SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

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

EIS007CY

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.**

Precautions for work

EIS007CZ

- After removing and installing the opening/closing parts, be sure to carry out fitting adjustments to check their operation.
- Check the lubrication level, damage, and wear of each part. If necessary, grease or replace it.

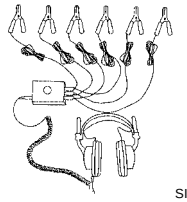
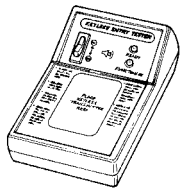
PREPARATION

PFP:00002

Special Service Tool

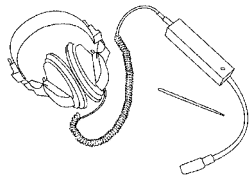
EIS007D1

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
— (J-39570) Chassis ear  SIIA0993E	Locating the noise
— (J-43980) NISSAN Squeak and Rattle Kit  SIIA0994E	Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester  LEL946A	Used to test keyfobs

Commercial Service Tool

EIS007D2

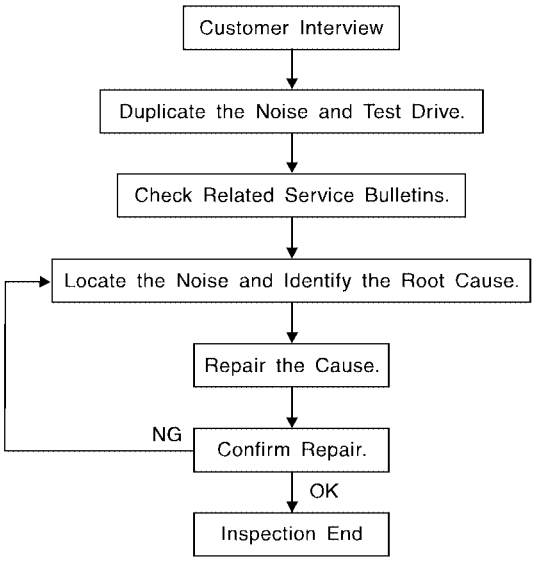
(Kent-Moore No.) Tool name	Description
(J-39565) Engine ear  SIIA0995E	Locating the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

EIS007D3



SBT842

CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to BL-11, "Diagnostic Worksheet" . This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by test driving the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak —(Like tennis shoes on a clean floor)
  Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces = higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping.
- Creak—(Like walking on an old wooden floor)
  Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle—(Like shaking a baby rattle)
  Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock —(Like a knock on a door)
  Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick—(Like a clock second hand)
  Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump—(Heavy, muffled knock noise)
  Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz—(Like a bumble bee)
  Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that you may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when you confirm the repair.
If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:
1) Close a door.
2) Tap or push/pull around the area where the noise appears to be coming from.
3) Rev the engine.
4) Use a floor jack to recreate vehicle “twist”.
5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on A/T model).
6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.

- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
- If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.
If a TSB relates to the symptom, follow the procedure to repair the noise.

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area.To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:

- removing the components in the area that you suspect the noise is coming from.
  Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise.
  Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks.
  Refer to BL-9, "Generic Squeak and Rattle Troubleshooting" .

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:

– separate components by repositioning or loosening and retightening the component, if possible.
– insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A NISSAN Squeak and Rattle Kit (J-43980) is available through your authorized NISSAN Parts Department.

CAUTION:
Do not use excessive force as many components are constructed of plastic and may be damaged.
Always check with the Parts Department for the latest parts information.
The following materials are contained in the NISSAN Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.
URETHANE PADS [1.5 mm (0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100×135 mm (3.94×5.31 in)/76884-71L01: 60×85 mm (2.36×3.35 in)/76884-71L02: 15×25 mm (0.59×0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact. Can be used to fill space behind a panel.
73982-9E000: 45 mm (1.77 in) thick, 50×50 mm (1.97×1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97×1.97 in)
INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30×50 mm (1.18×1.97 in)
FELT CLOTH TAPE
Used to insulate where movement does not occur. Ideal for instrument panel applications.
68370-4B000: 15×25 mm (0.59×0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll. The following materials not found in the kit can also be used to repair squeaks and rattles.
UHMW (TEFLON) TAPE
Insulates where slight movement is present. Ideal for instrument panel applications.
SILICONE GREASE
Used instead of UHMW tape that will be visible or not fit.
Note: Will only last a few months.
SILICONE SPRAY
Use when grease cannot be applied.
DUCT TAPE
Use to eliminate movement.

CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

Generic Squeak and Rattle Troubleshooting

EIS007D4

Refer to Table of Contents for specific component removal and installation information.

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicone spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

CAUTION:
Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will not be able to recheck the repair.

CENTER CONSOLE

Components to pay attention to include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

DOORS

Pay attention to the:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the NISSAN Squeak and Rattle Kit (J-43980) to repair the noise.

TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner.
In addition look for:

1. Trunk lid bumpers out of adjustment
2. Trunk lid striker out of adjustment
3. The trunk lid torsion bars knocking together
4. A loose license plate or bracket

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
2. Sun visor shaft shaking in the holder
3. Front or rear windshield touching headliner and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

OVERHEAD CONSOLE (FRONT AND REAR)

Overhead console noises are often caused by the console panel clips not being engaged correctly. Most of these incidents are repaired by pushing up on the console at the clip locations until the clips engage.
In addition look for:

1. Loose harness or harness connectors.
2. Front console map/reading lamp lense loose.
3. Loose screws at console attachment points.

SEATS

When isolating seat noise it's important to note the position the seat is in and the load placed on the seat when the noise is present. These conditions should be duplicated when verifying and isolating the cause of the noise.
Cause of seat noise include:

1. Headrest rods and holder
2. A squeak between the seat pad cushion and frame
3. The rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.
Causes of transmitted underhood noise include:

1. Any component mounted to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator mounting pins
5. Hood bumpers out of adjustment
6. Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

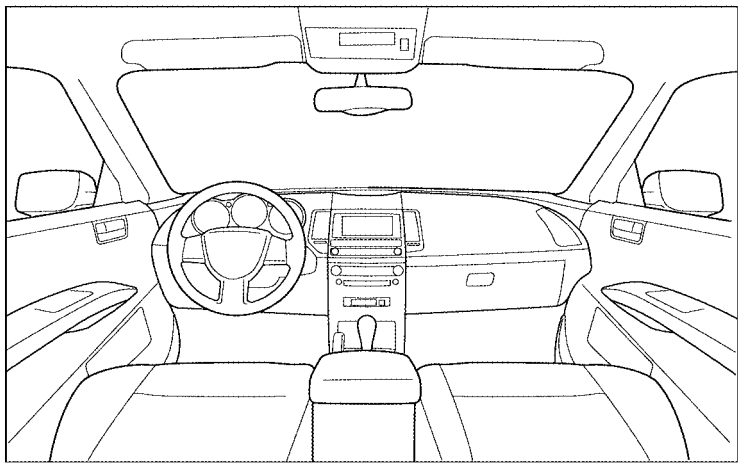
Diagnostic Worksheet

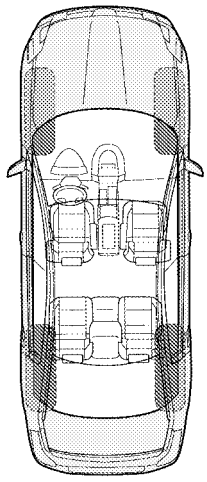
EIS007D5

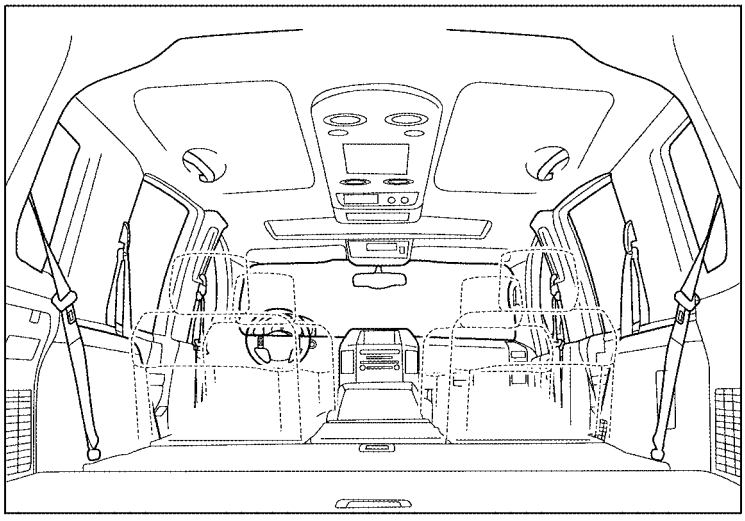
Dear Customer:
We are concerned about your satisfaction with your vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your vehicle right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service advisor or technician to ensure we confirm the noise you are hearing.

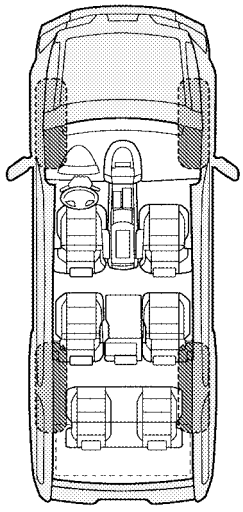
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)
The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.









Continue to page 2 of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

LAIA0072E

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

_____

_____

II. WHEN DOES IT OCCUR? (please check the boxes that apply)

- ☐ Anytime
- ☐ 1st time in the morning
- ☐ Only when it is cold outside
- ☐ Only when it is hot outside
- ☐ After sitting out in the rain
- ☐ When it is raining or wet
- ☐ Dry or dusty conditions
- ☐ Other:

III. WHEN DRIVING:

- ☐ Through driveways
- ☐ Over rough roads
- ☐ Over speed bumps
- ☐ Only about ____ mph
- ☐ On acceleration
- ☐ Coming to a stop
- ☐ On turns: left, right or either (circle)
- ☐ With passengers or cargo
- ☐ Other: _____
- ☐ After driving _____ miles or _____ minutes

IV. WHAT TYPE OF NOISE

- ☐ Squeak (like tennis shoes on a clean floor)
- ☐ Creak (like walking on an old wooden floor)
- ☐ Rattle (like shaking a baby rattle)
- ☐ Knock (like a knock at the door)
- ☐ Tick (like a clock second hand)
- ☐ Thump (heavy muffled knock noise)
- ☐ Buzz (like a bumble bee)

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

_____

_____

_____

	YES	NO	Initials of person performing
Vehicle test driven with customer	☐	☐	_____
- Noise verified on test drive	☐	☐	_____
- Noise source located and repaired	☐	☐	_____
- Follow up test drive performed to confirm repair	☐	☐	_____

VIN: _____ Customer Name _____

W.O.# _____ Date: _____

This form must be attached to Work Order

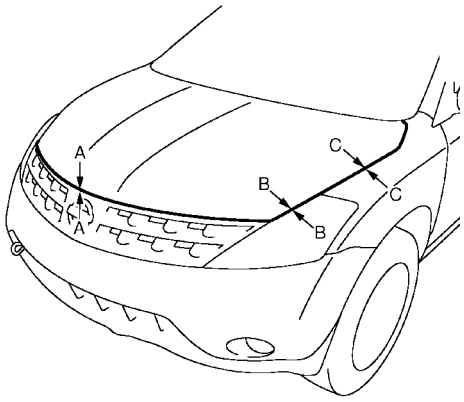
LAIA0071E

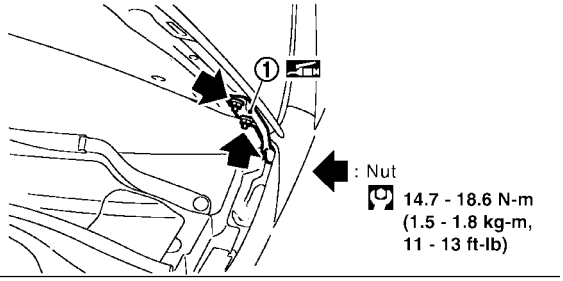
HOOD

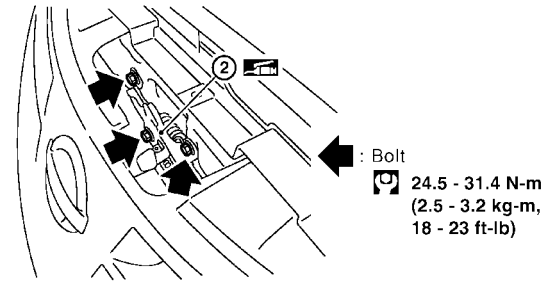
PFP:F5100

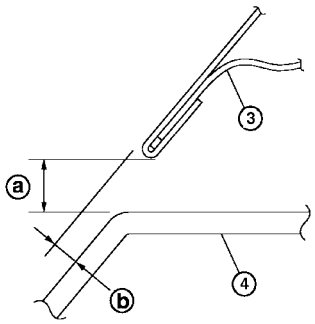
Fitting Adjustment

EIS007D6

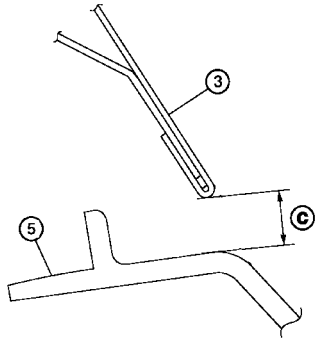




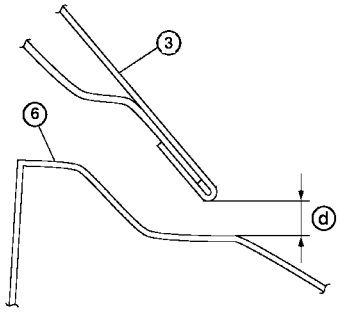




A - A



B - B



C - C

CLEARANCE	ⓐ	6.0 - 10.0 (0.236 - 0.394)
	ⓒ	5.3 - 9.3 (0.209 - 0.366)
	ⓓ	5.1 - 7.1 (0.201 - 0.280)
SURFACE HEIGHT	ⓑ	0.0 - 4.0 (0.000 - 0.157)

Unit: mm (in)

: Apply body grease.

LIIA0880E

1. Hood hinge
2. Hood lock assembly
3. Hood assembly
4. Front grille
5. Headlamp
6. Front fender

CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the hood lock assembly and adjust the height by rotating the bumper rubber until the hood clearance of hood and fender becomes 1 mm (0.04 in) lower than fitting standard dimension.
2. Temporarily tighten the hood lock, and position it by engaging it with the hood striker. Check the lock and striker for looseness, and tighten the lock bolt to the specified torque.
3. Adjust the clearance and surface height of hood and fender according to the fitting standard dimension by rotating right and left bumper rubbers.

CAUTION:

Adjust right/left gap between hood and each part to the following specification.

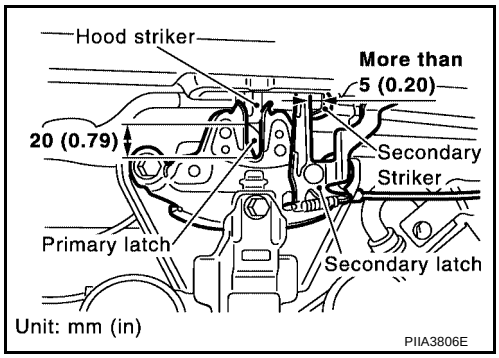
Hood and headlamp (B–B) : Less than 2.0 mm

HOOD LOCK ADJUSTMENT

1. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
2. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).

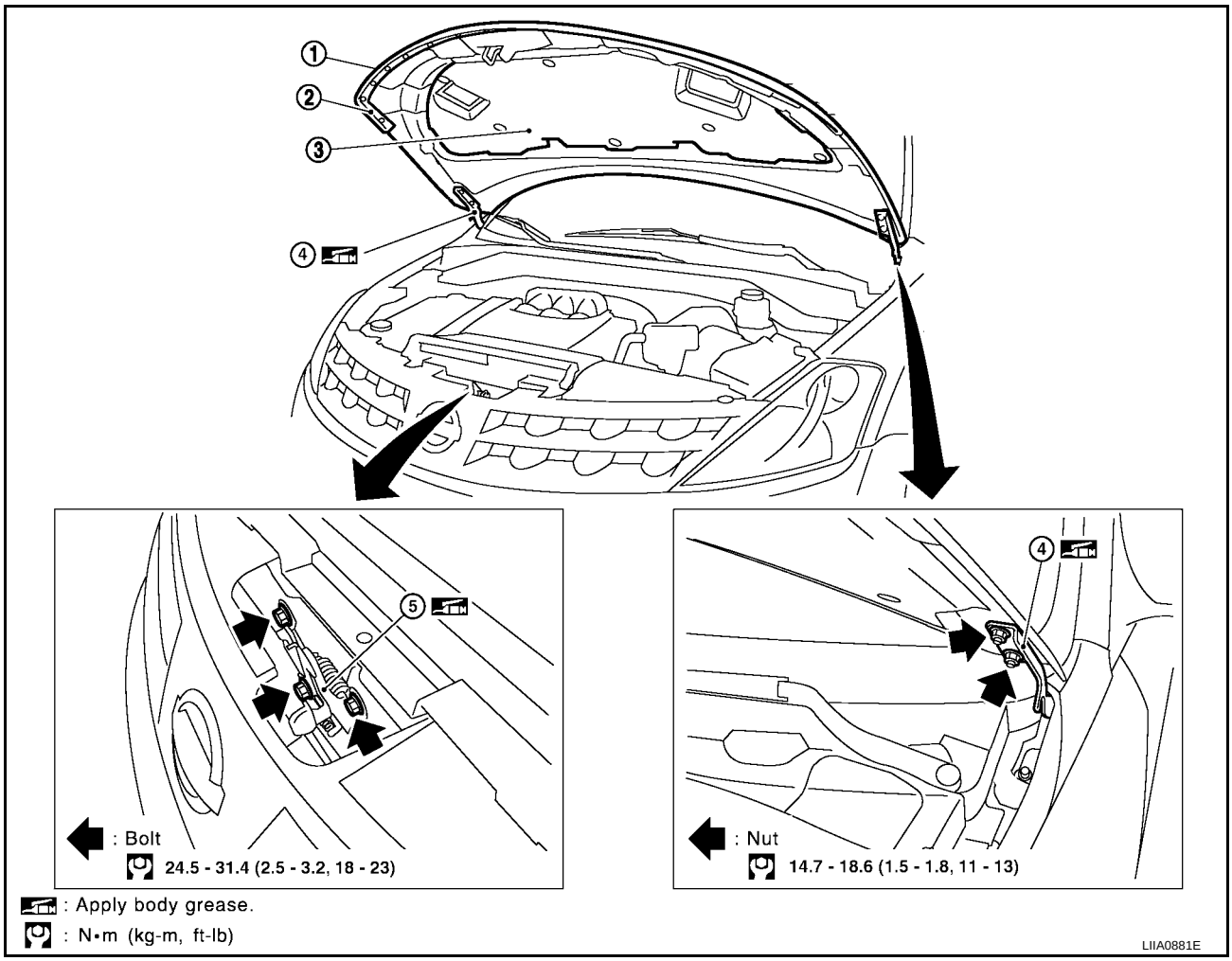
   CAUTION:

   Do not drop the hood from 300 mm (11.81 in) height or higher.
3. After adjusting hood lock, tighten the lock bolts to the specified torque.



Removal and Installation of Hood Assembly

EIS007D7

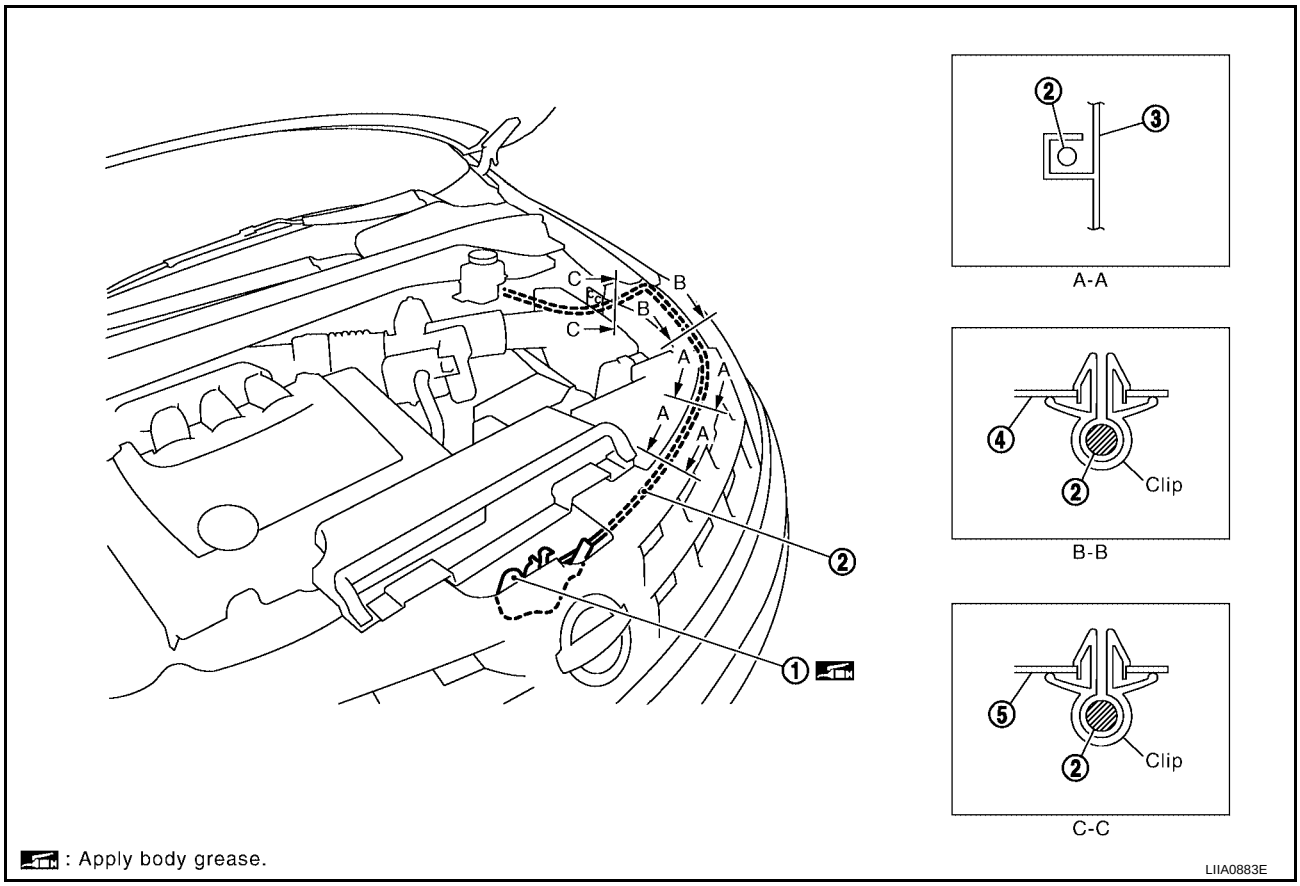


1. Hood assembly
2. Hood front sealing rubber
3. Hood insulator
4. Hood hinge
5. Hood lock assembly

1. Support the hood by the striker with a suitable tool to prevent it from falling.
2. Remove the hinge nuts on the hood to remove the hood assembly.
   CAUTION:
   Operate with two workers, because of its heavy weight.
3. Installation is in the reverse order of removal.

Removal and Installation of Hood Lock Control

EIS007D8

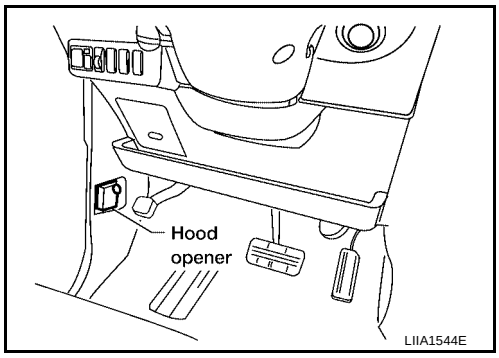


1. Hood lock assembly
2. Hood lock cable
3. Radiator core support side
4. Hood ledge reinforce upper
5. Hood ledge upper

REMOVAL

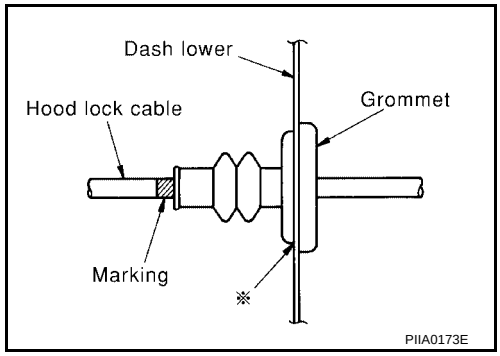
1. Remove the front grille. Refer to EI-18, "Removal and Installation" .
2. Remove the front fender protector (LH). Refer to EI-22, "Removal and Installation" .
3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
4. Remove the bolt and the hood opener.
5. Remove the grommet on the dash lower panel, and pull the hood lock cable toward the passenger room.

   CAUTION:
   While pulling, be careful not to damage the outside of the hood lock cable.

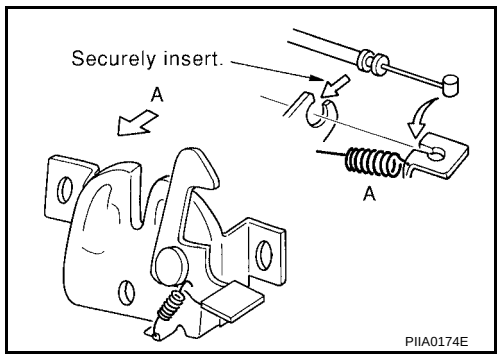


INSTALLATION

1. Pull the hood lock cable through the dash lower panel hole to the engine room. Be careful not to bend the cable too much, keeping the radius 100mm (3.94 in) or more.
2. Make sure the cable is not offset from the positioning grommet, and push the grommet into the panel hole securely.
3. Apply the sealant to the grommet (at * mark) properly.



4. Install the cable securely to the lock.
5. After installing, check the hood lock adjustment and hood opener operation. Refer to BL-14, "HOOD LOCK ADJUSTMENT" .



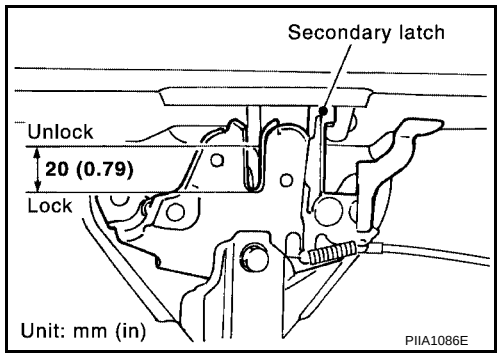
Hood Lock Control Inspection

EIS007D9

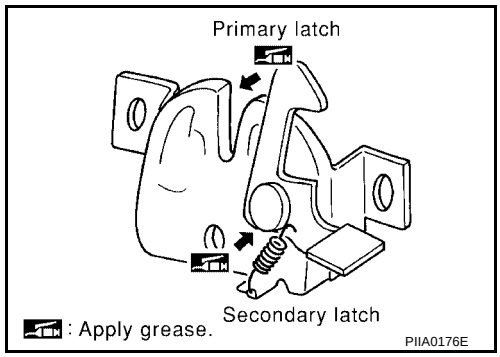
CAUTION:

If the hood lock cable is bent or deformed, replace it.

1. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
2. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



3. Check the hood lock lubrication condition. If necessary, apply “body grease” to the points shown in the figure.

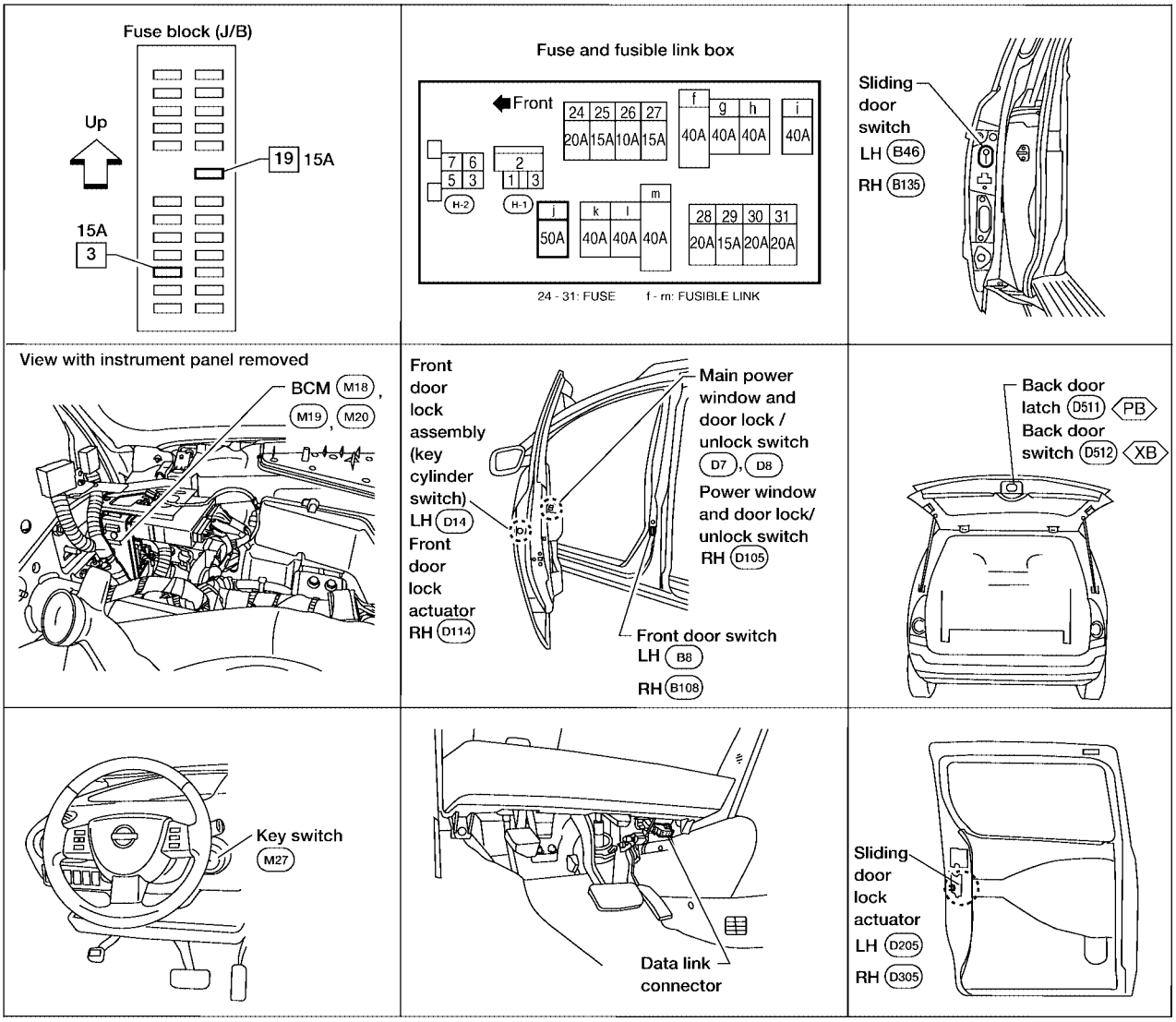


POWER DOOR LOCK SYSTEM

PFP:24814

Component Parts and Harness Connector Location

EIS007DA



PB : WITH POWER BACK DOOR

XB : WITHOUT POWER BACK DOOR

LIIA1899E

System Description

EIS007DB

WITHOUT AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM

Power is supplied at all times

- through 50A fusible link (letter **j,** located in the fuse and fusible link box)
- to BCM terminal 55 and
- through 15A fuse [No. 3, located in the fuse block (J/B)]
- to BCM terminal 42
- through 15A fuse [No. 19, located in the fuse block (J/B)]
- to key switch terminal 1.

With ignition key inserted, power is supplied

- through key switch terminal 2
- to BCM terminal 37.

Ground is supplied to terminal 52 of BCM through body grounds M57, M61 and M79.

When the door is locked or unlocked with main power window and door lock/unlock switch, ground is supplied

- to CPU of main power window and door lock/unlock switch
- through main power window and door lock/unlock switch terminal 15
- through grounds M57, M61 and M79.

Then main power window and door lock/unlock switch operation signal is supplied

- to BCM terminal 22
- through main power window and door lock/unlock switch terminal 12.

When the door is locked or unlocked with power window and door lock/unlock switch RH, ground is supplied

- to CPU of power window and door lock/unlock switch RH
- through power window and door lock/unlock switch RH terminal 11
- through grounds M57, M61 and M79.

Then power window and door lock/unlock switch RH operation signal is supplied

- to BCM terminal 22
- through power window and door lock/unlock switch RH terminal 16.

When the door is locked with front door lock assembly LH (key cylinder switch), ground is supplied

- to main power window and door lock/unlock switch terminal 6
- through front door lock assembly LH (key cylinder switch) terminals 1 and 5
- through grounds M57, M61 and M79.

Then front door lock assembly LH (key cylinder switch) operation signal is supplied

- to BCM terminal 22
- through main power window and door lock/unlock switch terminal 12.

When the door is unlocked with front door lock assembly LH (key cylinder switch), ground is supplied

- to main power window and door lock/unlock switch terminal 7
- through front door lock assembly LH (key cylinder switch) terminals 6 and 5
- through grounds M57, M61 and M79.

Then front door lock assembly LH (key cylinder switch) operation signal is supplied

- to BCM terminal 22
- through main power window and door lock/unlock switch terminal 12.

BCM is connected to main power window and door lock/unlock switch and power window and door lock/unlock switch RH through the power window serial link.

When the front door switch LH is ON (door is open), ground is supplied

- to BCM terminal 62
- through front door switch LH terminal 1
- through front door switch LH case ground.

When the front door switch RH is ON (door is open), ground is supplied

- to BCM terminal 12

- through front door switch RH terminal 1
- through front door switch RH case ground.

When the sliding door switch LH is ON (door is open), ground is supplied

- to BCM terminal 63
- through sliding door switch LH terminal 1
- through sliding door switch LH case ground.

When the sliding door switch RH is ON (door is open), ground is supplied

- to BCM terminal 13
- through sliding door switch RH terminal 1
- through sliding door switch RH case ground.

When the back door switch is ON (door is open), ground is supplied

- to BCM terminal 58
- through back door switch terminal 1
- through back door switch terminal 3
- through grounds D403 and D404.

WITH AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM

Power is supplied at all times

- through 50A fusible link (letter **j,** located in the fuse and fusible link box)
- to BCM terminal 55 and
- through 15A fuse [No. 3, located in the fuse block (J/B)]
- to BCM terminal 42
- through 15A fuse [No. 19, located in the fuse block (J/B)]
- to key switch terminal 1.

With ignition key inserted, power is supplied

- through key switch terminal 2
- to BCM terminal 37.

Ground is supplied to terminal 52 of BCM through body grounds M57, M61 and M79.
When the door is locked or unlocked with main power window and door lock/unlock switch, ground is supplied

- to CPU of main power window and door lock/unlock switch
- through main power window and door lock/unlock switch terminal 17
- through grounds M57, M61 and M79.

Then main power window and door lock/unlock switch operation signal is supplied

- to BCM terminal 22
- through main power window and door lock/unlock switch terminal 14.

When the door is locked or unlocked with power window and door lock/unlock switch RH, ground is supplied

- to CPU of power window and door lock/unlock switch RH
- through power window and door lock/unlock switch RH terminal 11
- through grounds M57, M61 and M79.

Then power window and door lock/unlock switch RH operation signal is supplied

- to BCM terminal 22
- through power window and door lock/unlock switch RH terminal 16.

When the door is locked with front door lock assembly LH (key cylinder switch), ground is supplied

- to main power window and door lock/unlock switch terminal 4
- through front door lock assembly LH (key cylinder switch) terminals 1 and 5
- through grounds M57, M61 and M79.

Then the front door lock assembly LH (key cylinder switch) operation signal is supplied

- to BCM terminal 22
- through main power window and door lock/unlock switch terminal 14.

When the door is unlocked with front door lock assembly LH (key cylinder switch), ground is supplied

- to main power window and door lock/unlock switch terminal 6
- through front door lock assembly LH (key cylinder switch) terminals 6 and 5
- through grounds M57, M61 and M79.

Then front door lock assembly LH (key cylinder switch) operation signal is supplied

- to BCM terminal 22
- through main power window and door lock/unlock switch terminal 14.

BCM is connected to main power window and door lock/unlock switch and power window and door lock/unlock switch RH through a serial link.
When the front door switch LH is ON (door is open), ground is supplied

- to BCM terminal 62
- through front door switch LH terminal 1
- through front door switch LH case ground.

When the front door switch RH is ON (door is open), ground is supplied

- to BCM terminal 12
- through front door switch RH terminal 1
- through front door switch RH case ground.

When the sliding door switch LH is ON (door is open), ground is supplied

- to BCM terminal 63
- through sliding door switch LH terminal 1
- through sliding door switch LH case ground.

When the sliding door switch RH is ON (door is open), ground is supplied

- to BCM terminal 13
- through sliding door switch RH terminal 1
- through sliding door switch RH case ground.

When the back door switch (built into back door latch) is ON (door is open), ground is supplied

- to BCM terminal 58
- through back door latch (door ajar switch) assembly terminal 7
- through back door latch assembly terminal 8
- through grounds D403 and D404.

OUTLINE

Functions available by operating the door lock and unlock switches on driver's door and passenger's door

- Interlocked with the locking operation of door lock and unlock switch, door lock actuators of all doors are locked.
- Interlocked with the unlocking operation of door lock and unlock switch, door lock actuators of all doors are unlocked.

Functions available by operating the front door lock assembly LH (key cylinder switch)

- Interlocked with the locking operation of door key cylinder, door lock actuators of all doors are locked.
- When door key cylinder is unlocked, front door lock assembly LH (actuator) is unlocked.
- When door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.

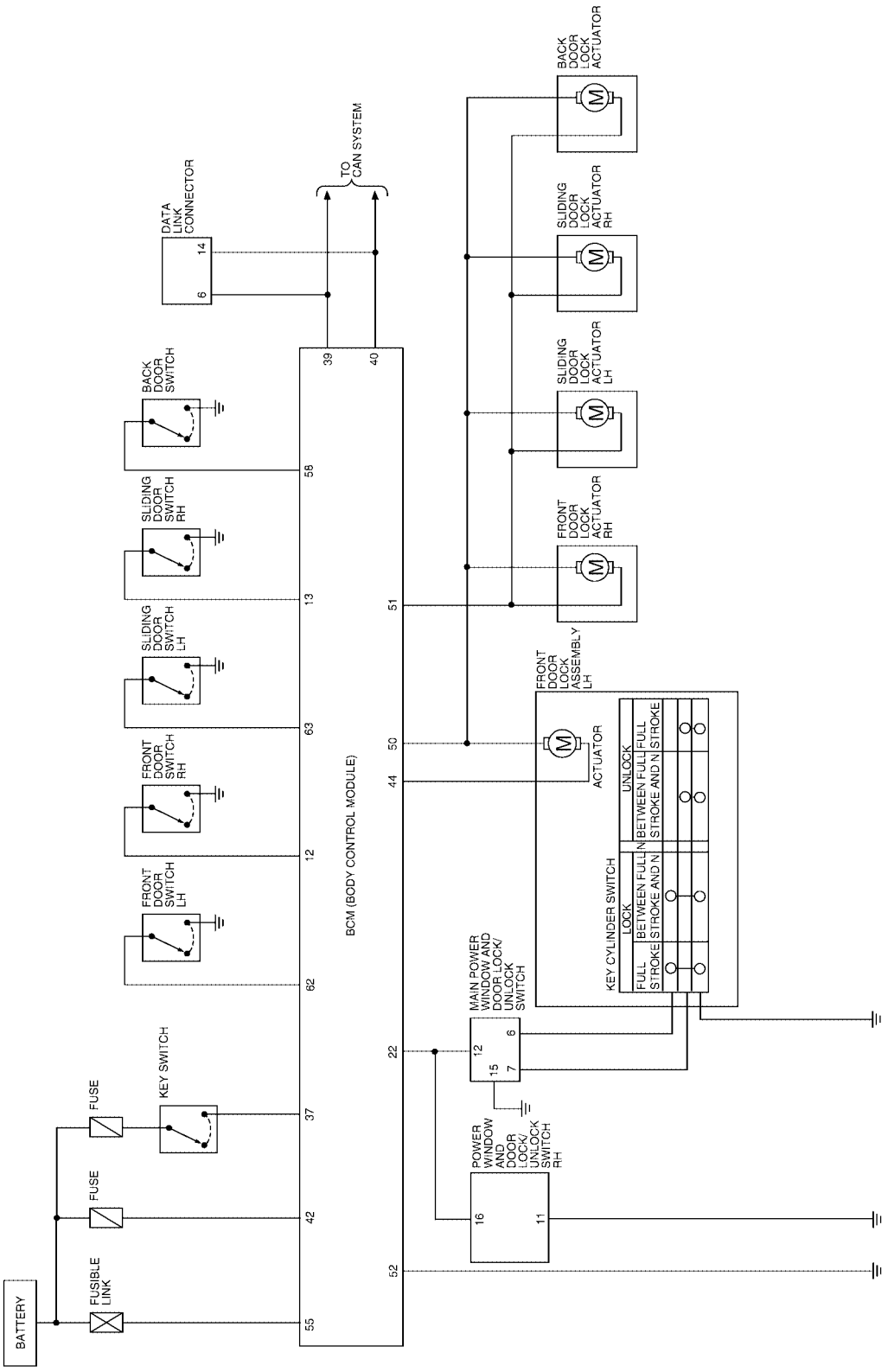
Key reminder door system

When door lock and unlock switch is operated to lock doors with ignition key in key cylinder and any door open, all door lock actuators are locked and then unlocked.

Schematic

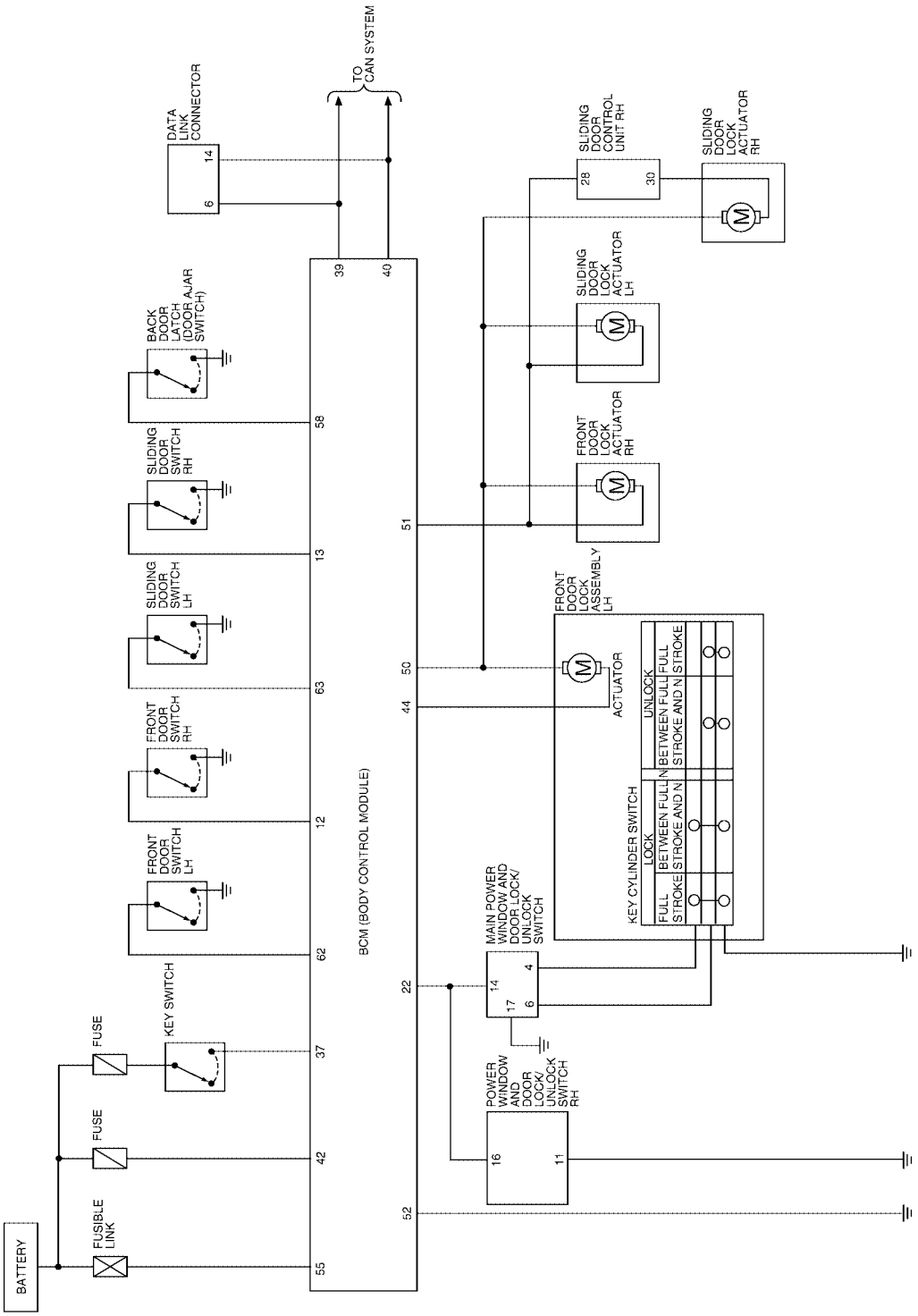
EIS007DC

WITHOUT AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM



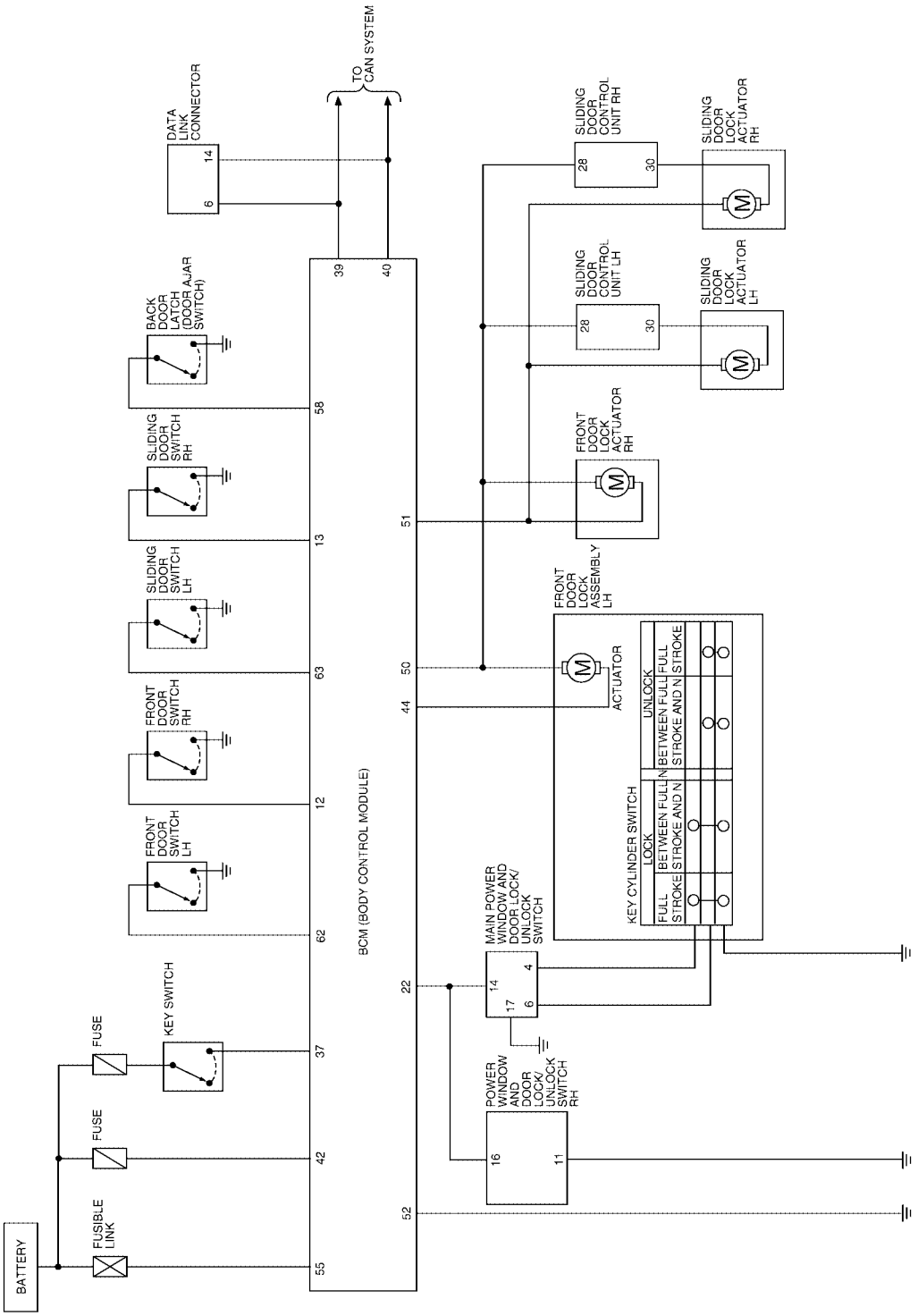
WIWA1108E

WITH RIGHT HAND AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM



WIWA1109E

WITH RIGHT AND LEFT HAND AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM

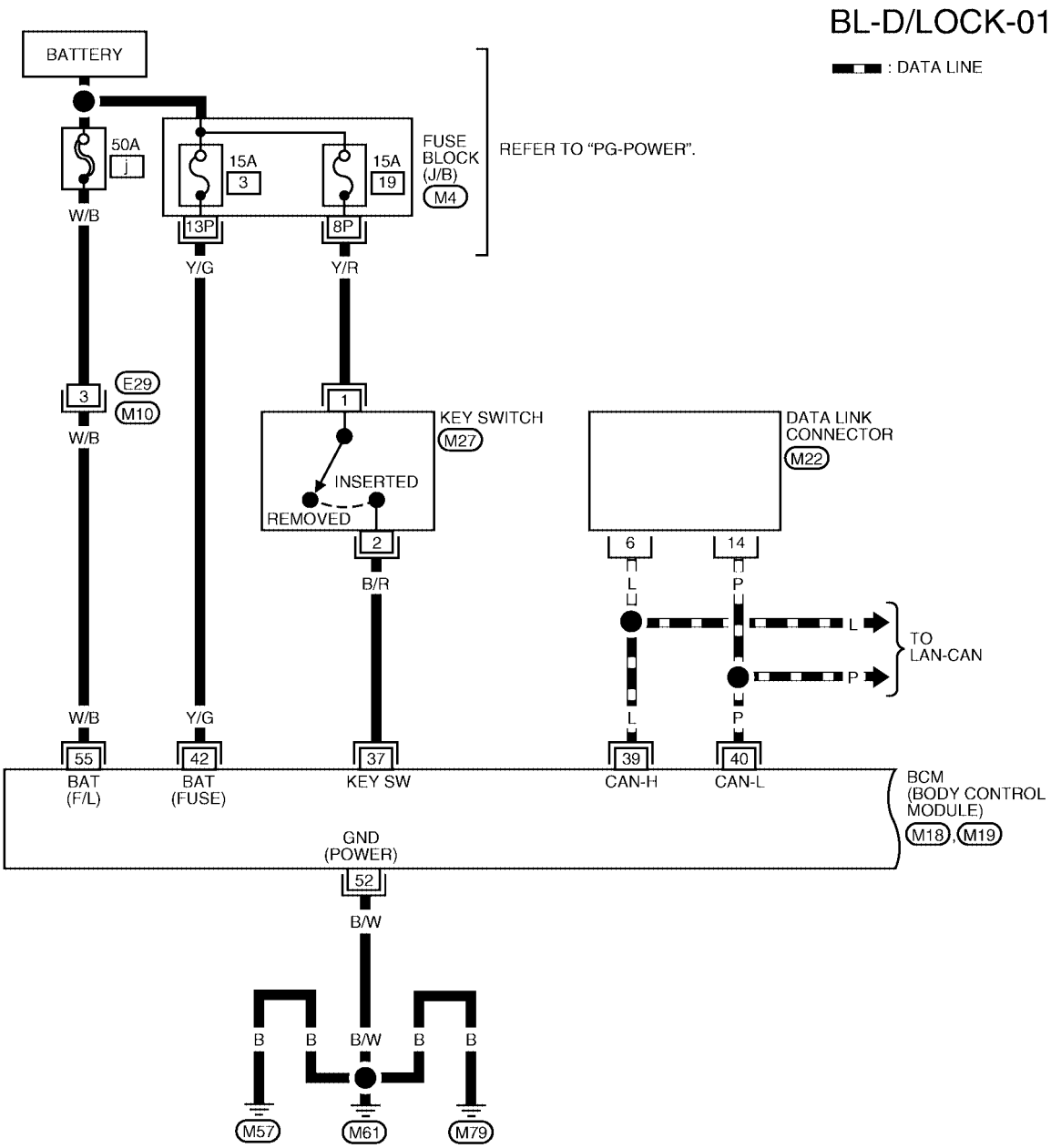


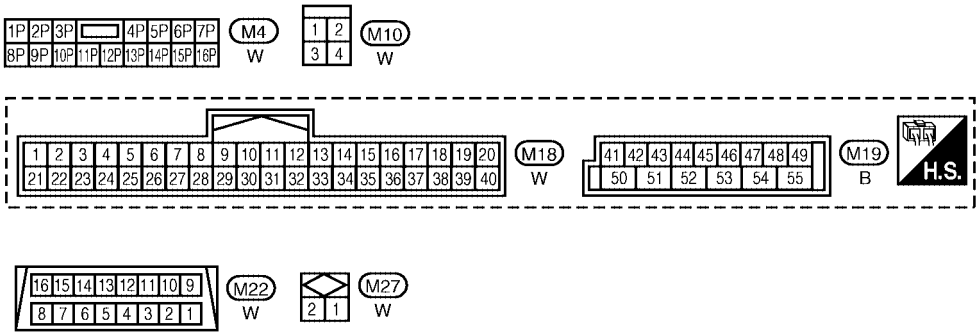
WIWA1110E

Wiring Diagram — D/LOCK —

EIS007DD

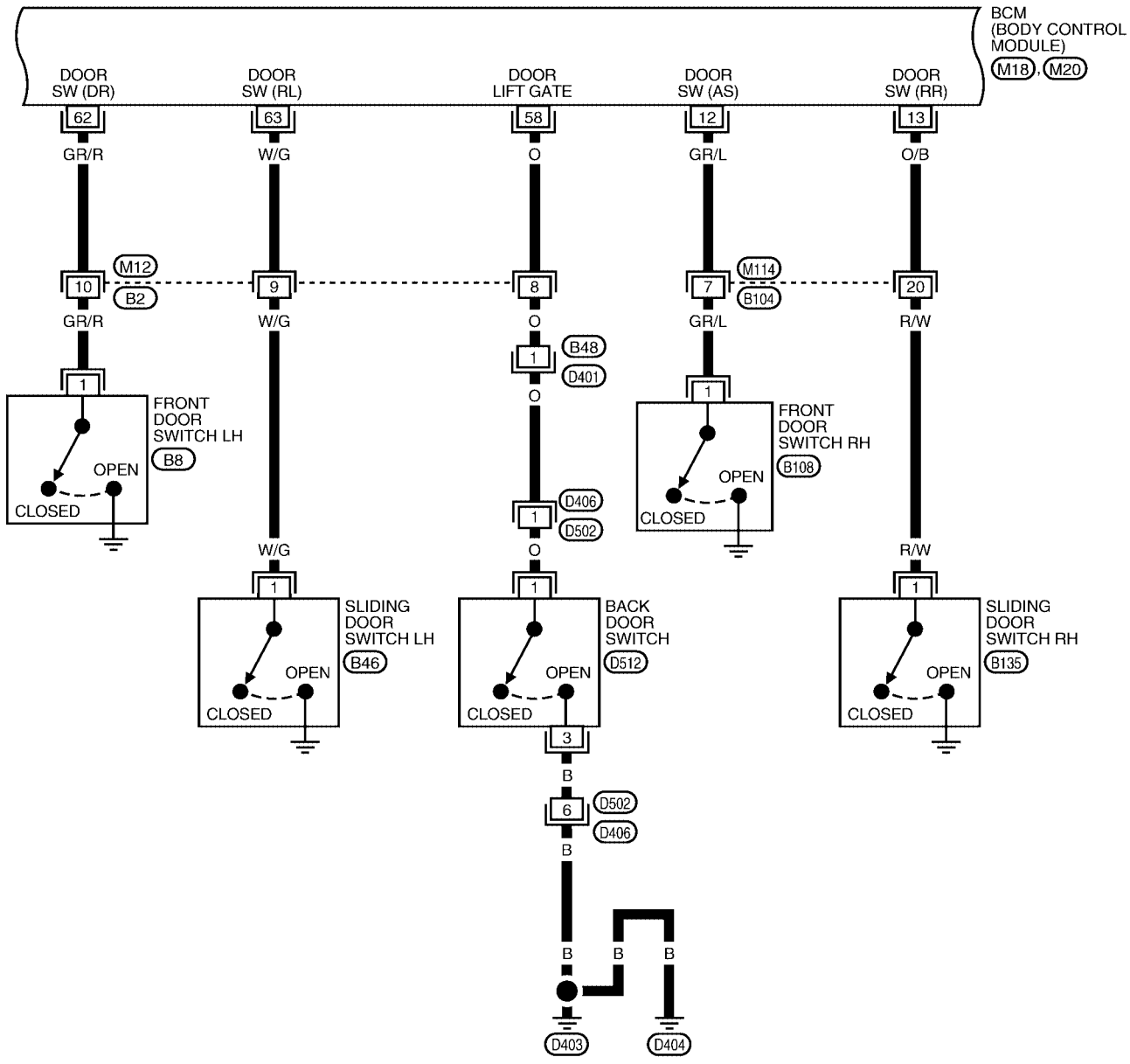
WITHOUT AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM

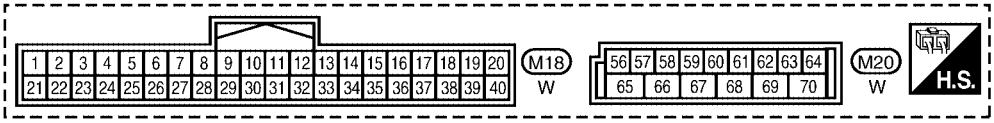


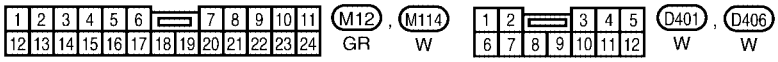


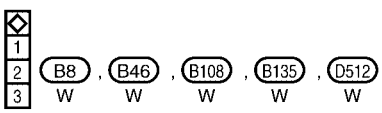
WIWA0483E

BL-D/LOCK-02



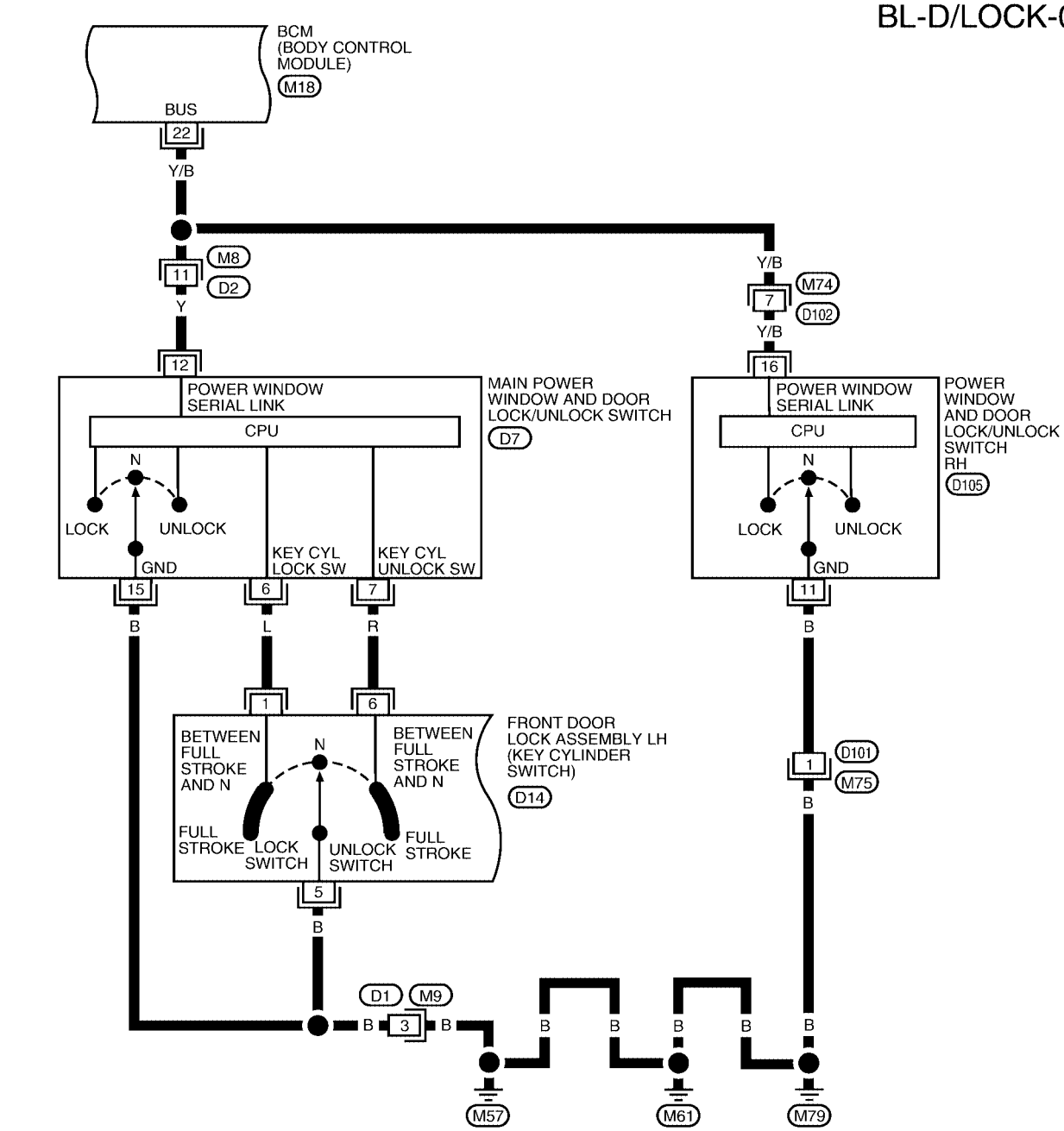


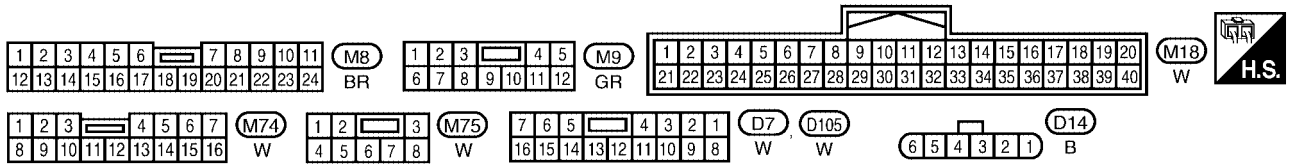




WIWA1111E

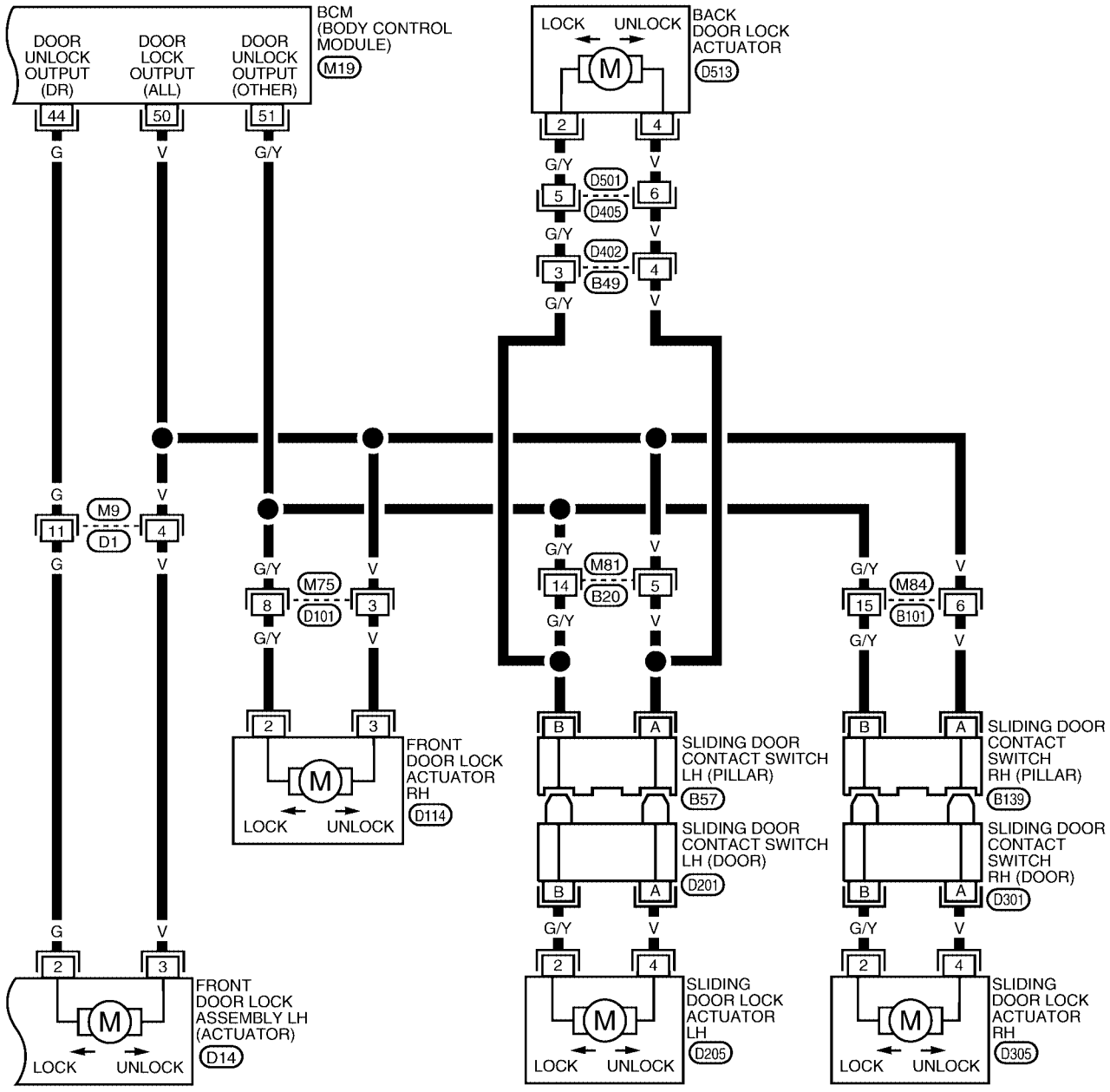
BL-D/LOCK-03

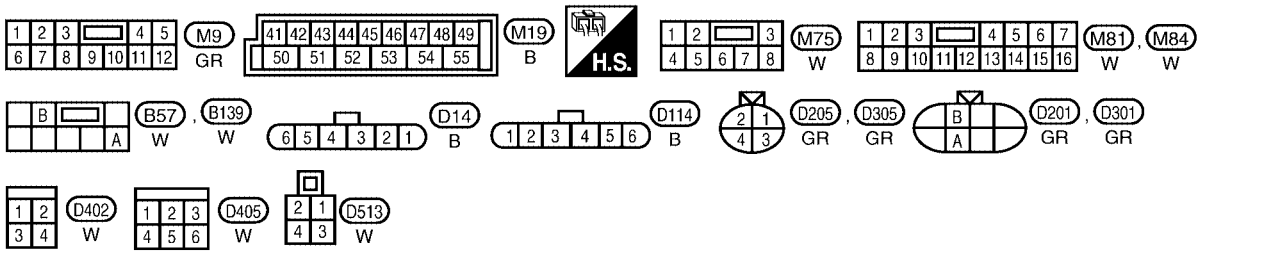




WIWA1112E

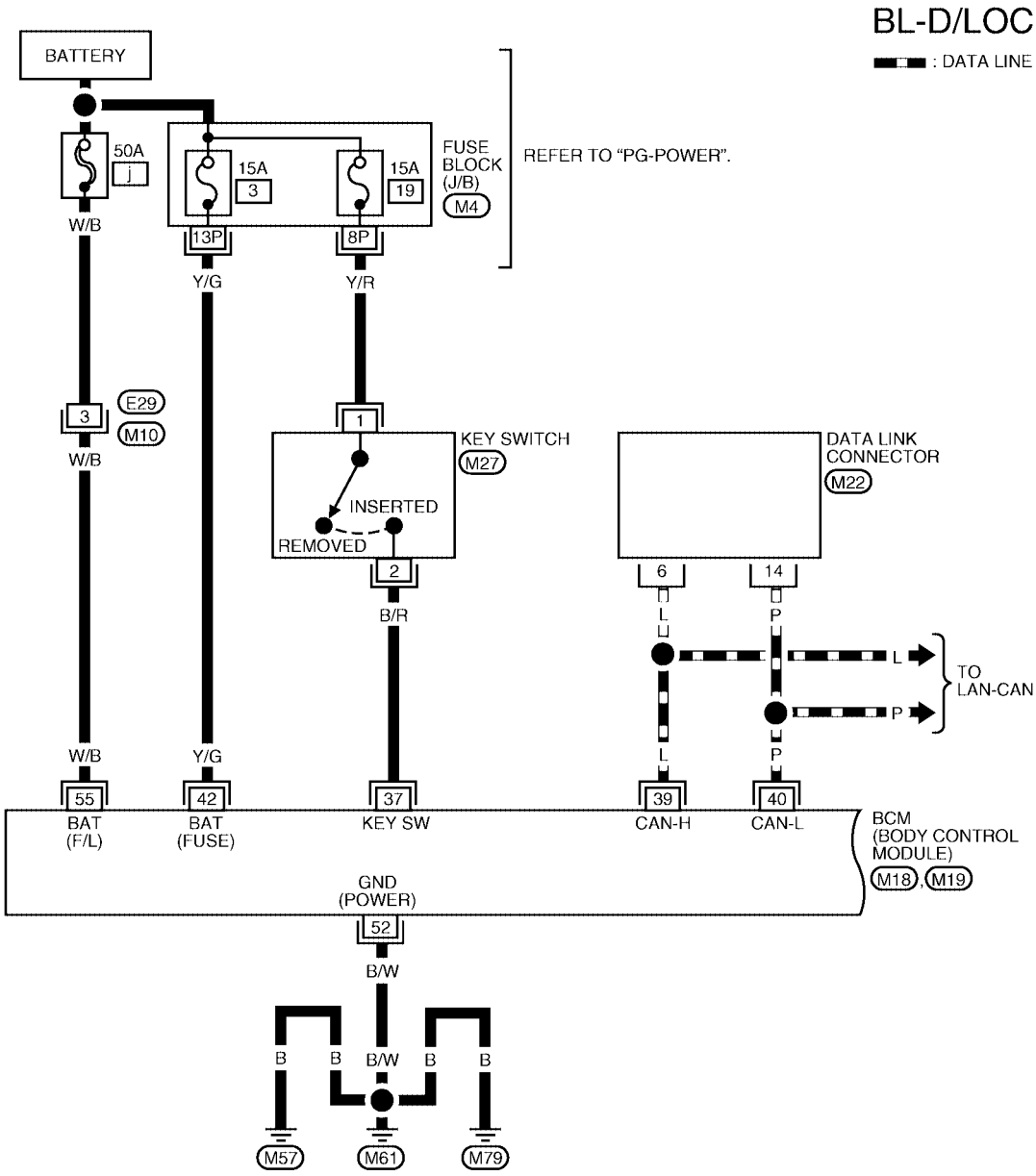
BL-D/LOCK-04

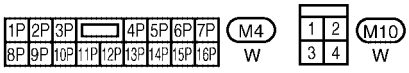


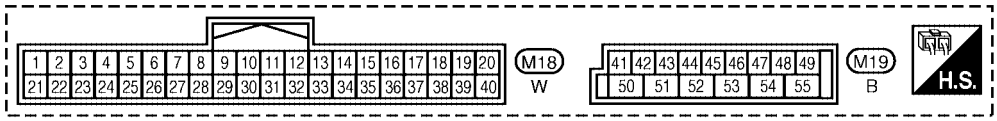


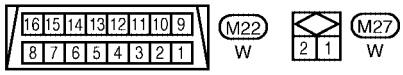
WIWA1113E

WITH RIGHT HAND AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM



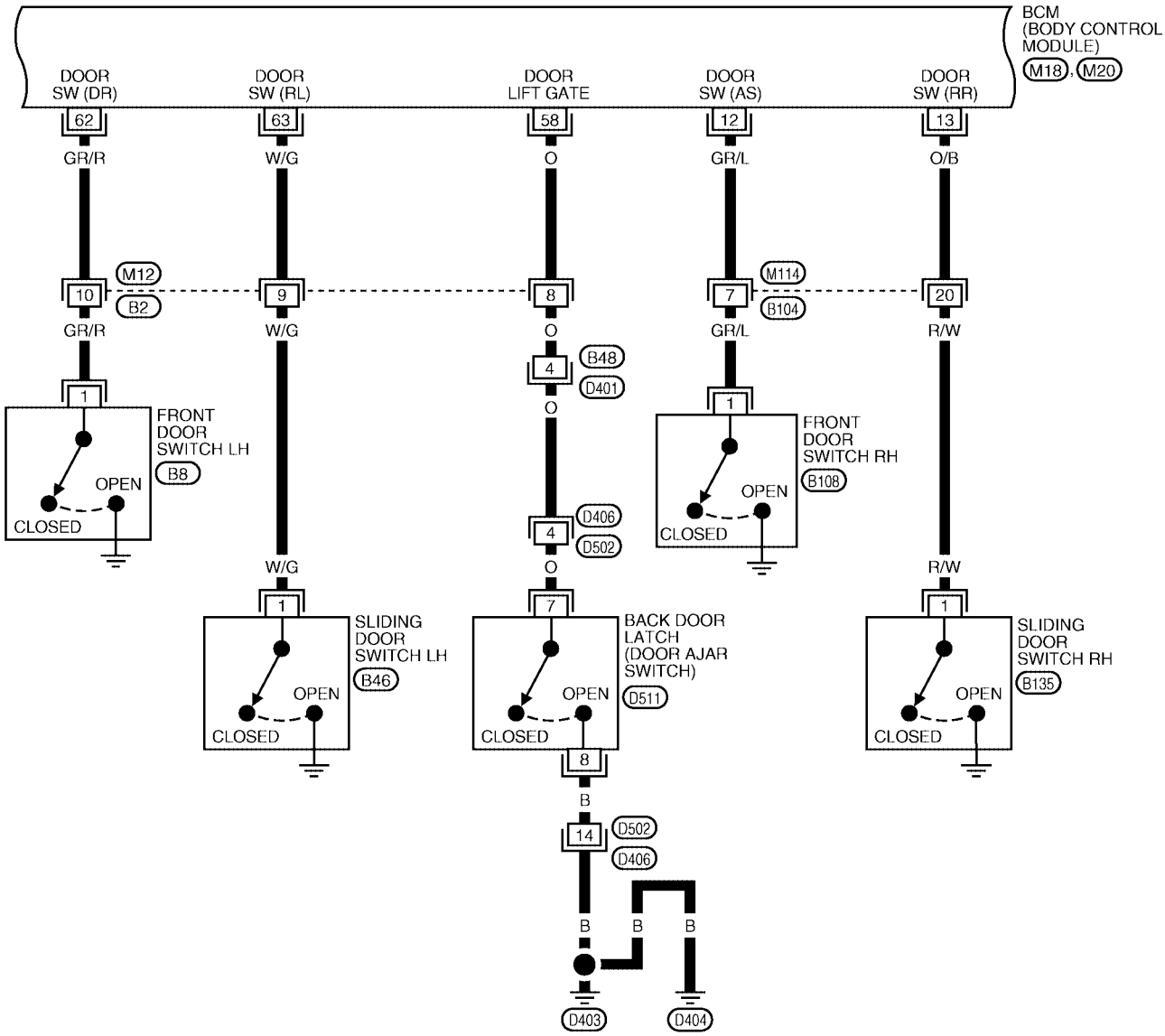


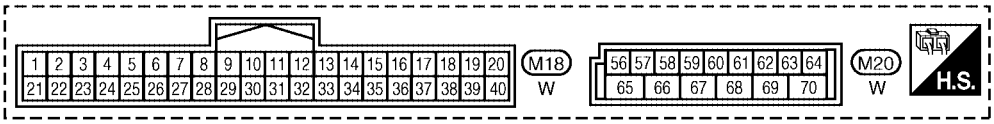


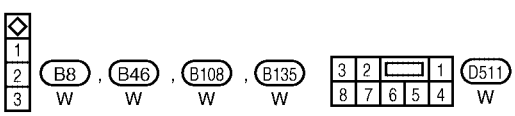


WIWA0487E

BL-D/LOCK-06

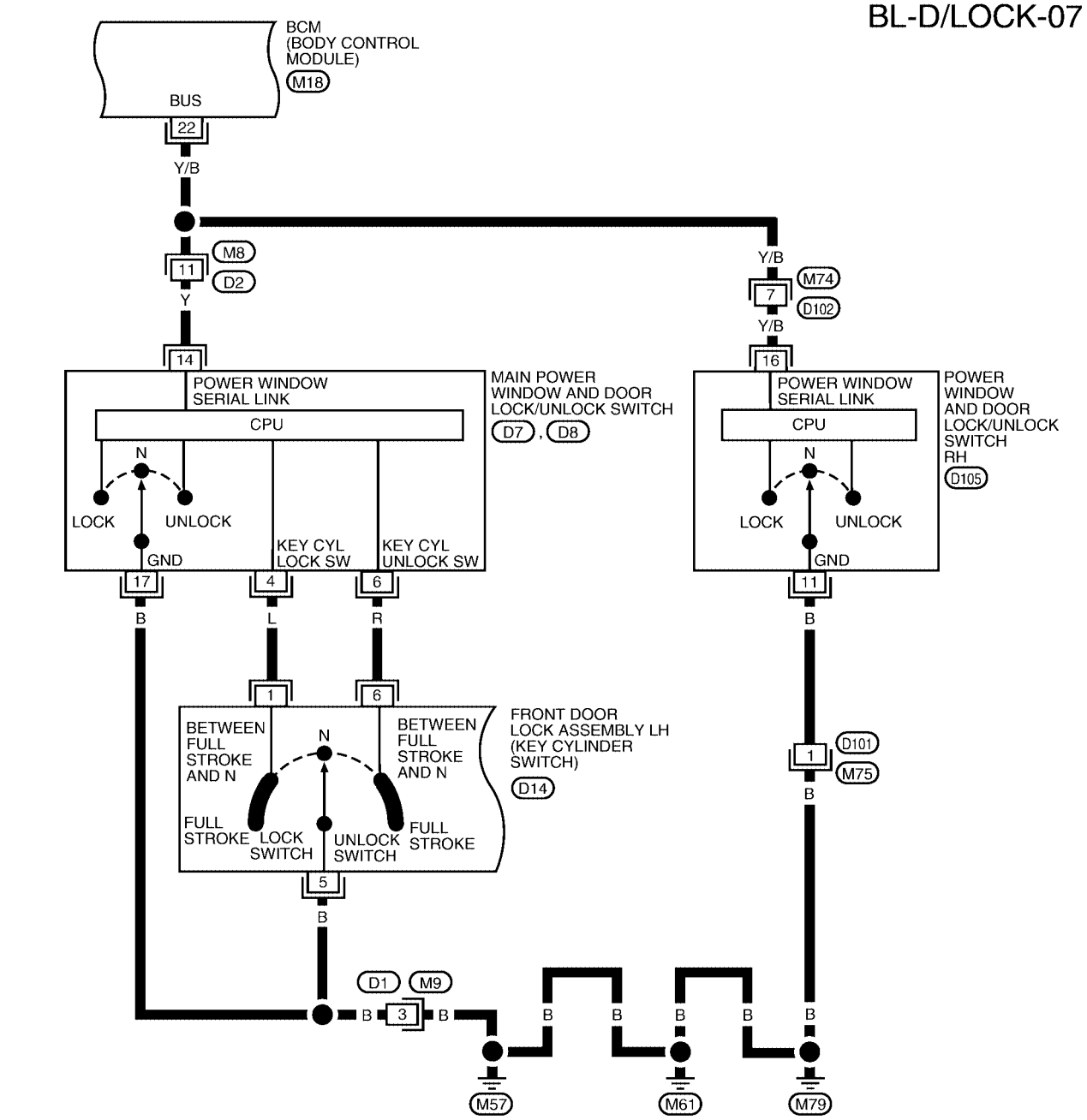


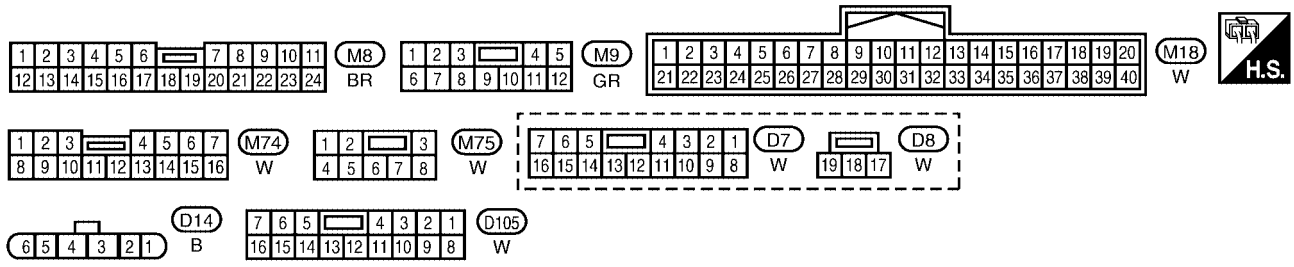




WIWA0488E

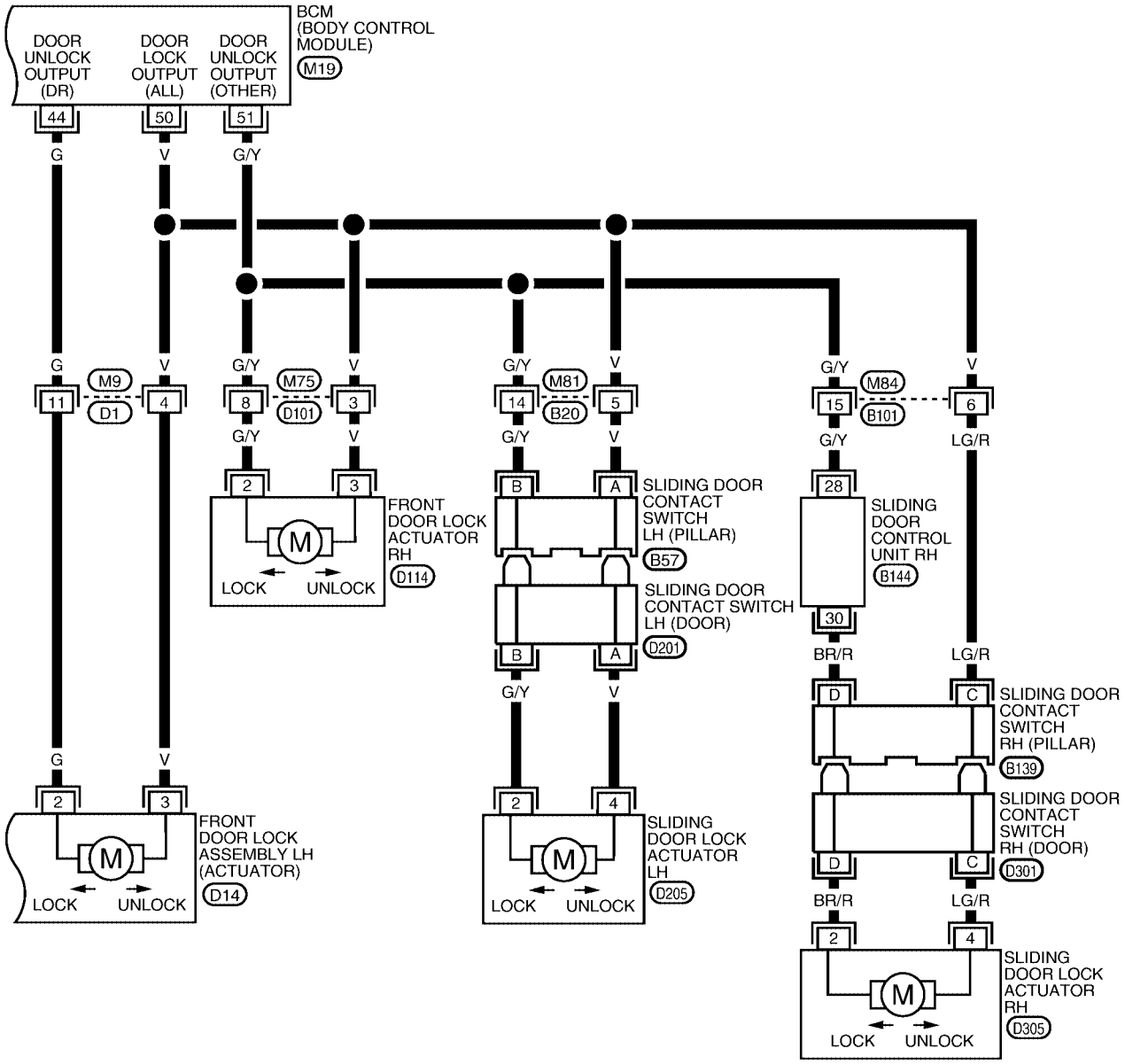
BL-D/LOCK-07

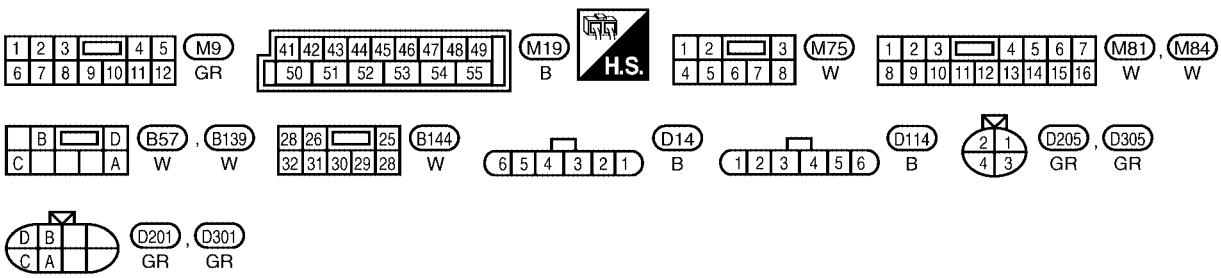




WIWA1114E

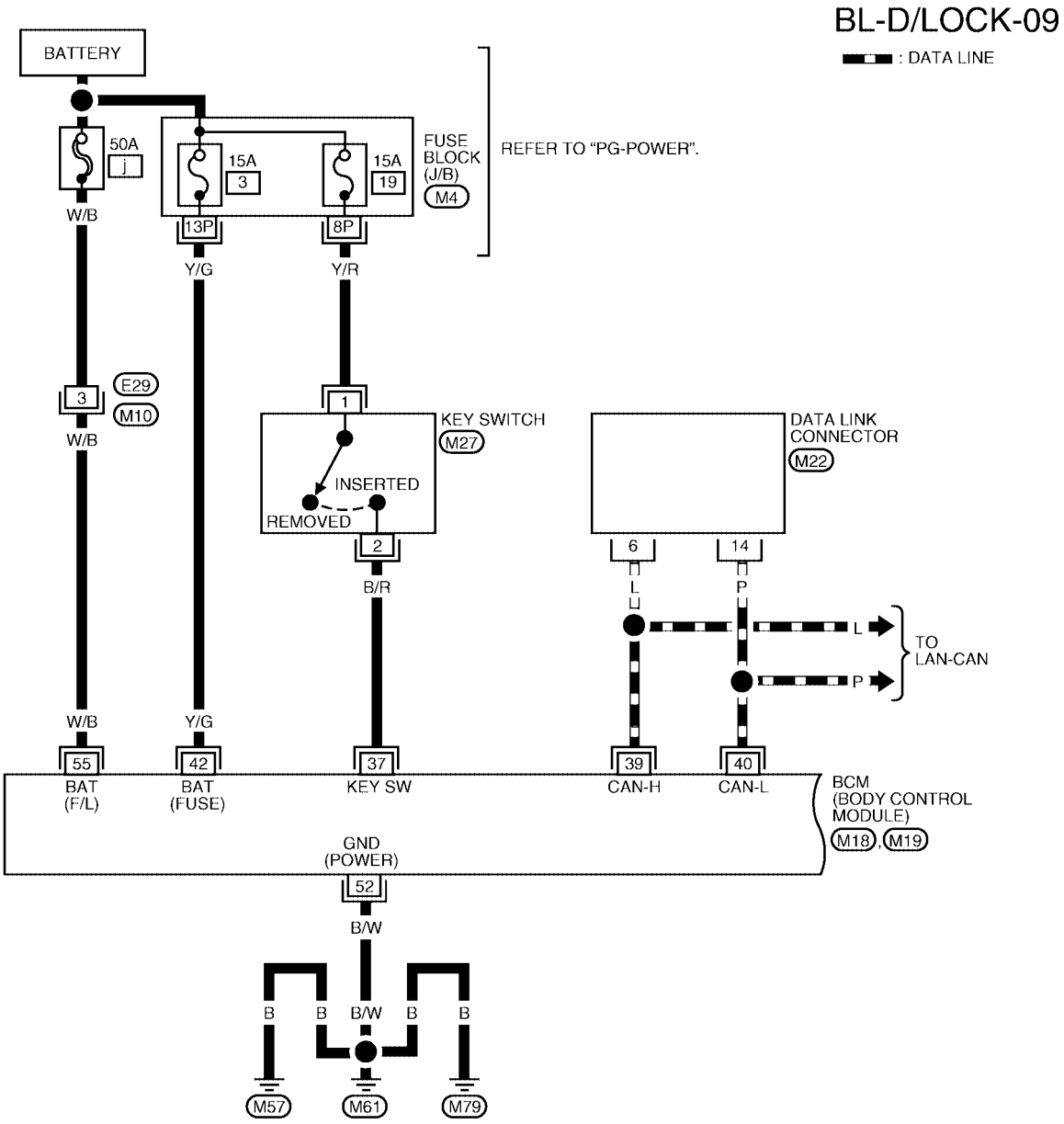
BL-D/LOCK-08

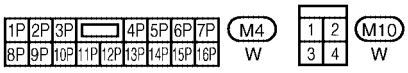


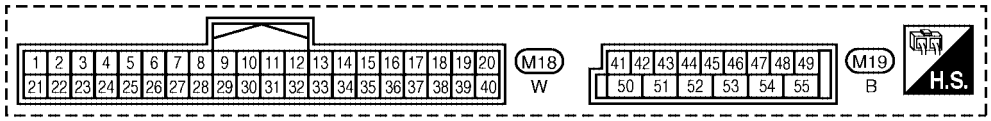


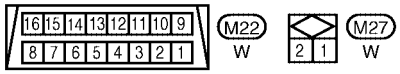
WIWA1246E

WITH RIGHT AND LEFT HAND AUTO SLIDE DOOR CLOSURE AND AUTOMATIC BACK DOOR SYSTEM



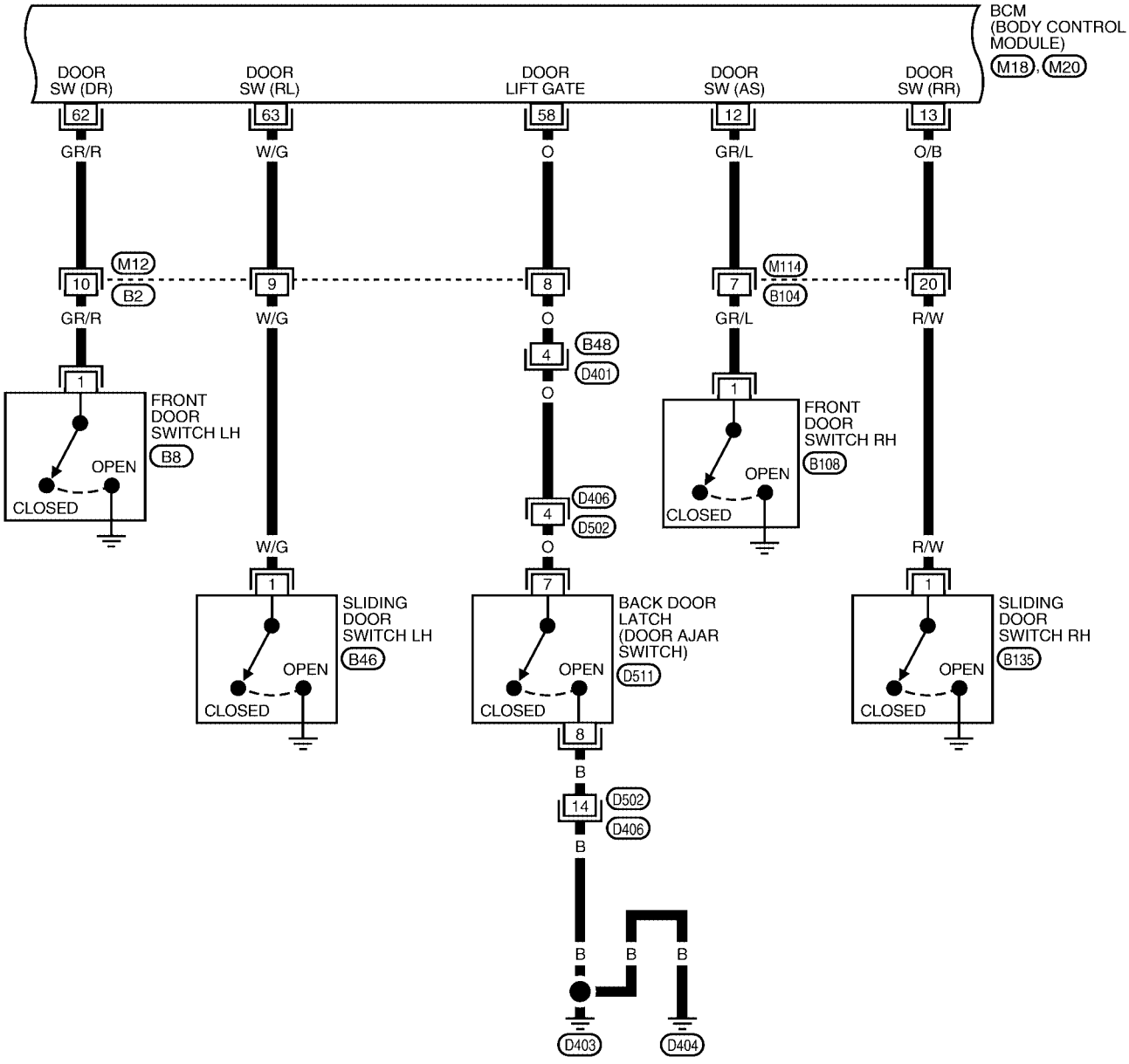


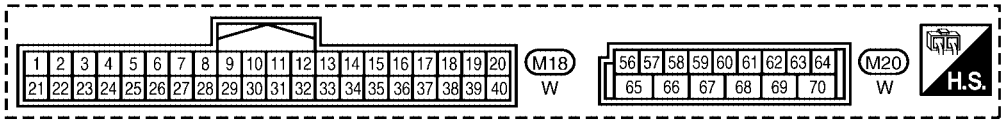


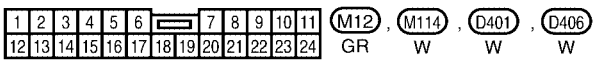


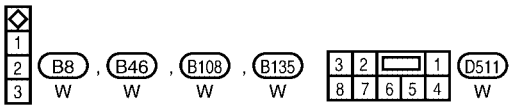
WIWA0491E

BL-D/LOCK-10



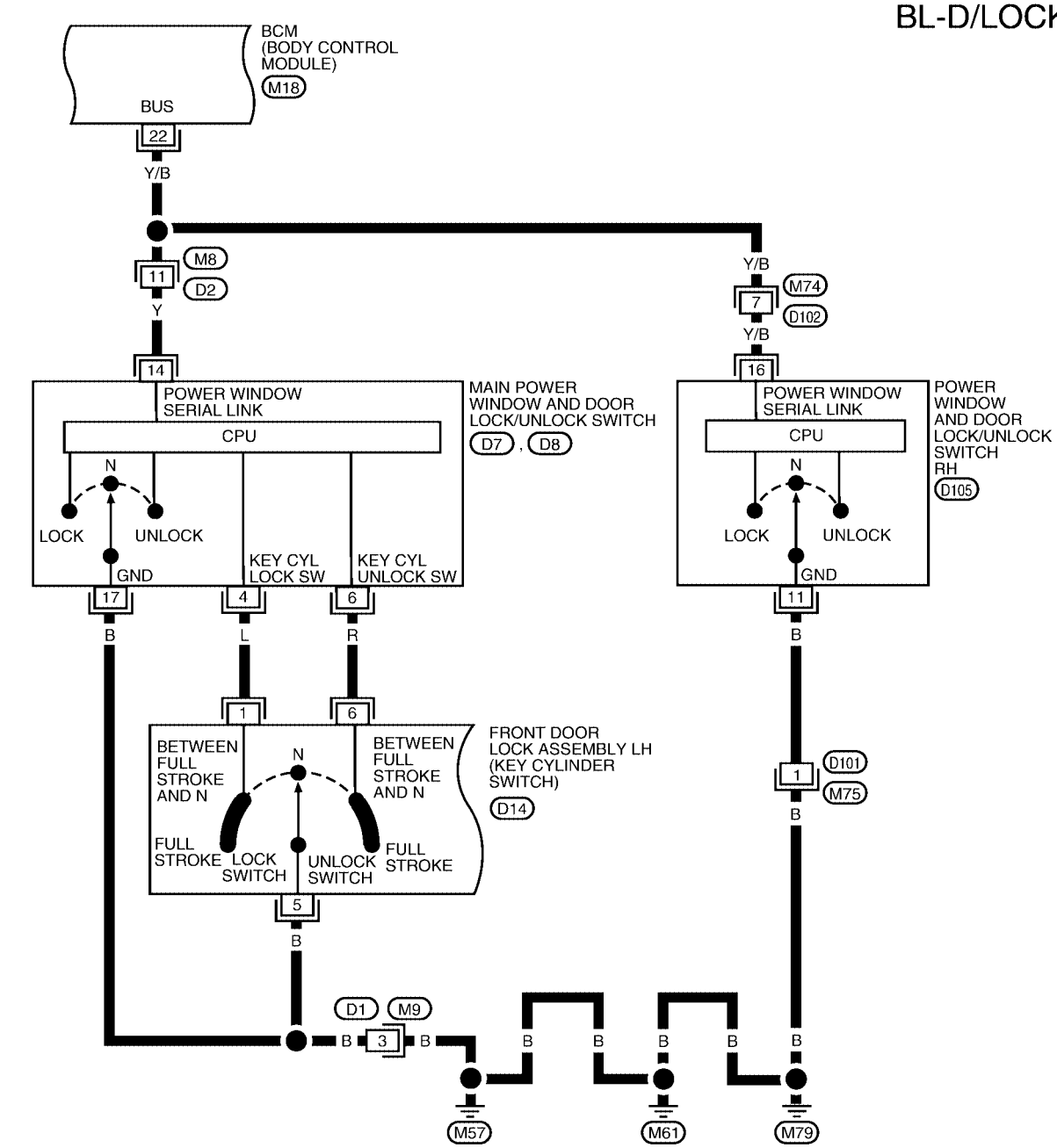


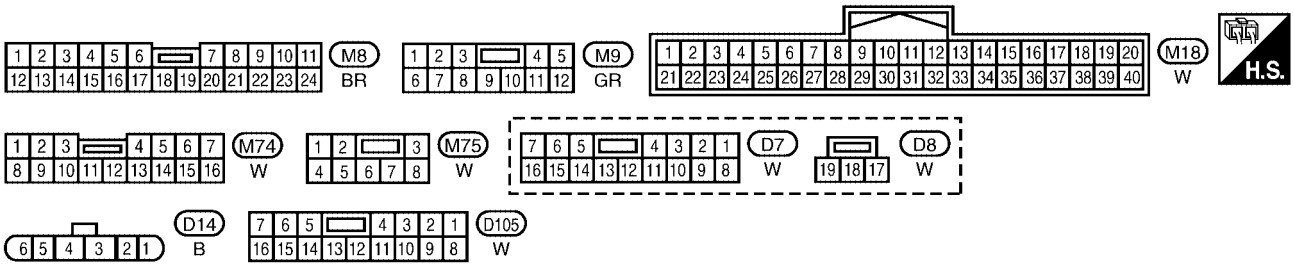




WIWA1247E

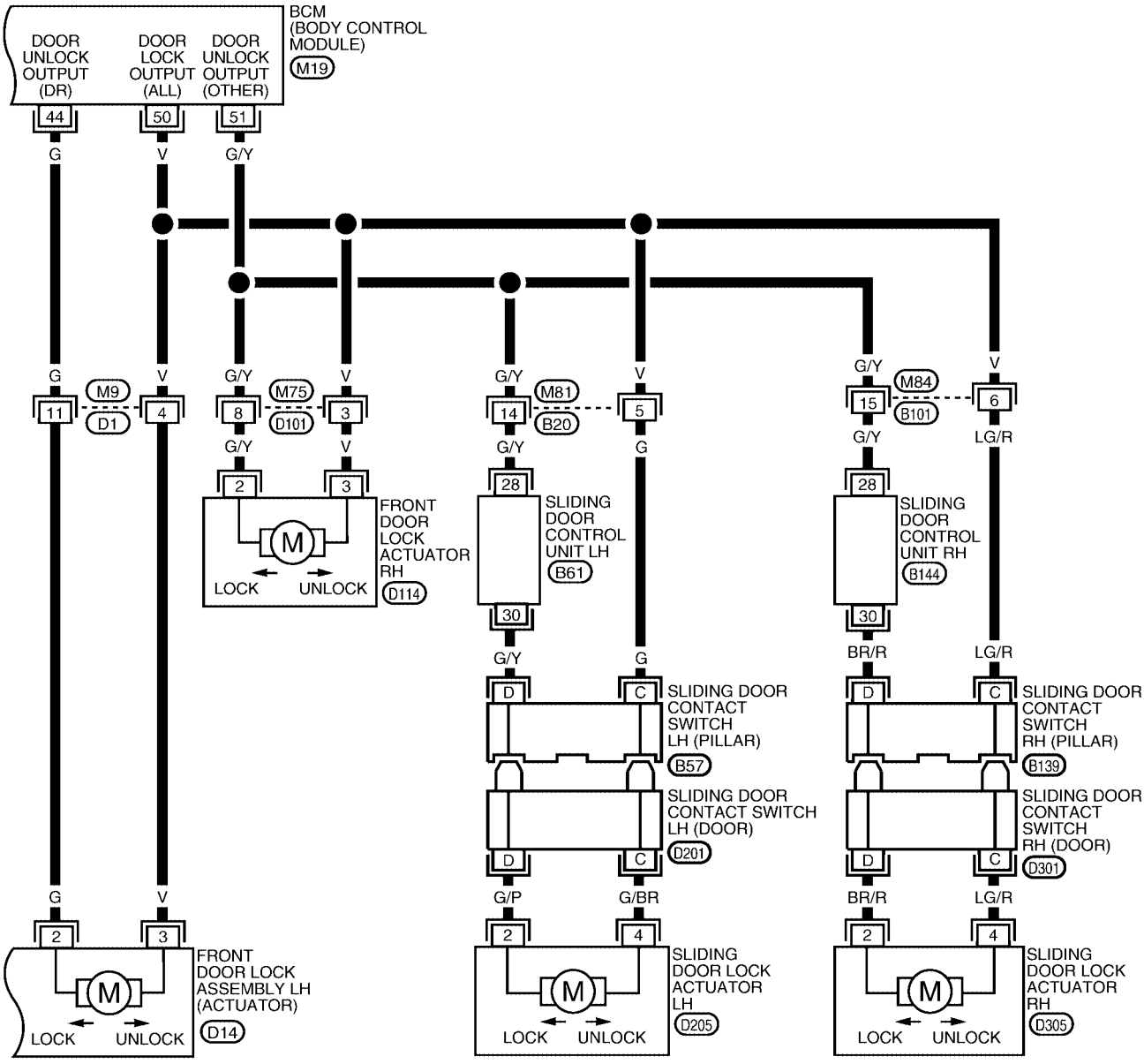
BL-D/LOCK-11

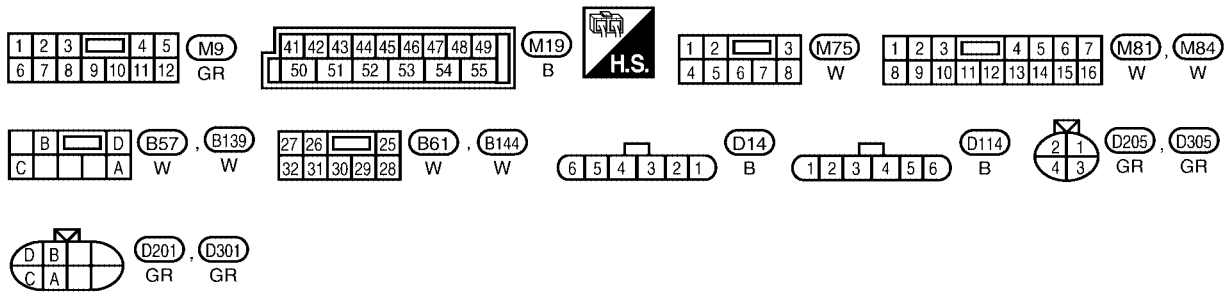




WIWA1115E

BL-D/LOCK-12

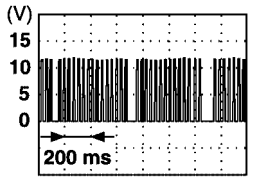




WIWA1248E

Terminals and Reference Value for BCM

EIS007DE

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
12	GR/L	Front door switch RH	Door open (ON) → Door closed (OFF)	0 → Battery voltage
13	O/B	Sliding door switch RH	Door open (ON) → Door closed (OFF)	0 → Battery voltage
22	Y/B	Bus	When ignition switch is ON or power window timer operates	 PIIA2344E
37	B/R	Key switch (insert)	Key inserted in IGN key cylinder (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
39	L	CAN-H	—	—
40	P	CAN-L	—	—
42	Y/G	Battery power supply	—	Battery voltage
44	G	Front door lock assembly LH (actuator) (unlock)	Driver door lock knob (locked → unlocked)	0 → Battery voltage for 300 ms
50	V	All door lock actuator (lock)	Driver door lock knob (neutral → lock)	0 → Battery voltage for 300 ms
51	G/Y	Front door lock actuator RH, sliding door lock actuators LH/ RH and back door lock actuator (unlock)	Door lock and unlock switch (locked → unlocked)	0 → Battery voltage for 300 ms
52	B/W	Ground	—	—
55	W/B	Battery power supply	—	Battery voltage
58	O	Back door switch (without automatic back door system) or back door latch actuator (with automatic back door system)	Door open (ON) → Door close (OFF)	0 → Battery voltage
62	GR/R	Front door switch LH	Door open (ON) → Door close (OFF)	0 → Battery voltage
63	W/G	Sliding door switch LH	Door open (ON) → Door close (OFF)	0 → Battery voltage

Work Flow

EIS007DF

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-19, "System Description" .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to BL-40, "Trouble Diagnoses Symptom Chart" .
4. Does power door lock system operate normally? OK: GO TO 5, NG: GO TO 3.
5. Inspection End.

