SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

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

EIS003EM

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

EIS001PF

- 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.

Wiring Diagnosis and Trouble Diagnosis

EIS001PG

When you read wiring diagrams, refer to the following:

- GI-12, "How to Read Wiring Diagrams"
- PG-4, "POWER SUPPLY ROUTING CIRCUIT"

When you perform trouble diagnosis, refer to the following:

- GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"
- GI-25, "How to Perform Efficient Diagnosis for an Electrical Incident"
  Check for any Service bulletins before servicing the vehicle.

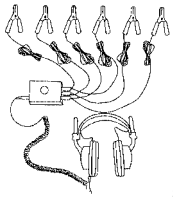
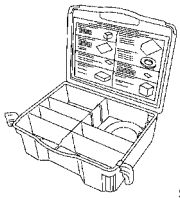
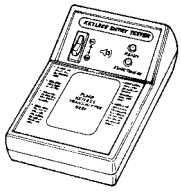
PREPARATION

PFP:00002

Special service tool

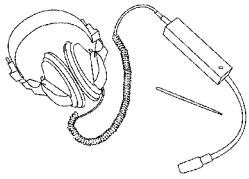
EIS001PH

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 key fobs

Commercial Service Tool

EIS001PI

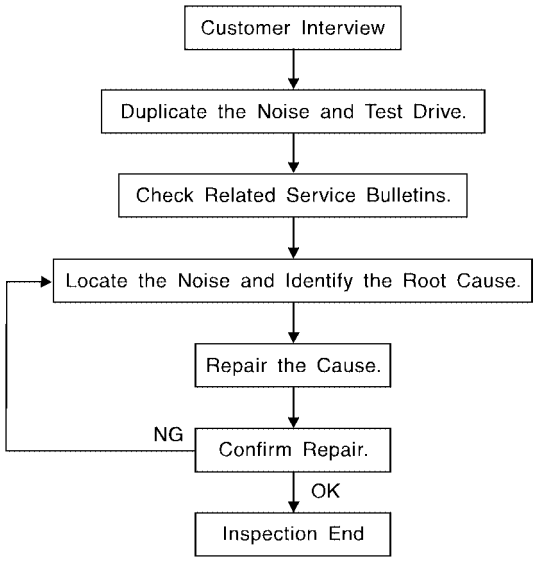
(Kent-Moore No.) Tool name	Description
(J-39565) Engine ear  SIIA0995E	Locating the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

EIS003PN



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-10, "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-8, "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

EIS003PO

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.

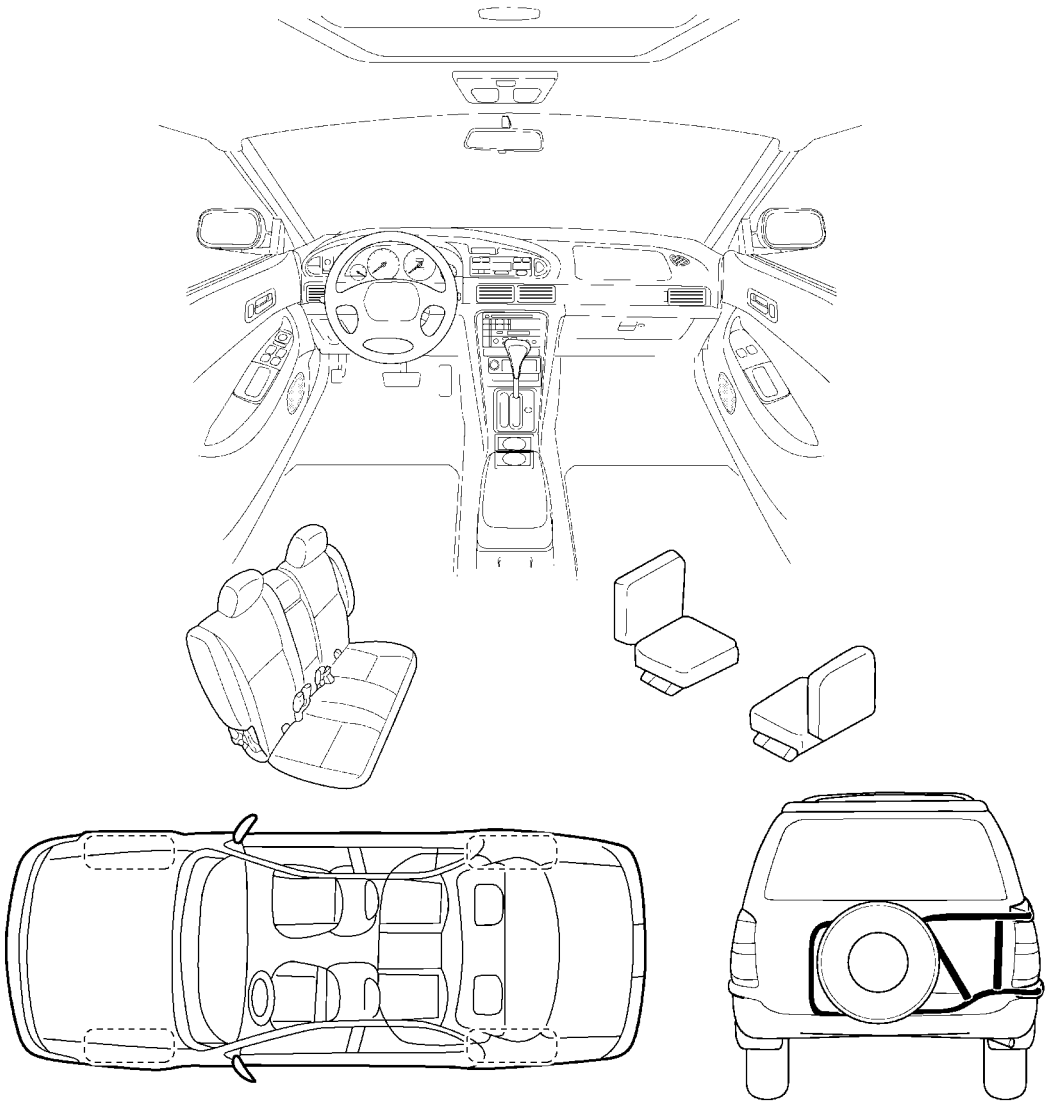
Diagnostic Worksheet

EIS003PP

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Nissan Customer:
We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan 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.

I. WHERE DOESTHE 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 the back 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.

LIWA0276E

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

_____

_____

II. WHEN DOES IT OCCUR? (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 sun
❑ when it is raining or wet
❑ dry or dusty conditions
❑ other: _____

III. WHEN DRIVING:

❑ through driveways
❑ over rough roads
❑ over speed bumps
❑ only at 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 on a 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: _____

SBT844

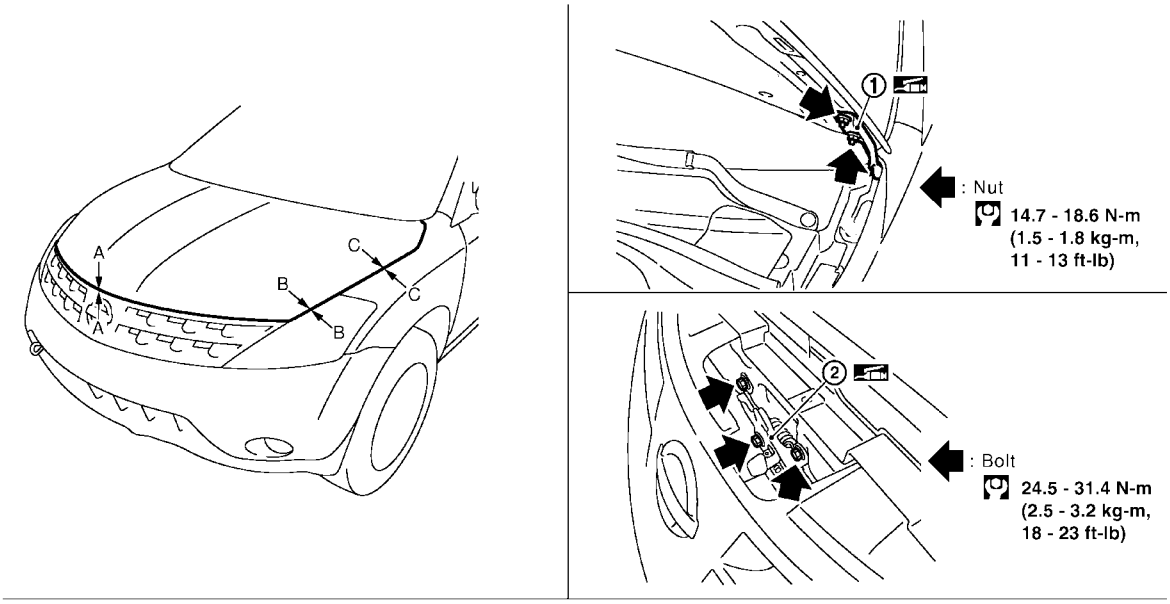
This form must be attached to Work Order

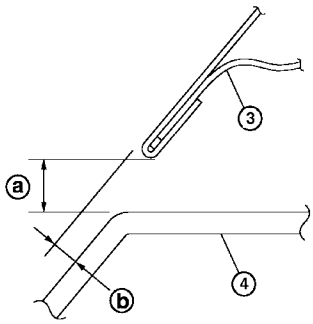
HOOD

PFP:F5100

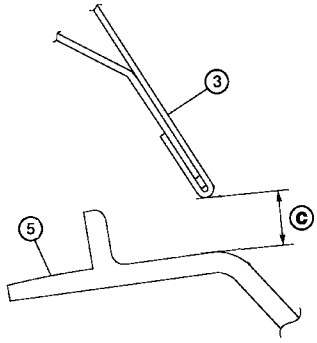
Fitting Adjustment

EIS0021K

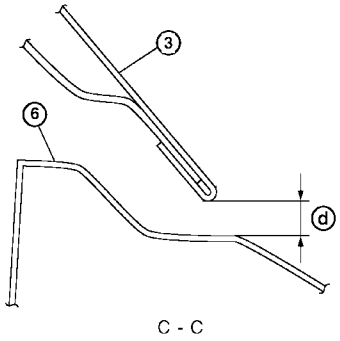




A - A



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.

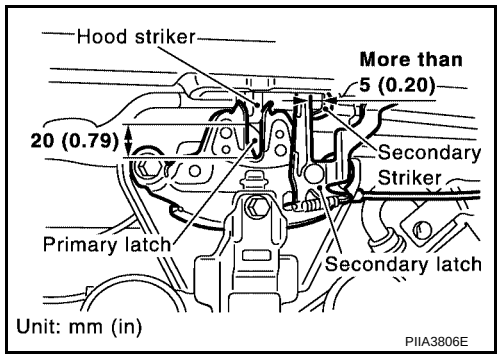
Hood and head lamp (B–B) : Less than 9.3 mm

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, approximately 3 kg (29 N, 7lb).

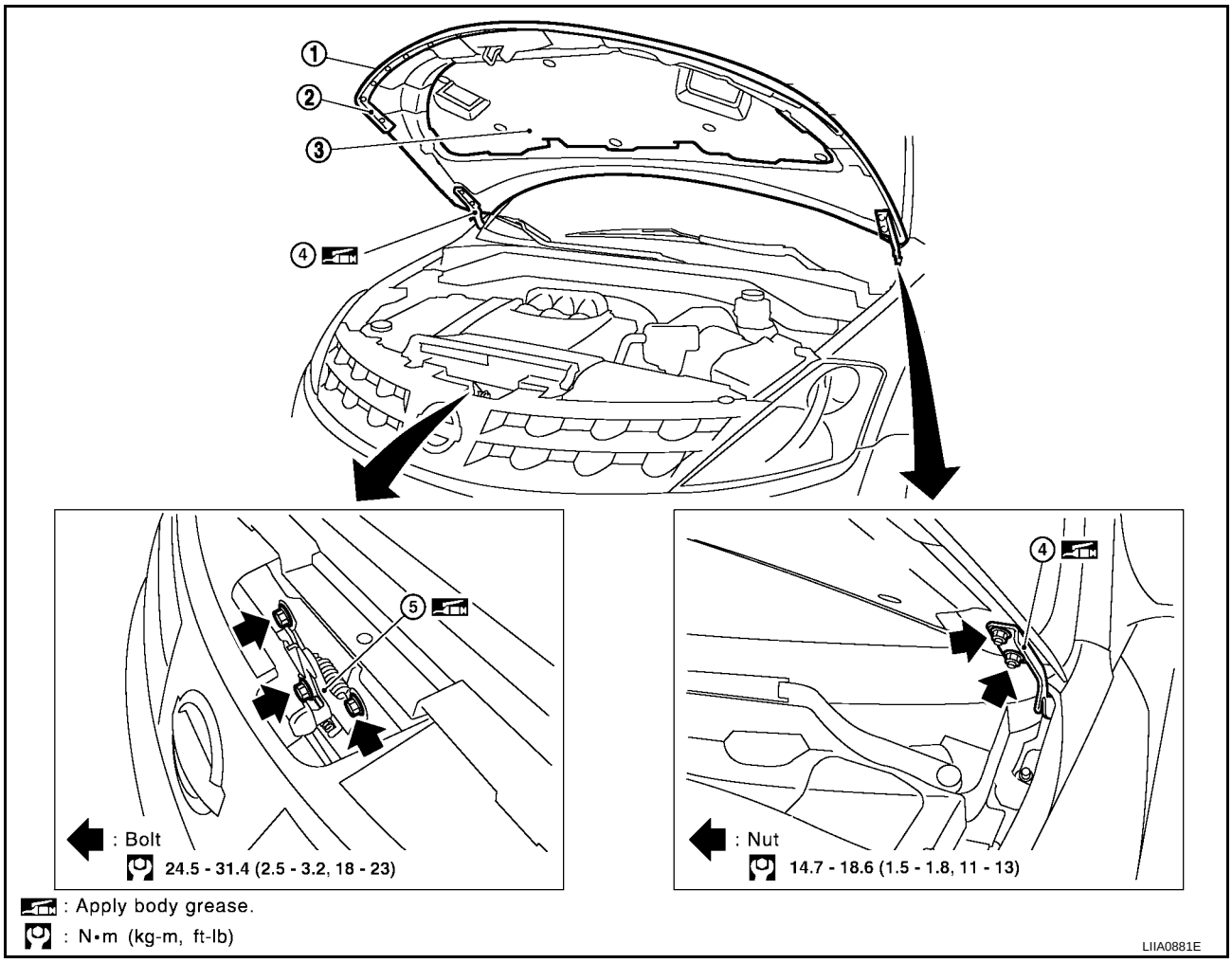
   CAUTION:

   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

EIS0021L

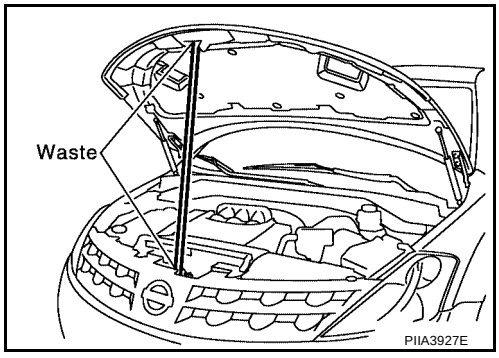


1. Hood assembly
2. Hood front sealing rubber
3. Hood insulator
4. Hood hinge
5. Hood lock assembly

1. Support the hood striker with a proper material to prevent it from falling.

WARNING:

Body injury may occur if no supporting rod is holding the hood open when removing the damper stay.



2. Remove the hinge nuts on the hood to remove the hood assembly.

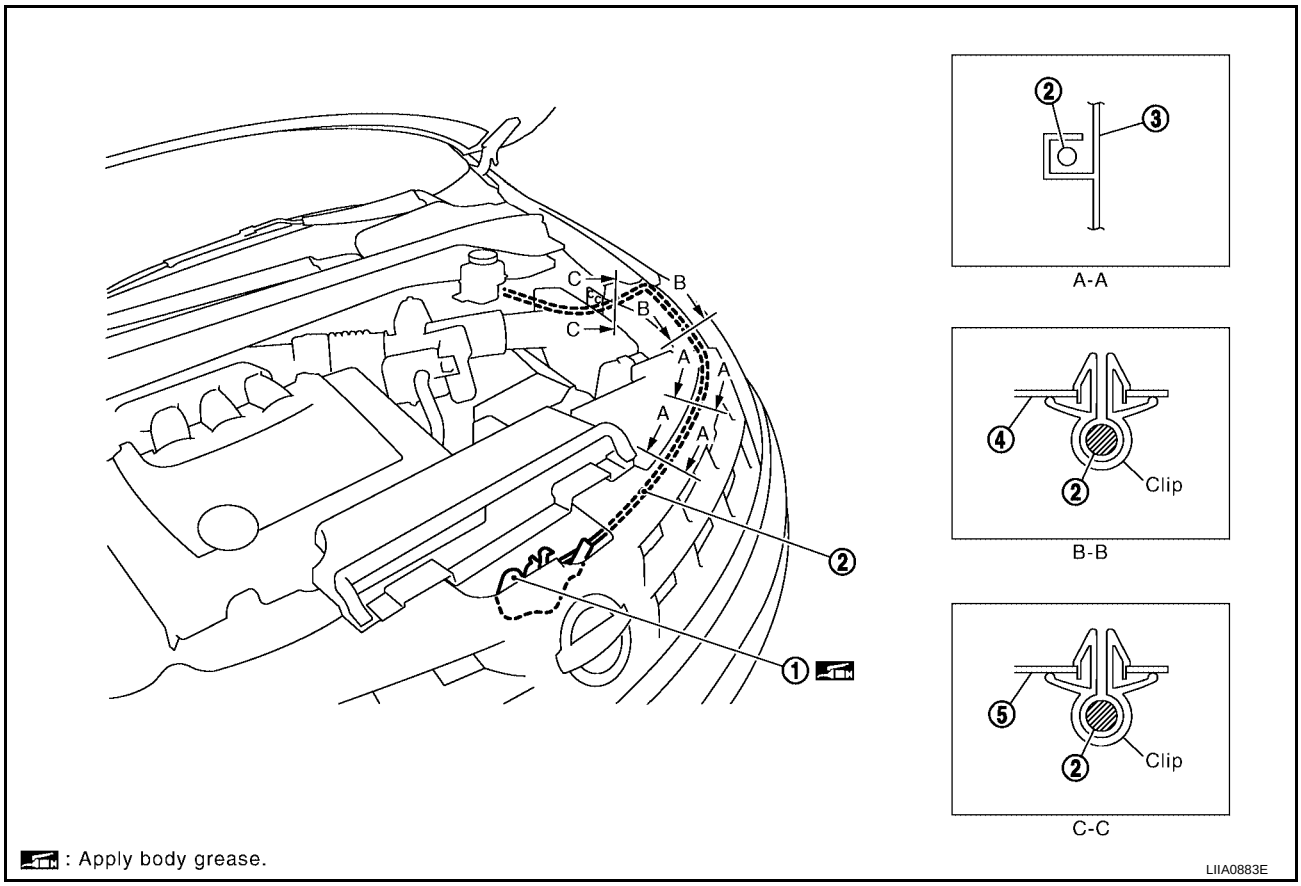
CAUTION:

Operate with two workers, because of its heavy weight.

Installation is in the reverse order of removal.

Removal and Installation of Hood Lock Control

EIS0021M

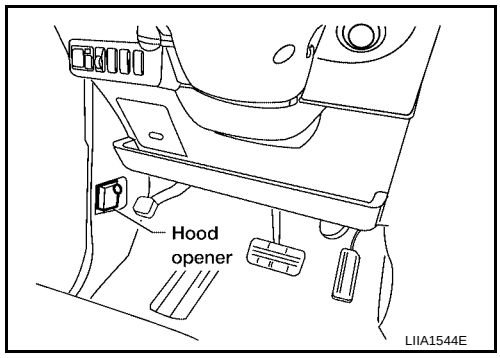


1. Hood lock assembly
2. Hood lock cable
3. Radiator core support side
4. Hood ledge reinforce upper
5. hood ledge upper

REMOVAL

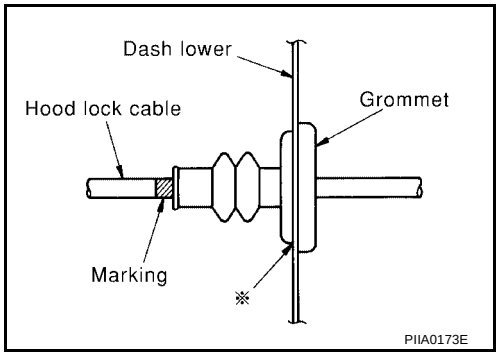
1. Remove the front grill. Refer to EI-17, "Removal and Installation" .
2. Remove the front fender protector (LH). Refer to EI-21, "Removal and Installation" .
3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hood ledge.
4. Remove the bolt and the hood opener.
5. Remove the grommet from 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.

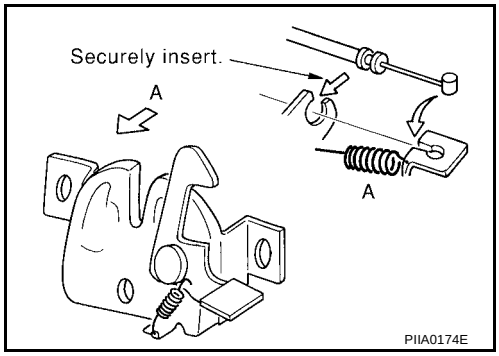


INSTALLATION

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.



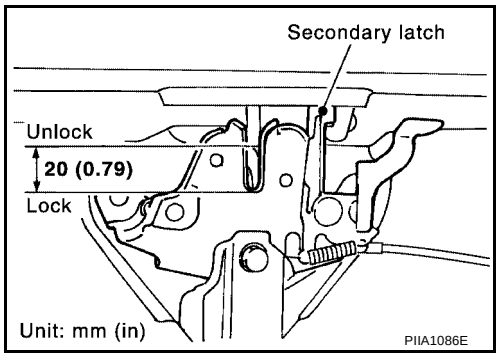
Hood Lock Control Inspection

EIS0021N

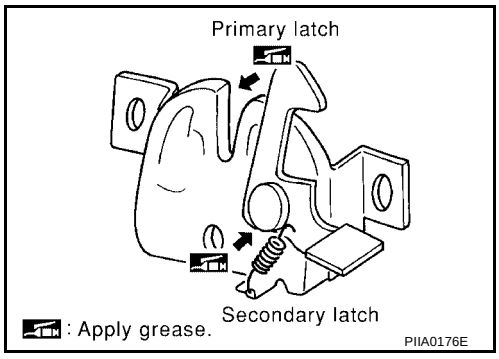
CAUTION:

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.