CONSULT–II Function (BCM)

EIS007DG

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

BCM diagnostic test item	Diagnostic mode	Description
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 date 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 result 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.

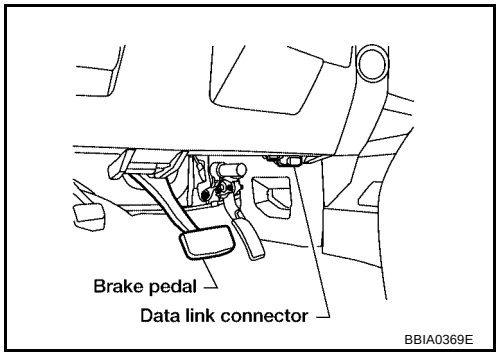
CONSULT–II INSPECTION PROCEDURE

"DOOR LOCK"

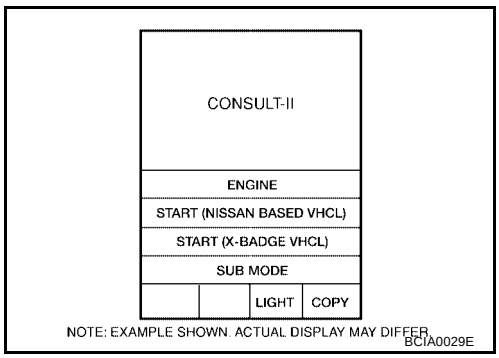
CAUTION:

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.

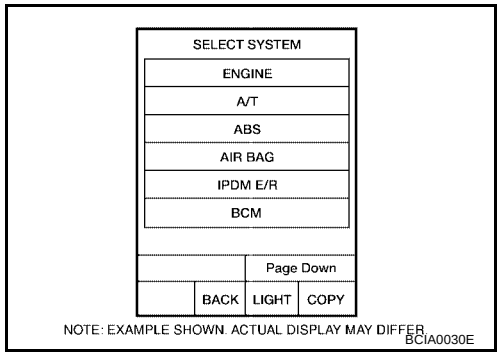
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



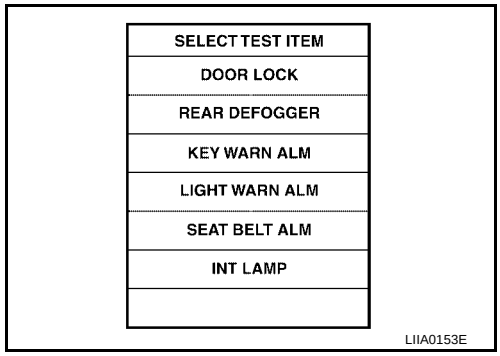
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



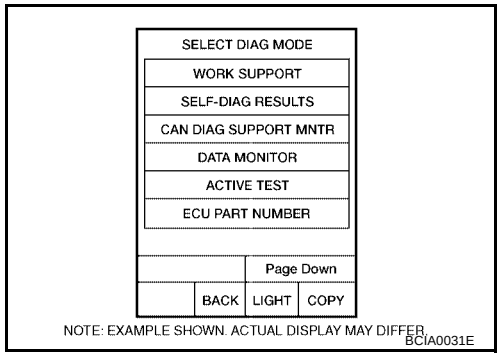
5. Touch “BCM”.
If "BCM" is not indicated, refer to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Touch “DOOR LOCK”.



7. Select diagnosis mode.
“DATA MONITOR” and “ACTIVE TEST” are available.



DATA MONITOR

Monitor item "OPERATION"		Content
KEY ON SW	"ON/OFF"	Indicates [ON/OFF] condition of key switch.
CDL LOCK SW	"ON/OFF"	Indicates [ON/OFF] condition of lock signal from lock/unlock switch LH and RH.
CDL UNLOCK SW	"ON/OFF"	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch LH and RH.
KEY CYL LK-SW	"ON/OFF"	Indicates [ON/OFF] condition of lock signal from key cylinder.
KEY CYL UN-SW	"ON/OFF"	Indicates [ON/OFF] condition of unlock signal from key cylinder.
IGN ON SW	"ON/OFF"	Indicates [ON/OFF] condition of ignition switch.
DOOR SW–DR	"ON/OFF"	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW–AS	"ON/OFF"	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW–RR	"ON/OFF"	Indicates [ON/OFF] condition of sliding door switch RH.
DOOR SW–RL	"ON/OFF"	Indicates [ON/OFF] condition of sliding door switch LH.
BACK DOOR SW	"ON/OFF"	Indicates [ON/OFF] condition of back door switch.

ACTIVE TEST

Test item	Content
ALL LOCK/UNLOCK	This test is able to check all door lock actuators lock operation. These actuators lock when "ON" on CONSULT–II screen is touched.
DR UNLOCK	This test is able to check front door lock assembly LH (actuator) unlock operation.These actuators lock when "ON" on CONSULT–II screen is touched.
OTHER UNLOCK	This test is able to check door lock actuators [except front door lock assembly LH (actuator)] unlock operation.These actuators unlock when "ON" on CONSULT–II screen is touched.

Trouble Diagnoses Symptom Chart

EIS007DH

Symptom	Repair order	Refer to page
Key reminder door function does not operate properly.	1. Door switch check	BL-42
	2. Key switch (Insert) check	BL-46
	3. Replace BCM.	BCS-20
Power door lock does not operate with door lock and unlock switch on main power window and door lock/unlock switch or power window and door lock/unlock switch RH.	1. Door lock/unlock switch check	BL-47
Front door lock assembly LH (actuator) does not operate.	1. Front door lock assembly LH (actuator) check	BL-49
Specific door lock actuator does not operate.	1. Door lock actuator check (Front LH)	BL-49
	2. Door lock actuator check (Front RH)	BL-50
	3. Door lock actuator check (Sliding door)	BL-51
	4. Back door lock actuator check (Without automatic back door system)	BL-52
	5. Back door lock actuator check (With automatic back door system)	BL-177
Power door lock does not operate with front door lock assembly LH (key cylinder switch) operation.	1. Front door lock assembly LH (key cylinder switch) check	BL-53
	2. Replace BCM.	BCS-20
Power door lock does not operate.	1. BCM power supply and ground circuit check	BL-40
	2. Door lock/unlock switch check	BL-47
	3. Replace BCM.	BCS-20

BCM Power Supply and Ground Circuit Check

EIS007DI

1. CHECK FUSE AND FUSIBLE LINK

Check the following BCM fuse and fusible link.

Component Parts	Terminal No. (SIGNAL)	Ampere	No.	Location
BCM	42 (BAT power supply)	15A	3	Fuse block (J/B)
BCM	55 (BAT power supply)	50A	**j**	Fuse and fusible link box

NOTE:

Refer to BL-18, "Component Parts and Harness Connector Location" .

OK or NG

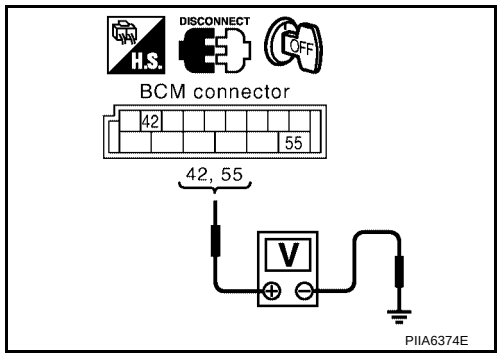
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to PG-4, "POWER SUPPLY ROUTING CIRCUIT" .

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM.
3. Check voltage between BCM connector M19 terminals 42, 55 and ground.

Connector	Terminals		Voltage (V) (Approx.)
	(+)	(-)	
M19	42	Ground	Battery voltage
	55		



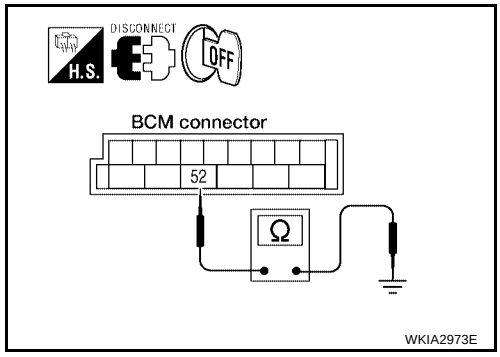
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M19 terminal 52 and ground.

Connector	Terminals		Continuity
	(+)	(-)	
M19	52	Ground	Yes



OK or NG

OK >> Power supply and ground circuits are OK.
NG >> Repair or replace harness.

Door Switch Check (Without Automatic Back Door System)

EIS007DJ

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When doors are open:

DOOR SW-DR : ON
DOOR SW-AS : ON
DOOR SW-RR : ON
DOOR SW-RL : ON
BACK DOOR SW : ON

- When doors are closed:

DOOR SW-DR : OFF
DOOR SW-AS : OFF
DOOR SW-RR : OFF
DOOR SW-RL : OFF
BACK DOOR SW : OFF

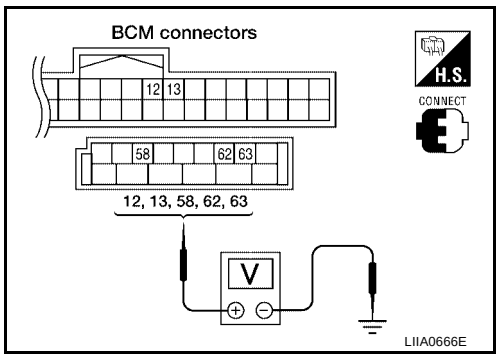
DATA MONITOR	
MONITOR	
DOOR SW - DR	OFF
DOOR SW - AS	OFF
DOOR SW - RR	OFF
DOOR SW - RL	OFF
BACK DOOR SW	OFF

LIIA0665E

Without CONSULT-II

Check voltage between BCM connector M18 or M20 terminals 12, 13, 58, 62, 63 and ground.

Connector	Item	Terminals (+)	Terminals (–)	Condition	Voltage (V) (Approx.)
M20	Back door switch	58	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62			
	Sliding door switch LH	63			
M18	Front door switch RH	12			
	Sliding door switch RH	13			



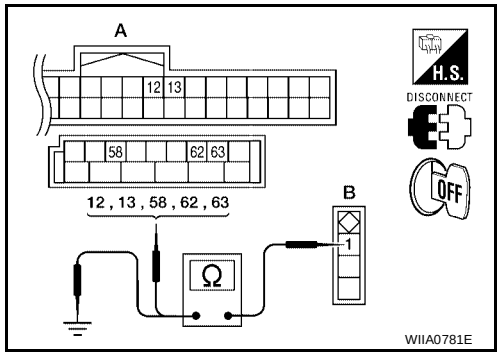
OK or NG

OK >> Door switch circuit is OK.
NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) or D512 (Back) terminal 1 and BCM connector (A) M18, M20 terminals 12, 13, 58, 62 and 63.

1 - 12 : Continuity should exist.
1 - 13 : Continuity should exist.
1 - 58 : Continuity should exist.
1 - 62 : Continuity should exist.
1 - 63 : Continuity should exist.



4. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) or D512 (Back) terminal 1 and ground.

1 - Ground : Continuity should not exist.

OK or NG

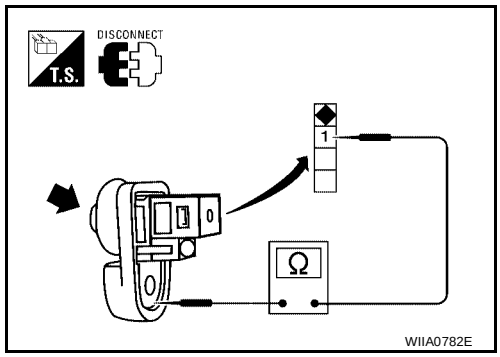
OK >> GO TO 3.
NG >> Repair or replace harness.

3. CHECK DOOR SWITCHES

FRONT AND SLIDING DOORS

Check continuity between front or sliding door switch terminal 1 and exposed metal of switch while pressing and releasing switch.

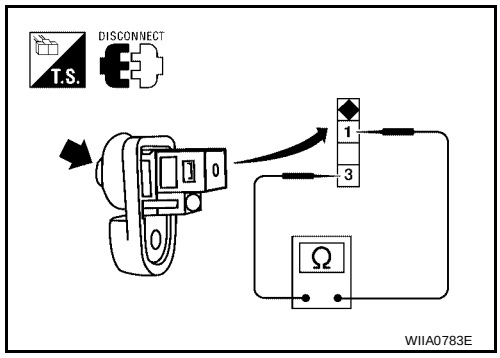
Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.



BACK DOOR

Check continuity between back door switch terminals 1 and 3 while pressing and releasing switch.

Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.



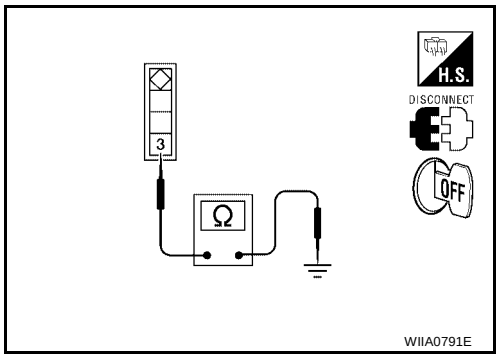
OK or NG

OK >> (Front and sliding doors) Switch circuit is OK.
OK >> (Back door) GO TO 4.
NG >> Replace door switch.

4. CHECK BACK DOOR SWITCH GROUND

Check continuity between back door switch connector terminal 3 and ground.

3 - Ground : Continuity should exist.



OK or NG

OK >> Back door switch circuit is OK.
NG >> Repair or replace harness.

Door Switch Check (With Automatic Back Door System)

EIS007DK

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

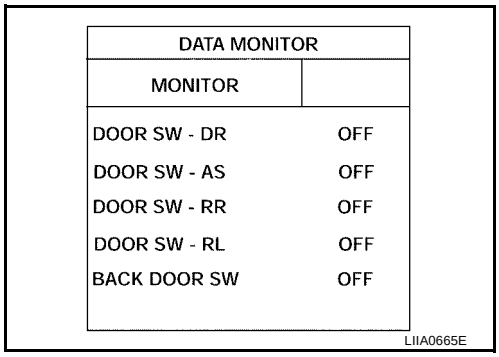
Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When doors are open:

DOOR SW-DR : ON
DOOR SW-AS : ON
DOOR SW-RR : ON
DOOR SW-RL : ON
BACK DOOR SW : ON

- When doors are closed:

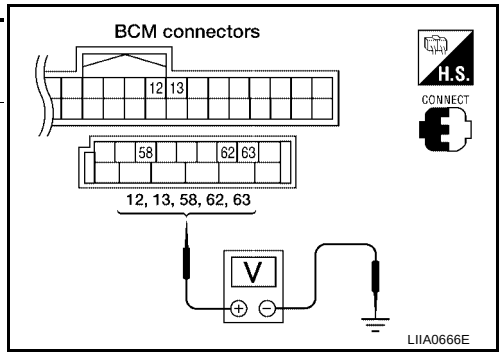
DOOR SW-DR : OFF
DOOR SW-AS : OFF
DOOR SW-RR : OFF
DOOR SW-RL : OFF
BACK DOOR SW : OFF



Without CONSULT-II

Check voltage between BCM connector M18 or M20 terminals 12, 13, 58, 62, 63 and ground.

Connector	Item	Terminals (+)	Terminals (–)	Condition	Voltage (V) (Approx.)
M20	Back door latch (door ajar switch)	58	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62			
	Sliding door switch LH	63			
M18	Front door switch RH	12			
	Sliding door switch RH	13			



OK or NG

OK >> Door switch is OK.
NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) terminal 1 or back door latch (door ajar switch) connector (C) D511 terminal 7 and BCM connector (A) M18, M20 terminals 12, 13, 58, 62 and 63

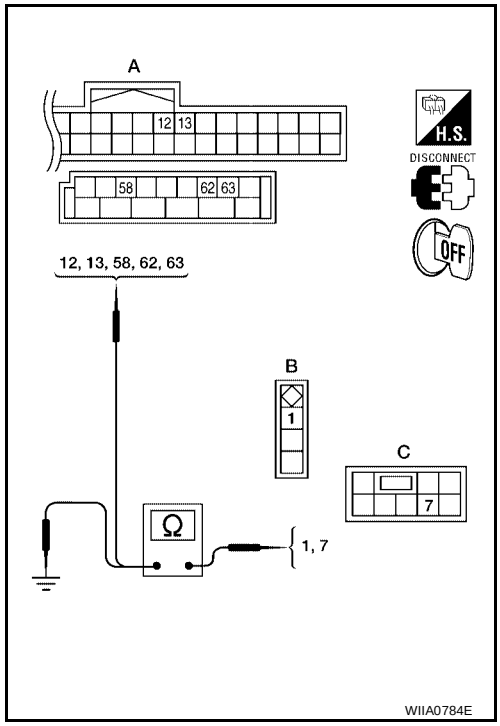
1 - 62 : Continuity should exist.
1 - 12 : Continuity should exist.
1 - 63 : Continuity should exist.
1 - 13 : Continuity should exist.
7 - 58 : Continuity should exist.

4. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) terminal 1 or back door latch (door ajar switch) connector (C) D511 terminal 7 and ground.

1 - Ground : Continuity should not exist.
7 - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

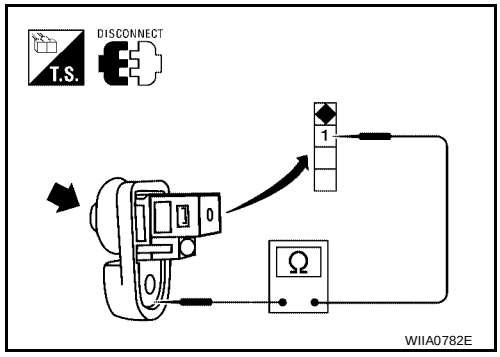


3. CHECK DOOR SWITCHES

FRONT AND SLIDING DOORS

Check continuity between front or sliding door switch terminal 1 and exposed metal of switch while pressing and releasing switch.

Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.



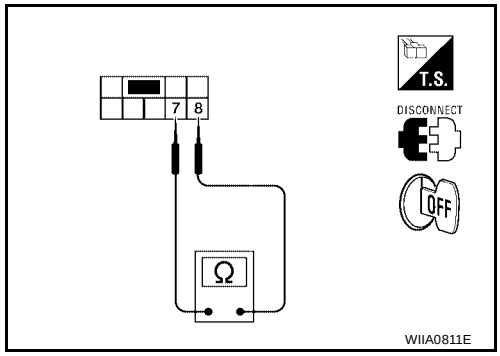
BACK DOOR

Check continuity between back door latch (door ajar switch) connector D511 terminals 7 and 8 while pressing (closing back door) and releasing (opening back door) switch.

When back door is open : Continuity should exist.
When back door is closed : Continuity should not exist.

OK or NG

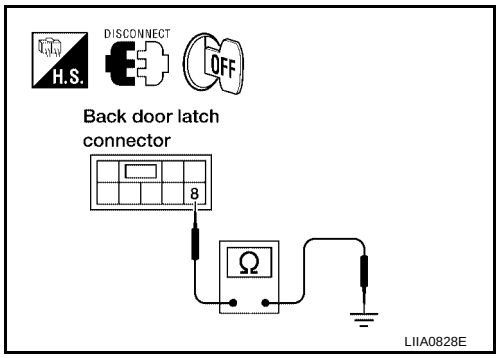
OK >> (Front and sliding doors) Switch circuit is OK.
OK >> (Back door) GO TO 4.
NG >> Replace door switch.



4. CHECK BACK DOOR SWITCH GROUND

Check continuity between back door latch (door ajar switch) connector terminal 8 and ground.

8 - Ground : Continuity should exist.



OK or NG

OK >> Back door switch circuit is OK.
NG >> Repair or replace harness.

Key Switch (Insert) Check

EIS007DL

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

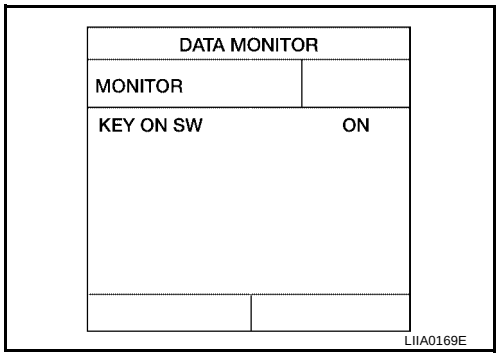
Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When key is inserted to ignition key cylinder:

  KEY ON SW : ON

- When key is removed from ignition key cylinder:

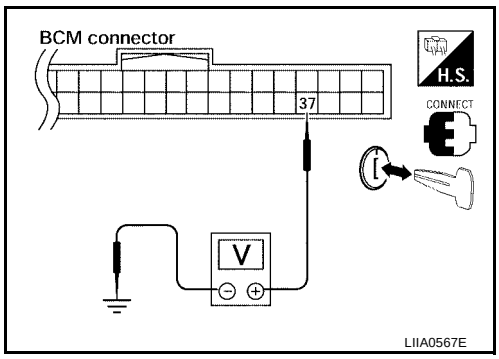
  KEY ON SW : OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 37 and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M18	37	Ground	Key is inserted.	Battery voltage
			Key is removed.	0



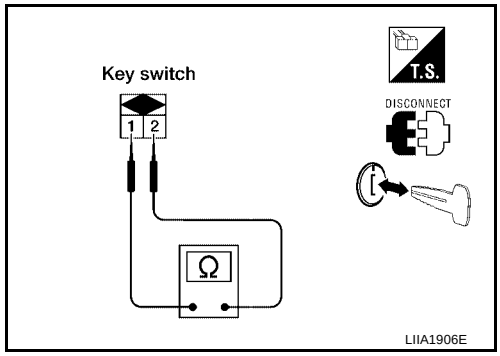
OK or NG

OK >> Key switch (insert) circuit is OK.
NG >> GO TO 2.

2. CHECK KEY SWITCH (INSERT)

1. Turn ignition switch OFF.
2. Disconnect key switch.
3. Check continuity between key switch terminals 1, 2.

Terminals	Condition	Continuity
1 – 2	Key is inserted.	Yes
	Key is removed.	No



OK or NG

OK >> Repair or replace harness.
NG >> Replace key switch. Refer to PS-9, "STEERING COLUMN" .

Door Lock/Unlock Switch Check

EIS007DM

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-II

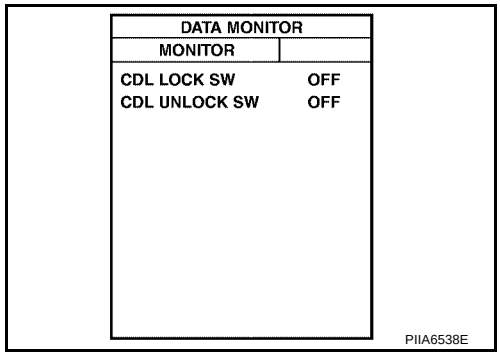
Check door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When door lock/unlock switch is turned to LOCK:

  CDL LOCK SW : ON

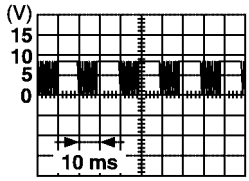
- When door lock/unlock switch is turned to UNLOCK:

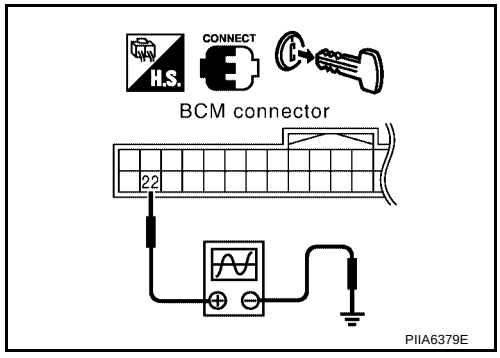
  CDL UNLOCK SW : ON



Without CONSULT-II

1. Remove key from ignition key cylinder.
2. Check the signal between BCM connector M18 terminal 22 and ground with oscilloscope when door lock/unlock switch is turned to LOCK or UNLOCK.
3. Make sure the signals which are shown in the figure below can be detected during 10 seconds just after the door lock/unlock switch is turned to LOCK or UNLOCK.

Connector	Terminal		Voltage (V) (Approx.)
	(+)	(–)	
M18	22	Ground	

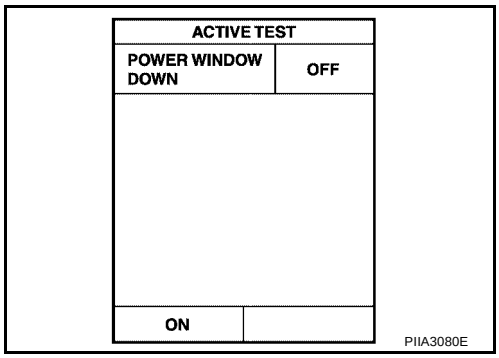


OK or NG

OK >> Door lock and unlock switch circuit is OK.
NG >> GO TO 2.

2. CHECK BCM OUTPUT SIGNAL

Check ("POWER WINDOW DOWN") in ACTIVE TEST mode for "MULTI REMOTE ENT" with CONSULT–II. Refer to BL-68, "Active Test" .



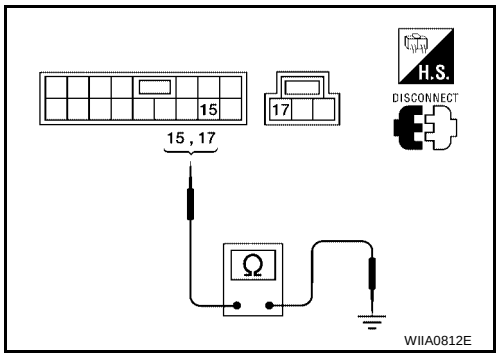
When "ACTIVE TEST" is performed, are the front windows lowered?

YES or NO

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .

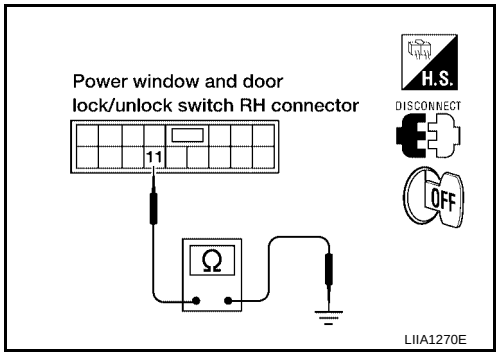
3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch or power window and door lock/unlock switch RH.
3. Check continuity between main power window and door lock/unlock switch connector D7 terminal 15 (without automatic back door system) or D8 terminal 17 (with automatic back door system) and ground.



15 - Ground : Continuity should exist.
17 - Ground : Continuity should exist.

4. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground.



11 - Ground : Continuity should exist.

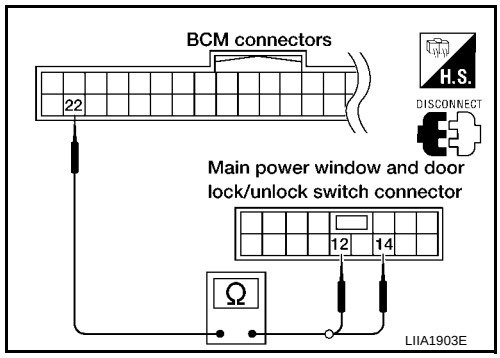
OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness.

4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

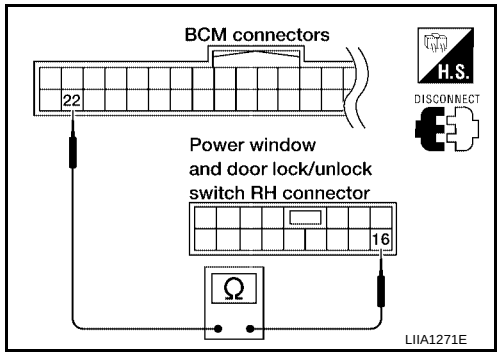
1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 12 (without automatic back door system) or terminal 14 (with automatic back door system).

22 - 12 : Continuity should exist.
22 - 14 : Continuity should exist.



3. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

22 - 16 : Continuity should exist.



OK or NG

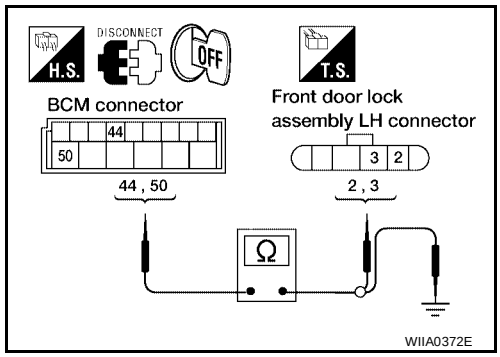
OK >> Replace main power window and door lock/unlock switch or power window and door lock/unlock switch RH. Refer to EI-29, "Removal and Installation" .
NG >> Repair or replace harness.

Front Door Lock Assembly LH (Actuator) Check

EIS007DN

1. CHECK FRONT DOOR LOCK ASSEMBLY LH (ACTUATOR) HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and front door lock assembly LH (actuator).
3. Check continuity between BCM connector M19 terminals 44, 50 and front door lock assembly LH (actuator) connector D14 terminals 2, 3.



Connector	Terminals	Connector	Terminals	Continuity
M19	44	D14	2	Yes
	50		3	Yes

4. Check continuity between BCM connector M19 terminals 44, 50 and body ground.

Connector	Terminals		Continuity
M19	44	Ground	No
	50		No

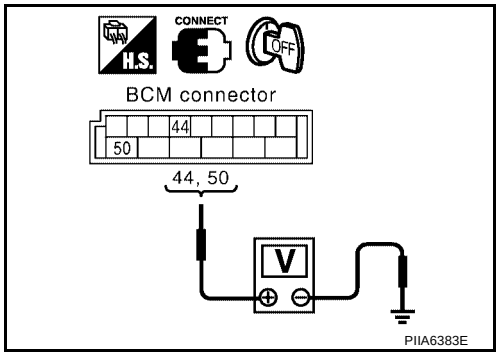
OK or NG

OK >> Go to 2.
NG >> Repair or replace harness.

2. CHECK FRONT DOOR LOCK ASSEMBLY LH (ACTUATOR) SIGNAL

1. Reconnect BCM.
2. Check voltage between BCM connector M19 terminals 44, 50 and ground.

Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
M19	44	Ground	Driver door lock/unlock switch is turned to UNLOCK	0 → Battery voltage for 300 ms
	50		Driver door lock/unlock switch is turned to LOCK	0 → Battery voltage for 300 ms



OK or NG

OK >> Replace front door lock assembly LH (actuator). Refer to BL-197, "Removal and Installation" .
NG >> Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .

Front Door Lock Actuator RH Check

EIS007DO

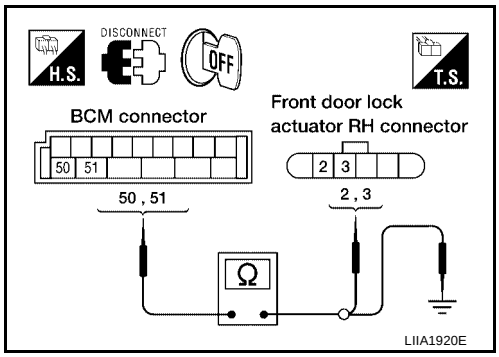
1. CHECK DOOR LOCK ACTUATOR HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and front door lock actuator RH.
3. Check continuity between BCM connector M19 terminals 50, 51 and front door lock actuator RH connector D114 terminals 2, 3.

Terminals		Continuity
50	3	Yes
51	2	Yes

4. Check continuity between BCM connector M19 terminals 50, 51 and body ground.

Terminals		Continuity
50	Ground	No
51		No



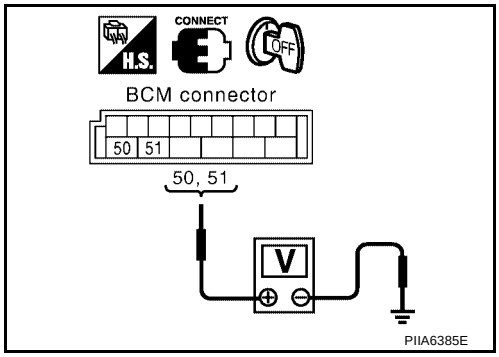
OK or NG

OK >> GO TO 2.
NG >> Repair or replace harness.

2. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Reconnect BCM.
2. Check voltage between BCM connector M19 terminals 50, 51 and ground.

Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
M19	50	Ground	Door lock/unlock switch is turned to LOCK	0 → Battery voltage for 300 ms
	51		Door lock/unlock switch is turned to UNLOCK	0 → Battery voltage for 300 ms



OK or NG

OK >> Replace front door lock actuator RH. Refer to BL-197, "Removal and Installation" .
NG >> Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .

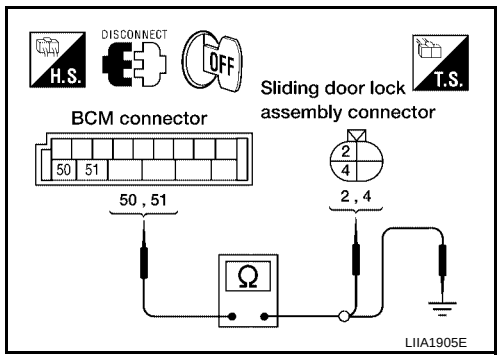
Door Lock Actuator Check (Sliding Door)

EIS007DP

1. CHECK DOOR LOCK ACTUATOR HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and each door lock actuator.
3. Check continuity between BCM connector M19 terminals 50, 51 and sliding door lock actuator connector terminals 2, 4.

Terminal		Continuity
50	4	Yes
51	2	Yes



4. Check continuity between BCM connector M19 terminals 50, 51 and body ground.

Terminals		Continuity
50	Ground	No
51		No

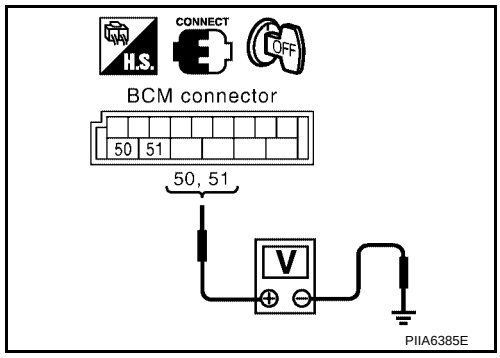
OK or NG

OK >> GO TO 2.
NG >> Repair or replace harness.

2. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Reconnect BCM.
2. Check voltage between BCM connector M19 terminals 50, 51 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M19	50	Ground	Door lock/unlock switch is turned to LOCK	0 → Battery voltage for 300 ms
	51		Door lock/unlock switch is turned to UNLOCK	0 → Battery voltage for 300 ms



OK or NG

OK >> Replace sliding door lock actuator. Refer to BL-200, "SLIDE DOOR LOCK" .
NG >> Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .

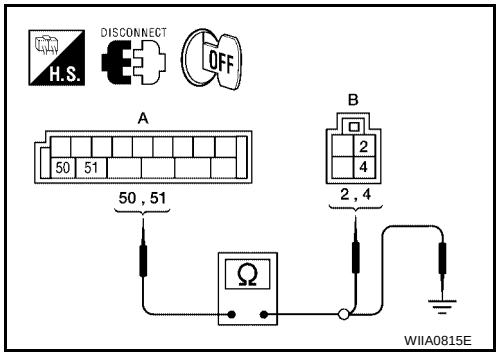
Back Door Lock Actuator Check (Without Automatic Back Door)

EIS007NJ

1. CHECK BACK DOOR LOCK ACTUATOR HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and back door lock actuator.
3. Check continuity between BCM connector (A) M19 terminals 50, 51 and back door lock actuator connector (B) D513 terminals 2, 4.

Terminals		Continuity
50	4	Yes
51	2	Yes



4. Check continuity between BCM connector (A) M19 terminals 50, 51 and body ground.

Terminals		Continuity
50	Ground	No
51		No

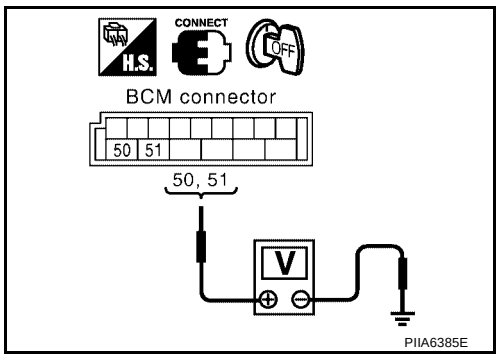
OK or NG

OK >> GO TO 2.
NG >> Repair or replace harness.

2. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Reconnect BCM.
2. Check voltage between BCM connector M19 terminals 50, 51 and ground.

Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
M19	50	Ground	Door lock/unlock switch is turned to LOCK	0 → Battery voltage for 300 ms
	51		Door lock/unlock switch is turned to UNLOCK	0 → Battery voltage for 300 ms



OK or NG

OK >> Replace back door lock actuator. Refer to BL-205, "Back Door Latch" .
NG >> Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .

Front Door Lock Assembly LH (Key Cylinder Switch) Check

EIS007DQ

1. CHECK DOOR KEY CYLINDER SWITCH LH

With CONSULT-II

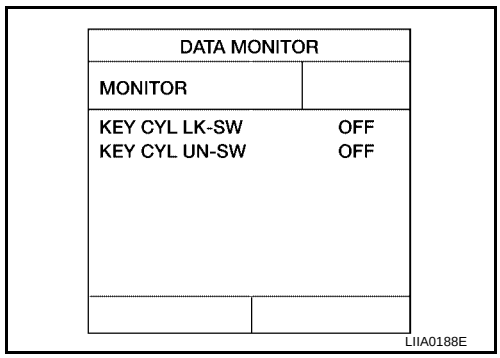
Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode in CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When key inserted in front key cylinder is turned to LOCK:

  KEY CYL LK-SW : ON

- When key inserted in front key cylinder is turned to UNLOCK:

  KEY CYL UN-SW : ON

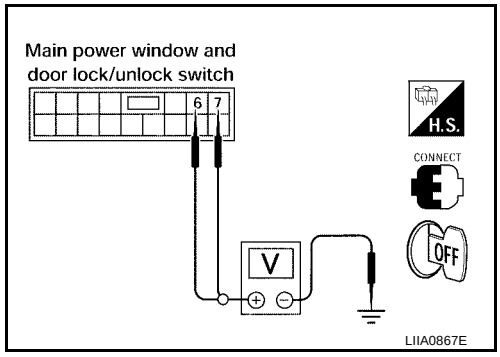


Without CONSULT-II

Check voltage between main power window and door lock/unlock switch connector D7 terminals 6, 7 (without automatic sliding door system) or terminals 4, 6 (with automatic sliding door system) and ground.

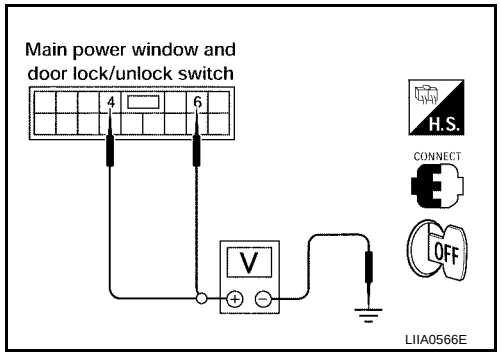
Without Automatic Sliding Door System

Connector	Terminals (+)	Terminals (–)	Condition	Voltage (V) (Approx.)
D7	6	Ground	Neutral/Unlock	5
			Lock	0
	7		Neutral/Lock	5
			Unlock	0



With Automatic Sliding Door System

Connector	Terminals (+)	Terminals (–)	Condition	Voltage (V) (Approx.)
D7	4	Ground	Neutral/Unlock	5
			Lock	0
	6		Neutral/Lock	5
			Unlock	0



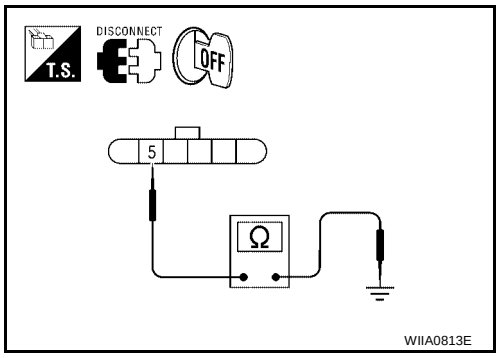
OK or NG

OK >> Front door lock assembly LH (key cylinder switch) signal is OK.
NG >> GO TO 2.

2. CHECK DOOR KEY CYLINDER SWITCH LH GROUND HARNESS

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly LH (key cylinder switch).
3. Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminal 5 and body ground.

Connector	Terminals	Continuity
D14	5 – Ground	Yes



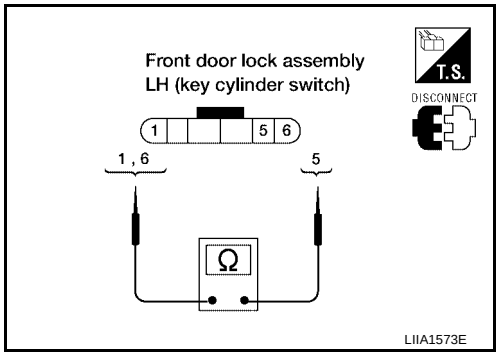
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. CHECK DOOR KEY CYLINDER SWITCH LH

Check continuity between front door lock assembly LH (key cylinder switch) terminals.

Terminals	Condition	Continuity
1 – 5	Key is turned to UNLOCK or neutral.	No
	Key is turned to LOCK.	Yes
5 – 6	Key is turned to LOCK or neutral.	No
	Key is turned to UNLOCK.	Yes



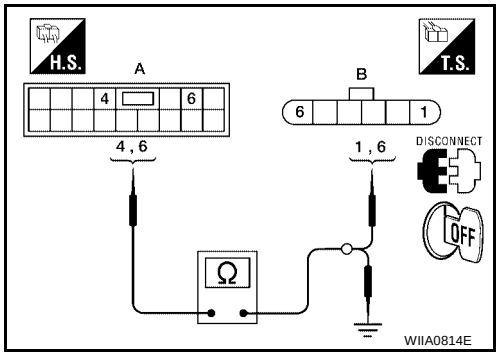
OK or NG

OK >> GO TO 4.
NG >> Replace front door lock assembly LH (key cylinder switch). Refer to BL-197, "FRONT DOOR LOCK" .

4. CHECK DOOR KEY CYLINDER HARNESS

Check continuity between main power window and door lock/unlock switch connector (A) D7 terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector (B) D14 terminals 1, 6 and body ground.

Connector	Terminals	Connector	Terminals	Continuity
A: Main power window and door lock/unlock switch	4	B: Front door lock assembly LH (key cylinder switch)	1	Yes
	6		6	Yes
	4	Ground		No
	6	Ground		No



OK or NG

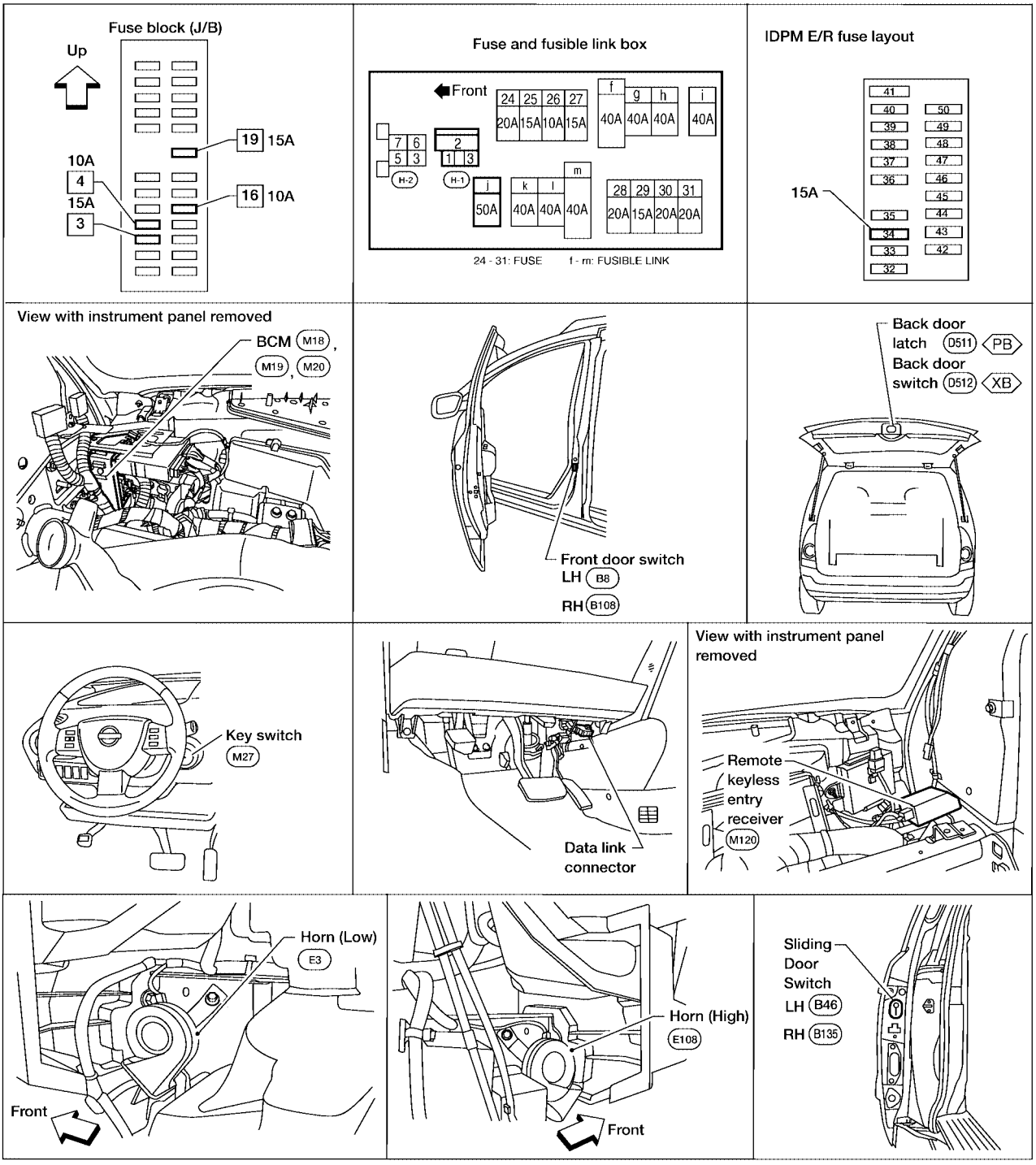
OK >> Replace main power window and door lock/unlock switch.
NG >> Repair or replace harness.

REMOTE KEYLESS ENTRY SYSTEM

PFP:28596

Component Parts and Harness Connector Location

EIS007DR



PB : WITH POWER BACK DOOR

XB : WITHOUT POWER BACK DOOR

LIIA1904E

System Description

EIS007DS

INPUTS

Power is supplied at all times

- to BCM terminal 55
- through 50A fusible link (letter **j** , located in the fuse and fusible link box).
- to BCM terminal 42
- through 15A fuse [No. 3, located in the fuse block (J/B)].

When the ignition key is inserted in the ignition cylinder, power is supplied

- to BCM terminal 37
- through key switch terminals 1 and 2
- through 15A fuse [No. 19, located in the fuse block (J/B)].

When the ignition switch is in ACC or ON, power is supplied

- to BCM terminal 11
- through 10A fuse [No. 4, located in the fuse block (J/B)].

When the ignition switch is in ON or START, power is supplied

- to BCM terminal 38
- through 10A fuse [No. 16, located in the fuse block (J/B)].

When the front door switch LH is ON (door is OPEN), ground is supplied

- to BCM terminal 62
- through front door switch LH terminal 1
- through front door switch LH case ground.

When the front door switch RH is ON (door is OPEN), ground is supplied

- to BCM terminal 12
- through front door switch RH terminal 1
- through front door switch RH case ground.

When the sliding door switch LH is ON (door is OPEN), ground is supplied

- to BCM terminal 63
- through sliding door switch LH terminal 1
- through sliding door switch LH case ground.

When the sliding door switch RH is ON (door is OPEN), ground is supplied

- to BCM terminal 13
- through sliding door switch RH terminal 1
- through sliding door switch RH case ground.

When the back door switch is ON (door is OPEN), ground is supplied

- to BCM terminal 58
- through back door switch terminal 1 (without power back door) or,
- through back door latch terminal 7 (with power back door)
- through back door switch terminal 3 (without power back door)
- through back door latch terminal 8 (with power back door)
- through body grounds D403 and D404.

Keyfob signal is supplied to BCM from the remote keyless entry receiver.
The remote keyless entry system controls operation of the

- power door lock
- sliding door opener (with automatic sliding door system)
- back door opener (with power back door)
- interior lamp and step lamps
- panic alarm
- hazard and horn reminder
- keyless power window down (open)

- auto door lock operation

OPERATION PROCEDURE

- When the keyfob is operated, the signal from the keyfob is sent and the remote keyless entry receiver receives the signal and sends it to the BCM. The BCM only locks/unlocks the doors if the ID number matches. (Remote control entry functions)
- Using the keyfob, the transmitter sends radio waves to the remote keyless entry receiver, which then sends the received waves to the BCM. Only if the ID number matches does the BCM lock/unlock the doors. (Remote control door function)
- Unless the key is inserted into the ignition key cylinder or one of the doors is opened within 1 minute after the UNLOCK switch on the keyfob is pressed, all the doors are automatically locked. (Auto lock function)
- When a door is locked or unlocked, the vehicle turn signal lamps flash and the horn sounds to verify operation. (Active check function)
- When the key is in the ignition key cylinder (when the key switch is ON) and one of the doors is open, the door lock function does not work even when the door lock is operated with the keyfob.
- Keyfob ID set up is available.
- If a keyfob is lost, a new keyfob can be set up. A maximum of 5 IDs can be set up.

Remote Control Entry Functions

Operation Description

- When a button on the keyfob is operated, the signal is sent from the keyfob and received by the remote keyless entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM sends the lock/unlock signal to each door lock actuator.
- When the door lock actuators receive this signal, each operates to lock/unlock its door.
- BCM locks all doors with input of LOCK signal from keyfob.
- When an UNLOCK signal is sent from keyfob once, driver's door will be unlocked.
- Then, if an UNLOCK signal is sent from keyfob again within 5 seconds, all other doors will be unlocked.

Remote control entry operation conditions

Keyfob operation	Operation condition
Door lock operation (locking)	● With key removed (key switch: OFF) ● Closing all doors (door switch: OFF)
Door lock operation (unlocking)	With key removed (key switch: OFF)

Auto Lock Function

Operation Description

- Unless the key is inserted into the ignition key cylinder, one of the doors is opened, or the keyfob is operated within 1 minute after a door lock is unlocked by keyfob operation, all the doors are automatically locked.
  The 1 minute timer count is executed by the BCM and after 1 minute, the BCM sends the lock signal to all doors.
  Lock operations are the same as for the remote control entry function.

Remote Control Auto Sliding Door Function (Vehicles With Automatic Sliding Door System)

Switching from all closed to all open

- When a button on the keyfob is operated, the signal is sent from the keyfob and received by the remote keyless entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM sends the sliding door open signal to the sliding door control unit.
- When the sliding door control unit receives the sliding door open signal, if the remote control auto sliding door operation enable conditions are met, the warning chime is sounded and the sliding door unlock signal is sent to the sliding door latch control unit.
- When the sliding door latch control unit receives the sliding door unlock signal, it operates the release actuator and unlocks the door lock.

- The sliding door control unit operates the magnetic clutch and the sliding door motor to slide the sliding door in the open direction (At this time, speed control, input reverse, and overload reverse control are executed.)
- When the sliding door is opened to the fully open position, the full-open lock engages, the full-open position is detected with the rotation sensor, the sliding door motor is stopped and the magnetic clutch is controlled ON → half clutch → OFF.
- This is held by locking the sliding door at the full open position.

Full open → full closed operation

- When a button of the keyfob is operated, the signal is sent from the keyfob and received by the remote keyless entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM sends the sliding door close request signal to the sliding door control unit.
- When the sliding door control unit receives the sliding door close request signal, if the remote control auto sliding door operation enable conditions are met, the warning chime is sounded and the sliding door full open unlock signal is sent to the sliding door latch control unit and the full open lock is unlocked.
- The sliding door control unit operates the magnetic clutch and the sliding door motor to slide the sliding door in the close direction. (At this time, the sliding door control unit executes speed control, input reverse, and overload reverse control.)
- When the sliding door comes to the half-latch state, the sliding door latch control unit detects the half-latch state through half-latch switch operation. The sliding door latch control unit uses communication to send the half-latch status to the sliding door control unit.
- When the sliding door control unit receives the signal, it switches OFF the sliding door motor and controls the magnetic clutch ON → half clutch.
- When the sliding door auto closure operates and the full latch is detected, the magnetic clutch is controlled half clutch → OFF and when the sliding door auto closure operation ends, the door is fully closed.

Operation condition

Keyfob operation	Operation condition
Sliding door open operation	With key removed (key switch: OFF)
Sliding door close operation	With key removed (key switch: OFF)

For the auto sliding door system operation enable conditions, refer to BL-114, "System Description" .

Active Check Function

Operation Description

When a door is locked or unlocked by keyfob operation, the vehicle turn signals flash and the horn sounds to verify operation.

- When a button on the keyfob is operated, the signal is sent from the remote controller and received by the keyless remote entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM sends the turn signal flashing and horn signal to the IPDM E/R.
- The IPDM E/R flashes the turn signal lamps and sounds the horn for each keyfob operation.

Operating function of hazard and horn reminder

	C mode		S mode	
Keyfob operation	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—
Horn sound	Once	—	—	—

Remote Control Entry Operation

Operation is possible when any of the following operating conditions are met.

- When a button on the keyfob is operated, the signal is sent from the keyfob and received by the remote keyless entry receiver.

- The received signal is sent from remote keyless entry receiver terminal 2 to BCM terminal 20 and compared with the registered ID number.
- If the ID number matches, the BCM sends the lock/unlock signal to the door lock actuator LH.

When the door lock signal is received,

- The BCM supplies voltage from terminal 50 to front door lock assembly LH (actuator) terminal 3 and the front door LH lock is locked

When the door unlock signal is received,

- The BCM supplies voltage from terminal 44 to front door lock assembly LH (actuator) terminal 2 and the front door LH is unlocked.

The front door lock assembly LH (actuator) operation detects the lock/unlock operation of the driver door lock with the status detection switch built into the front door lock assembly (actuator).
When the BCM receives the door lock signal,

- The BCM supplies voltage from terminal 50 to all door lock actuator terminals 3 (front RH), 4 [sliding RH and LH, back (without power back door)] and locks the doors.

When the BCM receives the door unlock signal,

- The BCM supplies voltage from terminal 51 to all door lock actuator terminals 2 and unlocks the doors.

When the sliding door control unit receives the door lock signal (same operation for both left and right sliding),

- It supplies voltage from sliding door control unit terminal 25 to sliding door lock actuator terminal 4 and locks the sliding doors.

When the sliding door control unit receives the door unlock signal (same operation for both left and right sliding),

- It supplies voltage from sliding door control unit terminal 28 to sliding door lock actuator terminal 2 and unlocks the sliding doors.

When the back door control unit receives the door lock signal,

- It stops the supply of voltage to the back door closure motor and stops the back door open operation.

When the back door control unit receives the door unlock signal,

- The supply of voltage to the back door closure motor goes on standby and operation of the back door opener switch enables operation.

Remote Control Auto Sliding Door Operation

For explanation of remote control auto sliding door operation, refer to BL-114, "System Description" .

Active Check Function

When a door is locked or unlocked by keyfob operation, the turn signal lamps are flashed and the horn sounds to verify operation.

- When a button on the keyfob is operated, the signal is sent from the keyfob and received by the remote keyless entry receiver.
- The received signal is sent from the remote keyless entry receiver terminal 2 to BCM terminal 20 and compared with the registered ID number.
- If the ID number matches, the BCM sends the turn signal flash signal to the IPDM E/R.
- The IPDM E/R supplies voltage, turning on each turn signal lamp.

Hazard and Horn Reminder

BCM output to IPDM E/R for horn reminder signal as DATA LINE (CAN-H line and CAN-L line).
The hazard and horn reminder has C mode (horn chirp mode) and S mode (non-horn chirp mode).

How to change hazard and horn reminder mode

With CONSULT-II
Hazard and horn reminder can be changed using “WORK SUPPORT” mode in “MULTI ANSWER BACK SET".

Without CONSULT-II
Refer to Owner's Manual for instructions.

Interior Lamp Operation

When the following input signals are both supplied:

- all door switches are in the OFF position. (when all the doors are closed);
- lamps on demand switch is in DOOR position.

Remote keyless entry system turns on interior lamp and ignition keyhole illumination (for 30 seconds) with input of UNLOCK signal from keyfob.
For detailed description, refer to LT-139, "ROOM LAMP TIMER OPERATION" .

Panic Alarm Operation

When key switch is OFF (when ignition key is not inserted in key cylinder), remote keyless entry system turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from keyfob.
The alarm automatically turns off after 25 seconds or when BCM receives any signal from keyfob.

Keyless Power Window Down (open) Operation

When keyfob unlock switch is turned ON with ignition switch OFF, and the switch is detected to be on continuously for more than 1 second, the driver's door and passenger's door power windows are simultaneously opened.
Power window is operated to open and the operation continues as long as the keyfob unlock switch is pressed.

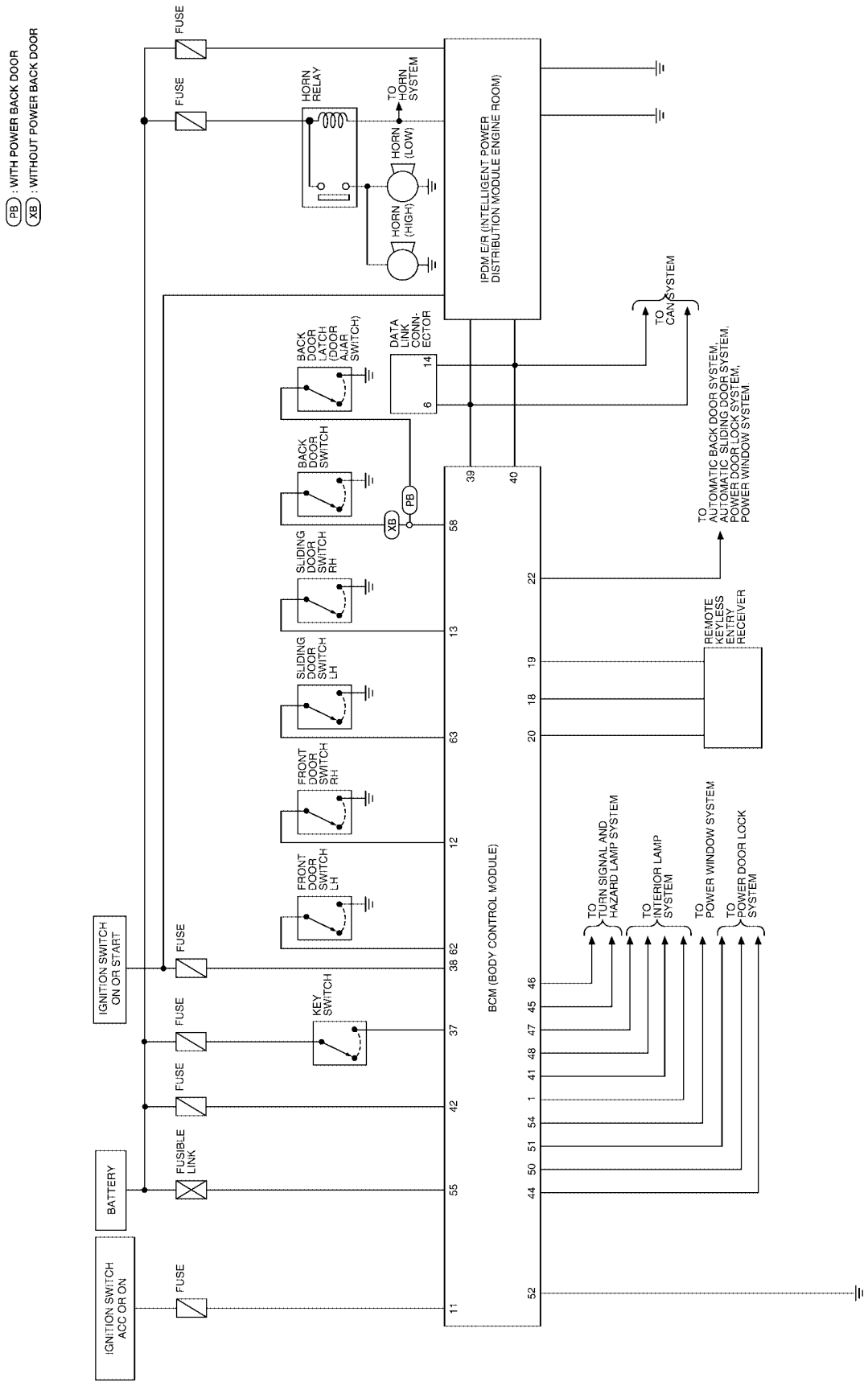
CAN Communication System Description

EIS007DT

Refer to LAN-24, "CAN COMMUNICATION" .

Schematic

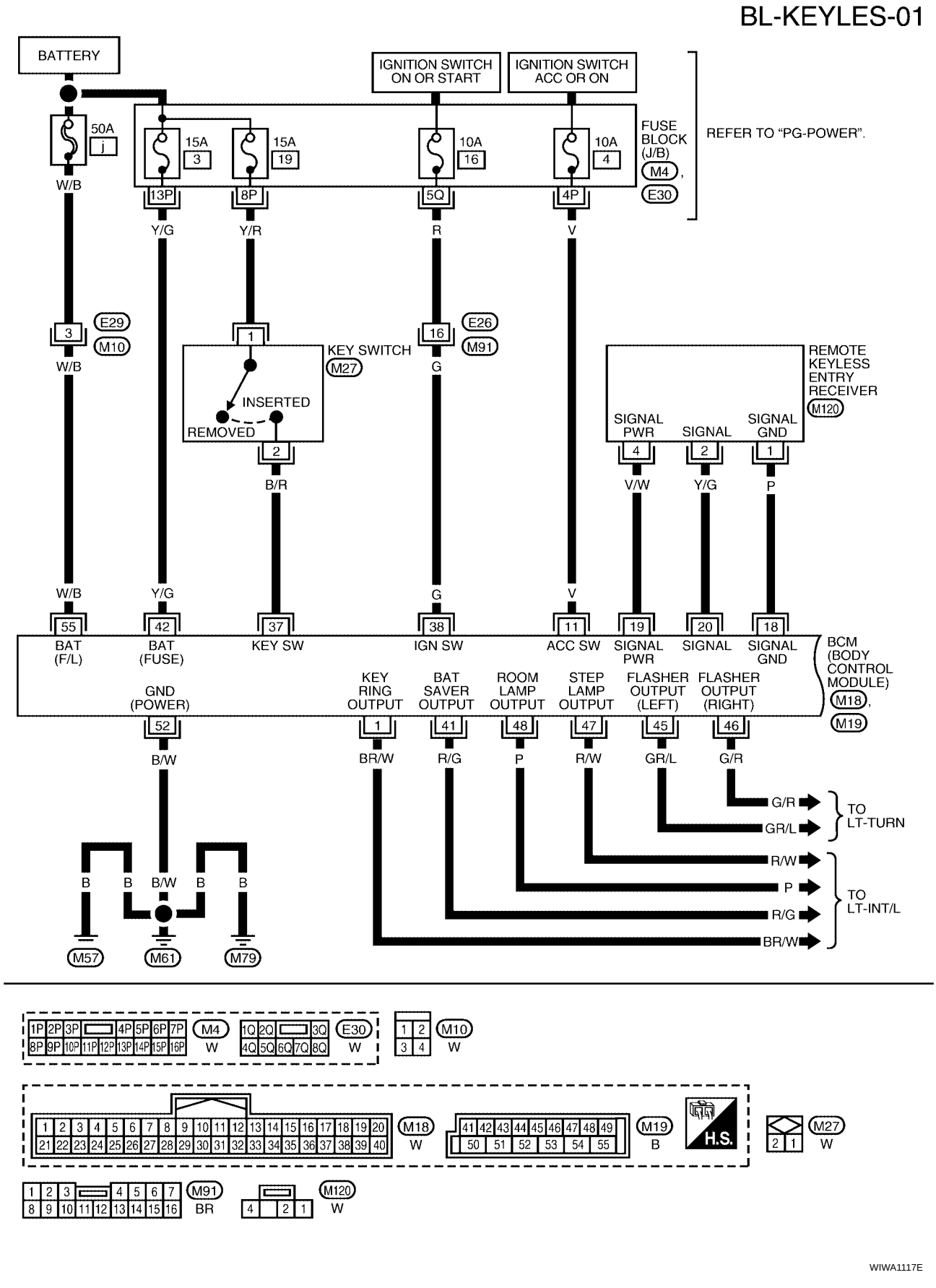
EIS007DU



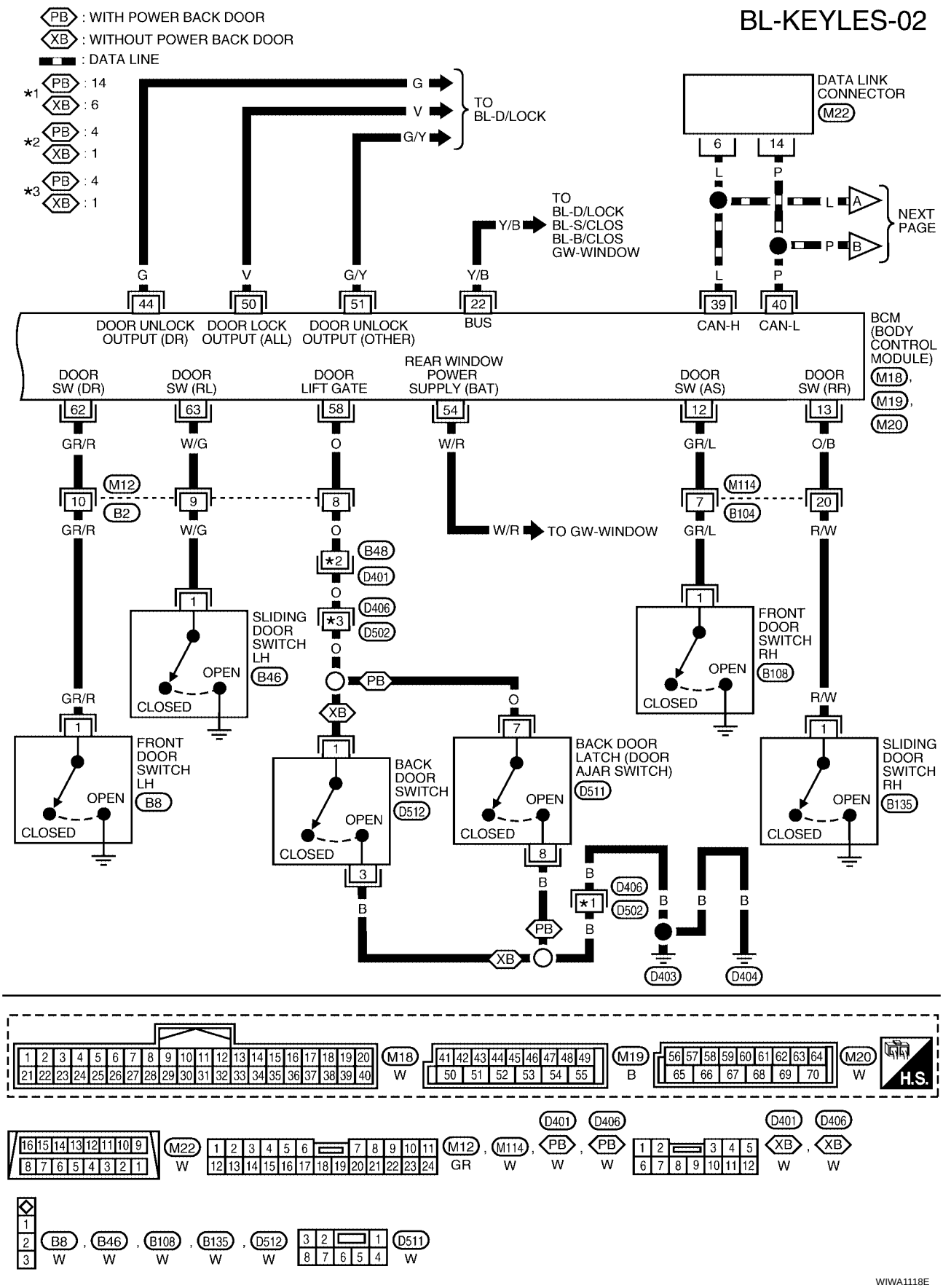
WIWA1116E

Wiring Diagram — KEYLES —

EIS007DV

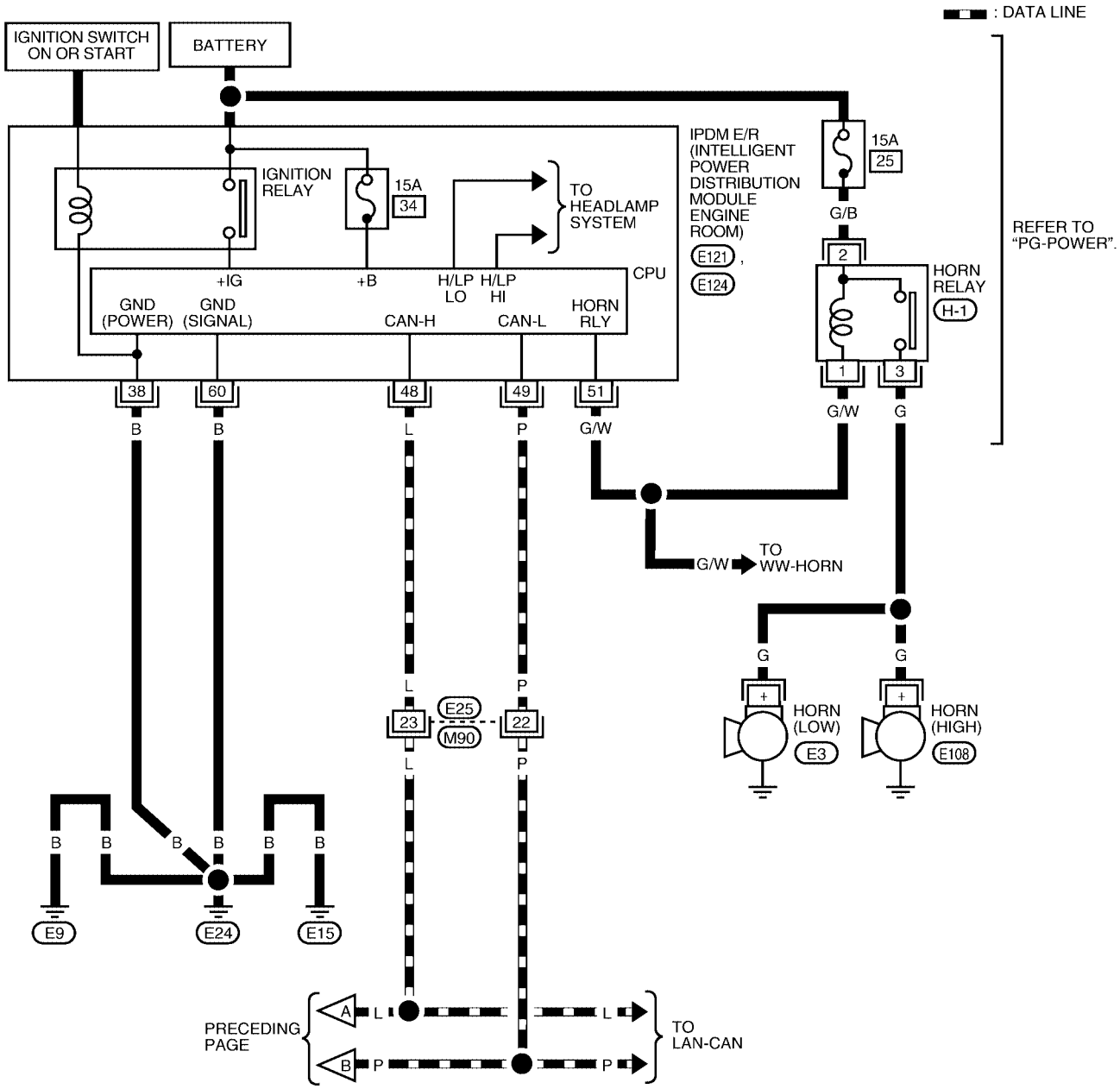


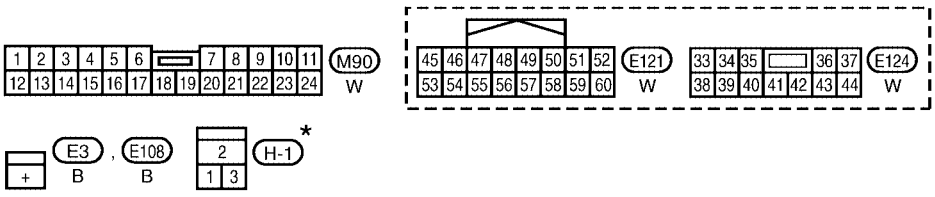
WIWA1117E


BL-KEYLES-02
PB : WITH POWER BACK DOOR
XB : WITHOUT POWER BACK DOOR
: DATA LINE
*1 PB : 14
XB : 6
*2 PB : 4
XB : 1
*3 PB : 4
XB : 1
G
V
G/Y
TO BL-D/LOCK
Y/B
TO BL-D/LOCK BL-S/CLOS BL-B/CLOS GW-WINDOW
DATA LINK CONNECTOR M22
6
14
L
P
NEXT PAGE
44
50
51
22
39
40
DOOR UNLOCK OUTPUT (DR)
DOOR LOCK OUTPUT (ALL)
DOOR UNLOCK OUTPUT (OTHER)
BUS
CAN-H
CAN-L
BCM (BODY CONTROL MODULE) M18, M19, M20
DOOR SW (DR)
DOOR SW (RL)
DOOR LIFT GATE
REAR WINDOW POWER SUPPLY (BAT)
DOOR SW (AS)
DOOR SW (RR)
62
63
58
54
12
13
GR/R
W/G
O
W/R
GR/L
O/B
M12
B2
M114
B104
10
9
8
7
20
W/R TO GW-WINDOW
R/W
B48
D401
D406
D502
*2
*3
SLIDING DOOR SWITCH LH B46
FRONT DOOR SWITCH RH B108
FRONT DOOR SWITCH LH B8
BACK DOOR SWITCH D512
BACK DOOR LATCH (DOOR AJAR SWITCH) D511
SLIDING DOOR SWITCH RH B135
OPEN
CLOSED
PB
XB
*1
D403
D404
M18
M19
M20
W
B
H.S.
M22
M12
M114
GR
B8
B46
B108
B135
D512
D511

WIWA1118E

BL-KEYLES-03



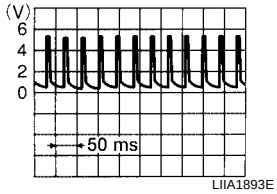
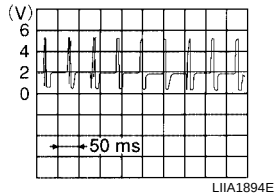
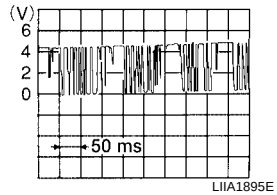
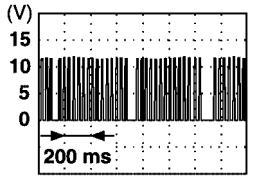


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

WIWA1119E

Terminals and Reference Value for BCM

EIS007DW

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	BR/W	Ignition key illumination	Key ring illumination ON	0
			Key ring illumination OFF	Battery voltage
11	V	Ignition switch (ACC or ON)	Ignition switch (ACC or ON position)	Battery voltage
12	GR/L	Front door switch RH	Door close (OFF) → Open (ON)	Battery voltage → 0
13	O/B	Sliding door switch RH	Door close (OFF) → Open (ON)	Battery voltage → 0
18	P	Remote keyless entry receiver (Ground)	—	0
19	V/W	Remote keyless entry receiver (Power supply)	—	 LIIA1893E
20	Y/G	Remote keyless entry receiver signal (Signal)	Stand-by (keyfob buttons released)	 LIIA1894E
			When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 LIIA1895E
22	Y/B	Bus	When ignition switch is ON or power window timer operates	
37	B/R	Key switch	Key inserted in IGN key cylinder → Key removed from IGN key cylinder	Battery voltage → 0
38	G	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
39	L	CAN-H	—	—
40	P	CAN-L	—	—
41	R/G	Battery saver (Interior lamp)	Battery saver does operated → Does not operated (ON → OFF)	Battery voltage → 0
42	Y/G	Battery power supply	—	Battery voltage
44	G	Driver door lock actuator	Door lock/unlock switch (Neutral → Unlock)	0 → Battery voltage for 300 ms

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
45	GR/L	Turn signal LH	When doors are locked or unlocked using keyfob (OFF → ON) *1	0 → Battery voltage
46	G/R	Turn signal RH	When doors are locked or unlocked using keyfob (OFF → ON) *1	0 → Battery voltage
47	R/W	Step lamp LH and RH	Step lamp ON	0
			Step lamp OFF	Battery voltage
48	P	Room lamp	Room lamp ON *2	Battery voltage
			Room Lamp OFF *2	0
50	V	Door lock actuators	Door lock/unlock switch (Neutral → Lock)	0 → Battery voltage for 300 ms
51	G/Y	Passenger and rear doors lock actuator	Door lock/unlock switch (Neutral → Unlock)	0 → Battery voltage for 300 ms
52	B/W	Ground	—	0
54	W/R	Power window power source	—	Battery voltage
55	W/B	Battery power supply	—	Battery voltage
58	O	Back door switch	Door close (OFF) → Open (ON)	Battery voltage → 0
62	GR/R	Front door switch LH	Door close (OFF) → Open (ON)	Battery voltage → 0
63	W/G	Sliding door switch LH	Door close (OFF) → Open (ON)	Battery voltage → 0

- *1: when hazard reminder is ON.
- *2: when lamps on demand switch is in "DOOR" position.

Terminals and Reference Value for IPDM E/R

EIS007DX

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
38	B	Ground	—	0
48	L	CAN-H	—	—
49	P	CAN-L	—	—
51	G/W	Horn relay	When doors locks are operated using keyfob (OFF → ON) *	Battery voltage → 0
60	B	Ground	—	0

*: when horn reminder is ON.

CONSULT-II Function (BCM)

EIS007DY

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

BCM diagnostic test item	Diagnostic mode	Description
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 date 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 result 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 Inspection Procedure

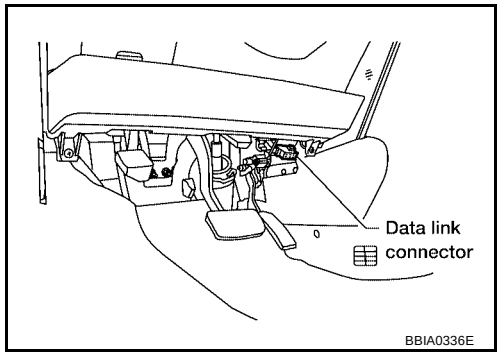
EIS007DZ

“MULTI REMOTE ENT”

CAUTION:

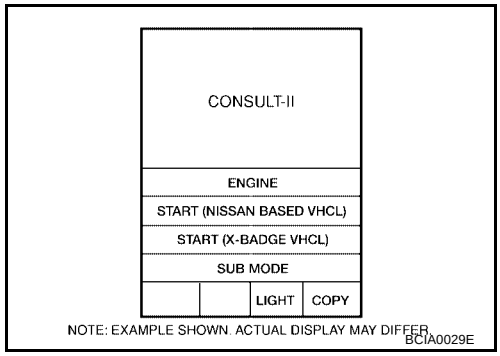
If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



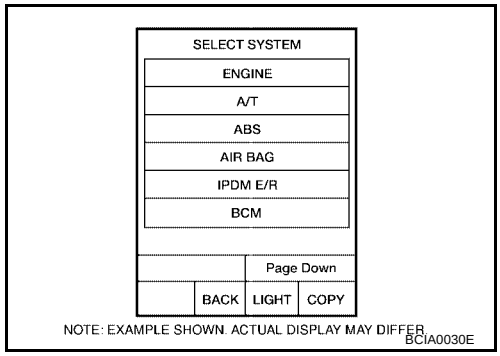
BBIA0336E

3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



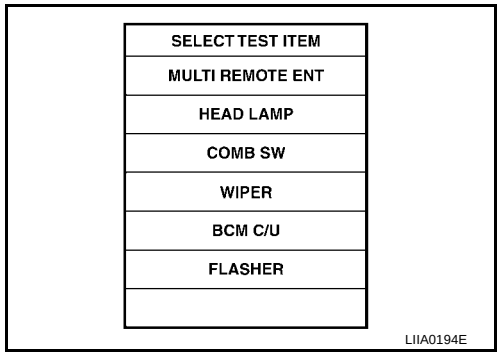
NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER.
BCIA0029E

5. Touch “BCM”.
   If "BCM" is not indicated, refer to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



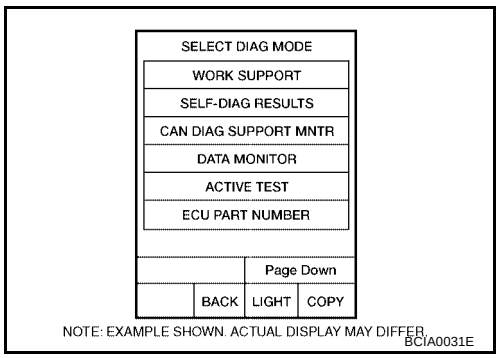
NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER.
BCIA0030E

6. Touch “MULTI REMOTE ENT”.



LIIA0194E

7. Select diagnosis mode.
   “DATA MONITOR”, “ACTIVE TEST” and “WORK SUPPORT” are available.



CONSULT-II Application Items

EIS007E0

“MULTI REMOTE ENT”

Data Monitor

Monitored Item	Description
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-RL	Indicates [ON/OFF] condition of sliding door switch LH.
DOOR SW-RR	Indicates [ON/OFF] condition of sliding door switch RH.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder switch.
KEYLESS LOCK	Indicates [ON/OFF] condition of remote locking signal.
KEYLESS PANIC	Indicates [ON/OFF] condition of panic signal from keyfob.
KEYLESS PSD	Indicates [ON/OFF] condition when keyfob sliding door button is pushed (with RH power door only).
KEYLESS PSD L	Indicates [ON/OFF] condition when keyfob left sliding door button is pushed (with LH and RH power doors).
KEYLESS PSD R	Indicates [ON/OFF] condition when keyfob right sliding door button is pushed (with LH and RH power doors).
KEYLESS UNLOCK	Indicates [ON/OFF] condition of remote unlocking signal.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from keyfob.
LK/UN BTN ON	Indicates [ON/OFF] condition of lock/unlock signal at the same time from keyfob.
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch.
PANIC BTN	Indicates [ON/OFF] condition of panic signal from keyfob.
RKE KEEP UNLK	Indicates [ON/OFF] condition. Keep pushing UNLOCK, turns to ON 3 seconds after UNLOCK button is pushed.
RKE LCK-UNLCK	Indicates [ON/OFF] condition when keyfob LOCK and UNLOCK buttons are pushed at the same time.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from keyfob.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch.
UN BUTTON ON	Indicates [ON/OFF] condition of unlock signal from keyfob.

Active Test

Test Item	Description
INT ILLUM	This test is able to check interior lamp illumination operation. The interior lamp illumination is turned on when “ON” on CONSULT-II screen is touched.
IGN ILLUM	This test is able to check ignition keyhole illumination operation. The ignition keyhole illumination is turned on when “ON” on CONSULT-II screen is touched.
FLASHER RIGHT(CAN)	This test is able to check right hazard reminder operation. The right hazard lamp turns on when “ON” on CONSULT-II screen is touched.
FLASHER LEFT(CAN)	This test is able to check left hazard reminder operation. The left hazard lamp turns on when “ON” on CONSULT-II screen is touched.

Test Item	Description
HORN	This test is able to check panic alarm and horn reminder operations. The alarm activates for 0.5 seconds after “ON” on CONSULT-II screen is touched.
HEAD LAMP (HI)	This test is able to check headlamps panic alarm operation. The headlamp illuminates for 0.5 seconds after “ON” on CONSULT-II screen is touched.
POWER WINDOW DOWN	This test is able to check power window down operation. The windows are lowered when “ON” on CONSULT-II screen is touched.
TRUNK/BACK DOOR	This test is able to check back door actuator operation. The back door is unlocked when “ON” on CONSULT-II screen is touched.

Work Support

Test Item	Description
REMO CONT ID REGIST	keyfob ID code can be registered.
REMO CONT ID ERASUR	keyfob ID code can be erased.
REMO CONT ID CONFIR	It can be checked whether keyfob ID code is registered or not in this mode.
HORN CHIRP SET	Horn reminder mode can be changed in this mode. The horn reminder mode will be changed when "CHANGE SETT" on CONSULT-II screen is touched.
HAZARD LAMP SET	Hazard reminder mode can be changed in this mode. The hazard reminder mode will be changed when "CHANGE SETT" on CONSULT-II screen is touched.
MULTI ANSWER BACK SET	Hazard and horn reminder mode can be changed in this mode. The reminder mode will be changed when “CHANG SETT” on CONSULT-II screen is touched.
AUTO LOCK SET	Auto locking function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.
PANIC ALRM SET	Panic alarm operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.
TRUNK OPEN SET	Back door opener operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.
PW DOWN SET	Keyless power window down (open) operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.

Hazard and horn reminder mode

	MODE 1 (C mode)		MODE 2 (S mode)		MODE 3		MODE 4		MODE 5		MODE 6	
Keyfob operation	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—	—	—	Twice	Once	Twice	—	—	Once
Horn sound	Once	—	—	—	—	—	—	—	Once	—	Once	—

Auto locking function mode

	MODE 1	MODE 2	MODE 3
Auto locking function	5 minutes	Nothing	1 minute

Panic alarm operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	0.5 seconds	Nothing	1.5 seconds

Trunk lid open operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	0.5 seconds	Nothing	1.5 seconds

Keyless power window down operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	3 seconds	Nothing	5 seconds

Trouble Diagnosis Procedure

EIS007E1

1. Check the symptom and customer's requests.
2. Understand outline of system. Refer to BL-56, "System Description" .
3. Confirm system operation.
   - Check that the power door lock system operates normally. Refer to BL-18, "POWER DOOR LOCK SYSTEM" .
   - Check that the automatic sliding door system operates normally. Refer to BL-113, "AUTOMATIC SLIDING DOOR SYSTEM" .
   - Check that the automatic back door system operates normally. Refer to BL-162, "AUTOMATIC BACK DOOR SYSTEM" .
4. Perform pre-diagnosis inspection. Refer to BL-70, "Pre-Diagnosis Inspection" .
5. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts. Refer to BL-71, "Trouble Diagnoses" .
6. Inspection End.

Pre-Diagnosis Inspection

EIS007E2

BCM POWER SUPPLY AND GROUND CIRCUIT INSPECTION

1. FUSE INSPECTION

Check the following fuses and fusible link in the fuse block (J/B) and fuse and fusible link box.

Unit	Terminal No.	Signal name	No.	Location
BCM	55	Battery power supply	j	Fuse and fusible link box
	42	Battery power supply	3	Fuse block (J/B)
	11	ACC power supply	4	Fuse block (J/B)
	38	IGN power supply	16	Fuse block (J/B)

OK or NG

OK >> GO TO 2.
NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to PG-4, "POWER SUPPLY ROUTING CIRCUIT" .

2. POWER SUPPLY CIRCUIT INSPECTION

Disconnect BCM connector, and connect vehicle-side connector terminals shown below to positive probe and body ground to negative probe. Measure voltage.

Unit	Terminal No.	Signal name	Ignition switch	Voltage
BCM	55	Battery power supply	OFF	Battery voltage
	42	Battery power supply	OFF	Battery voltage
	11	ACC power supply	ACC	Battery voltage
	38	IGN power supply	ON	Battery voltage

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. GROUND CIRCUIT INSPECTION

Check continuity between BCM vehicle-side connector and body ground.

Unit	Terminal No.	Signal name	Ignition switch	Continuity
BCM	52	Ground	OFF	Yes

OK or NG

OK >> Power supply and ground circuits are normal.
NG >> Repair or replace harness.

Trouble Diagnoses

EIS007E3

SYMPTOM CHART

NOTE:

- Always check the "Trouble Diagnosis Procedure" before troubleshooting. Refer to BL-70, "Trouble Diagnosis Procedure" .
- Always check keyfob battery before replacing keyfob. Refer to BL-78, "Keyfob Battery and Function Check" .
- The panic alarm operation and trunk lid opener operation of remote keyless entry system do not activate with the ignition key inserted in the ignition key cylinder.
- Use Remote Keyless Entry Tester J-43241 (follow instructions on tester) to check operation of keyfob before replacing keyfob.

Symptom	Diagnoses/service procedure	Reference page
All functions of remote keyless entry system do not operate.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241). **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	BL-78
	2. Check BCM and remote keyless entry receiver.	BL-80
The new ID of keyfob cannot be entered.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241). **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	BL-78
	2. Key switch (insert) check.	BL-73
	3a. Door switch check (without automatic back door system).	BL-74
	3b. Door switch check (with automatic back door system).	BL-76
	4. ACC power check.	BL-81
	5. Replace BCM.	BCS-20
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system. Refer to BL-18, "POWER DOOR LOCK SYSTEM" .)	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241). **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	BL-78
	2. Replace BCM.	BCS-20
Hazard and horn reminder does not activate properly when pressing lock or unlock button of keyfob.	1. Check hazard and horn reminder mode with CONSULT-II. **NOTE:** Hazard and horn reminder mode can be changed. First check the hazard and horn reminder mode setting.	BL-68
	2a. Door switch check (without automatic back door system).	BL-74
	2b. Door switch check (with automatic back door system).	BL-76
	3. Replace BCM.	BCS-20
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob. (Horn reminder OK)	1. Check hazard reminder mode with CONSULT-II. **NOTE:** Hazard reminder mode can be changed. First check the hazard reminder mode setting.	BL-68
	2. Check hazard function with hazard switch.	BL-83
	3. Replace BCM.	BCS-20

Symptom	Diagnoses/service procedure	Reference page
Horn reminder does not activate properly when pressing lock or unlock button of keyfob. (Hazard reminder OK)	1. Check horn reminder mode with CONSULT-II. **NOTE:** Horn reminder mode can be changed. First check the horn reminder mode setting.	BL-68
	2. Check horn function with horn switch.	WW-51
	3. IPDM E/R operation check.	BL-82
	4. Replace BCM.	BCS-20
Sliding door open/close operation is not carried out with keyfob operation. (The automatic sliding door system is normal.)	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241). **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	BL-78
	2. Key switch (insert) check.	BL-73
	3. Remote keyless entry receiver system check.	BL-80
	4. Replace BCM.	BCS-20
Room lamp, ignition keyhole illumination and step lamp operation do not activate properly.	1. Room lamp operation check.	BL-83
	2. Ignition keyhole illumination operation check.	BL-83
	3. Step lamp operation check.	LT-137
	4a. Door switch check (without automatic back door).	BL-74
	4b. Door switch check (with automatic back door).	BL-76
	5. Replace BCM.	BCS-20
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241). **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	BL-78
	2. Key switch (insert) check.	BL-73
	3. Replace BCM.	BCS-20
Auto door lock operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check auto door lock operation mode with CONSULT-II. **NOTE:** Auto door lock operation mode can be changed. First check the auto door lock operation mode setting.	BL-69
	2. Replace BCM.	BCS-20
Keyless power window down (open) operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check power window down operation mode with CONSULT-II. **NOTE:** Power window down operation mode can be changed. First check the power window down operation mode setting.	BL-69
	2. Check power window function with switch.	GW-17
	3. Replace BCM.	BCS-20

Key Switch (insert) Check

EIS007E4

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

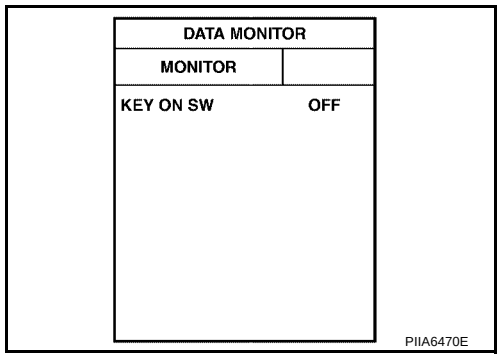
Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When key is inserted to ignition key cylinder:

  KEY ON SW : ON

- When key is removed from ignition key cylinder:

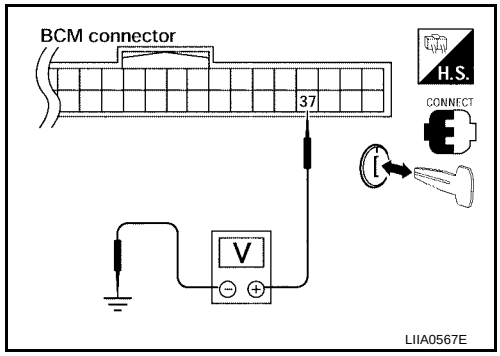
  KEY ON SW : OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 37 and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M18	37	Ground	Key is inserted.	Battery voltage
			Key is removed.	0



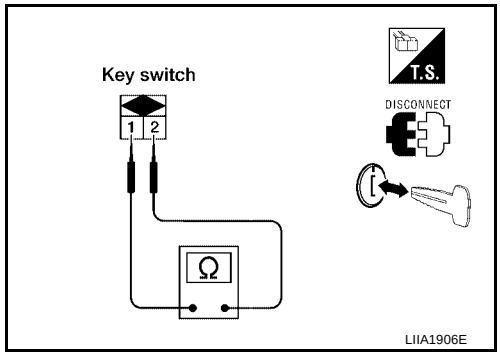
OK or NG

OK >> Key switch (insert) circuit is OK.
NG >> GO TO 2.

2. CHECK KEY SWITCH (INSERT)

1. Turn ignition switch OFF.
2. Disconnect key switch.
3. Check continuity between key switch terminals 1, 2.

Terminals	Condition	Continuity
1 – 2	Key is inserted.	Yes
	Key is removed.	No



OK or NG

OK >> Repair or replace harness.
NG >> Replace key switch.

Door Switch Check (Without Automatic Back Door System)

EIS007E5

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

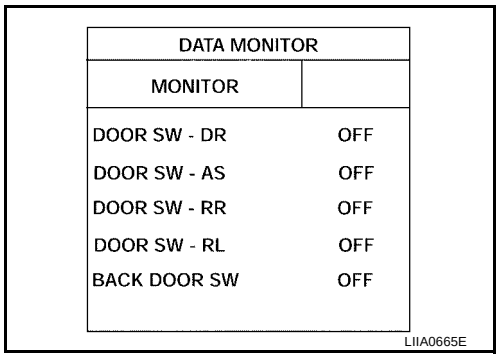
Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When doors are open:

DOOR SW-DR : ON
DOOR SW-AS : ON
DOOR SW-RR : ON
DOOR SW-RL : ON
BACK DOOR SW : ON

- When doors are closed:

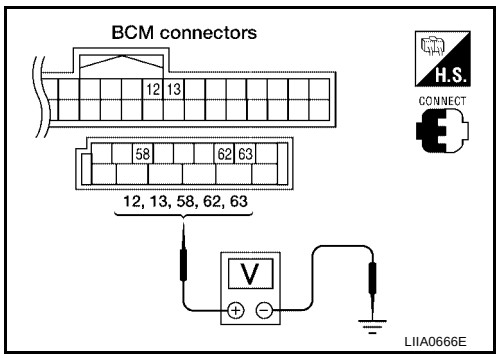
DOOR SW-DR : OFF
DOOR SW-AS : OFF
DOOR SW-RR : OFF
DOOR SW-RL : OFF
BACK DOOR SW : OFF



Without CONSULT-II

Check voltage between BCM connector M18 or M20 terminals 12, 13, 58, 62, 63 and ground.

Connector	Item	Terminals (+)	Terminals (–)	Condition	Voltage (V) (Approx.)
M20	Back door switch	58	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62			
	Sliding door switch LH	63			
M18	Front door switch RH	12			
	Sliding door switch RH	13			



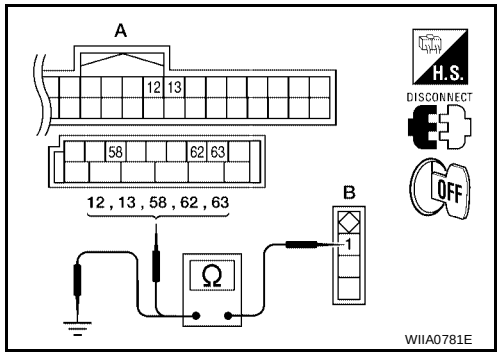
OK or NG

OK >> Door switch circuit is OK.
NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) or D512 (Back) terminal 1 and BCM connector (A) M18, M20 terminals 12, 13, 58, 62 and 63.

1 - 12 : Continuity should exist.
1 - 13 : Continuity should exist.
1 - 58 : Continuity should exist.
1 - 62 : Continuity should exist.
1 - 63 : Continuity should exist.



4. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) or D512 (Back) terminal 1 and ground.

1 - Ground : Continuity should not exist.

OK or NG

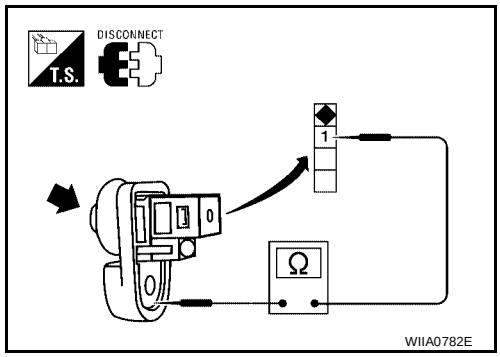
OK >> GO TO 3.
NG >> Repair or replace harness.

3. CHECK DOOR SWITCHES

FRONT AND REAR DOORS

Check continuity between front or rear door switch terminal 1 and exposed metal of switch while pressing and releasing switch.