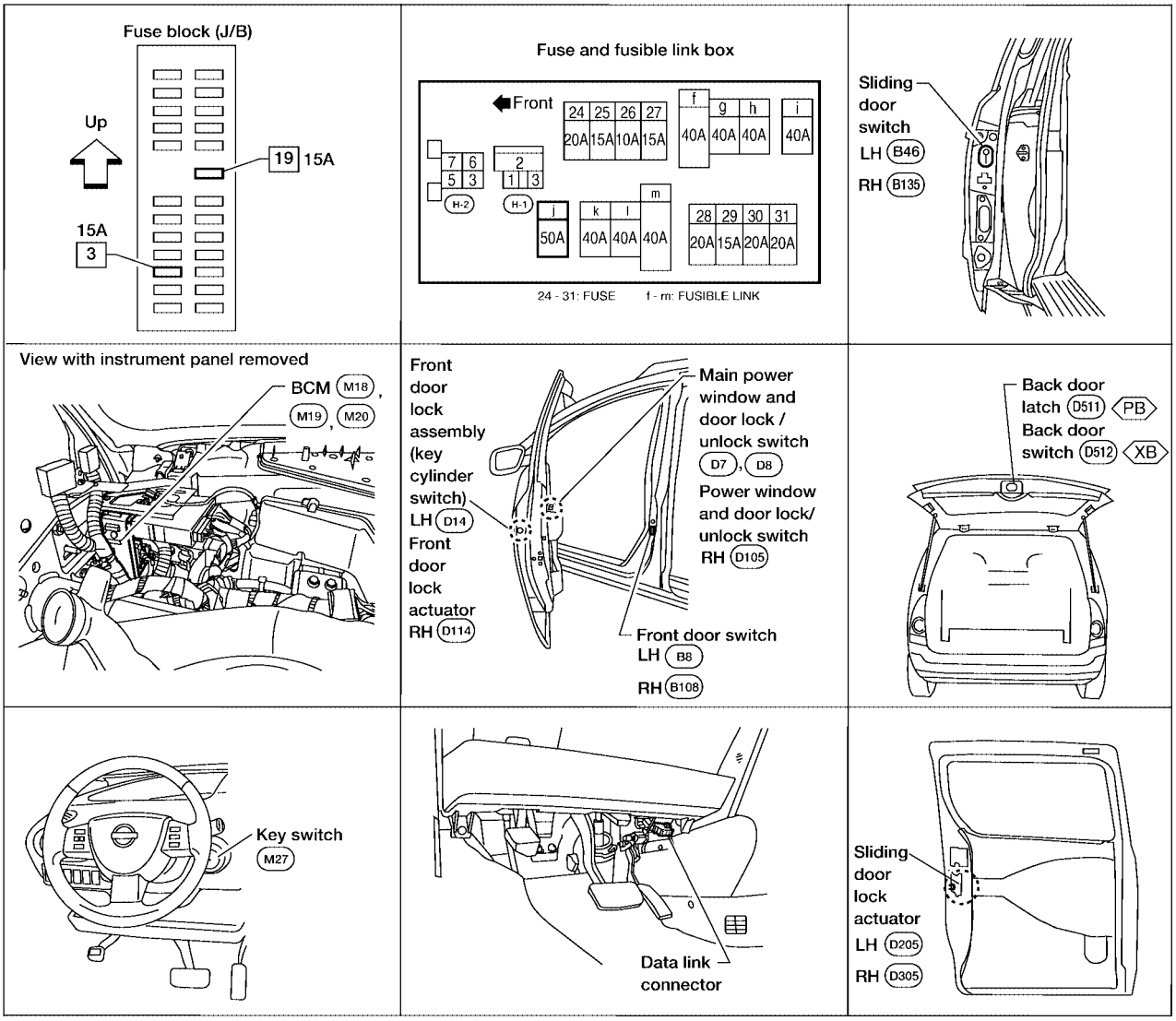


POWER DOOR LOCK SYSTEM

PFP:24814

Component Parts and Harness Connector Location

EIS001PQ



PB : WITH POWER BACK DOOR

XB : WITHOUT POWER BACK DOOR

LIIA1899E

System Description

EIS001PR

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 terminals 49 (early production) and 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 terminals 49 (early production) and 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 front power window 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 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.

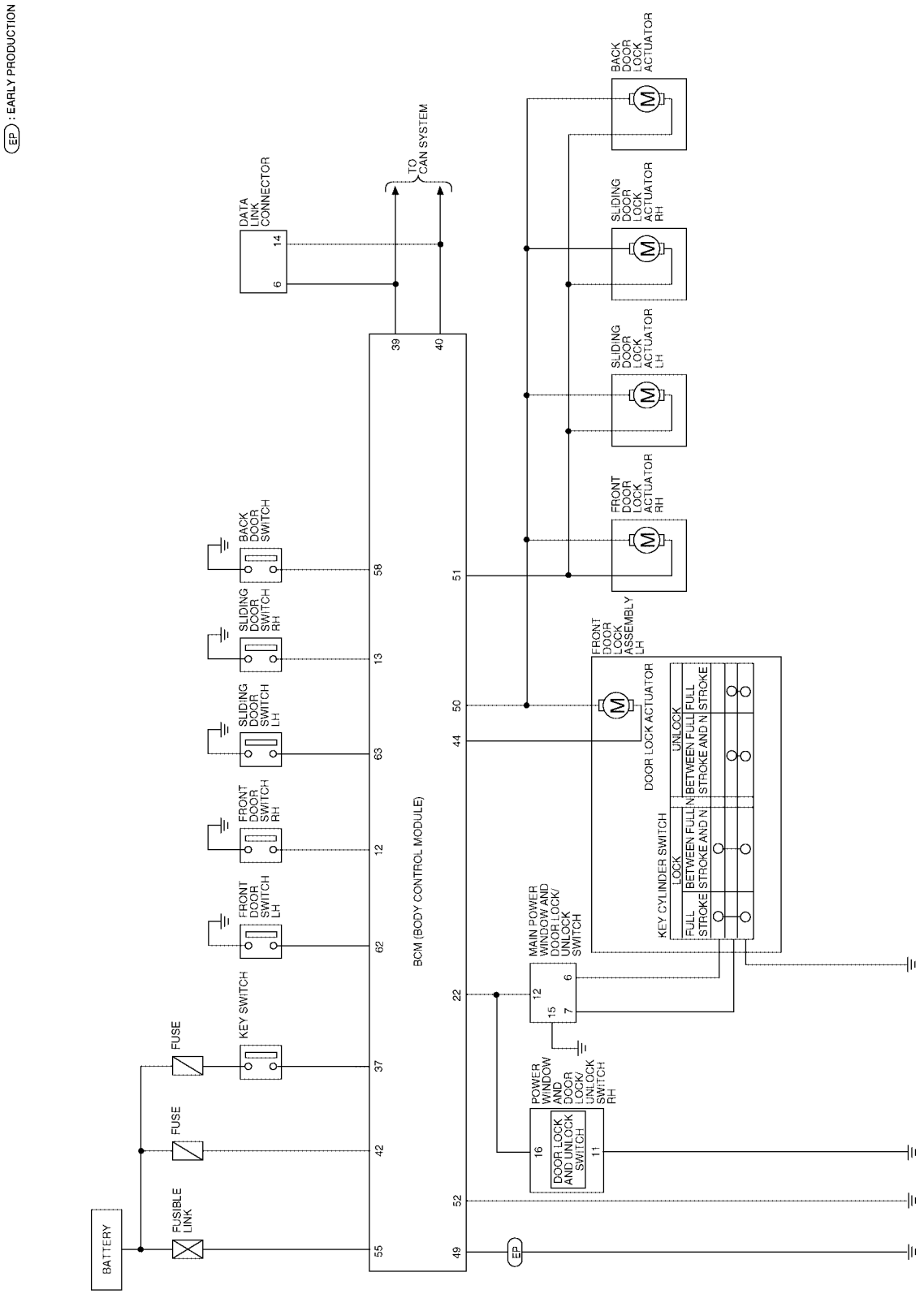
Key reminder door system

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

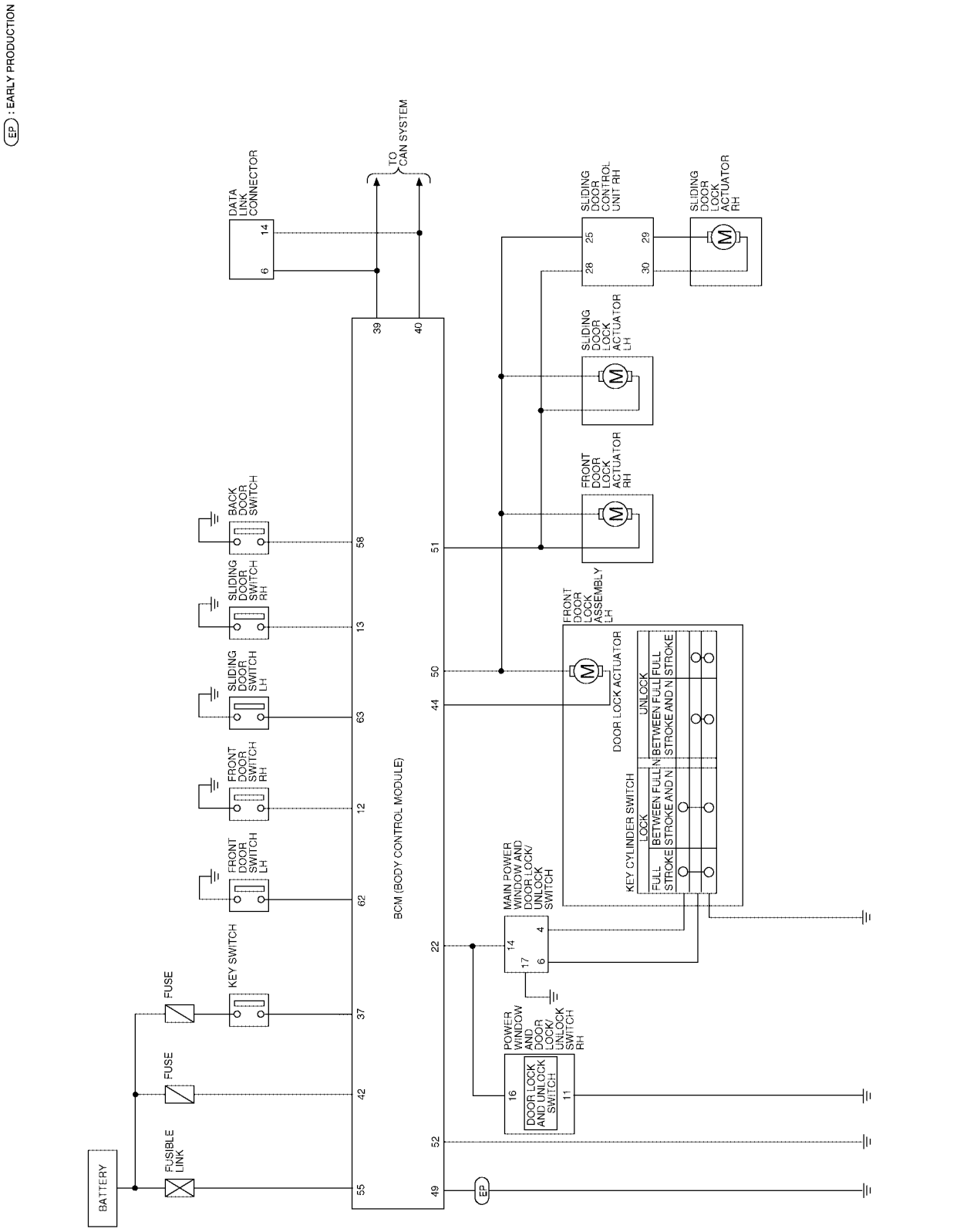
EIS001PS

WITHOUT AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM



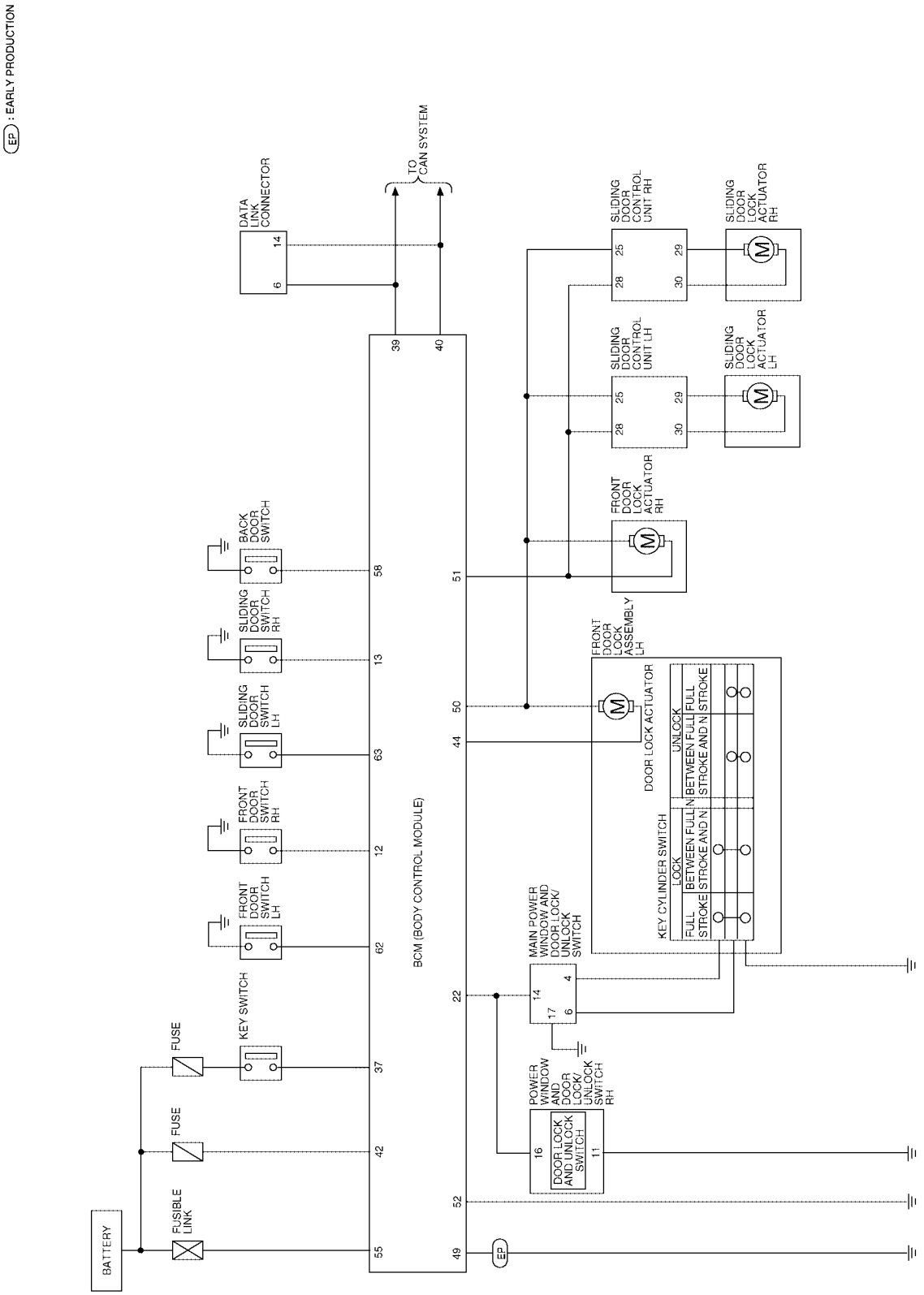
LIWA0469E

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



LIWA0470E

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



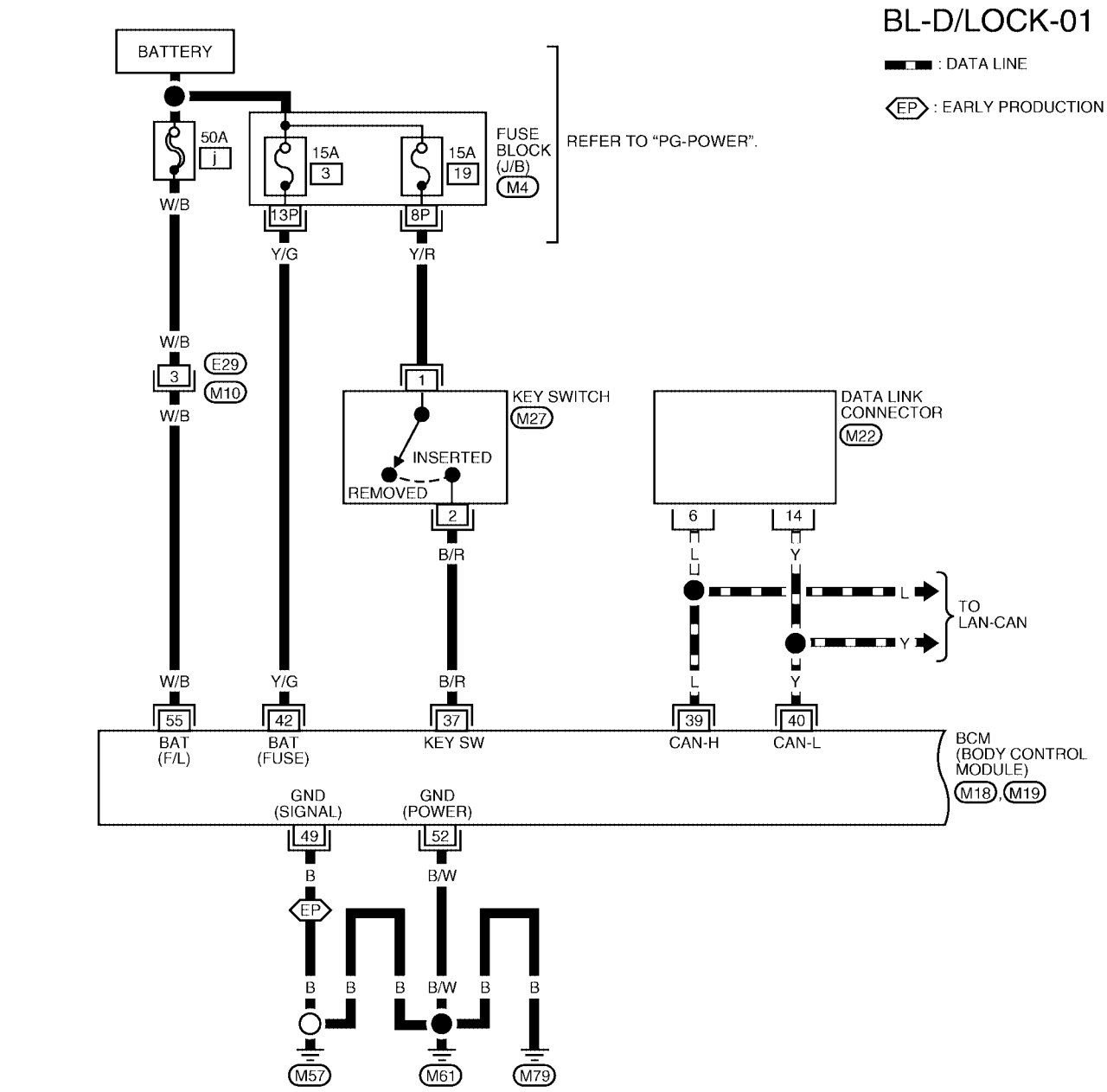
LIWA0471E

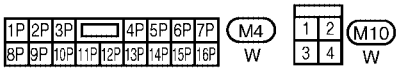
Wiring Diagram -D/LOCK-

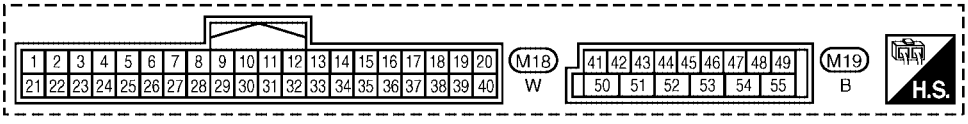
EIS001PT

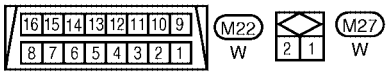
WITHOUT AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM

FIG. 1





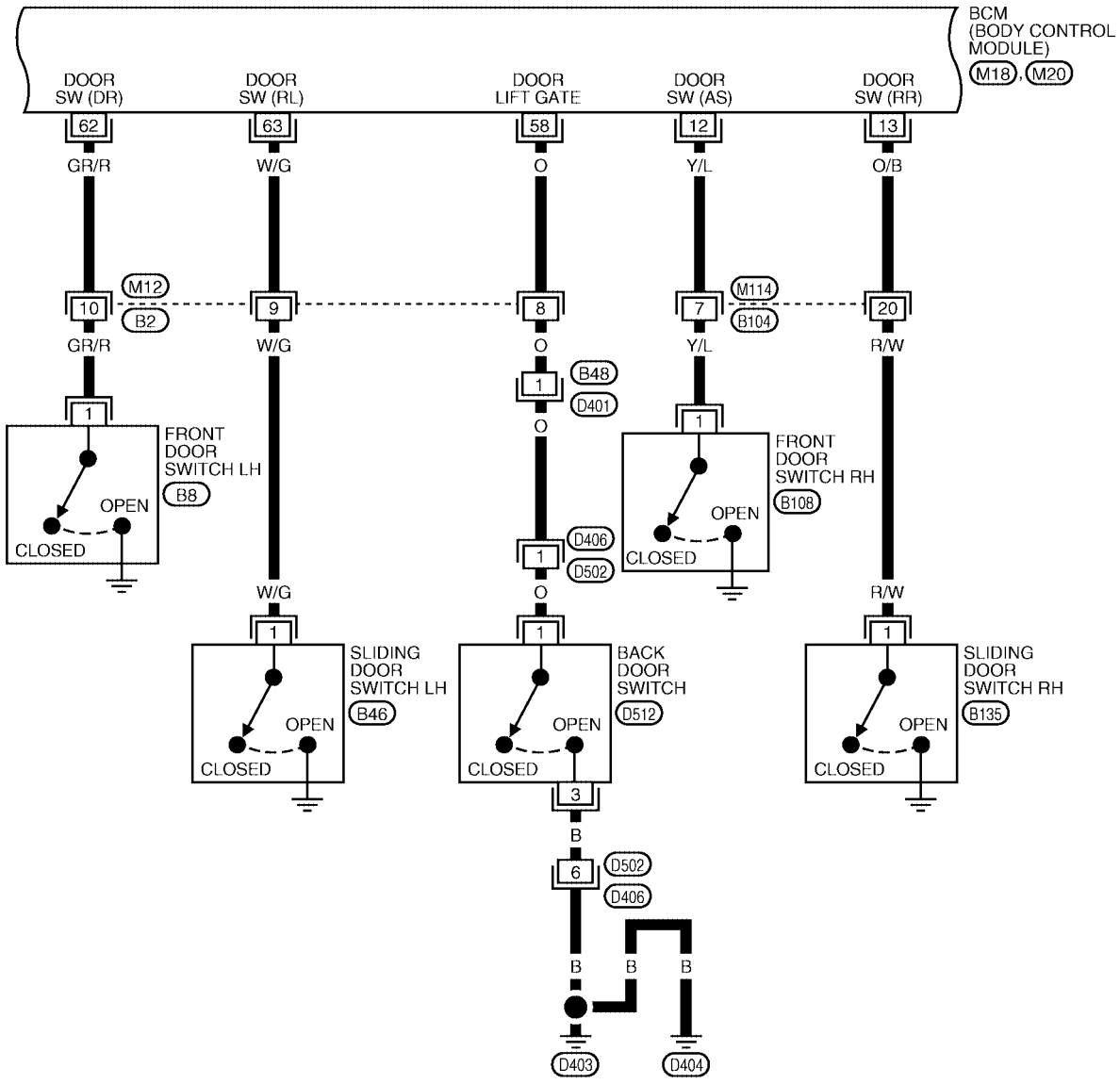


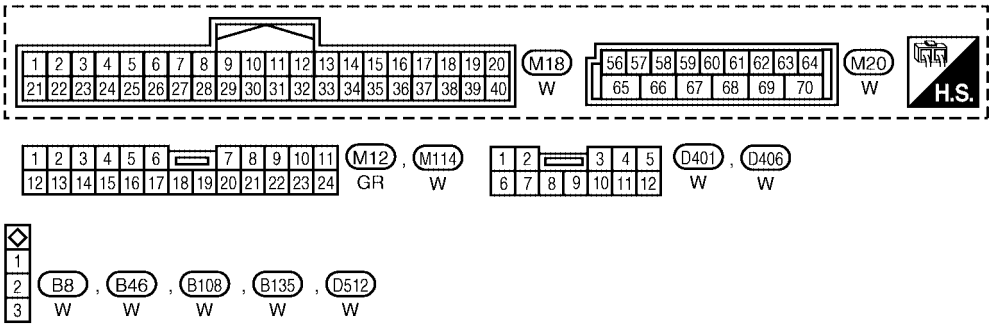


WIWA0248E

FIG. 2

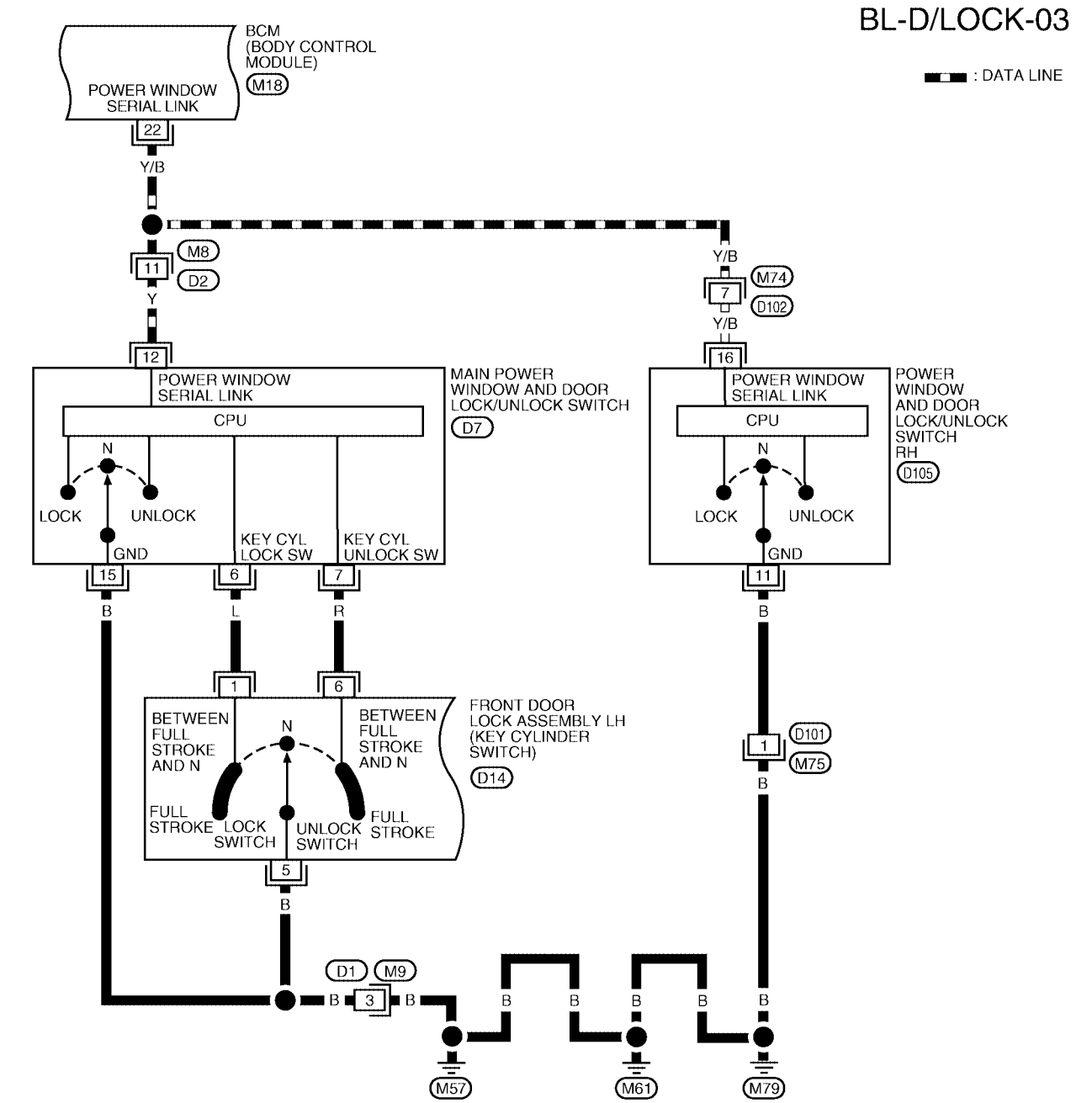
BL-D/LOCK-02

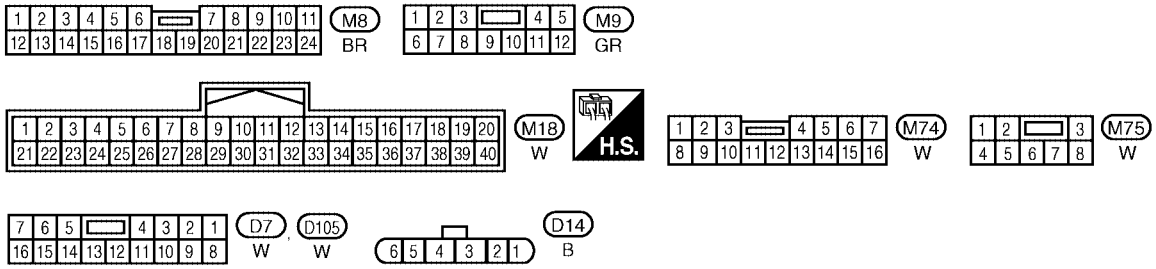




LIWA0503E

FIG. 3

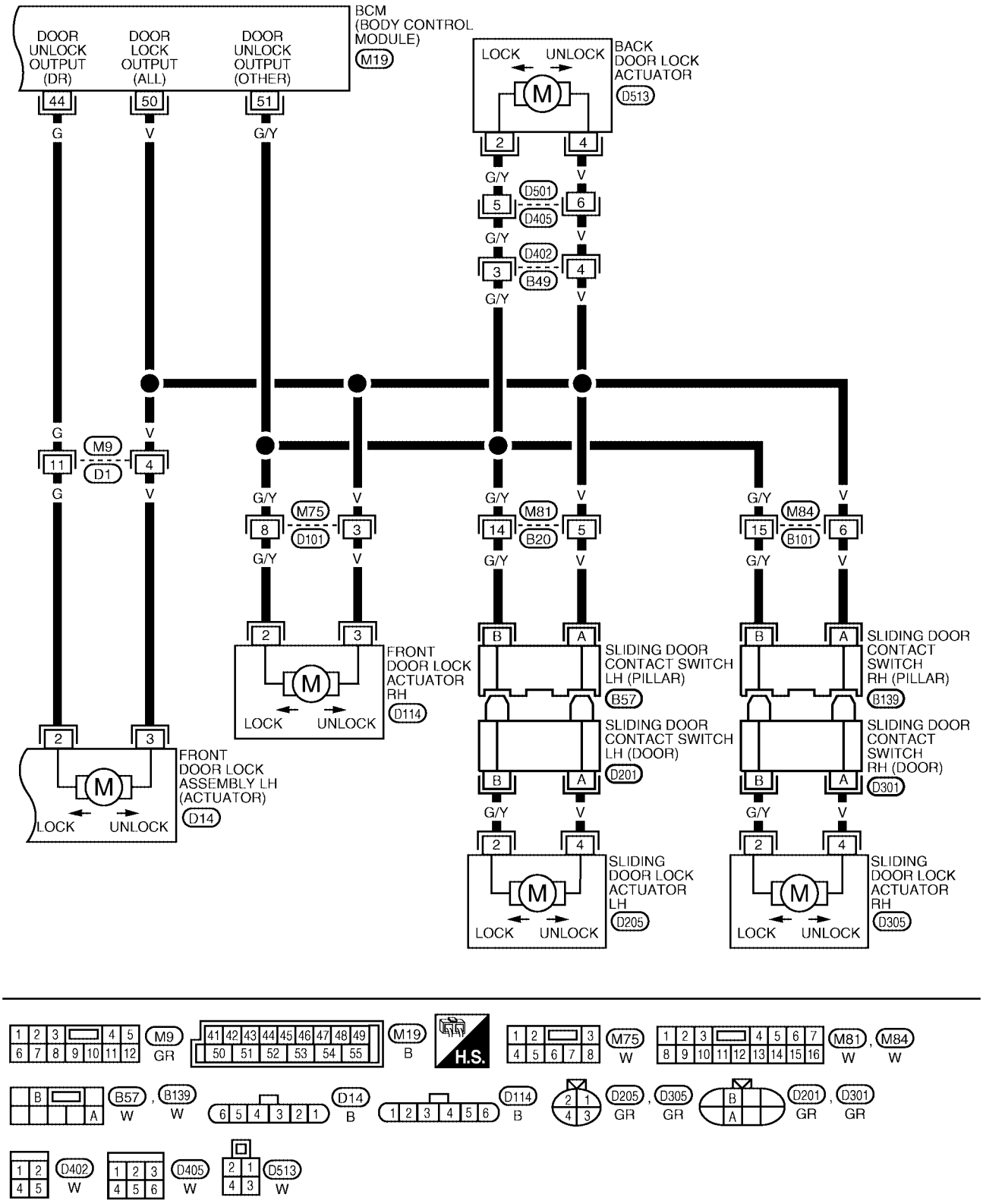




WIWA0485E

FIG. 4

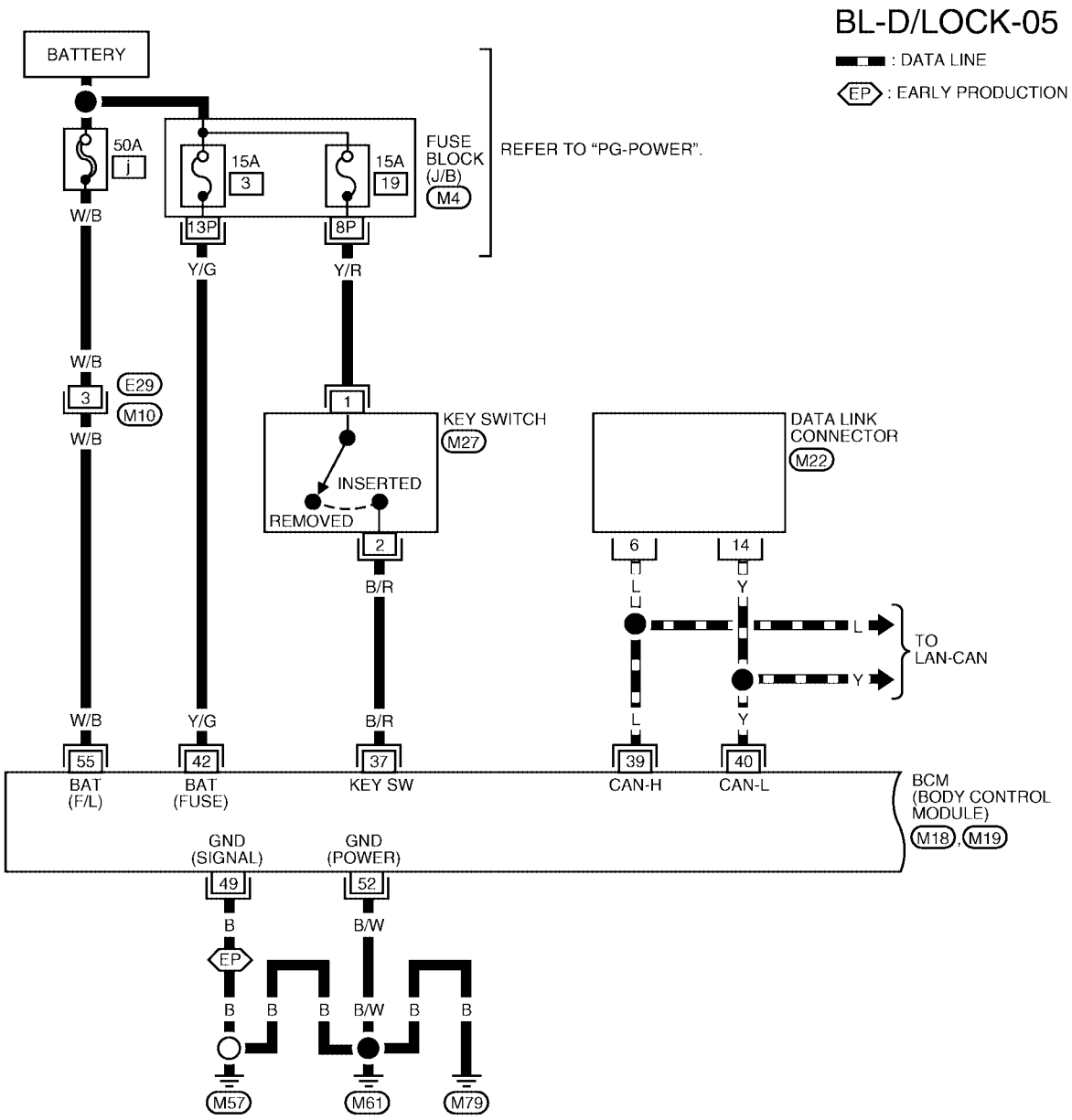
BL-D/LOCK-04