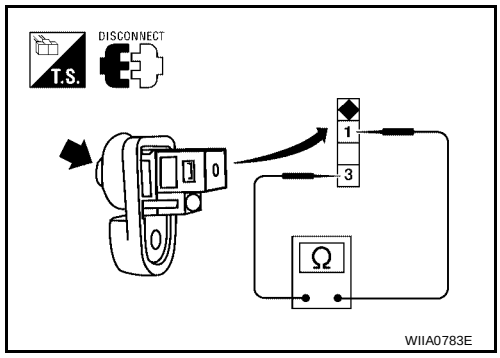
Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.



BACK DOOR

Check continuity between back door switch terminals 1 and 3 while pressing and releasing switch.

Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.



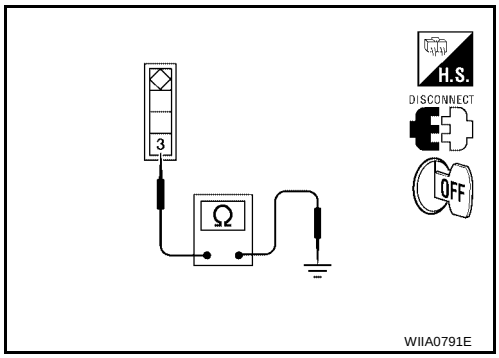
OK or NG

OK >> (Front and rear doors) Switch circuit is OK.
OK >> (Back door) GO TO 4.
NG >> Replace door switch.

4. CHECK BACK DOOR SWITCH GROUND

Check continuity between back door switch connector terminal 3 and ground.

3 - Ground : Continuity should exist.



OK or NG

OK >> Back door switch circuit is OK.
NG >> Repair or replace harness.

Door Switch Check (With Automatic Back Door System)

EIS007E6

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

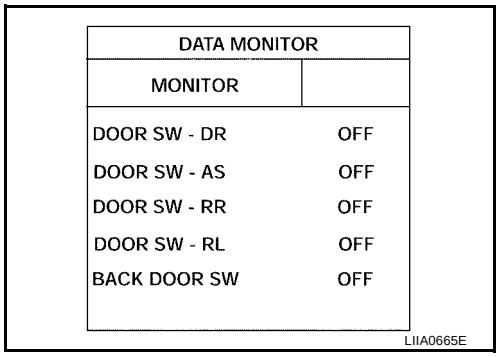
Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When doors are open:

DOOR SW-DR : ON
DOOR SW-AS : ON
DOOR SW-RR : ON
DOOR SW-RL : ON
BACK DOOR SW : ON

- When doors are closed:

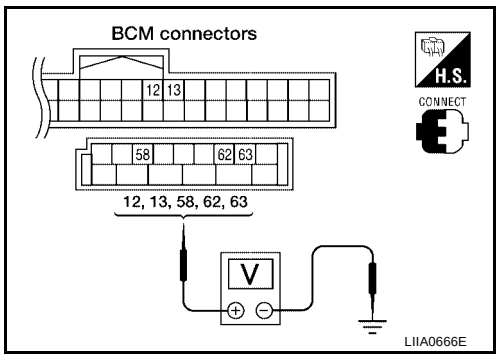
DOOR SW-DR : OFF
DOOR SW-AS : OFF
DOOR SW-RR : OFF
DOOR SW-RL : OFF
BACK DOOR SW : OFF



Without CONSULT-II

Check voltage between BCM connector M18 or M20 terminals 12, 13, 58, 62, 63 and ground.

Connector	Item	Terminals (+)	Terminals (–)	Condition	Voltage (V) (Approx.)
M20	Back door latch (door ajar switch)	58	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62			
	Sliding door switch LH	63			
M18	Front door switch RH	12			
	Sliding door switch RH	13			



OK or NG

OK >> Door switch circuit is OK.
NG >> GO TO 2.

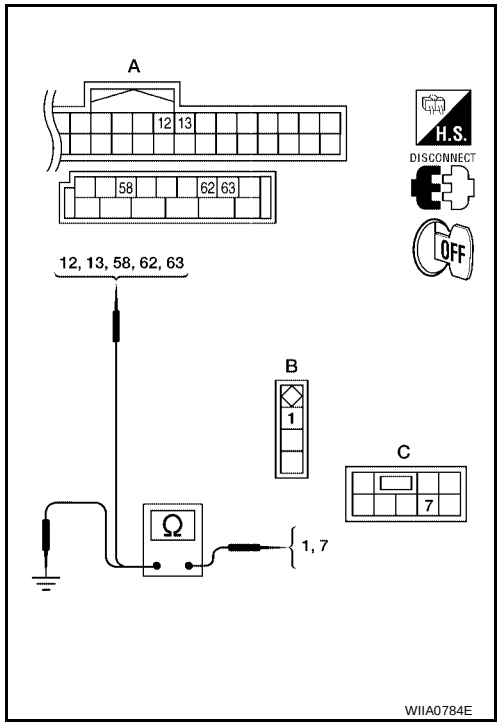
2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) terminal 1 or back door latch (door ajar switch) connector (C) D511 terminal 7 and BCM connector (A) M18, M20 terminals 12, 13, 58, 62 and 63

1 - 62 : Continuity should exist.
1 - 12 : Continuity should exist.
1 - 63 : Continuity should exist.
1 - 13 : Continuity should exist.
7 - 58 : Continuity should exist.

4. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) terminal 1 or back door latch (door ajar switch) connector (C) D511 terminal 7 and ground.

1 - Ground : Continuity should not exist.
7 - Ground : Continuity should not exist.



OK or NG

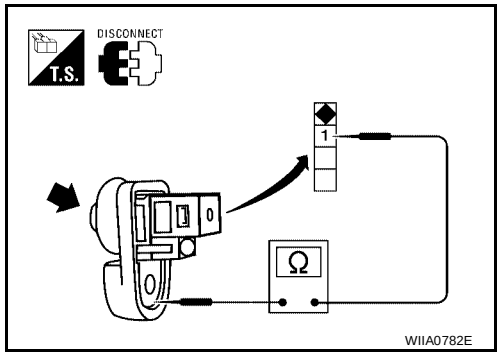
OK >> GO TO 3.
NG >> Repair or replace harness.

3. CHECK DOOR SWITCHES

FRONT AND REAR DOORS

Check continuity between front or rear door switch terminal 1 and exposed metal of switch while pressing and releasing switch.

Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.



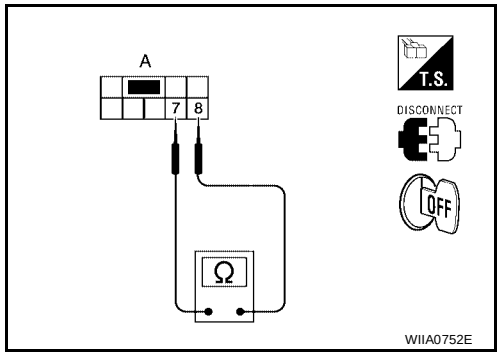
BACK DOOR

Check continuity between back door latch connector (A) D511 terminals 7 and 8 while pressing (closing back door) and releasing (opening back door) switch.

When back door is open : Continuity should exist.
When back door is closed : Continuity should not exist.

OK or NG

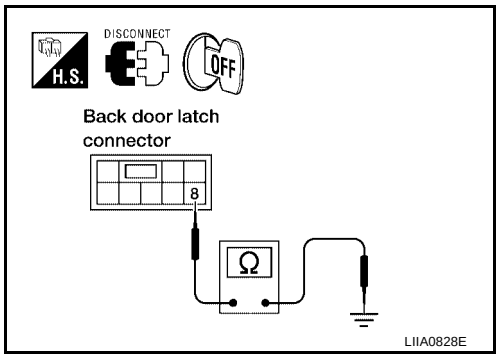
OK >> (Front and rear doors) Switch circuit is OK.
OK >> (Back door) GO TO 4.
NG >> Replace door switch.



4. CHECK BACK DOOR SWITCH GROUND

Check continuity between back door latch connector terminal 8 and ground.

8 - Ground : Continuity should exist.



OK or NG

OK >> Back door switch circuit is OK.
NG >> Repair or replace harness.

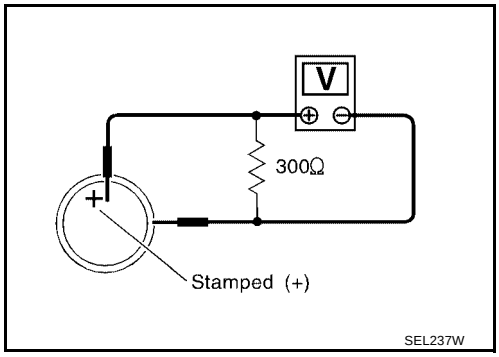
Keyfob Battery and Function Check

EIS007E7

1. CHECK KEYFOB BATTERY

Remove battery and measure voltage across battery positive and negative terminals, (+) and (–).

Voltage : 2.5V - 3.0V



NOTE:
Keyfob does not function if battery is not set correctly.

OK or NG

OK >> GO TO 2.
NG >> Replace keyfob battery. Refer to BL-87, "Keyfob Battery Replacement" .

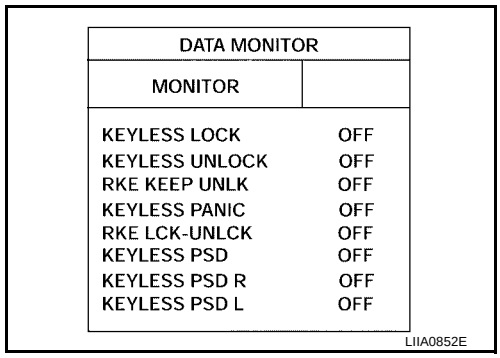
2. CHECK KEYFOB FUNCTION

With CONSULT-II

Check keyfob function in “DATA MONITOR” mode with CONSULT-II.

When pushing each button of keyfob, the corresponding monitor item should be turned as follows.

Condition	Monitor item	
Pushing LOCK	KEYLESS LOCK	: ON
Pushing UNLOCK	KEYLESS UNLOCK	: ON
Keep pushing UNLOCK	RKE KEEP UNLK turns to ON 3 seconds after UNLOCK button is pushed.	
Pushing PANIC	KEYLESS PANIC	: ON
Pushing LOCK and UNLOCK at the same time	RKE LCK-UNLCK	: ON
Pushing SLID DOOR RH OPEN	KEYLESS PSD *1	: ON
	KEYLESS PSD R *2	: ON
Pushing SLID DOOR LH OPEN	KEYLESS PSD L *2	: ON



***1: With auto sliding door RH**
***2: With auto sliding door RH and LH**

Without CONSULT-II

Check keyfob function using Remote Keyless Entry Tester J-43241.

OK or NG

OK >> WITH CONSULT-II: Keyfob, remote keyless entry receiver and wiring harness between BCM and remote keyless entry receiver are OK. Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .

OK >> WITHOUT CONSULT-II: Keyfob is OK. Further inspection is necessary. Refer to BL-71, "SYMPTOM CHART" .

NG >> WITH CONSULT-II: Further inspection is necessary. Refer to BL-71, "SYMPTOM CHART" .

NG >> WITHOUT CONSULT-II: Replace keyfob. Refer to BL-84, "ID Code Entry Procedure" .

Remote Keyless Entry Receiver System Check

EIS007E8

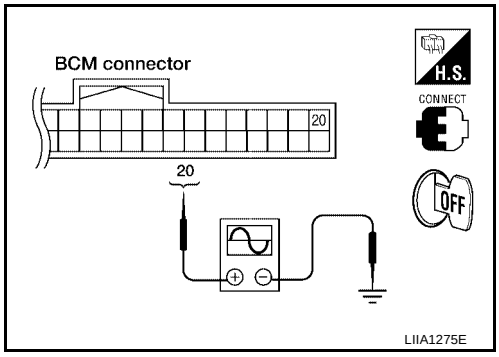
1. REMOTE KEYLESS ENTRY RECEIVER SIGNAL

Check signal voltage waveform between BCM connector M18 terminal 20 and ground using an oscilloscope.

Condition:

Keyfob buttons released : **Refer to BL-65, "Terminals and Reference Value for BCM" .**

Keyfob buttons pressed : **Refer to BL-65, "Terminals and Reference Value for BCM" .**



OK or NG

OK >> Remote keyless entry receiver signal power supply, ground and signal circuits are OK. Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .

NG >> GO TO 2.

2. REMOTE KEYLESS ENTRY RECEIVER POWER SUPPLY INSPECTION

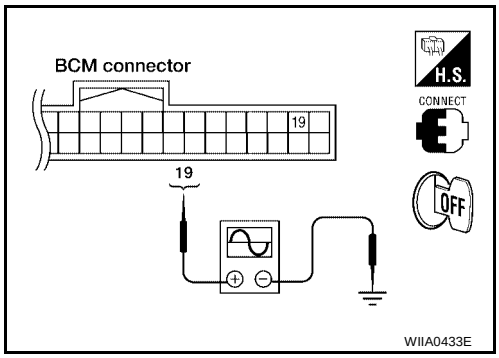
Check signal voltage waveform between BCM connector M18 terminal 19 and ground using an oscilloscope.

19 - Ground : **Refer to BL-65, "Terminals and Reference Value for BCM" .**

OK or NG

OK >> GO TO 3.

NG >> Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .



3. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION (BCM)

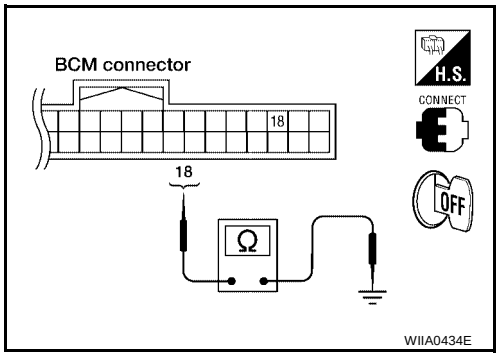
Check continuity between BCM connector M18 terminal 18 and ground.

18 - Ground : **Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .



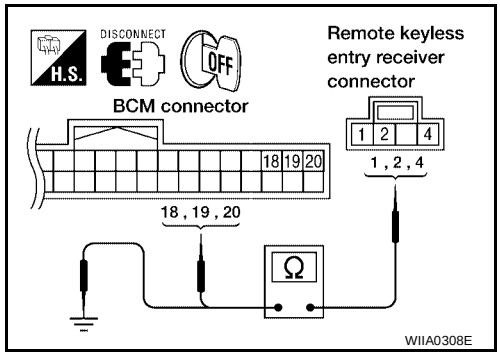
4. HARNESS INSPECTION BETWEEN BCM AND REMOTE KEYLESS ENTRY RECEIVER

1. Disconnect remote keyless entry receiver and BCM connectors.
2. Check continuity between remote keyless entry receiver connector M120 terminals 1, 2, 4 and BCM connector M18 terminals 18, 19, 20.

1 - 18 : Continuity should exist.
2 - 20 : Continuity should exist.
4 - 19 : Continuity should exist.

3. Check continuity between remote keyless entry receiver terminals 1, 2 and 4 and ground.

1 - Ground : Continuity should not exist.
2 - Ground : Continuity should not exist.
4 - Ground : Continuity should not exist.



OK or NG

OK >> Replace remote keyless entry receiver.
NG >> Repair or replace the harness between the remote keyless entry receiver and BCM.

ACC Power Check

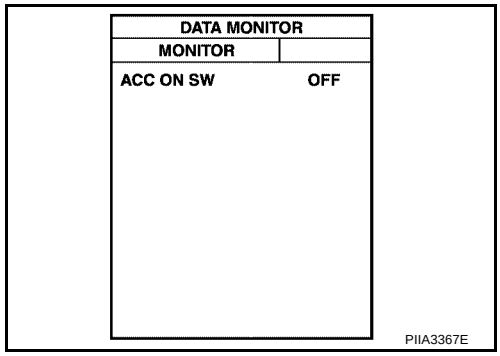
EIS007E9

1. CHECK ACC POWER

With CONSULT-II

Check "ACC ON SW" in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

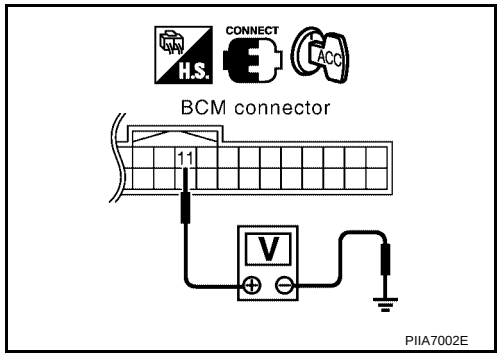
Monitor Item	Condition	
ACC ON SW	Ignition switch position is ACC	: ON
	Ignition switch position is OFF	: OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 11 and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M18	11	Ground	ACC or ON	Battery voltage
			OFF	0



OK or NG

OK >> ACC power circuit is OK.
NG >> Check the following:

- 10A fuse [No. 4, located in fuse block (J/B)]
- Harness for open or short.

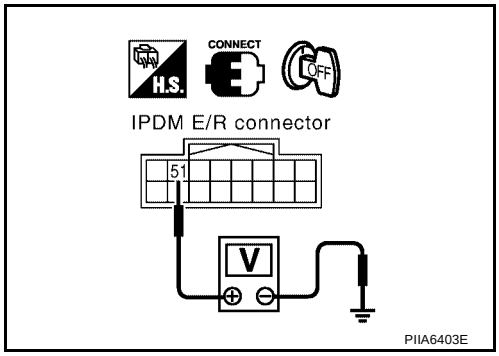
IPDM E/R Operation Check

EIS007EA

1. CHECK IPDM E/R INPUT VOLTAGE

Check voltage between IPDM E/R connector E121 terminal 51 and ground.

Connector	Terminal		Voltage (V) (Approx.)
	(+)	(–)	
E121	51	Ground	Battery voltage



OK or NG

OK >> Replace IPDM E/R. Refer to PG-29, "Removal and Installation of IPDM E/R" .

NG >> GO TO 2.

2. CHECK IPDM E/R INPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay.
3. Check continuity between IPDM E/R connector E121 terminal 51 and horn relay connector H-1 terminal 1.

51 - 1 :Continuity should exist.

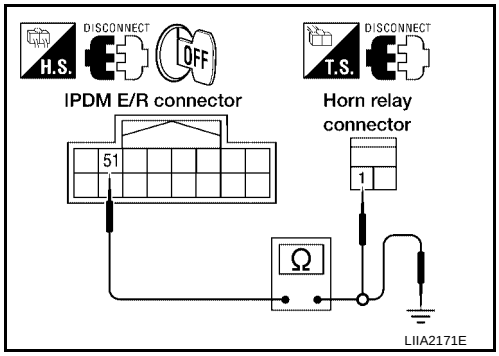
4. Check continuity between IPDM E/R connector E121 terminal 51 and ground.

51 - Ground :Continuity should not exist.

OK or NG

OK >> Further inspection is necessary. Refer to BL-71, "SYMPTOM CHART" .

NG >> Repair or replace harness.



Check Hazard Function

EIS007EB

1. CHECK HAZARD WARNING LAMP

Does hazard indicator flash with hazard switch?

Yes or No

Yes >> Hazard warning lamp circuit is OK.
No >> Check hazard indicator. Refer toLT-71, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

Check Horn Function

EIS007EC

First, perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, then perform the trouble diagnosis of malfunction system indicated in "SELF-DIAG RESULTS" of "BCM".

1. CHECK HORN FUNCTION

Does horn sound with horn switch?

Yes or No

Yes >> Horn circuit is OK.
No >> Check horn circuit. Refer to WW-51, "HORN" .

Check Headlamp Function

EIS007ED

First, perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, then perform the trouble diagnosis of malfunction system indicated in "SELF-DIAG RESULTS" of "BCM".

1. CHECK HEADLAMP OPERATION

Does headlamp come on when turning lighting switch ON?

Yes or No

Yes >> Headlamp operation circuit is OK.
No >> Check headlamp circuit. Refer to LT-5, "HEADLAMP (FOR USA)" .

Check Map Lamp and Ignition Keyhole Illumination Function

EIS007EE

1. CHECK MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

When lamps on demand switch is in DOOR position, open the front door LH or RH.

Map lamp and ignition keyhole illumination should illuminate.

OK or NG

OK >> System is OK.
NG >> Check ignition keyhole illumination circuit. Refer to LT-162, "ILLUMINATION" .

ID Code Entry Procedure

EIS007EF

KEYFOB ID SET UP WITH CONSULT-II

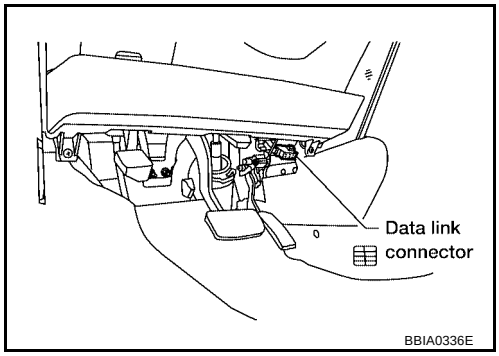
NOTE:

- **If a keyfob is lost, the ID code of the lost keyfob must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-II. However, when the ID code of a lost keyfob is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.**
- **When registering an additional keyfob, the existing ID codes in memory may or may not be erased. If five ID codes are stored in memory when an additional code is registered, only the oldest code is erased. If less than five codes are stored in memory when an additional code is registered, the new ID code is added and no ID codes are erased.**
- **Entry of a maximum of five ID codes is allowed. When more than five codes are entered, the oldest ID code will be erased.**
- **Even if the same ID code that is already in memory is input, the same ID code can be entered. The code is counted as an additional code.**

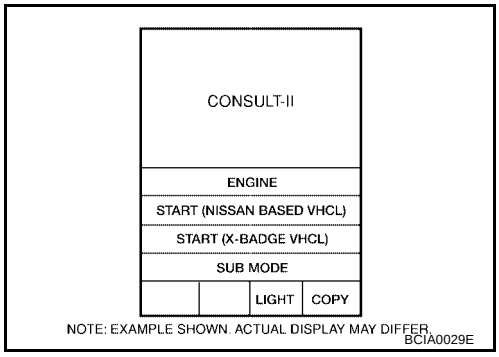
CAUTION:

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 on CAN communication.

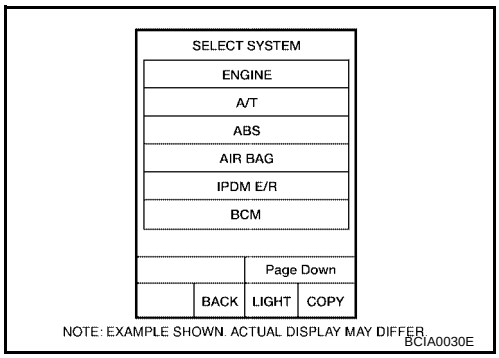
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



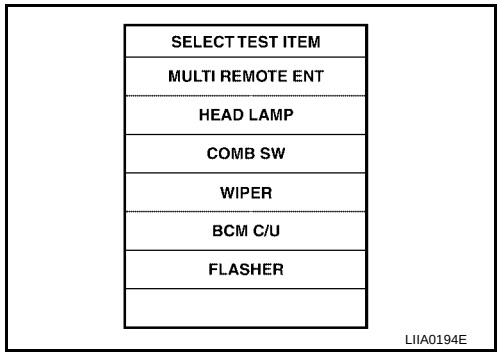
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



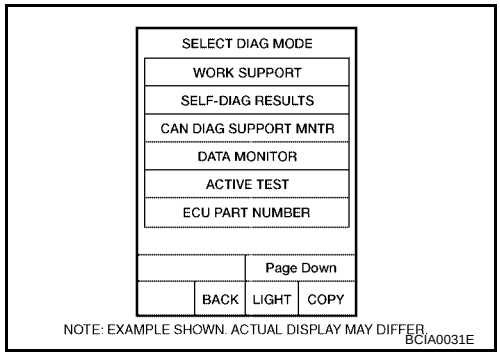
5. Touch “BCM”.
   If "BCM" is not indicated, refer to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



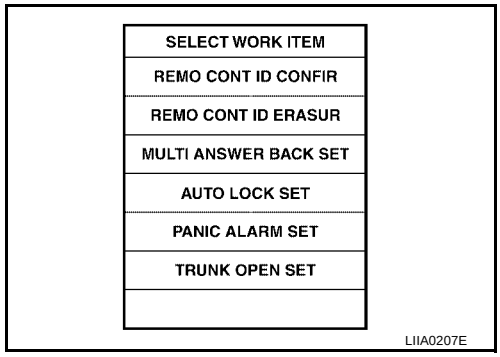
6. Touch “MULTI REMOTE ENT”.



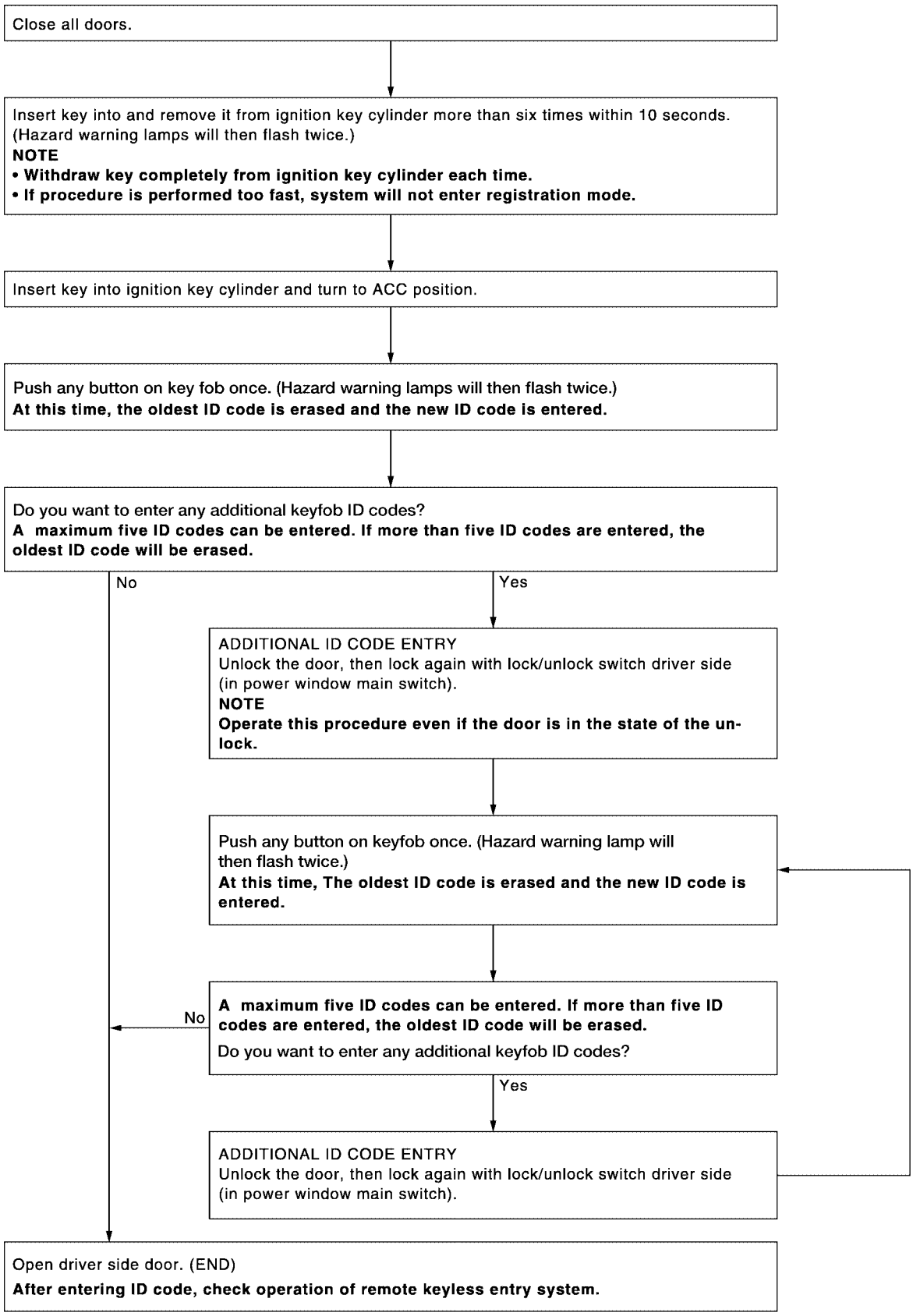
7. Touch “WORK SUPPORT”.



8. The items below can be set up.
   - “REMO CONT ID CONFIR”
     Use this mode to confirm if a keyfob ID code is registered or not.
   - “REMO CONT ID REGIST”
     Use this mode to register a keyfob ID code.
     NOTE:
     Register the ID code when keyfob or BCM is replaced, or when additional keyfob is required.
   - “REMO CONT ID ERASUR”
     Use this mode to erase a keyfob ID code.



KEYFOB ID SET UP WITHOUT CONSULT-II



LIIA1670E

NOTE:

- If a keyfob is lost, the ID code of the lost keyfob must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-II. However, when the ID code of a lost keyfob is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.
  To erase all ID codes in memory, register one ID code (keyfob) five times. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.
- When registering an additional keyfob, the existing ID codes in memory may or may not be erased. If five ID codes are stored in memory, when an additional code is registered, only the oldest code is erased. If less than five ID codes are stored in memory, when an additional ID code is registered, the new ID code is added and no ID codes are erased.
- If you need to activate more than two additional new keyfobs, repeat the procedure “Additional ID code entry” for each new keyfob.
- Entry of maximum five ID codes is allowed. When more than five ID codes are entered, the oldest ID code will be erased.
- Even if same ID code that is already in the memory is input, the same ID code can be entered. The code is counted as an additional code.

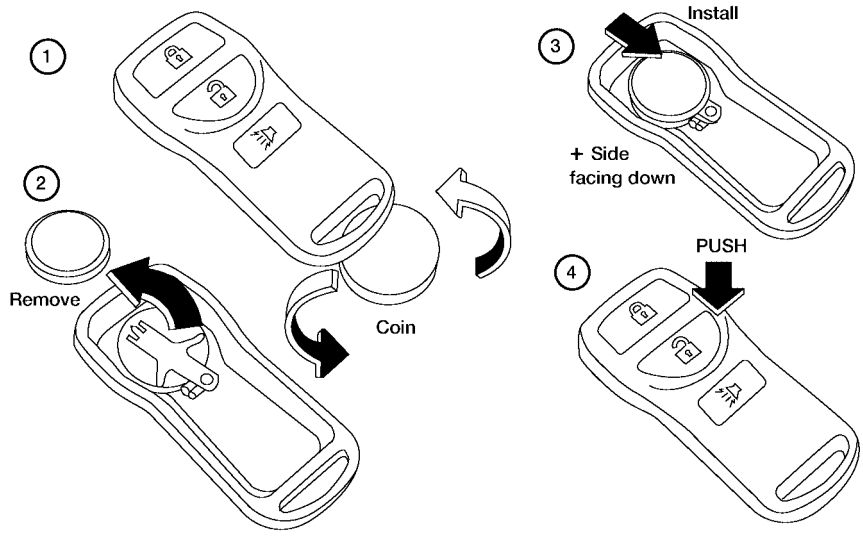
Keyfob Battery Replacement

EIS007EG

NOTE:

- Be careful not to touch the circuit board or battery terminal.
- The keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.

1. Open the lid using a coin.
2. Remove the battery.
3. Install the new battery, positive side down.
4. Close the lid securely. Push the keyfob buttons two or three times to check operation.



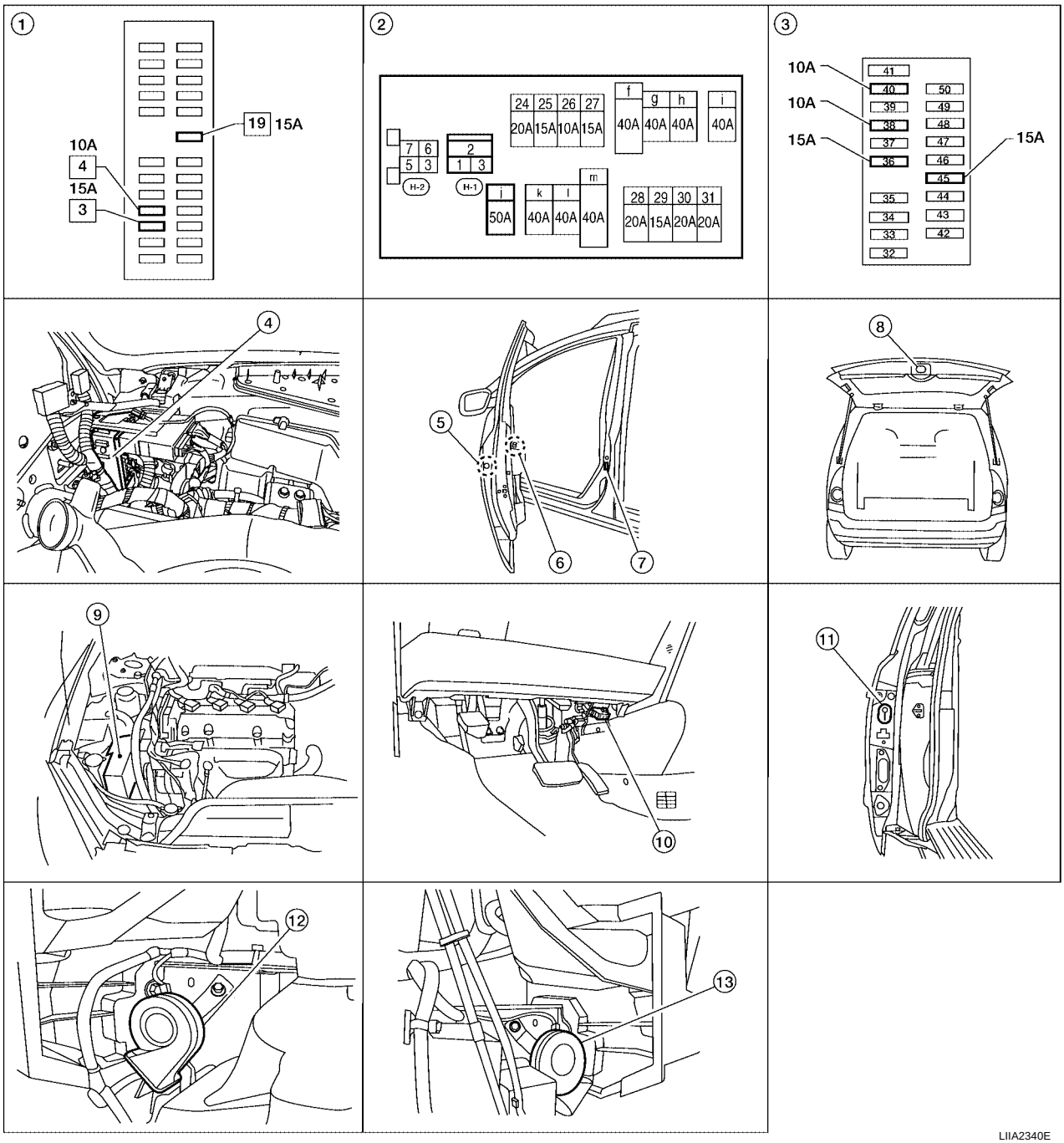
LIIA1514E

VEHICLE SECURITY (THEFT WARNING) SYSTEM

PFP:28491

Component Parts and Harness Connector Location

EIS007EH



LIIA2340E

1. Fuse block (J/B)
2. Fuse and fusible link box
3. IPDM E/R fuse layout
4. BCM M18, M19, M20 (view with instrument panel removed)
5. Front door lock assembly LH D14 (key cylinder switch)
6. Main power window and door lock/ unlock switch LH D7, D8 Power window and door lock/unlock switch RH D105
7. Front door switch LH B8 RH B108
8. Back door latch (door ajar switch) D511 (with power back door) Back door switch D512 (without power back door)
9. IPDM E/R E124

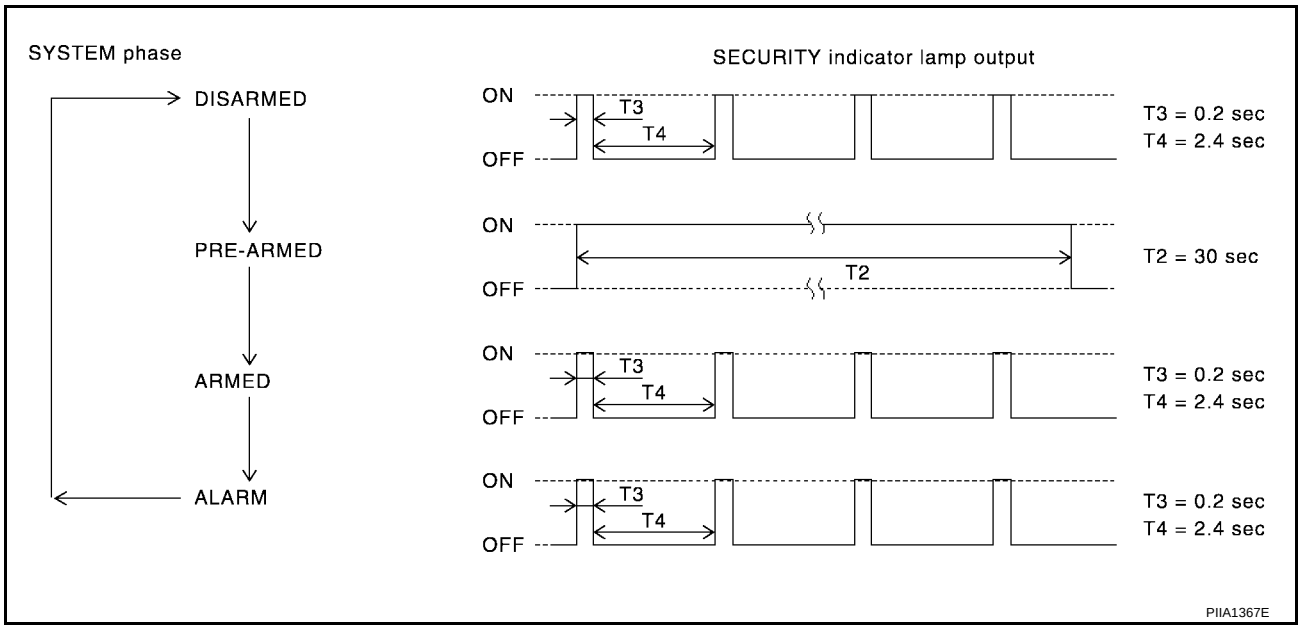
10. Data link connector M22
11. Sliding door switch LH B46 RH B135
12. Horn (low) E3
13. Horn (high) E108

System Description

EIS007EI

DESCRIPTION

Operation Flow



Setting the vehicle security system

Initial condition

- Ignition switch is OFF.

Disarmed phase

- When the vehicle is being driven or when doors are open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.

Pre-armed phase and armed phase

- There are three conditions to enable the vehicle security system to turn into the "pre-armed" phase and transition into armed phase. The initial requirements are that hood, glass hatch and all doors must be closed (ignition key removed) for the transition to take place. Those three conditions are:
  1. Locking vehicle with either front power door lock switch before exiting vehicle and closing all doors.
  2. Using keyfob to lock already closed doors after leaving the vehicle.
  3. Using driver key cylinder switch to lock already closed doors after leaving the vehicle.
- Upon any of the above three steps taking place, the security indicator lamp illuminates for 30 seconds, then the system automatically shifts into the "armed" phase.

Canceling the set vehicle security system

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

1. Unlock the front doors with the key or the keyfob.
2. Open the back door with the keyfob. When the back door is closed after opening the back door with the keyfob, the system returns to the armed phase.
3. Open the sliding door(s) with the keyfob. With the sliding door(s) closed after opening the sliding door(s) with the keyfob, the system returns to the armed phase.

Activating the alarm operation of the vehicle security system

Make sure the system is in the armed phase.
When one of the following operations is performed, the system sounds the horns and flashes the head-lamps for about 50 seconds.

1. Any door is opened before unlocking door with key or keyfob.
2. Door is unlocked without using key or keyfob.
3. Back door is opened without using keyfob.
4. Sliding door(s) opened without using keyfob.

POWER SUPPLY AND GROUND CIRCUIT

Power is supplied at all times

- through 10A fuse [No.19, located in the fuse block (J/B)]
- to combination meter (security indicator lamp) terminal 31
- through 50A fusible link (letter **j** , located in the fuse and fusible link box)
- to BCM terminal 55.
- through 15A fuse [No. 3, located in the fuse block (J/B)]
- to BCM terminal 42.
- through 15A fuse (No. 25, located in the fuse and fusible link box)
- to horn relay terminal 2.
- through 15A fuse (No. 34, located in the IPDM E/R),
- to IPDM E/R internal CPU.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 4, located in the fuse block (J/B)]
- to BCM terminal 11.

Ground is supplied

- to BCM terminal 52
- through body grounds M57, M61 and M79 and
- to IPDM E/R terminals 38 and 60
- through body ground E9, E15 and E24.

INITIAL CONDITION TO ACTIVATE THE SYSTEM

The operation of the vehicle security system is controlled by the doors.
To activate the vehicle security system, BCM must receive signals indicating the doors are closed and locked.
When a door is open, BCM terminal 12, 13, 58, 62 or 63 receives a ground signal from each door switch.
When front door LH is unlocked, BCM terminal 22 receives a signal from terminal 12 (without power back door) or terminal 14 (with power back door) of main power window and door lock/unlock switch.
When front door RH is unlocked, BCM terminal 22 receives a signal from terminal 16 of power window and door lock/unlock switch RH.
When the back door is open, BCM terminal 58 receives a ground signal

- from terminal 1 (without power back door) of the back door switch or terminal 7 (with power back door) of the back door latch (door ajar switch)
- through body grounds D403 and D404.

VEHICLE SECURITY SYSTEM ALARM OPERATION

The vehicle security system is triggered by

- opening a door
- unlocking door without using the key or keyfob.

The vehicle security system will be triggered once the system is in armed phase,

- when BCM receives a ground signal at terminals 12, 13, 62, 63 (door switch), or terminal 58 (back door switch).

Power is supplied at all times

- to horn relay terminal 2
- through 15A fuse (No. 25, located in fuse and fusible link box).

When the vehicle security system is triggered, ground is supplied intermittently

- from IPDM E/R terminal 51
- to headlamp high relay and
- to horn relay terminal 1.

The headlamps flash and the horn sounds intermittently.
The alarm automatically turns off after 50 seconds, but will reactivate if the vehicle is tampered with again.

VEHICLE SECURITY SYSTEM DEACTIVATION

To deactivate the vehicle security system, a door must be unlocked with the key or keyfob.
When the key is used to unlock a door, BCM terminal 22 receives signal

- from terminal 12 (without power back door) or terminal 14 (with power back door) of the main power window and door lock/unlock switch.

When the BCM receives either one of these signals or unlock signal from keyfob or key cylinder switch, the vehicle security system is deactivated. (Disarmed phase)

PANIC ALARM OPERATION

Remote keyless entry system may or may not operate vehicle security system (horn and headlamps) as required.
When the remote keyless entry system is triggered, ground is supplied intermittently

- from IPDM E/R terminal 51
- to headlamp high relay and
- to horn relay terminal 1.

The headlamp flashes and the horn sounds intermittently.
The alarm automatically turns off after 25 seconds or when BCM receives any signal from keyfob.

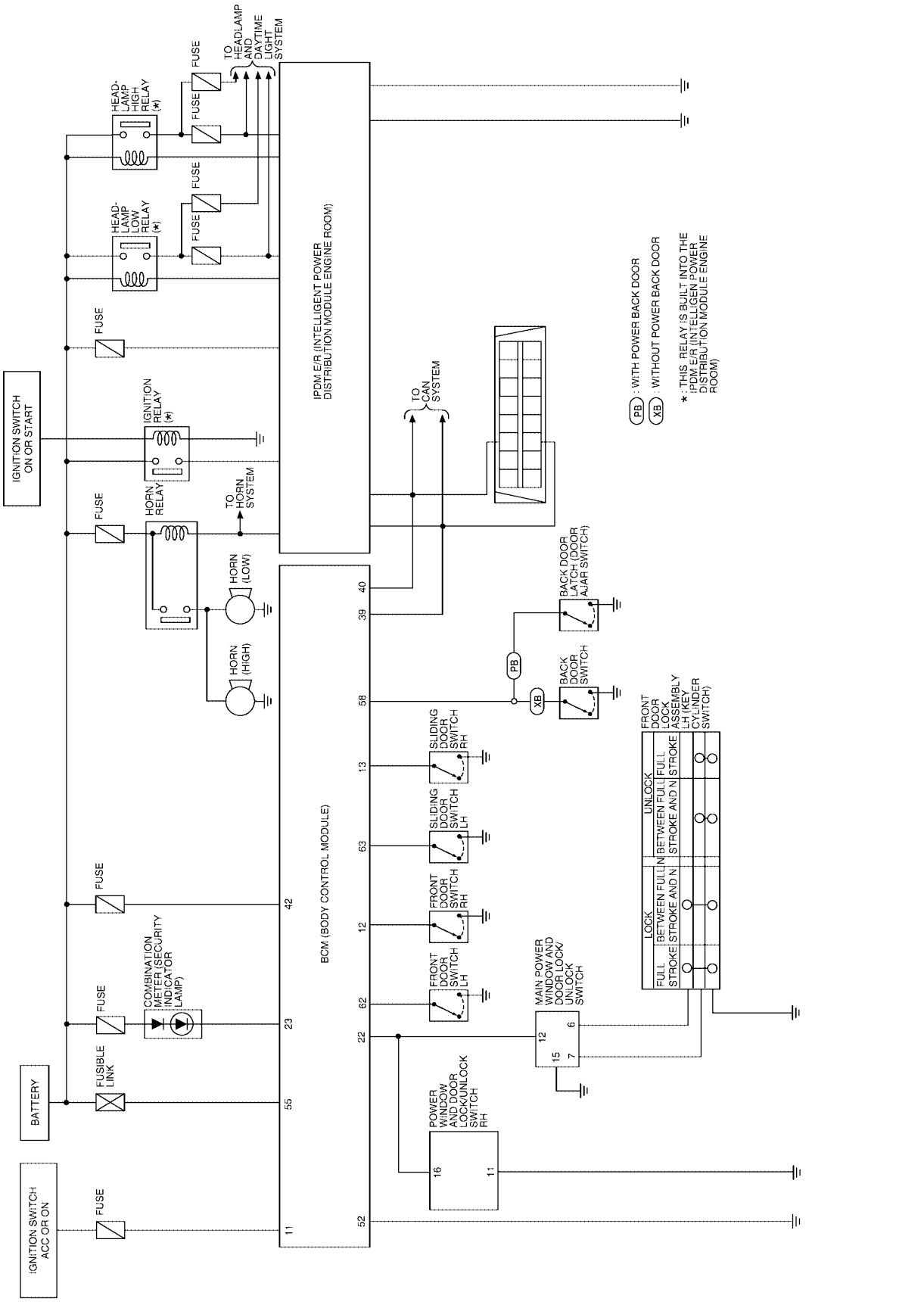
CAN Communication System Description

EIS007EJ

Refer to LAN-24, "CAN COMMUNICATION" .

Schematic

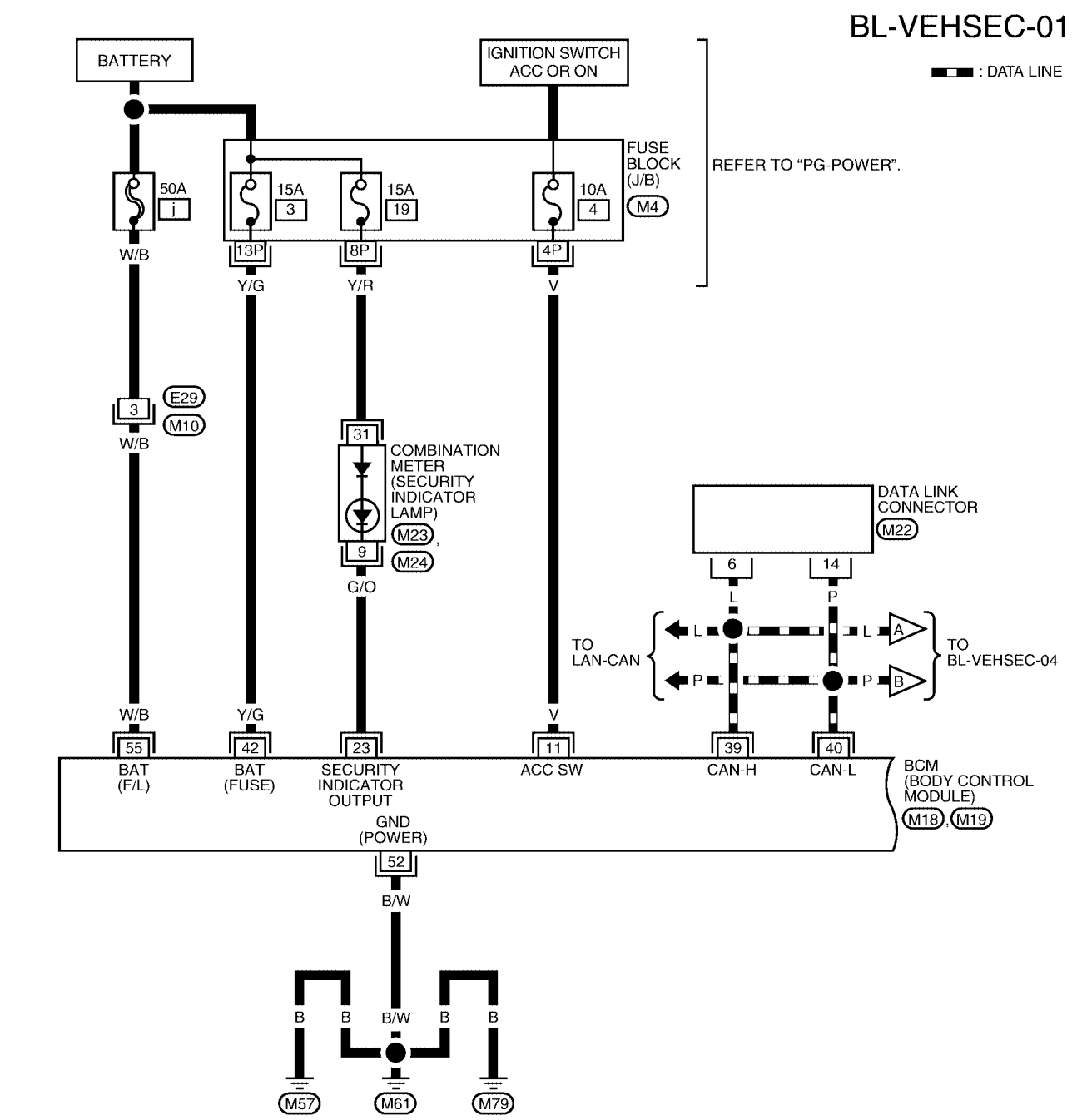
EIS007EK

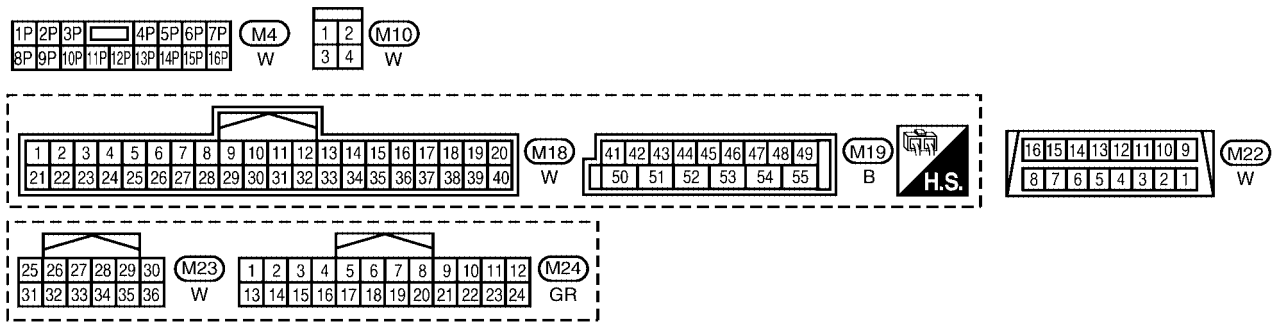


WIWA1120E

Wiring Diagram — VEHSEC —

EIS007EL

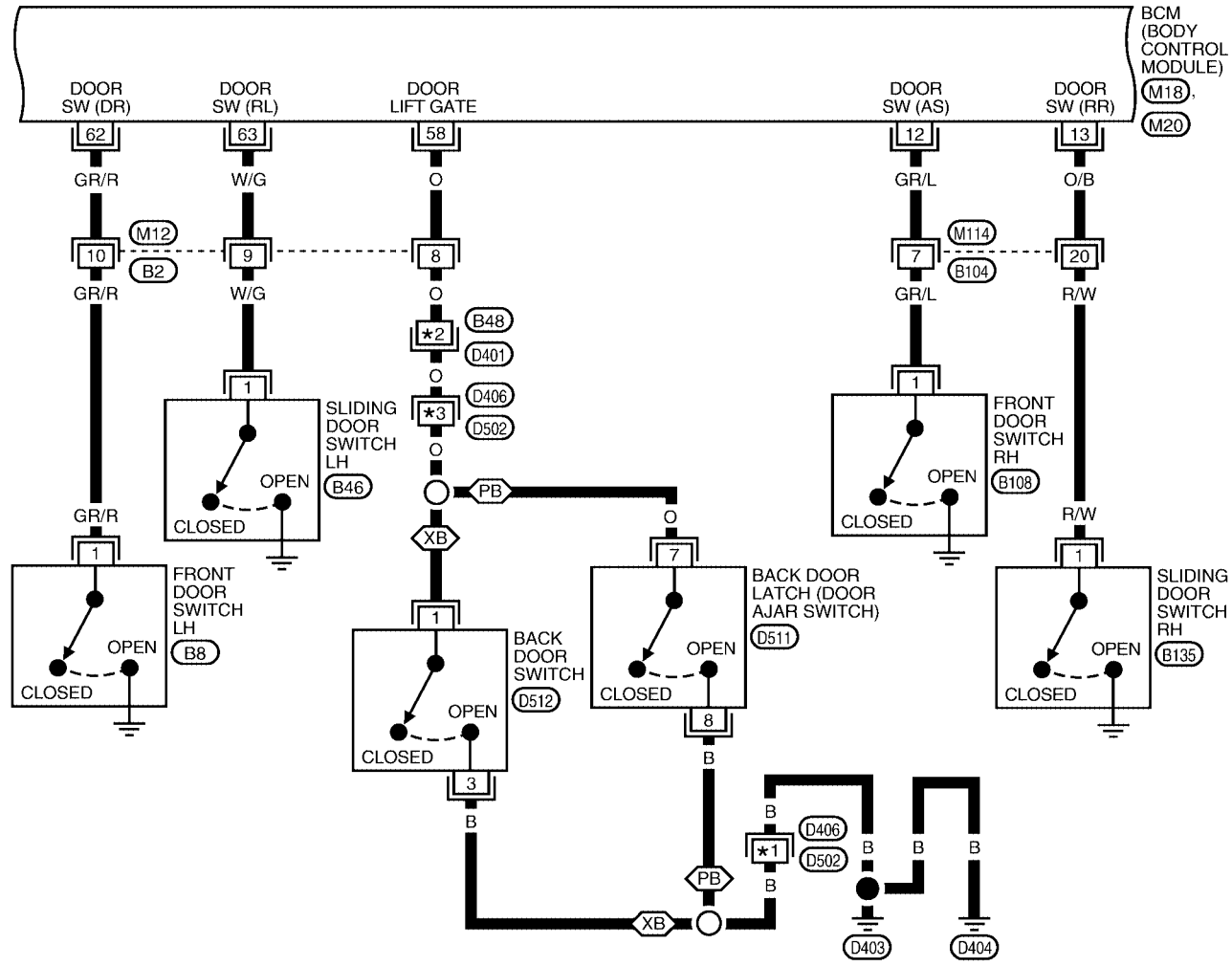


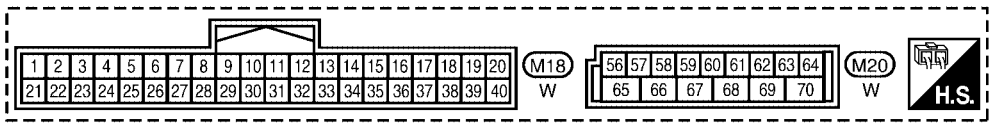


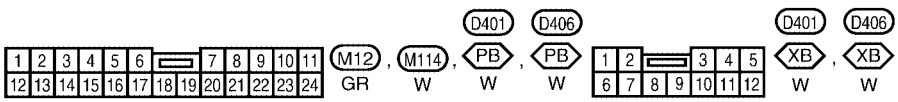
WIWA1121E

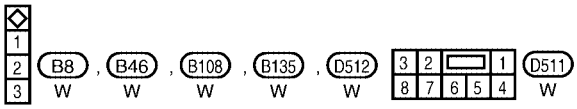
BL-VEHSEC-02

PB : WITH POWER BACK DOOR
XB : WITHOUT POWER BACK DOOR
*1 PB : 14
XB : 6
*2 PB : 4
XB : 1
*3 PB : 4
XB : 1

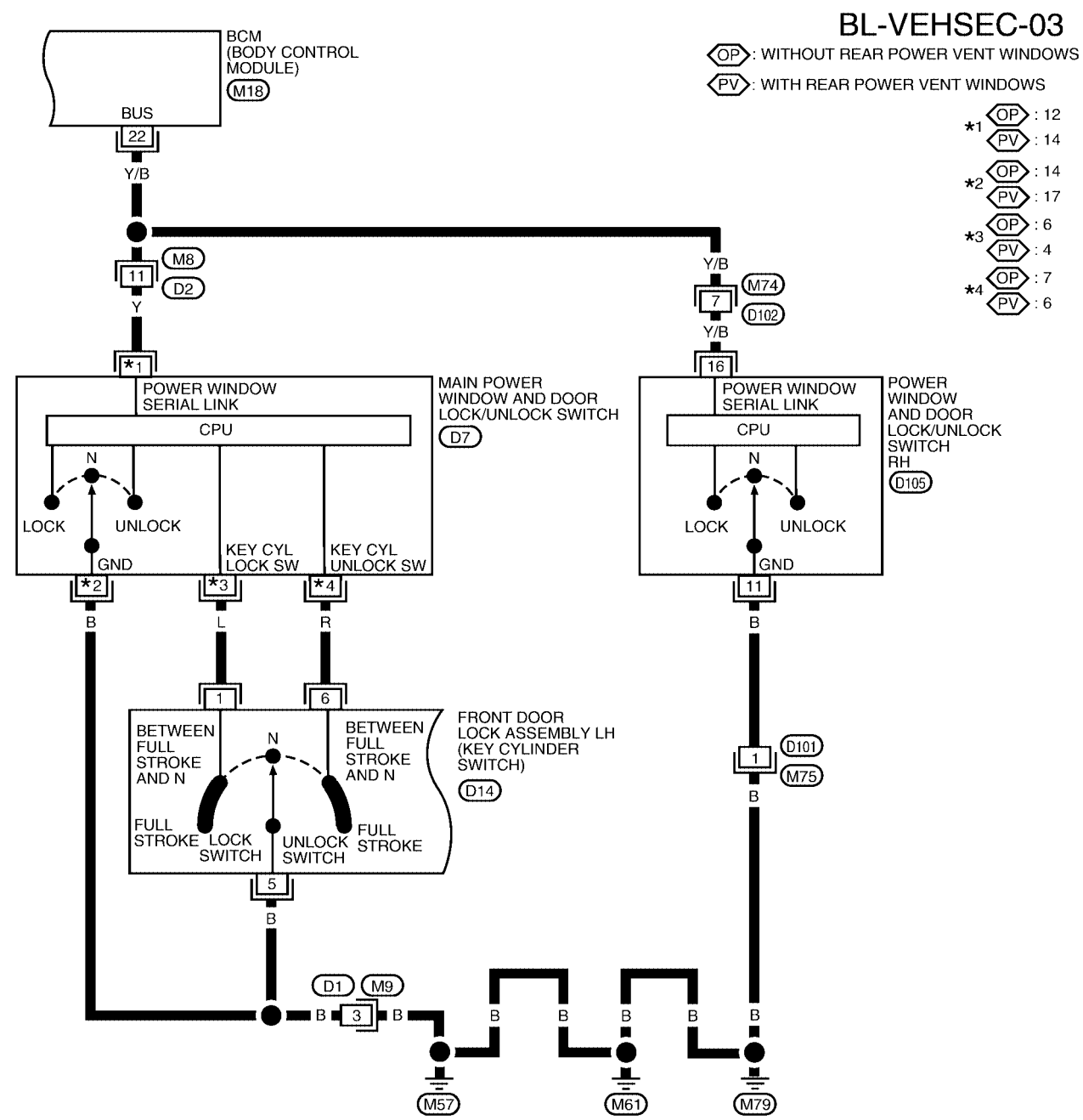


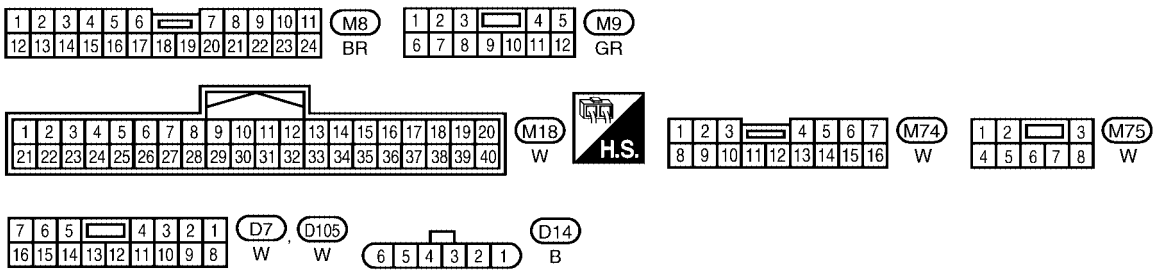




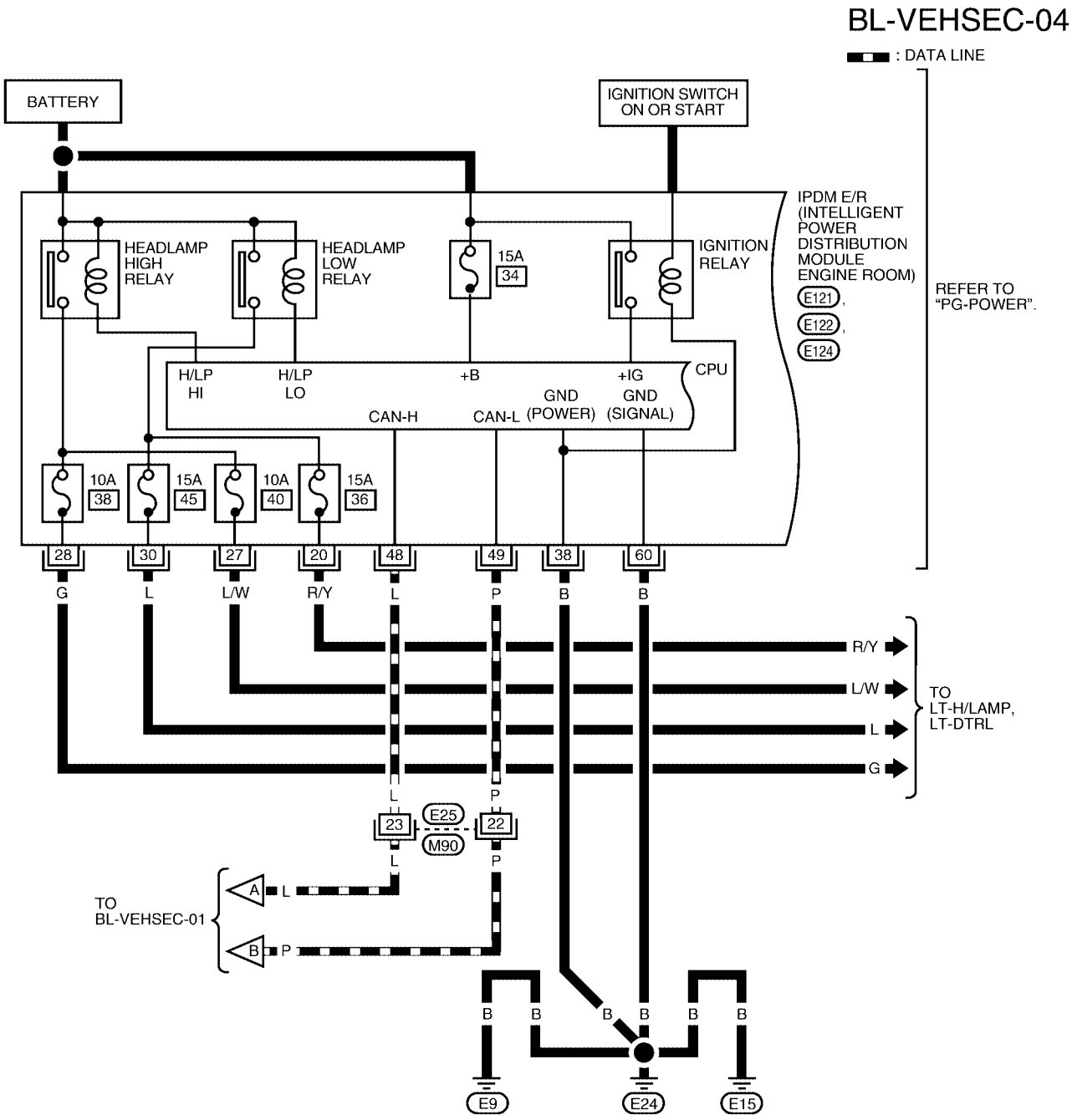


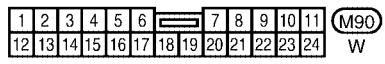
WIWA1122E

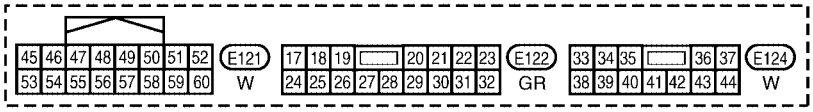

BL-VEHSEC-03
OP: WITHOUT REAR POWER VENT WINDOWS
PV: WITH REAR POWER VENT WINDOWS
*1 OP: 12 PV: 14
*2 OP: 14 PV: 17
*3 OP: 6 PV: 4
*4 OP: 7 PV: 6
BCM (BODY CONTROL MODULE)
M18
BUS
22
Y/B
M8
11
D2
Y
*1
POWER WINDOW SERIAL LINK
CPU
N
LOCK
UNLOCK
GND
KEY CYL LOCK SW
KEY CYL UNLOCK SW
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
D7
*2
*3
*4
B
L
R
1
6
BETWEEN FULL STROKE AND N
FULL STROKE LOCK SWITCH
UNLOCK SWITCH
FULL STROKE
FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)
D14
5
D1
M9
3
M57
M61
M79
Y/B
M74
7
D102
16
POWER WINDOW SERIAL LINK
CPU
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
D105
LOCK
UNLOCK
GND
11
D101
M75


M8
BR
M9
GR
M18
W
H.S.
M74
W
M75
W
D7
W
D105
W
D14
B

WIWA1249E

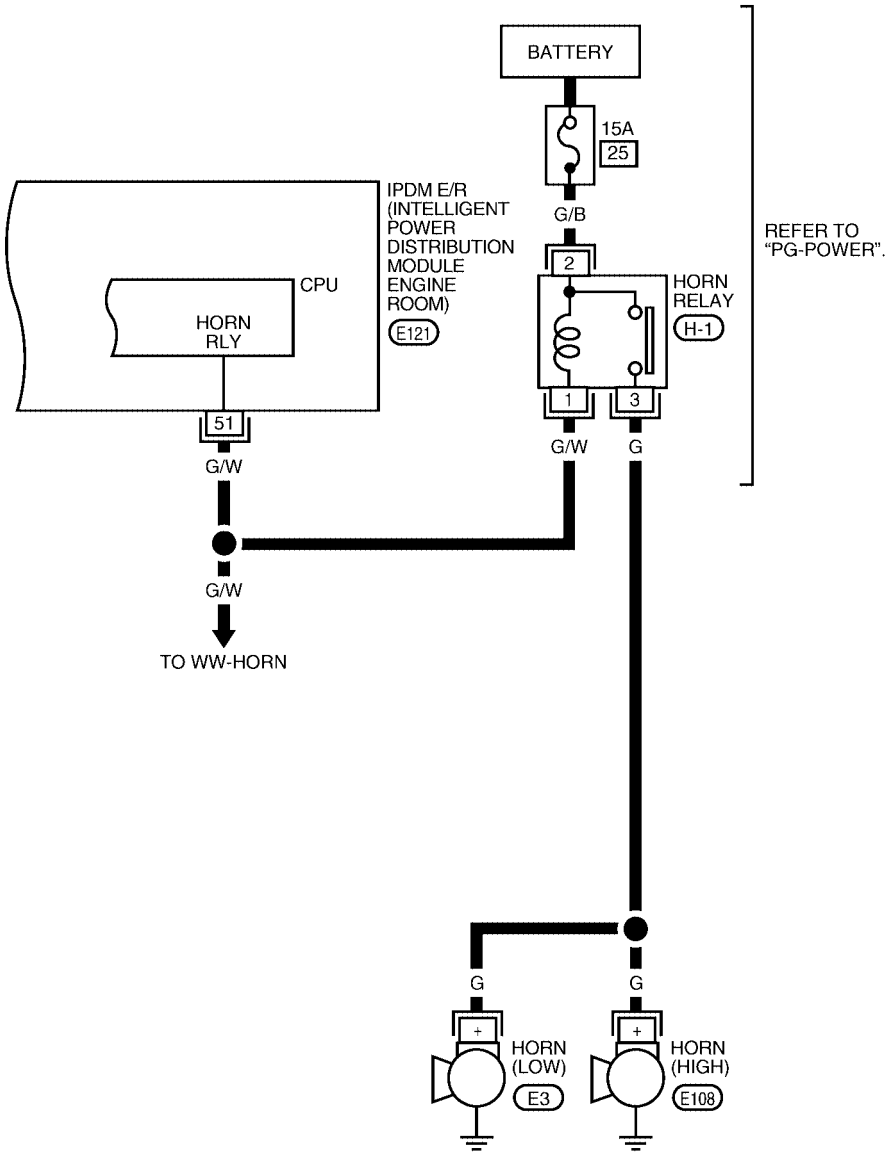

BL-VEHSEC-04
: DATA LINE
BATTERY
IGNITION SWITCH ON OR START
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E121, E122, E124
REFER TO "PG-POWER".
HEADLAMP HIGH RELAY
HEADLAMP LOW RELAY
15A 34
IGNITION RELAY
H/LP HI
H/LP LO
+B
+IG
GND (POWER)
GND (SIGNAL)
CPU
CAN-H
CAN-L
10A 38
15A 45
10A 40
15A 36
28
30
27
20
48
49
38
60
G
L
L/W
R/Y
L
P
B
B
R/Y
L/W
L
G
TO LT-H/LAMP, LT-DTRL
E25
M90
23
22
TO BL-VEHSEC-01
A
B
E9
E24
E15

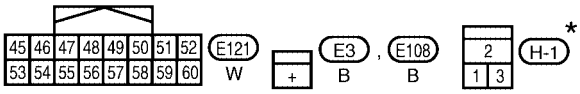

M90
W


E121
W
E122
GR
E124
W

WIWA1123E

BL-VEHSEC-05



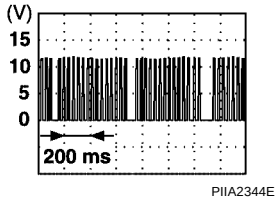


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

WIWA1124E

Terminals and Reference Value for BCM

EIS007EM

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
11	V	Ignition switch (ACC or ON)	Ignition switch (ACC or ON position)	Battery voltage
12	GR/L	Front door switch RH	Door closed (OFF) → Open (ON)	Battery voltage → 0
13	O/B	Sliding door switch RH	Door closed (OFF) → Open (ON)	Battery voltage → 0
22	Y/B	Bus	When ignition switch is ON or power window timer operates	 PIIA2344E
23	G/O	Combination meter (security indicator lamp)	Goes off → Illuminates (Every 3 seconds)	Battery voltage → 0
39	L	CAN-H	—	—
40	P	CAN-L	—	—
42	Y/G	Battery power supply	—	Battery voltage → 0
52	B/W	Ground	—	0
55	W/B	Battery power supply	—	Battery voltage
58	O	Back door switch	Door closed (OFF) → Open (ON)	Battery voltage → 0
62	GR/R	Front door switch LH	Door closed (OFF) → Open (ON)	Battery voltage → 0
63	W/G	Sliding door switch LH	Door closed (OFF) → Open (ON)	Battery voltage → 0

Terminals and Reference Value for IPDM E/R

EIS007EN

Terminal	Wire Color	Item	Condition			Voltage (V) (Approx.)
20	R/Y	Headlamp low (RH)	Ignition SW ON	Lighting switch 2ND position	OFF	0V
					ON	Battery voltage
27	L/W	Headlamp high (RH)	Ignition SW ON	Lighting switch HIGH or PASS position	OFF	0V
					ON	Battery voltage
28	G	Headlamp high (LH)	Ignition SW ON	Lighting switch HIGH or PASS position	OFF	0V
					ON	Battery voltage
30	L	Headlamp low (LH)	Ignition SW ON	Lighting switch 2ND position	OFF	0V
					ON	Battery voltage
38	B	Ground	—			0
48	L	CAN-H	—			—
49	P	CAN-L	—			—
51	G/W	Horn relay	When doors locks are operated using key fob (OFF → ON) *1			Battery voltage → 0
60	B	Ground	—			0

*1: when horn reminder is ON.

CONSULT-II Function (BCM)

EIS007EO

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

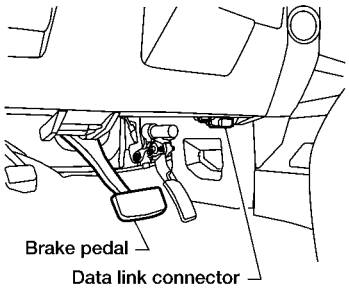
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received date is displayed.
	DATA MONITOR	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 result 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 INSPECTION PROCEDURE

CAUTION:

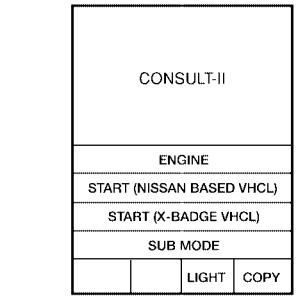
If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



BBIA0369E

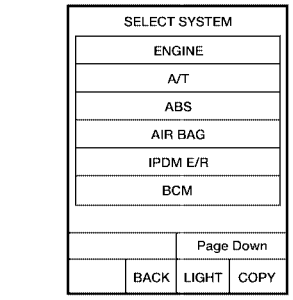
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)".



NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER.

BCIA0029E

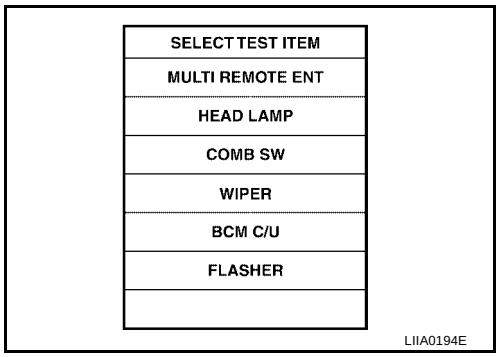
5. Touch “BCM”.
   If "BCM" is not indicated, refer to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



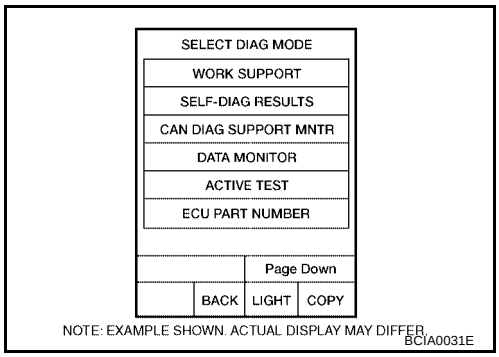
NOTE: EXAMPLE SHOWN. ACTUAL DISPLAY MAY DIFFER.

BCIA0030E

6. Touch “THEFT ALM” on the "SELECT TEST ITEM" screen.



7. Select diagnosis mode.
“DATA MONITOR”, “ACTIVE TEST” and “WORK SUPPORT” are available.



CONSULT-II APPLICATION ITEM

Data Monitor

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from keyfob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from keyfob.
KEYLESS TRUNK	Indicates [ON/OFF] condition of power back door open signal from keyfob.
KEYLESS PSD R	Indicates [ON/OFF] condition of power sliding door LH signal from keyfob.
KEYLESS PSD L	Indicates [ON/OFF] condition of power sliding door RH signal from keyfob.
KEYLESS PBD	Indicates [ON/OFF] condition of power back door close signal from keyfob.
TRNK OPNR SW	Indicates [ON/OFF] condition of power back door switch.
TRNK CYL SW	OFF (not equipped)
TRNK OPN MNTR	Indicates [ON/OFF] condition of power back door position.
HOOD SW	OFF (not equipped)
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from lock/unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch.

Active Test

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when “ON” on CONSULT-II screen is touched.
HEADLAMP (HI)	This test is able to check vehicle security lamp operation. The high beam headlamps will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.

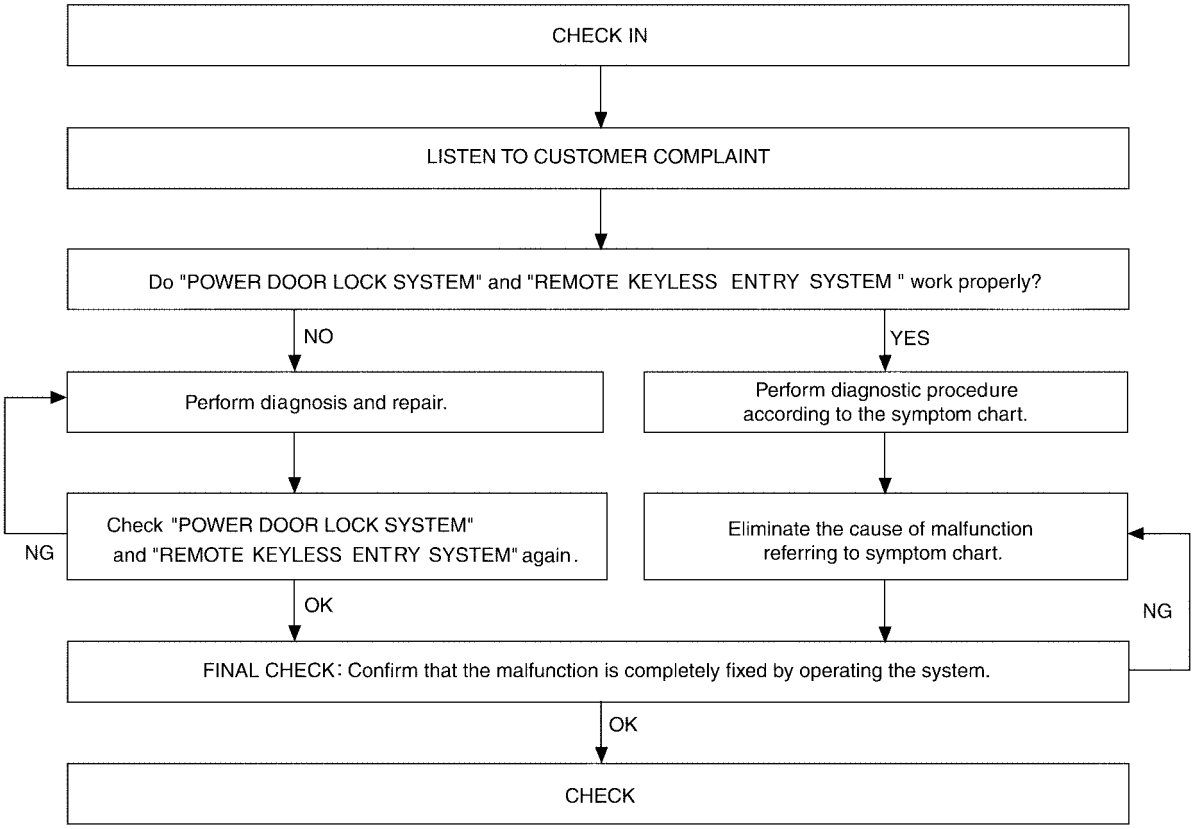
Work Support

Test Item	Description
SECURITY ALARM SET	This mode can confirm and change security alarm ON-OFF setting.
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching “CLEAR” on CONSULT-II screen.

Trouble Diagnosis

EIS007EP

WORK FLOW



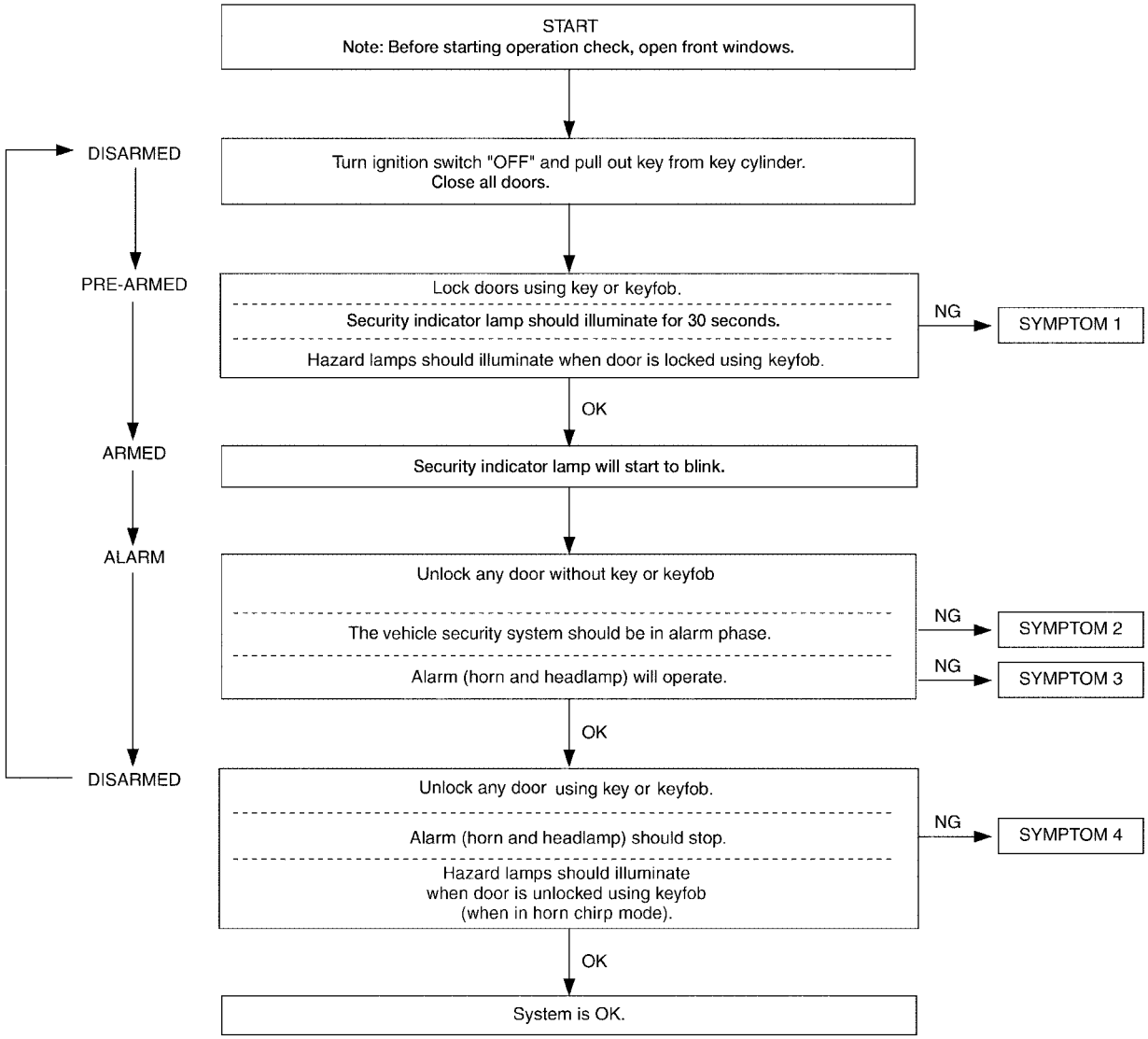
WIIA0599E

- “POWER DOOR LOCK SYSTEM” Diagnosis refer to BL-18, "POWER DOOR LOCK SYSTEM" .
- “REMOTE KEYLESS ENTRY SYSTEM” Diagnosis refer to BL-55, "REMOTE KEYLESS ENTRY SYSTEM" .

Preliminary Check

EIS007EQ

The system operation is canceled by turning ignition switch to ACC at any step between START and ARMED in the following flow chart.



WIIA0627E

After performing preliminary check, go to symptom chart.

Symptom Chart

EIS007ER

PROCEDURE / SYMPTOM			Diagnostic procedure
1	Vehicle security system cannot be set by ····	AII items	Diagnostic Procedure 1 Refer to BL-104, "Diagnostic Procedure 1" .
			If the above systems are “OK”, replace BCM.
		Lock/unlock switch	Diagnostic Procedure 6 Refer to BL-112, "Diagnostic Procedure 6" .
			If the above systems are “OK”, check main power window and door lock/ unlock switch.
		Door outside key	Diagnostic Procedure 3 Refer to BL-110, "Diagnostic Procedure 3" .
			If the above systems are “OK”, check main power window and door lock/ unlock switch.
	Security indicator does not turn “ON”.		Diagnostic Procedure 2 Refer to BL-108, "Diagnostic Procedure 2" .
			If the above systems are “OK”, replace BCM.
2	*1 Vehicle security system does not alarm when ····	Any door is opened.	Diagnostic Procedure 1 Refer to BL-104, "Diagnostic Procedure 1" .
			If the above systems are “OK”, replace BCM.
3	Vehicle security alarm does not activate.	Horn alarm	Diagnostic Procedure 4 Refer to BL-112, "Diagnostic Procedure 4" .
			If the above systems are “OK”, check horn system. Refer to WW-51, "HORN" .
		Headlamp alarm	Diagnostic Procedure 5 Refer to BL-112, "Diagnostic Procedure 5" .
			If the above systems are “OK”, replace BCM.
4	Vehicle security system cannot be canceled by ····	Door outside key	Diagnostic Procedure 3 Refer to BL-110, "Diagnostic Procedure 3" .
			If the above systems are “OK”, check main power window and door lock/ unlock switch.
		Keyfob	Check remote keyless entry function.
			If the above systems are “OK”, replace BCM.

*1: Make sure the system is in the armed phase.

Diagnostic Procedure 1

EIS007ES

Door Switch Check (Without Automatic Back Door System)

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

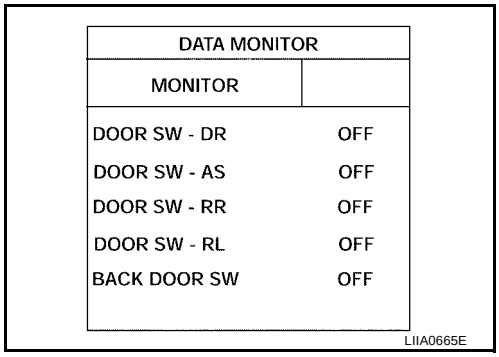
Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When doors are open:

DOOR SW-DR : ON
DOOR SW-AS : ON
DOOR SW-RR : ON
DOOR SW-RL : ON
BACK DOOR SW : ON

- When doors are closed:

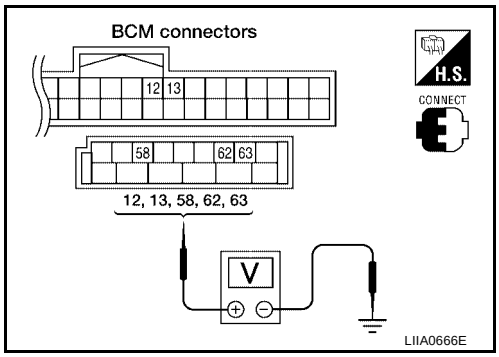
DOOR SW-DR : OFF
DOOR SW-AS : OFF
DOOR SW-RR : OFF
DOOR SW-RL : OFF
BACK DOOR SW : OFF



Without CONSULT-II

Check voltage between BCM connector M18 or M20 terminals 12, 13, 58, 62, 63 and ground.

Connector	Item	Terminals (+)	Terminals (–)	Condition	Voltage (V) (Approx.)
M20	Back door switch	58	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62			
	Sliding door switch LH	63			
M18	Front door switch RH	12			
	Sliding door switch RH	13			



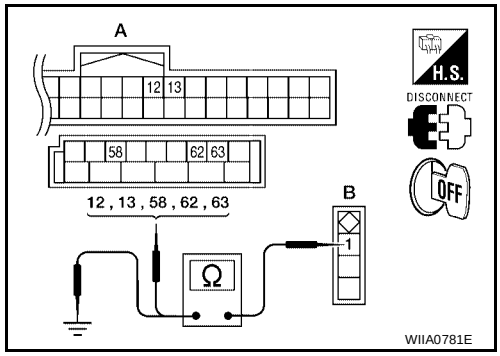
OK or NG

OK >> Door switch circuit is OK.
NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) or D512 (Back) terminal 1 and BCM connector (A) M18, M20 terminals 12, 13, 58, 62 and 63.

1 - 12 : Continuity should exist.
1 - 13 : Continuity should exist.
1 - 58 : Continuity should exist.
1 - 62 : Continuity should exist.
1 - 63 : Continuity should exist.



4. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) or D512 (Back) terminal 1 and ground.

1 - Ground : Continuity should not exist.

OK or NG

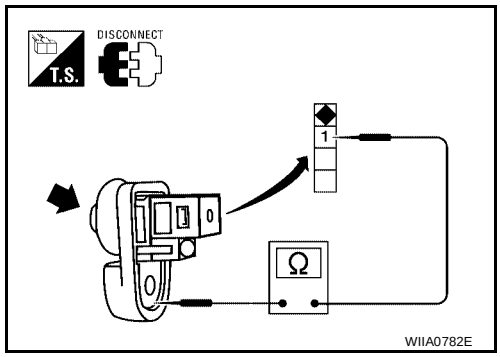
OK >> GO TO 3.
NG >> Repair or replace harness.

3. CHECK DOOR SWITCHES

FRONT AND REAR DOORS

Check continuity between front or rear door switch terminal 1 and exposed metal of switch while pressing and releasing switch.

Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.



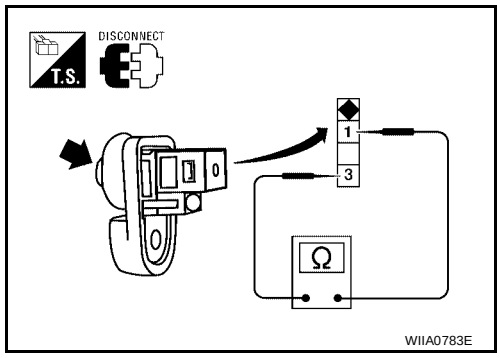
BACK DOOR

Check continuity between back door switch terminals 1 and 3 while pressing and releasing switch.

Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.

OK or NG

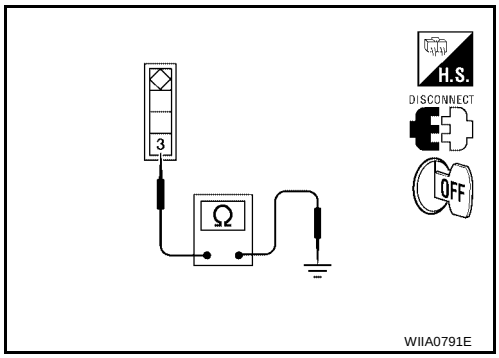
OK >> (Front and rear doors) Switch circuit is OK.
OK >> (Back door) GO TO 4.
NG >> Replace door switch.



4. CHECK BACK DOOR SWITCH GROUND

Check continuity between back door switch connector terminal 3 and ground.

3 - Ground : Continuity should exist.



OK or NG

OK >> Back door switch circuit is OK.
NG >> Repair or replace harness.

Door Switch Check (With Automatic Back Door System)

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

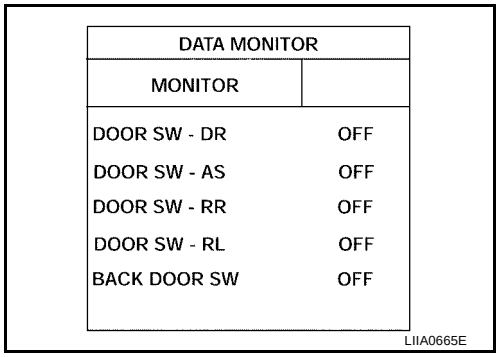
Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When doors are open:

DOOR SW-DR : ON
DOOR SW-AS : ON
DOOR SW-RR : ON
DOOR SW-RL : ON
BACK DOOR SW : ON

- When doors are closed:

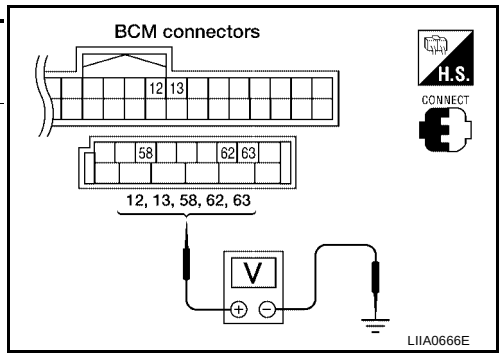
DOOR SW-DR : OFF
DOOR SW-AS : OFF
DOOR SW-RR : OFF
DOOR SW-RL : OFF
BACK DOOR SW : OFF



Without CONSULT-II

Check voltage between BCM connector M18 or M20 terminals 12, 13, 58, 62, 63 and ground.

Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(–)		
M20	Back door latch	58	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62			
	Sliding door switch LH	63			
M18	Front door switch RH	12			
	Sliding door switch RH	13			



OK or NG

OK >> Door switch is OK.
NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) terminal 1 or back door latch (door ajar switch) connector (C) D511 terminal 7 and BCM connector (A) M18, M20 terminals 12, 13, 58, 62 and 63

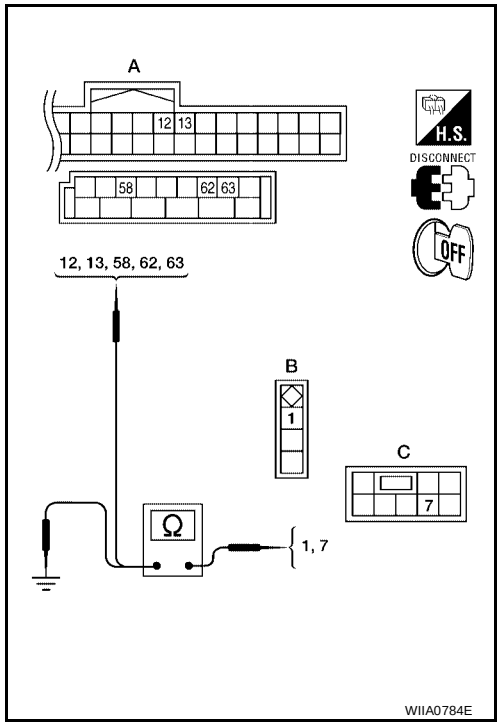
1 - 62 : Continuity should exist.
1 - 12 : Continuity should exist.
1 - 63 : Continuity should exist.
1 - 13 : Continuity should exist.
7 - 58 : Continuity should exist.

4. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) terminal 1 or back door latch (door ajar switch) connector (C) D511 terminal 7 and ground.

1 - Ground : Continuity should not exist.
7 - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

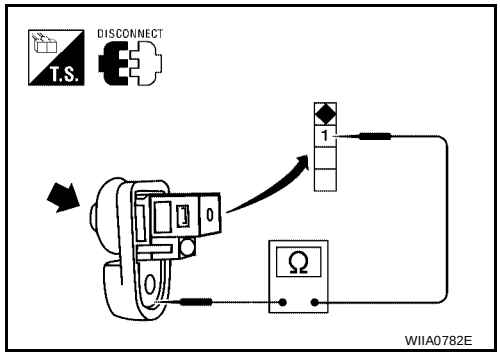


3. CHECK DOOR SWITCHES

FRONT AND REAR DOORS

Check continuity between front or rear door switch terminal 1 and exposed metal of switch while pressing and releasing switch.

Door switch is released : Continuity should exist.
Door switch is pushed : Continuity should not exist.



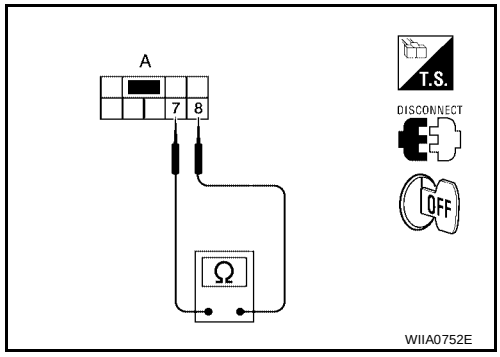
BACK DOOR

Check continuity between back door latch connector (A) D511 terminals 7 and 8 while pressing (closing back door) and releasing (opening back door) switch.

When back door is open : Continuity should exist.
When back door is closed : Continuity should not exist.

OK or NG

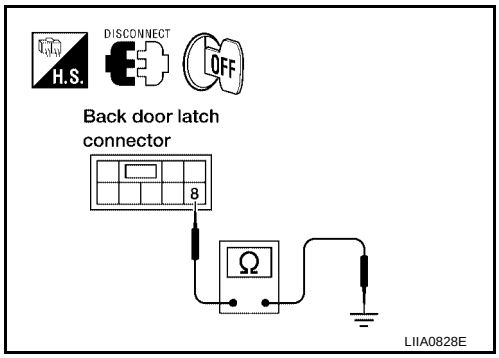
OK >> (Front and rear doors) Switch circuit is OK.
OK >> (Back door) GO TO 4.
NG >> Replace door switch.



4. CHECK BACK DOOR SWITCH GROUND

Check continuity between back door latch connector terminal 8 and ground.

8 - Ground : Continuity should exist.



OK or NG

OK >> Back door switch circuit is OK.
NG >> Repair or replace harness.

Diagnostic Procedure 2

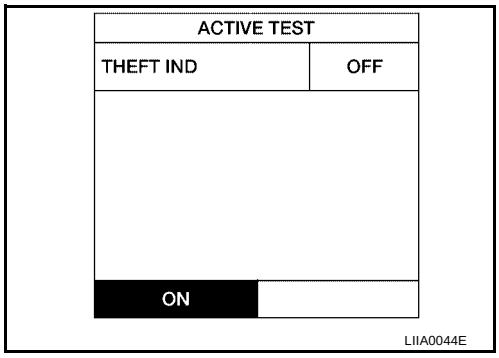
EIS007ET

SECURITY INDICATOR LAMP CHECK

1. SECURITY INDICATOR LAMP ACTIVE TEST

With CONSULT-II

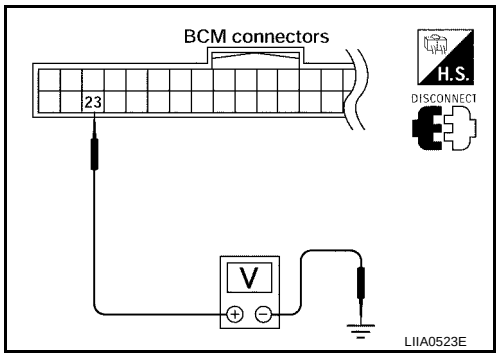
Check "THEFT IND" in "ACTIVE TEST" mode with CONSULT-II.



Without CONSULT-II

1. Disconnect BCM.
2. Check voltage between BCM harness connector M18 terminal 23 and ground.

Connector	Terminal		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M18	23	Ground	ON	0
			OFF	Battery voltage



OK or NG

OK >> Security indicator lamp is OK.
NG >> GO TO 2.

2. SECURITY INDICATOR LAMP CHECK

Check indicator lamp condition.
Refer to DI-5, "COMBINATION METERS" .

OK or NG

OK >> GO TO 3.
NG >> Replace combination meter (security indicator lamp). Refer to IP-10, "Removal and Installation" .

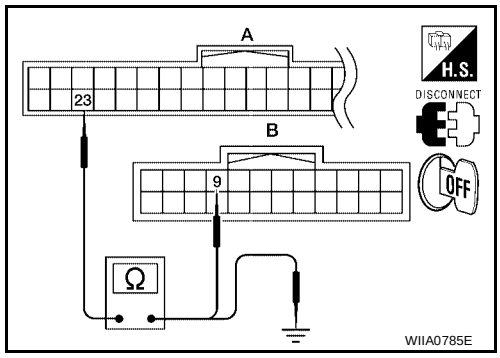
3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and security indicator lamp connector.
3. Check continuity between BCM connector (A) M18 terminal 23 and combination meter (security indicator lamp) connector (B) M24 terminal 9.

   23 - 9 : Continuity should exist.

4. Check continuity between BCM connector (A) M18 terminal 23 and ground.

   23 - Ground : Continuity should not exist.



OK or NG

OK >> Check the following:
- 10A fuse [No. 19, located in fuse block (J/B)]
- Harness for open or short between security indicator lamp and fuse

NG >> Repair or replace harness.

Diagnostic Procedure 3

EIS007EU

1. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

With CONSULT-II

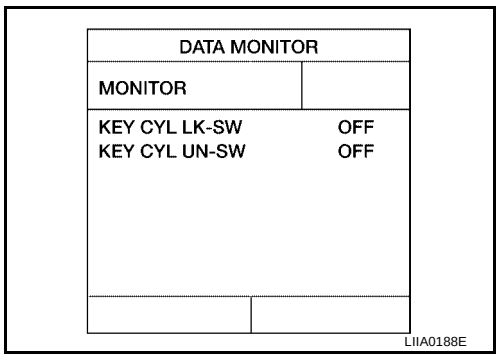
Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode with CONSULT–II. Refer to BL-39, "DATA MONITOR" .

- When key inserted in left front door key cylinder is turned to LOCK:

  KEY CYL LK-SW : ON

- When key inserted in left front key cylinder is turned to UNLOCK:

  KEY CYL UN-SW : ON

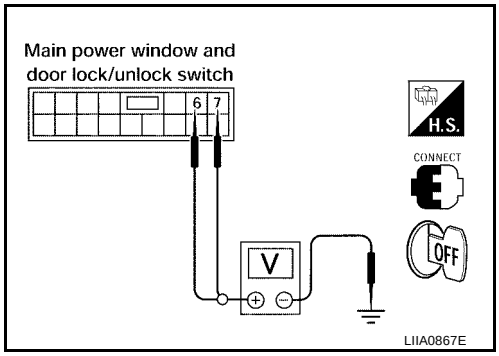


Without CONSULT-II

Check voltage between main power window and door lock/unlock switch connector D7 terminals 6, 7 (without power vent windows) or terminals 4, 6 (with power vent windows) and ground.

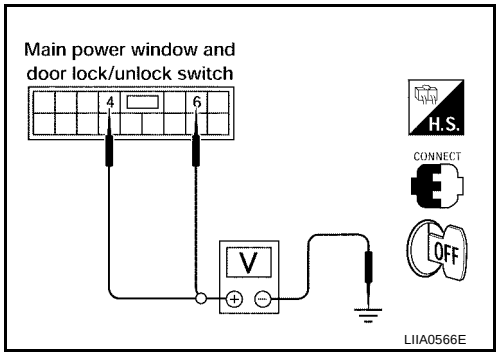
Without Power Vent Windows

Connector	Terminals		Condition of left front key cylinder	Voltage (V) (Approx.)
	(+)	(–)		
D7	6	Ground	Neutral/Unlock	5
			Lock	0
	7		Neutral/Lock	5
			Unlock	0



With Power Vent Windows

Connector	Terminals		Condition of left front key cylinder	Voltage (V) (Approx.)
	(+)	(–)		
D7	4	Ground	Neutral/Unlock	5
			Lock	0
	6		Neutral/Lock	5
			Unlock	0



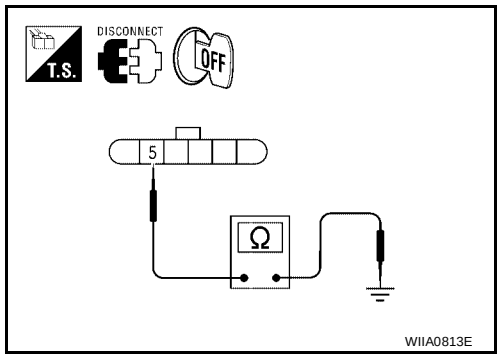
OK or NG

OK >> Key cylinder switch signal is OK.
NG >> GO TO 2.

2. CHECK DOOR KEY CYLINDER SWITCH LH GROUND HARNESS

Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminal 5 and body ground.

Connector	Terminals	Continuity
D14	5 – Ground	Yes



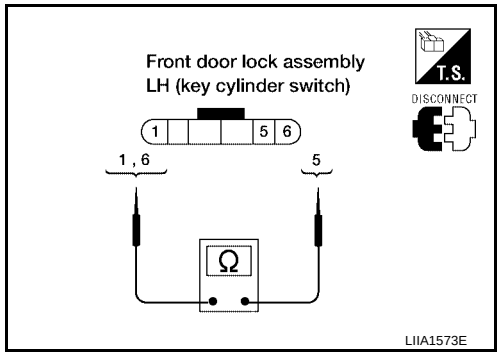
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. CHECK DOOR KEY CYLINDER SWITCH LH

Check continuity between front door lock assembly LH (key cylinder switch) terminals.

Terminals	Condition	Continuity
1 – 5	Key is turned to UNLOCK or neutral.	No
	Key is turned to LOCK.	Yes
5 – 6	Key is turned to LOCK or neutral.	No
	Key is turned to UNLOCK.	Yes



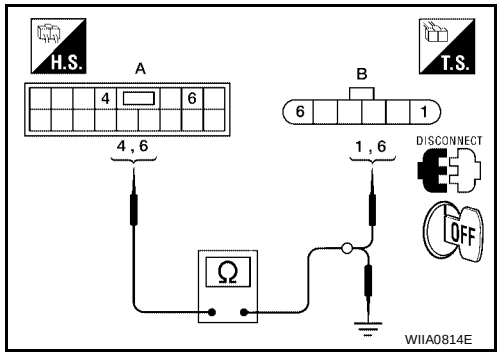
OK or NG

OK >> GO TO 4.
NG >> Replace front door lock assembly LH (key cylinder switch). Refer to BL-197, "FRONT DOOR LOCK" .

4. CHECK DOOR KEY CYLINDER HARNESS

Check continuity between main power window and door lock/unlock switch connector (A) D7 terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector (B) D14 terminals 1, 6 and body ground.

Connector	Terminals	Connector	Terminals	Continuity
A: Main power window and door lock/unlock switch	4	B: Front door lock assembly LH (key cylinder switch)	1	Yes
	6		6	Yes
	4	Ground		No
	6	Ground		No



OK or NG

OK >> Replace main power window and door lock/unlock switch.
NG >> Repair or replace harness.

Diagnostic Procedure 4

EIS007EV

VEHICLE SECURITY HORN ALARM CHECK

1. CHECK HORN OPERATION

Check if horn sounds with horn switch.

Does horn operate?

Yes >> Check harness for open or short between IPDM E/R and horn relay.
No >> Check horn circuit. Refer to WW-51, "HORN" .

Diagnostic Procedure 5

EIS007EW

VEHICLE SECURITY HEADLAMP ALARM CHECK

1. CHECK VEHICLE SECURITY HEADLAMP ALARM OPERATION

Check if headlamps operate with lighting switch.

Do headlamps come on when turning switch ON?

Yes >> Headlamp alarm is OK.
No >> Check headlamp system. Refer to LT-5, "HEADLAMP (FOR USA)" or LT-32, "HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -" .

Diagnostic Procedure 6

EIS007EX

DOOR LOCK/UNLOCK SWITCH CHECK

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

Check if power door lock operates with door lock/unlock switch.

Do doors lock/unlock when using each door lock/unlock switch?

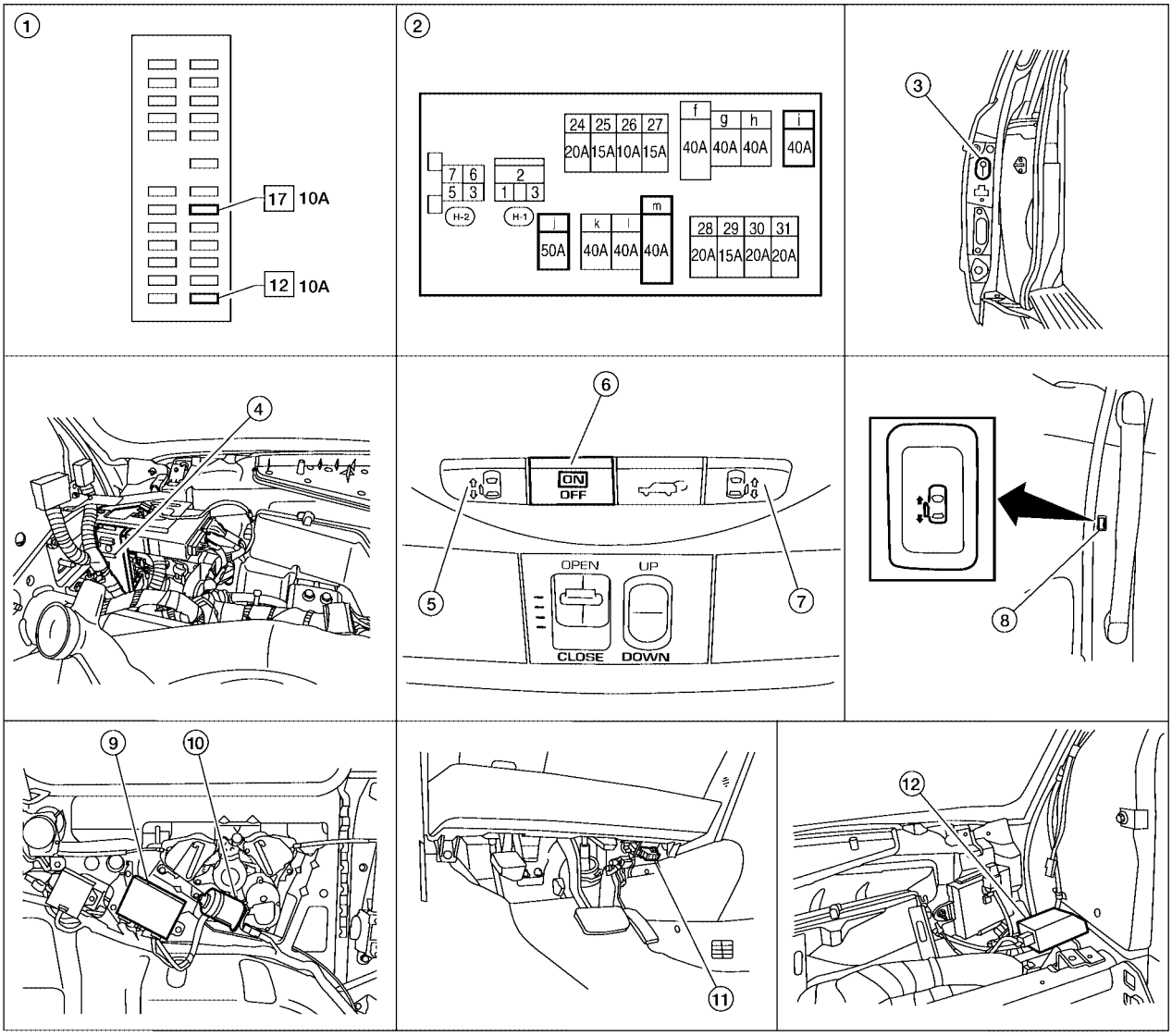
Yes >> Door lock/unlock switch is OK.
No >> Refer to BL-18, "POWER DOOR LOCK SYSTEM" .

AUTOMATIC SLIDING DOOR SYSTEM

PFP:28572

Component Parts and Harness Connector Location

EIS007EY



LIIA2335E

1. Fuse block (J/B)
2. Fuse and fusible link box
3. Sliding door switch
   LH B46
   RH B135
4. BCM M18, M19, M20
   (view with instrument panel removed)
5. Sliding door open/close switch LH
6. Automatic door main switch R10
7. Sliding door open/close switch RH
8. Sliding door open/close switch
   LH B58
   RH B140
9. Sliding door control unit
   LH B60, B61, B501 (left rear body)
   RH B143, B144, B401 (right rear body)
10. Sliding door motor assembly
    LH B59 (left rear body)
    RH B145 (right rear body)
11. Data link connector
12. Remote keyless entry receiver M120
    (view with instrument panel removed)

System Description

EIS007EZ

- It is possible to automatically open/close the sliding doors with automatic main door switch, remote keyless entry controller, or sliding door open/close switch.
- It is possible to switch the sliding doors between auto and manual operation by switching the automatic main door switch ON/OFF.

OPERATION DESCRIPTION

Automatic Door Main Switch Operation (Fully Closed → Fully Open Operation)

- When the automatic door main switch is pressed, sliding door control unit terminal 15 receives the signal.
- The sliding door control unit checks the automatic transaxle selector lever (A/T device) position through terminal 18, vehicle speed through terminal 7 and battery voltage.
- For automatic sliding door LH, fuel lid door status is checked through sliding door control unit terminal 13.
- Door lock status is checked through terminal 3. If the door is locked, the sliding door control unit will unlock the door through terminal 30.
- When the sliding door control unit receives the signal, if the auto sliding door operating enable conditions are met, it sends the unlock signal to the sliding door latch control unit.
- When the sliding door latch control unit receives the signal, it supplies voltage from terminal 10 to operate the release actuator and unlatches the door lock.
- The sliding door control unit supplies power from terminal 33 and supplies power from terminal 34 to the magnetic clutch to operate the sliding door motor and slide the sliding door in the open direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the sliding door is opened to the full-open position, the full-open position is detected by the encoder (built into the sliding door motor assembly), and the sliding door control unit switches the sliding door motor OFF and controls the magnetic clutch ON → half clutch → OFF.
- The sliding door is mechanically held in the fully open position by the checker.

Remote Keyless Entry Switch Operation (Fully Closed → Fully Open Operation)

- When the remote keyless entry switch is pressed for at lease 0.5 seconds, sliding door control unit terminal 7 receives the signal.
- The sliding door control unit checks the automatic transaxle selector lever (A/T device) position through terminal 18, vehicle speed through terminal 7 and battery voltage.
- For automatic sliding door LH, fuel lid door status is checked through sliding door control unit terminal 13.
- Door lock status is checked through terminal 3, if the door is locked, the sliding door control unit will unlock the door through terminal 30.
- When the sliding door control unit receives the signal, if the auto sliding door operating enable conditions are met, it sends the unlock signal to the sliding door latch control unit.
- When the sliding door latch control unit receives the signal, it supplies voltage from terminal 10 to operate the release actuator and unlatches the door lock.
- The sliding door control unit supplies power from terminal 33 and supplies power from terminal 34 to the magnetic clutch to operate the sliding door motor and slide the sliding door in the open direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the sliding door is opened to the full-open position, the full-open position is detected by the encoder (built into the sliding door motor assembly), and the sliding door control unit switches the sliding door motor OFF and controls the magnetic clutch ON → half clutch → OFF.
- The sliding door is mechanically held in the fully open position by the checker.

Sliding Door Open/Close Switch Operation (Fully Closed → Fully Open Operation)

- When the sliding door open/close switch is pressed, sliding door control unit terminal 2 receives the signal.
- The sliding door control unit checks the automatic transaxle selector lever (A/T device) position through terminal 18, vehicle speed through terminal 7 and battery voltage.
- For automatic sliding door LH, fuel lid door status is checked through sliding door control unit terminal 13.
- When the sliding door control unit receives the signal, if the auto sliding door operating enable conditions are met, including automatic door main switch in the ON position, doors in the unlock position and the child lock switch in the OFF position, it sends the unlock signal to the sliding door latch control unit.

- When the sliding door latch control unit receives the signal, it supplies voltage from terminal 10 to operate the release actuator and unlatches the door lock.
- The sliding door control unit supplies power from terminal 33 and supplies power from terminal 34 to the magnetic clutch to operate the sliding door motor and slide the sliding door in the open direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the sliding door is opened to the full-open position, the full-open position is detected by the encoder (built into the sliding door motor assembly), and the sliding door control unit switches the sliding door motor OFF and controls the magnetic clutch ON → half clutch → OFF.
- The sliding door is mechanically held in the fully open position by the checker.

Automatic Door Main Switch Operation (Fully Open → Fully Closed Operation)

- When the automatic door main switch is pressed, the sliding door control unit terminal 15 receives the signal.
- When the sliding door control unit receives the signal, if the auto sliding door operating enable conditions are met, it operates the sliding door motor.
- The sliding door control unit supplies power from terminal 36 and supplies power from terminal 34 to the magnetic clutch to operate the sliding door motor and slide the sliding door in the close direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the sliding door reaches the half-latch state, the half-latch switch closes and the sliding door control unit detects the signal through terminal 5.
- When the sliding door control unit receives the signal, it switches OFF the sliding door motor and sends the latch command through terminal 26 to the sliding door latch control unit terminal 6.
- When the sliding door auto closure operates the cinch latch motor and the full-latch switch detects this, sliding door latch control unit terminal 7 receives the signal and reverses the latch motor to the neutral position.
- The siding door auto closure operation ends when the door is fully closed. The sliding door remains unlocked.

Remote Keyless Entry Operation (Fully Open → Fully Closed Operation)

- When the remote keyless entry switch is pressed for at least 0.5 seconds, the sliding door control unit terminal 7 receives the signal.
- When the sliding door control unit receives the signal, if the auto sliding door operating enable conditions are met, it operates the sliding door motor.
- The sliding door control unit supplies power from terminal 36 and supplies power from terminal 34 to the magnetic clutch to operate the sliding door motor and slide the sliding door in the close direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the sliding door reaches the half-latch state, the half-latch switch closes and the sliding door control unit detects the signal through terminal 5.
- When the sliding door control unit receives the signal, it switches OFF the sliding door motor and sends the latch command through terminal 26 to the sliding door latch control unit terminal 6.
- When the sliding door auto closure operates the cinch latch motor and the full-latch switch detects this, sliding door latch control unit terminal 7 receives the signal and reverses the latch motor to the neutral position.
- The sliding door auto closure operation ends when the door is fully closed. The sliding door remains unlocked.

Power Assist Function

- When the sliding door is pushed or pulled from any position, operations switch to the auto open/close function.
- The automatic door main switch must be in the ON position.

Sliding Door Power Assist Operation (Fully Closed → Fully Open Operation)

- For automatic sliding door LH, fuel lid door status is checked through sliding door control unit terminal 13.
- The sliding door control unit checks the automatic transaxle selector lever (A/T device) position through terminal 18, vehicle speed through terminal 7 and battery voltage.

- When the sliding door control unit detects motion through terminals 4 and 17, if the auto sliding door operating enable conditions are met, it applies power to terminals 33 and 34 to operate the door in the open direction.
- The sliding door control unit supplies power from terminal 33 and supplies power from terminal 34 to the magnetic clutch to operate the sliding door motor and slide the sliding door in the open direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the sliding door is opened to the full-open position, the full-open position is detected by the encoder (built into the sliding door motor assembly), and the sliding door control unit switches the sliding door motor OFF and controls the magnetic clutch ON → half clutch → OFF.
- The sliding door is mechanically held in the fully open position by the checker.

Sliding Door Power Assist Operation (Fully Open → Fully Closed Operation)

- When the handle is pulled or the door is moved in the closed direction, sliding door control unit initiates the power assist close operation.
- The sliding door control unit supplies power from terminal 36 and supplies power from terminal 34 to the magnetic clutch to operate the sliding door motor and slide the sliding door in the close direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the sliding door reaches the half-latch state, the half-latch switch closes and the sliding door control unit detects the signal through terminal 5.
- When the sliding door control unit receives the signal, it switches OFF the sliding door motor and sends the latch command through terminal 26 to the sliding door latch control unit terminal 6.
- When the sliding door auto closure operates the cinch latch motor and the full-latch switch detects this, sliding door latch control unit terminal 7 receives the signal and reverses the latch motor to the neutral position.
- The siding door auto closure operation ends when the door is fully closed. The sliding door remains unlocked.

Anti-Pinch Function

- During auto open/close operation, if pinching of an object is detected, the sliding door reverses direction to prevent pinching by moving to the full open or close position.

Intermittent Clutch Control Function

- During automatic operation, if the door is stopped midway, for example due to the automatic door main switch being switched to OFF or a system error, the clutch is intermittently turned ON → OFF to prevent sudden opening or closing. Intermittent clutch control ends after 6 seconds or when no door motion is detected. If the vehicle is on level ground, intermittent clutch control is executed for 1/2 second.

Precautions

- Check and inspect operation of the remote control auto sliding door system on level ground.

Auto Sliding Door Operation Enable Conditions

Operation	Automatic door main switch or remote keyless entry		Sliding door open/close switch		Power assist	
Operating direction	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed
Main switch	—		ON			
Vehicle stop condition	Automatic transmission selector lever in P position and vehicle speed signal is less than 2 km/h	—	Automatic transmission selector lever in P position and vehicle speed signal is less than 2 km/h	—	Automatic transmission selector lever in P position and vehicle speed signal is less than 2 km/h	—
Door lock knob state	—				Unlock (if door is fully closed)	—
Battery voltage	Approx. 11V or more				About 9V min. (operates with warning chime for low voltage of 9 - 11V)	

Control When Handle Open/Closed When Operating Enable Conditions Not Yet Met

Items	Operation condition	Not met case	Control
Main switch	ON	OFF	Manual mode (Power operation is available with automatic door main switch and remote keyless entry)
A/T selector lever P position	P position	Other	Power close operation
Voltage drop	9V or more	9 - 6V	Stopped while constrained (clutch is engaged and warning chime sounds)
		6 - 0V	Manual mode

Control When Operating Enable Conditions No Longer Met

Description	Operation	Condition
Main switch turned OFF during power open or close	Warning chime active and clutch intermittent mode → Shift to manual mode (Recovery to power mode when main switch turned ON or door fully closed)	→ Shift to manual mode
A/T selector lever P position	Warning chime active continuously (0.66 second dings) and one-way operation continues if closing Warning chime active continuously (0.33 second beep followed by 0.33 second pause) and one-way operation continues if opening. Warning chime remains on after completing open function.	Stop continued
Voltage drop 11 - 9V	One-way operation continued (equivalent to the case of starting voltage ← 11V for handle operation with warning chime active)	Normal operation
Voltage drop 9 - micro reset V	Motor stopped (clutch ON) → stop continued while still constrained → (Switching the main switch OFF shifts operation to intermittent mode.)	→ Shift to manual mode unless voltages returns to >9 V within 5 seconds
Voltage drop below micro reset V (Clutch hold not possible voltage)	● Stop continued while still constrained (Clutch ON circuit) Clutch is released when micro reset occurs ● The clutch force is weak, so there is slipping on hills, etc.	→ Shift to manual mode

Warning Chime Active Conditions

The warning chime uses two types of audio warnings, a friendly chime and a warning chime. The friendly chime consists of dings lasting 0.66 seconds each immediately followed by the next ding. The warning chime consists of beeps lasting 0.33 seconds with a pause of 0.33 seconds between each beep.

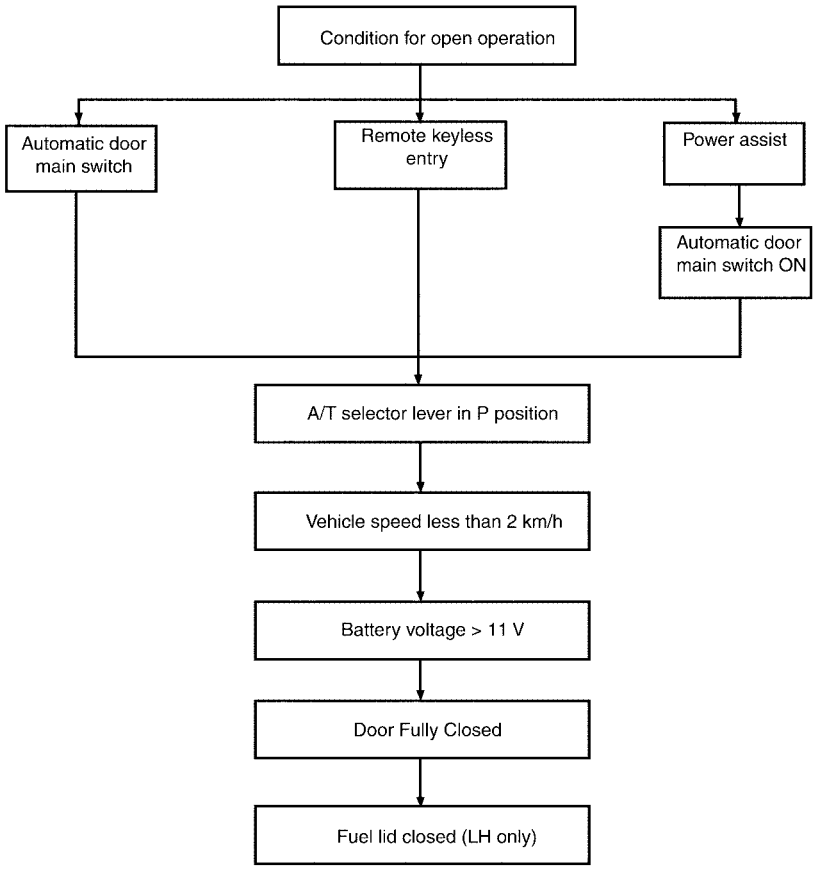
Operation status	Operation or conditions	Warning chime pattern
When reverse operation starts	When reverse operation detected	Friendly chime 1.33 seconds, 2 dings
During power close	When vehicle not in P position	Friendly chime Continuous
During power open or close	Obstacle is detected	Warning chime 2 seconds, 3 beeps
During power open	When vehicle not in P position or vehicle is moving at greater than 2 km/h	Warning chime Continuous until vehicle is shifted to P position

Reverse Conditions

Type	Control
Automatic door main switch, remote keyless entry or sliding door open/close switch operation	Both open/close directions
Detection method	Operation speed and motor current change direction
Non-reversed area	● Between full open and approx. 45 mm (near full-open lock) ● Closure operation area
Number of times reverse allowed	A maximum of one obstacle is allowed during an open or close operation. If a second obstacle is detected, the door will enter manual mode.

Operation Chart

- Open operation from fully closed



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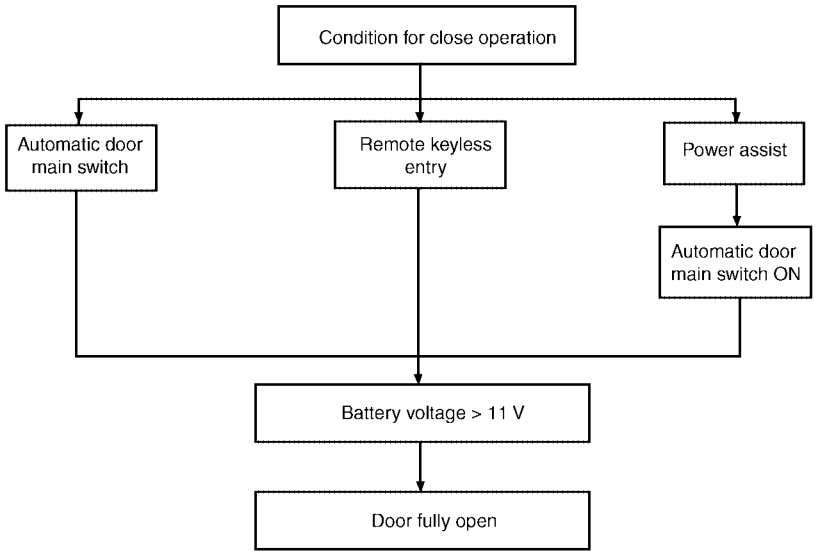
- Close operation from fully open



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Initialization Mode

Initialization mode is used to set the default values of door full open position and normal motor current.
It is necessary to complete initialization and reset the default settings under any of the following circumstances:

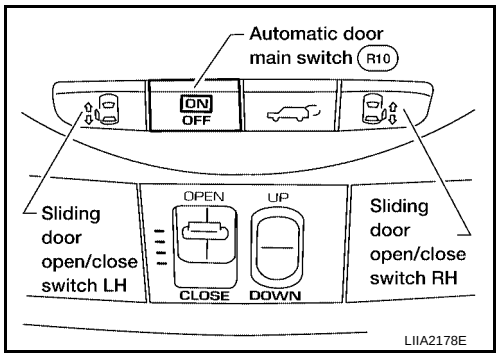
- Sliding door control unit is replaced.
- Sliding door motor is replaced.
- Sliding door is adjusted.
- Sliding door panel is replaced or repaired.
- Body panel near sliding door is replaced or repaired.
- Any sliding door roller is replaced or adjusted.
- Any sliding door striker is replaced or adjusted.
- Any sliding door dovetail is replaced or adjusted.
- Sliding door lock assembly is replaced.
- Rear rail is replaced.
- Sliding door weatherstrip is replaced.
- Sliding door contact switch is replaced or adjusted.
- When the battery is first connected, the sliding door control unit is automatically set to the initialization mode.

The sliding door control unit may be manually set to initialization mode by performing the following procedure:

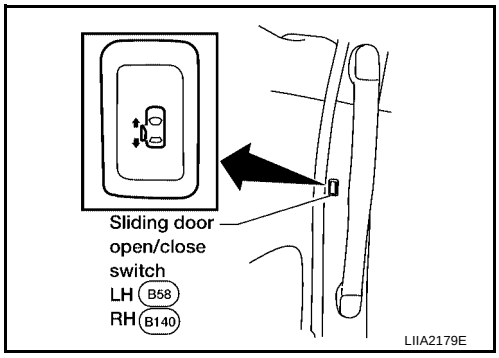
SLIDING DOOR INITIALIZATION PROCEDURE

NOTE:
While in initialization mode, only the overhead sliding door open/close switches are enabled. Remote keyless entry, door pillar switch and power assist functions are disabled. Each of the power sliding doors must be initialized individually. The following procedure can be repeated for each power sliding door needing initialization.

1. Open the sliding door being initialized.
2. Turn ignition switch ON.
3. Turn the Automatic Door Main Switch OFF.



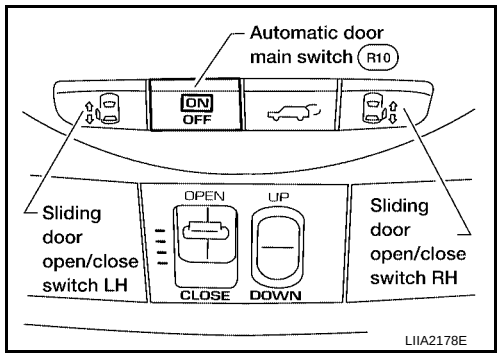
4. Within 3 seconds after step 3, press the door pillar Sliding Door Open/Close Switch of the door being initialized 10 times within 10 seconds.



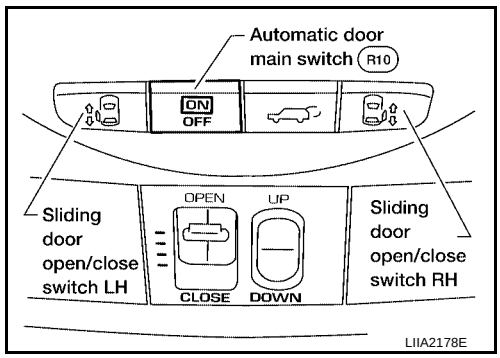
5. Within 3 seconds after step 4, turn ignition switch OFF then ON.
   - You should hear three sliding door warning chimes.
   - The three chimes indicate the sliding door control unit has entered initialization mode.

- Normal door functions are disabled during initialization.

6. Turn the Automatic Door Main Switch ON.



7. Press and HOLD the overhead Sliding Door Open/Close Switch of the door being initialized until the door completely closes and stops, then release the switch.



8. Press and HOLD the same overhead Sliding Door Open/Close Switch of the door being initialized again until the door completely opens and stops, then release the switch.
9. Press and HOLD the same overhead Sliding Door Open/Close Switch of the door being initialized again until the door completely closes and stops, then release the switch.
10. Turn ignition switch OFF.

The power sliding door initialization process is complete. The above procedure may be repeated for the other power sliding door (if equipped).

SLIDING DOOR LATCH AUTO CLOSURE FUNCTION DESCRIPTION

- If the sliding door is ajar (with lock and striker engaged), the motor automatically retracts the door to fully close it.
- During auto-close operation, if the exterior/interior handle is operated, the retraction mechanism is mechanically cancelled, and the door can open/close.

SLIDING DOOR LATCH AUTO CLOSURE OPERATION DESCRIPTION

- If the sliding door is ajar, sliding door latch control unit terminal 8 receives the signal, supplies power from terminal 3 to cinch latch motor terminals 1, grounds sliding door latch control unit terminal 9 from terminal 2, and rotates the cinch latch motor in the close direction.
- When the motor rotates, the cable is retracted and the close lever rotated.
- Pressed by the rotated close lever, the latch rotates and pulls in the door until it is fully latched.
- When the sliding door is fully latched, sliding door latch control unit terminal 7 receives the signal, supplies power from terminal 9 to cinch latch motor terminal 2, grounds sliding door control unit terminals 3 from terminal 1, and rotates the closure motor in the open direction.
- Then, when the neutral switch is pressed and the signal is received by sliding door latch control unit terminal 1, it stops the cinch latch motor and stops with the door fully closed.

Schematic

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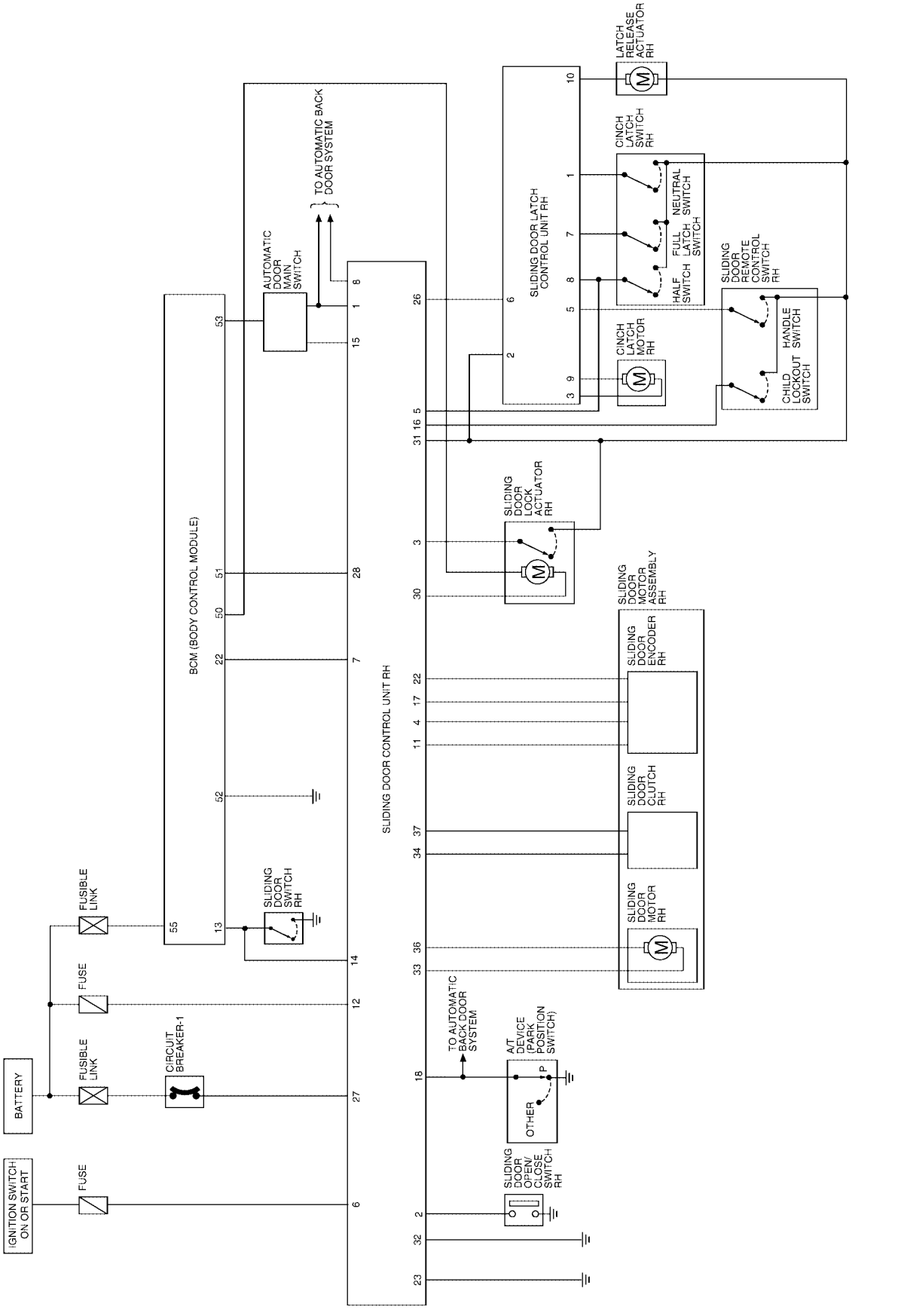
WITH RIGHT HAND SLIDE DOOR AUTO CLOSURE SYSTEM



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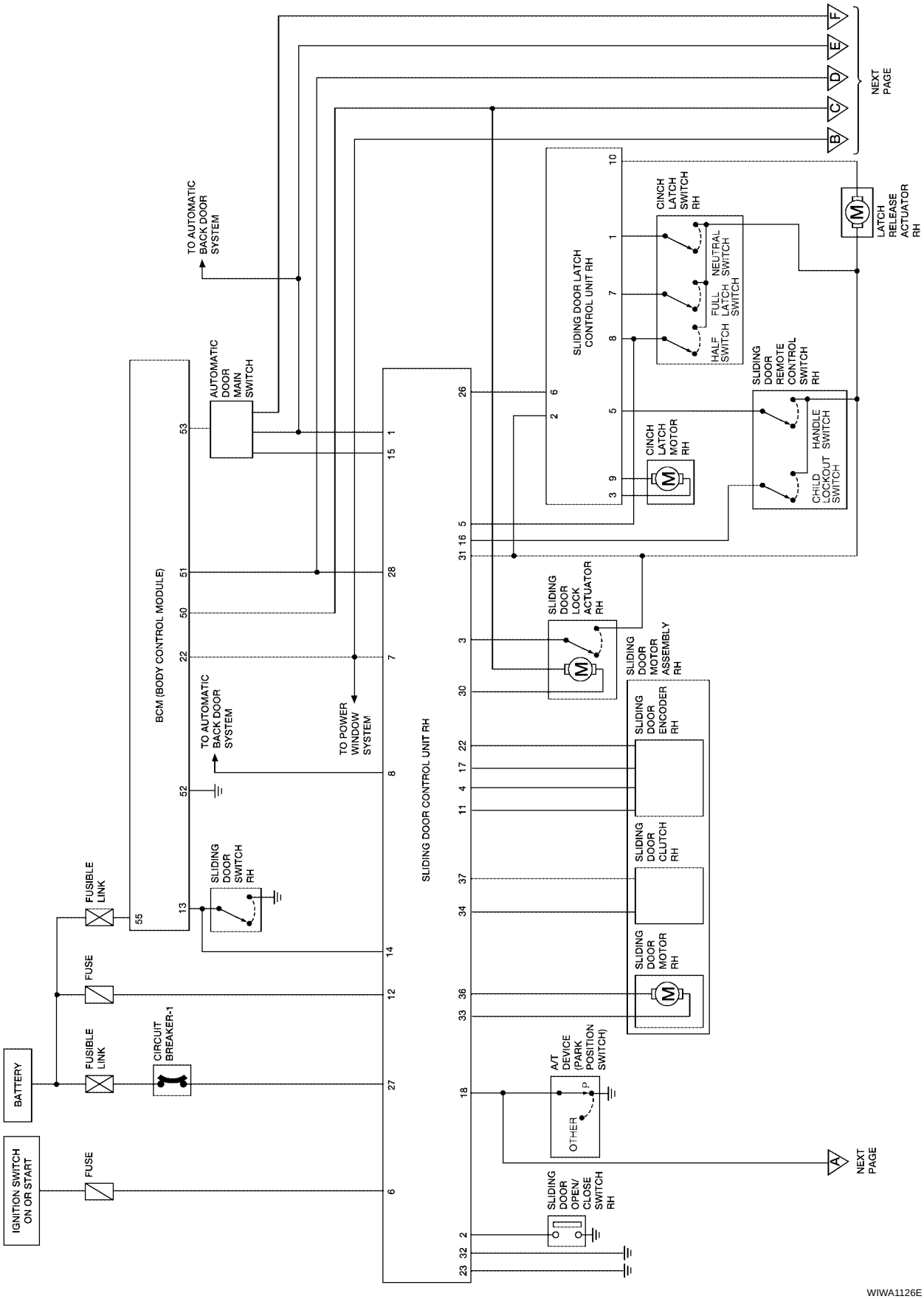
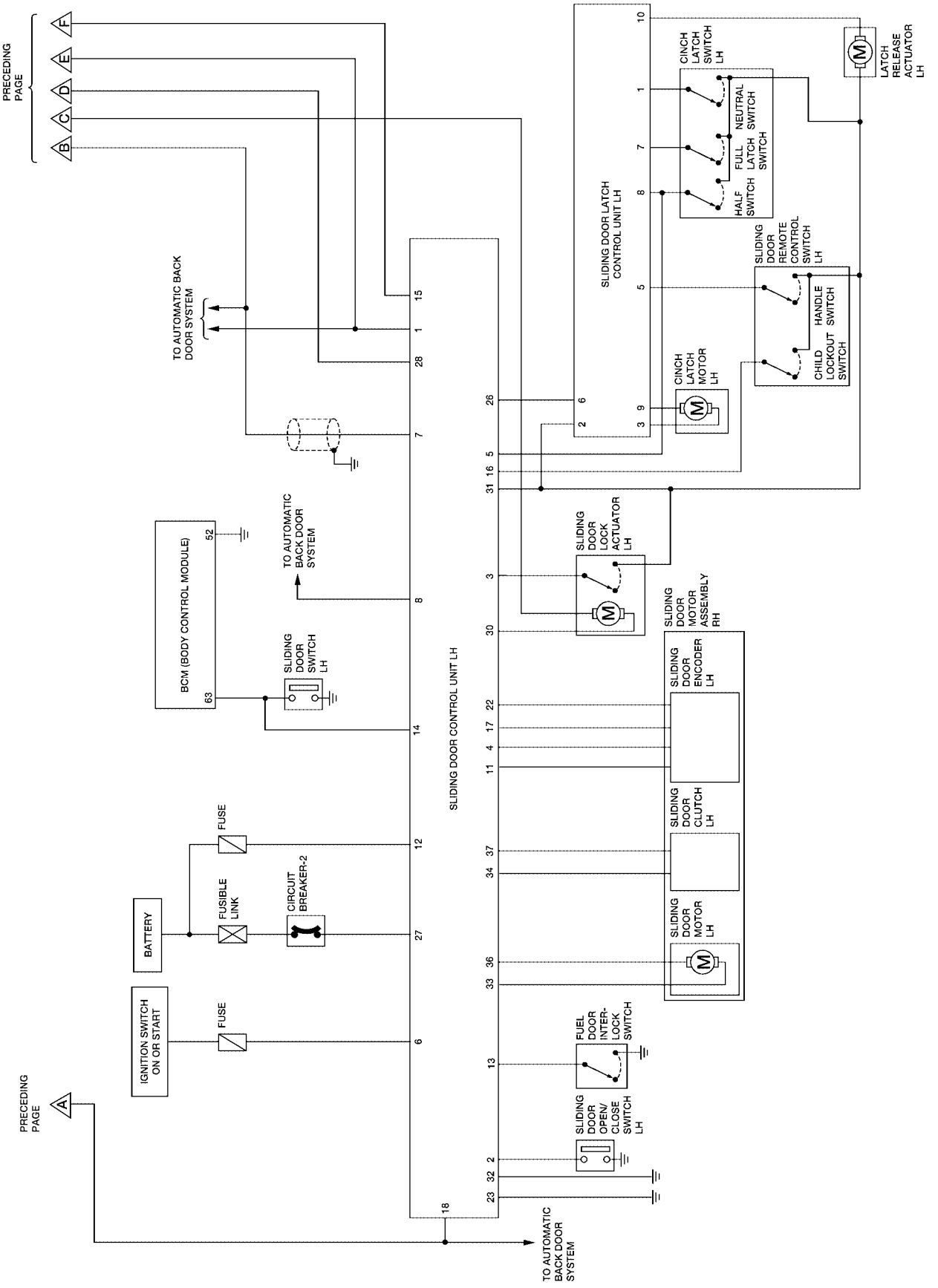
WITH RIGHT AND LEFT HAND SLIDE DOOR AUTO CLOSURE SYSTEM




PRECEDING PAGE
A
B
C
D
E
F
TO AUTOMATIC BACK DOOR SYSTEM
BCM (BODY CONTROL MODULE)
52
63
SLIDING DOOR SWITCH LH
TO AUTOMATIC BACK DOOR SYSTEM
BATTERY
FUSIBLE LINK
CIRCUIT BREAKER-2
FUSE
IGNITION SWITCH ON OR START
FUSE
SLIDING DOOR CONTROL UNIT LH
SLIDING DOOR LATCH CONTROL UNIT LH
CINCH LATCH SWITCH LH
NEUTRAL SWITCH
FULL LATCH SWITCH
HALF SWITCH
LATCH RELEASE ACTUATOR LH
SLIDING DOOR REMOTE CONTROL SWITCH LH
HANDLE SWITCH
CHILD LOCKOUT SWITCH
CINCH LATCH MOTOR LH
SLIDING DOOR LOCK ACTUATOR LH
SLIDING DOOR MOTOR ASSEMBLY RH
SLIDING DOOR ENCODER LH
SLIDING DOOR CLUTCH LH
SLIDING DOOR MOTOR LH
FUEL DOOR INTER-LOCK SWITCH
SLIDING DOOR OPEN/ CLOSE SWITCH LH
PRECEDING PAGE
A
TO AUTOMATIC BACK DOOR SYSTEM

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Wiring Diagram — S/CLOS —

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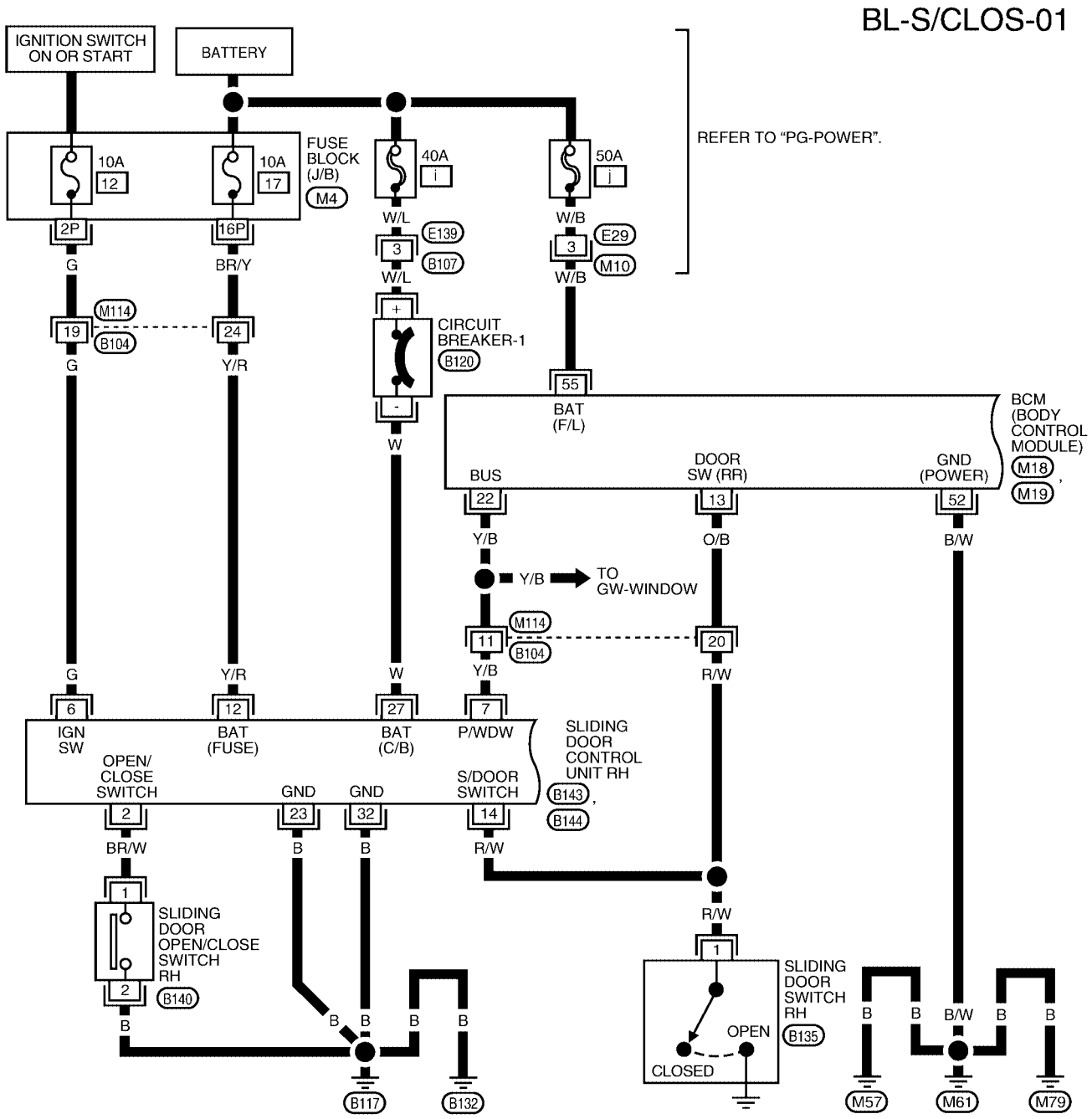
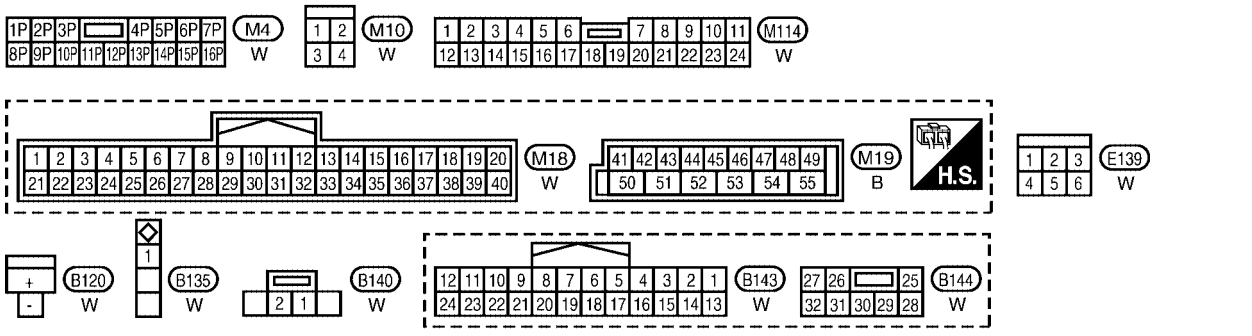
WITH RIGHT HAND SLIDE DOOR AUTO CLOSURE SYSTEM





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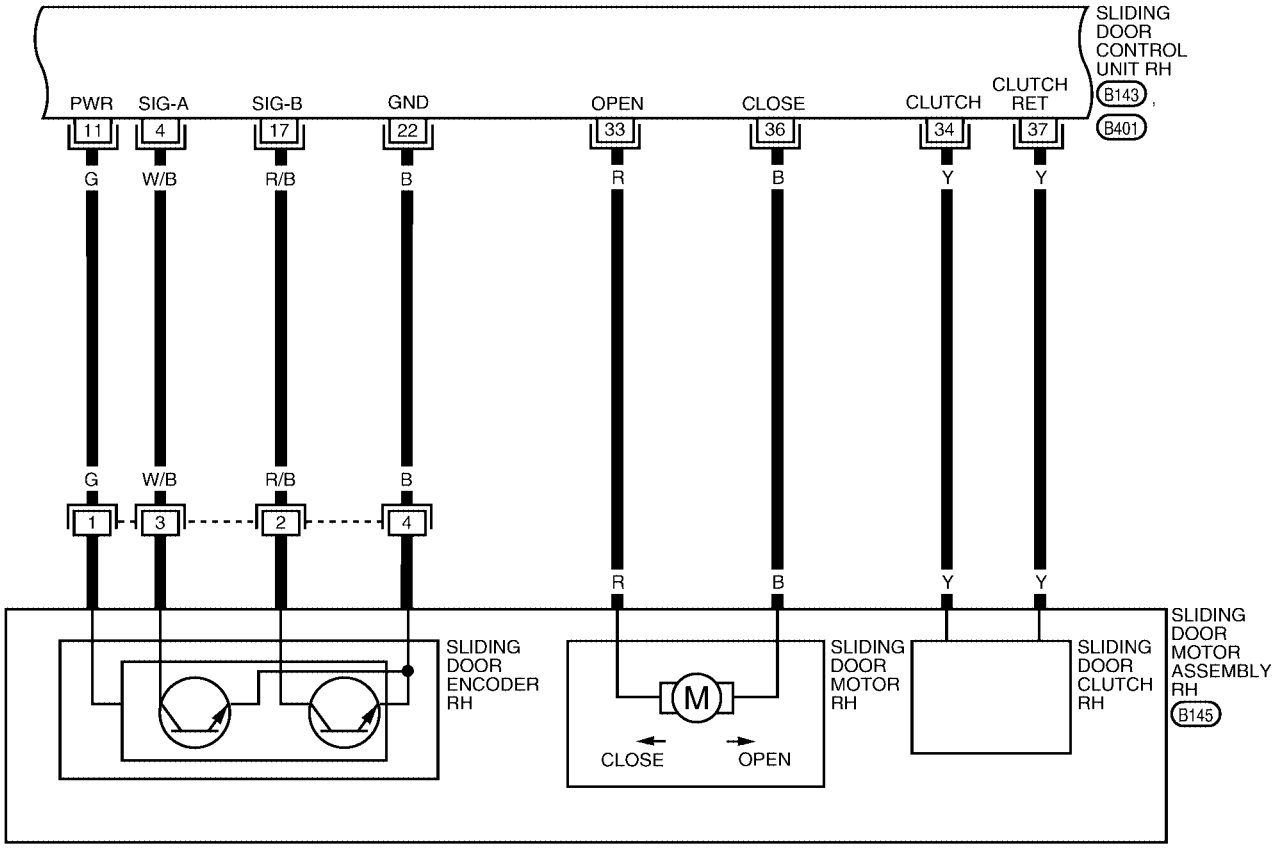

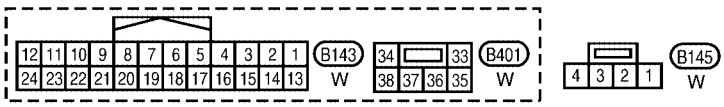

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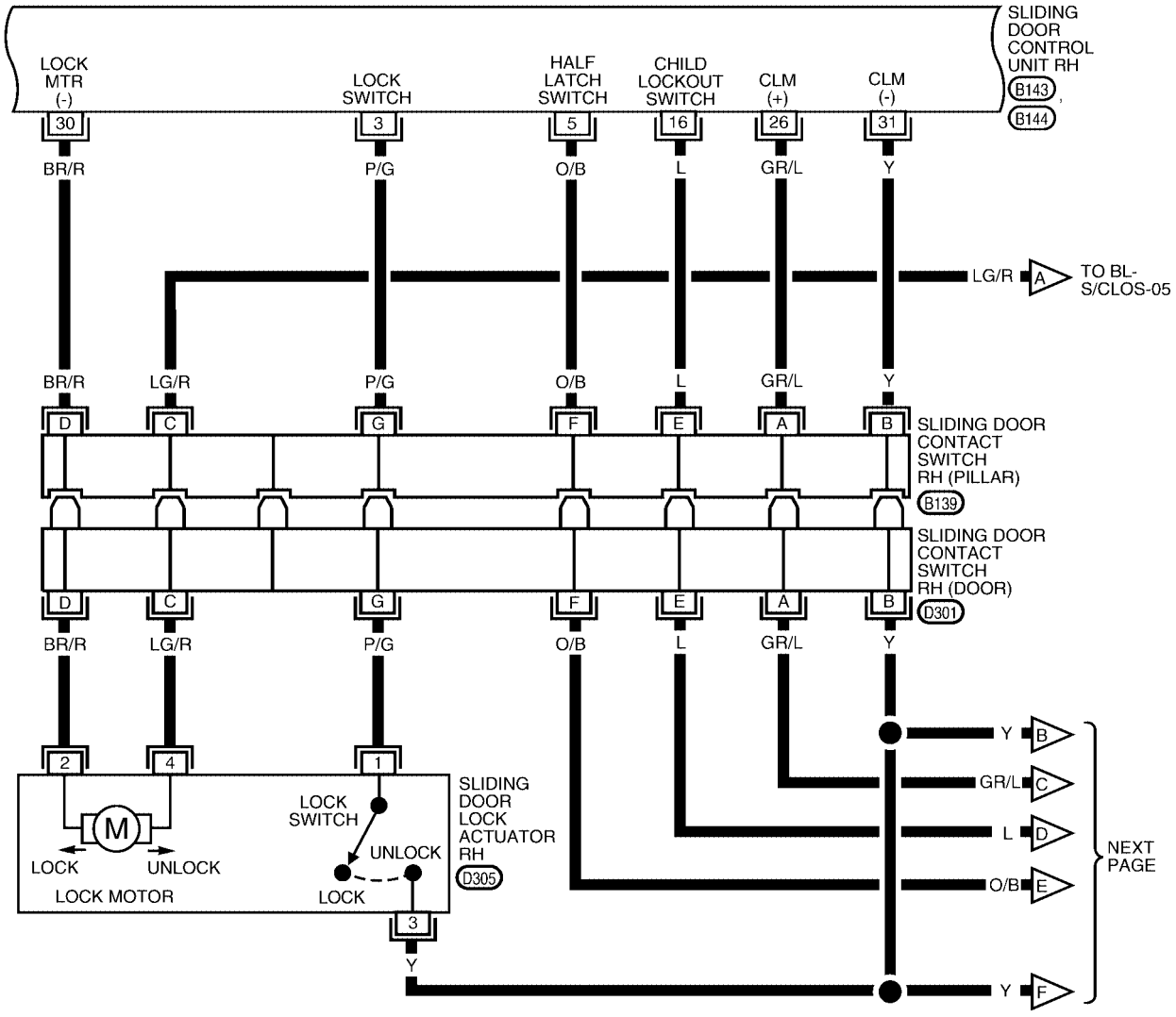
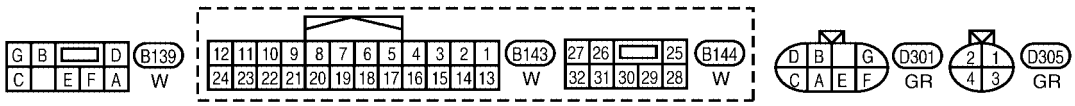
BL-S/CLOS-03





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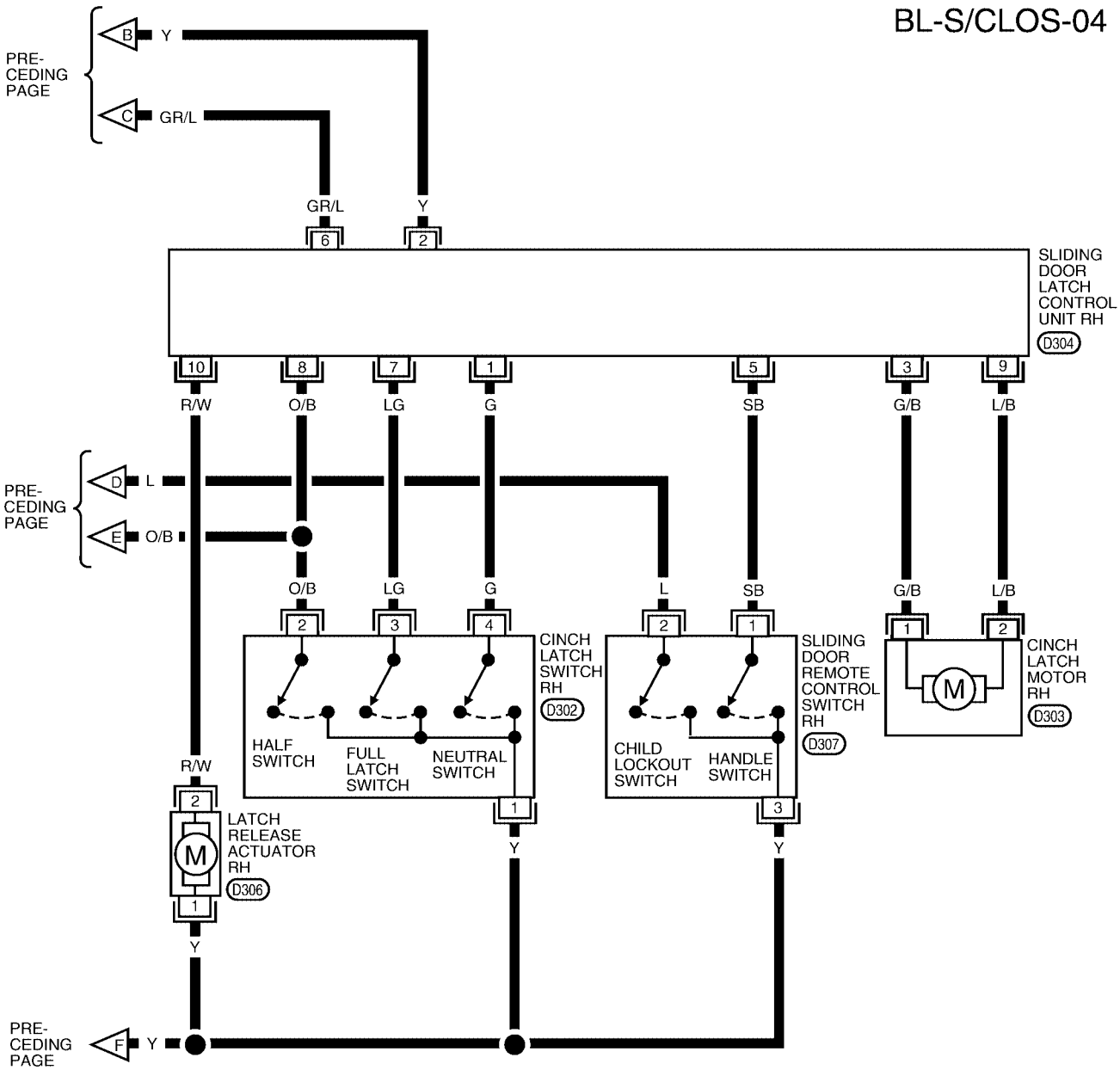
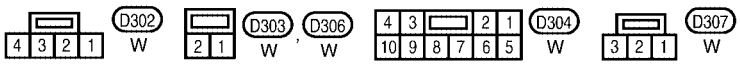

BL-S/CLOS-04
PRE-CEDING PAGE
B Y
C GR/L
GR/L
Y
6
2
SLIDING DOOR LATCH CONTROL UNIT RH
D304
10 8 7 1 5 3 9
R/W O/B LG G SB G/B L/B
PRE-CEDING PAGE
D L
E O/B
O/B LG G L SB G/B L/B
2 3 4 2 1 1 2
CINCH LATCH SWITCH RH
D302
HALF SWITCH
FULL LATCH SWITCH
NEUTRAL SWITCH
SLIDING DOOR REMOTE CONTROL SWITCH RH
D307
CHILD LOCKOUT SWITCH
HANDLE SWITCH
CINCH LATCH MOTOR RH
D303
R/W
2
LATCH RELEASE ACTUATOR RH
D306
1
Y
1
Y
3
Y
PRE-CEDING PAGE
F Y


D302
W
D303
W
D306
W
D304
W
D307
W

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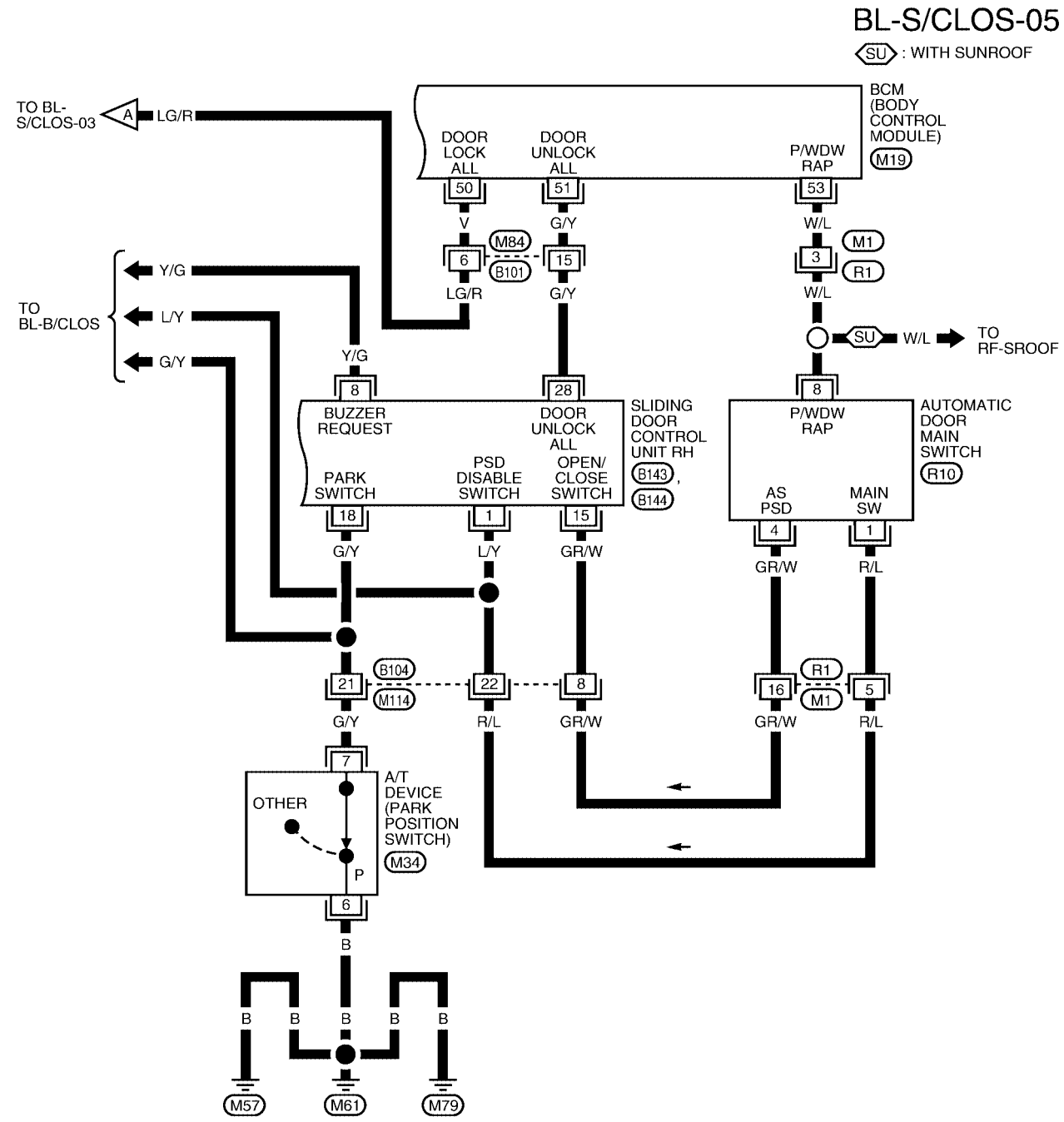
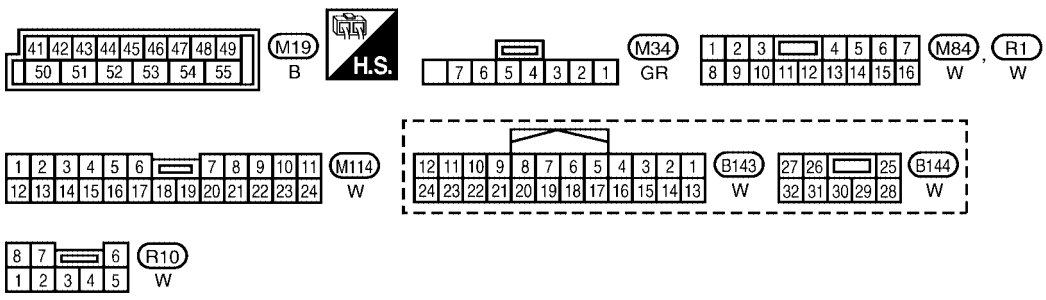
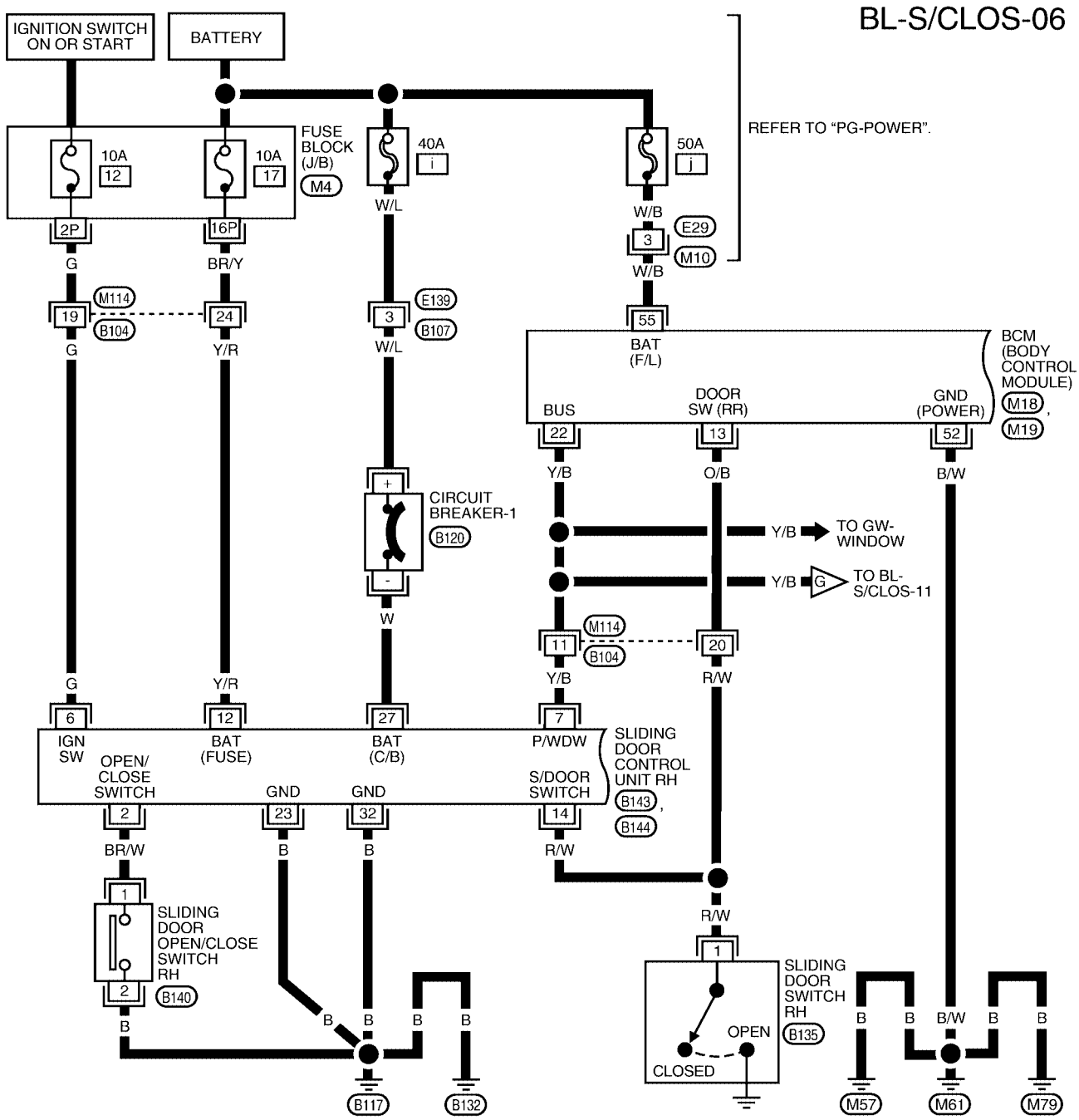
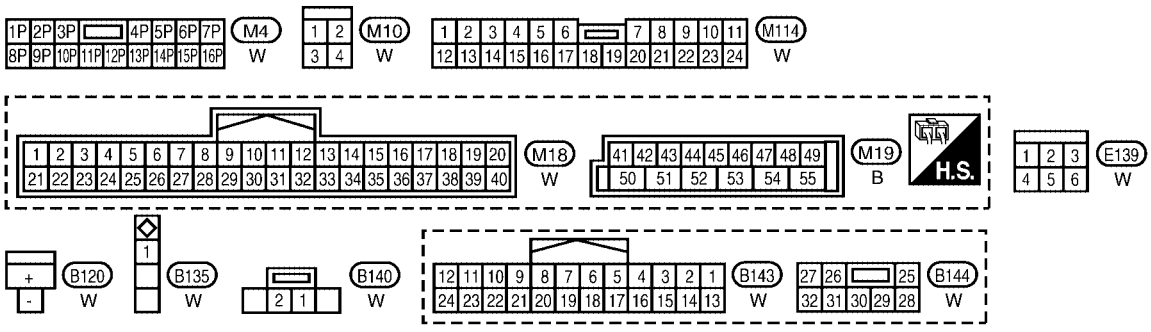

BL-S/CLOS-05
SU : WITH SUNROOF
TO BL-S/CLOS-03
A
LG/R
BCM (BODY CONTROL MODULE)
M19
DOOR LOCK ALL
DOOR UNLOCK ALL
P/WDW RAP
50
51
53
V
G/Y
W/L
M84
B101
M1
R1
6
15
3
LG/R
G/Y
W/L
TO BL-B/CLOS
Y/G
L/Y
G/Y
SU
W/L
TO RF-SROOF
8
28
8
BUZZER REQUEST
DOOR UNLOCK ALL
SLIDING DOOR CONTROL UNIT RH
B143
B144
P/WDW RAP
AUTOMATIC DOOR MAIN SWITCH
R10
PARK SWITCH
PSD DISABLE SWITCH
OPEN/ CLOSE SWITCH
AS PSD
MAIN SW
18
1
15
4
1
G/Y
L/Y
GR/W
GR/W
R/L
B104
M114
R1
M1
21
22
8
16
5
G/Y
R/L
GR/W
GR/W
R/L
7
OTHER
A/T DEVICE (PARK POSITION SWITCH)
M34
P
6
B
B
B
B
B
B
M57
M61
M79


M19
B
H.S.
M34
GR
M84, R1
W
W
M114
W
B143
W
B144
W
R10
W

WIWA1129E

WITH RIGHT AND LEFT HAND SLIDE DOOR AUTO CLOSURE SYSTEM





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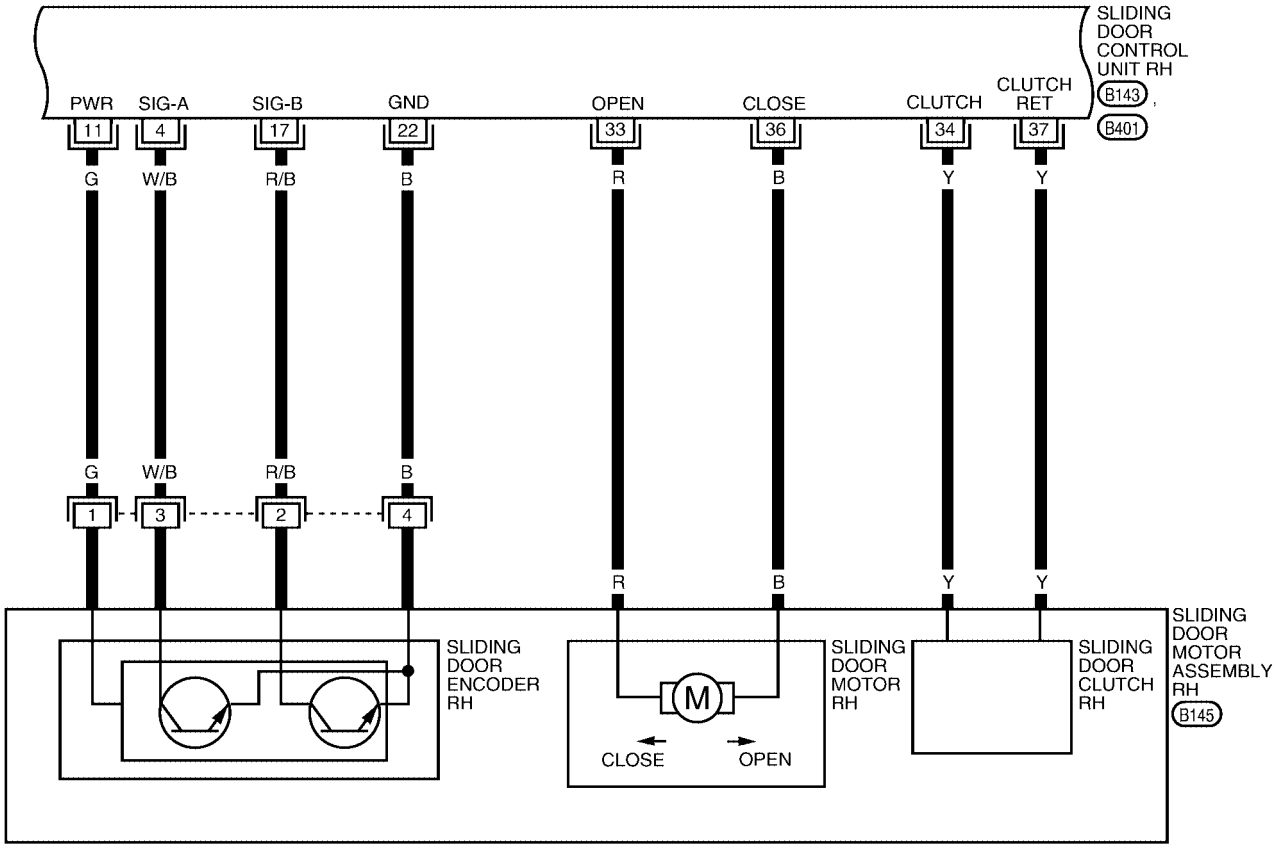
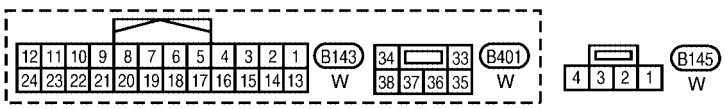
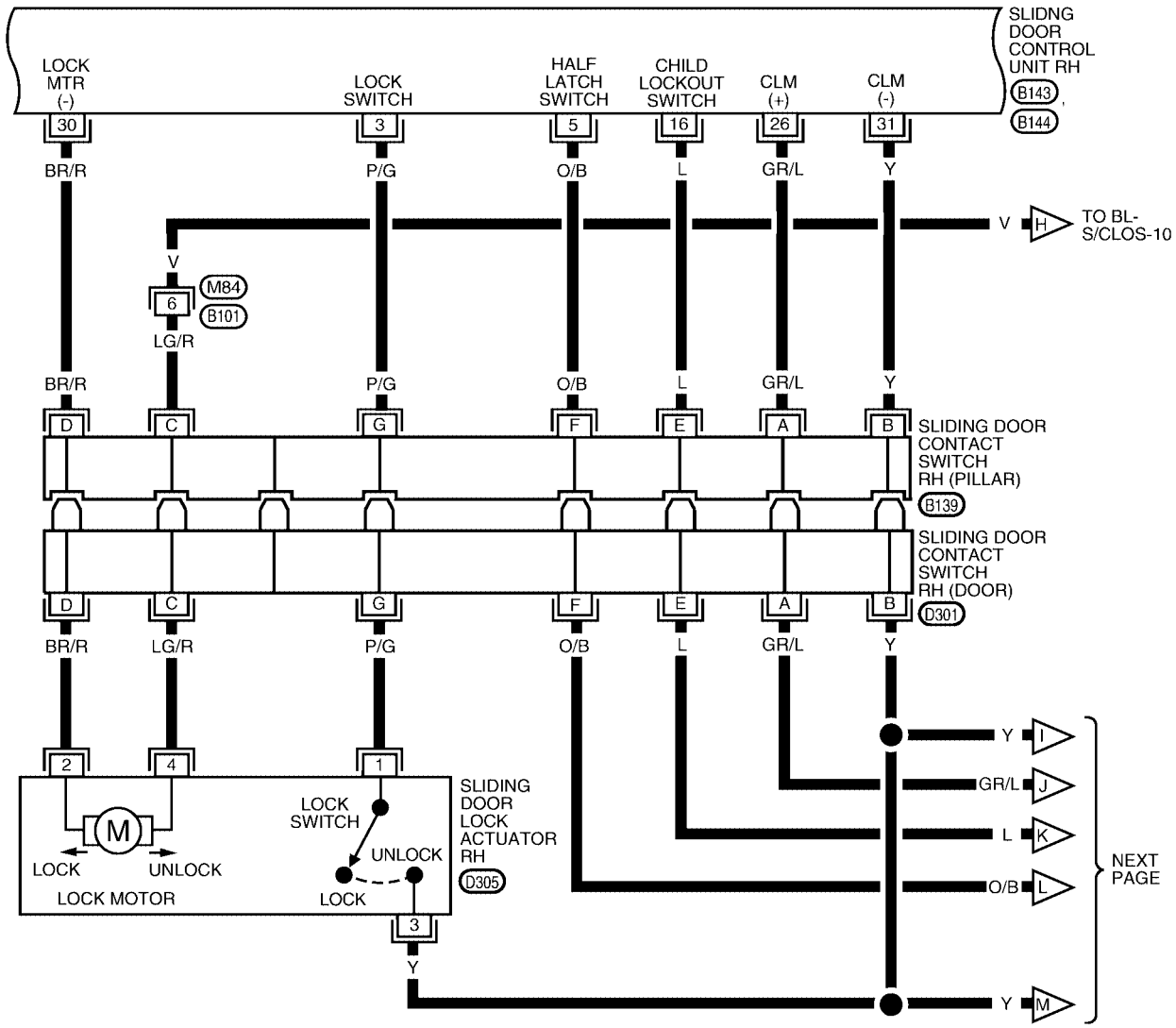
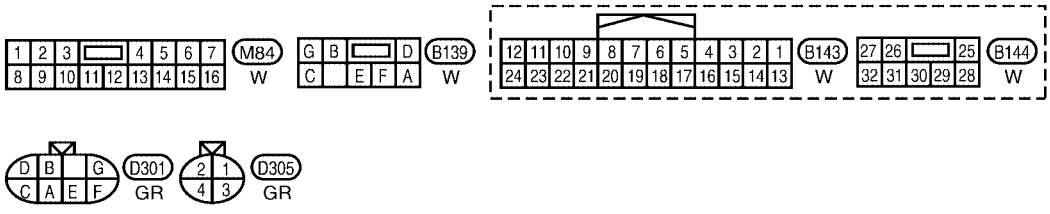




WIWA1218E

BL-S/CLOS-08





WIWA1252E

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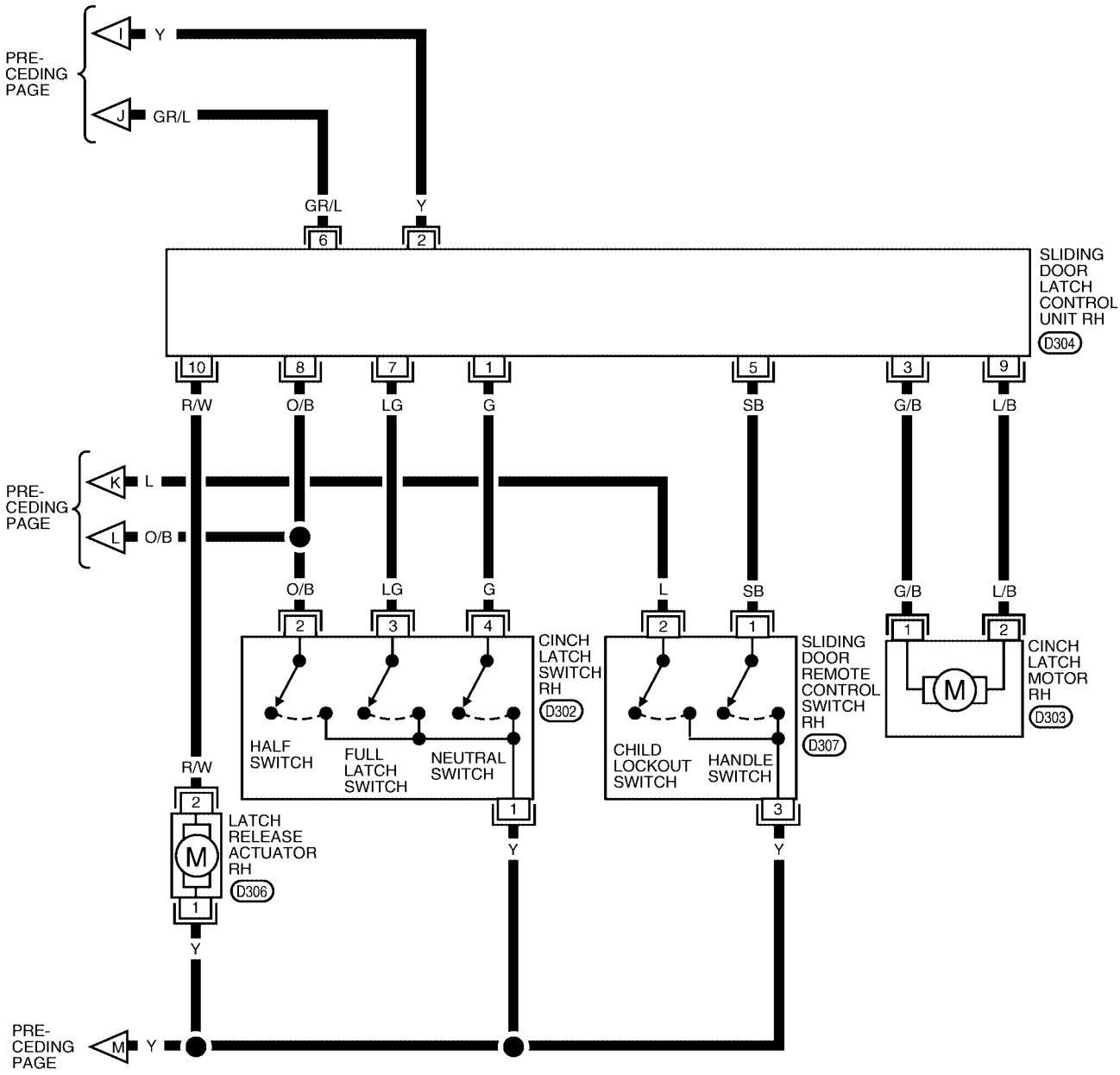

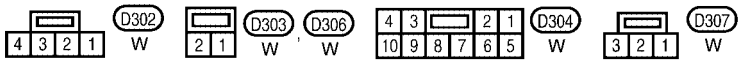

WIWA1131E

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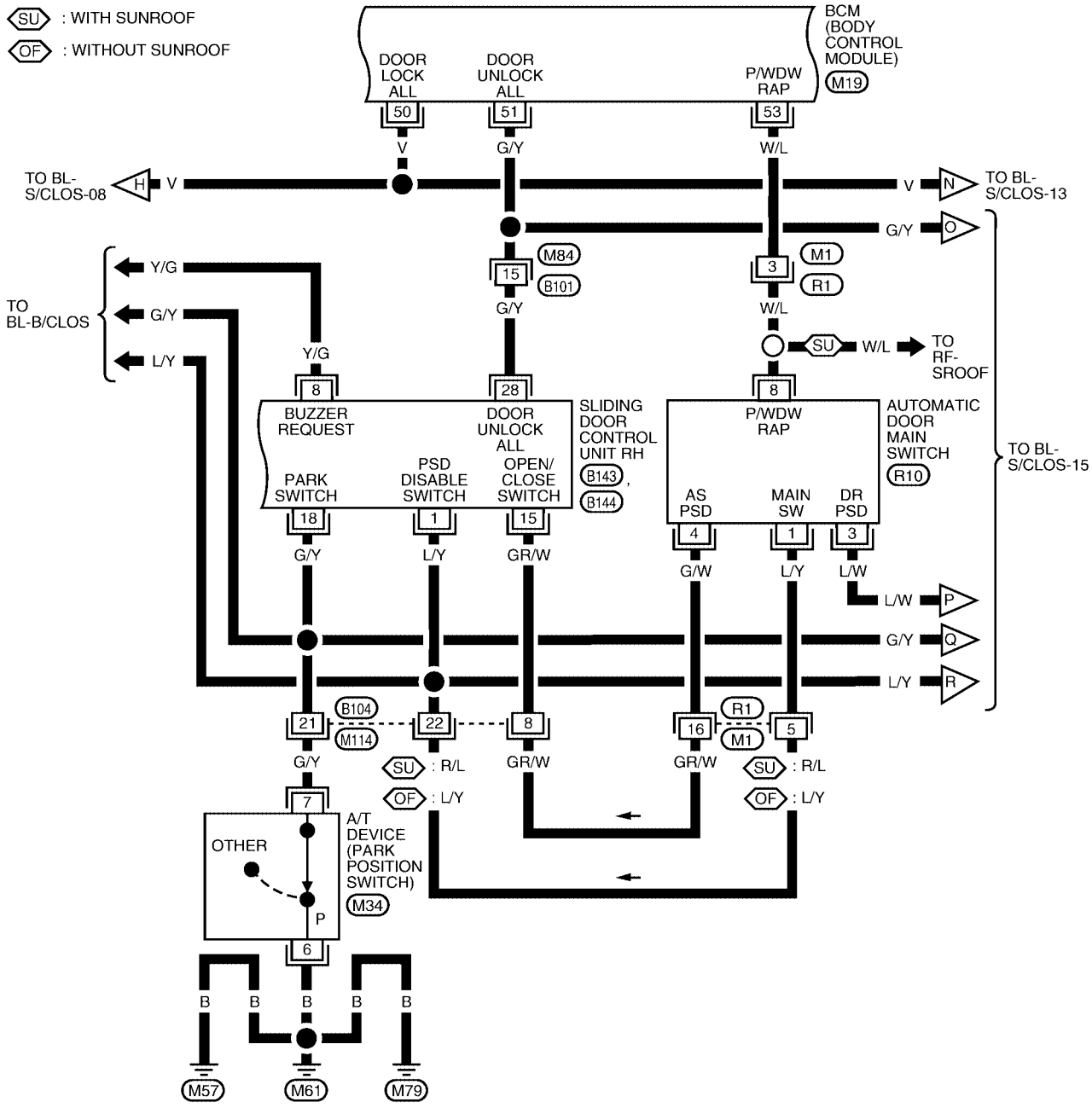

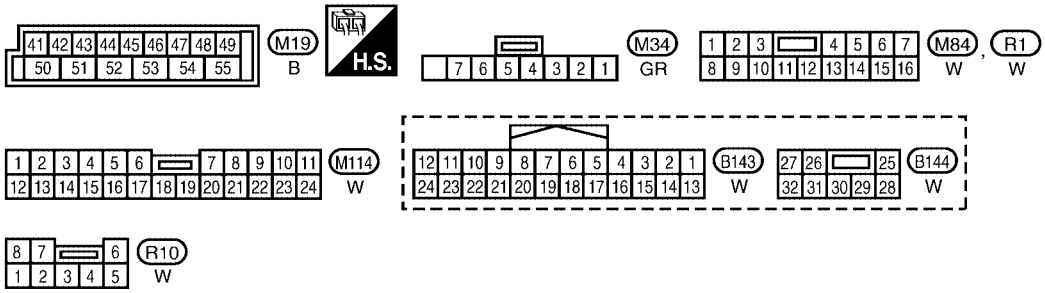

WIWA1132E

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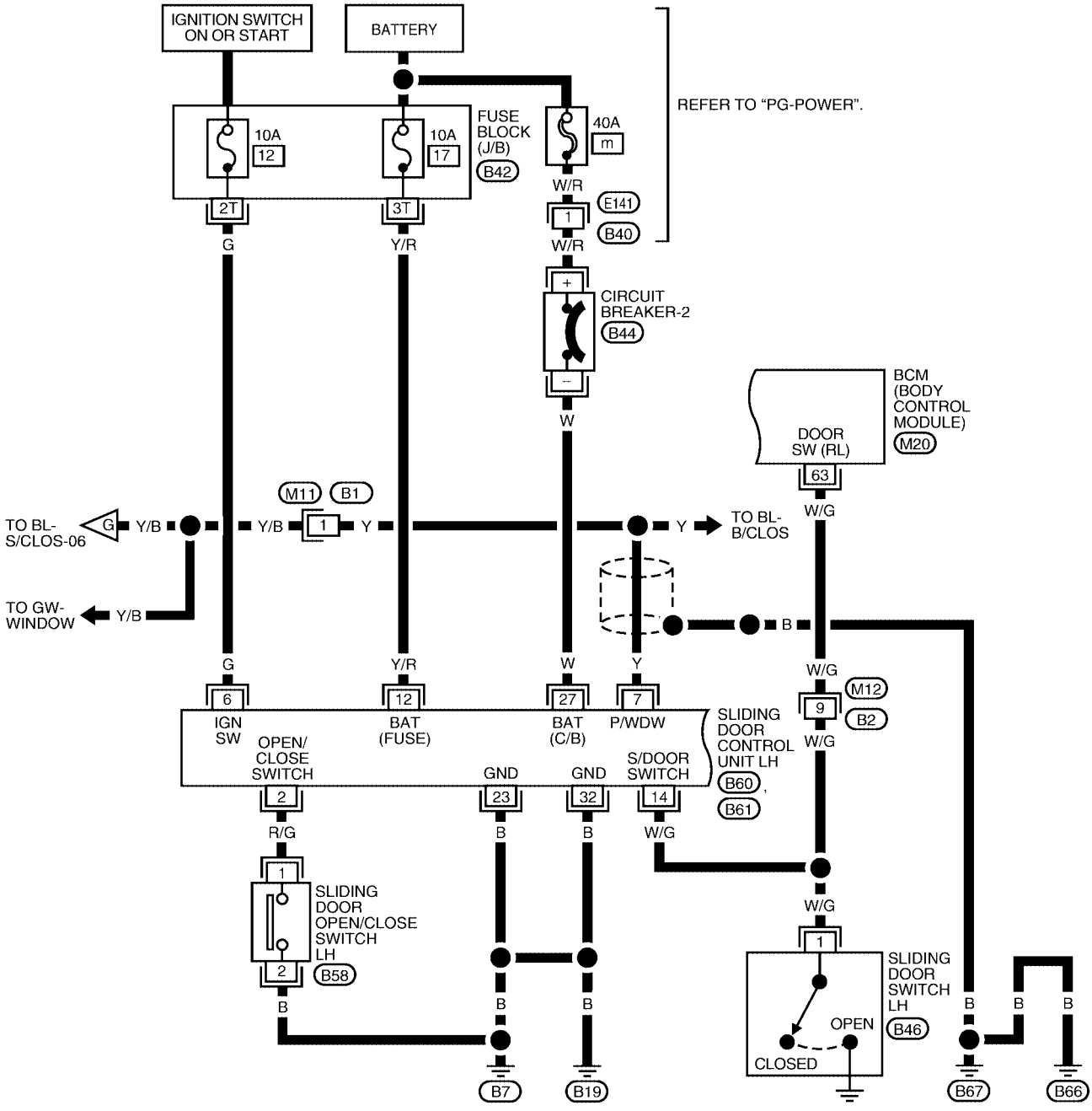

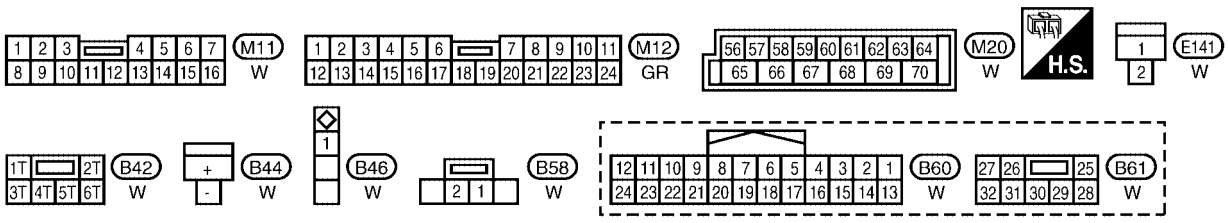

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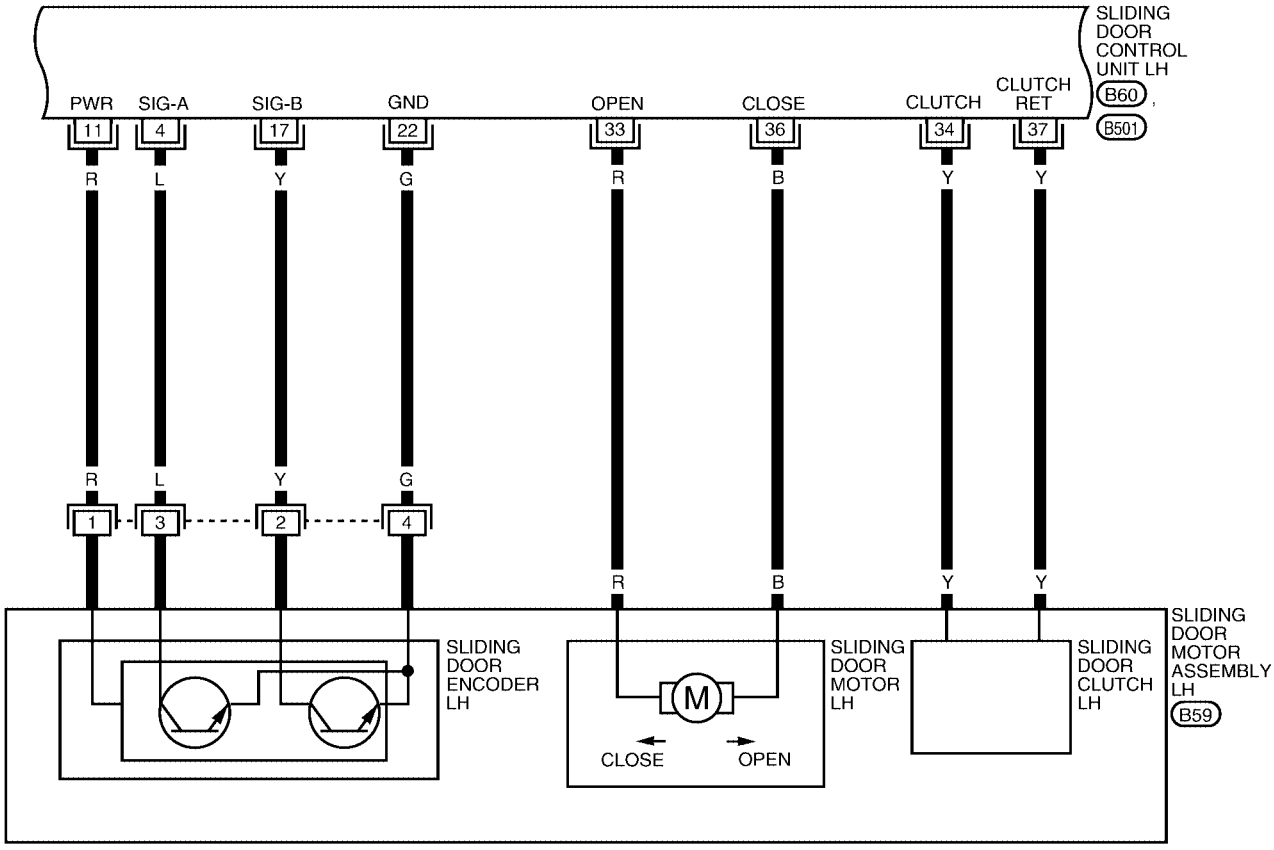
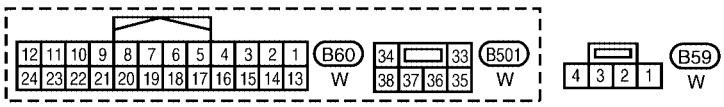
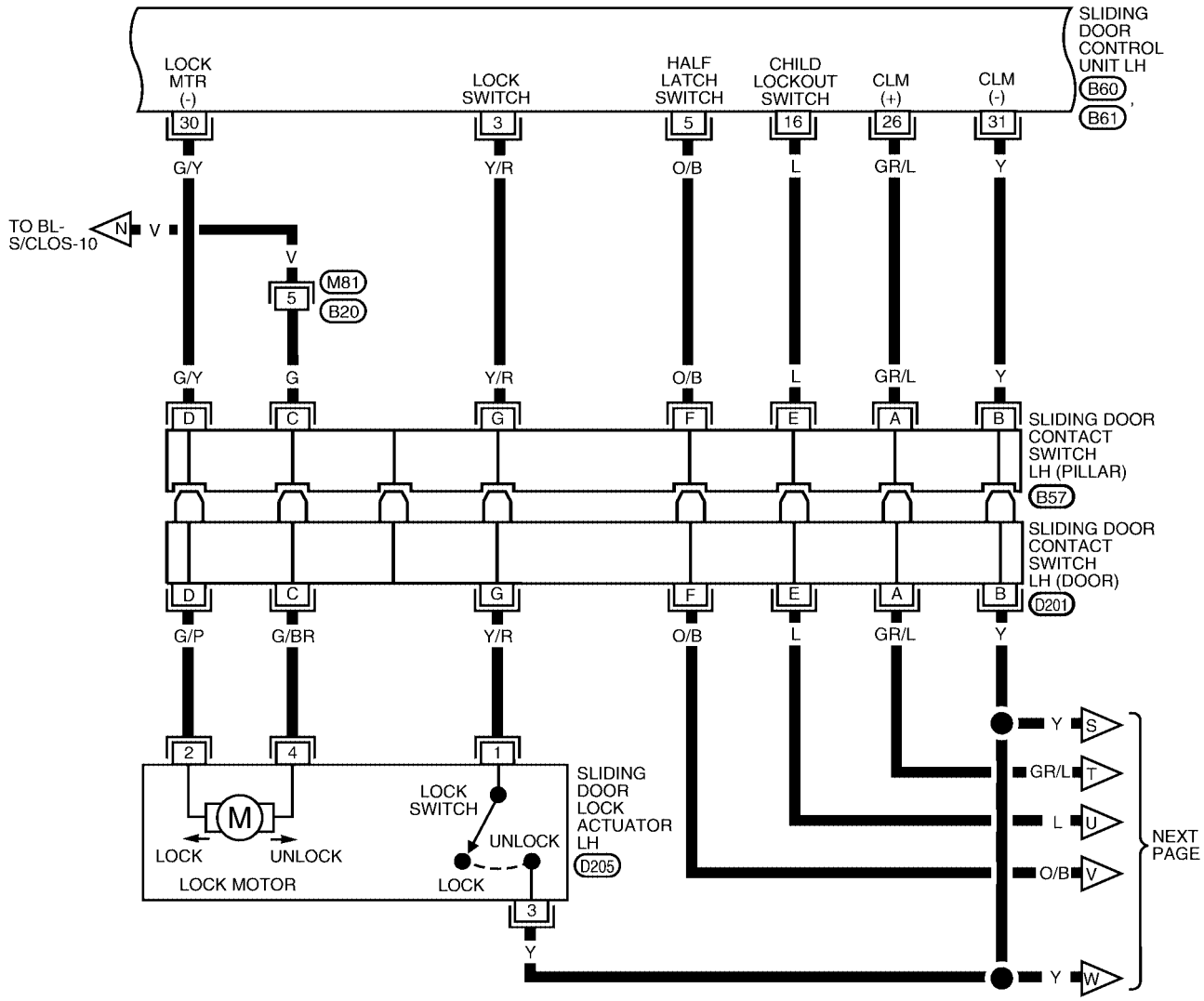
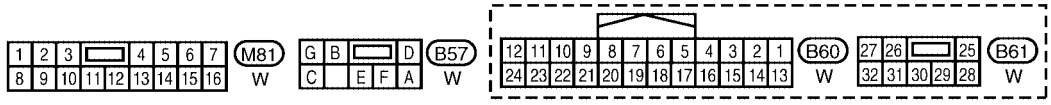

SLIDING DOOR CONTROL UNIT LH
B60
B501
PWR
SIG-A
SIG-B
GND
OPEN
CLOSE
CLUTCH
CLUTCH RET
11
4
17
22
33
36
34
37
R
L
Y
G
R
B
Y
Y
1
3
2
4
SLIDING DOOR ENCODER LH
SLIDING DOOR MOTOR LH
SLIDING DOOR CLUTCH LH
SLIDING DOOR MOTOR ASSEMBLY LH
B59
M
CLOSE
OPEN