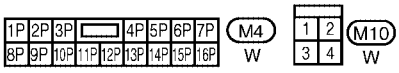


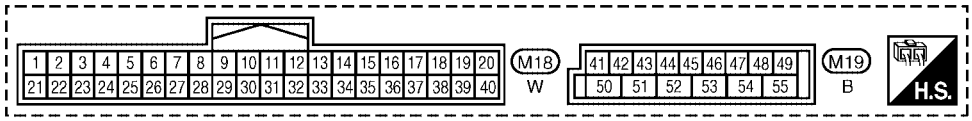
LIWA0473E

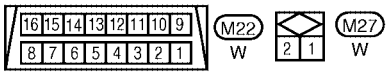
WITH RIGHT HAND AUTOMATIC SLIDING DOOR SYSTEM AND AUTOMATIC BACK DOOR SYSTEM

FIG. 5





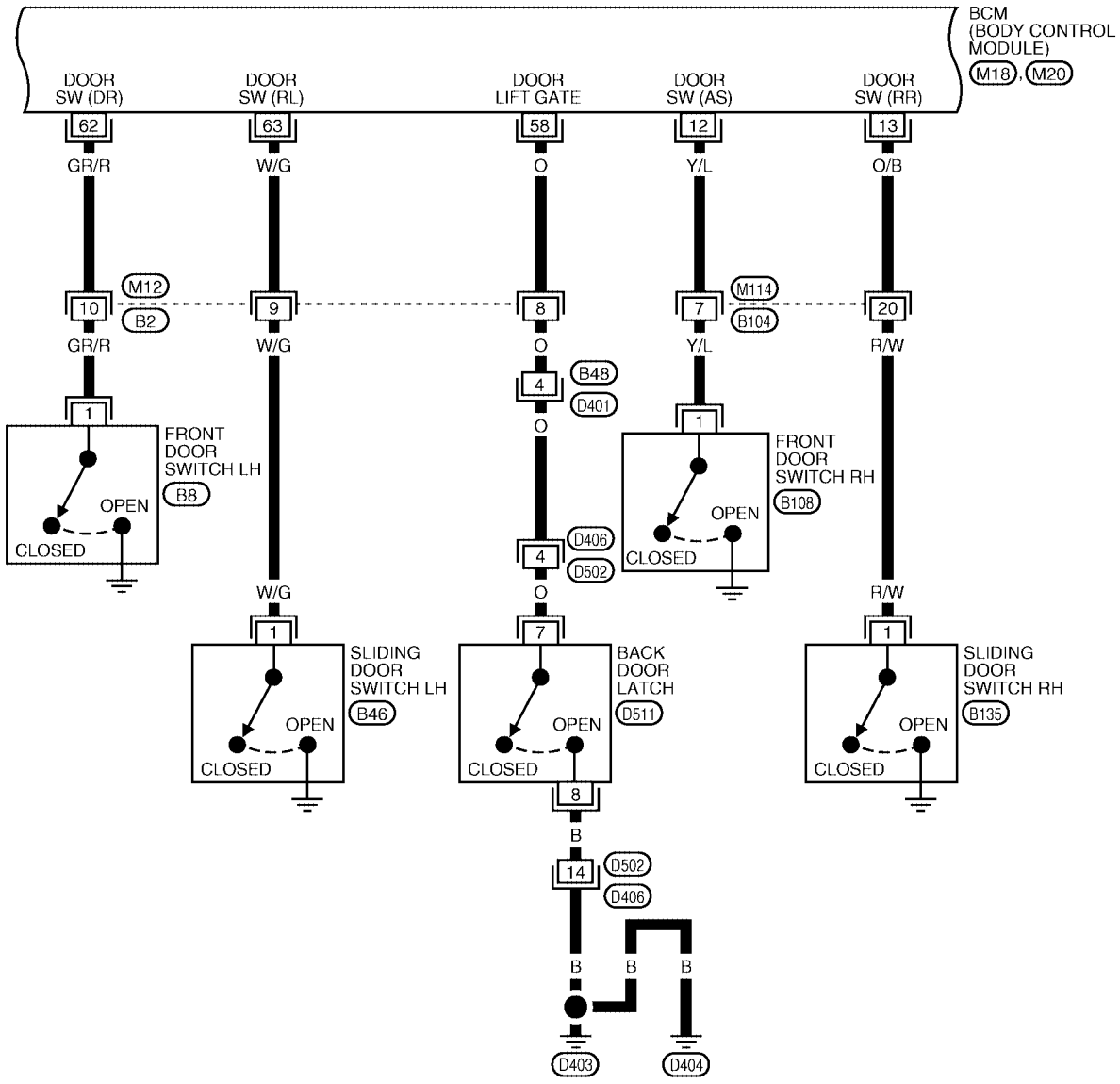


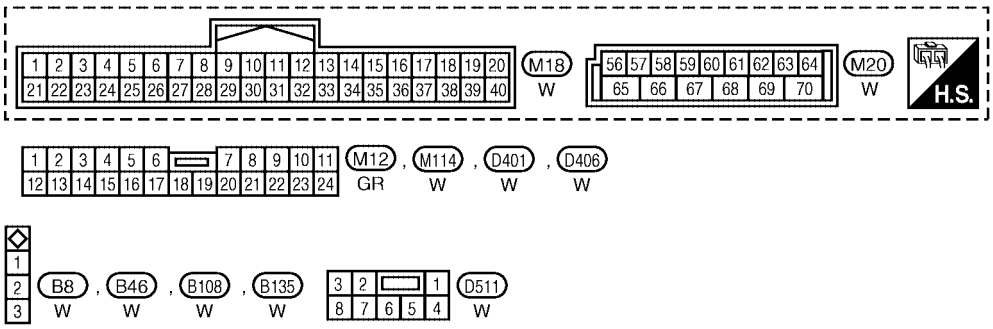


WIWA0249E

FIG. 6

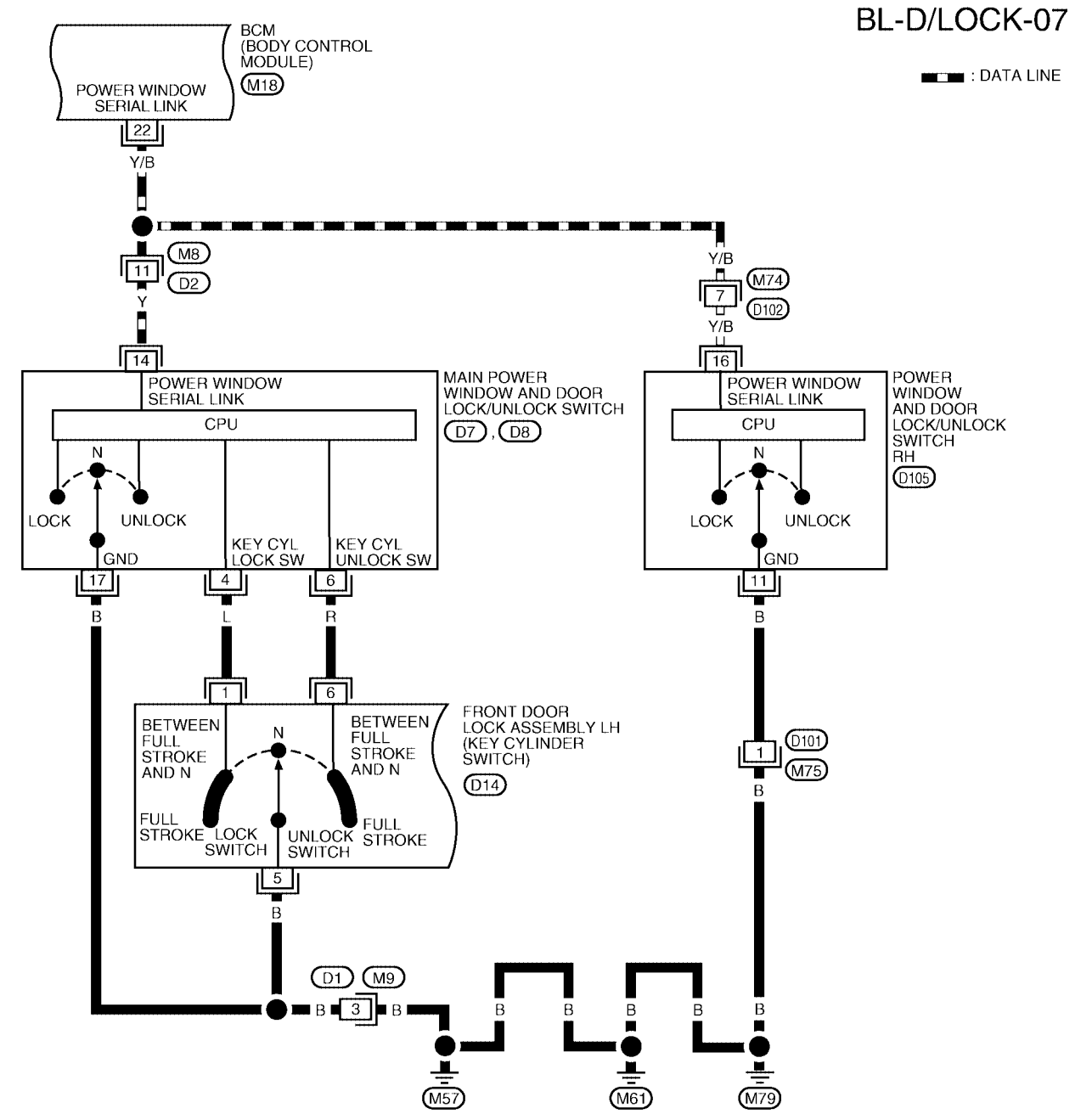