12 11 10 9 8 7 6 5 4 3 2 1
24 23 22 21 20 19 18 17 16 15 14 13
B60
W
34 33
38 37 36 35
B501
W
4 3 2 1
B59
W

WIWA1219E

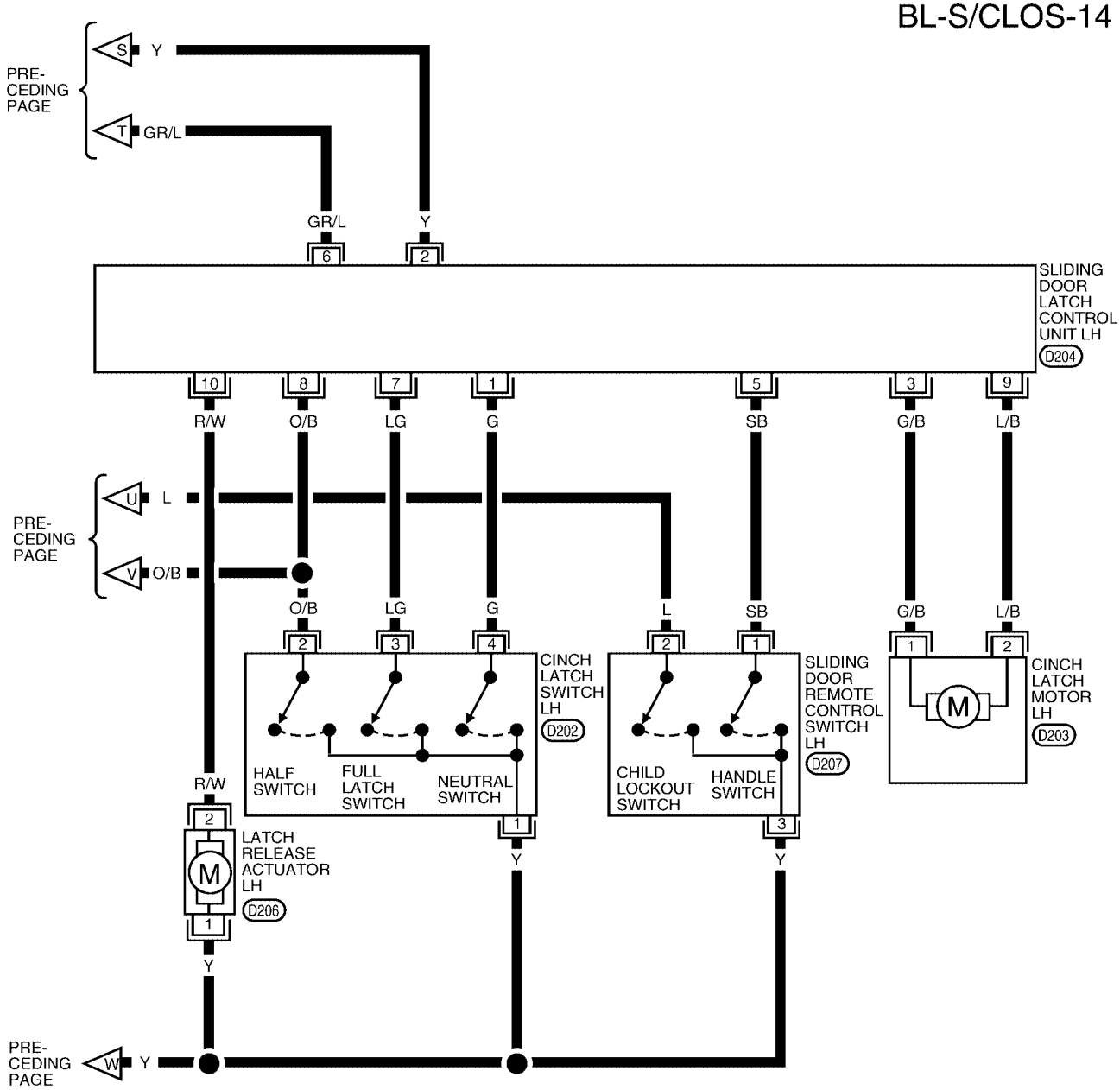
BL-S/CLOS-13

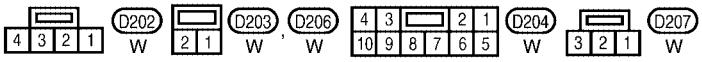




WIWA1253E

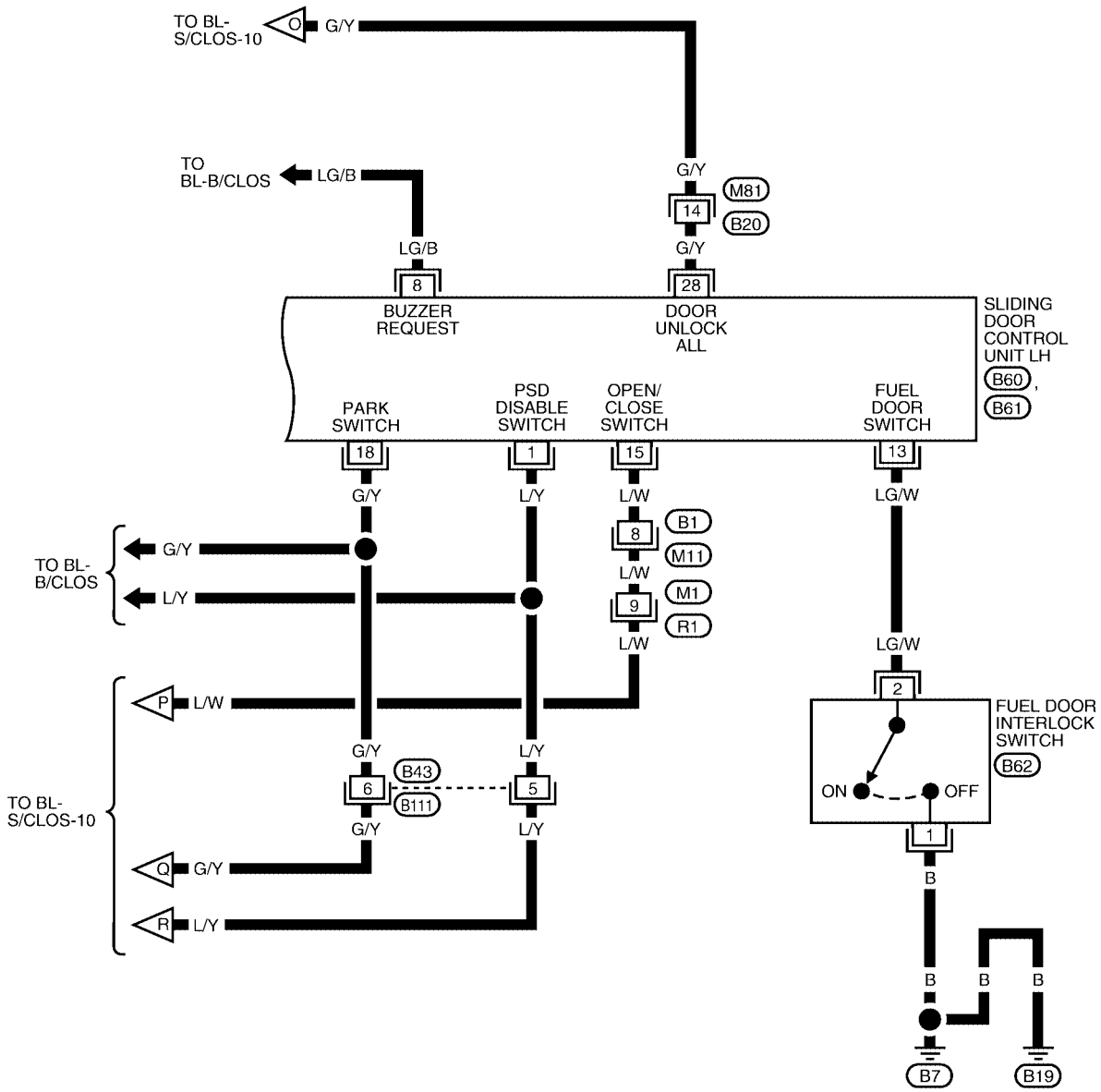
BL-S/CLOS-14

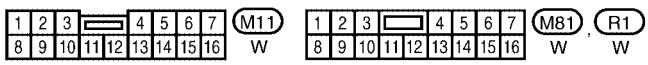


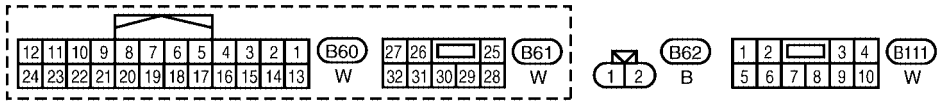


WIWA1134E

BL-S/CLOS-15



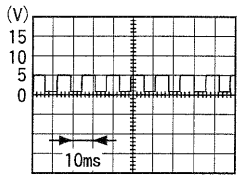
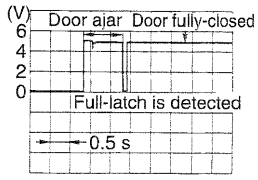
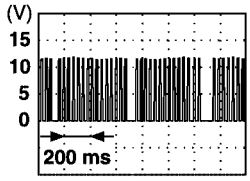
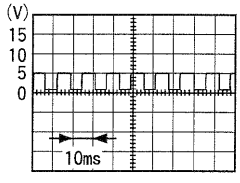


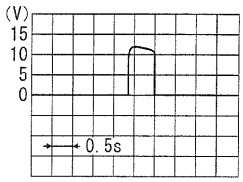
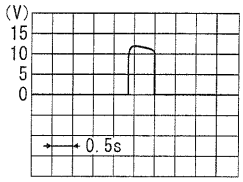
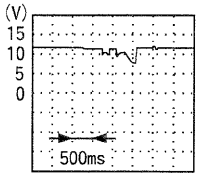


WIWA1254E

Terminals and Reference Value for Sliding Door Control Unit RH

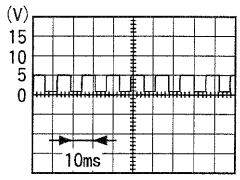
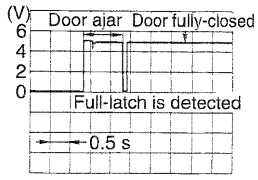
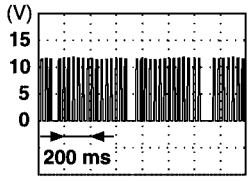
EIS007F2

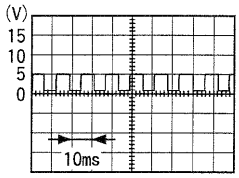
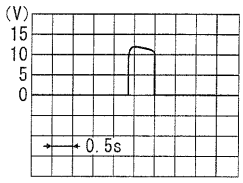
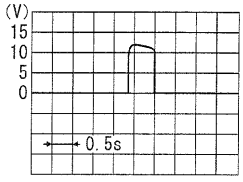
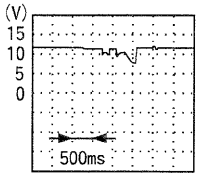
Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	L/Y	Automatic door main switch ON/OFF switch	Automatic door main switch ON	0
			Automatic door main switch OFF	5
2	BR/W	Sliding door open/close switch	Sliding door open/close switch ON	0
			Sliding door open/close switch OFF	5
3	P/G	Sliding door lock/unlock actuator unlock output signal	Power door lock switch door unlock operation	0 → Battery voltage → 0
			Other than above	0
4	W/B	Encoder pulse signal A	Sliding door (motor active)	 PIIA1060E
5	O/B	Half-latch switch	Sliding door Fully open → half → fully closed	 PIIA2169E
6	G	Ignition switch	Ignition switch ON	Battery voltage
			Ignition switch OFF	0
7	Y/B	Power window serial link	When ignition switch is ON or power window timer operates	 PIIA2344E
8	Y/G	Warning chime output signal	Warning chime ON	0
			Warning chime OFF	Battery voltage
11	G	Encoder power supply	—	9
12	Y/R	Battery power supply	—	Battery voltage
14	R/W	Sliding door switch	OPEN	0
			CLOSED	5
15	GR/W	Automatic door main switch	ON	0
			OFF	5
16	L	Child lockout switch	ACTIVE	5
			INACTIVE	0
17	R/B	Encoder pulse signal B	Sliding door (motor active)	Battery voltage  PIIA1060E

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
18	G/Y	A/T device (park position switch)	P position	0
			Other than above	5
22	B	Encoder ground	—	—
23	B	Ground	—	—
26	GR/L	Closure motor CLOSE output signal	Sliding door Fully open → half → fully closed	 SIIA1480E
27	W	Battery power supply	—	Battery voltage
28	G/Y	Door unlock input	Door lock & unlock switch (Neutral → Unlock)	0 → Battery voltage
30	BR/R	Sliding door lock motor unlock signal	Door lock (Neutral → Unlock)	0 → Battery voltage
31	Y	Closure motor RETURN output signal	Sliding door Fully open→ half → fully closed	 SIIA1480E
32	B	Ground	—	—
33	R	Sliding door motor OPEN output signal	Sliding door auto OPEN operation (motor active)	Battery voltage
			Other than above	0
34	Y	Magnetic clutch power supply	Auto sliding door (motor active)	Battery voltage → 0  PIIA1798E
36	B	Sliding door motor CLOSE output signal	Sliding door auto CLOSE operation (motor active)	Battery voltage
			Other than above	0
37	Y	Magnetic clutch ground	—	—

Terminals and Reference Value for Sliding Door Control Unit LH

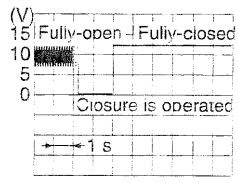
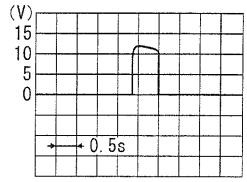
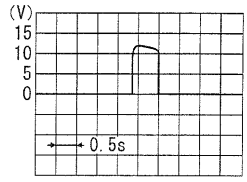
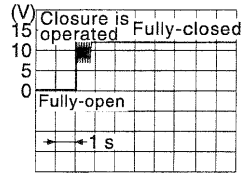
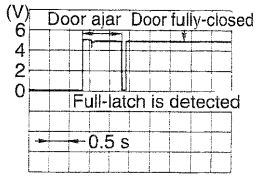
EIS007F3

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	L/Y	Automatic door main switch ON/OFF switch	Automatic door main switch ON	0
			Automatic door main switch OFF	5
2	R/G	Sliding door open/close switch	Sliding door open/close switch ON	0
			Sliding door open/close switch OFF	5
3	Y/R	Sliding door lock/unlock actuator unlock output signal	Power door lock switch door unlock operation	0 → Battery voltage → 0
			Other than above	0
4	L	Encoder pulse signal A	Sliding door (motor active)	 PIIA1060E
5	O/B	Half-latch switch	Sliding door Fully open → half → fully closed	 PIIA2169E
6	G	Ignition switch	Ignition switch ON	Battery voltage
			Ignition switch OFF	0
7	Y	Power window serial link	When ignition switch is ON or power window timer operates	 PIIA2344E
8	LG/B	Warning chime output signal	Warning chime ON	0
			Warning chime OFF	Battery voltage
11	R	Encoder power supply	—	9
12	Y/R	Battery power supply	—	Battery voltage
13	LG/W	Fuel door interlock switch	Fuel door closed	0
			Fuel door open	5
14	W/G	Sliding door switch	OPEN	0
			CLOSED	5
15	L/W	Automatic door main switch	ON	0
			OFF	5
16	L	Child lockout switch	ACTIVE	5
			INACTIVE	0

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
17	Y	Encoder pulse signal B	Sliding door (motor active)	Battery voltage  PIIA1060E
18	G/Y	A/T device (park position switch)	P position	0
			Other than above	5
22	G	Encoder ground	—	—
23	B	Ground	—	—
26	GR/L	Closure motor CLOSE output signal	Sliding door Fully open → half → fully closed	 SIIA1480E
27	W	Battery power supply	—	Battery voltage
28	G/Y	Door unlock input	Door lock & unlock switch (Neutral → Unlock)	0 → Battery voltage
30	G/Y	Sliding door lock motor unlock signal	Door lock (Neutral → Unlock)	0 → Battery voltage
31	Y	Closure motor RETURN output signal	Sliding door Fully open→ half → fully closed	 SIIA1480E
32	B	Ground	—	—
33	R	Sliding door motor OPEN output signal	Sliding door auto OPEN operation (motor active)	Battery voltage
			Other than above	0
34	Y	Magnetic clutch power supply	Auto sliding door (Motor active)	Battery voltage → 0  PIIA1798E
36	B	Sliding door motor CLOSE output signal	Sliding door auto CLOSE operation (motor active)	Battery voltage
			Other than above	0
37	Y	Magnetic clutch ground	—	—

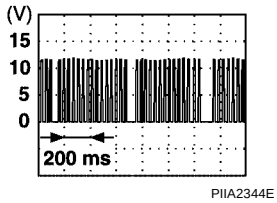
Terminals and Reference Value for Sliding Door Latch Control Unit

EIS007F4

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	G	Neutral switch signal	Sliding door Fully open→ half → fully closed	 PIIA2170E
2	Y	Cinch latch motor RETURN signal	Sliding door Fully open→ half → fully closed	 SIIA1480E
3	G/B	Cinch latch motor CLOSE output	Latch Open (ON) → Close (OFF)	Battery voltage → 0
			Other than above	0
5	SB	Handle switch (open) signal	Handle operation	0
			Other than above	5
6	GR/L	Cinch latch motor CLOSE signal	Sliding door Fully open→ half → fully closed	 SIIA1480E
7	LG	Full-latch switch signal	Sliding door Fully open→ half → fully closed	 PIIA2171E
8	O/B	Half-latch switch signal	Sliding door Fully open→ half → fully closed	 PIIA2169E
9	L/B	Cinch latch motor OPEN output	Latch Close (OFF) → Open (ON)	Battery voltage → 0
			Other than above	0
10	R/W	Latch release actuator output	Latch (Lock → Unlock)	Battery voltage → 0
			Other than above	0

Terminals and Reference Value for BCM

EIS007F5

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
13	O/B	Sliding door switch RH	Door Close (OFF) → Open (ON)	Battery voltage → 0
22	Y/B	Bus	When ignition switch is ON or power window timer operates	 PIIA2344E
50	V	Door lock actuators	Door lock & unlock switch (Neutral → Lock)	0 → Battery voltage
51	G/Y	Passenger and sliding doors lock actuator	Door lock & unlock switch (Neutral → Unlock)	0 → Battery voltage
52	B/W	Ground	—	0
53	W/L	Power window power source	—	Battery voltage
55	W/B	Battery power supply	—	Battery voltage
63*	W/G	Sliding door switch LH	Door Close (OFF) → Open (ON)	Battery voltage → 0

*: with LH slide door auto closure system.

Trouble Diagnosis Procedure

EIS007F6

1. Check the symptom and customer's requests.
2. Understand outline of system. Refer to BL-114, "System Description" .
3. Confirm system operation.
4. Perform self-diagnosis procedures. Refer to BL-146, "Self-Diagnosis Procedures" .
5. Refer to diagnosis chart by symptom, repair or replace any malfunctioning parts. Refer to BL-148, "Diagnosis Chart" .
6. Inspection End.

Self-Diagnosis Procedures

EIS007F7

INPUT SIGNAL CHECK MODE

Input signal check mode allows testing of switch input signal to the sliding door control unit.
To activate input signal check mode on the automatic sliding door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn automatic door main switch OFF (system cancelled).
3. Place A/T selector lever in P position.
4. Confirm fuel door closed (with LH sliding door).
5. Open sliding door RH or LH manually.
6. Have an assistant press and hold the sliding door open/close switch RH or LH.
7. While the assistant continues to hold the sliding door open/close switch RH or LH, turn ignition switch ON (DO NOT start engine).
8. After approximately 5 seconds, the back door warning chime will sound for 0.5 seconds.
9. Release the sliding door open/close switch RH or LH.
10. Within 8 seconds of the back door warning chime sounding, press and hold the automatic door main sliding door open/close switch RH or LH.
11. After approximately 5 seconds, the back door warning chime will sound for 1 second.
12. Release the automatic door main sliding door open/close switch RH or LH.
13. The input signal check mode is now initialized.

The input signal check mode can test the following inputs. The back door warning chime will sound for approximately 0.5 seconds each time a switch signal input occurs. Use this test when one of these inputs is not responding during normal automatic sliding door operation.

Switch signal	Operation	Refer to
Automatic door main switch	OFF → ON	BL-149
Automatic door main sliding door open/close switch RH or LH	OFF → ON	BL-149
Sliding door open/close switch RH or LH	OFF → ON	BL-150
Sliding door switch RH or LH	OFF (door closed) → ON (door open)	BL-76
A/T device (park position switch)	P position → other than P position	SE-76
Fuel door interlock switch	OFF (fuel door closed) → ON (fuel door open)	BL-208
Sliding door lock/unlock signal	LOCK → UNLOCK	BL-154
Vehicle speed*	Vehicle speed	BL-55
Remote keyless entry signal	Keyfob switch OFF → ON	BL-80
Door lock/unlock signal	LOCK → UNLOCK	BL-76

*Back door warning chime should sound as soon as vehicle moves.
Turn ignition switch OFF to end input signal check mode.

OPERATING CHECK MODE

Operating check mode allows self-diagnosis of the automatic sliding door system.
To activate operating check mode on the automatic sliding door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn automatic door main switch OFF (system cancelled).

3. Place A/T selector lever in P position.
4. Open sliding door RH or LH manually.
5. Have an assistant press and hold the sliding door open/close switch RH or LH.
6. While the assistant continues to hold the sliding door open/close switch RH or LH, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 seconds.
8. Release the sliding door open/close switch RH or LH.
9. Within 8 seconds of the back door warning chime sounding, press the automatic door main sliding door open/close switch RH or LH 5 times in rapid succession.
10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
11. Release the automatic door main sliding door open/close switch RH or LH.
12. Immediately close the sliding door RH or LH manually.
13. Turn automatic door main switch ON.
14. Open and close the back door with the automatic door main sliding door open/close switch RH or LH to activate operating check mode.

Self-diagnosis results are indicated by the back door warning chime.

Back door warning chime order	Back door warning chime length	
Start self-diagnosis	1.5 seconds	
	OK	NG
1. Operating conditions diagnosis	0.5 seconds	0.2 seconds
2. Sliding door encoder diagnosis	0.5 seconds	0.2 seconds
3. Sliding door clutch diagnosis	0.5 seconds	0.2 seconds
4. Sliding door motor diagnosis	0.5 seconds	0.2 seconds
5. Cinch latch motor diagnosis	0.5 seconds	0.2 seconds
Restart self-diagnosis	1.5 seconds	

Item	NG Result	Refer to
1. Operating conditions diagnosis result	One of the following operating conditions no longer met: ignition switch ON, automatic door main switch ON, A/T selector lever in P position	—
2. Sliding door encoder diagnosis result	Sensor diagnosis/short, pulse signal, pulse signal direction	BL-152
3. Sliding door clutch diagnosis result	Sliding door clutch does not operate	BL-152
4. Sliding door motor diagnosis result	Sliding door motor does not operate (no operating current)	BL-151
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	BL-160

Turn ignition switch OFF to end input signal check mode.

Diagnosis Chart

EIS007F8

Symptom	Suspect systems	Refer to
Automatic operations are not executed from the sliding door fully closed or fully open position. (Auto open/close operations from a position midway through automatic operation, power assist, and auto closure operate normally.)	Latch release actuator system inspection	BL-156
Automatic operations are not carried out together with open/close operations. (Manual operations are normal.)	Automatic door main switch system inspection	BL-149
	Sliding door open/close switch system inspection	BL-150
	Magnetic clutch line check	BL-152
	Auto sliding door power supply and ground circuit system inspection.	BL-149
Power window serial link.	Power window main switch	BL-145
Stops midway through sliding door open/close operations, power assist does not operate.	Encoder system inspection	BL-152
Warning chime does not sound.	Warning chime system inspection	BL-157
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Encoder system inspection	BL-152
During cinching operations, the door does not operate in reverse if the sliding door handle is operated.	Handle switch system	BL-154
Child lockout system does not operate.	Child lockout switch system inspection	BL-155
When the keyfob is operated, the sliding door does not operate automatically.	Remote keyless entry system inspection	BL-55
Auto closure does not operate.	Half-latch switch system	BL-157
	Cinch latch motor system	BL-160
	Handle switch system	BL-154
	Contact switch	—
The sliding door does not open. (Closure motor rotation is not reversed.)	Neutral switch system	BL-159
	Full-latch switch	BL-158
	Handle switch system	BL-154
	Door switch	BL-44
Auto closure operation works, but the sliding door is not fully closed.	Full-latch switch system	BL-158
	Handle switch system	BL-154
	Cinch latch motor system	BL-160
	Sliding door latch assembly mechanism damaged or worn.	BL-156

Auto Sliding Door Power Supply and Ground Circuit Inspection

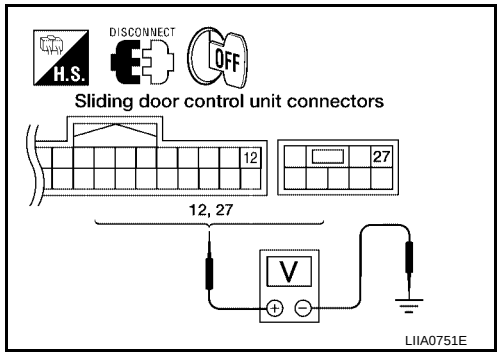
EIS007F9

1. AUTO SLIDING DOOR POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect sliding door control unit.
3. Check voltage between sliding door control unit connectors B60, B61 (LH) or B143, B144 (RH) terminals 12, 27 and ground.

12 - Ground : Approx. battery voltage

27 - Ground : Approx. battery voltage



OK or NG

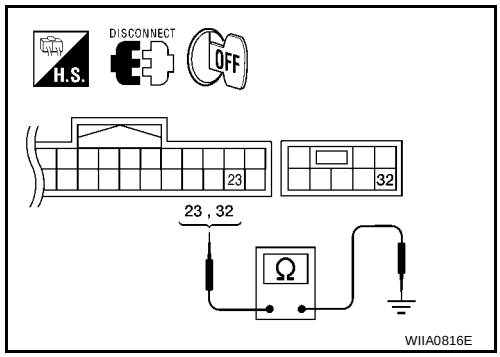
OK >> GO TO 2.
NG >> Repair the sliding door control unit power supply circuit.

2. AUTO SLIDING DOOR GROUND CIRCUIT INSPECTION

Check continuity between sliding door control unit connectors B60, B61 (LH) or B143, B144 (RH) terminals 23, 32 and ground.

23 - Ground : Continuity should exist.

32 - Ground : Continuity should exist.



OK or NG

OK >> Ground circuit is OK.
NG >> Repair or replace harness.

Automatic Door Main Switch System Inspection

EIS007FA

1. AUTOMATIC DOOR MAIN SWITCH FUNCTION INSPECTION

Check automatic door main switch using switch operation.

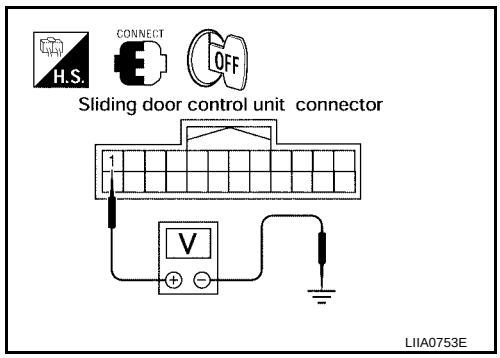
OK or NG

OK >> Automatic door main switch is OK.
NG >> GO TO 2.

2. AUTOMATIC DOOR MAIN SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the automatic door main switch, check voltage between sliding door control unit connector B60 (LH) or B143 (RH) terminal 1 and ground.

Terminal		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
1	Ground	Automatic door main switch	ON	0
			OFF	5



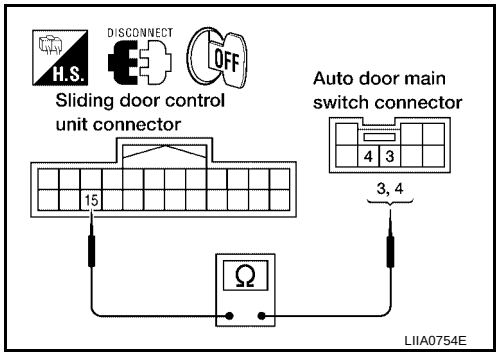
OK or NG

OK >> Automatic door main switch is OK.
NG >> GO TO 3.

3. AUTOMATIC DOOR MAIN SWITCH CIRCUIT INSPECTION

1. Disconnect automatic door main switch and sliding door control unit.
2. Check continuity between automatic door main switch connector R10 terminals 3 (LH) or 4 (RH) and sliding door control unit connector B60 (LH) or B143 (RH) terminal 15.

3 - 15 : Continuity should exist.
4 - 15 : Continuity should exist.



OK or NG

OK >> Replace automatic door main switch.
NG >> Repair or replace harness.

Sliding Door Open/Close Switch System Inspection

EIS007FB

1. SLIDING DOOR OPEN/CLOSE SWITCH FUNCTION INSPECTION

Check sliding door open/close switch using switch operation.

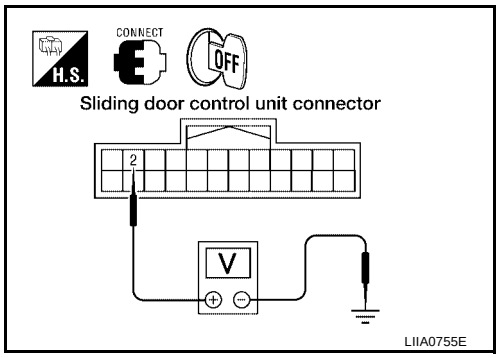
OK or NG

OK >> Sliding door open/close switch is OK.
NG >> GO TO 2.

2. SLIDING DOOR OPEN/CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the sliding door open/close switch, check voltage between sliding door control unit connector B60 (LH) or B143 (RH) terminal 2 and ground.

Terminal		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
2	Ground	Automatic door main switch	ON	0
			OFF	5



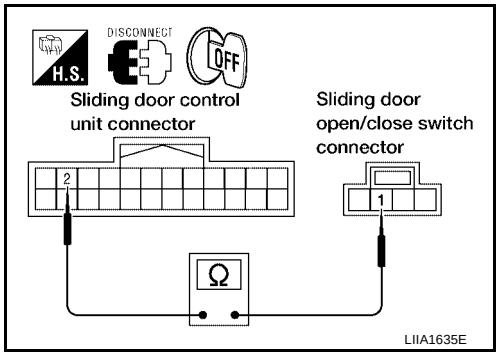
OK or NG

OK >> Sliding door open/close switch is OK.
NG >> GO TO 3.

3. SLIDING DOOR OPEN/CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect sliding door open/close switch and sliding door control unit.
2. Check continuity between sliding door open/close switch connector B58 (LH) or B140 (RH) terminal 1 and sliding door control unit connector B60 (LH) or B143 (RH) terminal 2.

1 - 2 : Continuity should exist.



OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness.

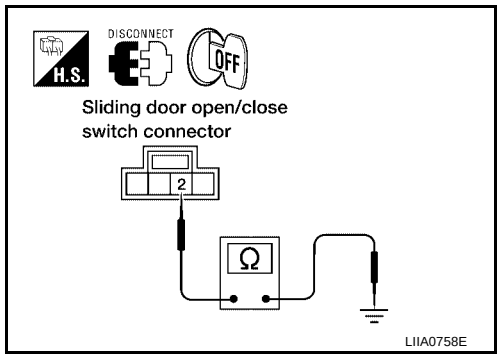
4. SLIDING DOOR OPEN/CLOSE SWITCH GROUND INSPECTION

Check continuity between sliding door open/close switch connector B58 (LH) or B140 (RH) terminal 2 and ground.

2 - Ground : Continuity should exist.

OK or NG

OK >> Replace the sliding door open/close switch.
NG >> Repair or replace harness.



Sliding Door Motor System Inspection

EIS007FC

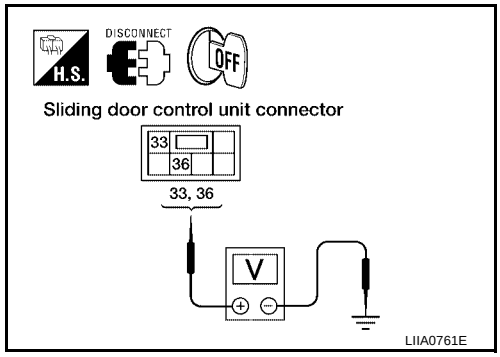
1. SLIDING DOOR MOTOR SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. Operate the sliding door fully open → fully closed and check voltage between sliding door control unit connector B501 (LH) or B401 (RH) terminals 33, 36 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
33	Ground	Fully open → half → fully closed	0
36			0 → Battery voltage → 0

OK or NG

OK >> GO TO 2.
NG >> Replace sliding door control unit.



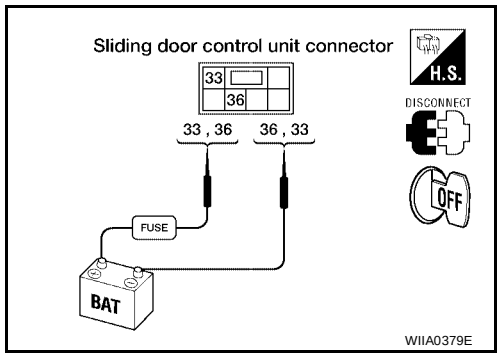
2. SLIDING DOOR MOTOR OPERATION INSPECTION

Connect battery power to terminals 33 and 36 on the sliding door control unit connector B501 (LH) or B401 (RH) and check motor operation.

33 (+) - 36 (-) : It operates.
33 (-) - 36 (+) : It operates. (Reverse rotation)

OK or NG

OK >> Motor is OK.
NG >> Replace the sliding door motor. Refer to BL-200, "SLIDE DOOR LOCK" .

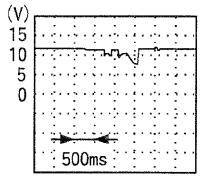


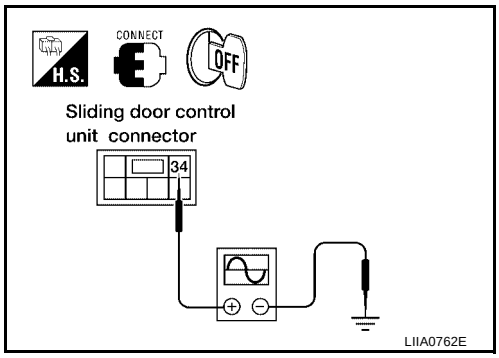
Magnetic Clutch Line Check

EIS007FD

1. MAGNETIC CLUTCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. Operate the sliding door and check voltage waveform between sliding door control unit connector B501 (LH) or B401 (RH) terminal 34 and ground using an oscilloscope.

34 - Ground	 PIIA1798E



LIIA0762E

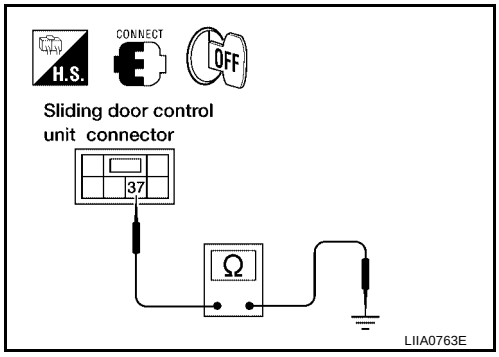
OK or NG

OK >> GO TO 2.
NG >> Replace sliding door control unit.

2. MAGNETIC CLUTCH GROUND CIRCUIT INSPECTION

Check continuity between sliding door control unit connector B501 (LH) or B401 (RH) terminal 37 and ground.

37 - Ground : Continuity should exist.



LIIA0763E

OK or NG

OK >> Clutch circuit is OK.
NG >> Repair or replace harness.

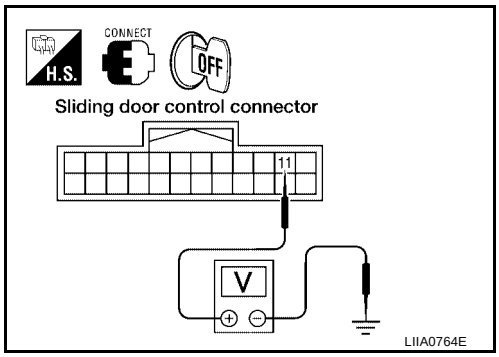
Sliding Door Encoder System Inspection

EIS007FE

1. SLIDING DOOR ENCODER POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Check voltage between sliding door control unit connector B60 (LH) or B143 (RH) terminal 11 and ground.

11 - Ground : Approx. 9V



LIIA0764E

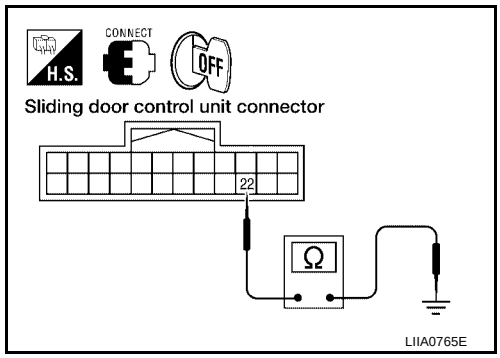
OK or NG

OK >> GO TO 3.
NG >> GO TO 2.

2. SLIDING DOOR ENCODER GROUND CIRCUIT INSPECTION

Check continuity between sliding door control unit connector B60 (LH) or B143 (RH) terminal 22 and ground.

22 - Ground : Continuity should exist.

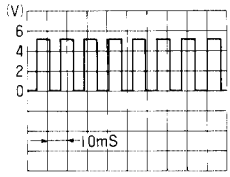


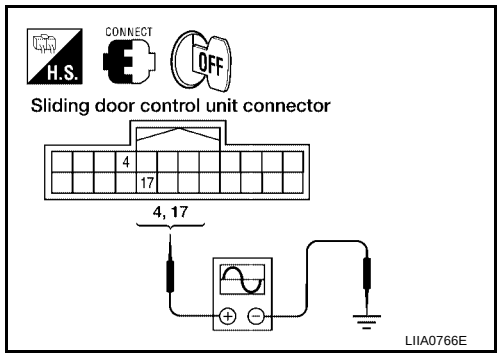
OK or NG

OK >> GO TO 4.
NG >> Replace sliding door control unit.

3. ENCODER (POSITION) SIGNAL INSPECTION

Operate the sliding door and check voltage waveform between sliding door control unit connector B60 (LH) or B143 (RH) terminals 4, 17 and ground using an oscilloscope.

4 - Ground 17 - Ground	 OCC3383D



OK or NG

OK >> GO TO 4.
NG >> Replace sliding door encoder.

4. SLIDING DOOR ENCODER CIRCUIT INSPECTION

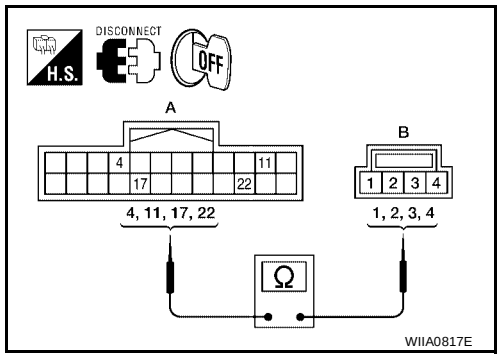
1. Disconnect sliding door control unit and sliding door motor assembly.
2. Check continuity between sliding door control unit connector B60 (LH) or B143 (RH) (A) terminals 4, 11, 17, 22 and sliding door motor assembly connector B59 (LH) or B145 (RH) (B) terminals 1, 2, 3, 4.

Sliding Door RH

4 - 3 : Continuity should exist.
11 - 1 : Continuity should exist.
17 - 2 : Continuity should exist.
22 - 4 : Continuity should exist.

Sliding Door LH

4 - 2 : Continuity should exist.
11 - 1 : Continuity should exist.
17 - 3 : Continuity should exist.
22 - 4 : Continuity should exist.



OK or NG

OK >> Sliding door encoder circuit is OK.
NG >> Repair or replace harness.

Sliding Door Remote Control Switch System Inspection

EIS007FF

1. SLIDING DOOR REMOTE CONTROL SWITCH FUNCTION INSPECTION

Check sliding door remote control switch operation.

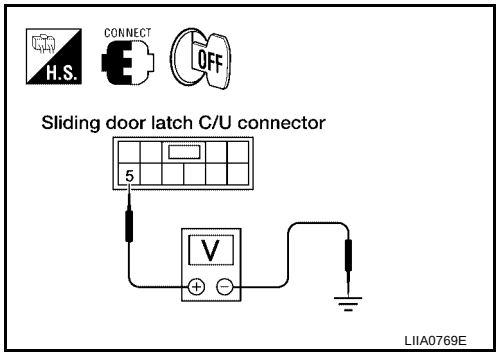
OK or NG

OK >> Sliding door remote control switch is OK.
NG >> GO TO 2.

2. SLIDING DOOR REMOTE CONTROL SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. Close the sliding door.
3. While operating the sliding door remote control switch, check voltage between sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 5 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
5	Ground	Sliding door handle open direction operation	0
		Other than above	5



OK or NG

OK >> Sliding door remote control switch is OK.
NG >> GO TO 3.

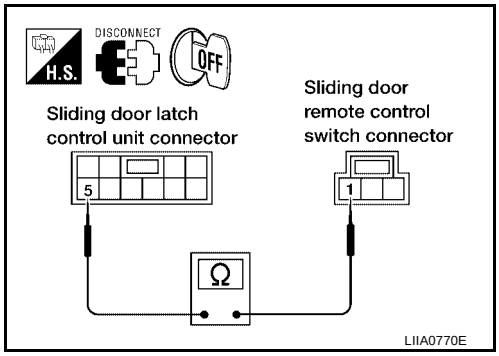
3. SLIDING DOOR REMOTE CONTROL SWITCH CIRCUIT INSPECTION

1. Disconnect sliding door remote control switch and sliding door latch control unit.
2. Check continuity between sliding door remote control switch connector D207 (LH) or D307 (RH) terminal 1 and sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 5.

1 - 5 : Continuity should exist.

OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness.



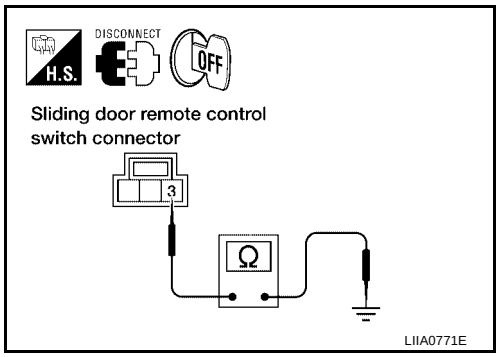
4. SLIDING DOOR REMOTE CONTROL SWITCH GROUND INSPECTION

1. Close the sliding door.
2. Check continuity between sliding door remote control switch connector D207 (LH) or D307 (RH) terminal 3 and ground.

3 - Ground : Continuity should exist.

OK or NG

OK >> Replace the sliding door remote control switch.
NG >> Repair or replace harness.



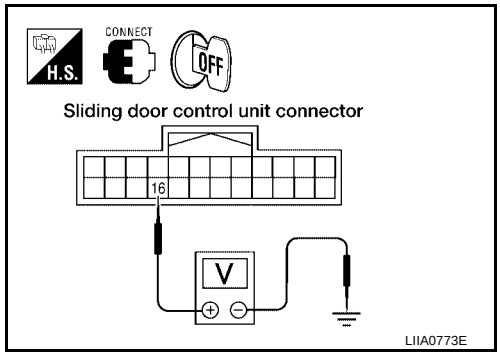
Child Lockout Switch System Inspection

EIS007FG

1. CHILD LOCKOUT SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. Set child lockout switch in LOCK position and close door.
3. While operating the sliding door in the open direction, check voltage between sliding door control unit connector B60 (LH) or B143 (RH) terminal 16 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
16	Ground	Sliding door handle in the open direction	0



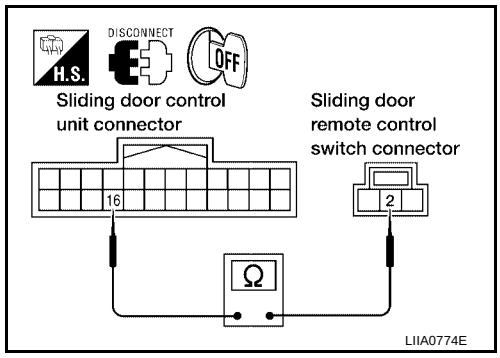
OK or NG

OK >> Switch is OK.
NG >> GO TO 2.

2. CHILD LOCKOUT SWITCH CIRCUIT INSPECTION

1. Disconnect sliding door remote control switch and sliding door control unit.
2. Check continuity between sliding door remote control switch connector D207 (LH) or D307 (RH) terminal 2 and sliding door control unit connector D204 (LH) or D304 (RH) terminal 16.

2 - 16 : Continuity should exist.



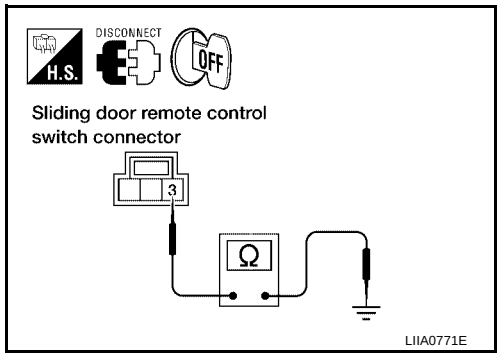
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. CHILD LOCKOUT SWITCH GROUND INSPECTION

1. Close the sliding door.
2. Check continuity between sliding door remote control switch connector D207 (LH) or D307 (RH) terminal 3 and ground.

3 - Ground : Continuity should exist.



OK or NG

OK >> Replace the sliding door remote control switch.
NG >> Repair or replace harness.

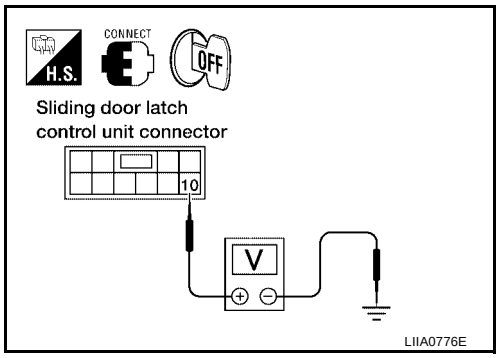
Latch Release Actuator System Inspection

EIS007FH

1. LATCH RELEASE ACTUATOR SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the sliding door, check voltage between sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 10 and ground.

Terminals		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
10	Ground	Latch release actuator operation	Battery voltage
		Other than above	0



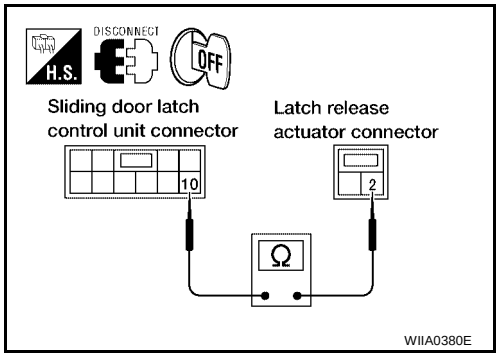
OK or NG

OK >> Latch release actuator is OK.
NG >> GO TO 2.

2. LATCH RELEASE ACTUATOR CIRCUIT INSPECTION

1. Disconnect latch release actuator and sliding door latch control unit.
2. Check continuity between latch release actuator connector D206 (LH) or D306 (RH) terminal 2 and sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 10.

2 - 10 : Continuity should exist.



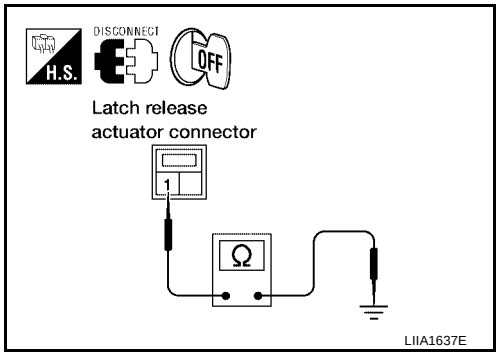
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. LATCH RELEASE ACTUATOR GROUND INSPECTION

1. Close the sliding door.
2. Check continuity between latch release actuator connector D206 (LH) or D306 (RH) terminal 1 and ground.

1 - Ground : Continuity should exist.



OK or NG

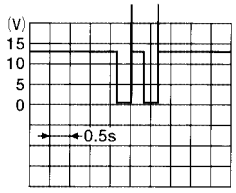
OK >> Replace the latch release actuator.
NG >> Repair or replace harness.

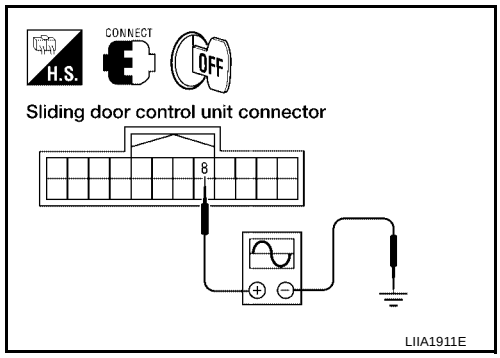
Warning Chime System Inspection

EIS007FI

1. WARNING CHIME OUTPUT SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. Operate the sliding door and check voltage waveform between sliding door control unit connector B60 (LH) or B143 (RH) terminal 8 and ground using an oscilloscope.

8 - Ground	 ELN0505D



OK or NG

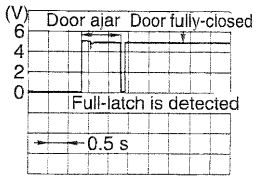
OK >> Warning chime system is OK.
NG >> Replace sliding door control unit.

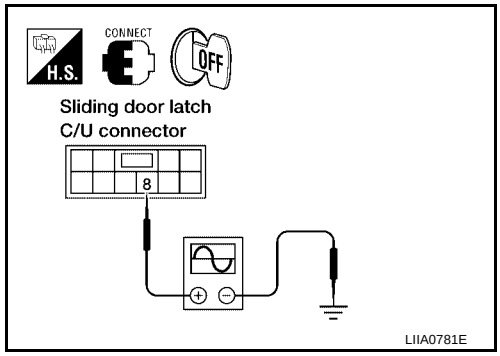
Half-Latch Switch System Inspection

EIS007FJ

1. HALF-LATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the sliding door, check voltage waveform between sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 8 and ground using an oscilloscope.

8 - Ground	 PIIA2169E



OK or NG

OK >> Half-latch switch is OK.
NG >> GO TO 2.

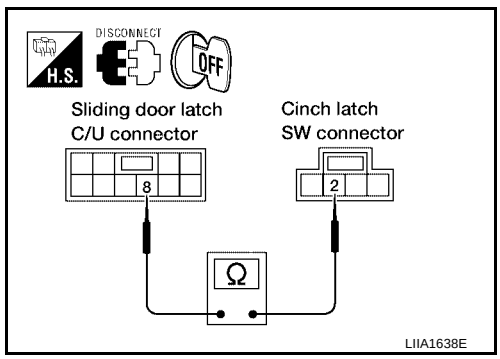
2. HALF-LATCH SWITCH CIRCUIT INSPECTION

1. Disconnect cinch latch switch and sliding door latch control unit.
2. Check continuity between cinch latch switch connector D202 (LH) or D302 (RH) terminal 2 and sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 8.

2 - 8 : Continuity should exist.

OK or NG

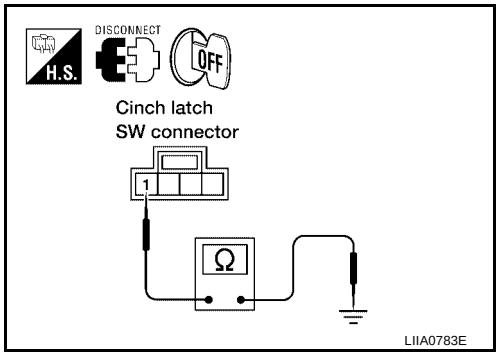
OK >> GO TO 3.
NG >> Repair or replace harness.



3. HALF-LATCH SWITCH GROUND INSPECTION

1. Close the sliding door.
2. Check continuity between cinch latch switch connector D202 (LH) or D302 (RH) terminal 1 and ground.

1 - Ground : Continuity should exist.



OK or NG

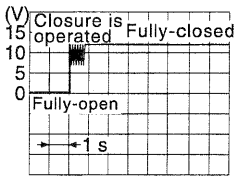
OK >> Replace the cinch latch switch.
NG >> Repair or replace harness.

Full-Latch Switch System Inspection

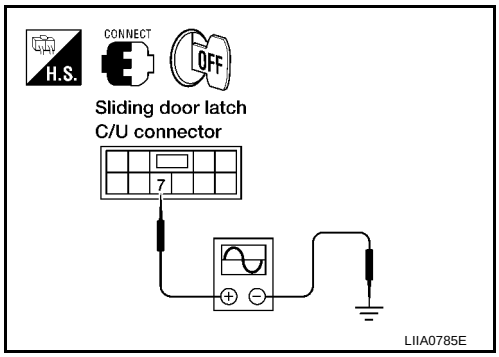
EIS007FK

1. FULL-LATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully closing and opening the sliding door, check voltage waveform between sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 7 and ground using an oscilloscope.

7 - Ground	

PIIA2171E



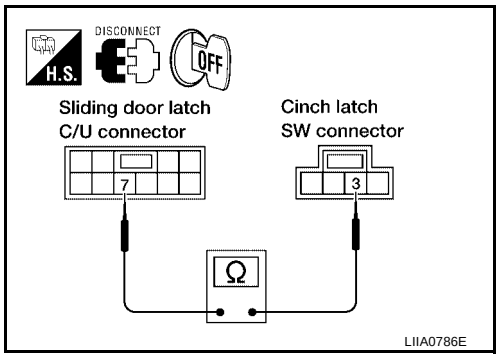
OK or NG

OK >> Full-latch switch is OK.
NG >> GO TO 2.

2. FULL-LATCH SWITCH CIRCUIT INSPECTION

1. Disconnect cinch latch switch and sliding door latch control unit.
2. Check continuity between cinch latch switch connector D202 (LH) or D302 (RH) terminal 3 and sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 7.

3 - 7 : Continuity should exist.



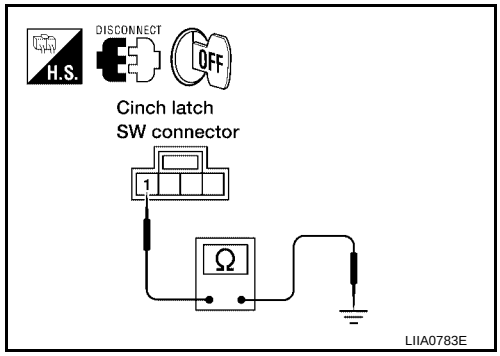
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. FULL-LATCH SWITCH GROUND INSPECTION

1. Close the sliding door.
2. Check continuity between cinch latch switch connector D202 (LH) or D302 (RH) terminal 1 and ground.

1 - Ground : Continuity should exist.



OK or NG

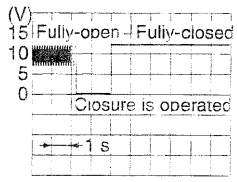
OK >> Replace the cinch latch switch.
NG >> Repair or replace harness.

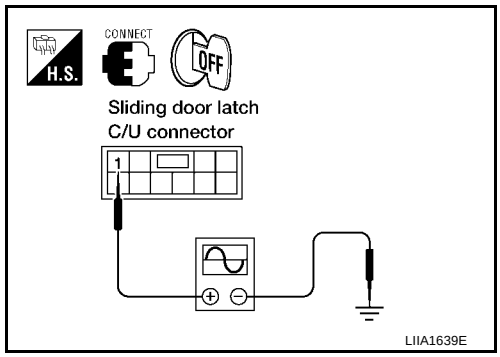
Neutral Switch System Inspection

EIS007FL

1. NEUTRAL SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the sliding door, check voltage waveform between sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 1 and ground using an oscilloscope.

1 - Ground	



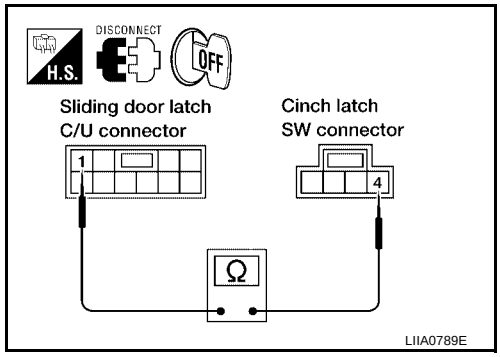
OK or NG

OK >> Neutral switch is OK.
NG >> GO TO 2.

2. NEUTRAL SWITCH CIRCUIT INSPECTION

1. Disconnect cinch latch switch and sliding door latch control unit.
2. Check continuity between cinch latch switch connector D202 (LH) or D302 (RH) terminal 4 and sliding door latch control unit connector D204 (LH) or D304 (RH) terminal 1.

4 - 1 : Continuity should exist.



OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

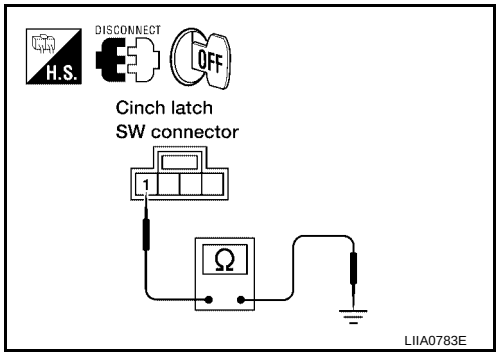
3. NEUTRAL SWITCH GROUND INSPECTION

1. Close the sliding door.
2. Check continuity between cinch latch switch connector D202 (LH) or D302 (RH) terminal 1 and ground.

1 - Ground : Continuity should exist.

OK or NG

OK >> Replace the cinch latch switch.
NG >> Repair or replace harness.

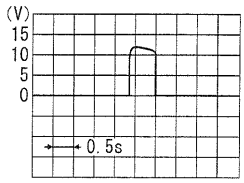


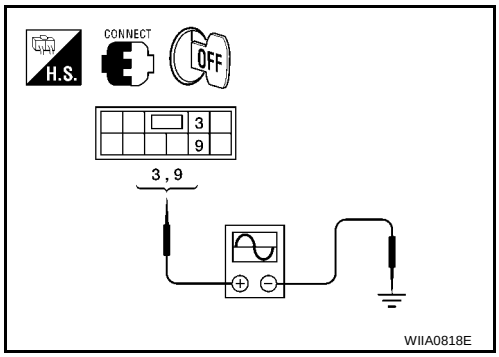
Cinch Latch Motor System Inspection

EIS007FM

1. CINCH LATCH MOTOR SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the sliding door, check voltage waveform between sliding door latch control unit connector D204 (LH) or D304 (RH) terminals 3, 9 and ground using an oscilloscope.

3 - Ground 9 - Ground	 SIIA1480E



OK or NG

OK >> GO TO 2.
NG >> Replace the sliding door latch control unit.

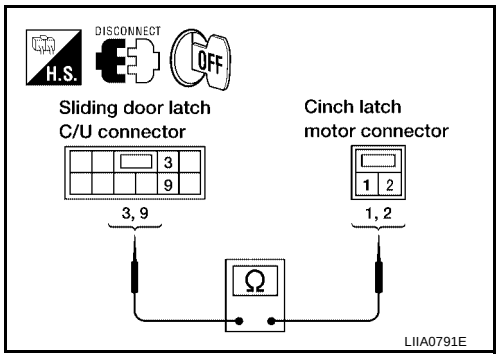
2. CINCH LATCH MOTOR CIRCUIT INSPECTION

1. Disconnect cinch latch switch and sliding door latch control unit.
2. Check continuity between cinch latch motor connector D203 (LH) or D303 (RH) terminals 1, 2 and sliding door latch control unit connector D204 (LH) or D304 (RH) terminals 3, 9.

1 - 3 : Continuity should exist.
2 - 9 : Continuity should exist.

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

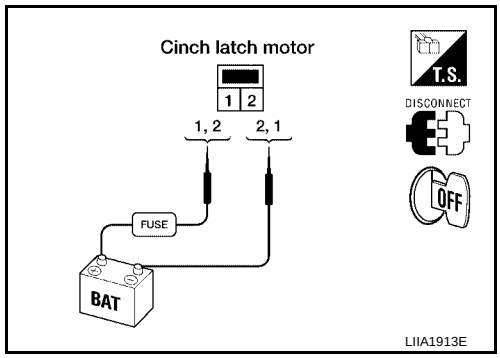


3. CINCH LATCH MOTOR OPERATION INSPECTION

Connect battery power to terminals 1 and 2 on the cinch latch motor and check motor operation.

1 (+) - 2 (-) : It operates.

1 (-) - 2 (+) : It operates. (Reverse rotation)



OK or NG

OK >> Motor is OK.

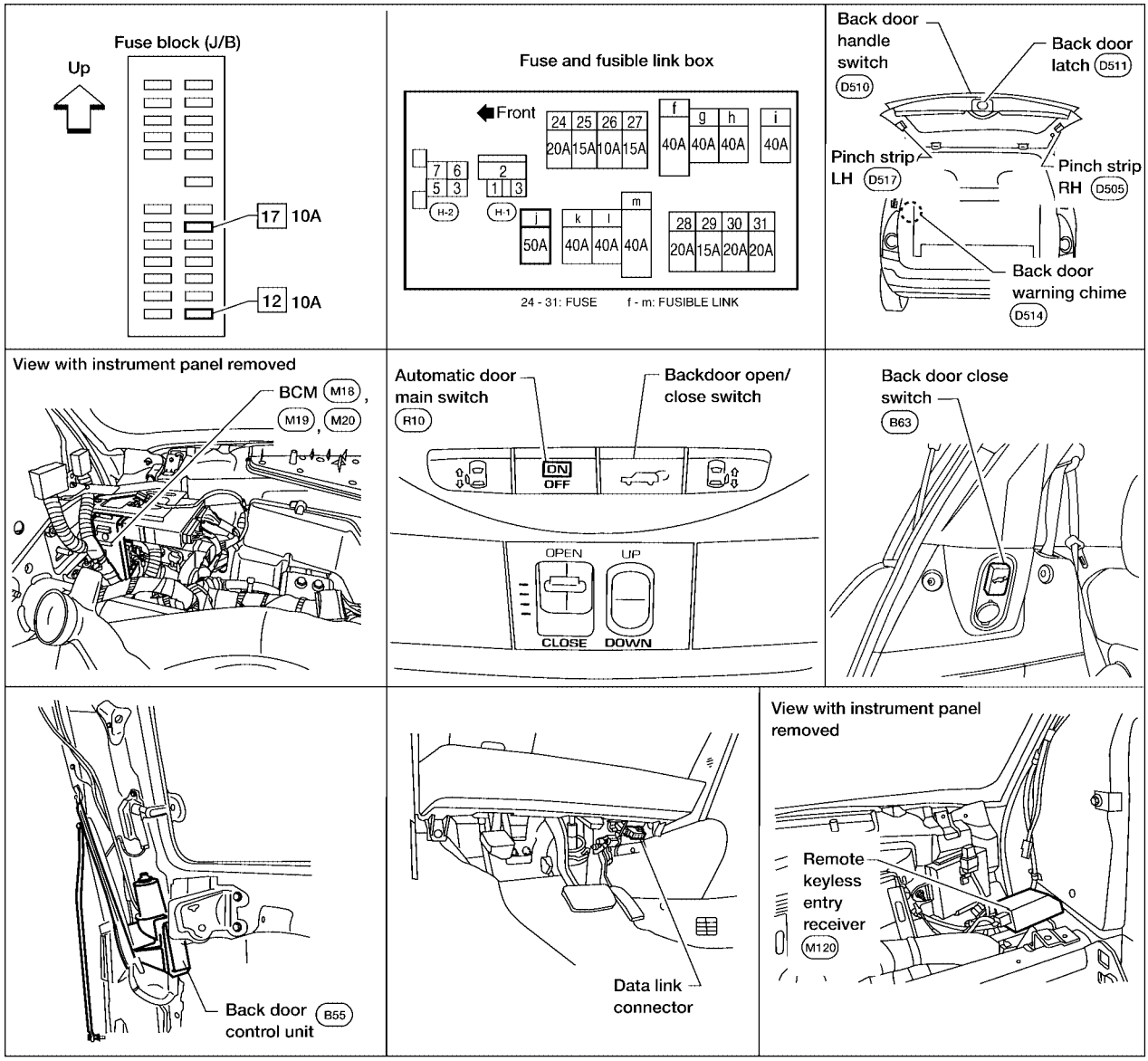
NG >> Replace the cinch latch motor.

AUTOMATIC BACK DOOR SYSTEM

PFP:82580

Component Parts and Harness Connector Location

EIS007FN



LIIA1914E

System Description

EIS007FO

NOTE:
The automatic back door system must be initialized by fully closing the back door anytime the battery or the back door control unit has been disconnected.

The automatic back door system consists of a one piece unit that combines the back door control unit along with the back door motor, back door clutch and the back door encoder. The back door latch contains a lock function that can control the two functions of automatic back door latch closure and electrical opener with a single motor when the back door is closed to the halfway state.

- Back door auto closure
  When the back door is closed to the half-way state (half-latch) position, the motor drives to rotate the latch lever and pull it in from half latched to full latched and automatically close the door.
- Power back door
  With the back door closed, press the automatic door main switch or press the remote keyless entry button, or pull the back door handle with the back door unlocked, the back door latch motor drives the open

the locking plate and releases the latch. The back door motor then raises the door to the full open position.
With the back door open, press the automatic door main switch, remote keyless entry button or the back door close switch, the back door motor closes the door to the half-latch state. The back door latch motor then drives the latch to the full close position.
On an open or close signal, the hazard lamps will flash 3 times and the warning chime will sound 3 dings lasting a total of 2 seconds.

OPERATION DESCRIPTION

Automatic Door Main Switch Operation (Fully Closed → Fully Open Operation)

- When the automatic door main switch is pressed, back door control unit terminal 23 receives the signal.
- The back door control unit checks the automatic transaxle select lever (A/T device) position through terminal 18, vehicle speed through terminal 21 and battery voltage.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and sends the unlock signal to the back door latch.
- When the back door latch receives the signal, it supplies voltage from terminal 12 to operate the release actuator and releases the door lock.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

Remote Keyless Entry Operation (Fully Closed → Fully Open Operation)

- When the remote keyless entry button is pressed for at least 0.5 seconds, back door control unit terminal 21 receives the signal.
- The back door control unit checks the automatic transaxle select lever (A/T device) position through terminal 18, vehicle speed through terminal 21 and battery voltage.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and sends the unlock signal to the back door latch.
- When the back door latch receives the signal, it supplies voltage from terminal 12 to operate the release actuator and releases the door lock.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

Back Door Handle Switch Operation (Fully Closed → Fully Open Operation)

- When the back door is unlocked and the back door handle is pulled, back door control unit terminal 26 receives the signal.
- The back door control unit checks the automatic transaxle select lever (A/T device) position through terminal 18, vehicle speed through terminal 21 and battery voltage and automatic door main switch position through terminal 13.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and sends the unlock signal to the back door latch.

- When the back door latch receives the signal, it supplies voltage from terminal 12 to operate the release actuator and releases the door lock.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

Automatic Door Main Switch Operation (Fully Open → Fully Closed Operation)

- When the automatic door main switch is pressed, the back door control unit terminal 23 receives the signal.
- The back door control units checks battery voltage.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the signal, it switches OFF the back door motor and the magnetic clutch.
- When the cinch latch motor operates and the close switch detects this and the back door control unit terminal 14 receives the signal from back door latch terminal 5.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the back door auto closure operation ends and the door is fully closed.

Remote Keyless Entry Operation (Fully Open → Fully Closed Operation)

- When the remote keyless entry switch is pressed for at least 0.5 seconds, the back door control unit terminal 21 receives the signal.
- The back door control units checks battery voltage.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the signal, it switches OFF the back door motor and the magnetic clutch.
- When the cinch latch motor operates and the close switch detects this and the back door control unit terminal 14 receives the signal from back door latch terminal 5.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the back door auto closure operation ends and the door is fully closed.

Back Door Close Switch Operation (Fully Open → Fully Closed Operation)

- When the back door close switch is pressed with the automatic main door switch ON, the back door control unit terminal 8 receives the signal.
- The back door control units checks battery voltage.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.

- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and overload reverse control.)
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the signal, it switches OFF the back door motor and the magnetic clutch.
- When the cinch latch motor operates and the close switch detects this and the back door control unit terminal 14 receives the signal from back door latch terminal 5.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the back door auto closure operation ends and the door is fully closed.

Anti-Pinch Function

- During auto operation, if an object is detected in the door's path, the back door operates in the reverse direction to prevent pinching.
- During auto close operation, if an object is detected by the pinch strips in the door's path, the back door operates in the open direction until it is fully open.
- During auto cinch latch operation, if an object is detected by the pinch strips in the door's path, the back door operates depending on the automatic door main switch position. If the automatic door main switch is in the ON position, the back door operates in the open direction until it is fully open. If the automatic door main switch is in the OFF position, the back door will reverse only until the latch is fully released.

Gas Stay Check

- During each power open operation, the back door control unit monitors motor current draw to determine if the gas stays are functioning properly.
- If a failure of the gas stays is detected, the back door control unit will close the back door while sounding the warning chime.

Warning Functions

- The warning chime is sounded according to the back door operating state, operations, and conditions.

Auto Back Door Operation Enable Conditions

Operation	Automatic door main switch		Remote keyless entry		Back door handle switch		Back door close switch	
Operating direction	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed
Main switch	ON							
Vehicle stop condition	A/T selector lever in P position and vehicle speed less than 2 km/h	—	A/T selector lever in P position and vehicle speed less than 2 km/h	—	A/T selector lever in P position and vehicle speed less than 2 km/h	—	—	
Battery voltage	Approx. 11V or more						Approx. 11V (operates with warning chime for low voltage of 9 - 11V)	

Control When Handle Pulled When Operating Enable Conditions Not Yet Met

Items	Operation condition	Not met case	Control
Main switch	ON	OFF	Manual mode (after finishing open/close operation if active)
A/T selector lever P position	P position	Other than P position	Power close operation only
Voltage drop	11V or more	11 > V > 9	Power operation will continue but will not begin from full close position
		9 > V > reset voltage	Power operation will stop and warning chime will sound
		Reset voltage > V	No power function available
Handle switch	Normal	Error	No operation

Control When Operating Enable Conditions No Longer Met

Description	Operation	Full open stop
Main switch turned OFF	Warning chime active → Shift to manual mode after full open or close operation is complete (Recovery to power mode when main switch turned ON or door fully closed)	→ Shift to manual mode
A/T selector lever P position	Warning chime active and one-way operation continuous (Warning chime inactive and door fully open or fully closed or operating conditions recovered)	Stop continued
Voltage drop 11 - 9V	One-way operation continued (equivalent to the case of starting voltage ← 11V for handle operation with warning chime active)	Not allowed
Voltage drop 6 - 4V (Microcomputer reset voltage - clutch hold voltage)	● Motor stopped ● Control not possible because microcomputer being reset	Control not possible because microcomputer being reset

Warning Chime Active Conditions

The warning chime uses two types of audio warnings, a friendly chime and a warning chime. The friendly chime consists of dings lasting 0.66 seconds each immediately followed by the next ding. The warning chime consists of beeps lasting 0.33 seconds with a pause of 0.33 seconds between each beep.

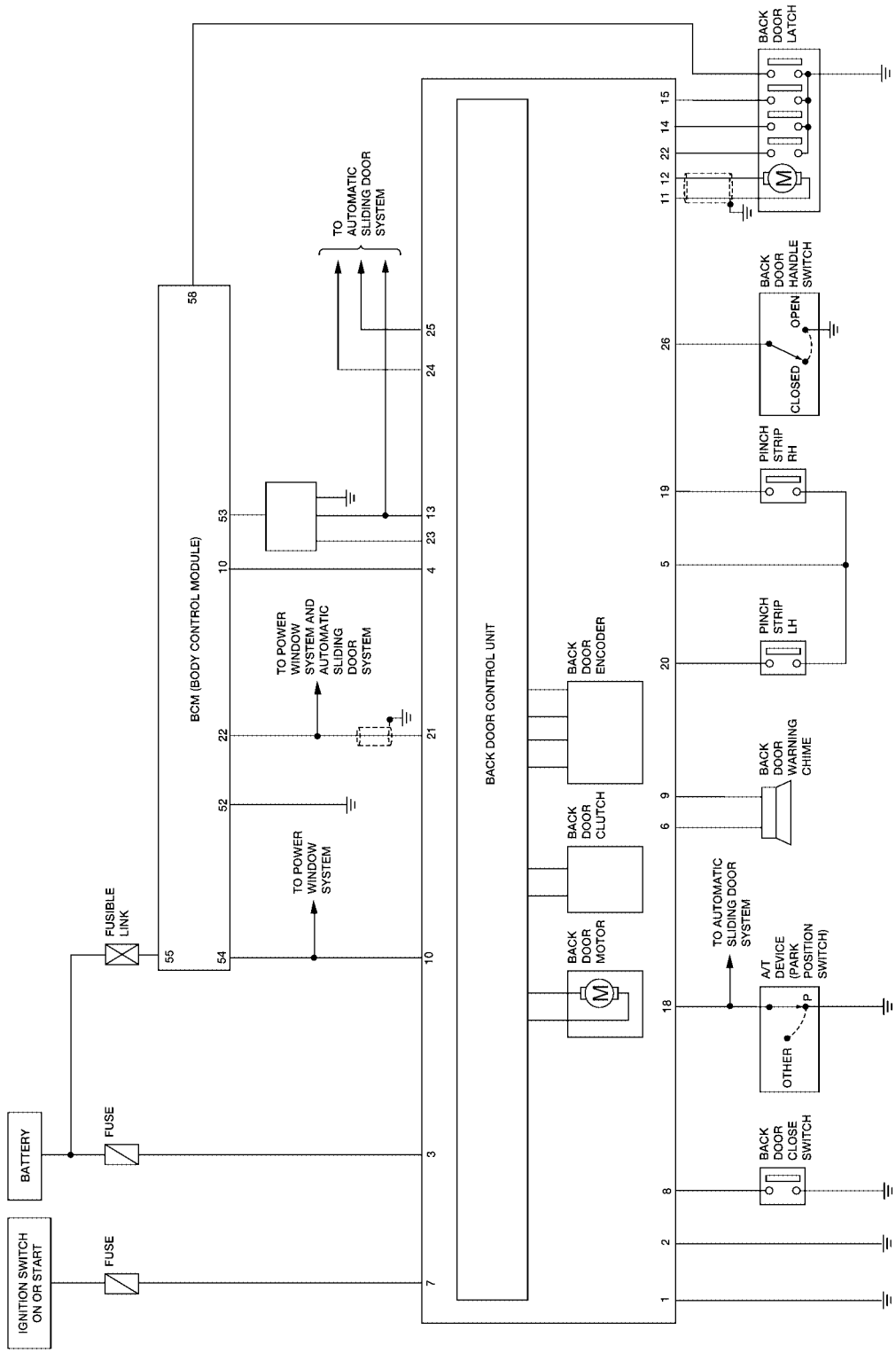
Operation status	Operation or conditions	Warning chime pattern
When auto operation starts	Automatic door main switch operation	Friendly chime 2 seconds, 3 dings
	Back door handle switch operation	
	Back door close switch operation	
When reverse operation starts	When reverse request is detected from automatic door main switch, remote keyless entry or back door close switch	Friendly chime 1.3 seconds, 2 dings
	When obstacle is detected	Warning chime 2 seconds, 3 beeps
Operating at low voltage	When operating with handle	Warning chime 2 seconds, 3 beeps
A/T selector lever not in P position	Back door close operation	Friendly chime Continuous dings
	Back door open operation	Warning chime Continuous beeps

Reverse Conditions

Type	Overload reverse
Operation covered	Both directions
Detection method	Operation speed and motor current change direction
	Pinch strips during back door close operation
Non-reversed area	● For about 0.5 seconds immediately after drive motor operation starts ● Between full open and approx. 7° from full open ● Closure operation area
Number of times reverse allowed	One reversal is allowed (if a second obstacle is detected during a power open or close operation, the door reverts to manual mode).

Schematic

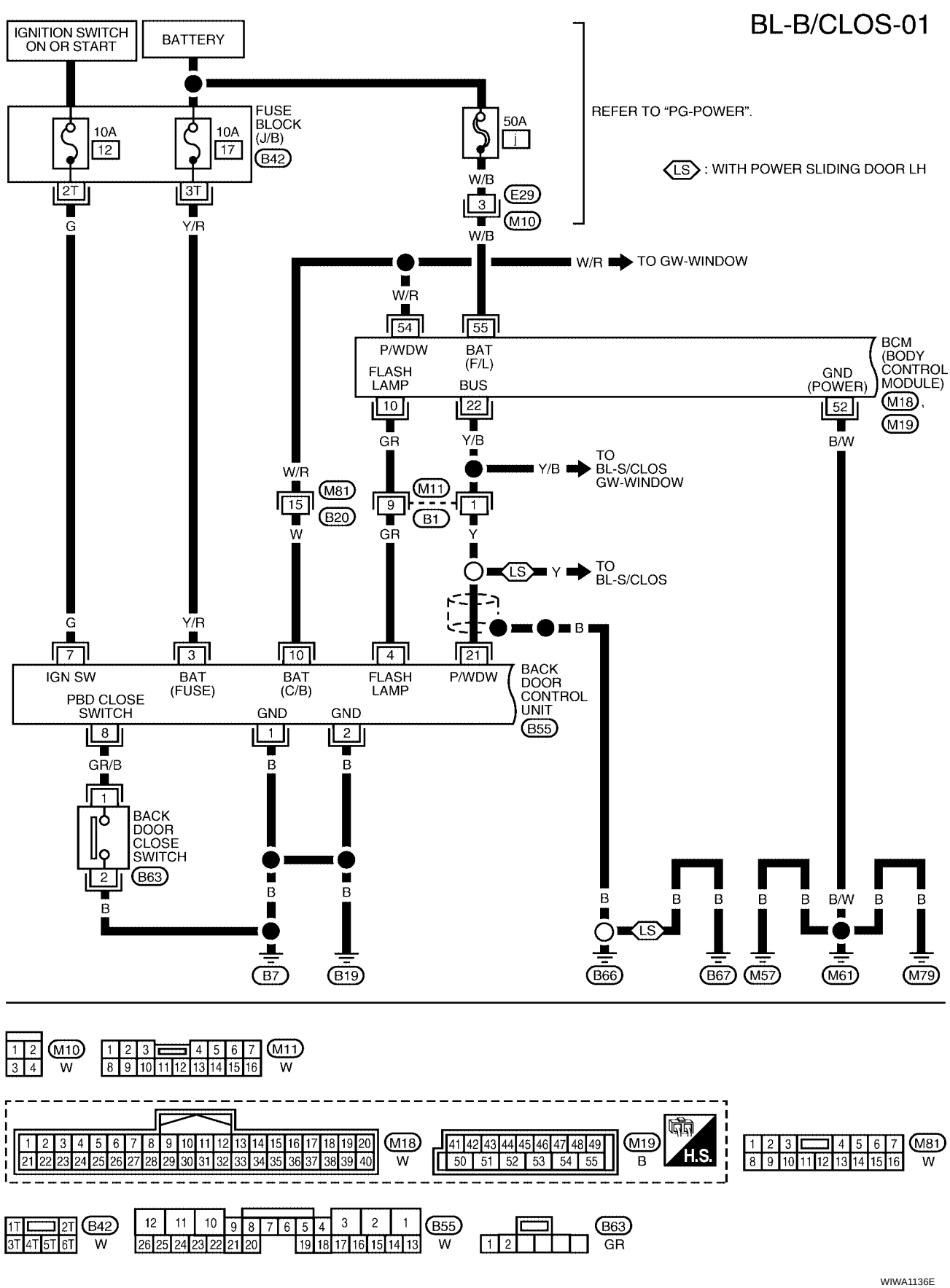
EIS007FP



WIWA1135E

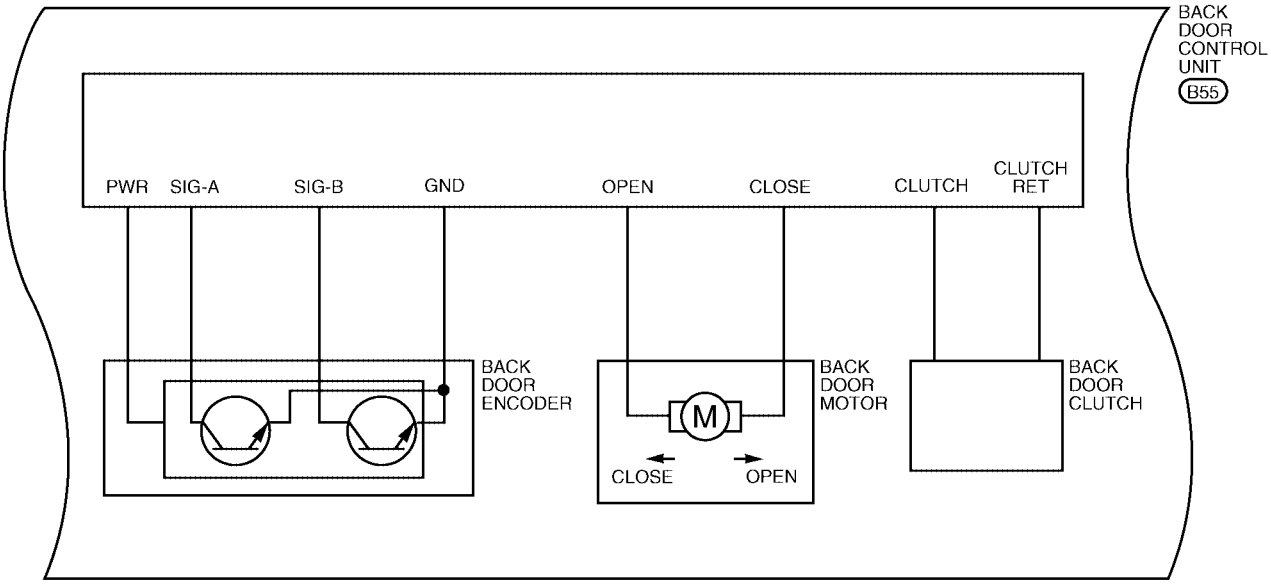
Wiring Diagram — B/CLOS —

EIS007FQ



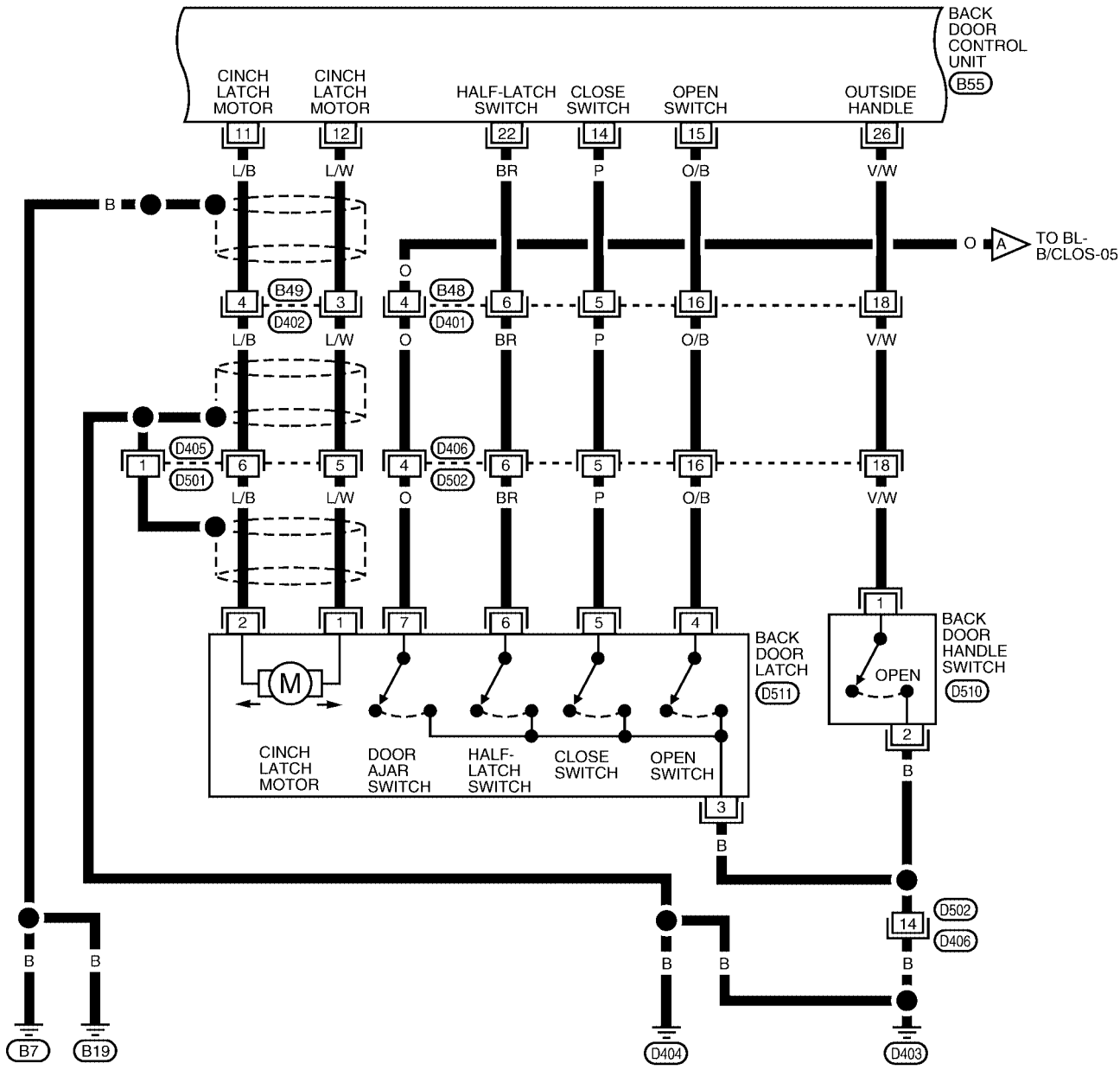
WIWA1136E

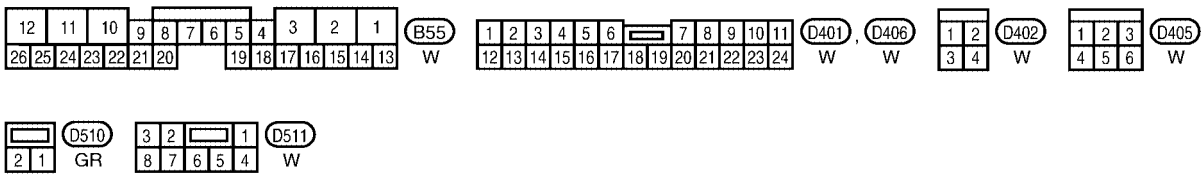
BL-B/CLOS-02



WIWA0512E

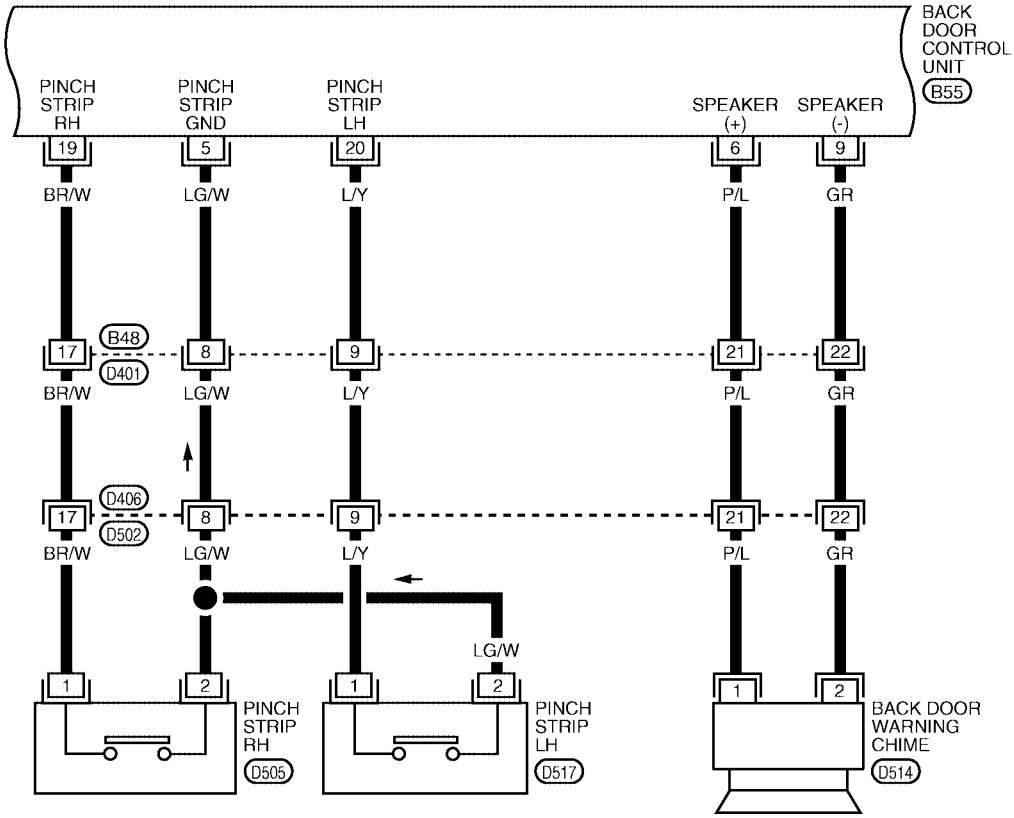
BL-B/CLOS-03

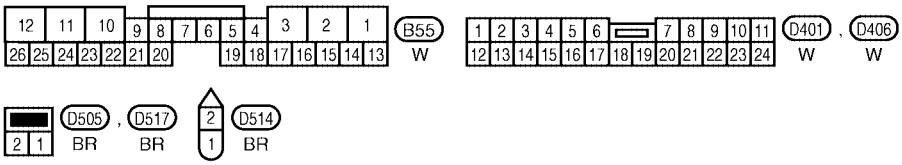




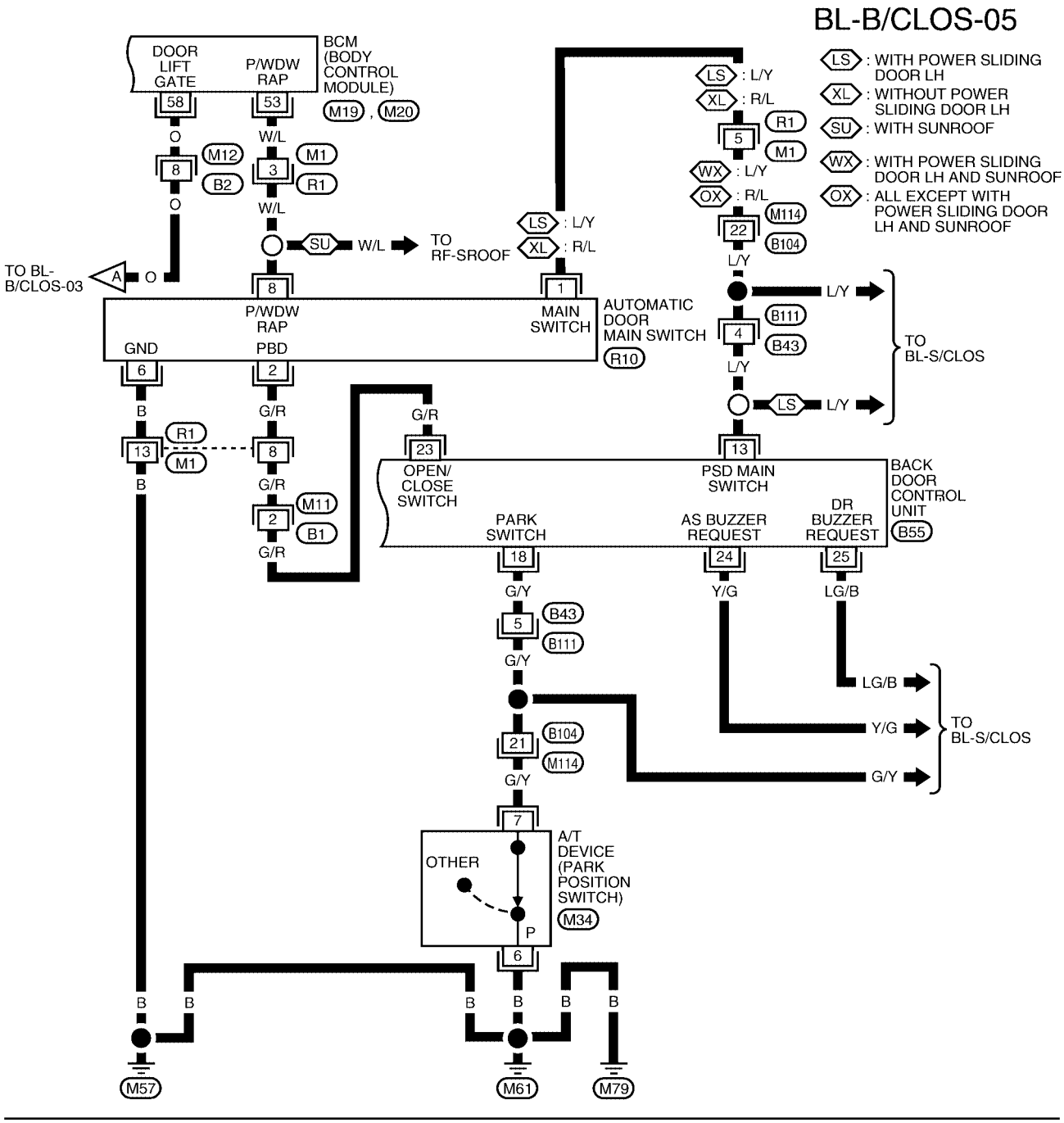
WIWA1137E

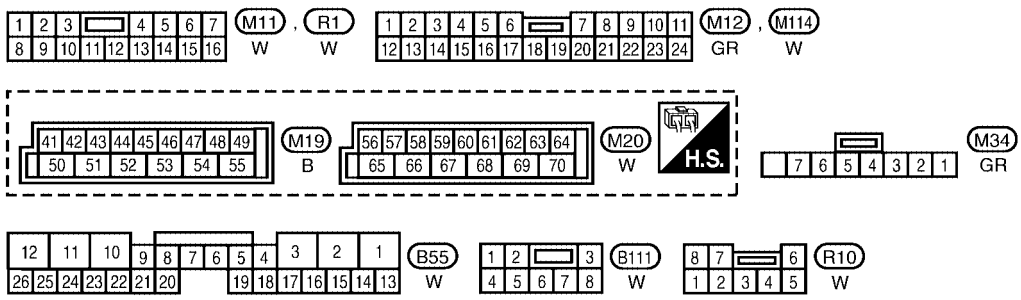
BL-B/CLOS-04





WIWA0514E

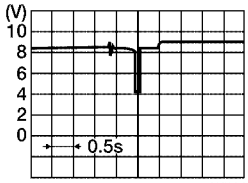
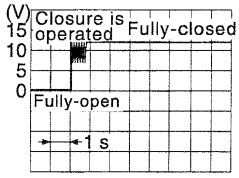
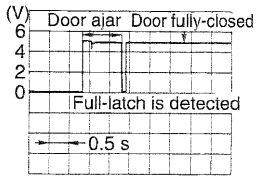

BL-B/CLOS-05
DOOR LIFT GATE
P/WDW RAP
BCM (BODY CONTROL MODULE)
M19 , M20
58
53
O
W/L
8
3
M12
B2
M1
R1
TO BL-B/CLOS-03
A
SU
W/L
TO RF-SROOF
LS : L/Y
XL : R/L
LS : WITH POWER SLIDING DOOR LH
XL : WITHOUT POWER SLIDING DOOR LH
SU : WITH SUNROOF
WX : WITH POWER SLIDING DOOR LH AND SUNROOF
OX : ALL EXCEPT WITH POWER SLIDING DOOR LH AND SUNROOF
WX : L/Y
OX : R/L
5
22
M114
B104
L/Y
AUTOMATIC DOOR MAIN SWITCH
R10
GND
PBD
6
2
B
G/R
B111
B43
TO BL-S/CLOS
13
23
OPEN/ CLOSE SWITCH
PSD MAIN SWITCH
BACK DOOR CONTROL UNIT
B55
PARK SWITCH
AS BUZZER REQUEST
DR BUZZER REQUEST
18
24
25
G/Y
Y/G
LG/B
21
M11
B1
A/T DEVICE (PARK POSITION SWITCH)
M34
OTHER
P
7
M57
M61
M79


M11 , R1
W W
M12 , M114
GR W
M19
B
M20
W
H.S.
M34
GR
B55
W
B111
W
R10
W

WIWA1138E

Terminals and Reference Value for Back Door Control Unit

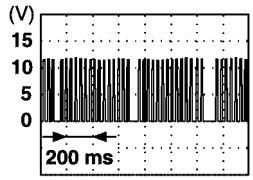
EIS007FR

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	B	Ground	—	—
2	B	Ground	—	—
3	Y/R	Battery power supply	—	Battery voltage
4	GR	Hazard lamp output	Back door motor active	5
5	LG/W	Pinch strip ground	—	—
6	P/L	Warning chime output	Back door motor active	12
7	G	Ignition switch	Ignition switch ON	Battery voltage
			Ignition switch OFF	0
8	GR/B	Back door close switch	Back door close switch ON	0
			Back door close switch OFF	Battery voltage
9	GR	Warning chime ground	—	—
10	W	Battery power	—	Battery voltage
11	L/B	Cinch latch motor CLOSE output	Back door close operation	Battery voltage
12	L/W	Cinch latch motor RETURN output	Back door open operation	Battery voltage
13	L/Y	Automatic door main switch ON/OFF switch	Automatic door main switch ON	0
			Automatic door main switch OFF	5
14	P	Close switch signal	While fully opening back door	 WIIA1047E
15	O/B	Open switch signal	While fully closing back door	 PIIA2171E
18	G/Y	A/T device (park position switch)	P or N position (Ignition is ON)	0
			Other than above (Ignition is ON)	9
19	BR/W	Pinch strip RH	Detecting obstruction	0
			Other than above	4
20	L/Y	Pinch strip LH	Detecting obstruction	0
			Other than above	4
21	Y	Power window serial link	—	—
22	BR	Half-latch switch	Back door close operation	 PIIA2169E

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
23	G/R	Automatic door main switch	ON	0
			OFF	5
24	Y/G	Sliding door RH warning chime request	Sliding door active	0
			Other than above	5
25	LG/B	Sliding door LH warning chime request	Sliding door active	0
			Other than above	5
26	V/W	Back door handle switch signal	Handle operation	0
			Other than above	Battery voltage

Terminals and Reference Value for BCM

EIS007FS

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
10	GR	Hazard lamp flash input	Back door active	0
			Other	5
22	Y/B	Bus	—	
52	B/W	Ground	—	0
53	W/L	Power window power source	—	Battery voltage
54	W/R	Power window (RAP)	—	Battery voltage
55	W/B	Battery power supply	—	Battery voltage
58	O	Back door switch	Open	0
			Closed	5

Trouble Diagnosis Procedure

EIS007FT

1. Check the symptom and customer's requests.
2. Understand outline of system. Refer to BL-162, "System Description" .
3. Confirm system operation.
4. Perform self-diagnosis procedures. Refer to BL-177, "Self-Diagnosis Procedures" .
5. Refer to diagnosis chart by symptom, repair or replace any malfunctioning parts. Refer to BL-179, "Diagnosis Chart" .
6. Inspection End.

Self-Diagnosis Procedures

EIS007FU

INPUT SIGNAL CHECK MODE

Input signal check mode allows testing of switch input signal to the back door control unit.
To activate input signal check mode on the automatic sliding door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn automatic door main switch OFF (system cancelled).
3. Place A/T selector lever in P position.
4. Using the inside emergency release lever, open the back door.
5. Have an assistant press and hold the back door close switch.
6. While the assistant continues to hold the back door close switch, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 seconds.
8. Release the back door close switch RH or LH.
9. Within 8 seconds of the back door warning chime sounding, press and hold the automatic door main back door open/close switch.
10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
11. Release the automatic door main back door open/close switch.
12. The input signal check mode is now initialized.

The input signal check mode can test the following inputs. The back door warning chime will sound for approximately 0.5 seconds each time a switch signal input occurs. Use this test when one of these inputs is not responding during normal automatic sliding door operation.

Switch signal	Operation	Refer to
Automatic door main switch	OFF → ON	BL-180
Automatic door main back door open/close switch	OFF → ON	BL-180
Back door close switch	OFF → ON	BL-181
Back door handle switch	OFF → ON	BL-187
A/T device (park position switch)	P position → other than P position	SE-76
Vehicle speed*	Vehicle speed	—
Remote keyless entry signal	Keyfob switch OFF → ON	BL-80
Door lock/unlock signal	LOCK → UNLOCK	BL-47
Pinch strip LH signal	OFF → ON	BL-182
Pinch strip RH signal	OFF → ON	BL-182

*Back door warning chime should sound as soon as vehicle moves.
Turn ignition switch OFF to end input signal check mode.

OPERATING CHECK MODE

Operating check mode allows self-diagnosis of the automatic back door system.
To activate operating check mode on the automatic back door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn automatic door main switch OFF (system cancelled).
3. Place A/T selector lever in P position.

4. Using the inside emergency release lever, open the back door.
5. Have an assistant press and hold the back door close switch.
6. While the assistant continues to hold the back door close switch, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 seconds.
8. Release the back door close switch.
9. Within 8 seconds of the back door warning chime sounding, press the automatic door main back door open/close switch 5 times in rapid succession.
10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
11. Release the automatic door main back door open/close switch.
12. Immediately close the back door manually.
13. Turn automatic door main switch ON.
14. Open and close the back door with the automatic door main back door open/close switch to activate operating check mode.

Self-diagnosis results are indicated by the back door warning chime.

Back door warning chime order	Back door warning chime length	
Start self-diagnosis	1.5 seconds	
	OK	NG
1. Operating conditions diagnosis	0.5 seconds	0.2 seconds
2. Back door encoder diagnosis	0.5 seconds	0.2 seconds
3. Back door clutch diagnosis	0.5 seconds	0.2 seconds
4. Back door motor diagnosis	0.5 seconds	0.2 seconds
5. Cinch latch motor diagnosis	0.5 seconds	0.2 seconds
Restart self-diagnosis	1.5 seconds	

Item	NG Result	Refer to
1. Operating conditions diagnosis result	One of the following operating conditions no longer met: ignition switch ON, automatic door main switch ON, A/T selector lever in P position	—
2. Back door encoder diagnosis result	Sensor diagnosis/short, pulse signal, pulse signal direction	BL-179
3. Back door clutch diagnosis result	Back door clutch does not operate	BL-184
4. Back door motor diagnosis result	Back door motor does not operate (no operating current)	BL-179
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	BL-188

Turn ignition switch OFF to end input signal check mode.

Diagnosis Chart

EIS007FV

Symptom	Suspect systems	Refer to
Automatic operations are not executed from the back door fully closed or fully open position. (Auto closure operates normally.)	Automatic door main switch system inspection	BL-180
	A/T device (park position switch)	—
	Pinch strip system inspection	BL-182
Automatic operations are not carried out together with open/close operations. (Manual operations are normal.)	Automatic door main switch system inspection	BL-180
	Back door close switch system inspection	BL-181
	Back door control unit power supply and ground circuit system inspection.	BL-179
The auto closure function does not operate. (Stops at the halfway position for auto closing operations.)	Pinch strip system inspection	BL-182
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Back door motor assembly	—
During close or cinch operations, the door does not operate in reverse if the back door handle is operated.	Handle switch system	BL-187
When the keyfob is operated, the back door does not operate automatically.	Remote keyless entry system inspection	BL-55
	Power window serial link	BL-176
	Pinch strip system inspection	BL-182
Auto closure does not operate.	Half-latch switch system	BL-184
	Cinch latch motor system	BL-188
	Handle switch system	BL-187
The back door does not open. (Closure motor rotation is not reversed.)	Open switch system	BL-185
	Handle switch system	BL-187
Warning chime does not sound.	Back door warning chime system	BL-183
Auto closure operation works, but the back door is not fully closed.	Close switch system	BL-186
	Handle switch system	BL-187
	Cinch latch motor system	BL-188
	Back door latch assembly mechanism damaged or worn.	—

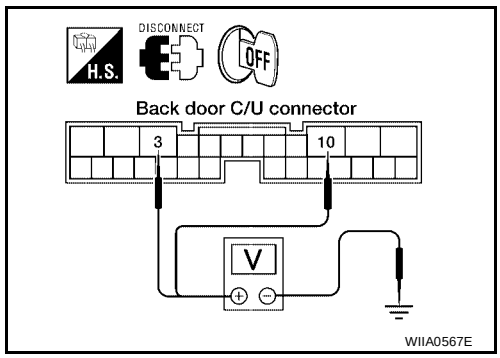
Back Door Control Unit Power Supply and Ground Circuit Inspection

EIS007FW

1. BACK DOOR CONTROL UNIT POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect back door control unit.
3. Check voltage between back door control unit connector B55 terminals 3, 10 and ground.

3 - Ground : Approx. battery voltage
10 - Ground : Approx. battery voltage



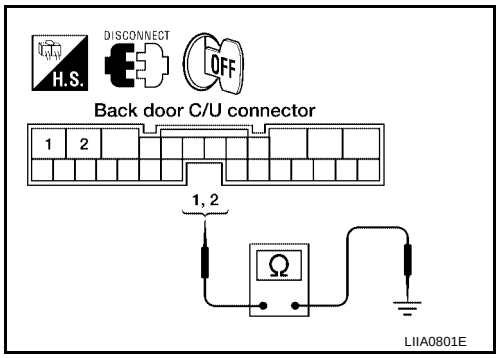
OK or NG

OK >> GO TO 2.
NG >> Repair or replace harness.

2. BACK DOOR CONTROL UNIT GROUND CIRCUIT INSPECTION

Check continuity between back door control unit connector B55 terminals 1, 2 and ground.

1 - Ground : Continuity should exist.
2 - Ground : Continuity should exist.



OK or NG

OK >> Ground circuit is OK.
NG >> Repair or replace harness.

Automatic Door Main Switch System Inspection

EIS007FX

1. AUTOMATIC DOOR MAIN SWITCH FUNCTION INSPECTION

Check automatic door main switch using switch operation.

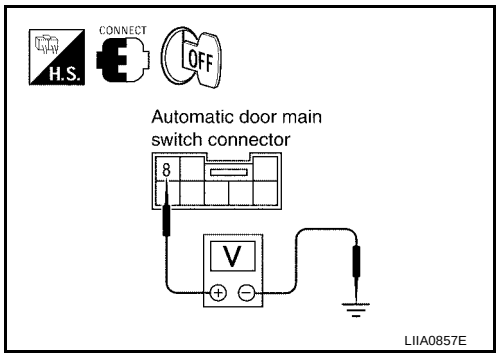
OK or NG

OK >> Automatic door main switch is OK.
NG >> GO TO 2.

2. AUTOMATIC DOOR MAIN SWITCH POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Check voltage between automatic door main switch connector R10 terminal 8 and ground.

8 - Ground : Approx. battery voltage



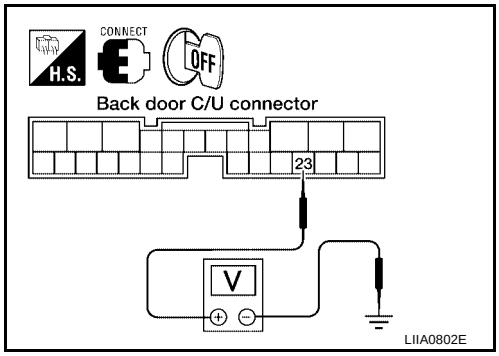
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. AUTOMATIC DOOR MAIN SWITCH SIGNAL INSPECTION

While operating the automatic door main switch, check voltage between back door control unit connector B55 terminal 23 and ground.

Terminals		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
23	Ground	Automatic door main switch	ON	0
			OFF	5



OK or NG

OK >> Switch is OK.
NG >> GO TO 4.

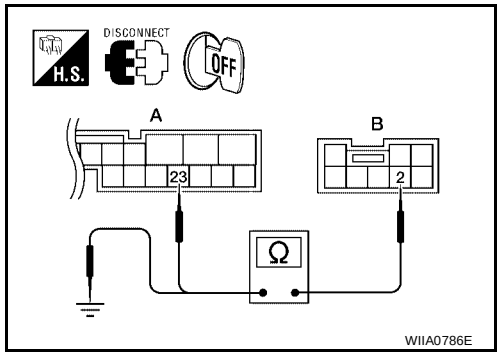
4. AUTOMATIC DOOR MAIN SWITCH CIRCUIT INSPECTION

1. Disconnect automatic door main switch and back door control unit.
2. Check continuity between automatic door main switch connector (B) R10 terminal 2 and back door control unit connector (A) B55 terminal 23.

2 - 23 : Continuity should exist.

3. Check continuity between automatic door main switch connector (B) R10 terminal 2 and ground.

2 - Ground : Continuity should not exist.



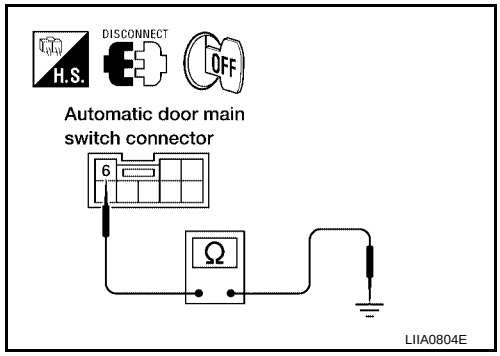
OK or NG

OK >> GO TO 5.
NG >> Repair or replace harness.

5. AUTOMATIC DOOR MAIN SWITCH GROUND INSPECTION

Check continuity between automatic door main switch connector terminal 6 and ground.

6 - Ground : Continuity should exist.



OK or NG

OK >> Replace the automatic door main switch.
NG >> Repair or replace harness.

Back Door Close Switch System Inspection

EIS007FY

1. BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

Check back door close switch using switch operation.

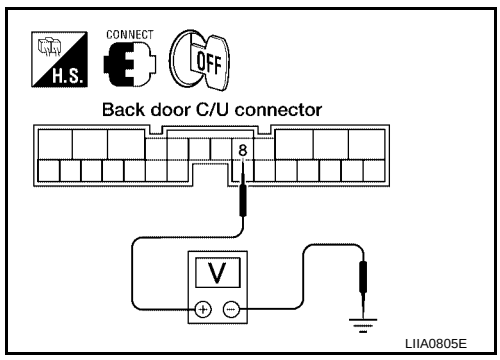
OK or NG

OK >> Back door close switch is OK.
NG >> GO TO 2.

2. BACK DOOR CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door close switch, check voltage between back door control unit connector B55 terminal 8 and ground.

Terminals		Position of back door close switch		Voltage (V) (Approx.)
(+)	(-)			
8	Ground	Momentary close position	ON	0
			OFF	Battery voltage



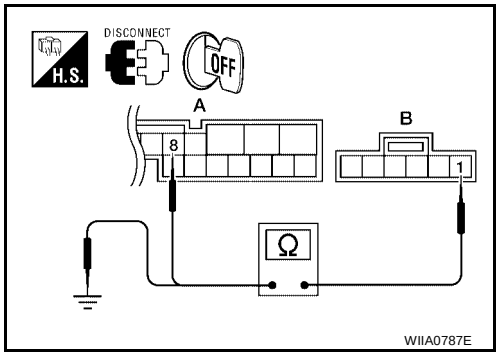
OK or NG

OK >> Switch is OK.
NG >> GO TO 3.

3. BACK DOOR CLOSE SWITCH CIRCUIT INSPECTION

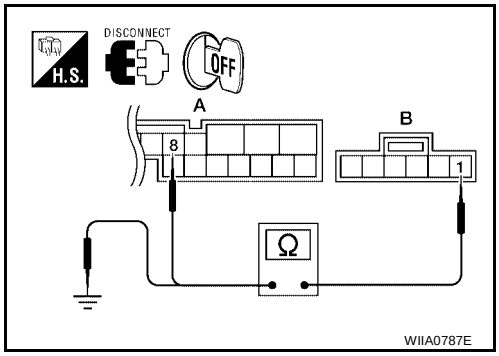
1. Disconnect back door close switch and back door control unit.
2. Check continuity between back door close switch connector (B) B63 terminal 1 and back door control unit connector (A) B55 terminal 8.

1 - 8 : Continuity should exist.



3. Check continuity between back door close switch connector (B) B63 terminal 1 and ground.

1 - Ground : Continuity should not exist.



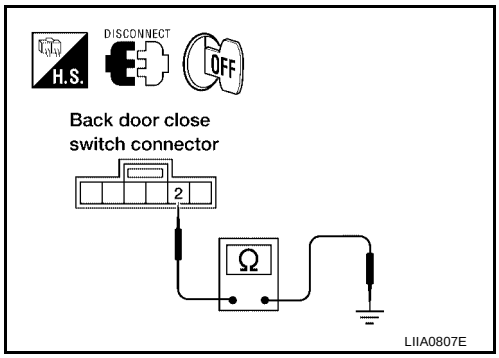
OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness.

4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

Check continuity between back door close switch connector B63 terminal 2 and ground.

2 - Ground : Continuity should exist.



OK or NG

OK >> Replace the back door close switch.
NG >> Repair or replace harness.

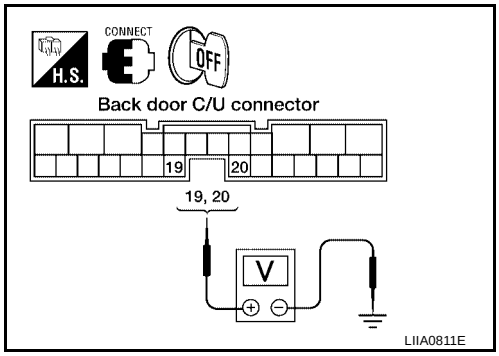
Pinch Strip System Inspection

EIS007FZ

1. PINCH STRIP SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the pinch strip, check voltage between back door control unit connector B55 terminals 19 (RH), 20 (LH) and ground.

Terminals		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
19 20	Ground	Pinch strip operation	0
		Other	4



OK or NG

OK >> Switch is OK.
NG >> GO TO 2.

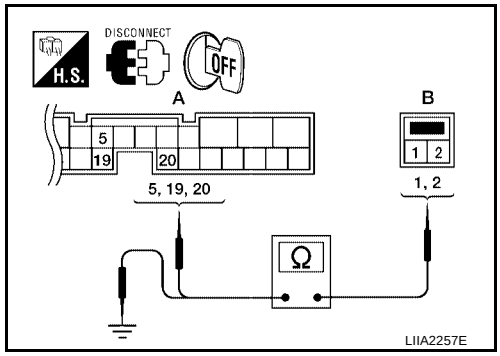
2. PINCH STRIP CIRCUIT INSPECTION

1. Disconnect pinch strip and back door control unit.
2. Check continuity between pinch strip connector (B) D505 (RH), D517 (LH) terminals 1, 2 and back door control unit connector (A) B55 terminals 5, 19 (RH), 20 (LH).

1 - 19 : Continuity should exist.
1 - 20 : Continuity should exist.
2 - 5 : Continuity should exist.

3. Check continuity between pinch strip connector (B) D505 (RH), D517 (LH) terminal 1and ground.

1 - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

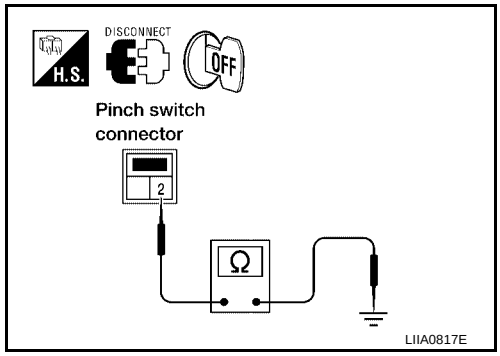
3. PINCH STRIP GROUND INSPECTION

Check continuity between pinch strip connector terminal 2 and ground.

2 - Ground : Continuity should exist.

OK or NG

OK >> Replace the pinch strip.
NG >> Repair or replace harness.



Back Door Warning Chime System Inspection

EIS007G0

1. BACK DOOR WARNING CHIME CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect back door warning chime and back door control unit.
3. Check continuity between back door warning chime connector (B) D514 terminal 1 and back door control unit connector (A) B55 terminal 6.

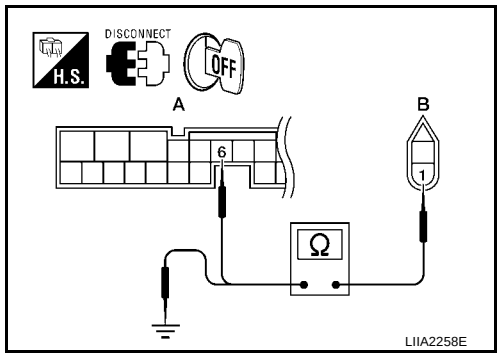
1 - 6 : Continuity should exist.

4. Check continuity between back door warning chime connector (B) D514 terminal 1 and ground.

1 - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 2.
NG >> Repair or replace harness.



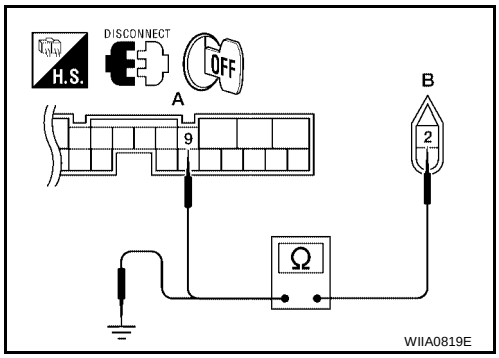
2. BACK DOOR WARNING CHIME CIRCUIT INSPECTION

1. Check continuity between back door warning chime connector (B) D514 terminal 2 and back door control unit connector (A) B55 terminal 9.

2 - 9 : Continuity should exist.

2. Check continuity between back door warning chime connector (B) D514 terminal 2 and ground.

2 - Ground : Continuity should not exist.



OK or NG

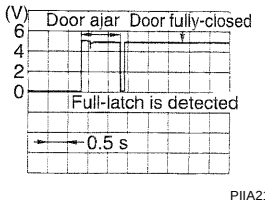
OK >> Replace warning chime.
NG >> Repair or replace harness.

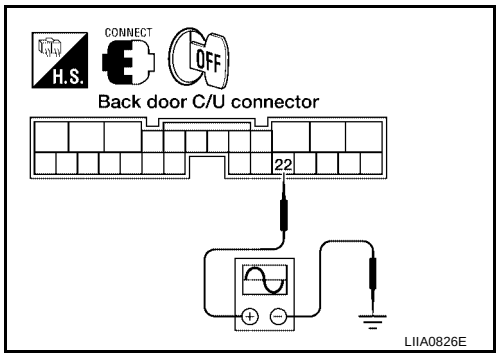
Half-Latch Switch System Inspection

EIS007G1

1. HALF-LATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the sliding door, check voltage waveform between back door control unit connector B55 terminal 22 and ground using an oscilloscope.

22 - Ground	



OK or NG

OK >> Half-latch switch is OK.
NG >> GO TO 2.

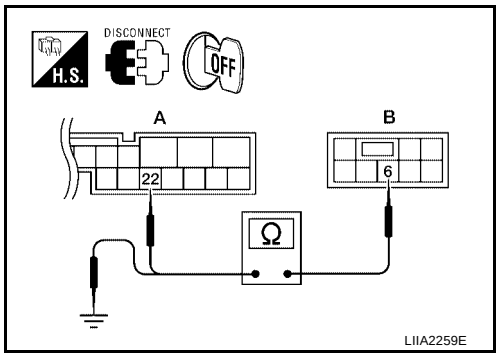
2. HALF-LATCH SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch switch and back control unit.
2. Check continuity between back door latch (half-latch switch) connector (B) D511 terminal 6 and back door control unit connector (A) B55 terminal 22.

6 - 22 : Continuity should exist.

3. Check continuity between back door latch (half-latch switch) connector (B) D511 terminal 6 and ground.

6 - Ground : Continuity should not exist.



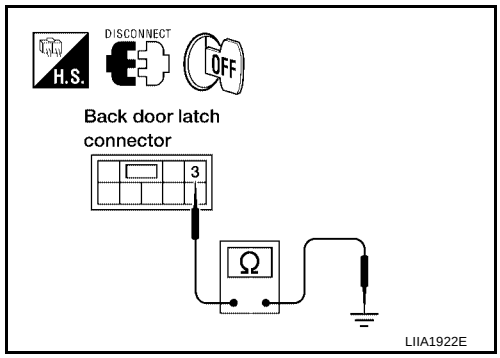
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. HALF-LATCH SWITCH GROUND INSPECTION

Check continuity between back door latch (half-latch switch) connector D511 terminal 3 and ground.

3 - Ground : Continuity should exist.



OK or NG

OK >> Replace the back door latch. Refer to BL-204, "BACK DOOR LOCK" .

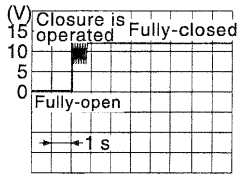
NG >> Repair or replace harness.

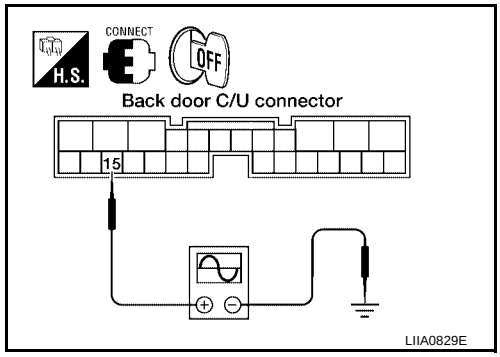
Open Switch System Inspection

EIS007G2

1. OPEN SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully closing and opening the back door, check voltage waveform between back door control unit connector B55 terminal 15 and ground using an oscilloscope.

15 - Ground	



OK or NG

OK >> Open switch is OK.

NG >> GO TO 2.

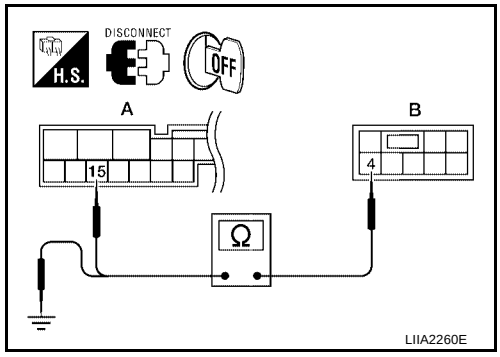
2. OPEN SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit.
2. Check continuity between back door latch (open switch) connector (B) D511 terminal 4 and back door control unit connector (A) B55 terminal 15.

4 - 15 : Continuity should exist.

3. Check continuity between back door latch (open switch) connector (B) D511 terminal 4 and ground.

4 - Ground : Continuity should not exist.



OK or NG

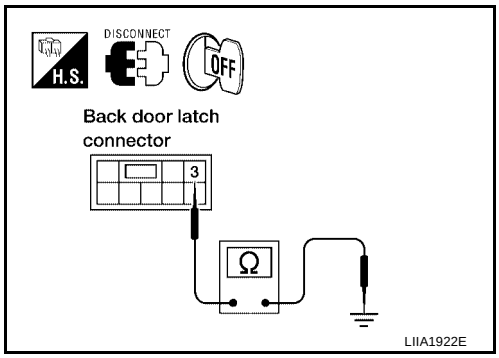
OK >> GO TO 3.

NG >> Repair or replace harness.

3. OPEN SWITCH GROUND INSPECTION

Check continuity between back door latch (open switch) connector D511 terminal 3 and ground.

3 - Ground : Continuity should exist.



OK or NG

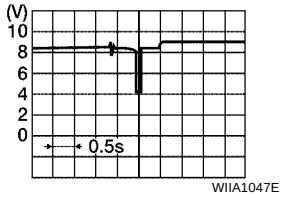
OK >> Replace the back door latch.
NG >> Repair or replace harness.

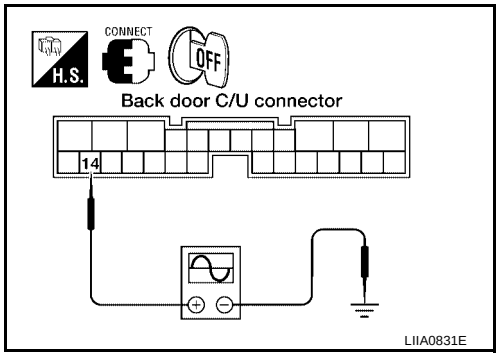
Close Switch System Inspection

EIS007G3

1. CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage waveform between back door control unit connector B55 terminal 14 and ground using an oscilloscope.

14 - Ground	



OK or NG

OK >> Close switch is OK.
NG >> GO TO 2.

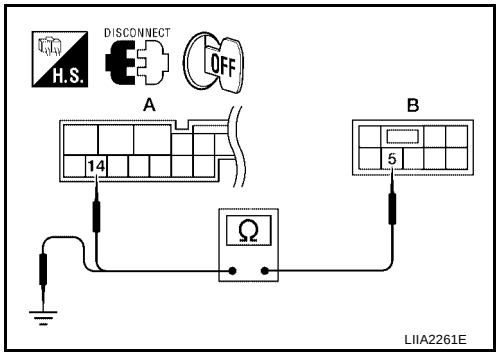
2. CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit.
2. Check continuity between back door latch (close switch) connector (B) D511 terminal 5 and back door control unit connector (A) B55 terminal 14.

5 - 14 : Continuity should exist.

3. Check continuity between back door latch (close switch) connector (B) D511 terminal 5 and ground.

5 - Ground : Continuity should not exist.



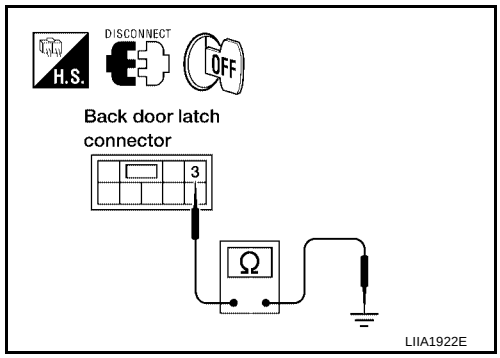
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness.

3. CLOSE SWITCH GROUND INSPECTION

Check continuity between back door latch (close switch) connector D511 terminal 3 and ground.

3 - Ground : Continuity should exist.



OK or NG

OK >> Replace the back door latch.
NG >> Repair or replace harness.

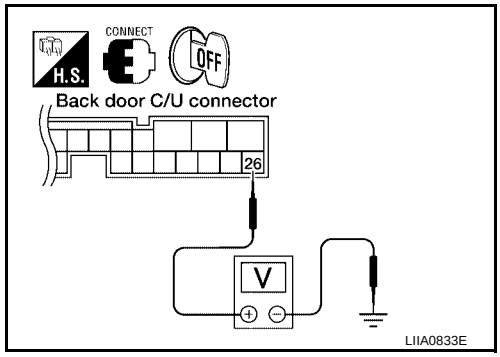
Back Door Handle Switch System Inspection

EIS007G4

1. BACK DOOR HANDLE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door handle switch, check voltage between back door control unit connector B55 terminal 26 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
26	Ground	Pull the back door handle switch (ON)	0
		Other (OFF)	Battery voltage



OK or NG

OK >> Back door handle switch circuit is OK.
NG >> GO TO 2.

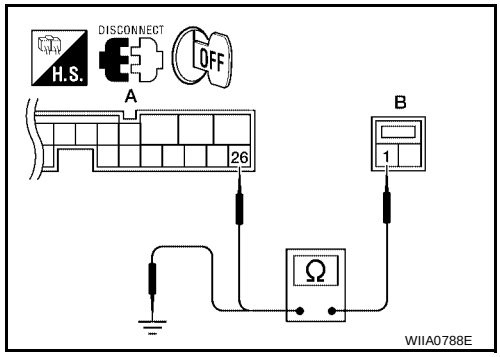
2. BACK DOOR HANDLE SWITCH CIRCUIT INSPECTION

1. Disconnect back door handle switch and back door control unit.
2. Check continuity between back door handle switch connector (B) D510 terminal 1 and back door control unit connector (A) B55 terminal 26.

1 - 26 : Continuity should exist.

3. Check continuity between back door handle switch connector (B) D510 terminal 1 and ground.

1 - Ground : Continuity should not exist.



OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness.

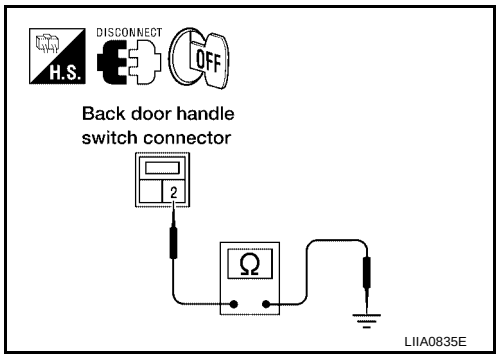
3. BACK DOOR HANDLE SWITCH GROUND INSPECTION

Check continuity between back door handle switch connector D510 terminal 2 and ground.

2 - Ground : Continuity should exist.

OK or NG

OK >> Replace the back door handle switch.
NG >> Repair or replace harness.



Cinch Latch Motor System Inspection

EIS007G5

1. CINCH LATCH MOTOR CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect back door latch and back door control unit.
3. Check continuity between back door latch (cinch latch motor) connector (B) D511 terminals 1, 2 and back door control unit connector (A) B55 terminals 11, 12.

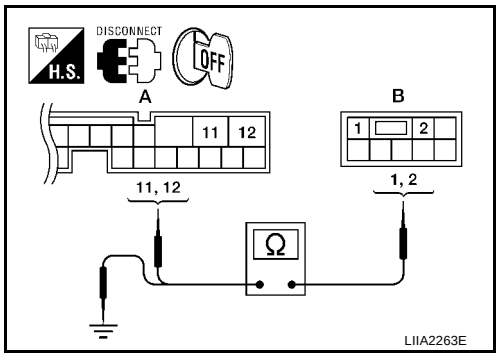
1 - 12 : Continuity should exist.
2 - 11 : Continuity should exist.

4. Check continuity between back door latch (cinch latch motor) connector (B) D511 terminals 1, 2 and ground.

1 - Ground : Continuity should not exist.
2 - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 2.
NG >> Repair or replace harness.



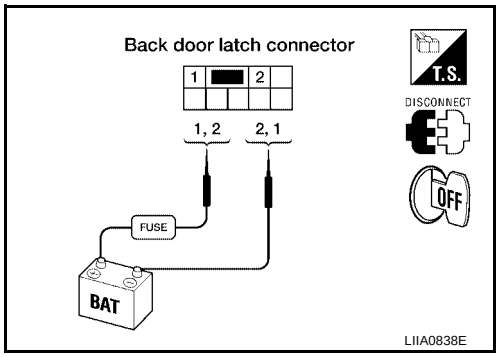
2. CINCH LATCH MOTOR OPERATION INSPECTION

Connect battery power to terminals 1 and 2 on the back door latch connector and check motor operation.

1 (+) - 2 (-) : It operates.
1 (-) - 2 (+) : It operates. (Reverse rotation)

OK or NG

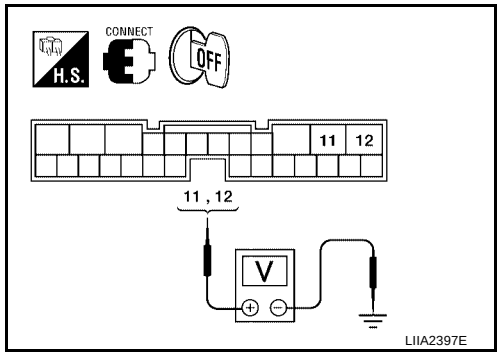
OK >> GO TO 3.
NG >> Replace the back door latch.



3. CINCH LATCH MOTOR SIGNAL INSPECTION

1. Reconnect back door latch and back door control unit.
2. While fully opening and closing the back door, check voltage waveform between back door control unit connector B55 terminals 11, 12 and ground using an oscilloscope.

11 - Ground 12 - Ground	Battery voltage



OK or NG

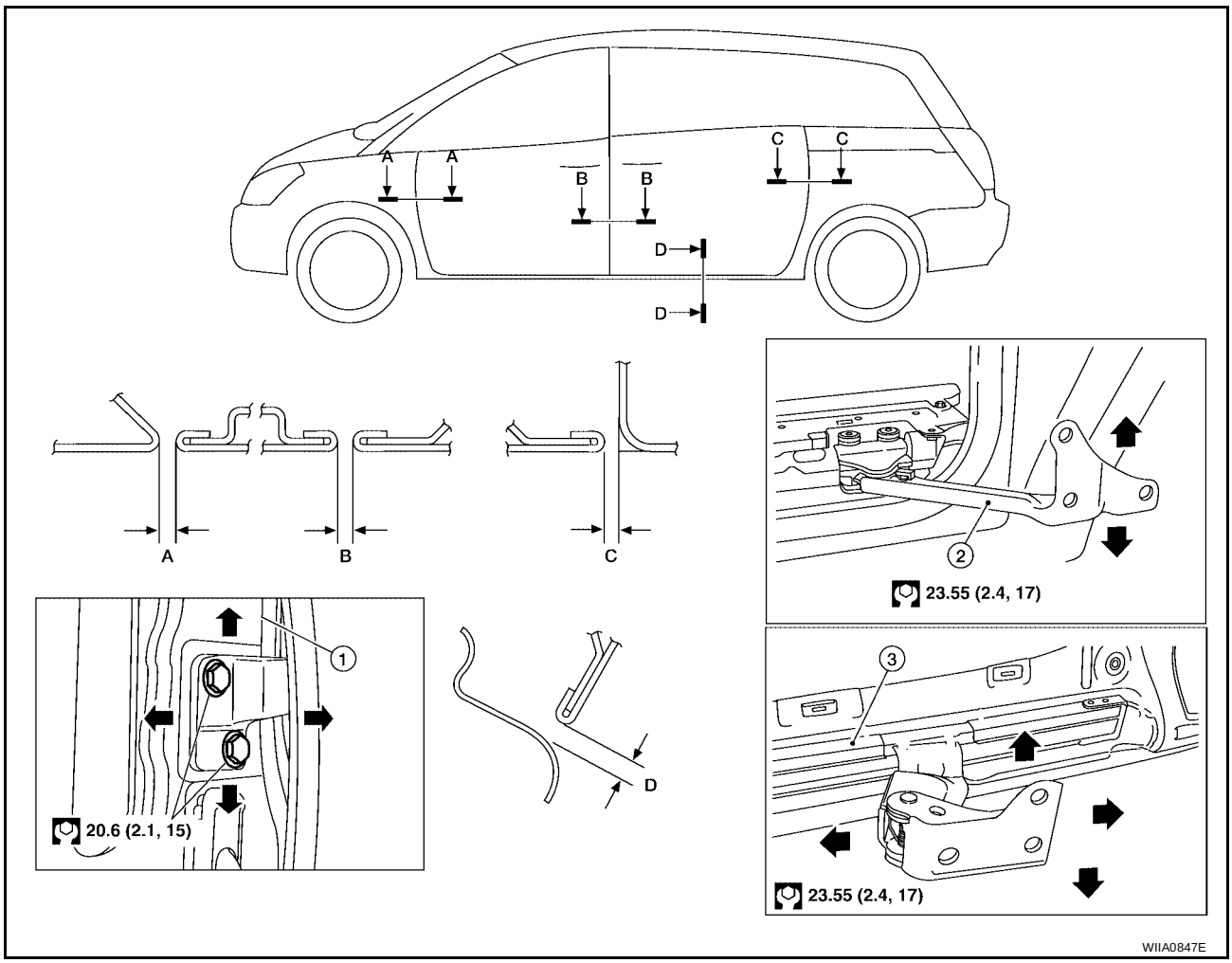
OK >> Cinch latch motor circuit is OK.
NG >> Replace the back door control unit.

DOOR

PFP:80100

Fitting Adjustment

EIS007G6



A. 4.5 ± 1.0 mm (0.177 ± 0.039 in)
B. 4.5 ± 1.0 mm (0.177 ± 0.039 in)
C. 4.5 ± 1.0 mm (0.177 ± 0.039 in)
D. 4.5 ± 1.0 mm (0.177 ± 0.039 in)
1. Front door hinge pillar
2. Lower roller assembly
3. Waist rail

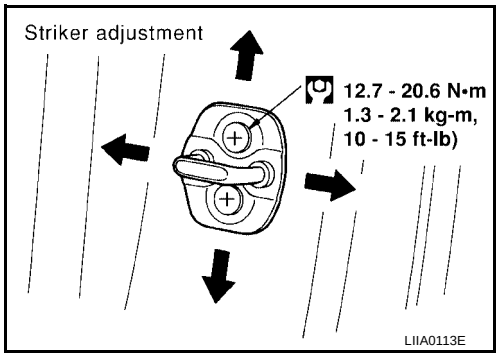
FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the front fender. Refer to EI-21, "FRONT FENDER" .
2. Loosen the hinge nuts or bolts and adjust as needed.

Striker Adjustment

1. Adjust the striker so that it becomes parallel with the lock insertion direction.



SLIDE DOOR

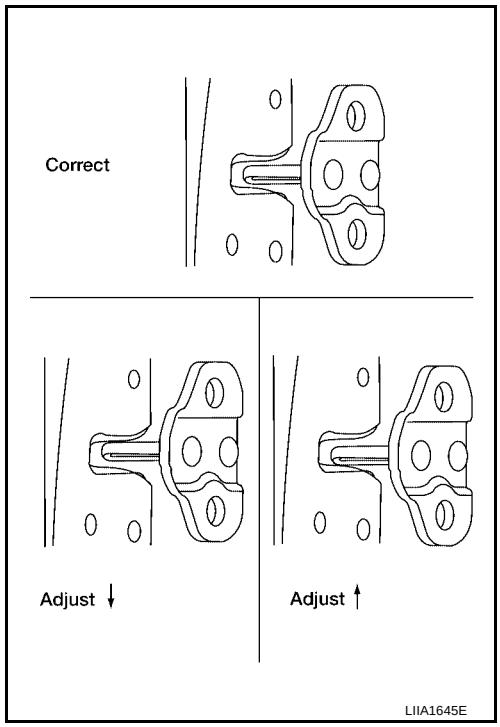
Longitudinal clearance, surface height and outboard adjustment at front end

1. Remove the sliding door trim panel. Refer to EI-30, "SLIDING DOOR" .
2. Accessing from inside the vehicle, loosen the nuts. Open the sliding door and adjust as needed.

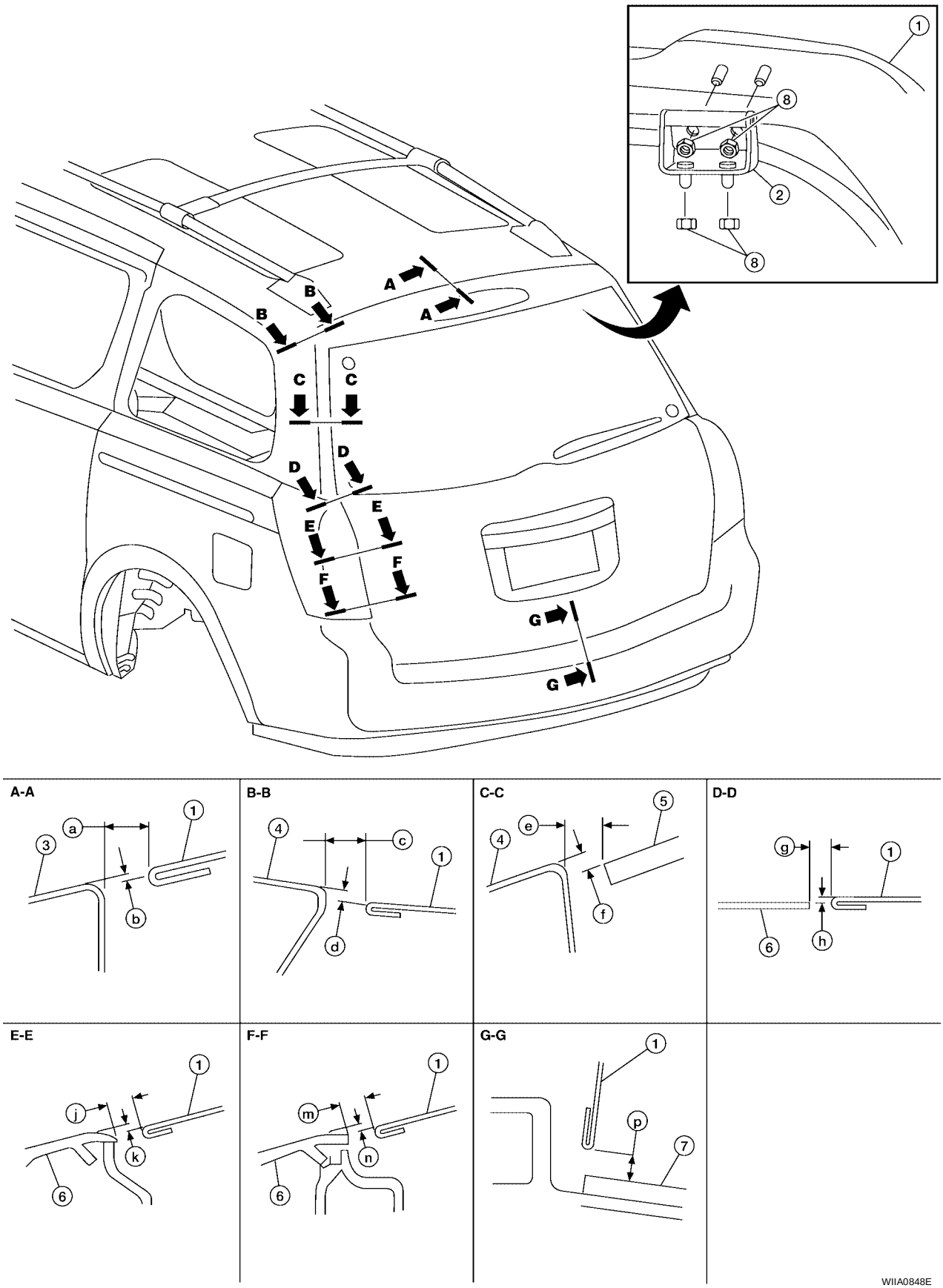
Striker Adjustment

NOTE:
Turn OFF automatic sliding door system, if equipped.

1. Inspect the door latch-to-striker clearance for the front and rear strikers.
   - Slowly open and close the sliding door.
   - Confirm the strikers meet the latches correctly.
   - Adjust striker height up or down as needed.
2. Slightly loosen the door strikers, upper and lower dovetails, and contact switch.
   NOTE:
   Loosened parts should not move on their own.
3. Open and close the door three or four times to allow the strikers and contact switch to align themselves.
4. Carefully tighten all loosened parts using care not to move the parts .
5. Open and close door three or four times to confirm smooth latching.



BACK DOOR



1. Back door
2. Back door hinge RH & LH
3. Roof
4. Body side outer
5. Back door glass
6. Rear combination lamp

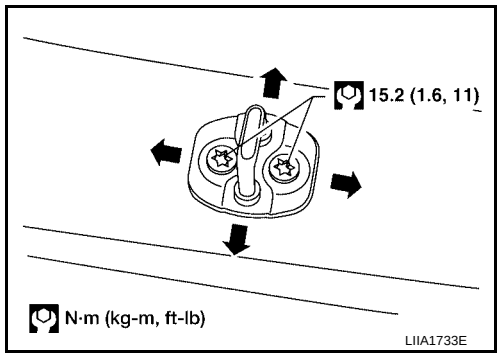
7.	Rear bumper fascia	8.	17 N·m (1.7 Kg·m, 13 ft-lb)	a.	10.0 mm (0.4in)
b.	2.5 mm (0.10 in)	c.	6.8 mm (0.27 in)	d.	0.8 mm (0.03 in)
e.	6.5 mm (0.26 in)	f.	2.8 mm (0.11 in)	g.	6.7 mm (0.26 in)
h.	1.4 mm (0.06 in)	j.	6.2 mm (0.24 in)	k.	0.4 mm (0.02 in)
m.	6.2 mm (0.24 in)	n.	0.4 mm (0.02 in)	p.	6.1 mm (0.24 in)

Longitudinal clearance, surface height and outboard adjustment at front end

1. Open and support the back door.
2. Slightly loosen the hinge nuts.
3. Reposition the door as necessary and tighten the nuts.
4. Confirm the adjustment. Repeat as necessary to obtain the desired fit.

Striker Adjustment

1. Adjust the striker so that it becomes parallel with the lock insertion direction.



Removal and Installation

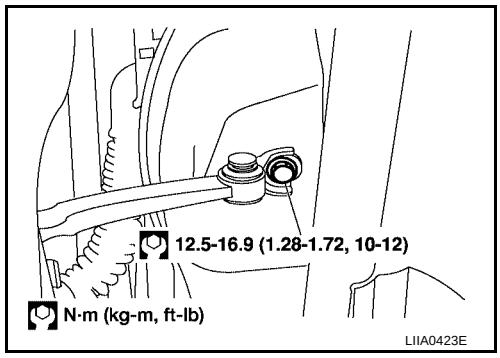
EIS007G7

FRONT DOOR

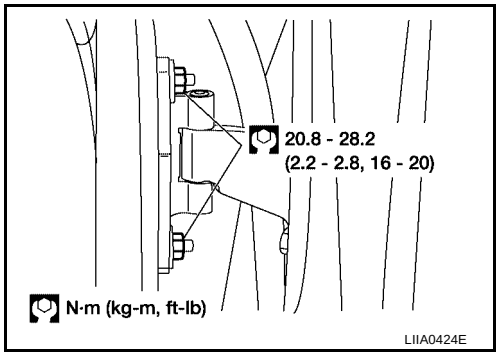
CAUTION:

- **When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.**
- **When removing and installing door assembly, be sure to carry out the fitting adjustment.**
- **Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".**

1. Remove the door window and module assembly. Refer to GW-82, "Removal and Installation" .
2. Remove the door harness.
3. Remove the check link cover.
4. Remove the check link bolt from the hinge pillar.



5. Remove the door-side hinge nuts and bolts, and remove the door assembly.



Installation is in the reverse order of removal.

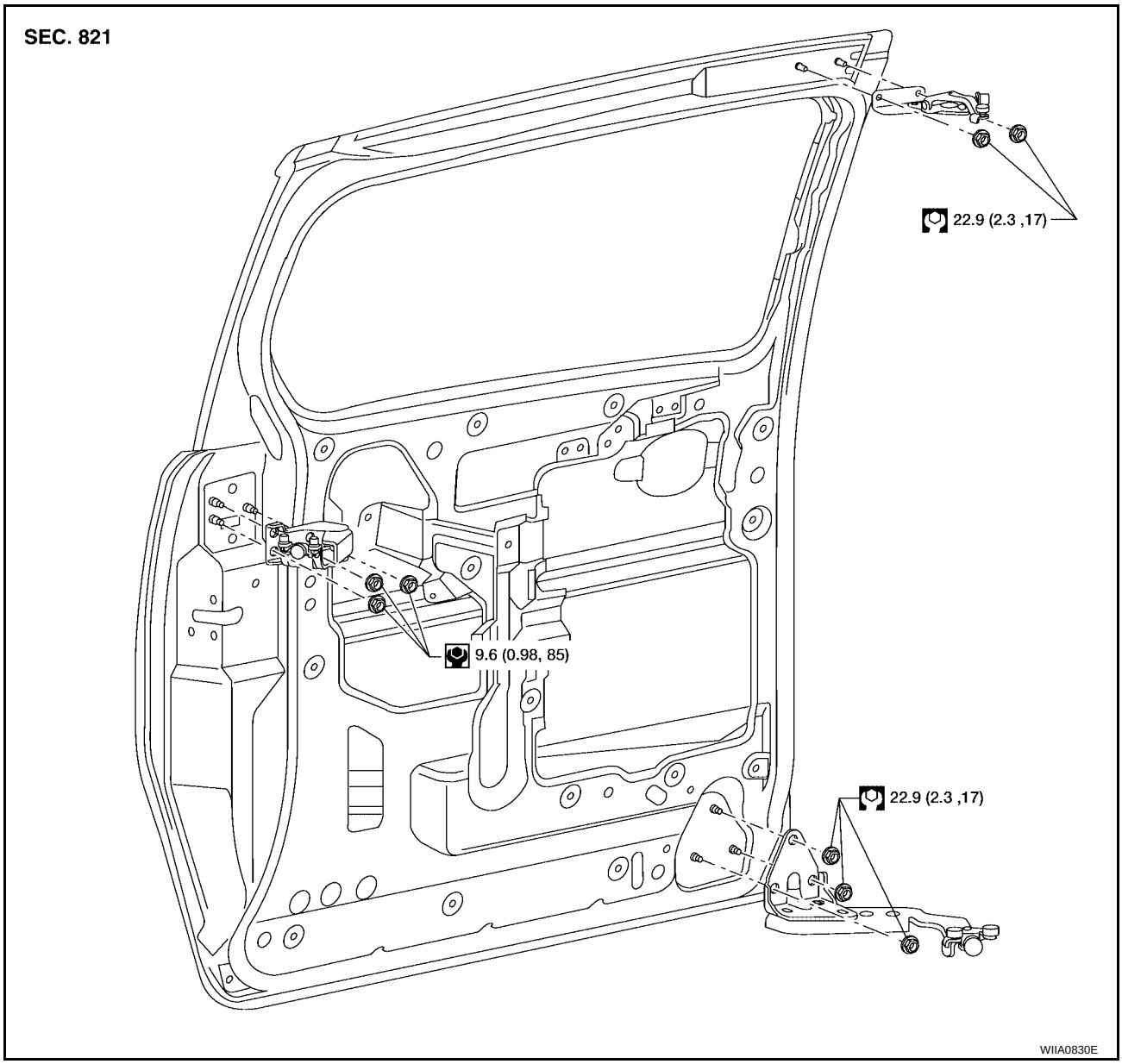
- Align the front door. Refer to BL-190, "Longitudinal clearance and surface height adjustment at front end" .

SLIDE DOOR

CAUTION:

- **When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.**
- **When removing and installing door assembly, be sure to carry out the fitting adjustment.**
- **Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".**

1. Remove the upper and lower door finishers. Refer to EI-30, "SLIDING DOOR" .
2. Remove the door glass. Refer to GW-86, "SLIDE DOOR GLASS" .
3. Remove the door lock and handle assemblies. Refer to BL-200, "SLIDE DOOR LOCK" .
4. Remove the upper and lower male dovetail assemblies.
5. Remove the door wiring harness.
6. Remove the door.
   - Disconnect the rear slide door guide.
   - Remove the lower hinge bracket.
   - Remove the upper hinge bracket.



Installation is in the reverse order of removal.

- Align the front door. Refer to BL-190, "Longitudinal clearance and surface height adjustment at front end" .

BACK DOOR

WARNING:

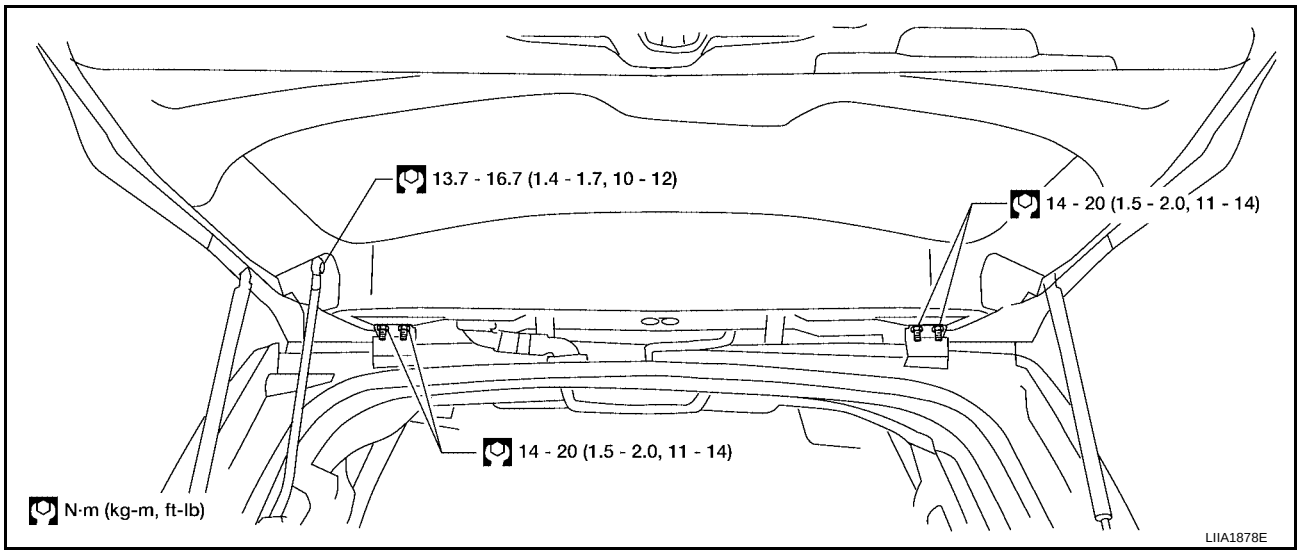
Always support back door when removing or replacing back door stays. Power back door opener will not support back door with back door stays removed.

1. Remove the back door glass. Refer to GW-13, "REAR WINDOW GLASS AND MOLDING" .
2. Remove the license lamp finisher. Refer to EI-23, "LICENSE LAMP FINISHER" .
3. Remove the back door lock assembly. Refer to BL-204, "BACK DOOR LOCK" .
4. Remove the rear wiper motor. Refer to WW-45, "Rear Wiper Motor" .
5. Remove the back door wire harness.
6. Remove the rear washer nozzle and hose from the back door. Refer to WW-47, "Rear Washer Nozzle" .

CAUTION:

Two technicians should be used to avoid damaging the back door during removal.

7. Support the back door with a suitable tool.
8. Disconnect the power back door lift arm from the door.
9. Remove the back door stays.
10. Remove the door side nuts and the back door assembly.



Installation is in the reverse order of removal.

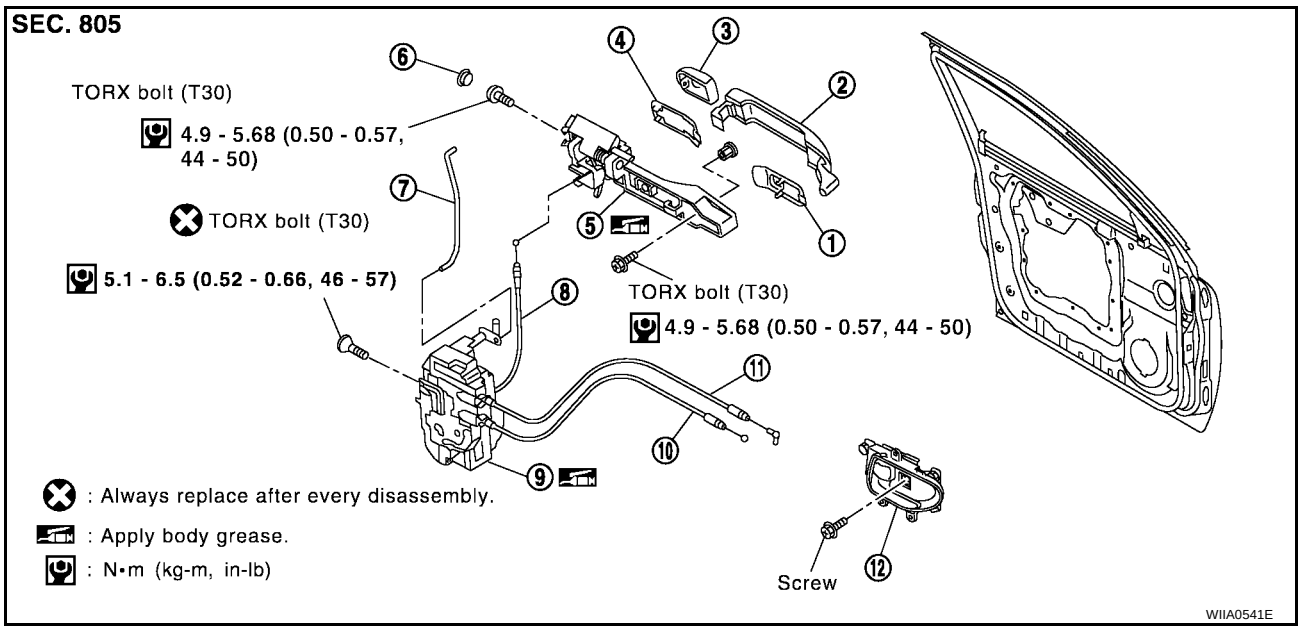
- Align the back door. Refer to BL-192, "BACK DOOR" .

FRONT DOOR LOCK

PFP:80502

Component Structure

EIS007G8

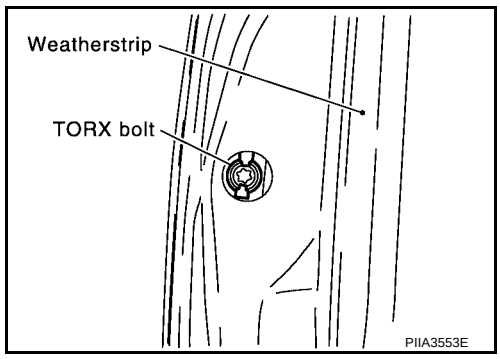


1. Front gasket	2. Outside handle	3. Door key cylinder assembly (Driver side) Outside handle escutcheon (Passenger side)
4. Rear gasket	5. Outside handle bracket	6. Grommet
7. Key cylinder rod (Driver side only)	8. Outside handle cable	9. Door lock assembly
10. Inside handle cable	11. Lock knob cable	12. Inside handle

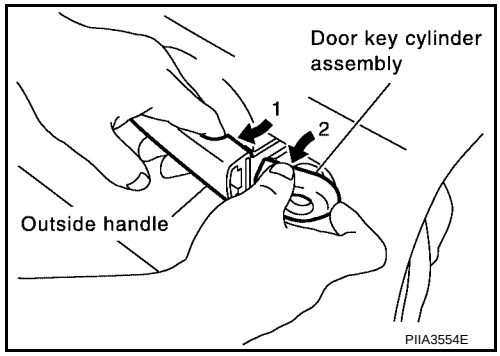
Removal and Installation

EIS007WN

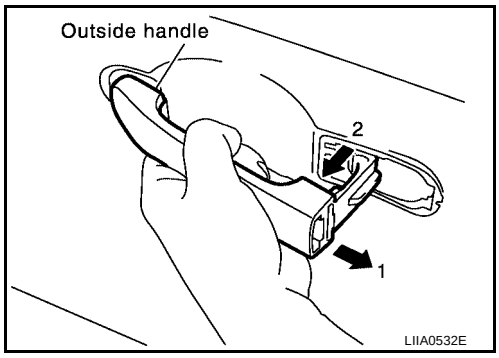
1. Remove the front door window regulator assembly. Refer to GW-82, "FRONT DOOR GLASS AND REGULATOR" .
2. Remove the front door window rear glass run.
3. Remove the grommet, and remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.



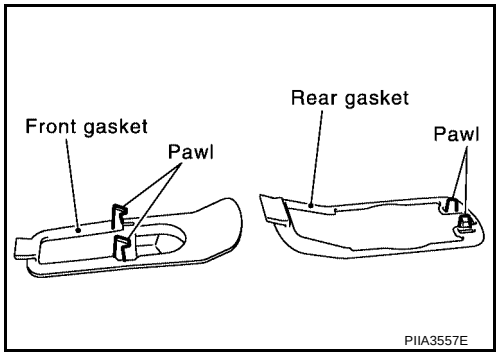
4. While pulling the outside handle, remove door key cylinder assembly or escutcheon.



5. Separate the key cylinder rod from the door key cylinder assembly (if equipped).
6. While pulling outside handle, slide toward rear of vehicle to remove.

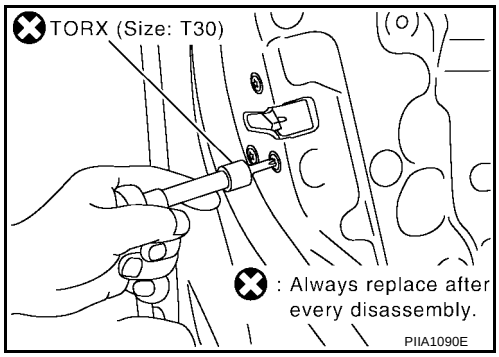


7. Remove the front and rear gaskets.

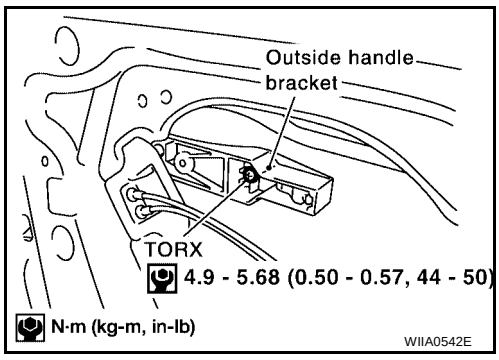


8. Remove the TORX bolts (T30) and the door lock assembly.

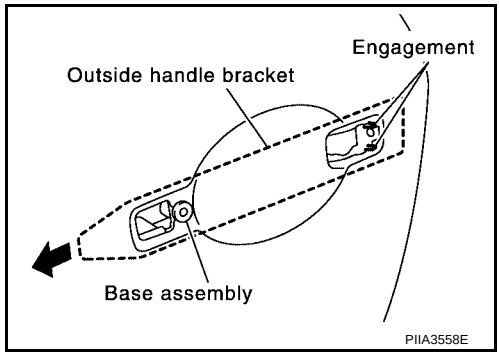
Door lock assembly bolts : 5.3 Nm (0.54 kg-m, 47 in-lb)



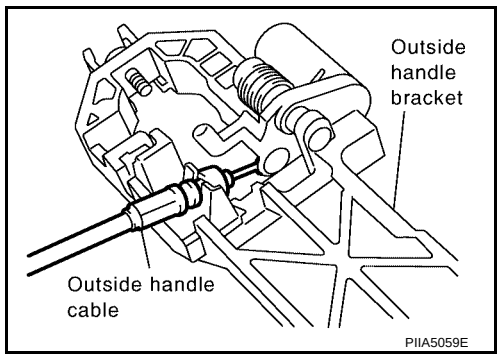
9. Remove the TORX bolt (T30) from the outside handle bracket.



10. While pulling the outside handle bracket, slide it toward the rear of the vehicle to remove it and the door lock assembly.



11. Disconnect the door lock actuator electrical connector.
12. Separate the outside handle cable connection from the outside handle bracket.



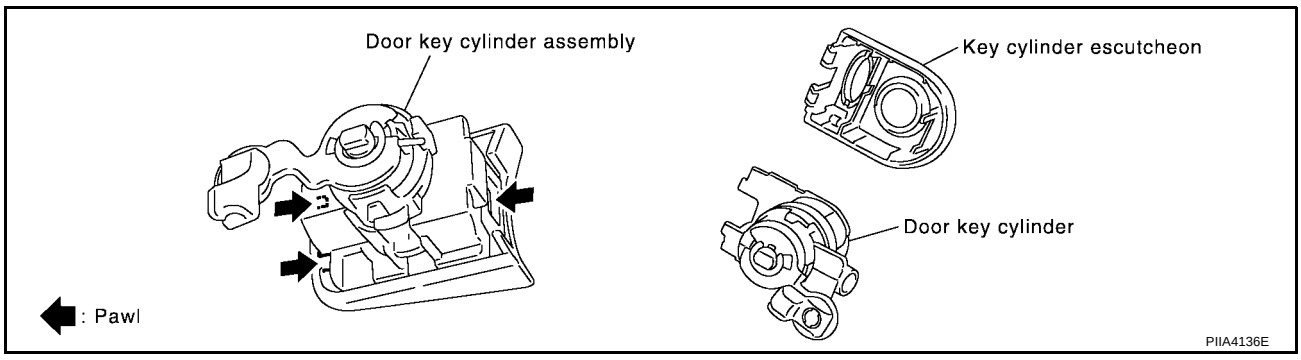
Installation is in the reverse order of removal.

CAUTION:
To install each rod, be sure to rotate the rod holder until a click is felt.

Disassembly and Assembly

EIS007GA

DOOR KEY CYLINDER ASSEMBLY



Remove the key cylinder escutcheon pawl and remove the door key cylinder.

SLIDE DOOR LOCK

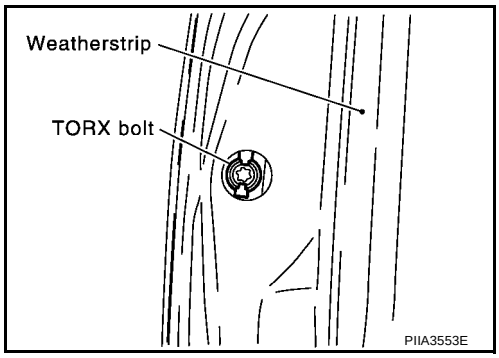
PFP:82504

Removal and Installation

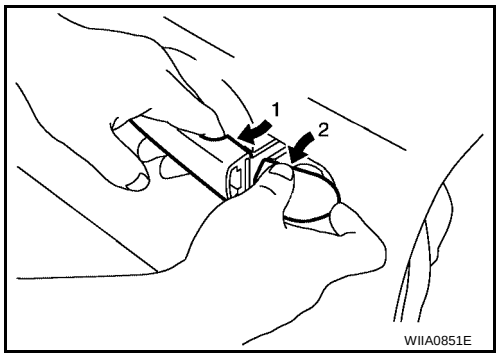
EIS007GB

OUTSIDE HANDLE

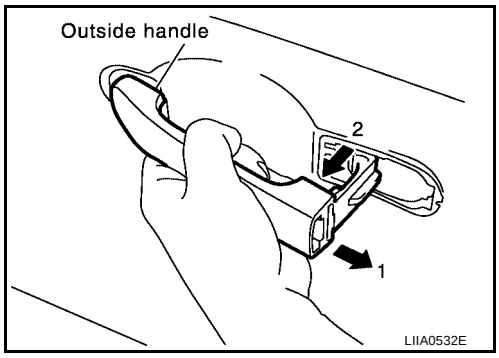
1. Remove the sliding door finisher. Refer to EI-29, "Removal and Installation" .
2. Remove the grommet, and the outside handle escutcheon bolt (TORX T30) from grommet hole.



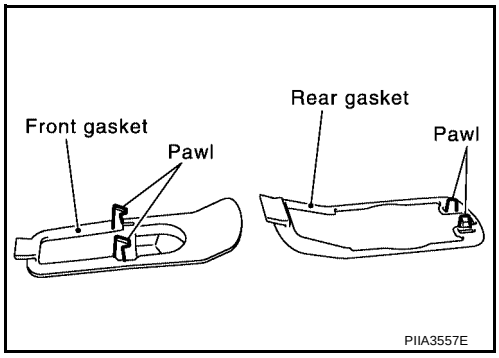
3. While 1) pulling the outside handle, 2) remove outside handle escutcheon.



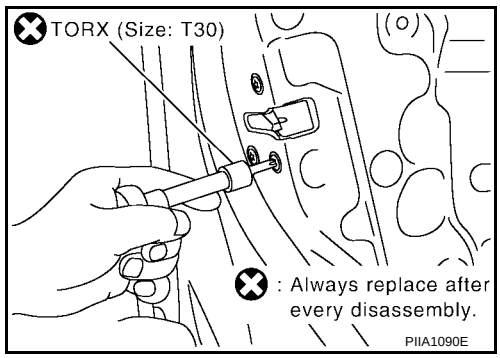
4. While 1) pulling outside handle, 2) slide toward rear of vehicle to remove.



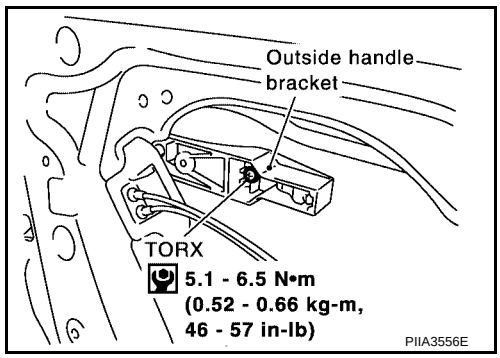
5. Remove the front gasket and rear gasket.



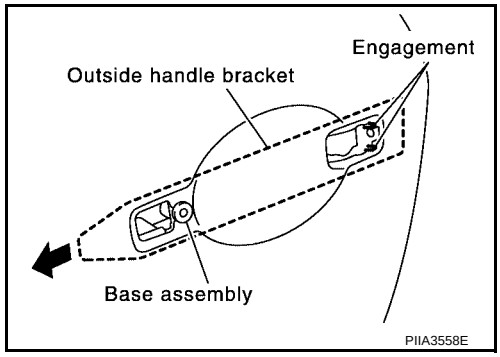
6. Remove the TORX bolts (T30), remove the door lock assembly.



7. Remove the TORX bolt (T30), and remove the outside handle bracket.



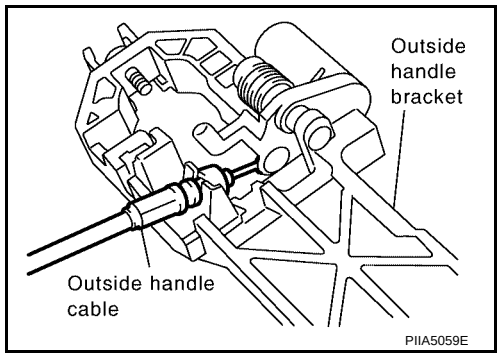
8. While pulling outside handle, slide toward rear of vehicle to remove outside handle and door lock assembly.



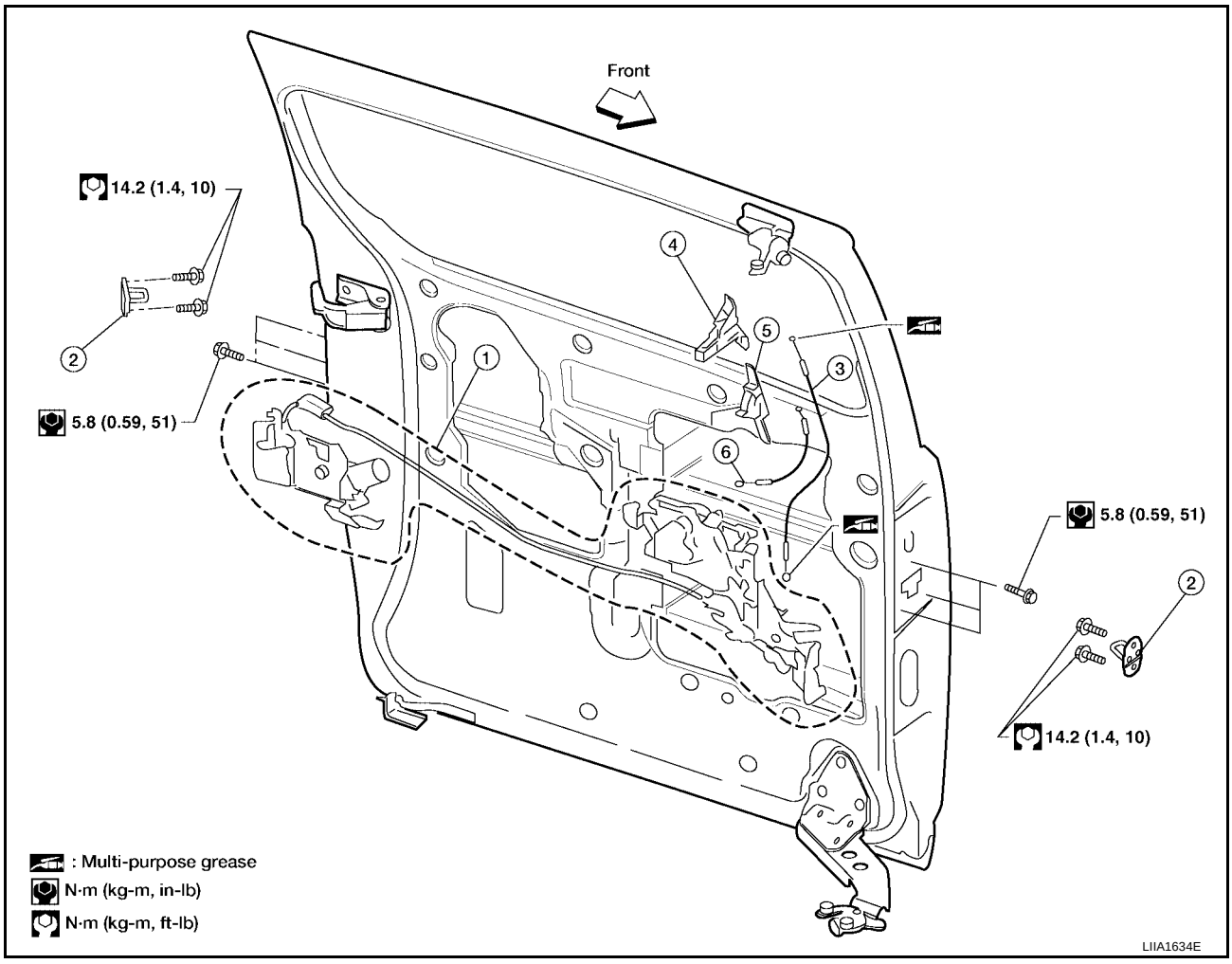
9. Disconnect the door lock actuator connector.

10. Separate outside handle cable from the outside handle bracket.

Installation is in the reverse order of removal.



SLIDING DOOR LOCK ASSEMBLY

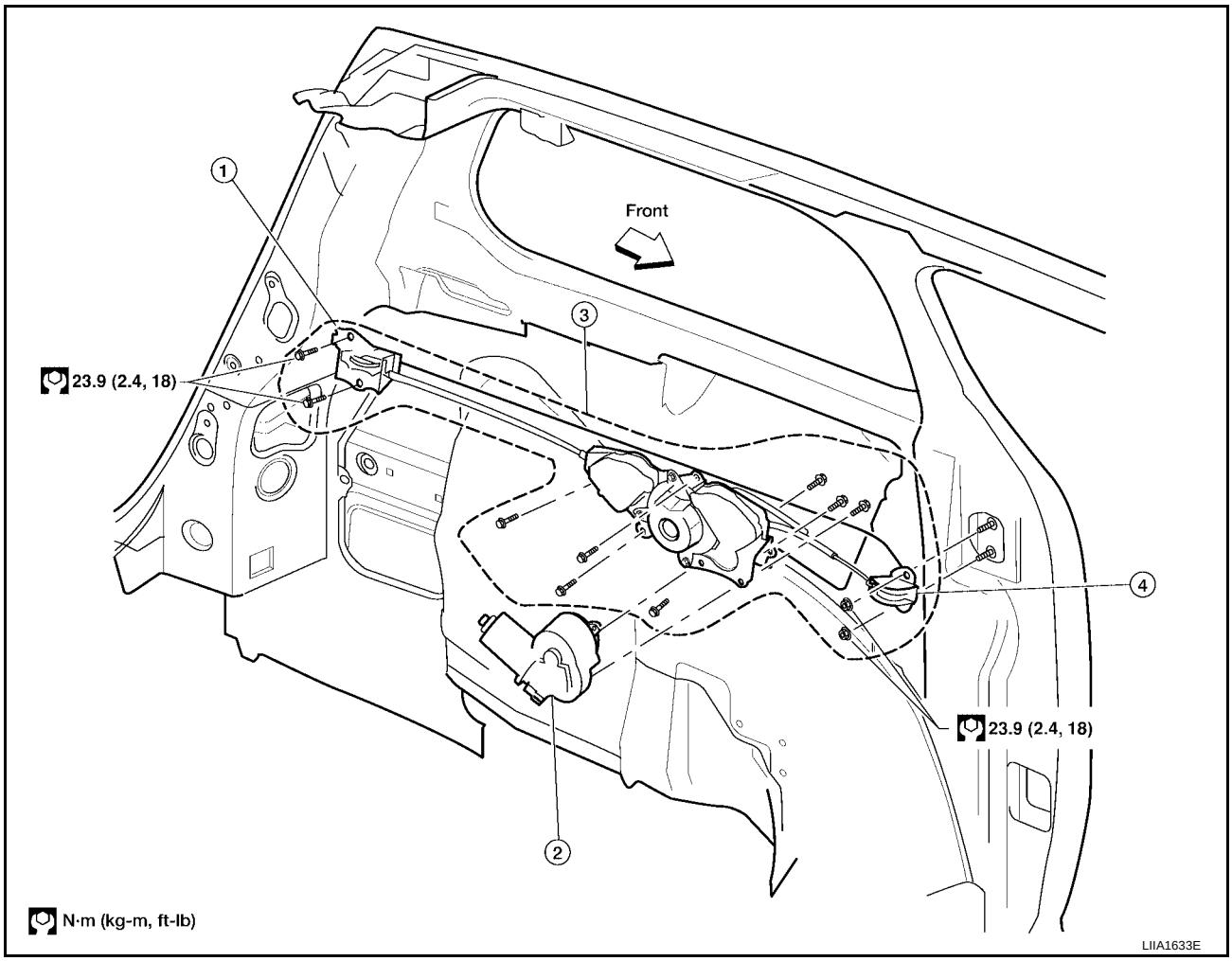


1. Sliding door lock assembly
2. Striker
3. Sliding door inside handle cable
4. Sliding door inside handle
5. Sliding door inside lock
6. Sliding door inside lock cable

1. Remove sliding door finisher. Refer to EI-30, "SLIDING DOOR" .
2. Remove exterior door handle. Refer to BL-200, "OUTSIDE HANDLE" .
3. Disconnect sliding door lock assembly electrical connectors.
4. Remove sliding door lock assembly.
   - Remove screws from front and rear latches.

Installation is in the reverse order of removal.

SLIDING DOOR CABLE ASSEMBLY AND MOTOR



1. Rear roller
2. Sliding door motor
3. Sliding door cable assembly
4. Front roller

1. Remove sliding door rail cover. Refer to EI-27, "SIDE GUARD MOLDING" .
2. Disconnect slide door cables.
3. Remove luggage lower trim. Refer to EI-36, "REAR LOWER FINISHER ASSEMBLY" .
4. Disconnect sliding door motor electrical connector.
5. Remove sliding door link rollers.
6. Remove sliding door cable and motor assembly.
7. Remove sliding door motor from sliding door cable assembly.

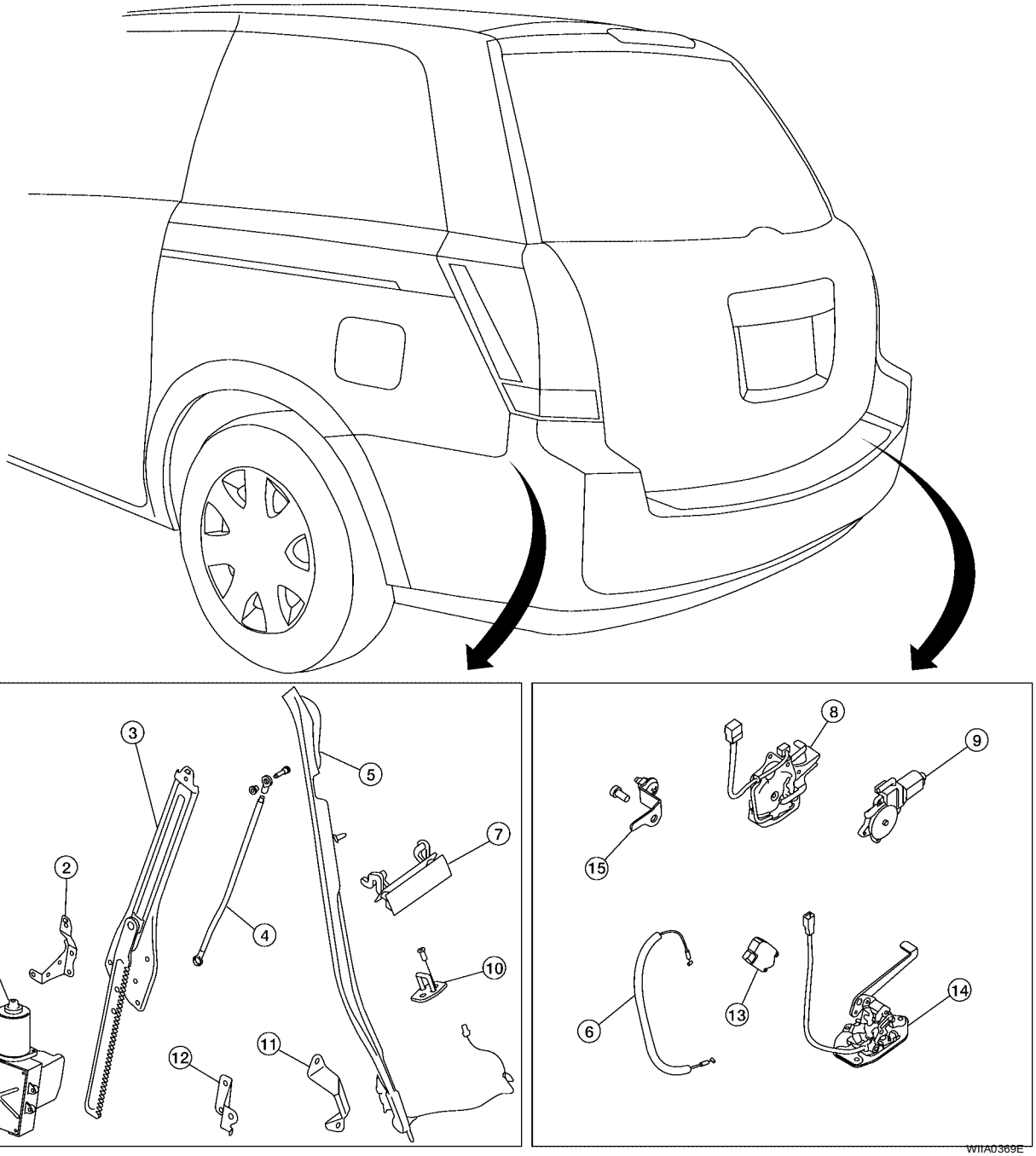
Installation is in the reverse order of removal.

BACK DOOR LOCK

PFP:90504

Component Structure

EIS007GC

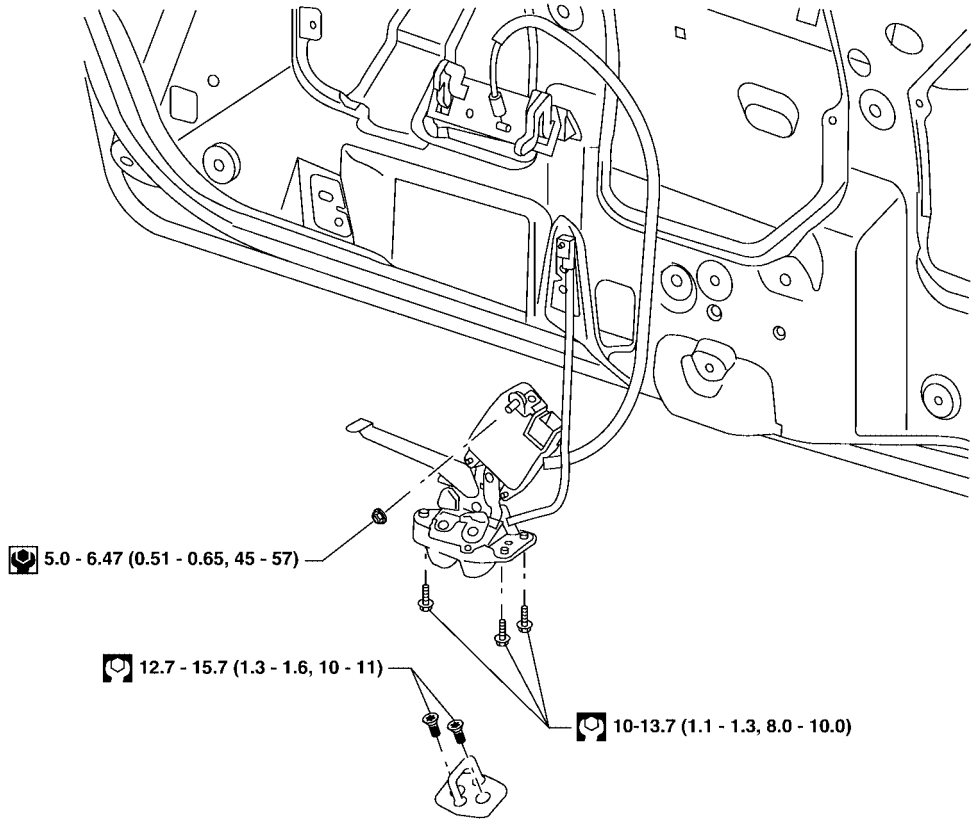


1. Back door motor assembly
2. Back door motor assembly bracket
3. Back door motor gear assembly
4. Back door closure rod
5. Pinch strip
6. Back door latch release cable
7. Back door handle
8. Power back door latch assembly
9. Power back door latch cinch motor
10. Back door striker
11. Dovetail (door side)
12. Dovetail (body side)
13. Back door opener actuator assembly
14. Lower back door lock assembly
15. Back door lock bracket

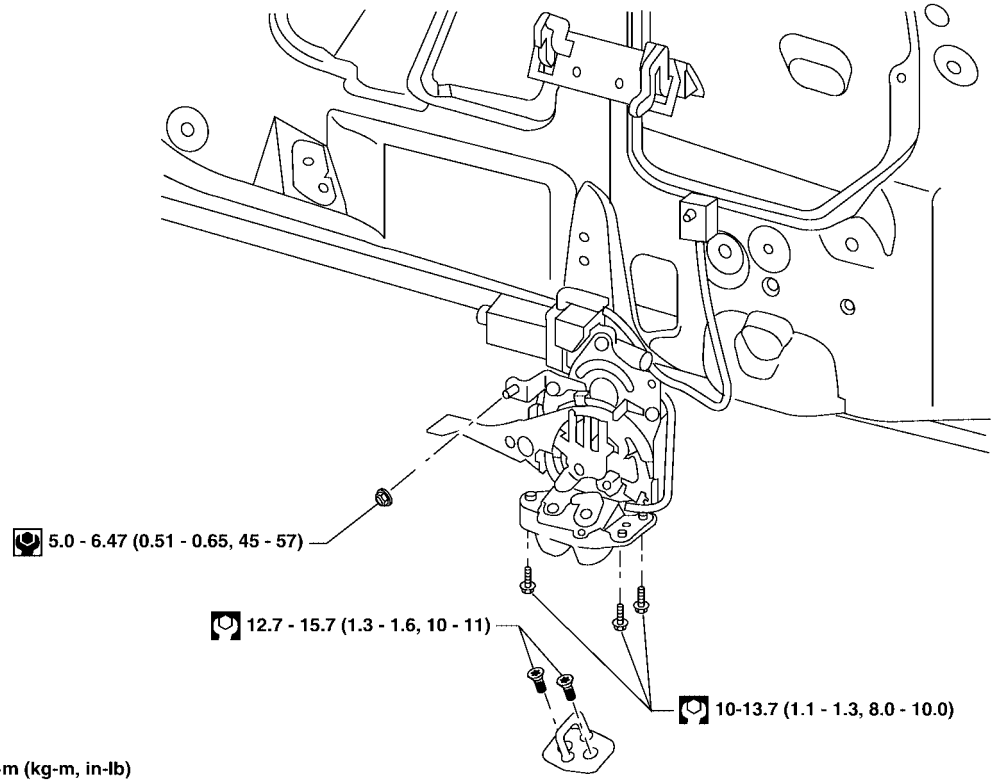
Back Door Latch

EIS007GD

Manual



Power



N·m (kg-m, in-lb)

N·m (kg-m, ft-lb)

LIIA1867E

A B C D E F G H BL J K L M

REMOVAL

1. Remove the back door lower finisher. Refer to EI-36, "BACK DOOR LOWER FINISHER"
2. Remove the weather seal.
3. On manual doors, disconnect the back door latch release cable.
4. For power doors, disconnect the cinch motor electrical connector.
5. Remove the back door latch assembly (power door) or the back door lock assembly (manual door).

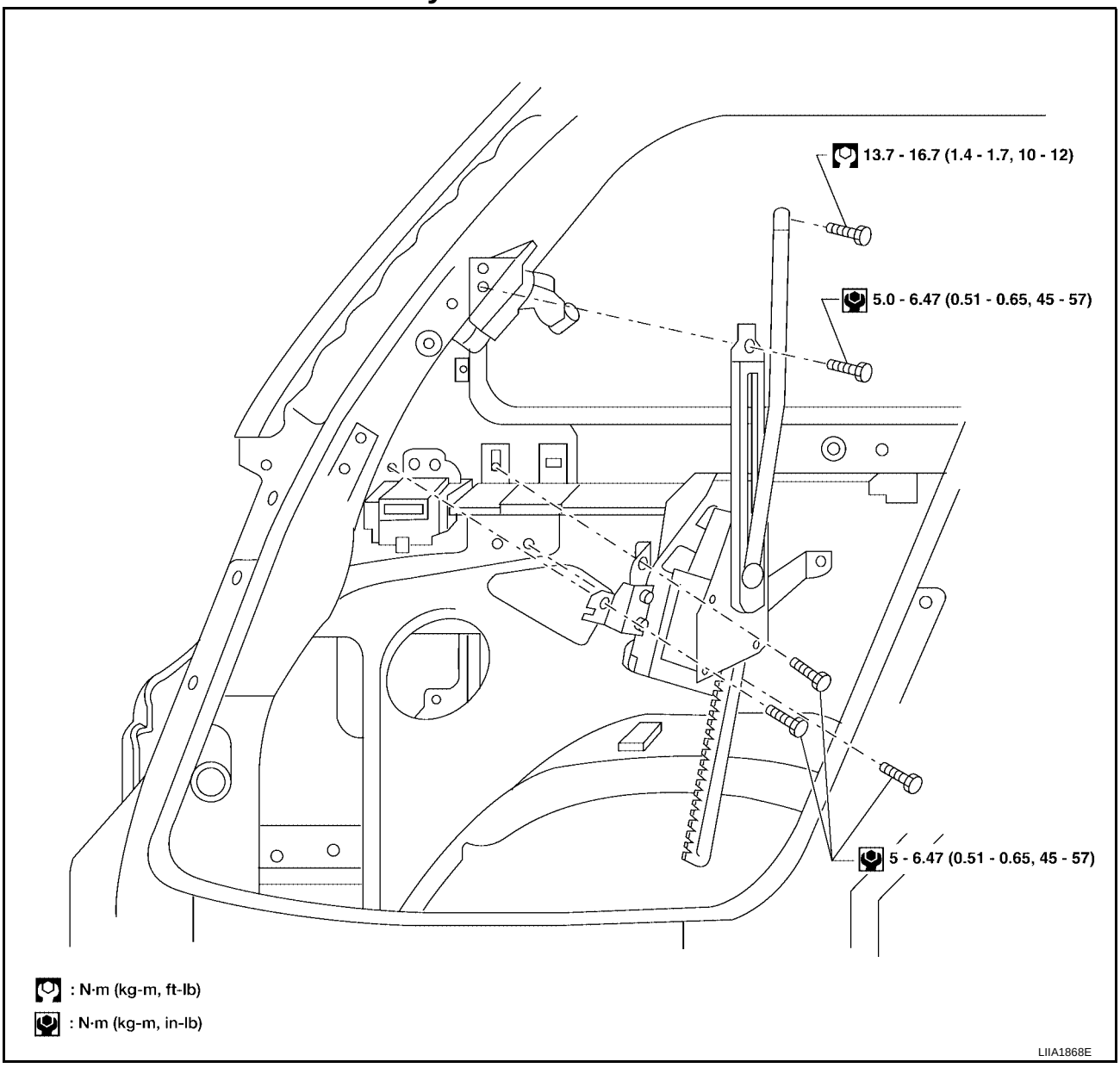
INSTALLATION

Installation is in the reverse order of removal.

- Align the back door latch. Refer to BL-192, "BACK DOOR" .

Back Door Power Lift Assembly

EIS007GE



REMOVAL

1. Remove the LH rear pillar upper finisher. Refer to EI-36, "REAR PILLAR UPPER FINISHER" .
2. Remove the closure rod to door bolt.
3. Remove the back door motor gear assembly.
4. Remove the back door motor.
   - Disconnect the electrical connector.

INSTALLATION

Installation is in the reverse order of removal.

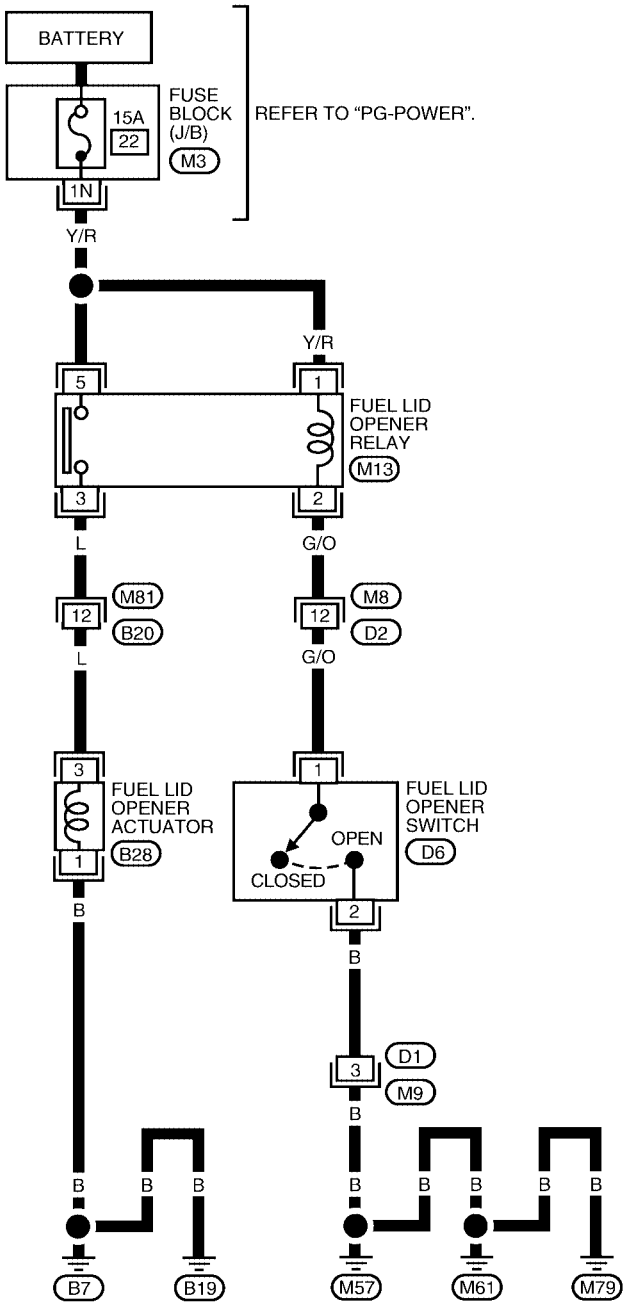
FUEL FILLER LID OPENER

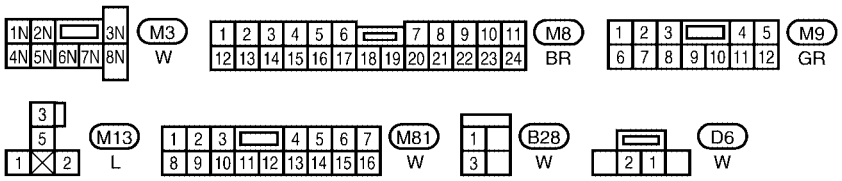
PFP:78820

Wiring Diagram — F/LID —

EIS007GF

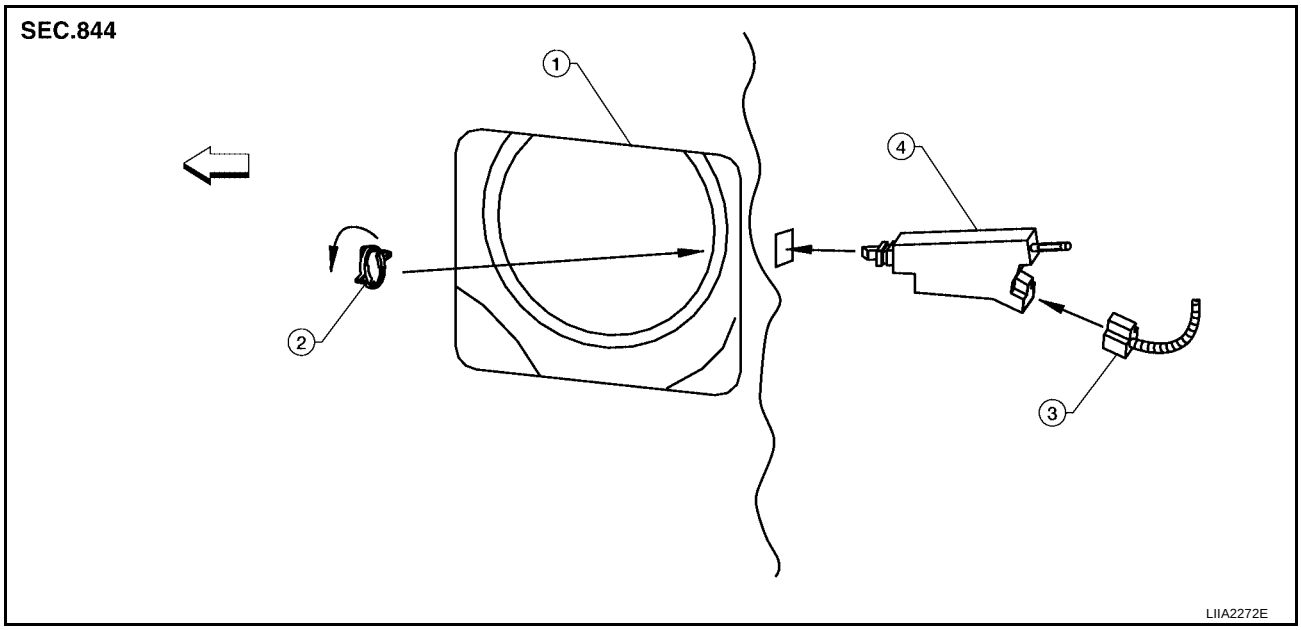
BL-F/LID-01





WIWA1139E

REMOVAL



1. Fuel filler lid opening (LH rear fender)
2. Lock ring
3. Electrical connector
4. Fuel filler lid opener actuator

1. Remove LH rear lower finisher. Refer to EI-36, "REAR LOWER FINISHER ASSEMBLY" .
2. Open fuel filler lid.
3. Disconnect fuel filler lid opener actuator electrical connector.
4. Remove lock ring and fuel filler lid opener actuator.
   - Turn lock ring 1/4 turn counter-clockwise to remove.

INSTALLATION

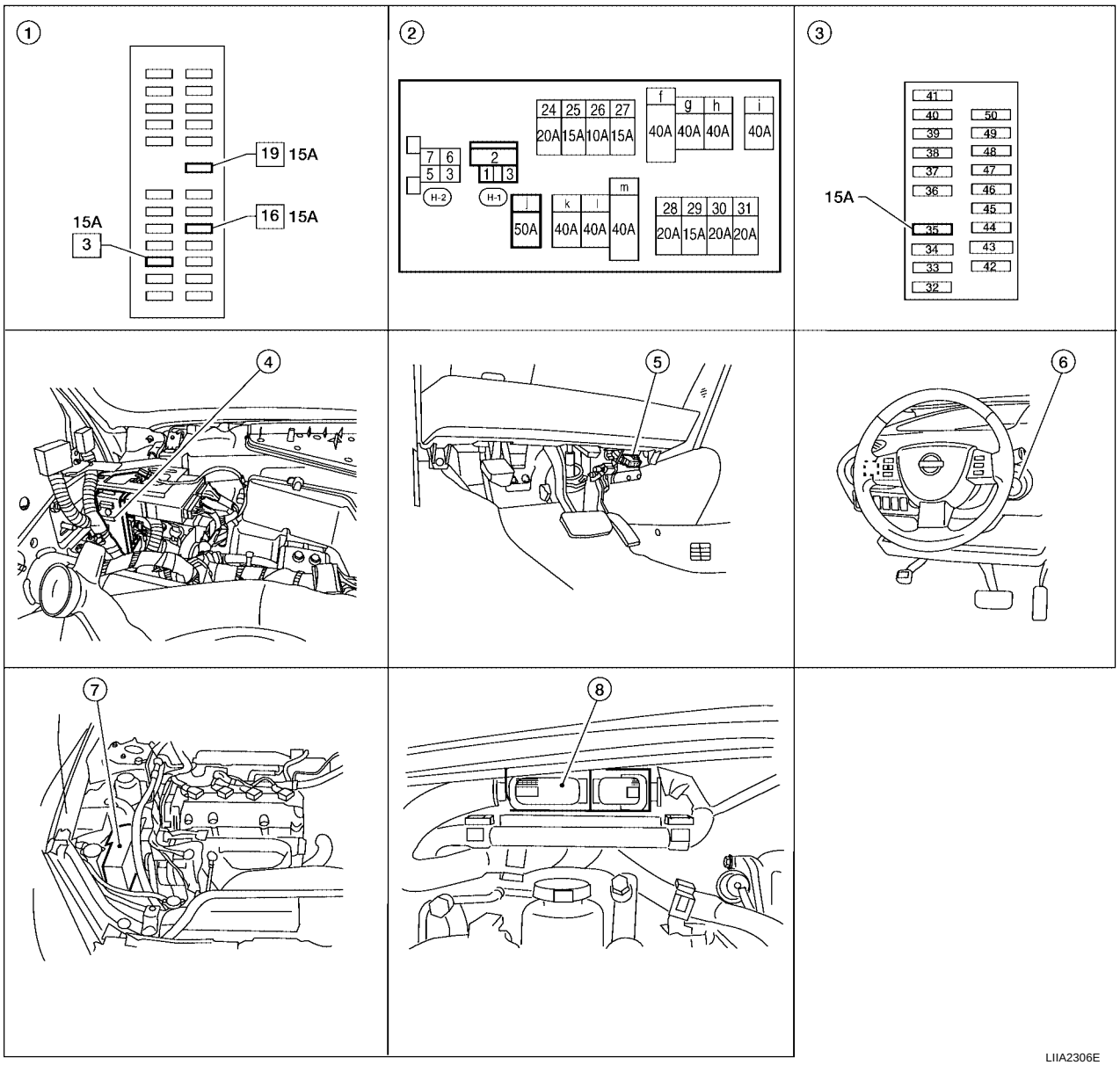
Installation is in the reverse order of removal.

NVIS(NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

PFP:28591

Component Parts and Harness Connector Location

EIS007GG



1. Fuse block (J/B)
2. Fuse and fusible link box
3. IPDM E/R fuse layout
4. BCM M18, M19, M20 view with instrument panel removed
5. Data link connector
6. NATS antenna amplifier M21
7. IPDM E/R E124
8. ECM E16

System Description

EIS007GH

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

- Since only NVIS (NATS) ignition keys, whose IDs have been registered into the ECM and BCM, allow the engine to run, operation of a stolen vehicle without a NVIS (NATS) registered key is prevented by NVIS (NATS).
  NVIS (NATS) will immobilize the engine if someone tries to start it without the registered key of NVIS (NATS).
- All of the originally supplied ignition key IDs have been NVIS (NATS) registered.
  If requested by the vehicle owner, a maximum of five key IDs can be registered into the NVIS (NATS) components.
- The security indicator blinks when the ignition switch is in OFF or ACC position. NVIS (NATS) warns outsiders that the vehicle is equipped with the anti-theft system.
- When NVIS (NATS) detects a malfunction, the security indicator lamp lights up while ignition key is in the ON position.
- NVIS (NATS) trouble diagnoses, system initialization and additional registration of other NVIS (NATS) ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II NVIS (NATS) software.
  When NVIS (NATS) initialization has been completed, the ID of the inserted ignition key is automatically NVIS (NATS) registered. Then, if necessary, additional registration of other NVIS (NATS) ignition key IDs can be carried out.
  Regarding the procedures of NVIS (NATS) initialization and NVIS (NATS) ignition key ID registration, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.
- **When servicing a malfunction of the NVIS (NATS) (indicated by lighting up of Security Indicator Lamp) or registering another NVIS (NATS) ignition key ID, it may be necessary to re-register original key identification. Therefore, be sure to receive ALL KEYS from vehicle owner.**

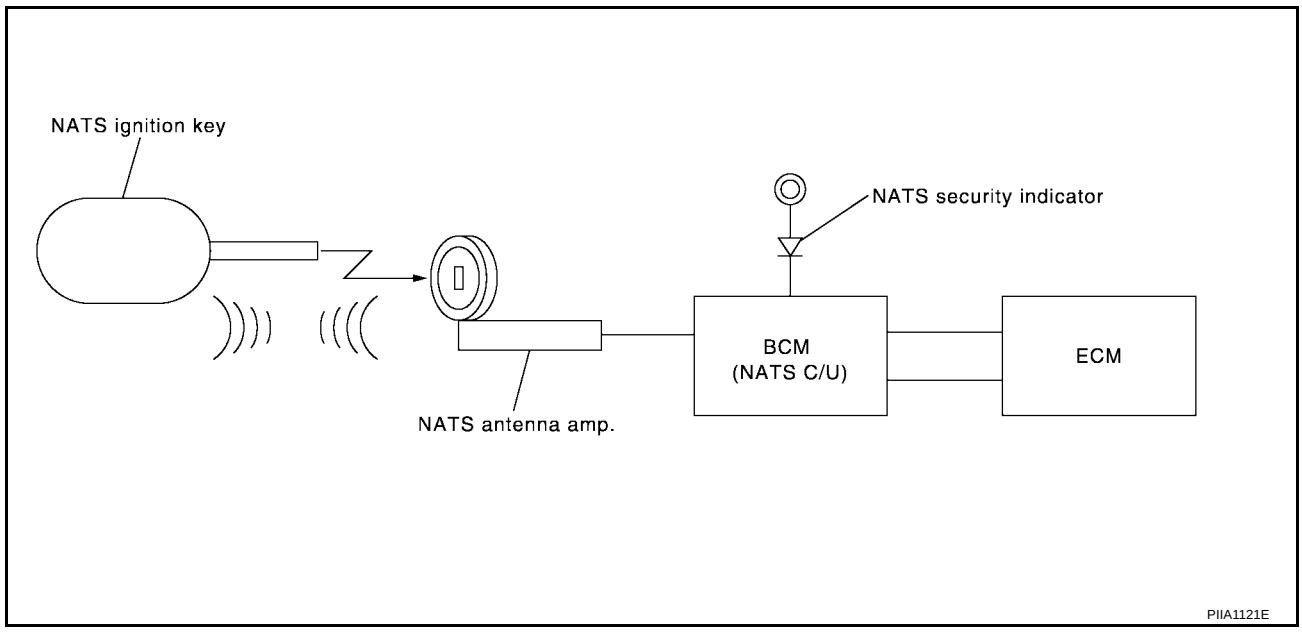
System Composition

EIS007GI

The immobilizer function of the NVIS (NATS) consists of the following:

- NATS ignition key
- NATS antenna amp. located in the ignition key cylinder
- Body control module (BCM)
- Engine control module (ECM)
- Security indicator

NOTE:
The communication between ECM and BCM uses the CAN communication system.