BL-D/LOCK-06

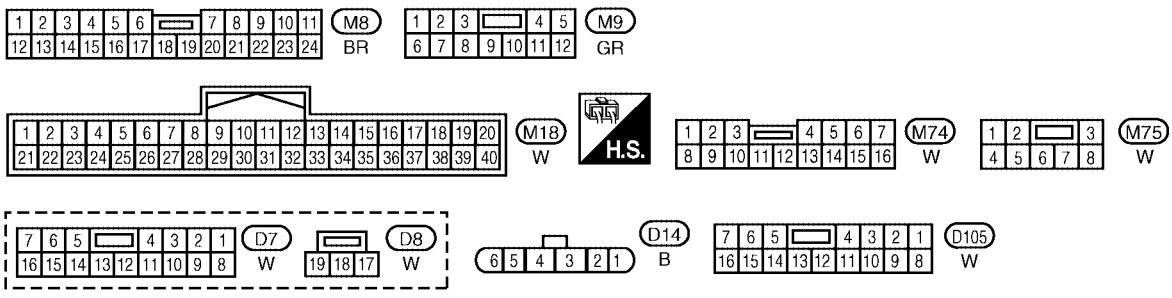




LIWA0502E

FIG. 7

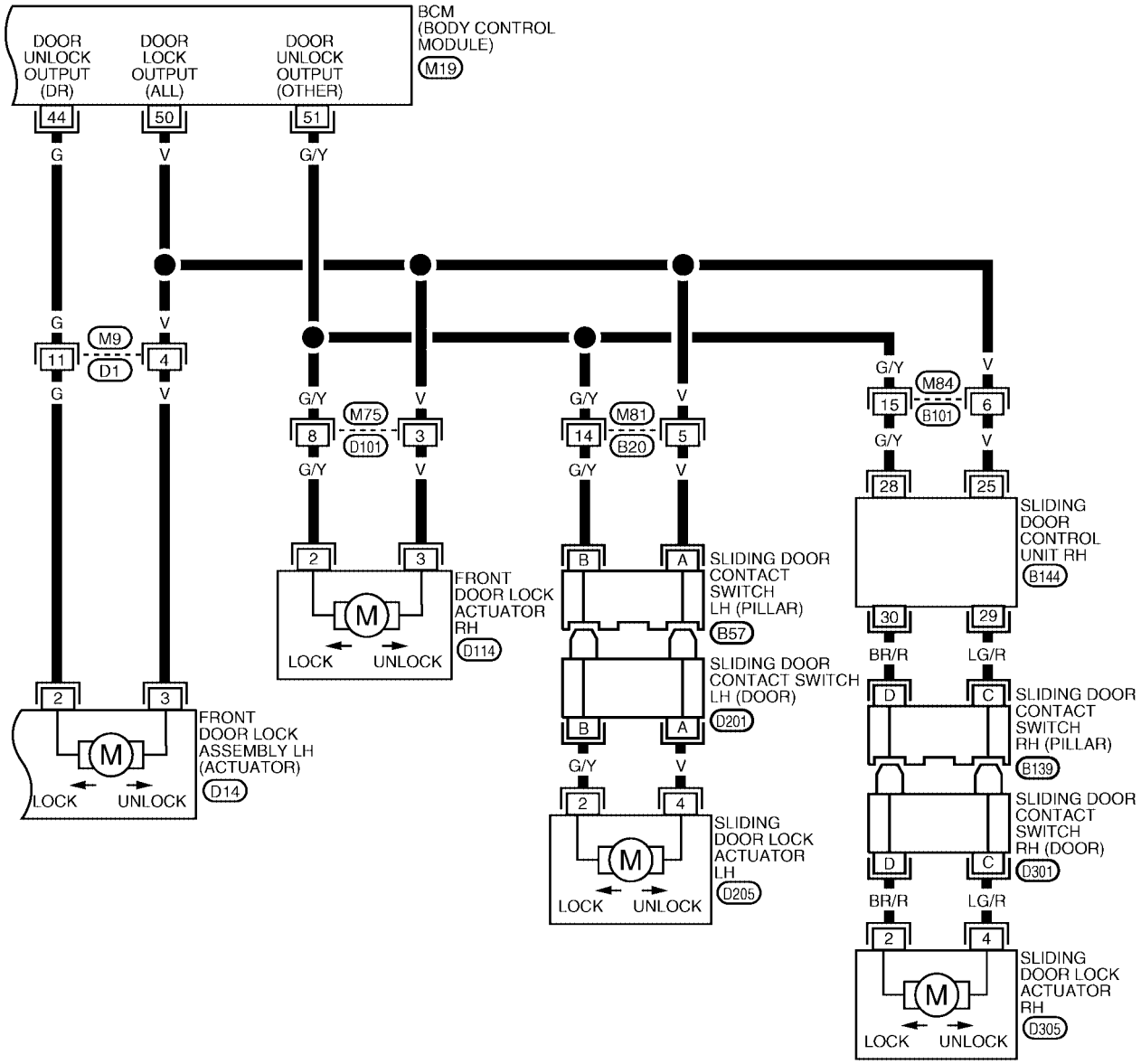


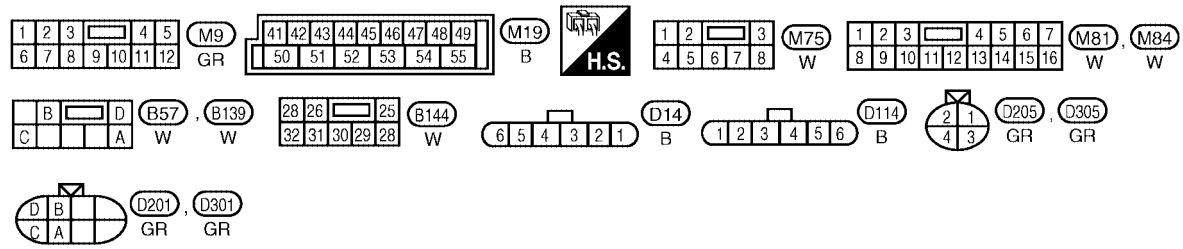


WIWA0489E

FIG. 8

BL-D/LOCK-08

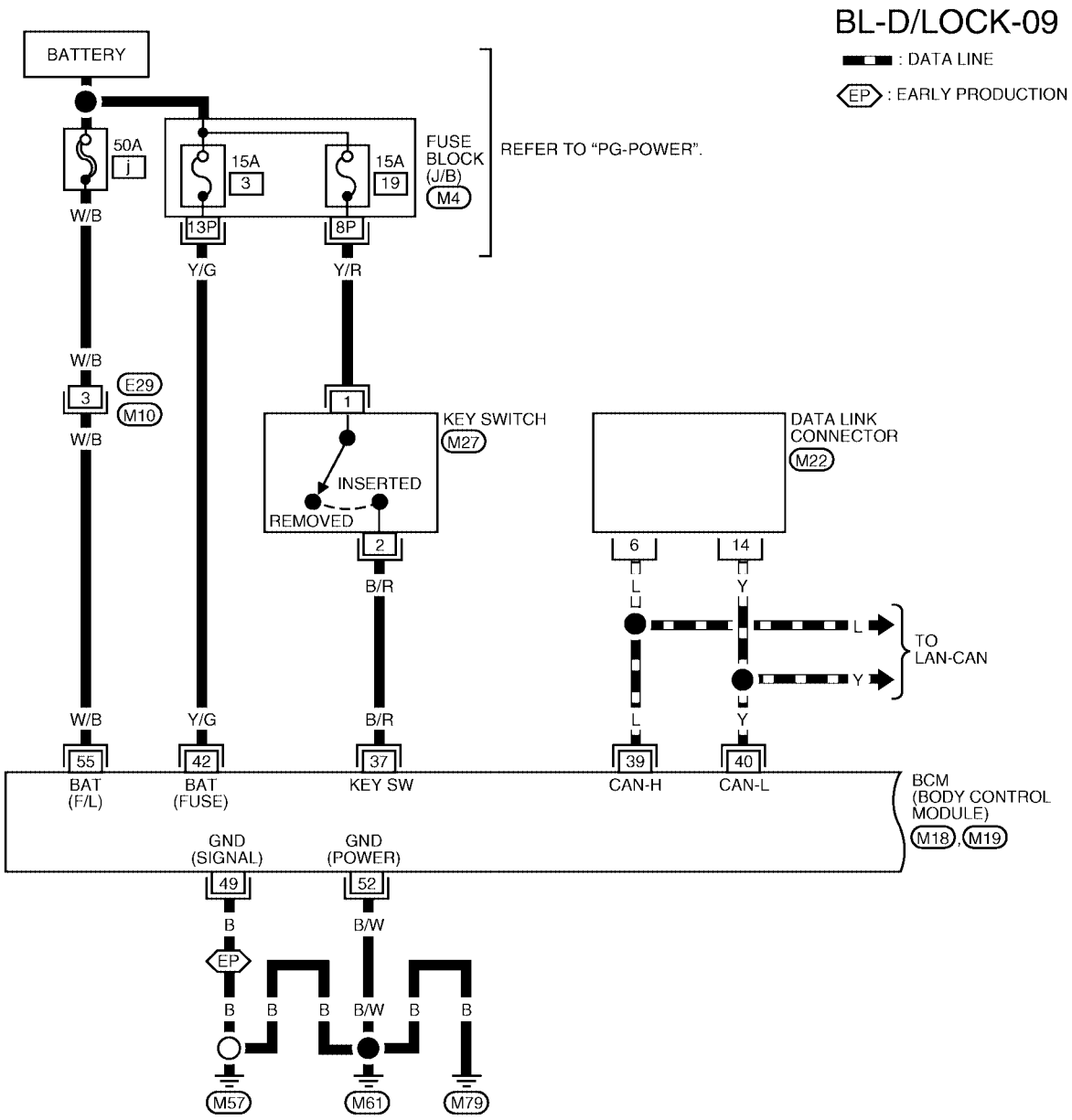


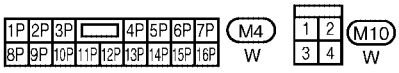


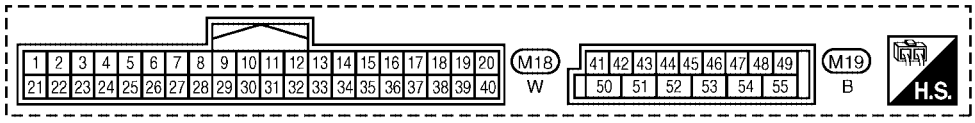
LIWA0475E