ECM Re-communicating Function

EIS007GJ

The following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one which has never been energized on-board.
(In this step, initialization procedure by CONSULT-II is not necessary).

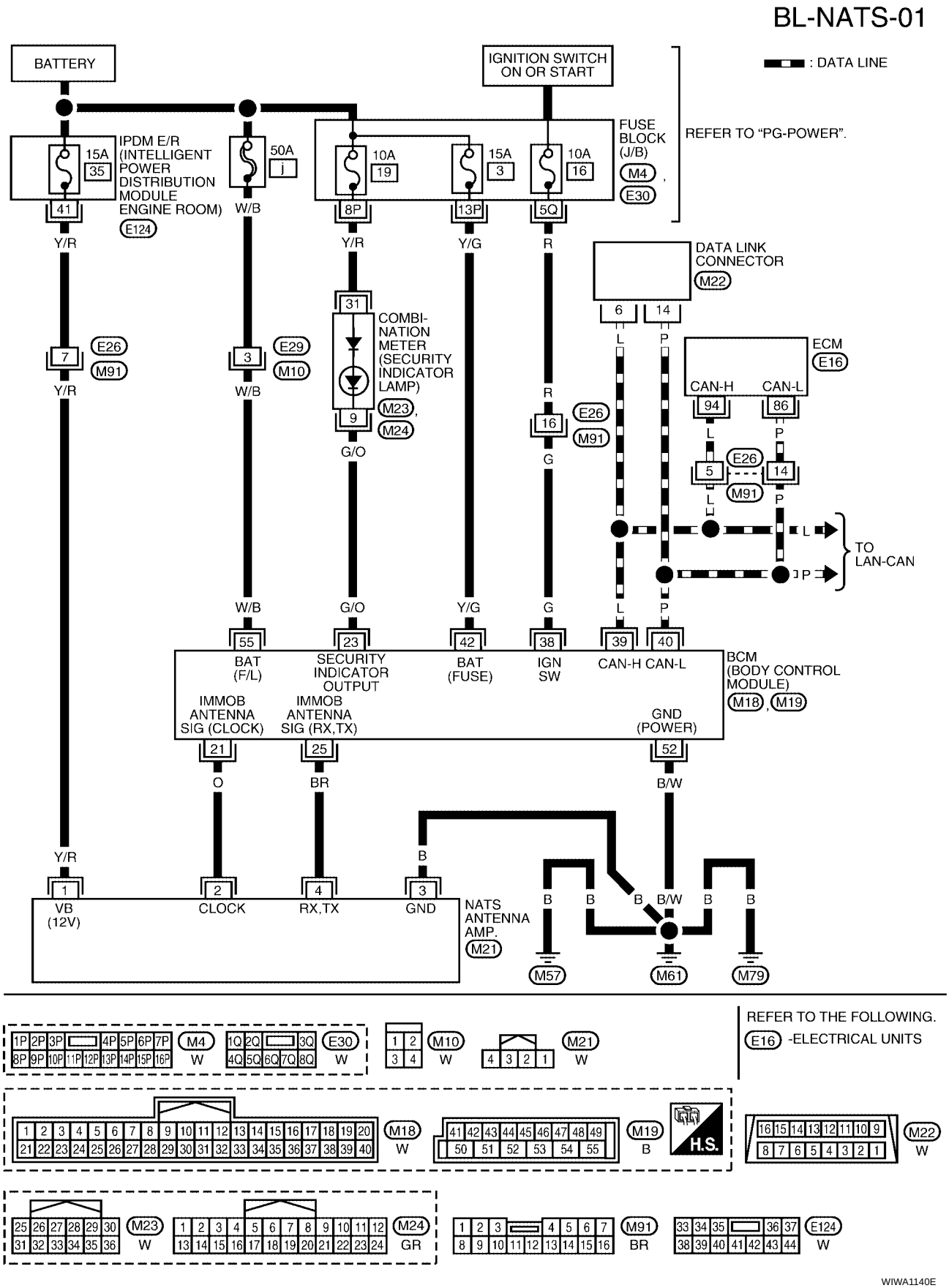
NOTE:

- **When registering new Key IDs or replacing the ECM other than brand new, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.**
- **If multiple keys are attached to the key holder, separate them before work.**
- **Distinguish keys with unregistered key ID from those with registered ID.**

1. Install ECM.
2. Using a registered key (*1), turn ignition switch to ON.
   *1: To perform this step, use the key that has been used before performing ECM replacement.
3. Maintain ignition switch in ON position for at least 5 seconds.
4. Turn ignition switch to OFF.
5. Start engine.
   If engine can be started, procedure is completed.
   If engine cannot be started, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS and initialize control unit.

Wiring Diagram — NATS —

EIS007GK



WIWA1140E

Terminals and Reference Value for BCM

EIS007GL

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
21	O	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move.
23	G/O	Security indicator lamp	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0
25	BR	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move.
38	G	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
39	L	CAN-H	—	—
40	P	CAN-L	—	—
42	Y/G	Power source (Fuse)	—	Battery voltage
52	B/W	Ground	—	0
55	W/B	Battery power supply	—	Battery voltage

CONSULT-II

EIS007GM

CONSULT-II INSPECTION PROCEDURE

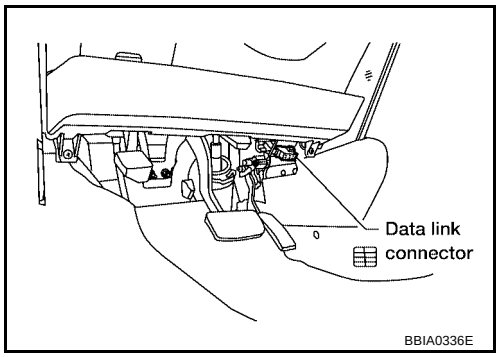
CAUTION:

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.

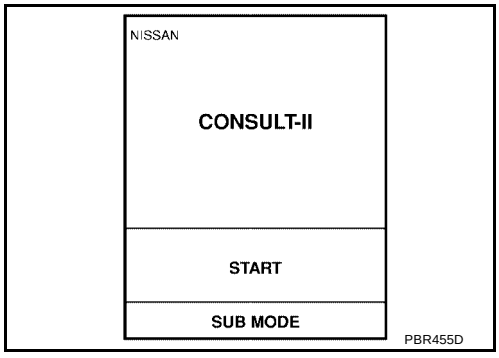
1. Turn ignition switch OFF.
2. Insert NVIS (NATS) program card into CONSULT-II.

   Program card : NATS (AEN04A-1) or later

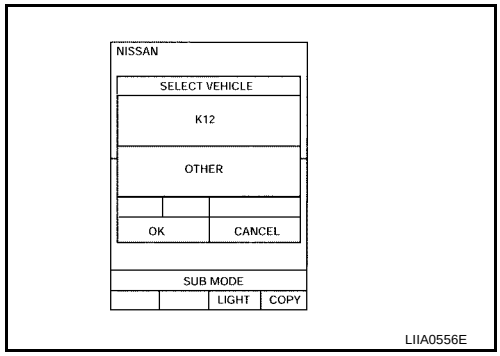
3. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.



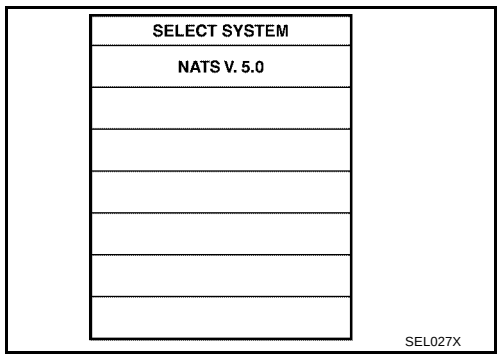
4. Turn ignition switch ON.
5. Touch “START”.



6. Touch "OTHER".

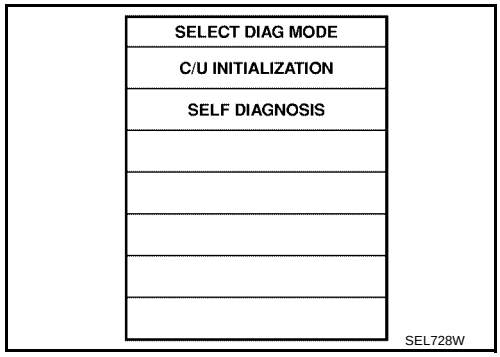


7. Select “NATS V.5.0”.
If “NATS V5.0” is not indicated, go to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



8. Perform each diagnostic test mode according to each service procedure.

For further information, see the CONSULT-II Operation Manual NATS-IVIS/NVIS.



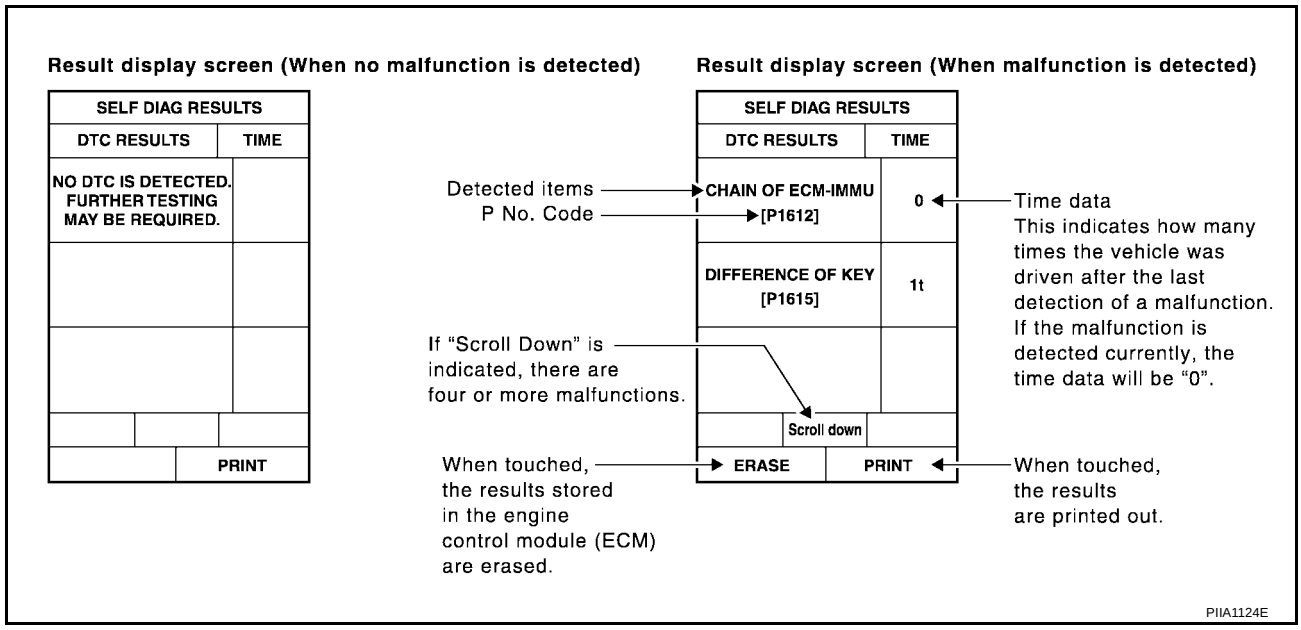
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following components, C/U initialization and re-registration of all NATS ignition keys are necessary. [(NATS ignition key/ BCM/ ECM]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart. Refer to BL-216, "NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART" .

NOTE:

- When any initialization is performed, all IDs previously registered will be erased and all NATS ignition keys must be registered again.
- The engine cannot be started with an unregistered key. In this case, the system will show “DIFFERENCE OF KEY” or “LOCK MODE” as a self-diagnostic result on the CONSULT-II screen.
- In rare case, “CHAIN OF ECM-IMMU” might be stored as a self-diagnostic result during key registration procedure, even if the system is not malfunctioning.

HOW TO READ SELF-DIAGNOSTIC RESULTS

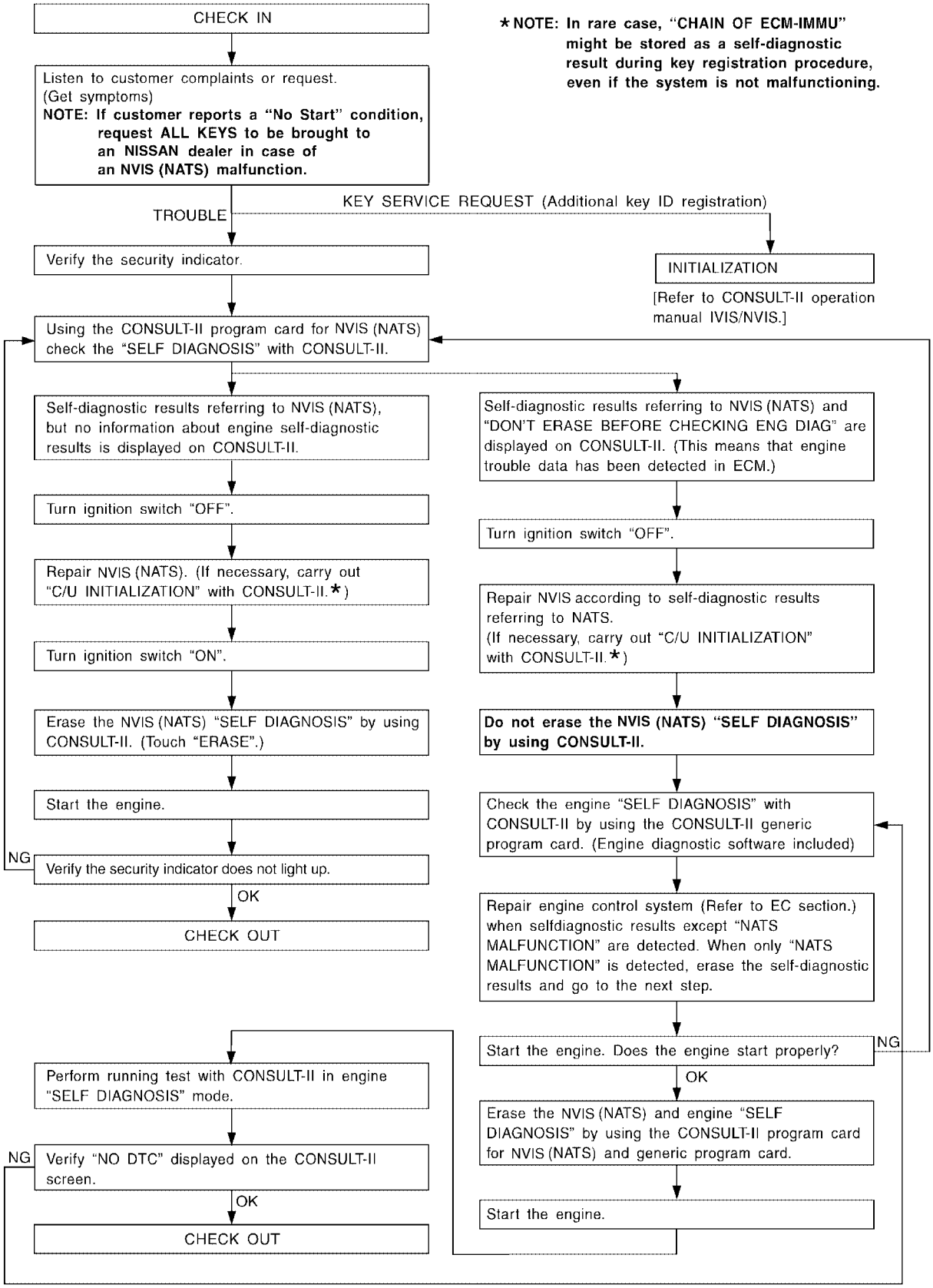


NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART

Detected items [NVIS (NATS) program card screen terms]	P No. Code (Self-diagnostic result of “ENGINE”)	Malfunction is detected when.....	Reference page
CHAIN OF ECM-IMMU [P1612]	NATS MAL-FUNCTION P1612	Communication impossible between ECM and BCM In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.	Refer to BL-220 .
DIFFERENCE OF KEY [P1615]	NATS MAL-FUNCTION P1615	BCM can receive the key ID signal but the result of ID verification between key ID and BCM is NG.	Refer to BL-221 .
CHAIN OF IMMU-KEY [P1614]	NATS MAL-FUNCTION P1614	BCM cannot receive the key ID signal.	Refer to BL-224 .
ID DISCORD, IMM-ECM [P1611]	NATS MAL-FUNCTION P1611	The result of ID verification between BCM and ECM is NG. System initialization is required.	Refer to BL-222 .
LOCK MODE [P1610]	NATS MAL-FUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, NVIS (NATS) will shift the mode to one which prevents the engine from being started. ● Unregistered ignition key is used. ● BCM or ECM’s malfunctioning.	Refer to BL-223 .
DON'T ERASE BEFORE CHECK-ING ENG DIAG	—	All engine trouble codes except NVIS (NATS) trouble code has been detected in ECM.	Refer to BL-217 .

Work Flow

EIS007GN



LIIA1152E

Trouble Diagnoses

EIS007GO

SYMPTOM MATRIX CHART 1

Self-diagnosis related item

Symptom	Displayed “SELF-DIAG RESULTS” on CONSULT-II screen.	Diagnostic Procedure (Reference page)	System (Malfunctioning part or mode)	Reference Part No. Of Illustration On System Diagram
● Security indicator lighting up* ● Engine cannot be started	CHAIN OF ECM-IMMU [P1612]	PROCEDURE 1 (BL-220)	In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.	—
			Open circuit in battery voltage line of BCM circuit	C1
			Open circuit in ignition line of BCM circuit	C2
			Open circuit in ground line of BCM circuit	C3
			Open or short circuit between BCM and ECM communication line	C4
			ECM	B
			BCM	A
	DIFFERENCE OF KEY [P1615]	PROCEDURE 2 (BL-221)	Unregistered key	D
			BCM	A
	CHAIN OF IMMU-KEY [P1614]	PROCEDURE 5 (BL-224)	Malfunction of key ID chip	E5
			Communication line between ANT/ AMP and BCM: Open circuit or short circuit of battery voltage line or ground line	E1
				E3, E4
			Open circuit in power source line of ANT/ AMP circuit	E3
			Open circuit in ground line of ANT/ AMP circuit	E4
			NATS antenna amp.	E6
			BCM	A
	ID DISCORD, IMM-ECM [P1611]	PROCEDURE 3 (BL-222)	System initialization has not yet been completed.	F
			ECM	B
	LOCK MODE [P1610]	PROCEDURE 4 (BL-223)	LOCK MODE	D
Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-217)	Engine trouble data and NVIS (NATS) trouble data have been detected in ECM	—

*: When NVIS (NATS) detects a malfunction, the security indicator lights up while ignition key is in the “ON” position.

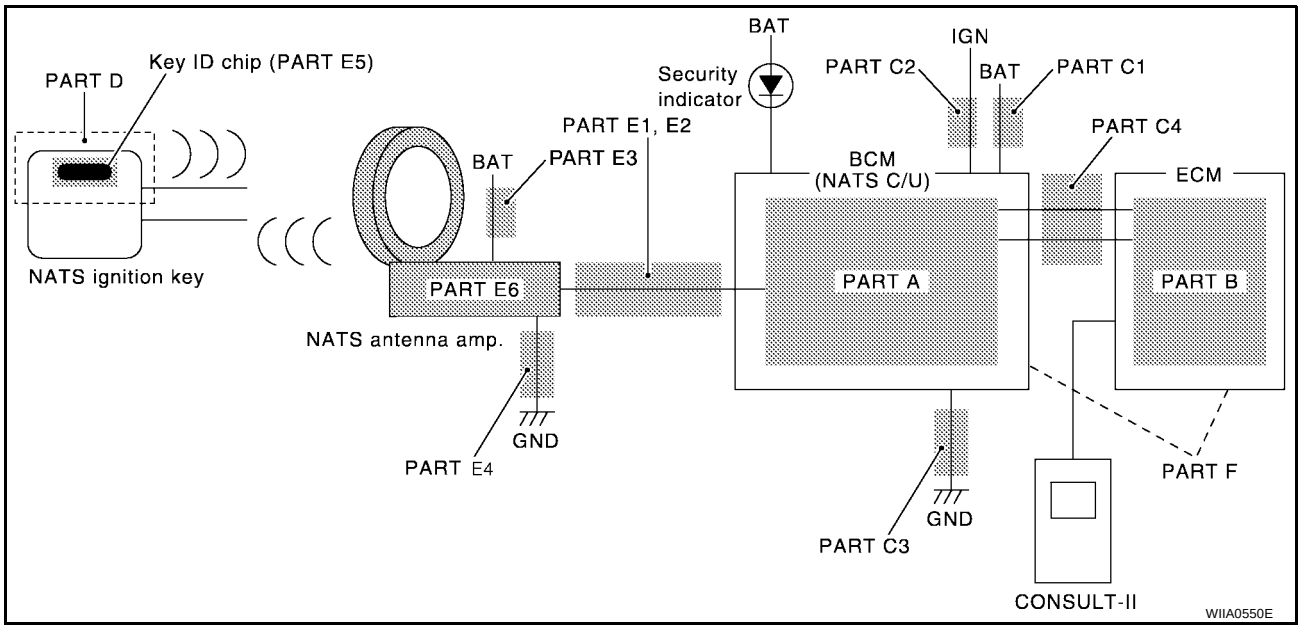
SYMPTOM MATRIX CHART 2

Non self-diagnosis related item

Symptom	Diagnostic Procedure (Reference page)	System (Malfunctioning part or mode)	Reference Part No. Of Illustration On System Diagram
Security indicator does not light up*.	PROCEDURE 6 (BL-227)	Combination meter (security indictor lamp)	E2
		Open circuit between Fuse and BCM	C1, C2
		BCM	A

*: CONSULT-II self-diagnostic results display screen “no malfunction is detected”.

DIAGNOSTIC SYSTEM DIAGRAM



Diagnostic Procedure 1

EIS007GP

Self-diagnostic results:
“CHAIN OF ECM-IMMU” displayed on CONSULT-II screen
First perform the “SELF-DIAG RESULTS” in “BCM” with CONSULT-II, then perform the trouble diagnosis of malfunction system indicated “SELF-DIAG RESULTS” of “BCM”. Refer to BL-214, "CONSULT-II" .

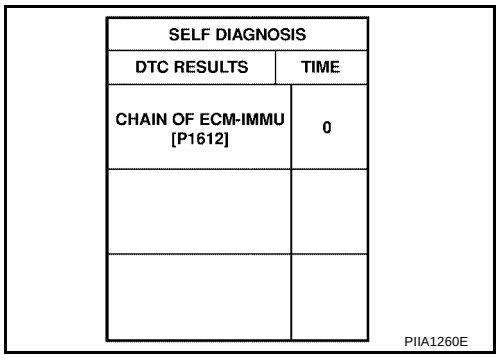
1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF ECM-IMMU” displayed on CONSULT-II screen.

NOTE:
In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.
No >> GO TO BL-218, "SYMPTOM MATRIX CHART 1" .



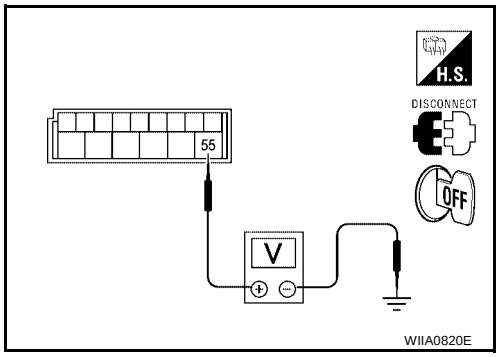
2. CHECK POWER SUPPLY CIRCUIT FOR BCM

1. Turn ignition switch OFF.
2. Disconnect BCM.
3. Check voltage between BCM connector M19 terminal 55 and ground.

55 – Ground : Battery voltage

OK or NG

OK >> GO TO 3.
NG >> Check the following:
- 50A fusible link (letter **j** , located in fuse and fusible link box).
- Harness for open or short between fuse and BCM connector. Ref. part No. C1



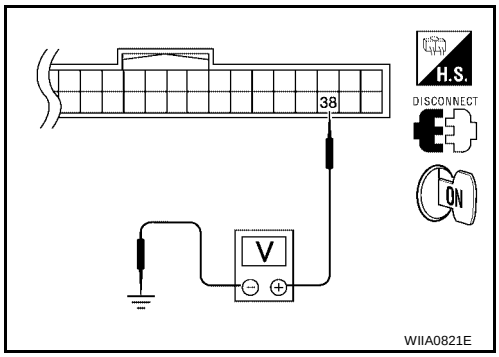
3. CHECK IGN SW. ON SIGNAL

1. Turn ignition switch ON.
2. Check voltage between BCM connector M18 terminal 38 and ground.

38 – Ground : Battery voltage

OK or NG

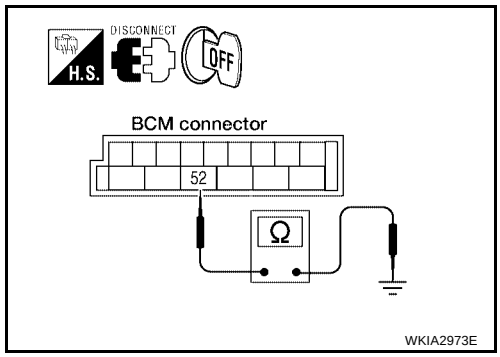
OK >> GO TO 4.
NG >> Check the following:
- 10A fuse [No. 16, located in the fuse block (J/B)].
- Harness for open or short between fuse and BCM connector. **Ref. part No. C2**



4. CHECK GROUND CIRCUIT FOR BCM

1. Turn ignition switch OFF.
2. Check continuity between BCM connector M19 terminal 52 and ground.

52 – Ground : Continuity should exist.



OK or NG

OK >> GO TO 5.
NG >> Repair or replace harness. **Ref. part No. C3**

5. REPLACE BCM

1. Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .**Ref. part No. A**
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

Does the engine start?

Yes >> BCM is malfunctioning.
No >>
- ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
- Perform initialization or re-communicating function.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.
- For re-communicating function, refer to BL-212, "ECM Re-communicating Function" .

Diagnostic Procedure 2

EIS007GQ

Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.
No >> GO TO BL-218, "SYMPTOM MATRIX CHART 1" .

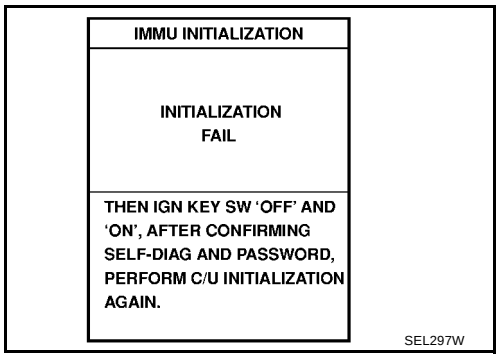
SELF DIAG RESULTS	
DTC RESULTS	TIME
DIFFERENCE OF KEY [P1615]	0

PIIA1261E

2. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization and registration of NATS ignition key IDs, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

NOTE:
If the initialization is not completed or malfunctions, CONSULT-II shows message on the screen.



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

Yes >> ● Ignition key ID was unregistered. **Ref. part No. D**

No >> ● BCM is malfunctioning.
- Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" . **Ref. part No. A**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

Diagnostic Procedure 3

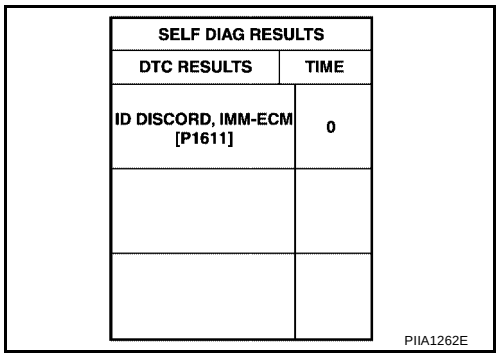
EIS007GR

Self-diagnostic results:
“ID DISCORD, IMM-ECM” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “ID DISCORD, IMM-ECM” displayed on CONSULT-II screen.

NOTE:
“ID DISCORD IMM-ECM”:
Registered ID of BCM is in discord with that of ECM.



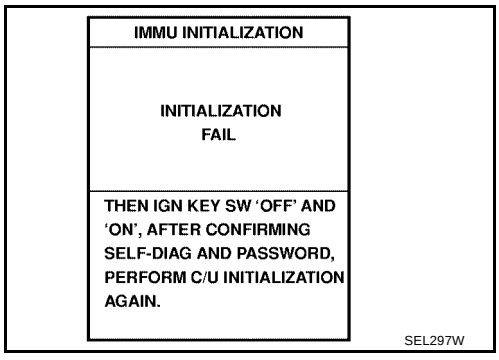
Is CONSULT-II screen displayed as shown?

Yes >> GO TO 2.
No >> GO TO BL-218, "SYMPTOM MATRIX CHART 1" .

2. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

NOTE:
If the initialization is not completed or malfunctions, CONSULT-II shows message on the screen.



Can the system be initialized?

Yes >> ● Start engine. (END)
- System initialization had not been completed. **Ref. part No. F**

No >> ● ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II.
  For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

Diagnostic Procedure 4

EIS007GS

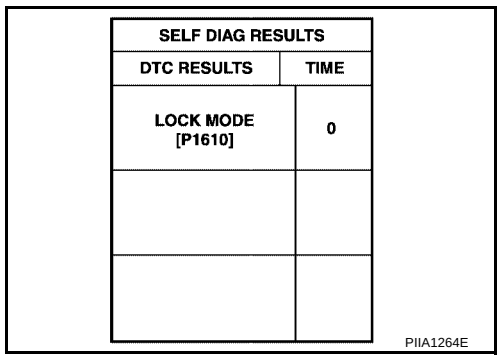
Self-diagnostic results:
“LOCK MODE” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “LOCK MODE” is displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as shown?

Yes >> GO TO 2.
No >> GO TO BL-218, "SYMPTOM MATRIX CHART 1" .



2. ESCAPE FROM LOCK MODE

1. Turn ignition switch OFF.
2. Turn ignition switch ON with registered key. (Do not start engine.) Wait 5 seconds.
3. Return the key to OFF position. Wait 5 seconds.
4. Repeat steps 2 and 3 twice (total of three cycles).
5. Start the engine.

Does engine start?

Yes >> System is OK (Now system is escaped from “LOCK MODE”).
No >> GO TO 3.

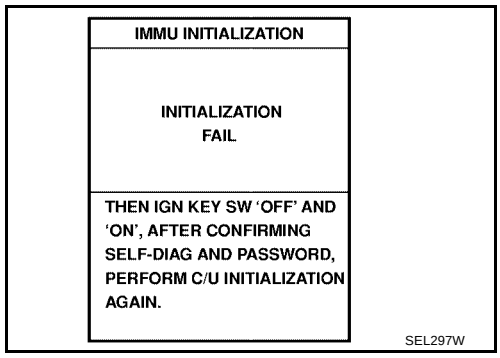
3. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II.
For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

NOTE:
If the initialization is not completed or malfunctions, CONSULT-II shows the message on the screen.

Can the system be initialized?

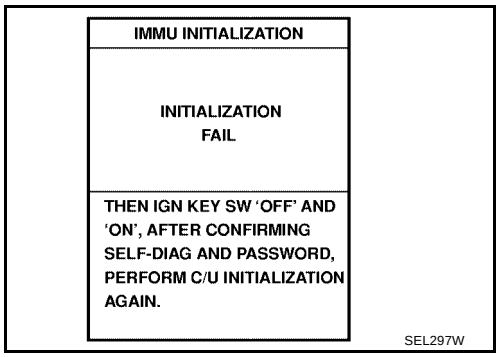
Yes >> System is OK.
No >> GO TO 4.



4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

1. Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

NOTE:
If the initialization is not completed or malfunctions, CONSULT-II shows the message on the screen.



Can the system be initialized?

Yes >> System is OK. BCM is malfunctioning. **Ref. part No. A**
No >>
- ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II.
  For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

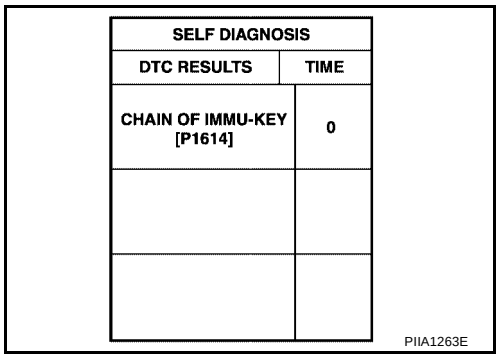
Diagnostic Procedure 5

EIS007GT

Self-diagnostic results:
“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.



Is CONSULT-II screen displayed as shown?

Yes >> GO TO 2.
No >> GO TO BL-218, "SYMPTOM MATRIX CHART 1" .

2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to BL-228, "How to Replace NATS Antenna Amp." .

OK or NG

OK >> GO TO 3.
NG >> Reinstall NATS antenna amp. correctly.

3. CHECK NVIS (NATS) IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

Does the engine start?

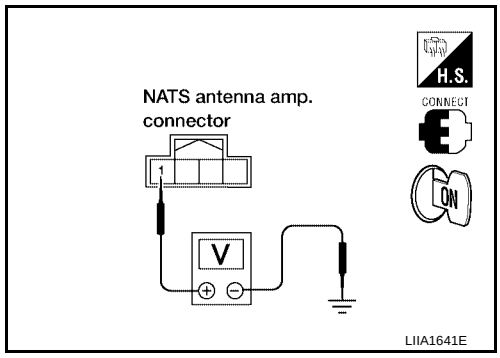
Yes >>
- Ignition key ID chip is malfunctioning.
- Replace the ignition key.
  Ref. part No. E5
- Perform initialization with CONSULT-II.
  For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

No >> GO TO 4.

4. CHECK POWER SUPPLY FOR NATS ANTENNA AMP.

1. Turn ignition switch ON.
2. Check voltage between NATS antenna amp. connector M21 terminal 1 and ground.

1 – Ground : Battery voltage

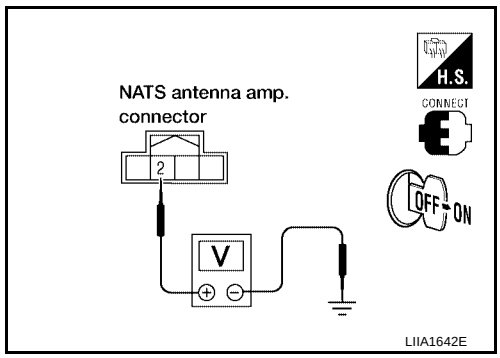


OK or NG

OK >> GO TO 5.
NG >> Repair or replace fuse or harness. **Ref. part No. E3**

5. CHECK NATS ANTENNA AMP. SIGNAL LINE- 1

Check voltage between NATS antenna amp. connector M21 terminal 2 and ground with analog tester.



Connector terminals (wire colors)		Position of ignition key cylinder	Voltage (V) (Approx.)
(+)	(-)		
2	Ground	Before inserting ignition key	Battery voltage
		After inserting ignition key	Pointer of tester should move for approx. 30 seconds, then return to battery voltage
		Just after turning ignition switch ON	Pointer of tester should move for approx. 1 second, then return to battery voltage

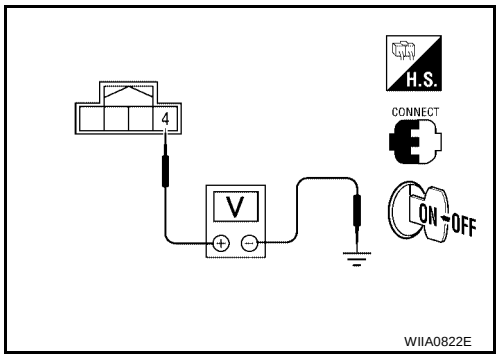
OK or NG

OK >> GO TO 6.
NG >> ● Repair or replace harness.

NOTE:
If harness is OK, replace BCM. Refer to BCS-20, "Removal and Installation of BCM" . perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

6. CHECK NATS ANTENNA AMP. SIGNAL LINE- 2

Check voltage between NATS antenna amp. connector M21 terminal 4 and ground with analog tester.



Connector terminals (wire colors)		Position of ignition key cylinder	Voltage (V) (Approx.)
(+)	(-)		
4	Ground	Before inserting ignition key	Battery voltage
		After inserting ignition key	Pointer of tester should move for approx. 30 seconds, then return to battery voltage
		Just after turning ignition switch ON	Pointer of tester should move for approx. 1 second, then return to battery voltage

OK or NG

OK >> GO TO 7.

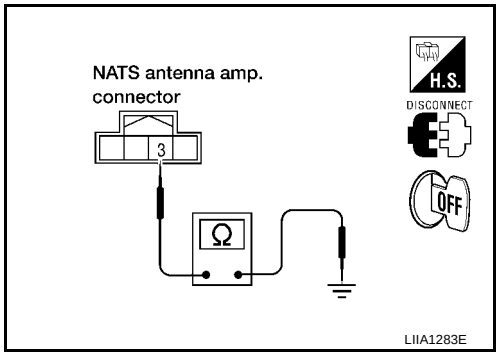
NG >> ● Repair or replace harness.

NOTE:
If harness is OK, replace BCM, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

7. CHECK NATS ANTENNA AMP. GROUND LINE CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between NATS antenna amp. connector M21 terminal 3 and ground.

3 – Ground : Continuity should exist.



OK or NG

OK >> ● NATS antenna amp. is malfunctioning.
Ref. part No. E6

NG >> ● Repair or replace harness.

NOTE:
If harness is OK, replace BCM. Refer to BCS-20, "Removal and Installation of BCM" . Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

Diagnostic Procedure 6

EIS007GU

“SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

1. CHECK FUSE

Check 10A fuse [No.19, located in the fuse block (J/B)].

OK or NG

OK >> GO TO 2.
NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to PG-4, "POWER SUPPLY ROUTING CIRCUIT" .

2. CHECK SECURITY INDICATOR LAMP

1. Start engine and turn ignition switch OFF.
2. Check the security indicator lamp lights up.

Security indicator lamp should light up.

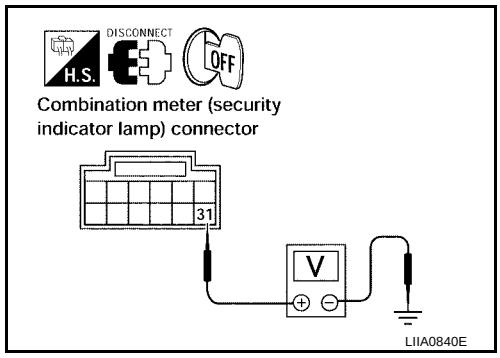
OK or NG

OK >> Inspection End.
NG >> GO TO 3.

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter (security indicator lamp).
2. Check voltage between security indicator lamp connector M23 terminal 31 and ground.

31 – Ground : Battery voltage



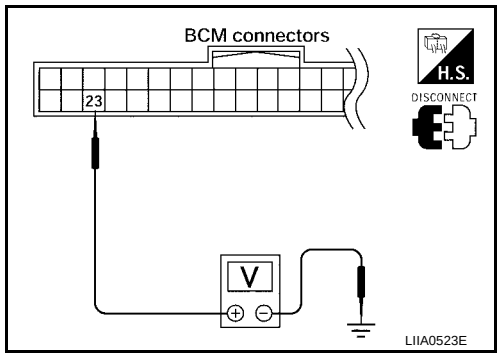
OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness.

4. CHECK BCM (NATS CONTROL UNIT) FUNCTION

1. Connect combination meter (security indicator lamp).
2. Disconnect BCM.
3. Check voltage between BCM connector M18 terminal 23 and ground.

23 – Ground : Battery voltage



OK or NG

OK >> BCM is malfunctioning.
- Replace BCM. Refer to BCS-20, "Removal and Installation of BCM" . **Ref. part No. A**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

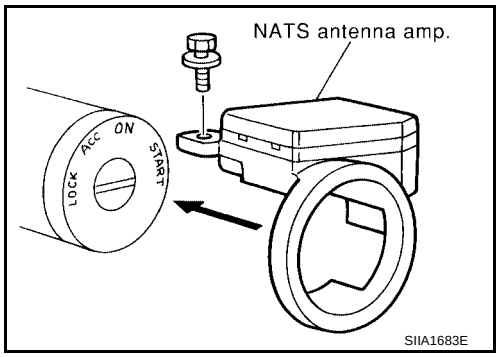
NG >> Check the following:
- Harness for open or short between security indicator lamp and BCM (NATS control unit).
- Indicator lamp condition.

How to Replace NATS Antenna Amp.

EIS007GV

NOTE:

- **If NATS antenna amp. is not installed correctly, NVIS (NATS) system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show “LOCK MODE” or “CHAIN OF IMMU-KEY”.**
- **Initialization is not necessary when only NATS antenna amp. is replaced with a new one.**



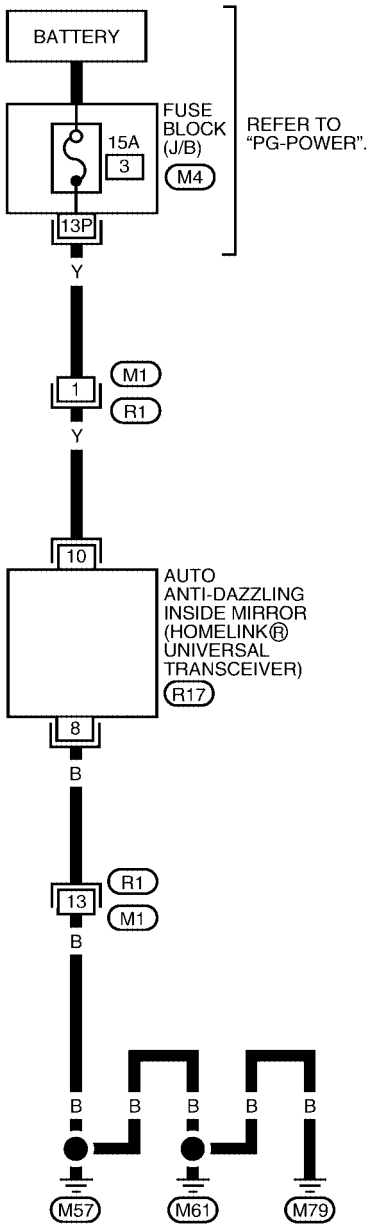
HOMELINK UNIVERSAL TRANSCEIVER

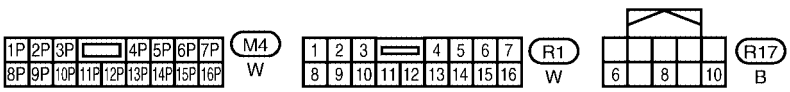
PFP:96401

Wiring Diagram — TRNSCV —

EIS007WO

BL-TRNSCV-01





WIWA1141E

Trouble Diagnoses

EIS007WP

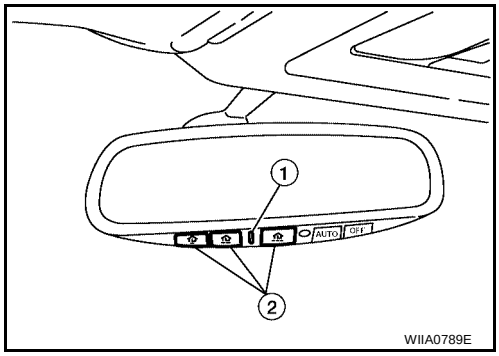
DIAGNOSTIC PROCEDURE

SYMPTOM: Transmitter does not activate receiver.

Before conducting the procedure given below, make sure that system receiver (garage door opener, etc.) operates with original, hand-held transmitter. If NG, receiver or hand-held transmitter is malfunctioning, not vehicle related.

1. ILLUMINATION CHECK

1. Turn ignition switch OFF.
2. Does red light (1) of transmitter illuminate when any of the three transmitter buttons (2) is pressed?



YES or NO

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

2. TRANSMITTER CHECK

Check transmitter with Tool*.
*:For details, refer to Technical Service Bulletin.

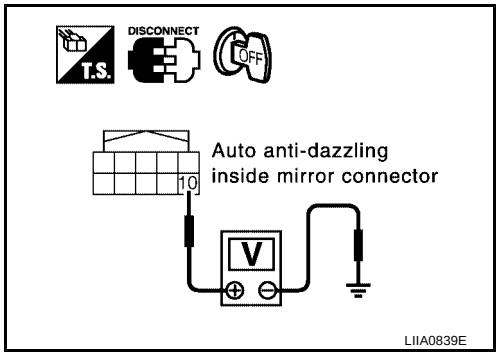
OK or NG

OK >> Receiver or hand-held transmitter malfunction, not vehicle related.
NG >> Replace auto anti-dazzling inside mirror (homelink universal transceiver).

3. POWER SUPPLY CHECK

1. Turn ignition switch OFF.
2. Disconnect auto anti-dazzling inside mirror (homelink universal transceiver) connector.
3. Check voltage between auto anti-dazzling inside mirror connector R17 terminal 10 and ground.

10 - Ground : Battery voltage



OK or NG

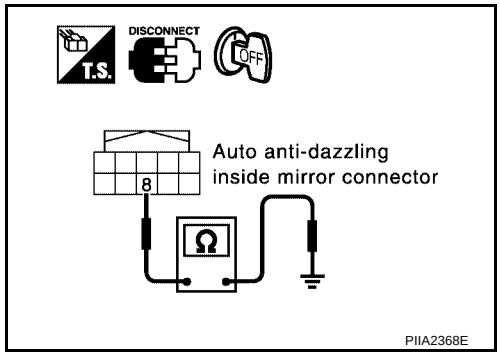
OK >> GO TO 4.
NG >> Check the following:

- 15A fuse [No. 3, located in the fuse block (J/B)].
- Harness for open or short between fuse and auto anti-dazzling inside mirror (homelink universal transceiver).

4. GROUND CIRCUIT CHECK

Check continuity between auto anti-dazzling inside mirror connector R17 terminal 8 and body ground.

8 - Ground : Continuity should exist.



OK or NG

OK >> Replace auto anti-dazzling inside mirror (homelink universal transceiver).

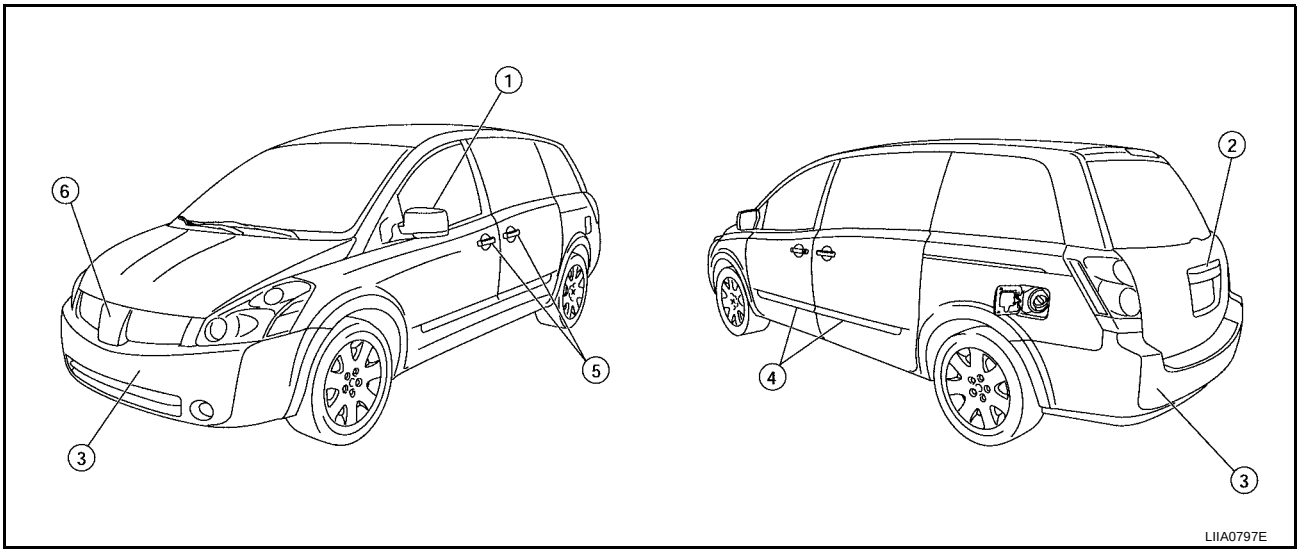
NG >> Repair or replace harness.

BODY REPAIR

PFP:60100

Body Exterior Paint Color

EIS007GY



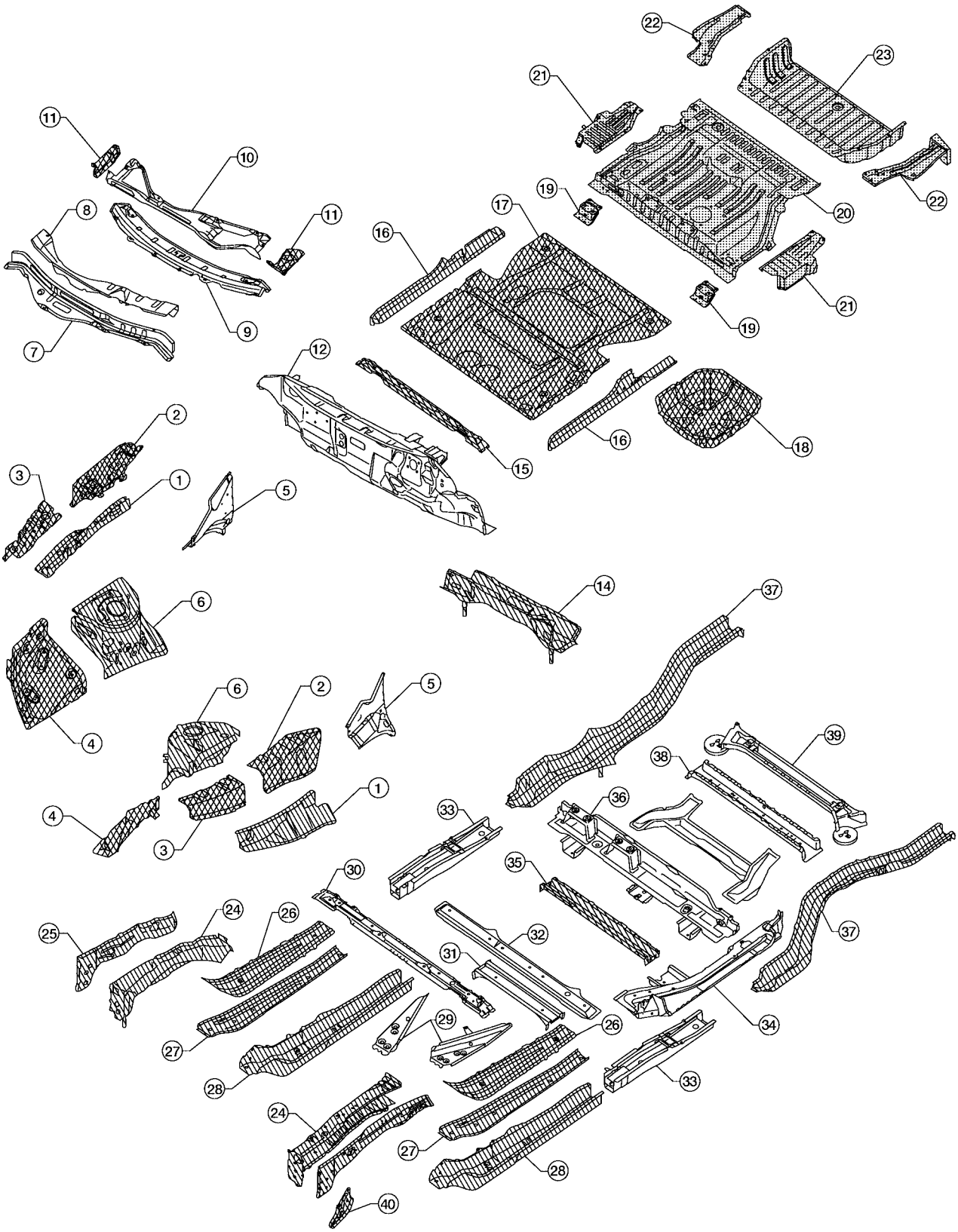
Component			Color code	A15	BW9	C12	G10	K11	K12	J20	Q11
			Description	Red Brawn	Majestic Blue	Coral Sand	Galaxy Black	Smoke	Silver Mist	Jade	Nordic White Pearl
			Paint type	M	M	M	M	M	M	M	3P
			Clear coat	t	t	t	t	t	t	t	t
1	Outside mirror	Body	Body color	A15	BW9	C12	G10	K11	K12	J20	Q11
		Base	Black	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01
2	Lift gate Finisher		Body color	A15	BW9	C12	G10	K11	K12	J20	Q11
3	Bumper fascia	Body	Body color	A15	BW9	C12	G10	K11	K12	J20	Q11
4	Side guard molding	Body	Body color	A15	BW9	C12	G10	K11	K12	J20	Q11
5	Outside handle		Body color	A15	BW9	C12	G10	K11	K12	J20	Q11
6	Radiator grille	Center	Chromium-plate +Smoke Clear	Cr+HFM 09	Cr+HFM 09	Cr+HFM 09	Cr+HFM 09	Cr+HFM 09	Cr+HFM 09	Cr+HFM 09	Cr+HFM 09

M: Metallic; 2S: 2-Coat Solid, 2P: 2-Coat Pearl; 3P: 3-Coat Pearl; t: New Cross Linking Clear Coat

Body Component Parts

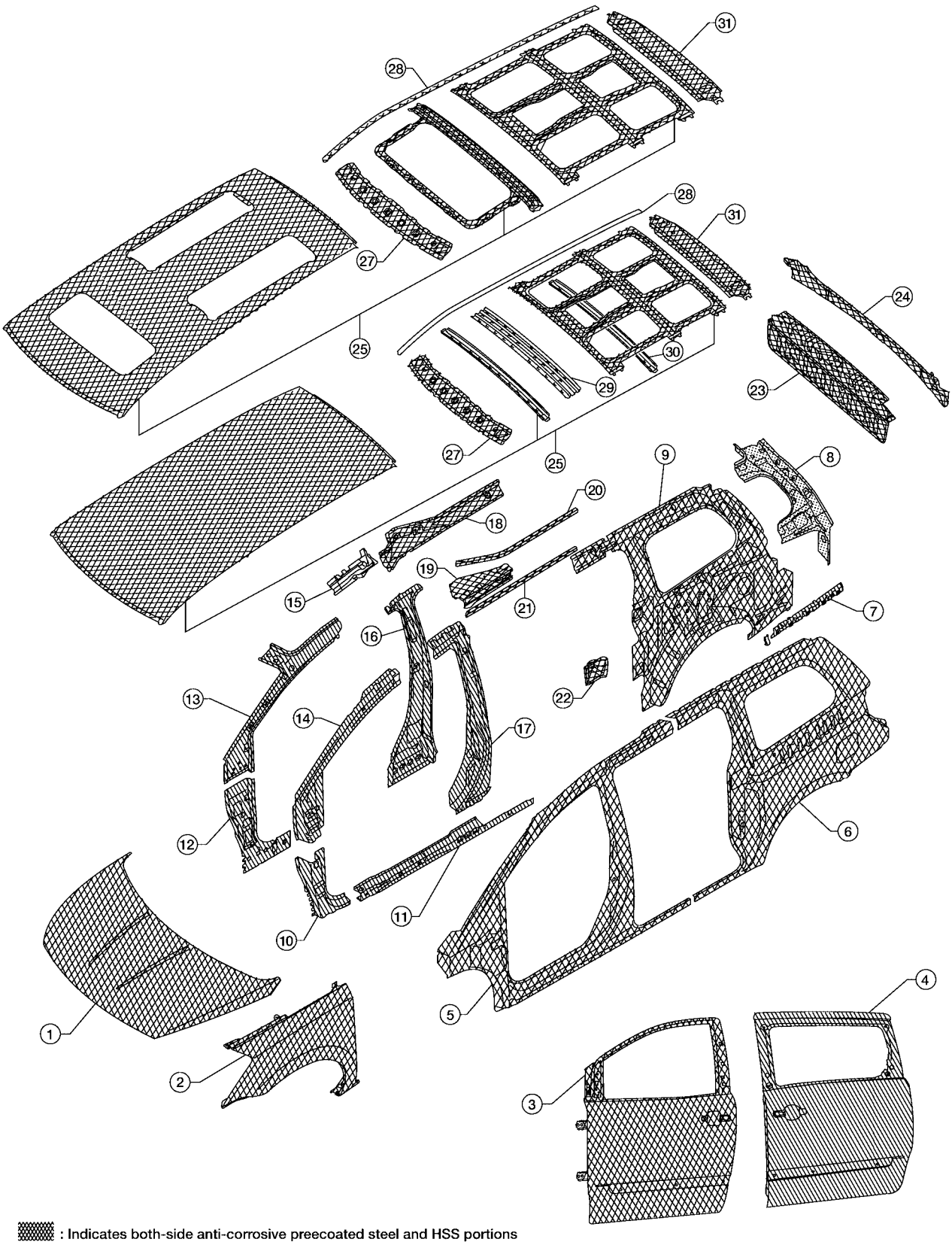
EIS007GZ

UNDERBODY COMPONENT PARTS



1. Hoodledge upper RH/LH
2. Rear hoodledge reinforcement RH/LH
3. Hoodledge reinforcement
4. Lower front hoodledge RH/LH
5. Side cowl top RH/LH
6. Rear lower hoodledge RH/LH
7. Upper dash
8. Front cowl top
9. Center cowl top
10. Cowl top extension
11. Cowl top extension bracket RH/LH
12. Lower dash
13. Dash lower cross member
14. 2nd cross member assembly
15. Inner sill RH/LH
16. Front floor
17. Center front floor
18. 2nd seat mounting bracket assembly RH/LH
19 Front floor rear
20. Rear floor step RH/LH
21. Rear side floor rear RH/LH
22. Rear floor rear
23. Front side member RH/LH
24. Front side member closing plate RH/LH
25. Front side member extension reinforcement RH/LH
26. Front side member reinforcement RH/LH
27. Front side member front extension RH/LH
28. Inner front side member assembly RH/LH
29. Floor center member assembly
30. Outer 3rd seat mounting bracket
31. Center 1st cross member assembly
32. Front side member rear extension RH/LH
33. Lower guide rail assembly RH/LH
34. 4th cab moulting cross member
35. Rear seat cross member
36. Rear side member RH/LH
37. Center rear seat cross member
38. 2nd rear cross member
39. Front hook RH/LH

BODY COMPONENT PARTS



: Indicates both-side anti-corrosive preecoated steel and HSS portions
: Indicates both-side anticorrosive precoated steel protions
: Indicates high strength steel (HSS) portions

WIIA0366E

1. Hood
2. Front fender (RH&LH)
3. Front door assembly
4. Slide door assembly
5. Body side outer
6. Rear fender
7. Body side outer reinforcement
8. Back pillar reinforcement
9. Inner side panel
10. Front pillar lower hinge brace
11. Outer sill reinforcement
12. Inner lower front pillar
13. Inner upper front pillar
14. Upper hinge pillar brace assembly
15. Inner roof rail reinforcement
16. Inner center pillar
17. Center pillar reinforcement
18. Inner roof side rail
19. Upper guide rail
20. Upper guide rail
21. Roof drip rail
22. Waist rail guide
23. Back panel assembly
24. Back panel assembly
25. Standard roof assembly
26. Roof assembly with sunroof
27. Front roof rail
28. Roof side molding assembly
29. Roof bow No. 2
30. Rear roof bow
31. Rear roof rail

Corrosion Protection

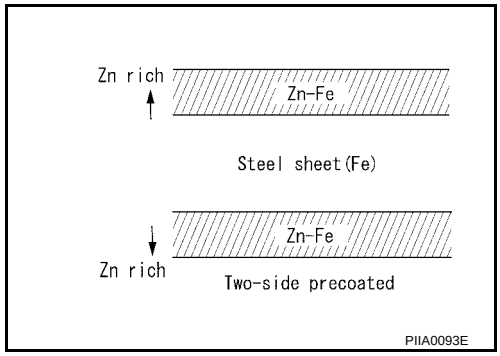
EIS007H0

DESCRIPTION

To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

ANTI-CORROSIVE PRECOATED STEEL (GALVANNEALED STEEL)

To improve repairability and corrosion resistance, a new type of anti-corrosive precoated steel sheet has been adopted replacing conventional zinc-coated steel sheet.
Galvannealed steel is electroplated and heated to form Zinc-iron alloy, which provides excellent and long term corrosion resistance with cationic electrode position primer.



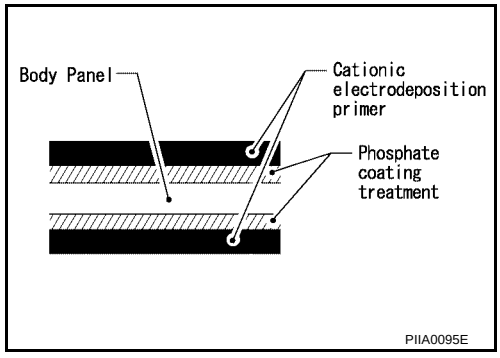
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

PHOSPHATE COATING TREATMENT AND CATIONIC ELECTRODEPOSITION PRIMER

A phosphate coating treatment and a cationic electrode position primer, which provide excellent corrosion protection, are employed on all body components.

CAUTION:

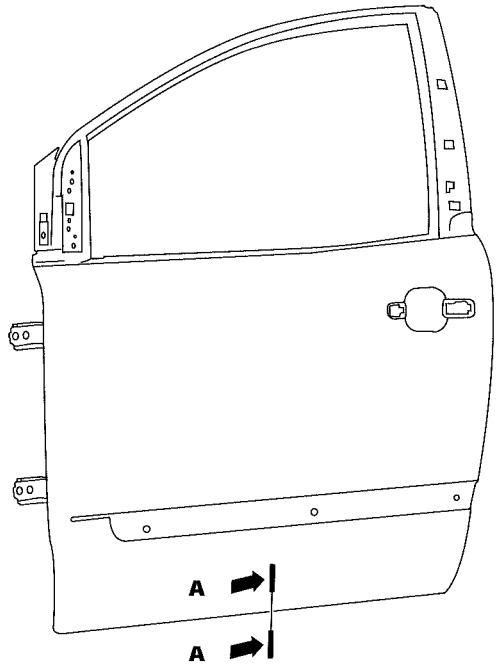
Confine paint removal during welding operations to an absolute minimum.



Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

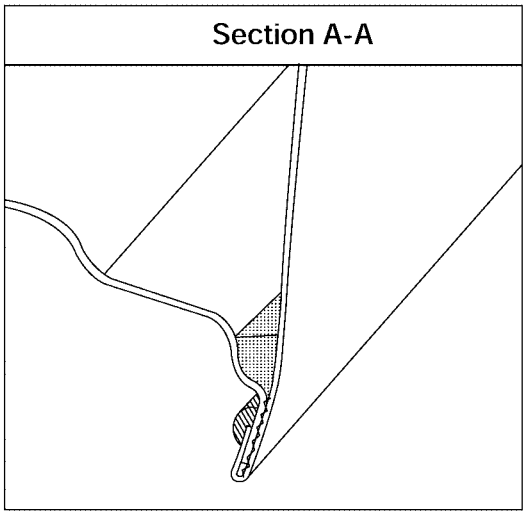
ANTI-CORROSIVE WAX

To improve corrosion resistance, anti-corrosive wax is applied inside the body sill and inside other closed sections. Accordingly, when replacing these parts, be sure to apply anti-corrosive wax to the appropriate areas of the new parts. Select an excellent anti-corrosive wax which will penetrate after application and has a long shelf life.



: indicates outside body sealant

: Indicates anti-corrosive wax coated portions



LIIA0810E

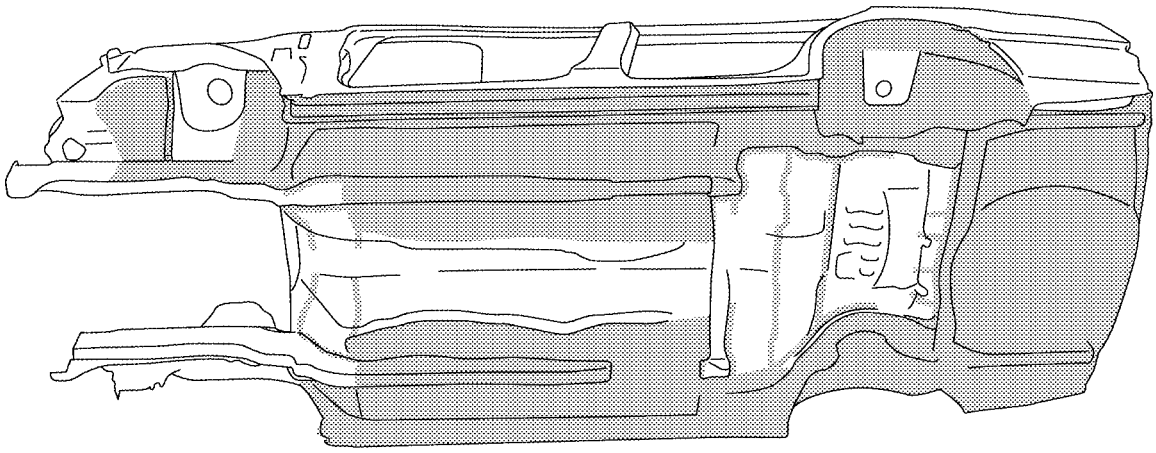
UNDERCOATING

The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust preventive, soundproof, vibration-proof, shock-resistant, adhesive, and durable.

Precautions in undercoating

1. Do not apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst which are subjected to heat).
2. Do not undercoat the exhaust pipe or other parts which become hot.
3. Do not undercoat rotating parts.
4. Apply bitumen wax after applying undercoating.

: Indicates undercoated portions.



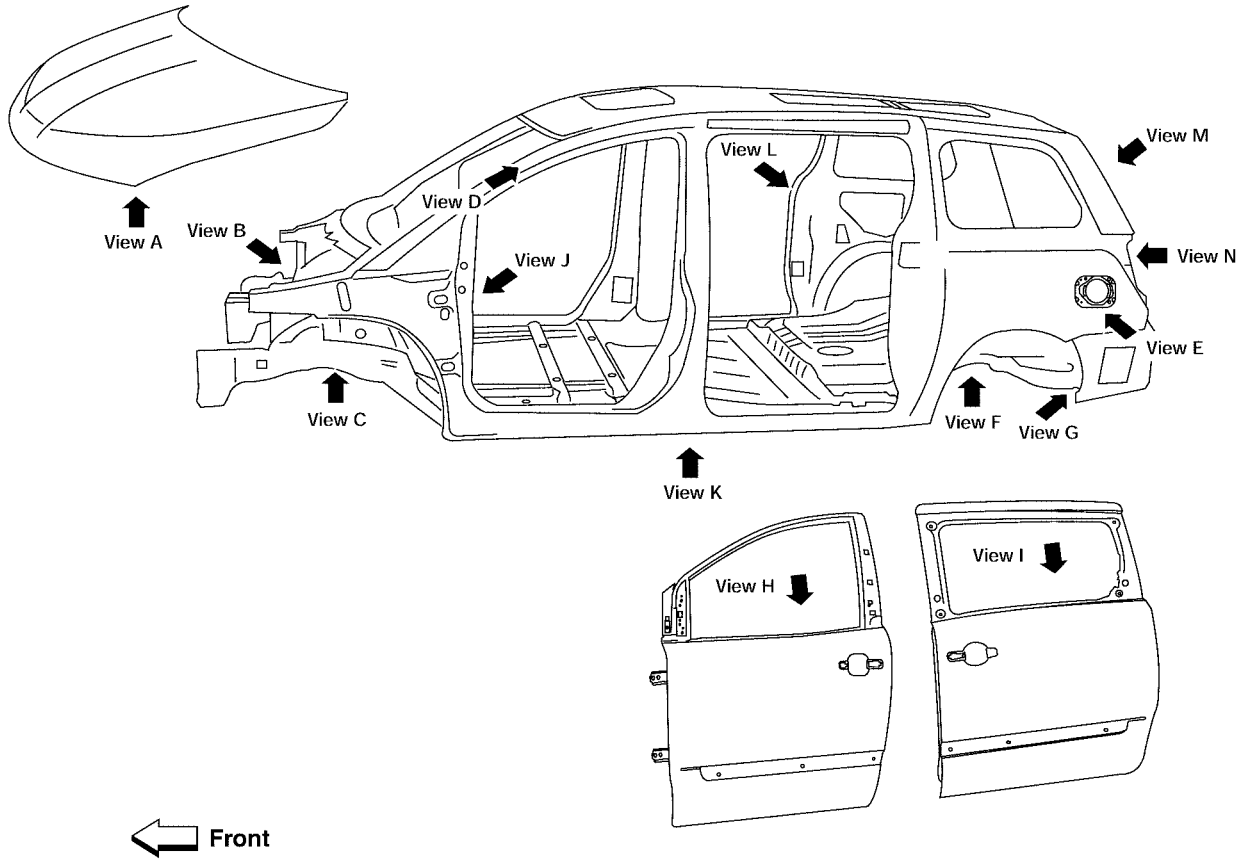
LIIA0129E

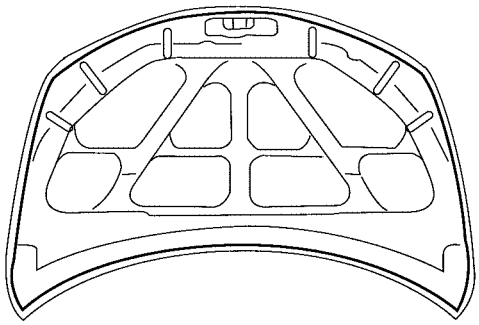
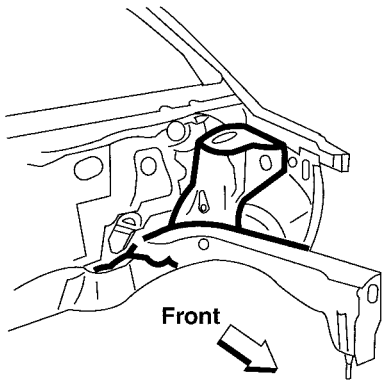
Body Sealing

EIS007H1

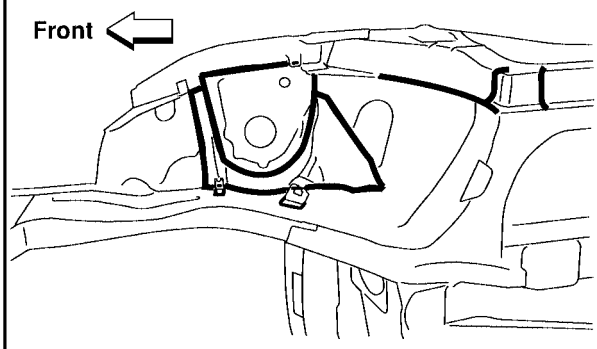
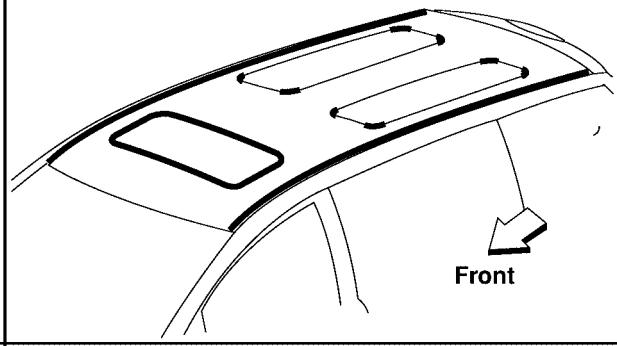
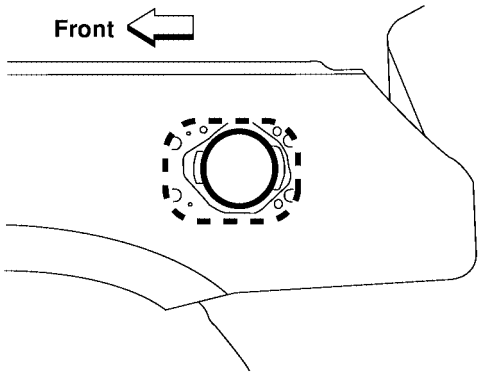
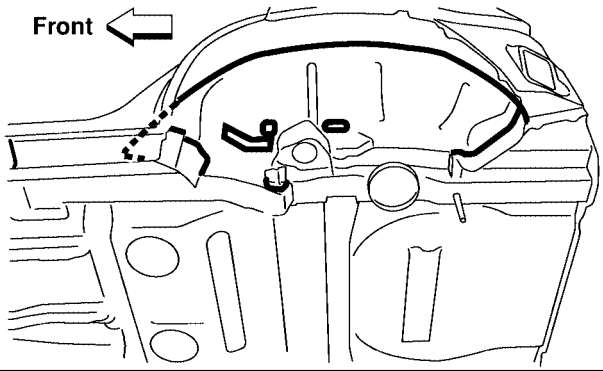
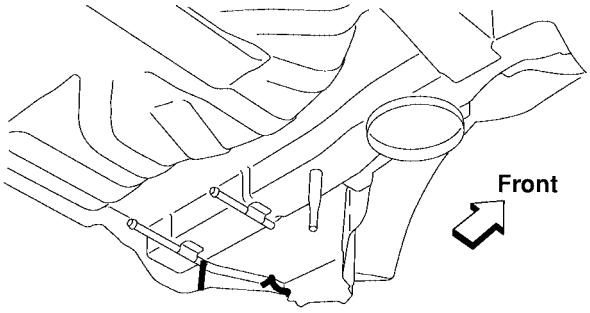
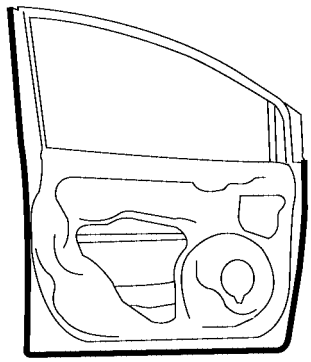
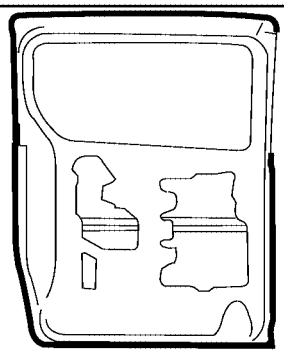
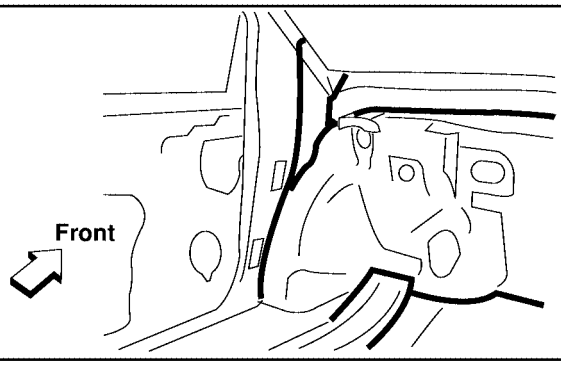
DESCRIPTION

The following figure shows the areas which are sealed at the factory. Sealant which has been applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.

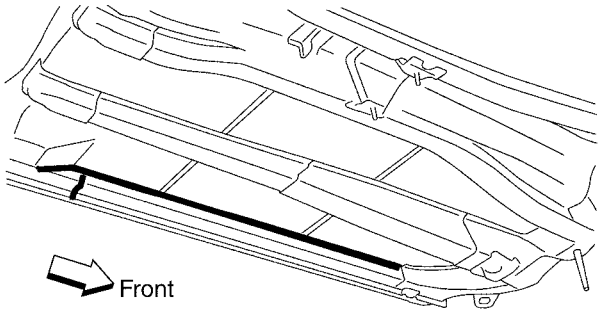
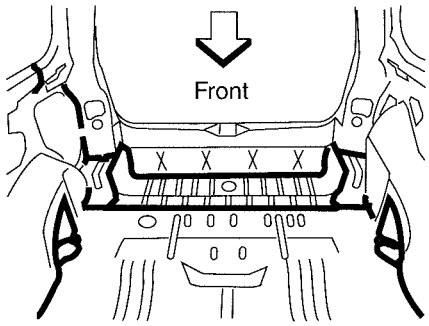
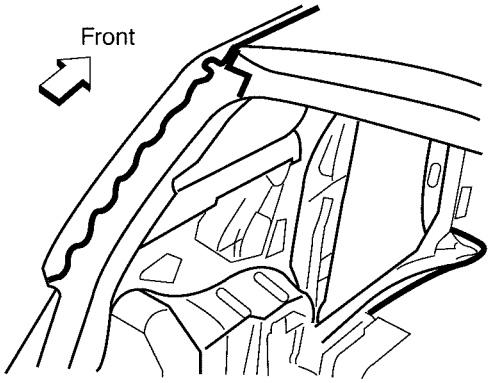
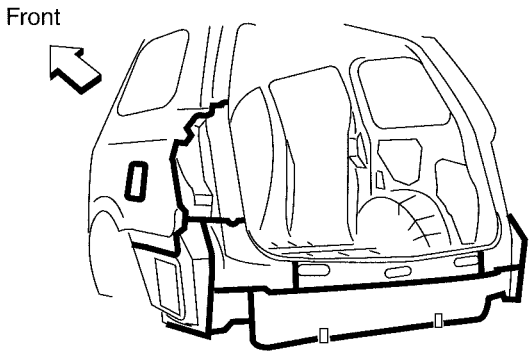


View A	View B
	

LIIA0812E

View C	View D
	
View E	**View F**
	
View G	**View H**
	
View I	**View J**
	

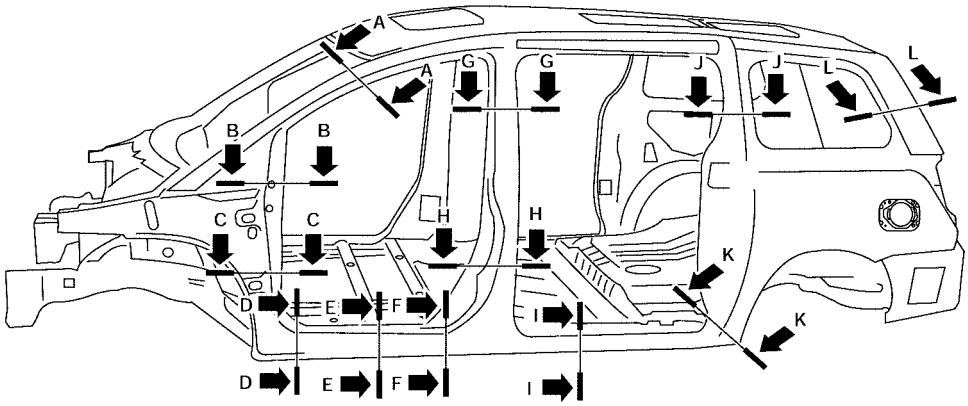
WIIA0368E

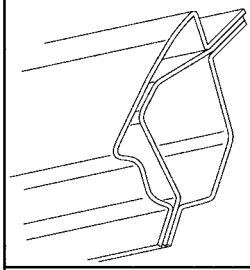
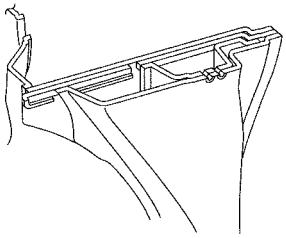
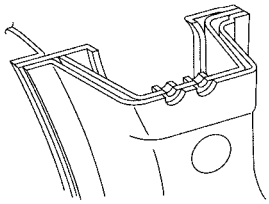
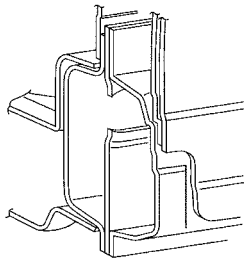
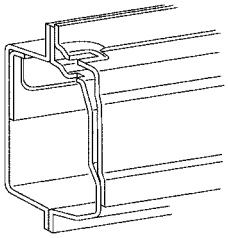
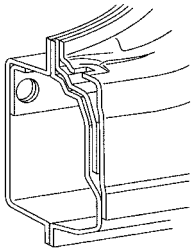
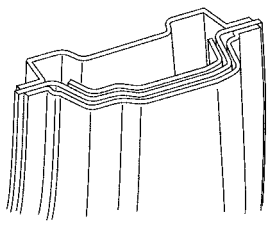
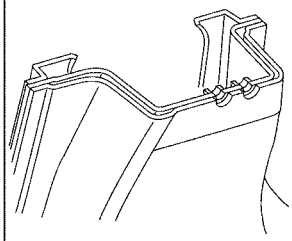
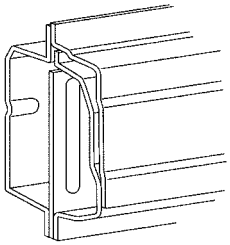
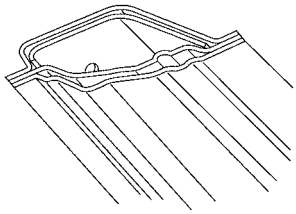
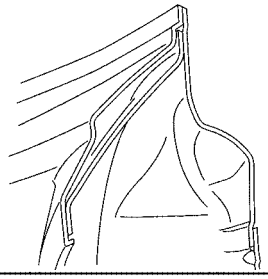
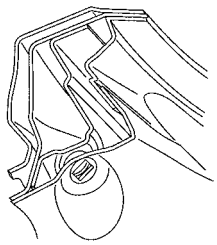
View K	View L
	
View M	**View N**
	

LIIA0816E

Body Construction
BODY CONSTRUCTION

EIS007H2



Section A-A	Section B-B	Section C-C	Section D-D
			
Section E-E	**Section F-F**	**Section G-G**	**Section H-H**
			
Section I-I	**Section J-J**	**Section K-K**	**Section L-L**
			

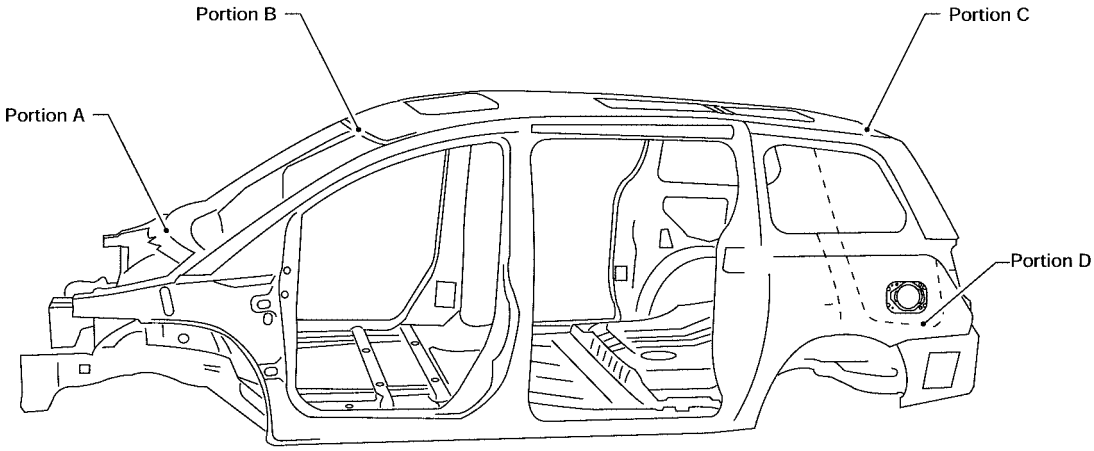
LIIA0818E

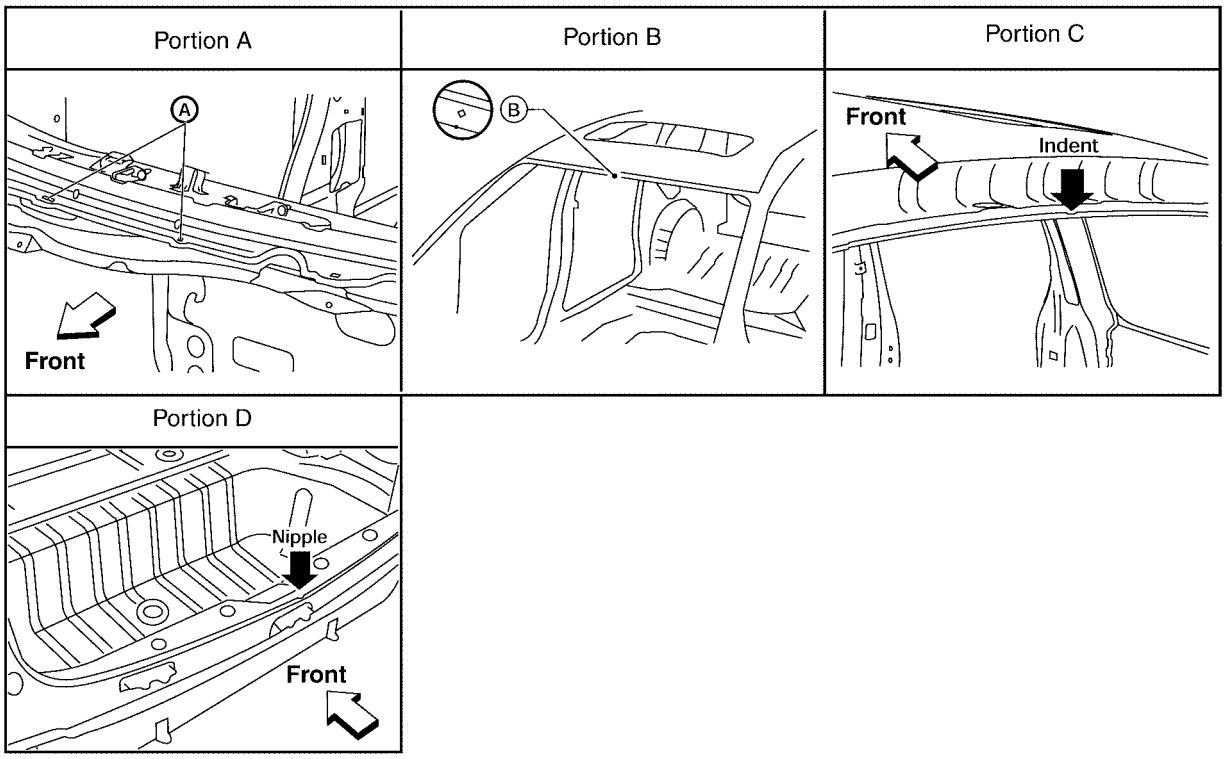
Body Alignment

EIS007H3

BODY CENTER MARKS

A mark has been placed on each part of the body to indicate the vehicle center. When repairing parts damaged by an accident which might affect the vehicle frame (members, pillars, etc.), more accurate and effective repair will be possible by using these marks together with body alignment specifications.

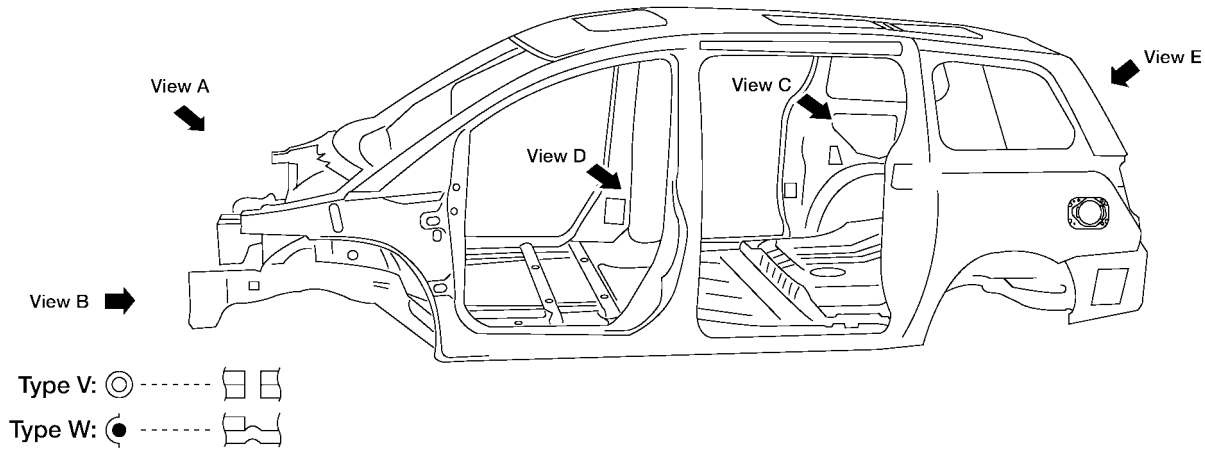

Portion B
Portion C
Portion A
Portion D


Portion A
Portion B
Portion C
A
B
Front
Front
Indent
Portion D
Nipple
Front

LIIA0819E

PANEL PARTS MATCHING MARKS

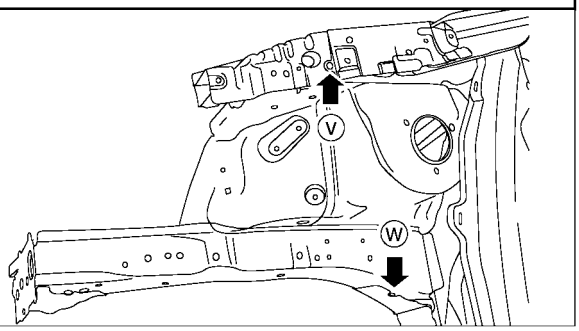
A mark has been placed on each body panel to indicate the parts matching positions. When repairing parts damaged by an accident which might affect the vehicle structure (members, pillars, etc.), more accurate and effective repair will be possible by using these marks together with body alignment specifications.



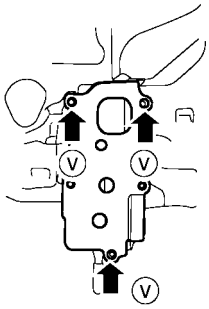
Type V: ⊚ -------

Type W: ● -------

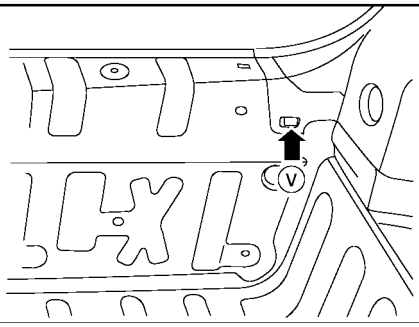
View A



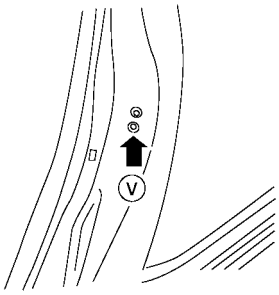
View B



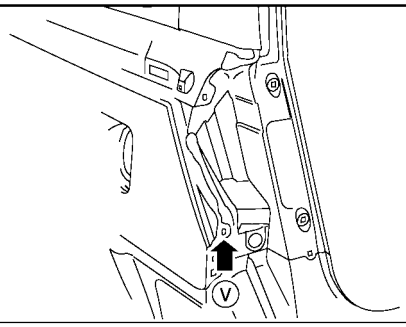
View C



View D



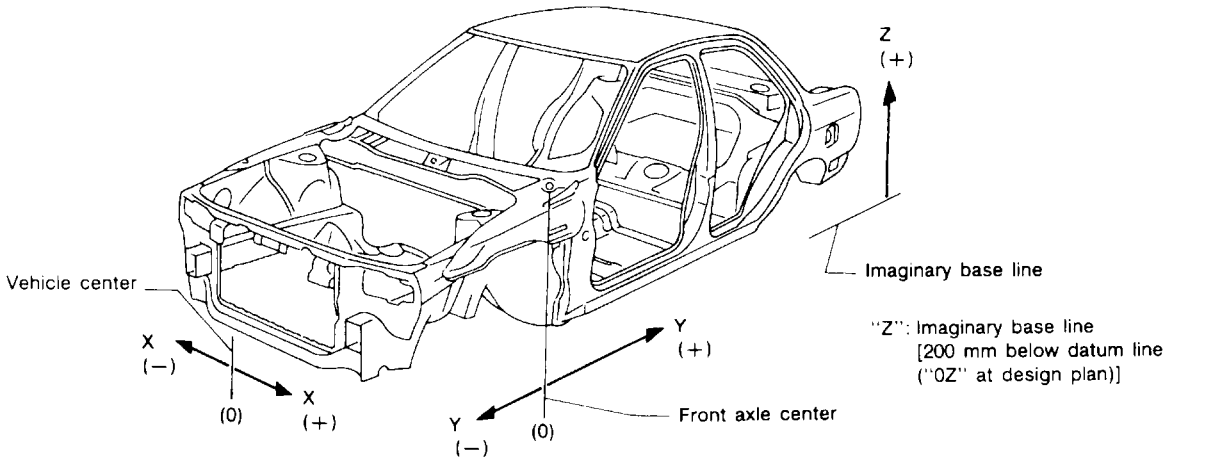
View E



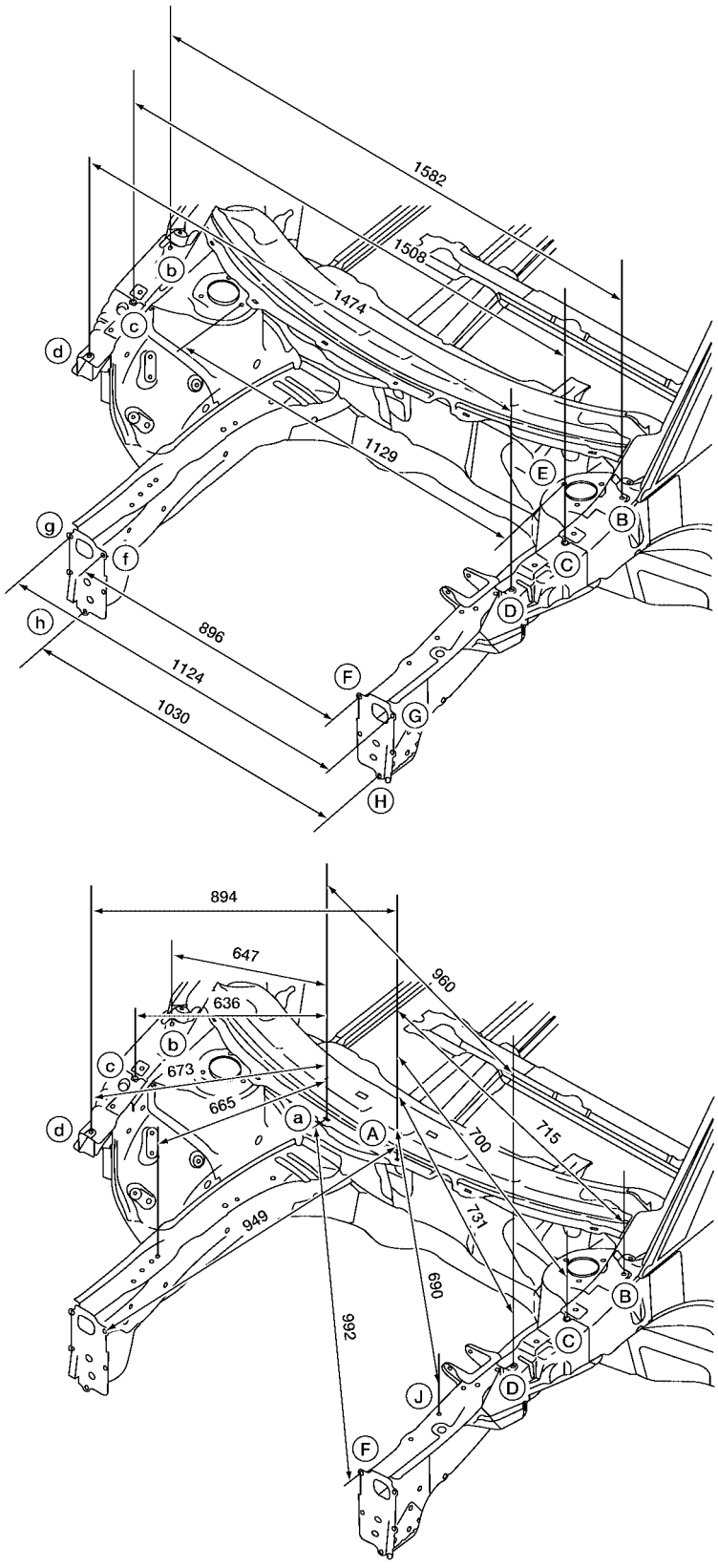
WIIA0364E

DESCRIPTION

- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements should be taken at the center of the mounting holes.
- An asterisk (*) following the value at the measuring point indicates that the measuring point on the other side is symmetrically the same value.
- The coordinates of the measurement points are the distances measured from the standard line of "X", "Y" and "Z".



ENGINE COMPARTMENT
MEASUREMENT

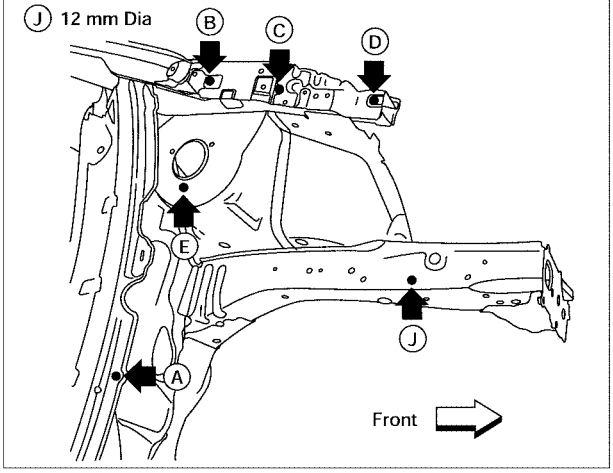


Unit: mm

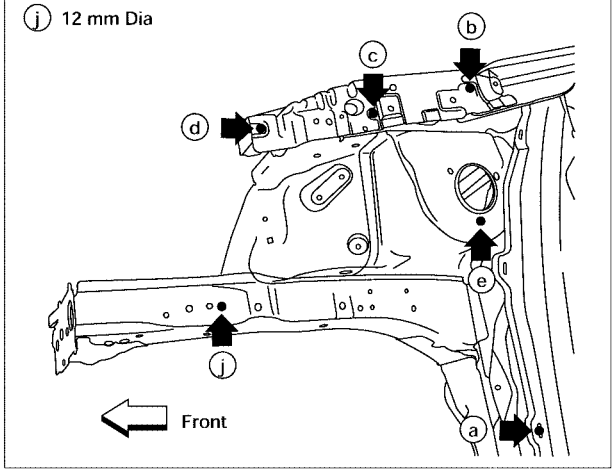
WIIA0536E

MEASUREMENT POINTS

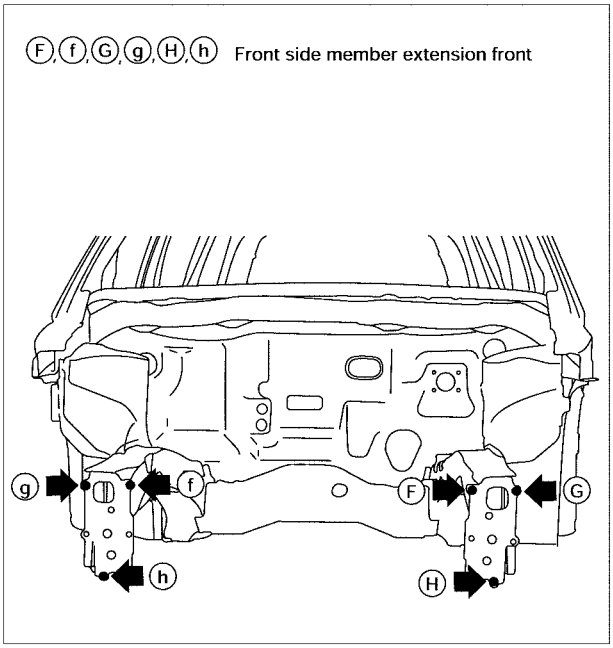
Ⓐ LH cowl
Ⓑ Fender installation hole center
Ⓒ Panel alignment hole
Ⓓ Front end module installation hole center
Ⓔ Strut installing hole center
Ⓙ 12 mm Dia



ⓐ LH cowl
ⓑ Fender installation hole center
ⓒ Panel alignment hole
ⓓ Front end module installation hole center
ⓔ Strut installing hole center
ⓙ 12 mm Dia

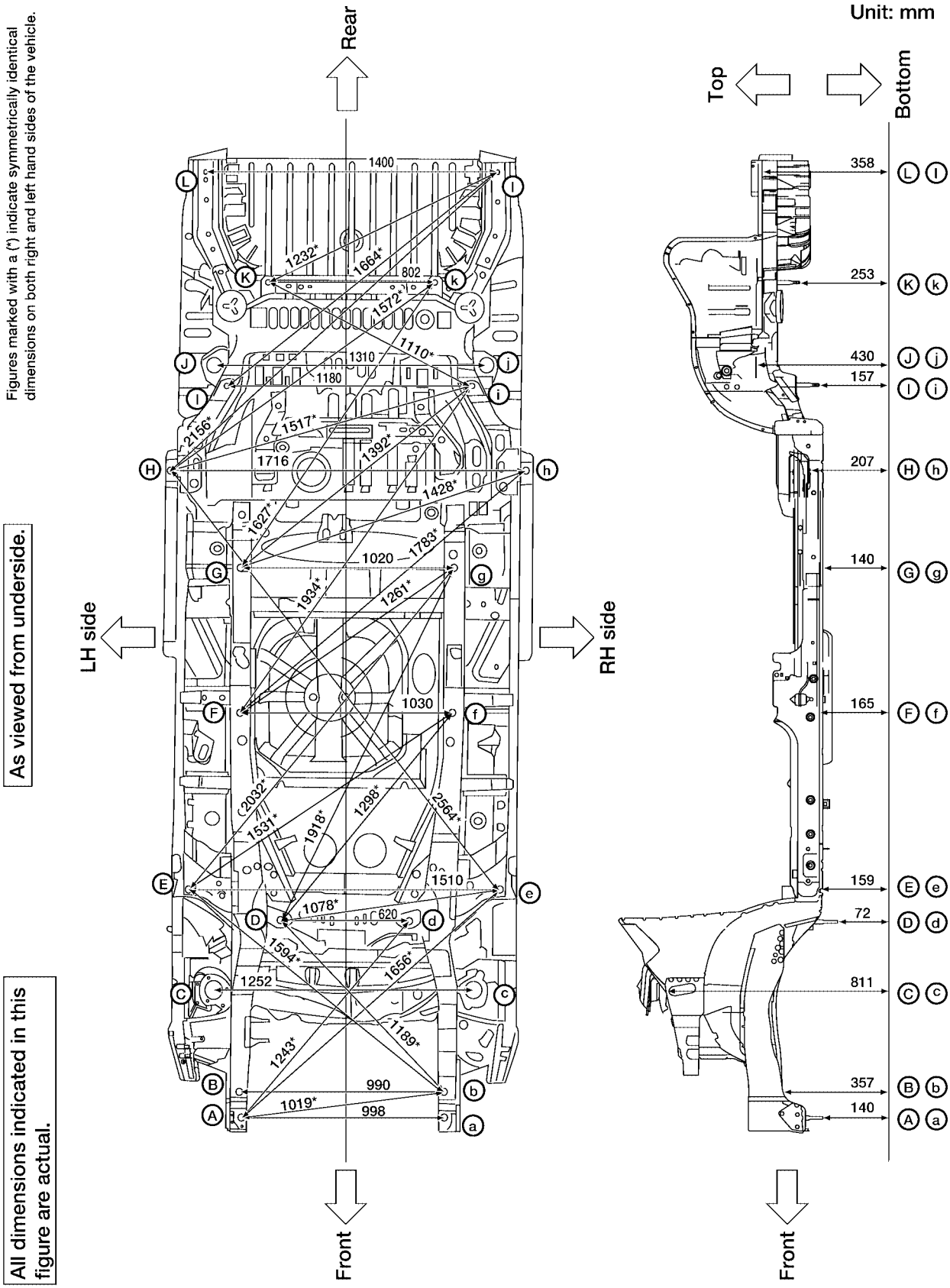


Ⓕ, ⓕ, Ⓖ, ⓖ, Ⓗ, ⓗ Front side member extension front



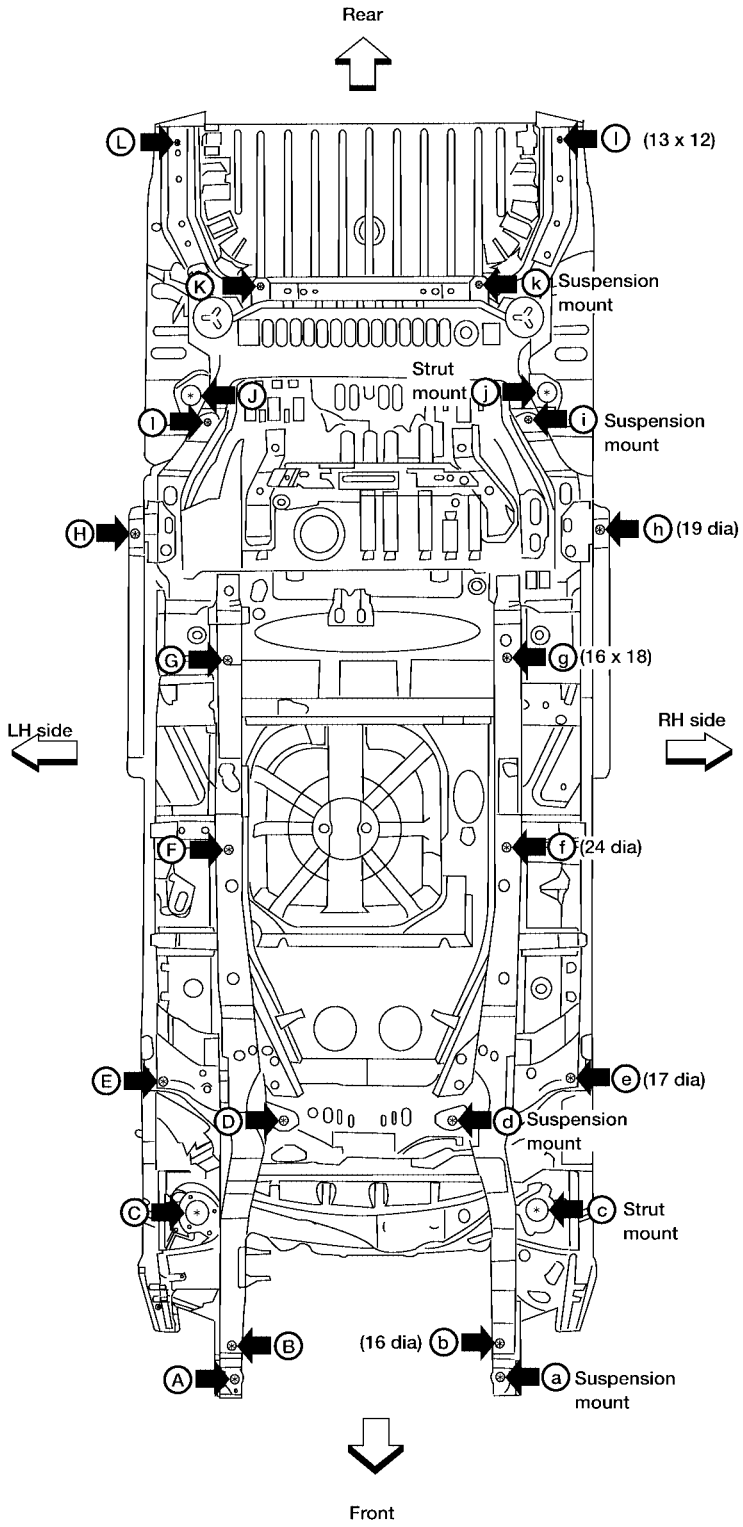
LIIA0860E

UNDERBODY MEASUREMENT



WIIA0358E

MEASUREMENT POINTS



Coordinates:

A, a
X : ±494
Y : -617
Z : 140

B, b
X : ±495
Y : -500
Z : 357

D, d
X : ±310
Y : 328
Z : 72

E, e
X : ±755
Y : 470
Z : 159

F, f
X : ±515
Y : 1326
Z : 165

G, g
X : ±510
Y : 2060
Z : 140

H, h
X : ±858
Y : 2463
Z : 207

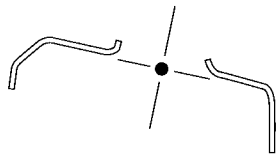
I, i
X : ±590
Y : 2913
Z : 157

K, k
X : ±401
Y : 3403
Z : 253

L, l
X : ±700
Y : 3945
Z : 358

Coordinates:

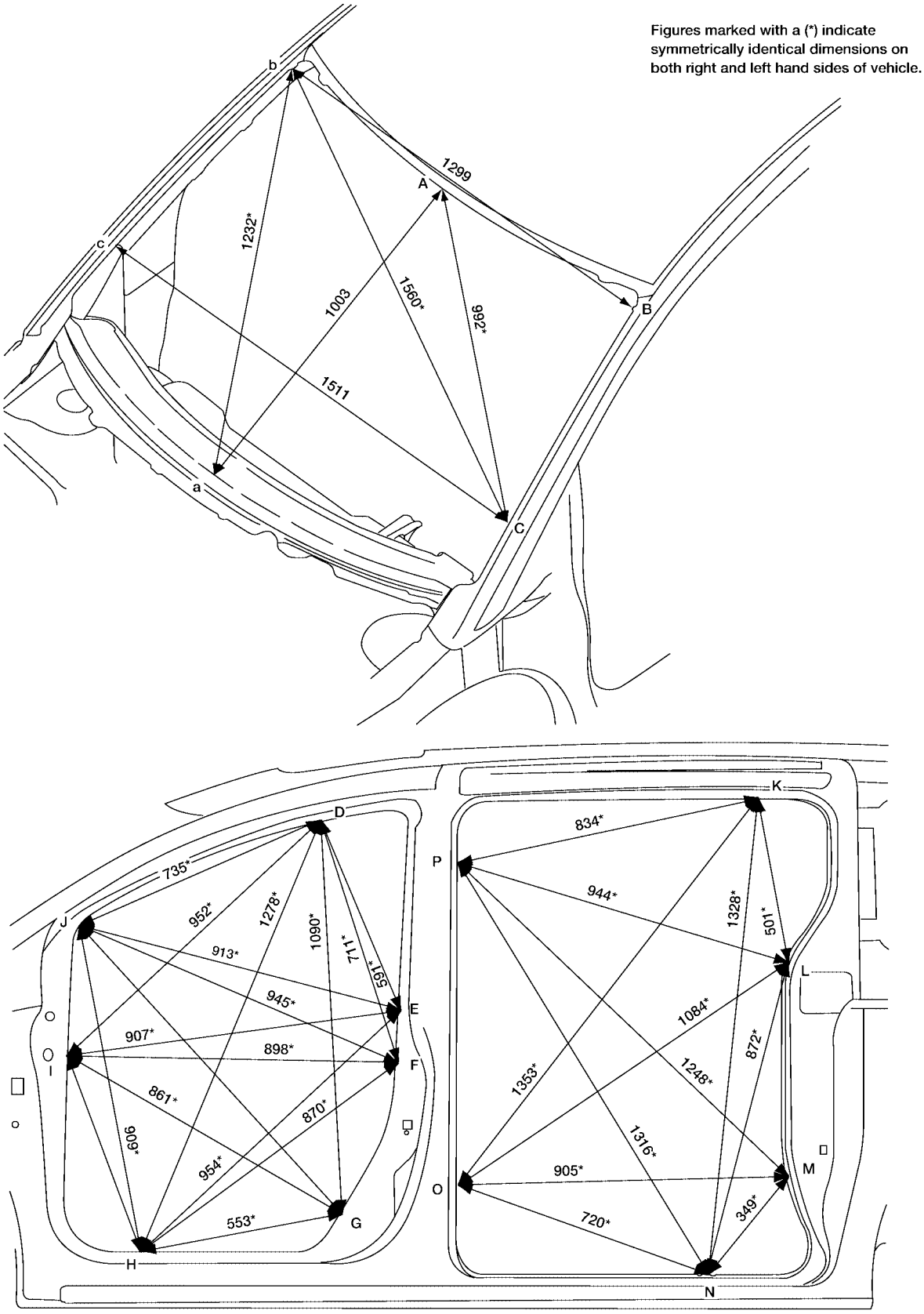
C, c
X : ±626
Y : 28
Z : 811



J, j
X : ±655
Y : 3023
Z : 430

WIIA0359E

PASSENGER COMPARTMENT MEASUREMENT

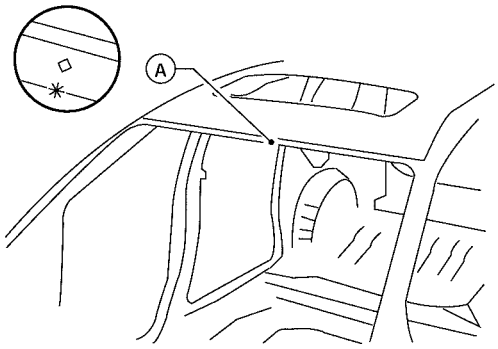


Unit: mm

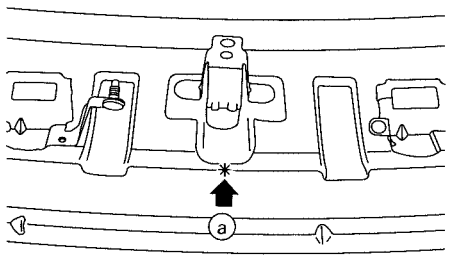
WIIA0537E

MEASUREMENT POINTS

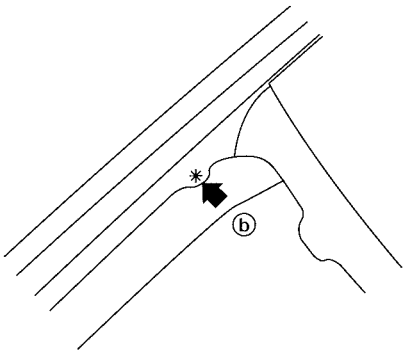
Ⓐ Front roof flange end of center position mark



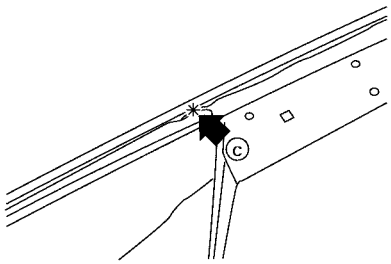
ⓐ Center of upper dash panel.



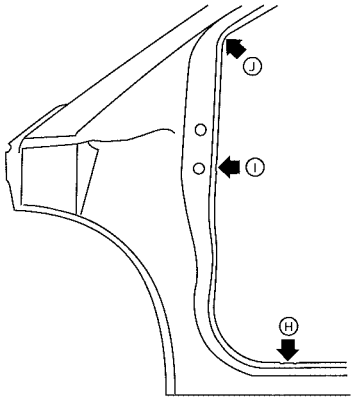
Ⓑ, ⓑ Outer front pillar upper position mark.



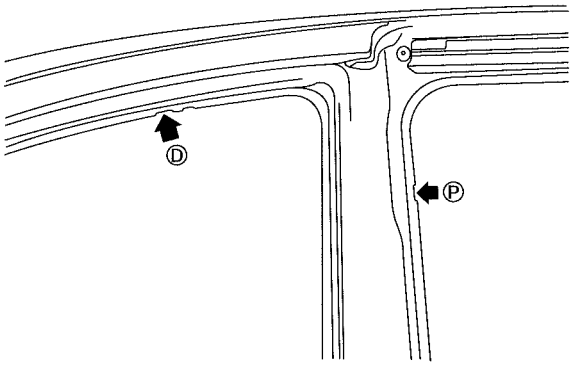
Ⓒ, ⓒ Inner front pillar lower reinforcement panel overlap.



Ⓗ, ⓗ Outer sill front fold over tab center.
Ⓘ, ⓘ Dash side pannel joggle center.
Ⓙ, ⓙ Center of pillar radius.

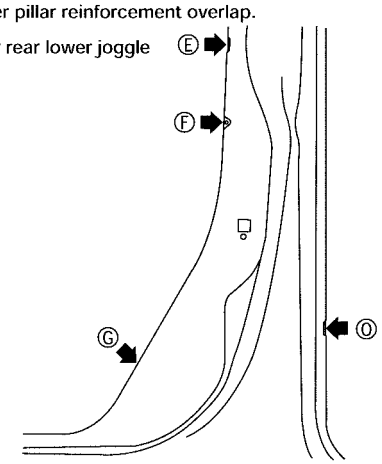


Ⓓ, ⓓ Upper door opening front joggle center.
Ⓟ, ⓟ Center pillar rear upper joggle center.

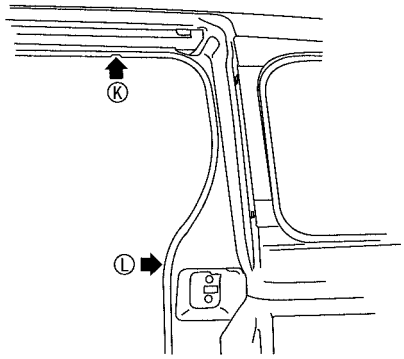


LIIA0862E

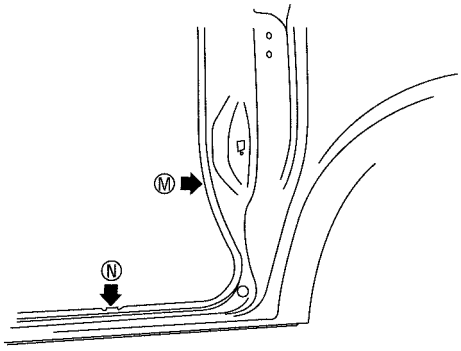
Ⓔ, ⓔ Center pillar lower joggle center.
Ⓕ, ⓕ Center pillar center position mark.
Ⓖ, ⓖ Lower center pillar reinforcement overlap.
Ⓞ, ⓞ Center pillar rear lower joggle center.



Ⓚ, ⓚ Upper sliding door opening rear joggle center.
Ⓛ, ⓘ Rear fender inner reinforcement upper panel overlap.



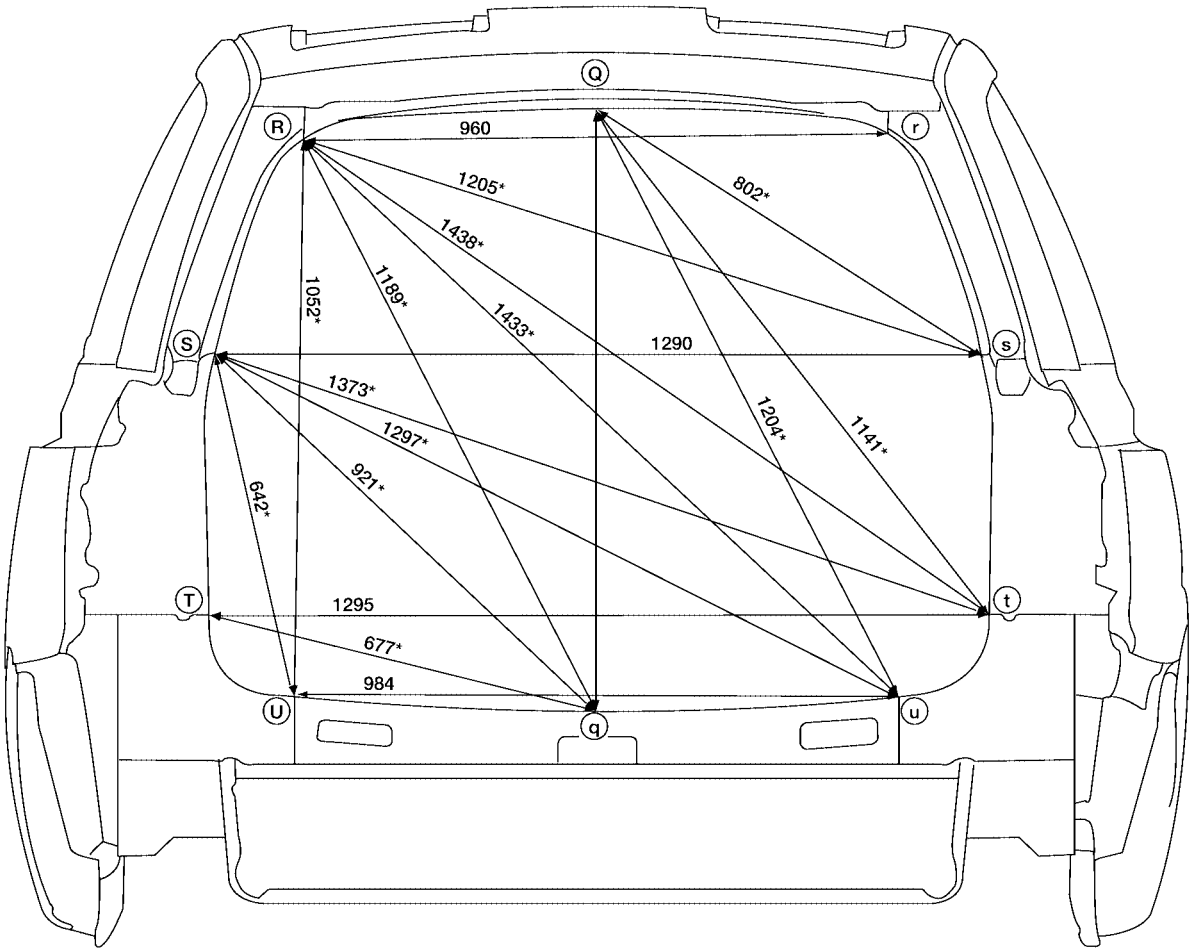
Ⓜ, ⓜ Outer sill rear fold over tab center.
Ⓝ, ⓝ Center pillar rear upper joggle center.



LIIA0903E

REAR BODY MEASUREMENT

Figures marked with a (*) indicate symmetrically identical dimensions on both right and left hand sides of vehicle.

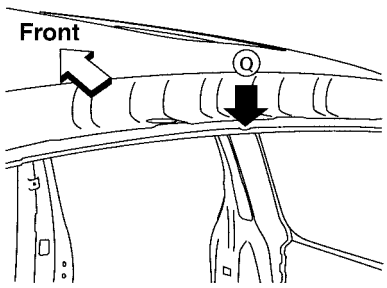


Unit: mm

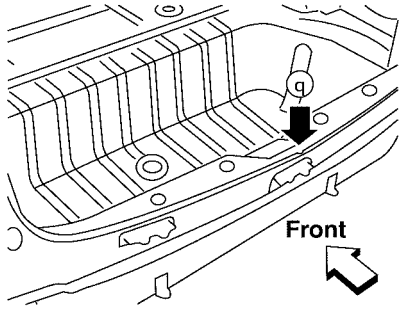
WIIA0539E

MEASUREMENT POINTS

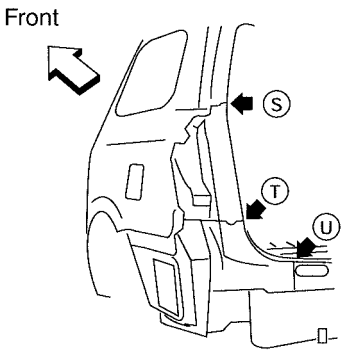
Ⓠ Rear roof flange center of indent.



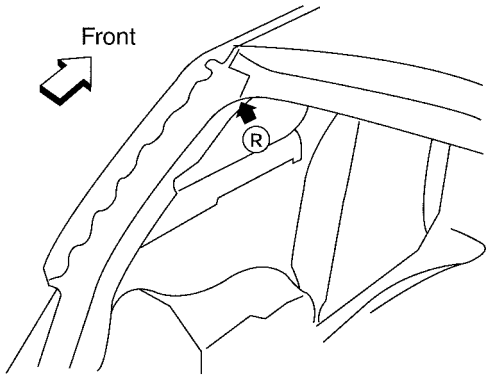
ⓠ Rear sill center nipple.



Ⓢ, ⓢ Middle pillar reinforcement panel overlap.
Ⓣ, ⓣ Lower pillar reinforcement panel overlap.
Ⓤ, ⓤ Rear sill and reinforcement panel overlap.



Ⓡ, ⓡ Rear pillar upper reinforcement and roof overlap..



LIIA0864E

Handling Precautions for Plastics

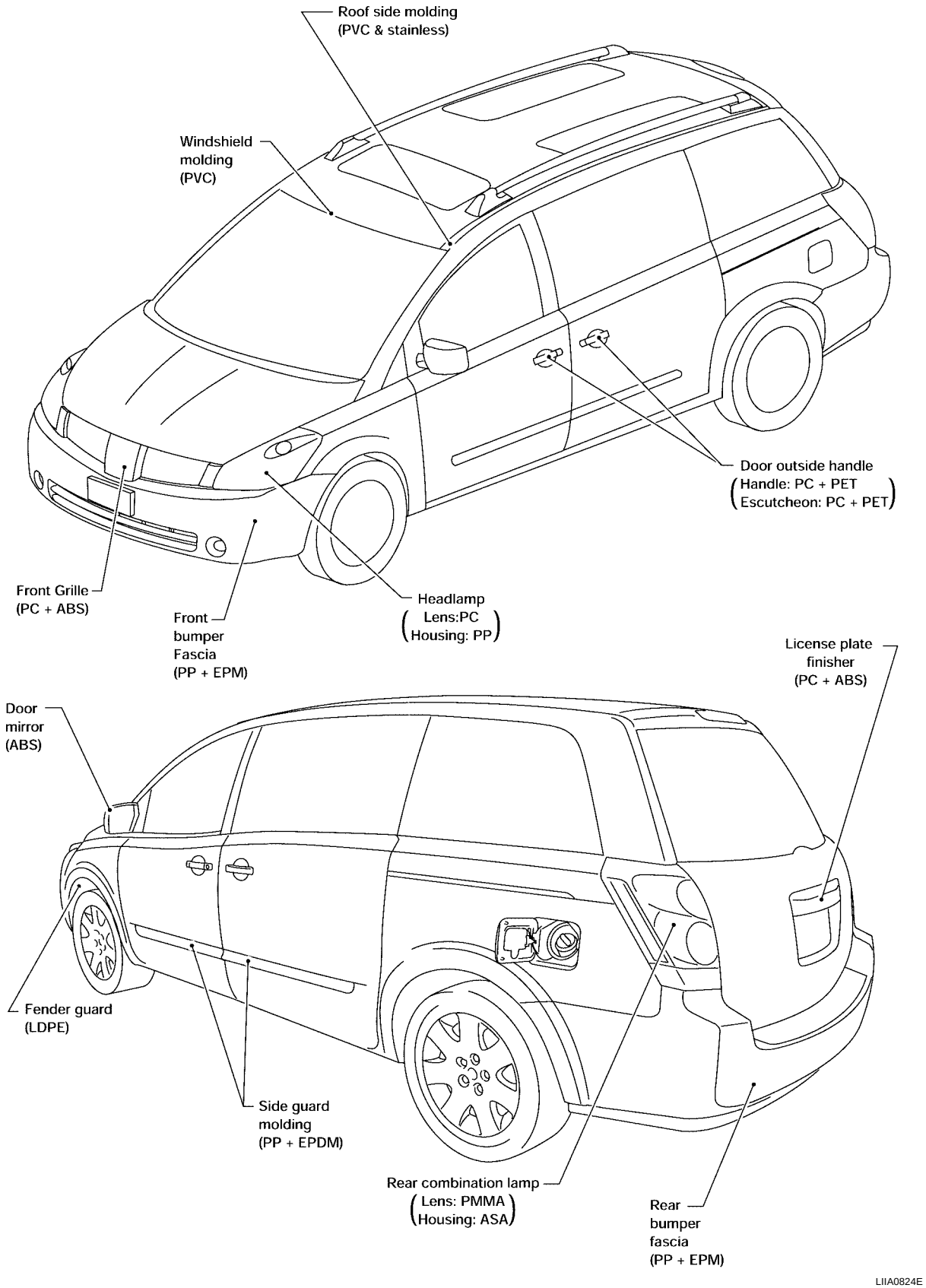
EIS007H4

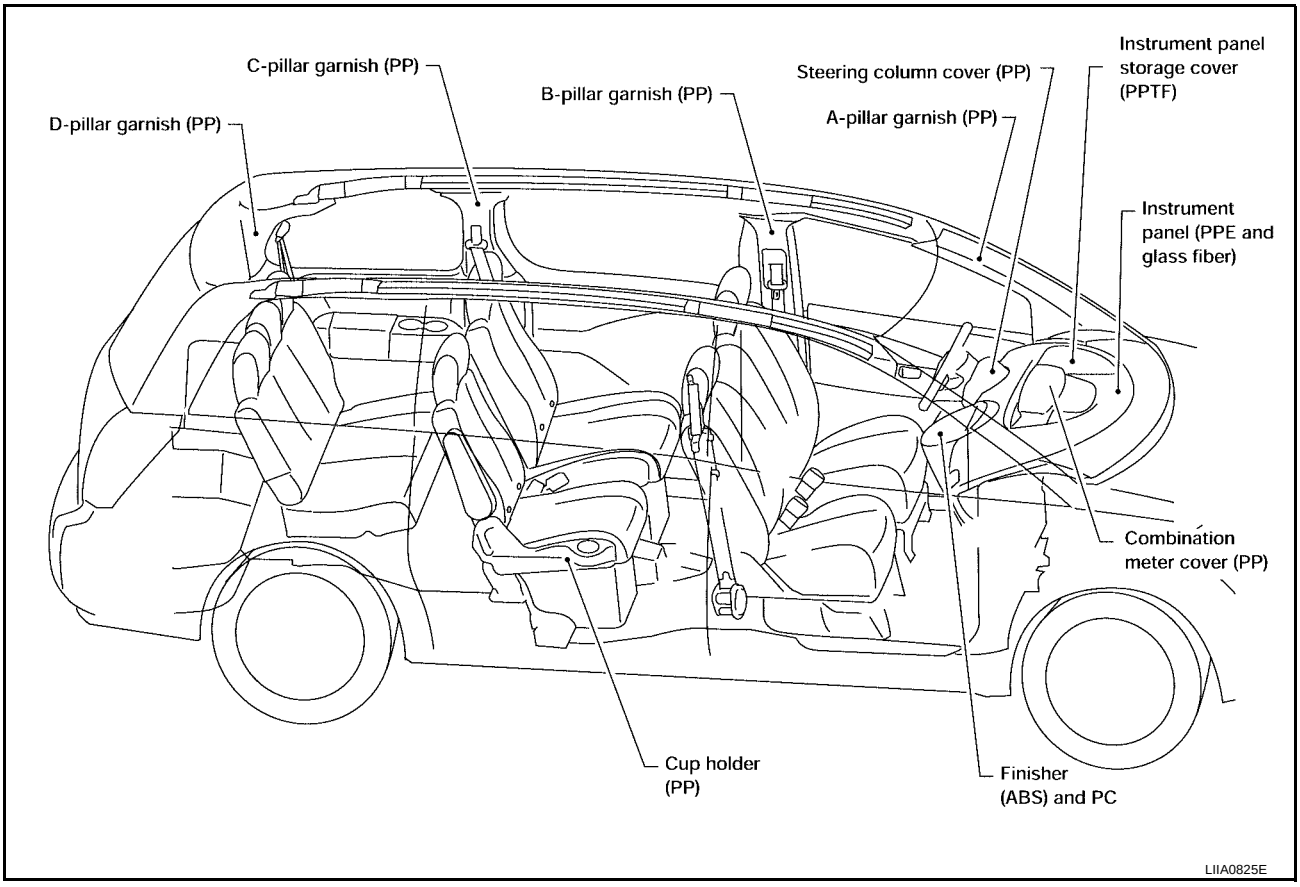
HANDLING PRECAUTIONS FOR PLASTICS

Abbre-viation	Material name	Heat resisting temperature °C (°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60 (140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Polyvinyl Chloride	80 (176)	Same as above.	Poison gas is emitted when burned.
EPM/ EPDM	Ethylene Propylene (Diene) rubber	80 (176)	Same as above.	Flammable
TPO/ TPR	Thermoplastic Olefine/ Thermoplastic Rubber	80 (176)	Same as above.	Flammable
PP	Polypropylene	90 (194)	Same as above.	Flammable, avoid battery acid.
UP	Polyester thermoset	90 (194)	Same as above.	Flammable
PS	Polystyrene	80 (176)	Avoid solvents.	Flammable
ABS	Acrylonitrile Butadiene Styrene resin	80 (176)	Avoid gasoline and solvents.	
AES	Acrylonitrile Ethylene Styrene	80 (176)	Same as above.	
PMMA	Polymethyl Methacrylate	85 (185)	Same as above.	
AAS	Acrylonitrile Acrylic Styrene	85 (185)	Same as above.	
AS	Acrylonitrile Styrene	85 (185)	Same as above.	
EVA	Polyvinyl Ethyl Acetate	90 (194)	Same as above.	
ASA	Acrylonitrile Styrene Acrylate	100 (222)	Same as above.	Flammable
PPO/ PPE	Polyphenylene Oxide/ Polyphenylene Ether	110 (230)	Same as above.	
PC	Polycarbonate	120 (248)	Same as above.	
PAR	Polyacrylate	180 (356)	Same as above.	
L-LDPE	Lenear Low Density PE	45 (100)	Gasoline and most solvents are harmless.	Flammable
PUR	Polyurethane	90 (194)	Same as above.	
TPU	Thermoplastic Urethane	110 (230)	Same as above.	
PPC	Polypropylene Composite	115 (239)	Same as above.	Flammable
POM	Polyacetal	120 (248)	Same as above.	Avoid battery acid.
PBT+PC	Polybutylene Terephthalate+Polycarbonate	120 (248)	Same as above.	Flammable
PA	Polyamide (Nylon)	140 (284)	Same as above.	Avoid immersing in water.
PBT	Polybutylene Terephthalate	140 (284)	Same as above.	
FRP	Fiber Reinforced Plastics	170 (338)	Same as above.	Avoid battery acid.
PET	Polyethylene Terephthalate	180 (356)	Same as above.	
PEI	Polyetherimide	200 (392)	Same as above.	

1. When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.
2. Plastic parts should be repaired and painted using methods suiting the materials' characteristics.

LOCATION OF PLASTIC PARTS




C-pillar garnish (PP)
D-pillar garnish (PP)
B-pillar garnish (PP)
Steering column cover (PP)
A-pillar garnish (PP)
Instrument panel storage cover (PPTF)
Instrument panel (PPE and glass fiber)
Combination meter cover (PP)
Cup holder (PP)
Finisher (ABS) and PC
LIIA0825E

Precautions in Repairing High Strength Steel

EIS007H5

High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

HIGH STRENGTH STEEL (HSS) USED IN NISSAN VEHICLES

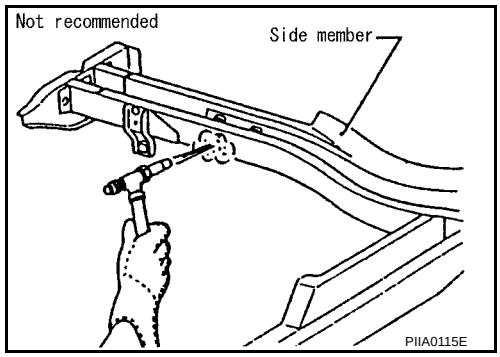
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm^2 (38kg/mm^2 ,54klb/sq in)	SP130	● Front side member assembly ● Upper hoodledge ● Upper pillar hinge brace assembly ● Rear side member extension ● Other reinforcements
785-981 N/mm^2 (80-100kg/mm^2 114-142klb/sq in)	SP150	● Front bumper reinforcement ● Rear bumper reinforcement

SP130 is the most commonly used HSS.
SP150 HSS is used only on parts that require much more strength.

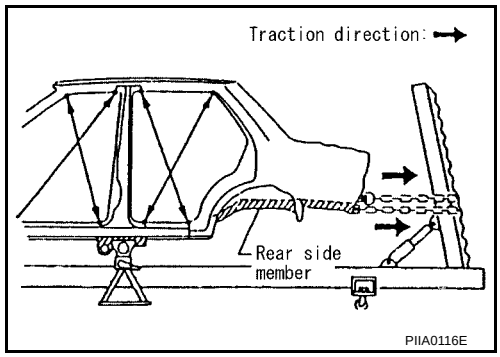
Read the following precautions when repairing HSS:

1. Additional points to consider

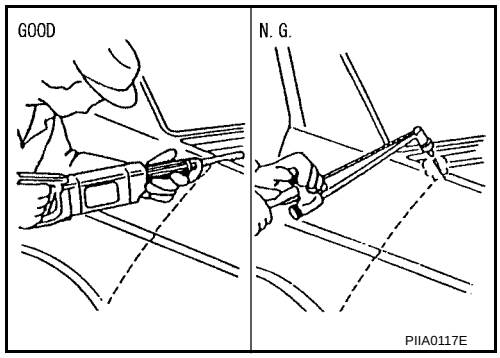
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).
  Verify heating temperature with a thermometer.
  (Crayon-type and other similar type thermometer are appropriate.)



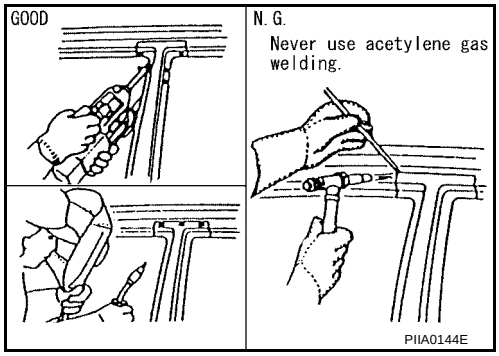
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



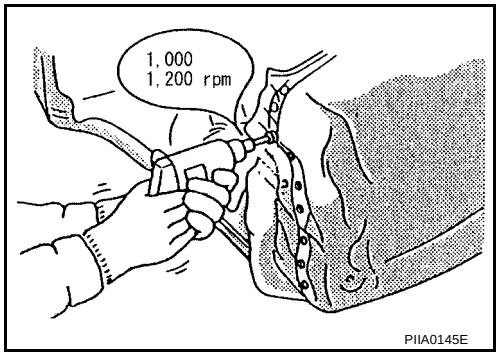
- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



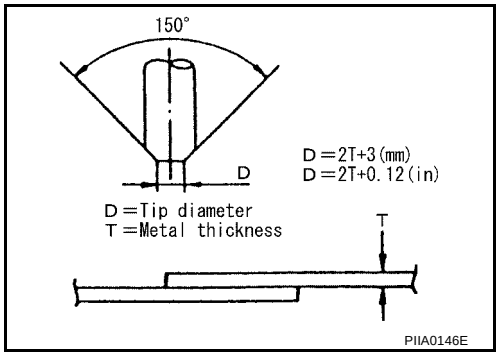
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



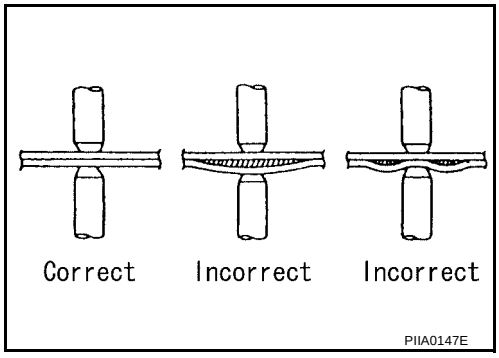
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.
- SP150 HSS panels with a tensile strength of 785 to 981 N/mm^2 (80 to 100 kg/mm^2, 114 to 142 klb/sq in), used as reinforcement in the door guard beams, is too strong to repair. When these HSS parts are damaged, the outer panels also sustain substantial damage; therefore, the assembly parts must be replaced.



2. Precautions in spot welding HSS
   This work should be performed under standard working conditions. Always note the following when spot welding HSS:
   - The electrode tip diameter must be sized properly according to the metal thickness.



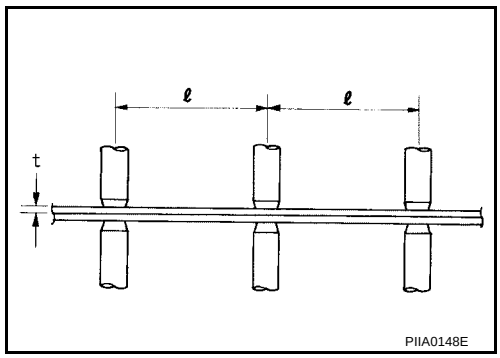
- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

Unit:mm

Thickness (t)	Minimum pitch (ℓ)
0.6 (0.024)	10 (0.39) or over
0.8 (0.031)	12 (0.47) or over
1.0 (0.039)	18 (0.71) or over
1.2 (0.047)	20 (0.79) or over
1.6 (0.063)	27 (1.06) or over
1.8 (0.071)	31 (1.22) or over



Foam Repair

EIS007H6

During factory body assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

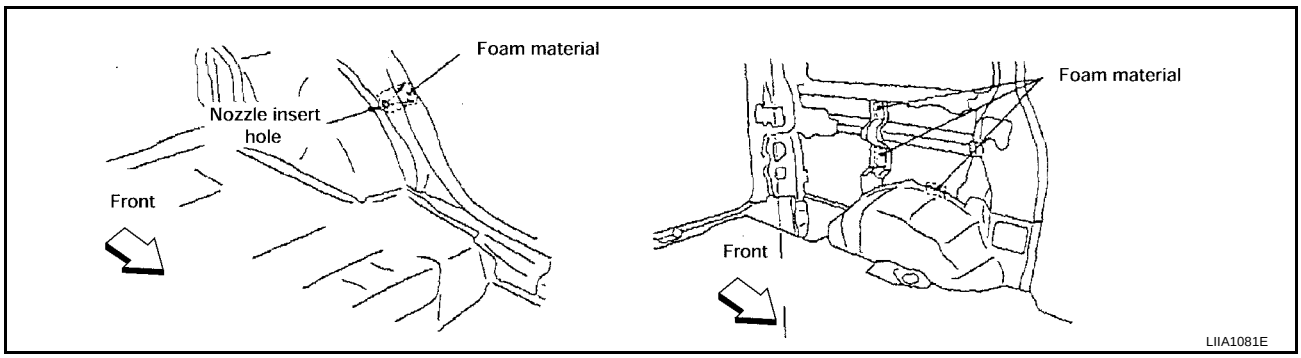
URETHANE FOAM APPLICATIONS

Use commercially available spray foam for sealant (foam material) repair of material used on vehicle. Read instructions on product for fill procedures.

FILL PROCEDURES

1. Fill procedures after installation of service part.

- Remove foam material remaining on vehicle side.
- Clean area in which foam was removed.
- Install service part.
- Insert nozzle into hole near fill area and fill foam material or fill in enough to close gap with the service part.



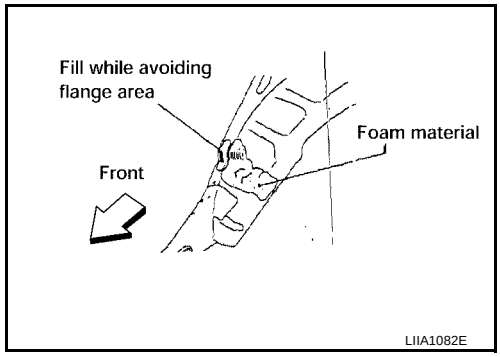
2. Fill procedures before installation of service part.

- Remove foam material remaining on vehicle side.
- Clean area in which foam was removed.
- Fill foam material on wheelhouse outer side.

NOTE:
Fill in enough to close gap with service part while avoiding flange area.

- Install service part.

NOTE:
Refer to label for information on working times.



Replacement Operations

EIS007H7

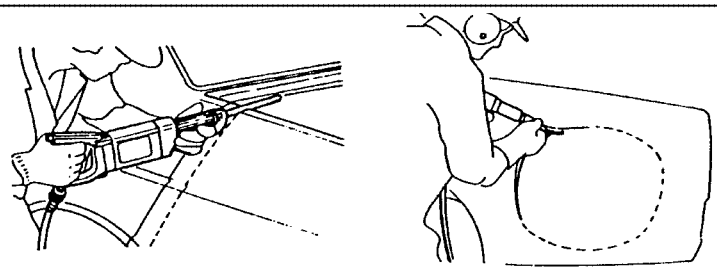
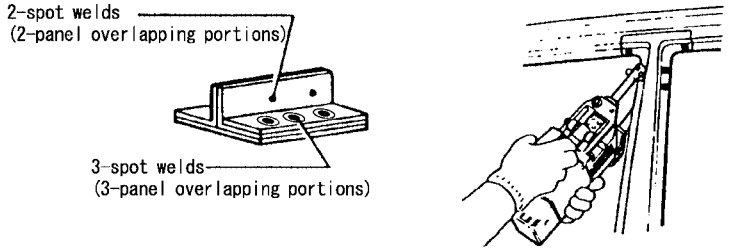
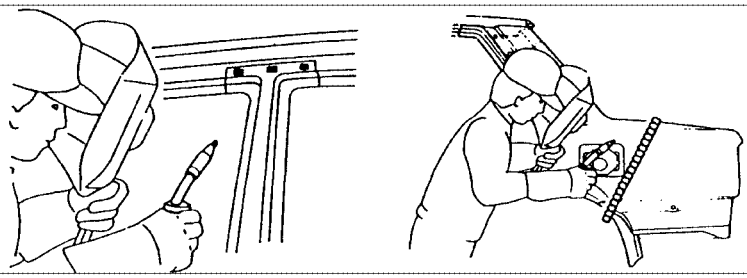
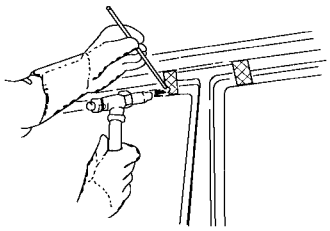
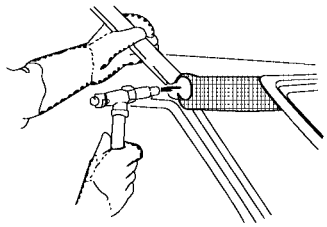
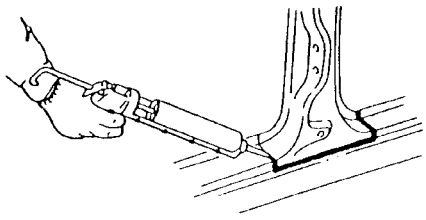
DESCRIPTION

This section is prepared for technicians who have attained a high level of skill and experience in repairing collision-damaged vehicles and also use modern service tools and equipment. Persons unfamiliar with body repair techniques should not attempt to repair collision-damaged vehicles by using this section.

Technicians are also encouraged to read Body Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle can be maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warnings, that are not including in this manual. Technicians should refer to both manuals to ensure proper repairs.

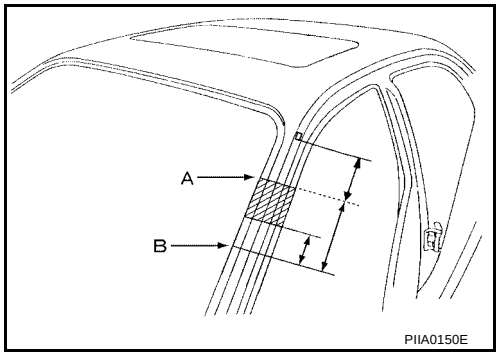
Please note that this information is prepared for worldwide usage, and as such, certain procedures may not apply in some regions or countries.

The symbols used in this section for cutting and welding / brazing operations are shown below.

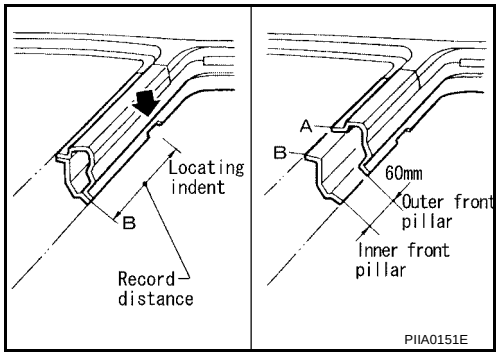
Saw cut or air chisel cut	
Spot weld 2-spot welds	
Spot weld 3-spot welds	
MIG plug weld	
MIG seam weld/ Point weld	
Brazing	
Soldering	
Sealing	

PIIA0149E

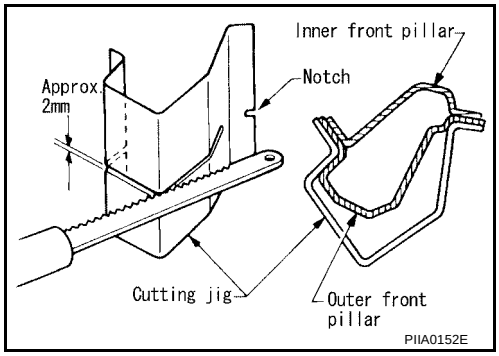
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- Determine cutting position and record distance from the locating indent. Use this distance when cutting the service part. Cut outer front pillar over 60 mm above inner front pillar cut position.

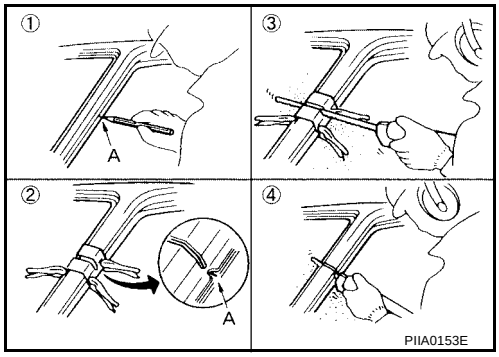


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- An example of cutting operation using a cutting jig is as follows.

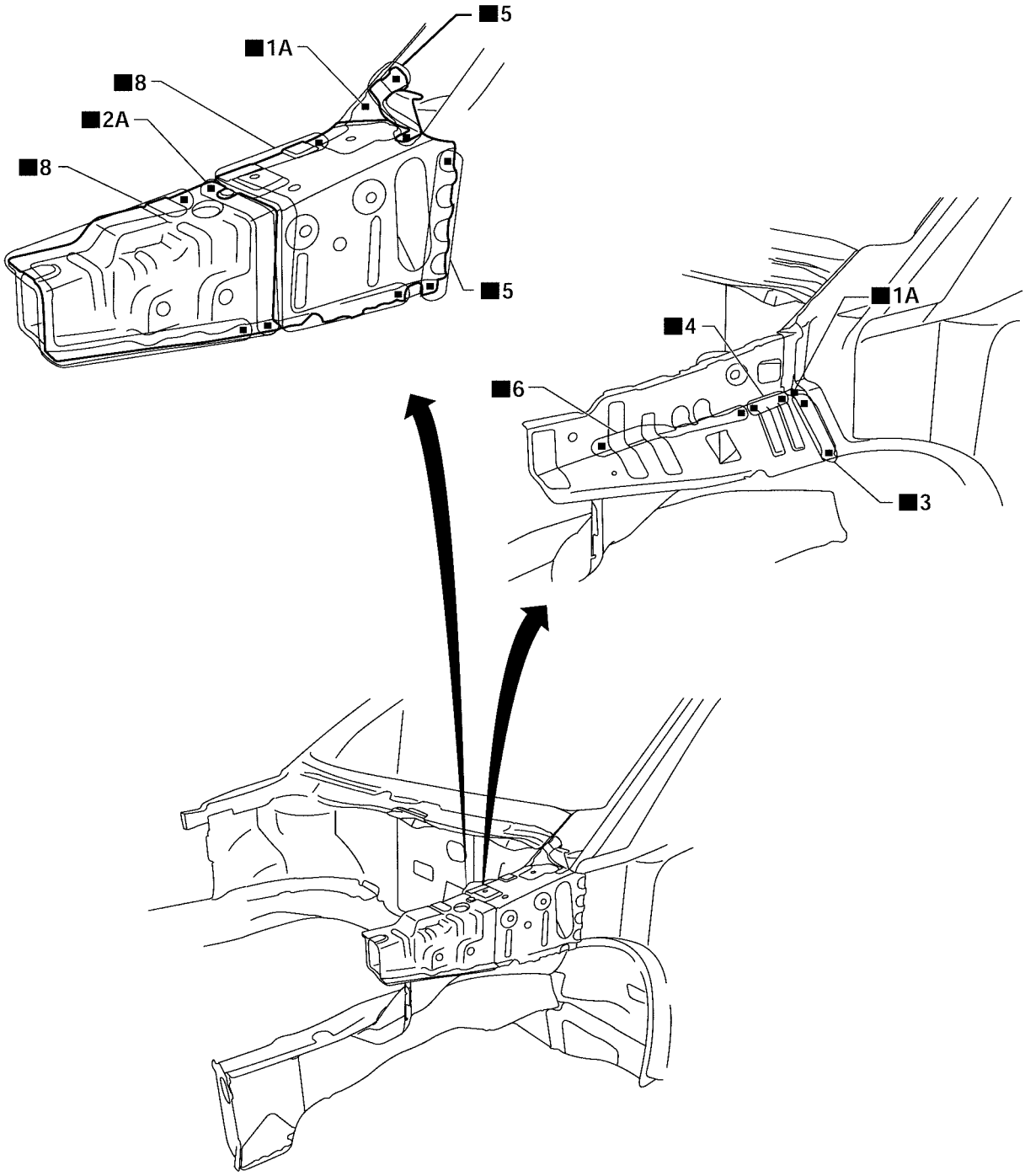
1. Mark cutting lines.
   A: Cut position of outer pillar
   B: Cut position of inner pillar
2. Align cutting line with notch on jig. Clamp jig to pillar.
3. Cut outer pillar along groove of jig. (At position A)
4. Remove jig and cut remaining portions.
5. Cut inner pillar at position B in same manner.



HOODLEDGE

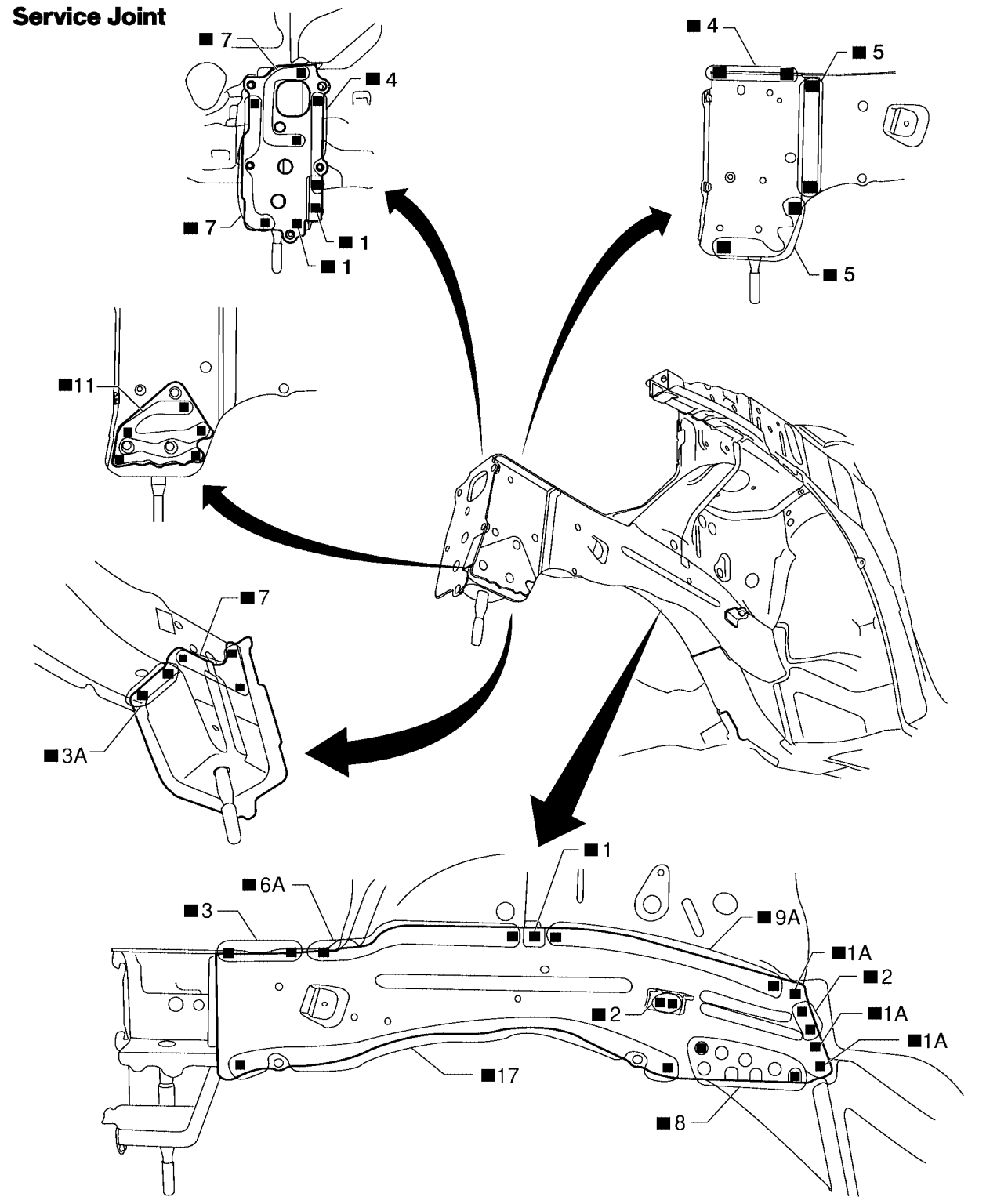
- Work after radiator core support has been removed.

Service Joint

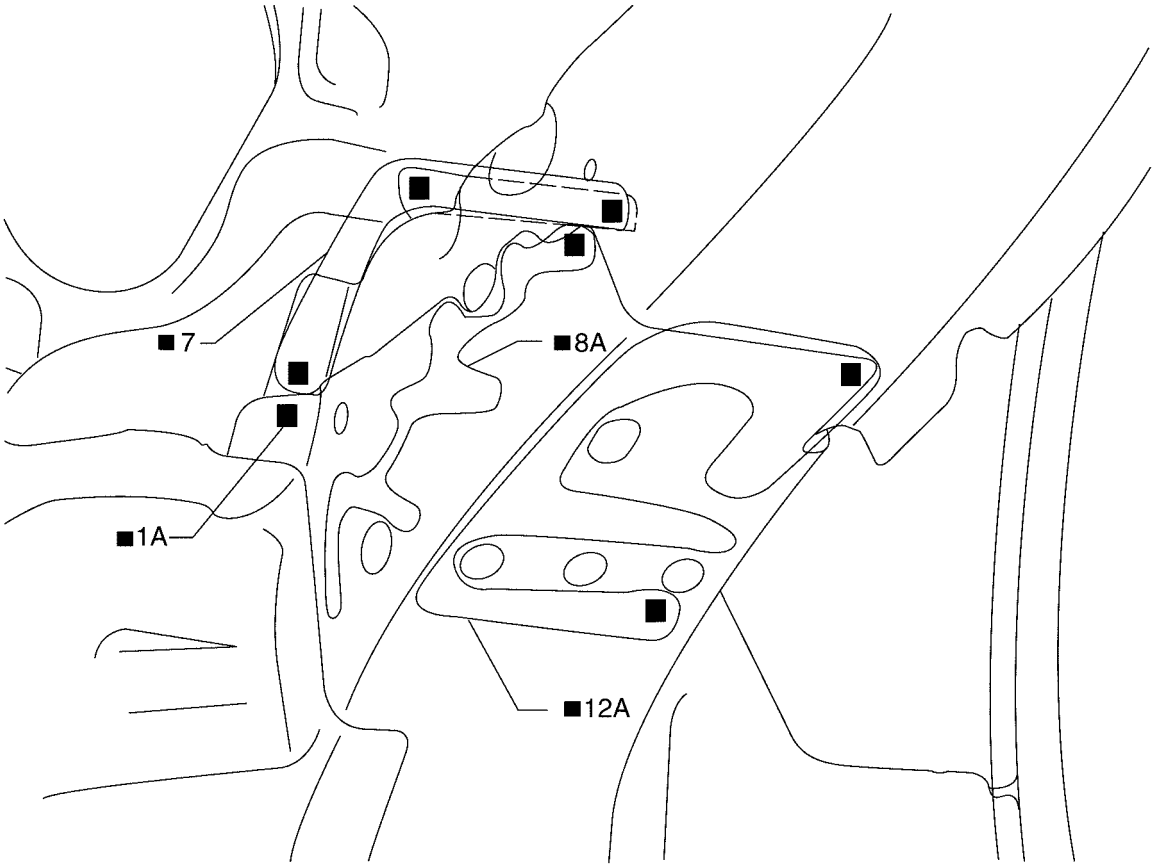


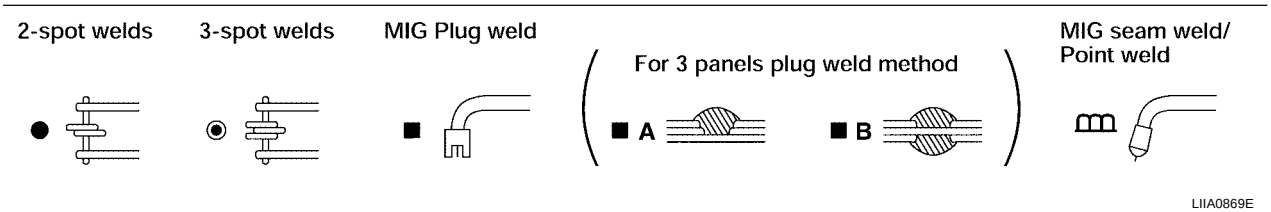
FRONT SIDE MEMBER

- Work after hoodledge and radiator core support have been removed.



Service Joint

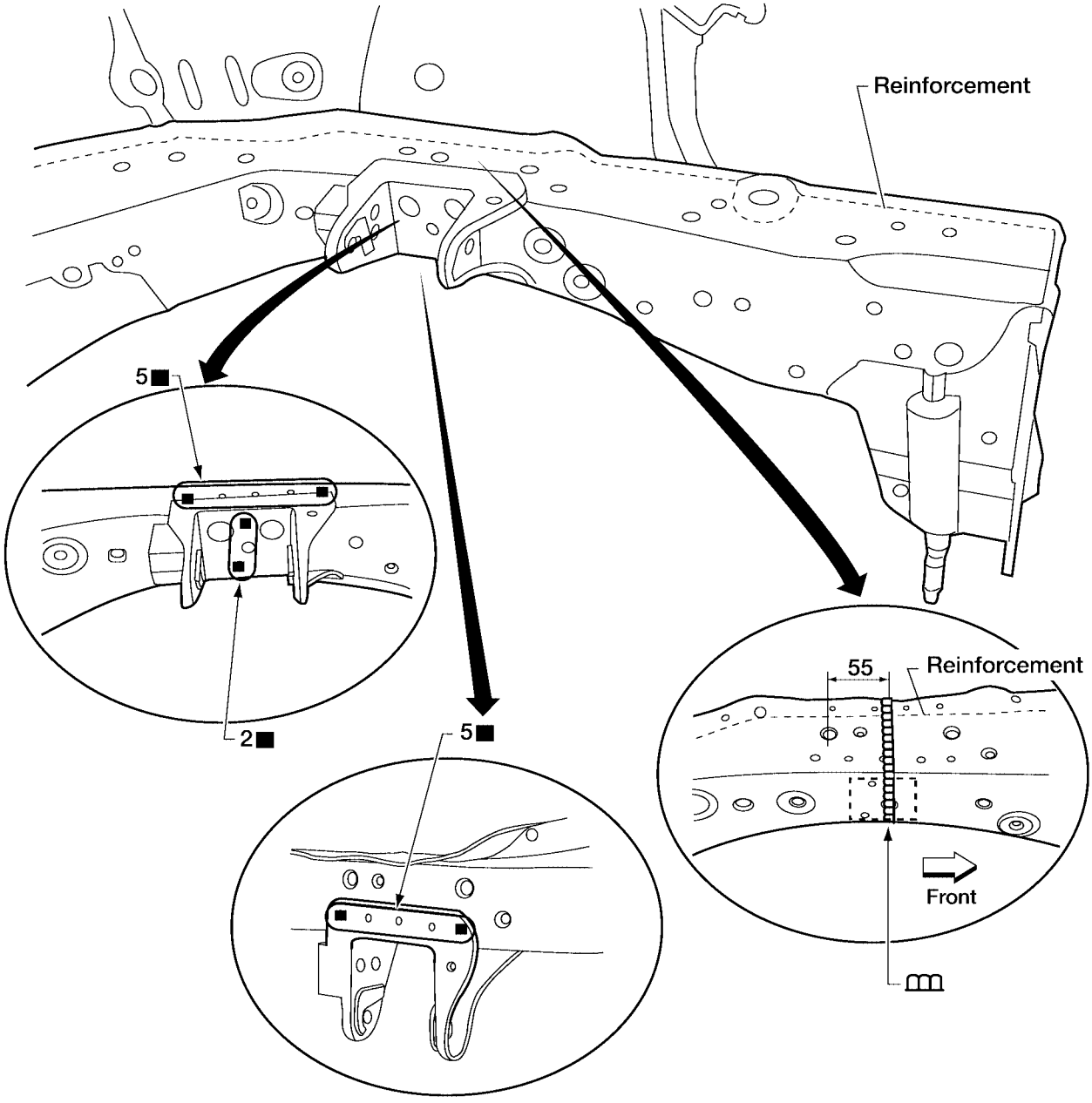




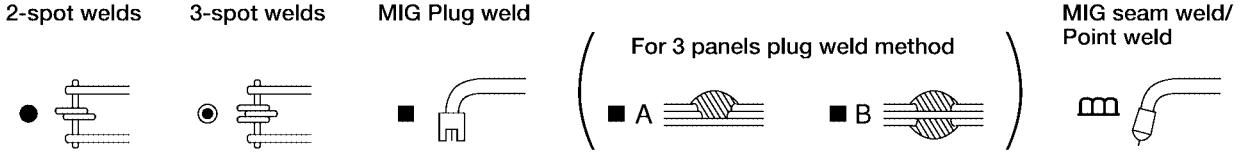
FRONT SIDE MEMBER (PARTIAL REPLACEMENT)

- Work after radiator core support has been removed.

Service Joint



Unit : mm

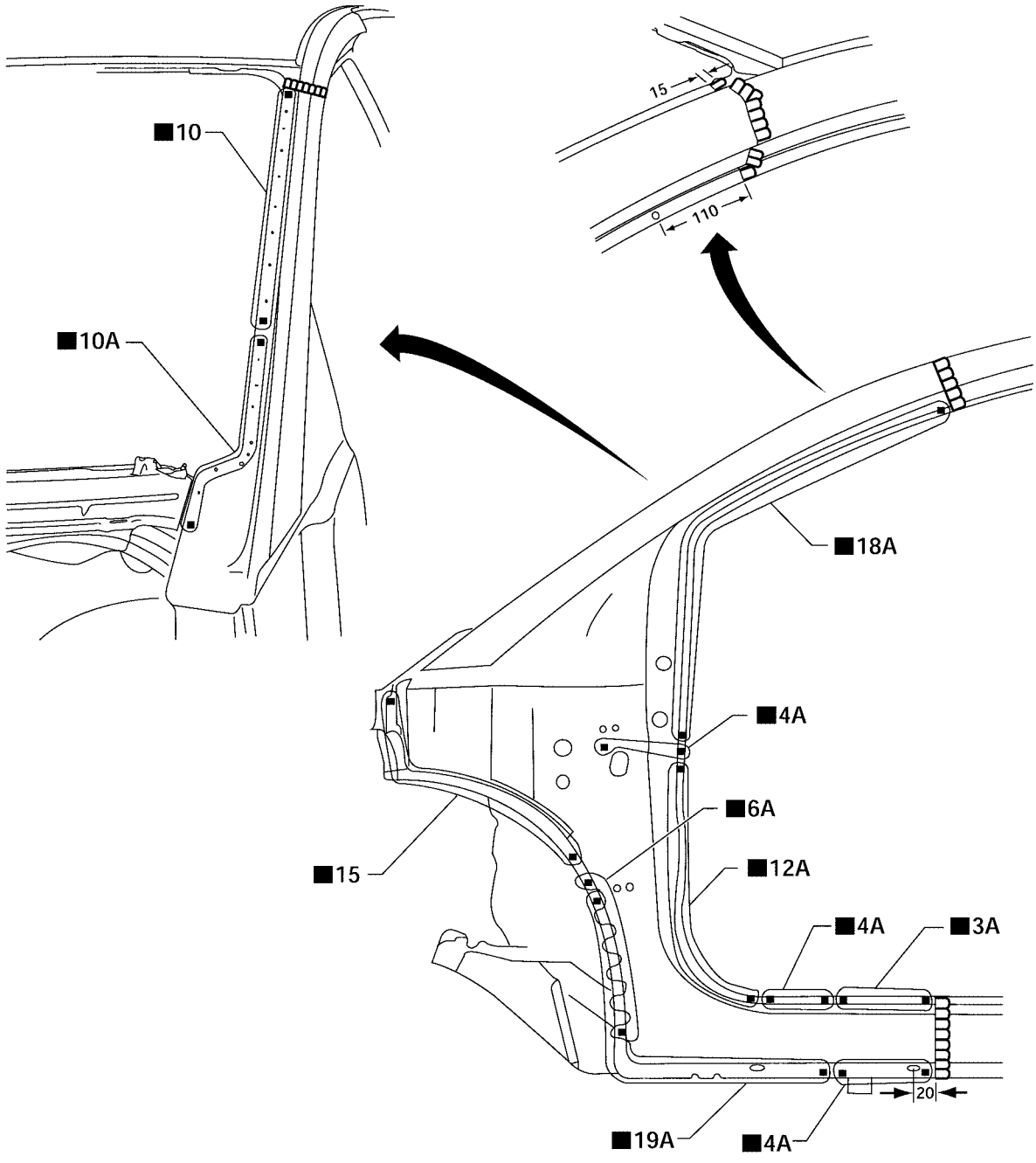


WIIA0361E

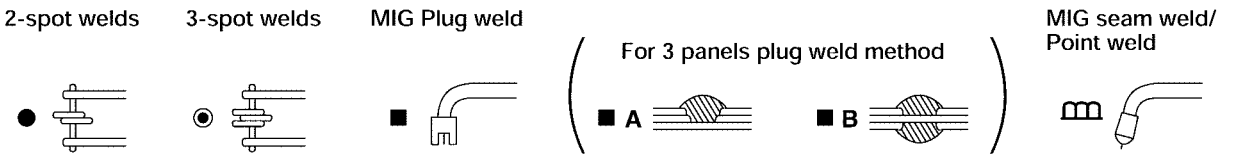
FRONT PILLAR

- Work after rear hoodledge reinforcement has been removed.

Service Joint

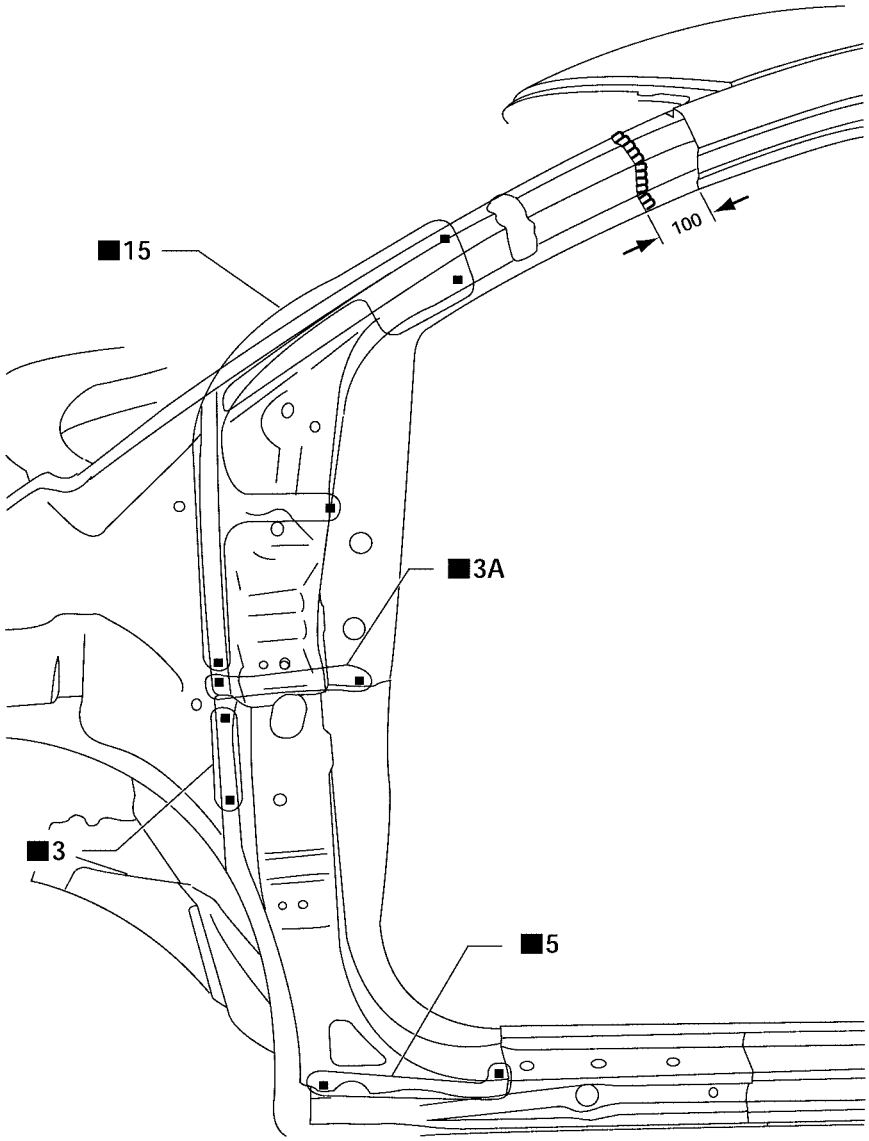


Unit: mm



LIIA0870E

Service Joint

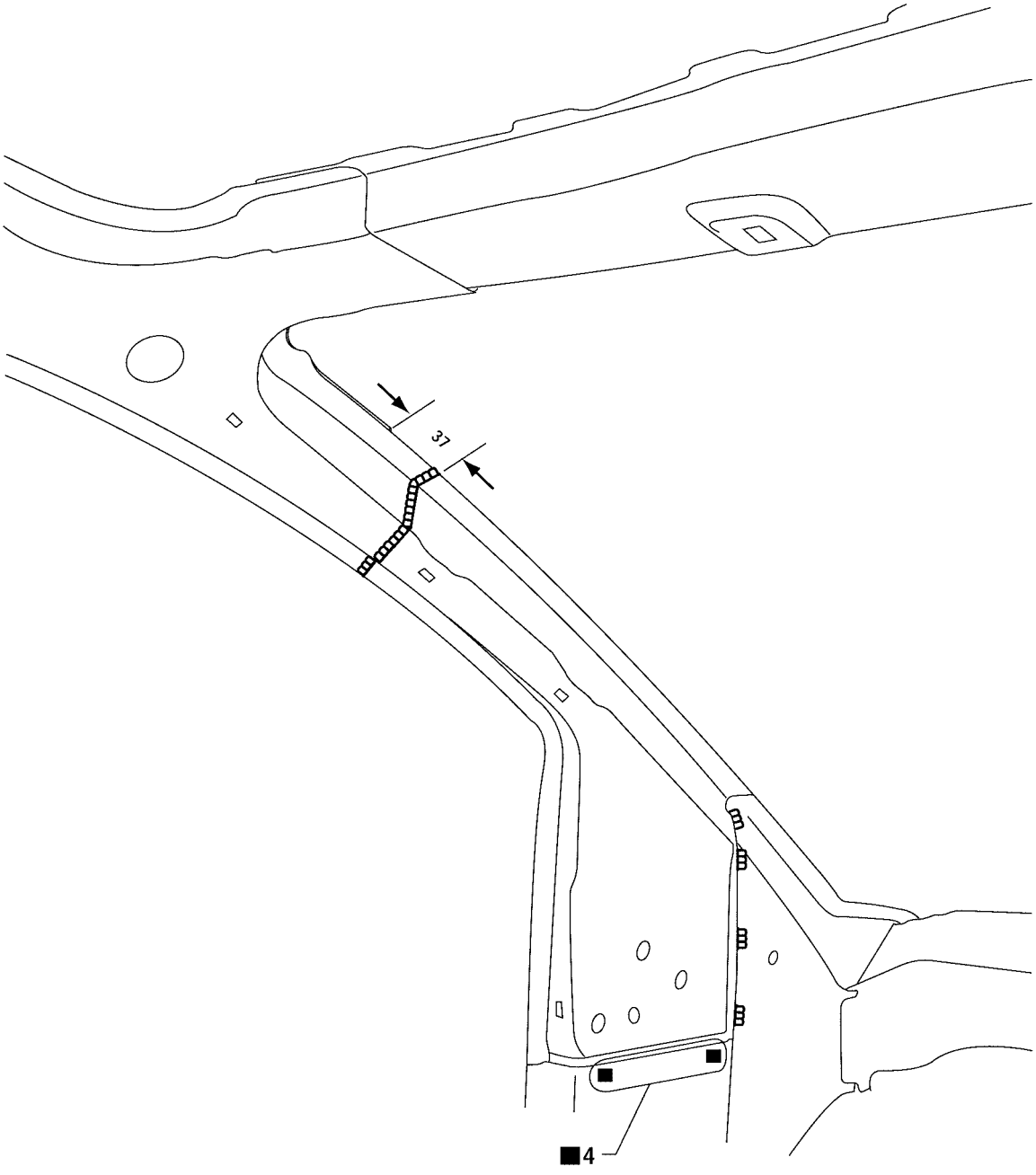


Unit: mm

2-spot welds	3-spot welds	MIG Plug weld	For 3 panels plug weld method	MIG seam weld/ Point weld
●	◉	■	■ A ■ B	

LIIA0871E

Service Joint



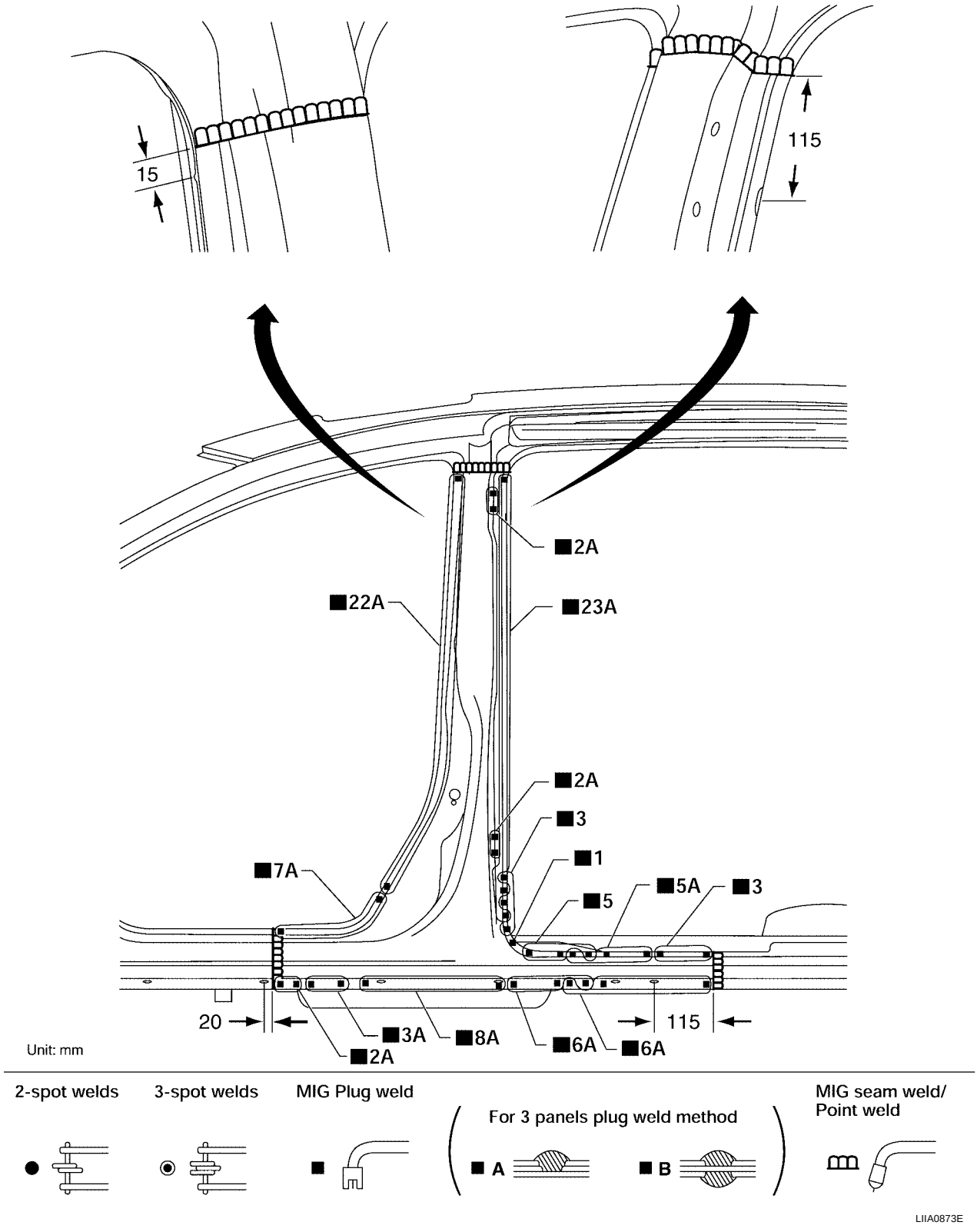
Unit: mm

2-spot welds | 3-spot welds | MIG Plug weld | For 3 panels plug weld method (A | B) | MIG seam weld/ Point weld

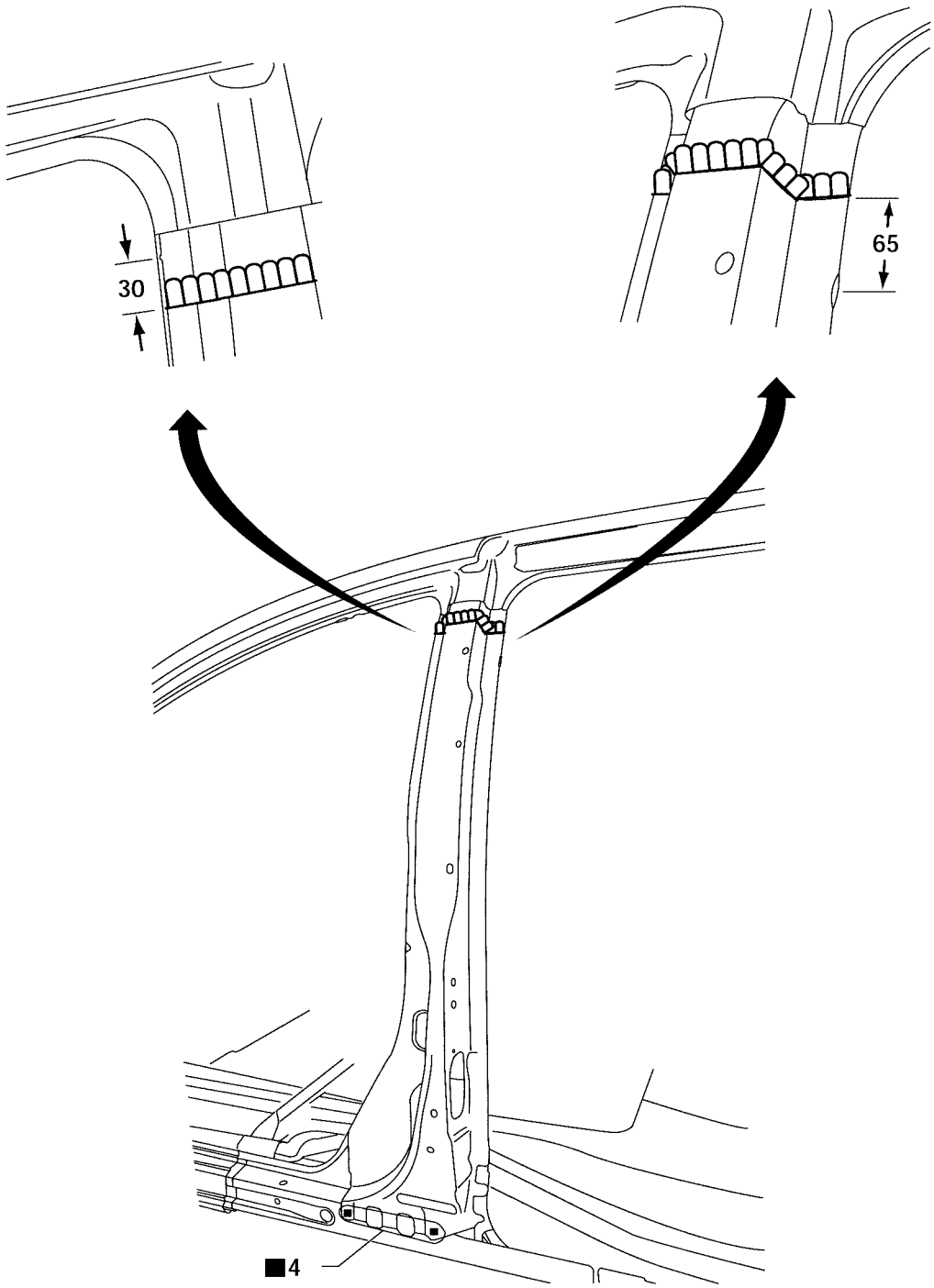
LIIA0872E

CENTER PILLAR

Service Joint



Service Joint

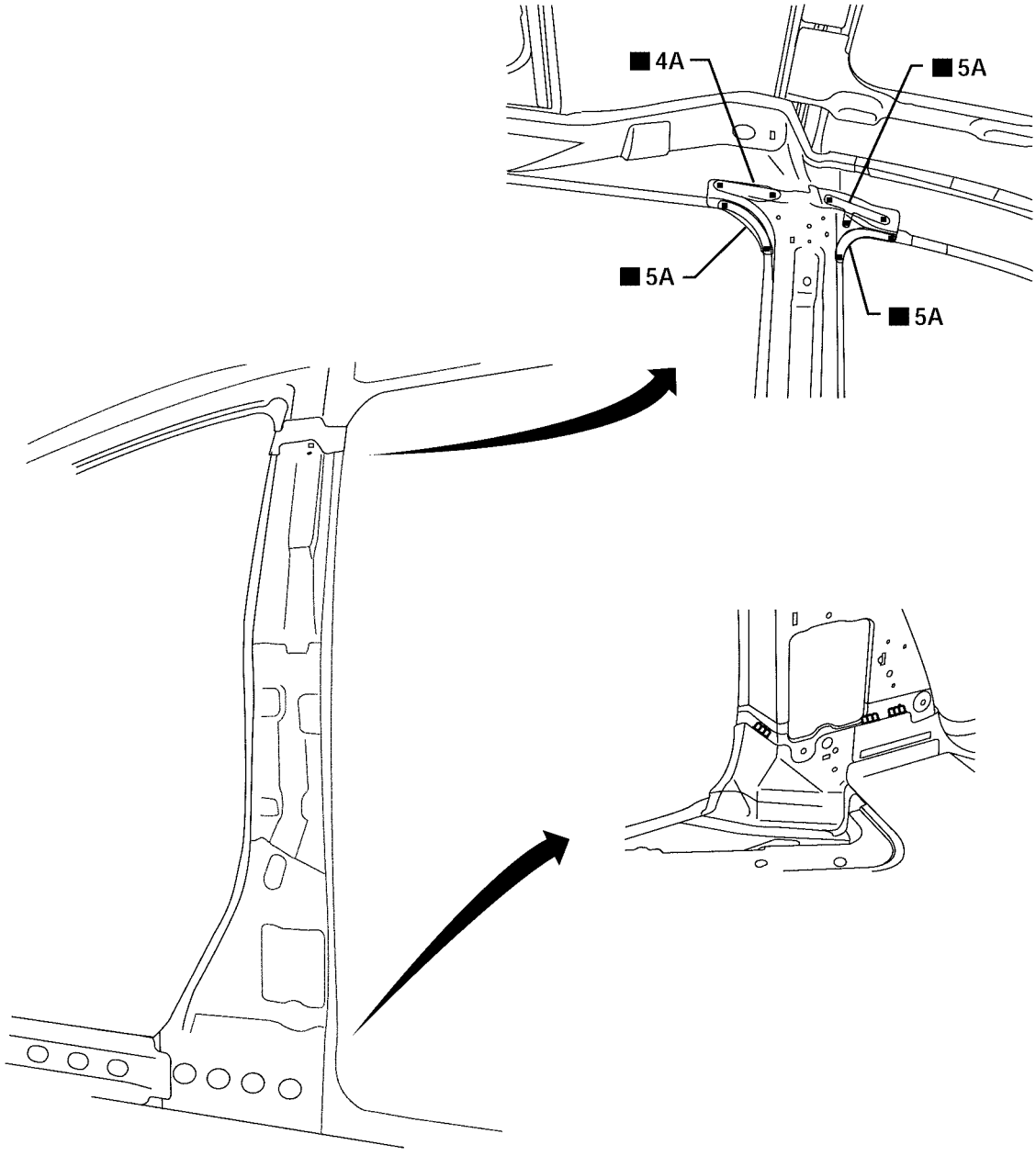


Unit: mm

2-spot welds	3-spot welds	MIG Plug weld	For 3 panels plug weld method	MIG seam weld/ Point weld
●	◉	■	■ A ■ B	

LIIA0874E

Service Joint

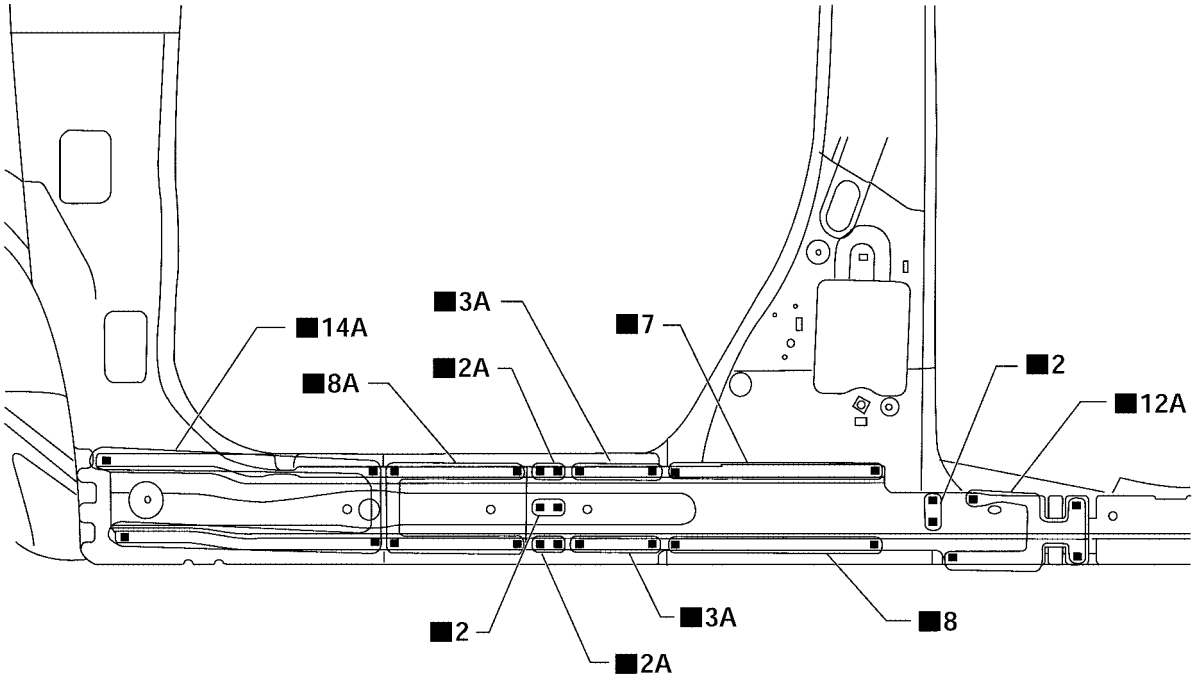


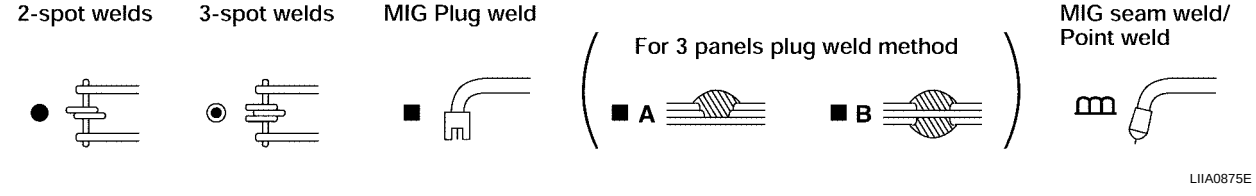
2-spot welds
3-spot welds
MIG Plug weld
For 3 panels plug weld method
■ A
■ B
MIG seam weld/ Point weld

LIIA0904E

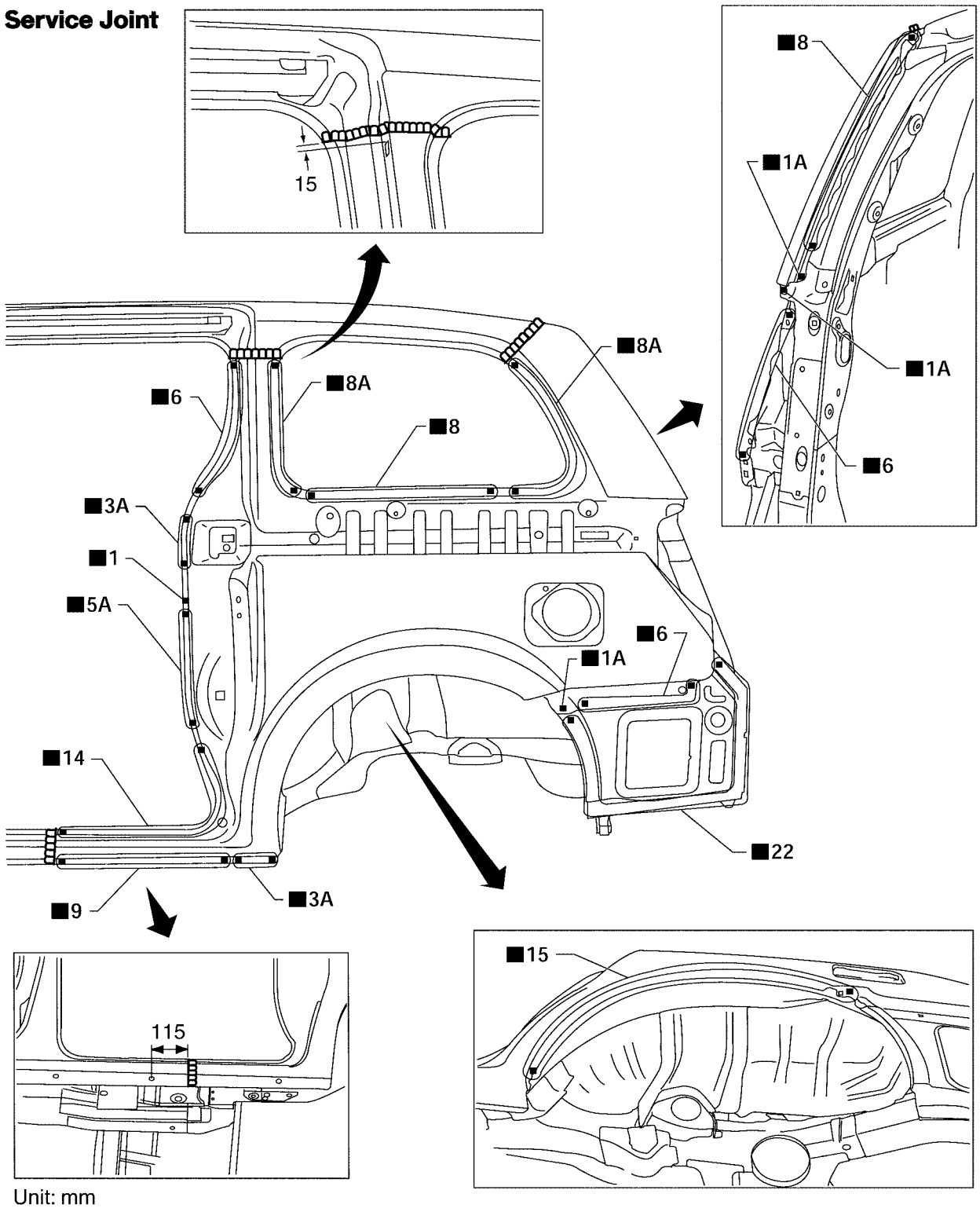
OUTER SILL

Service Joint



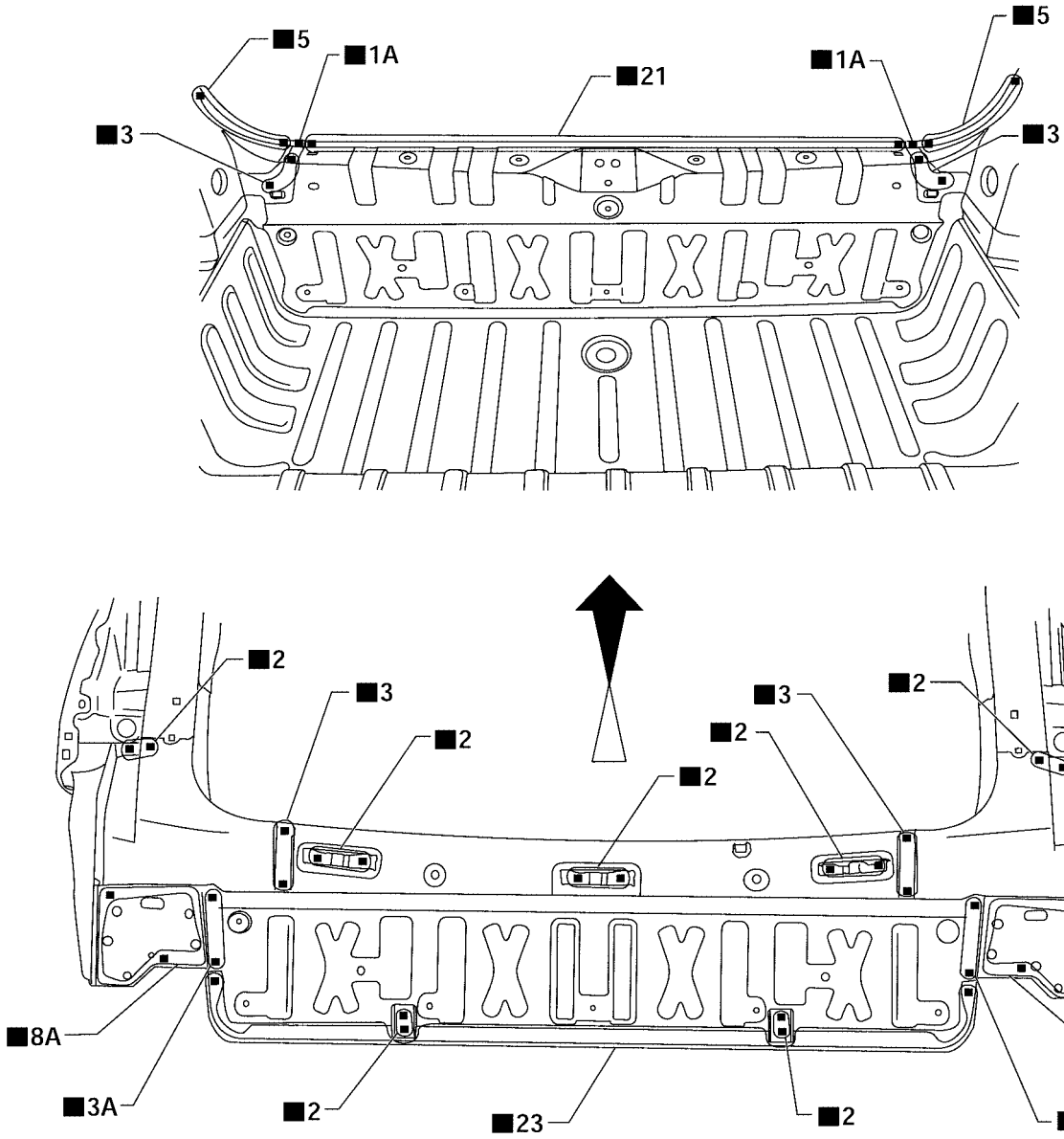


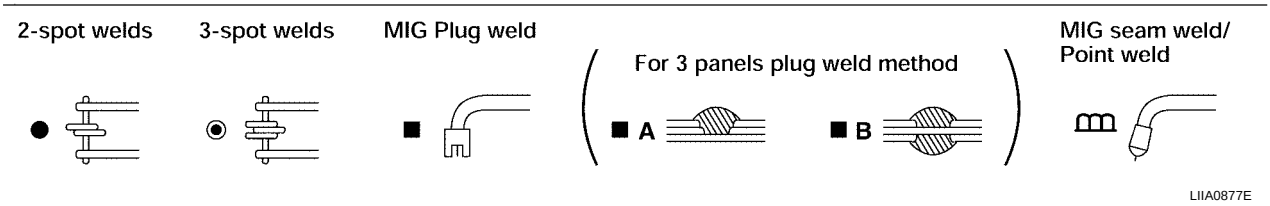
REAR FENDER


Service Joint
15
8
1A
8A
6
8A
8
3A
1
5A
6
1A
14
22
9
3A
115
15
Unit: mm
2-spot welds
3-spot welds
MIG Plug weld
For 3 panels plug weld method
A
B
MIG seam weld/
Point weld
LIIA0876E

REAR PANEL

Service Joint



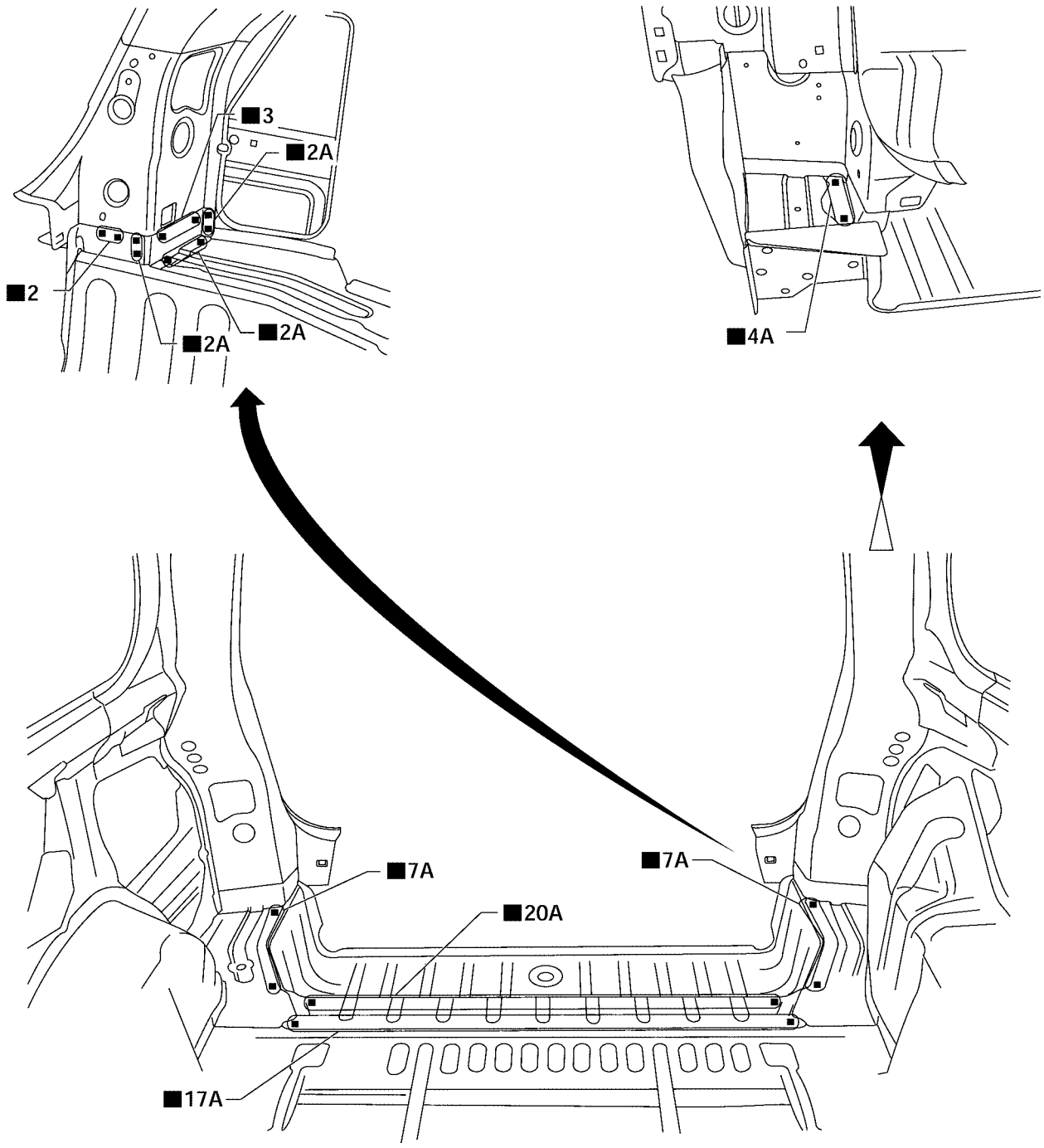


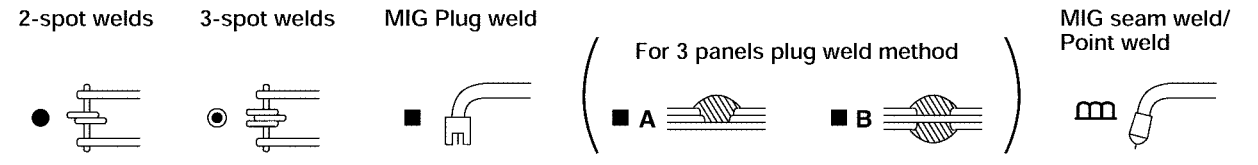
LIIA0877E

REAR FLOOR REAR

- Work after rear panel has been removed.

Service Joint





LIIA0878E

REAR SIDE MEMBER EXTENSION

- Work after rear panel and rear end crossmember have been removed.

Service Joint