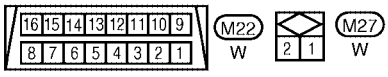
WITH RIGHT AND LEFT HAND AUTO SLIDE DOOR CLOSURE AND AUTOMATIC BACK DOOR SYSTEM

FIG. 9





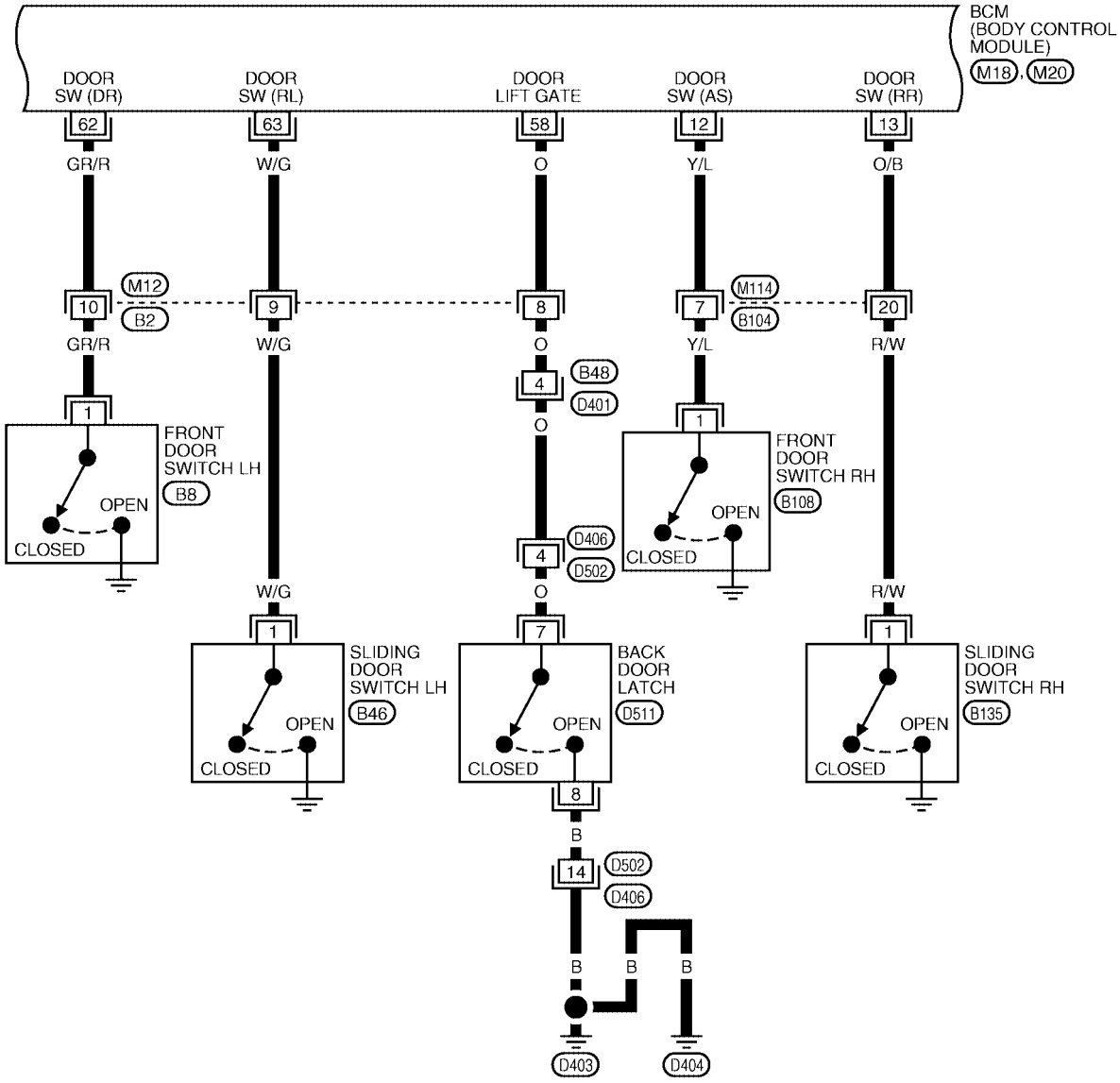


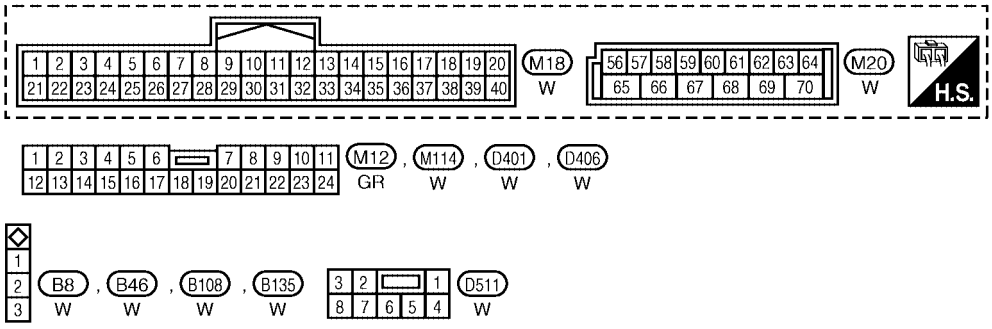


WIWA0250E

FIG. 10

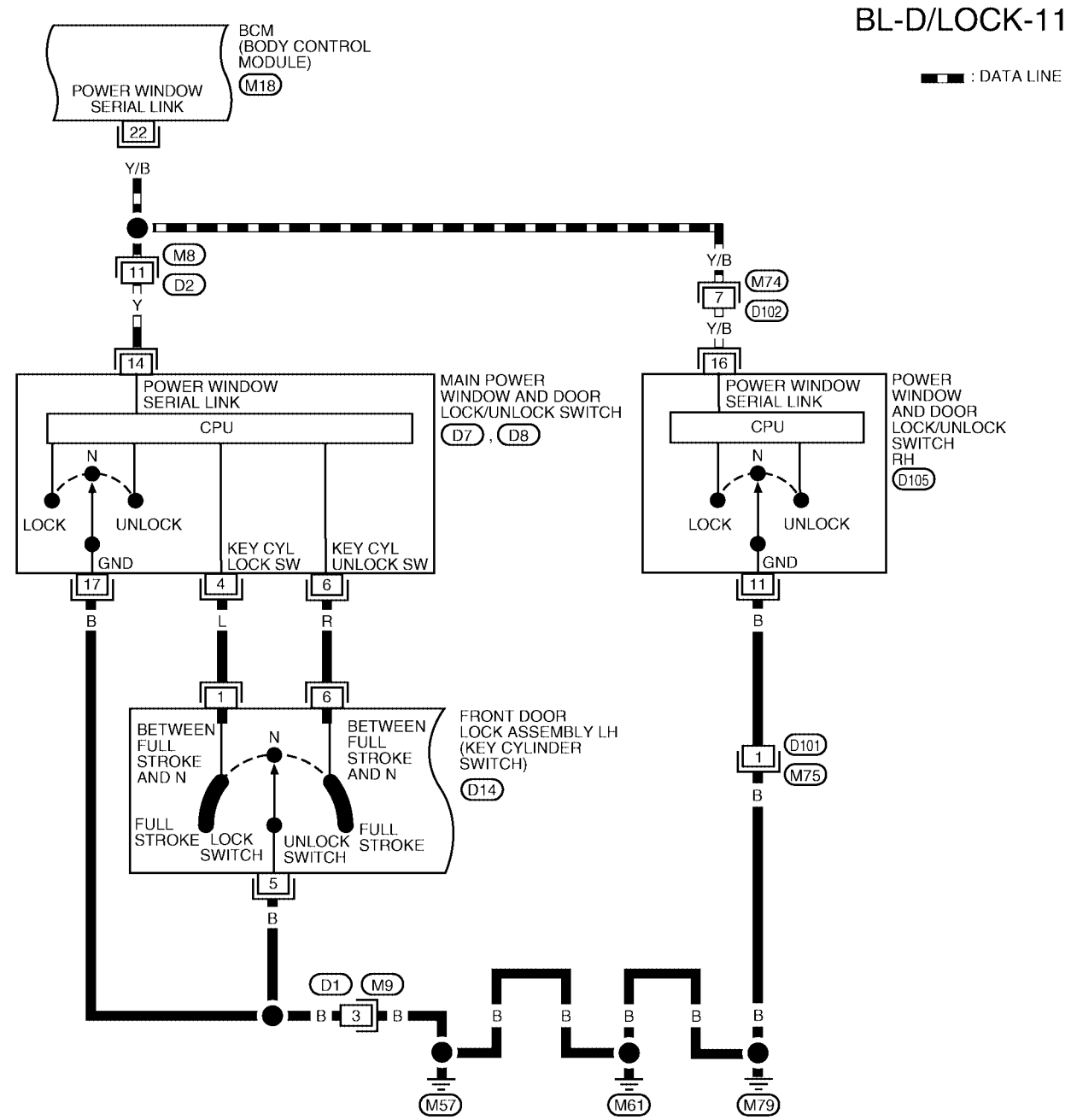
BL-D/LOCK-10

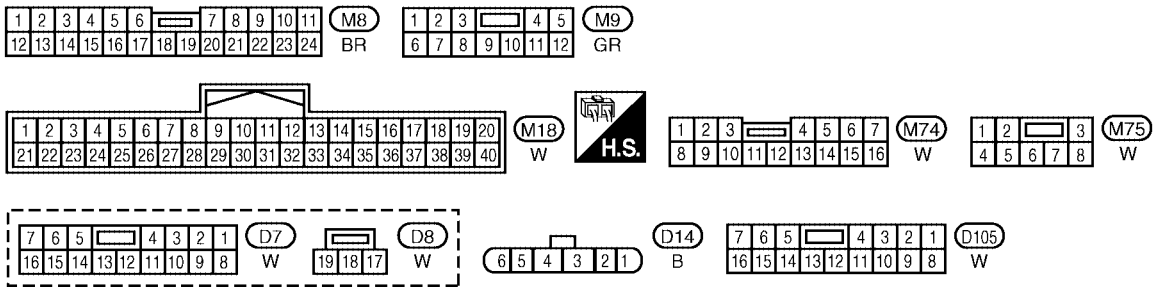




LIWA0501E

FIG. 11

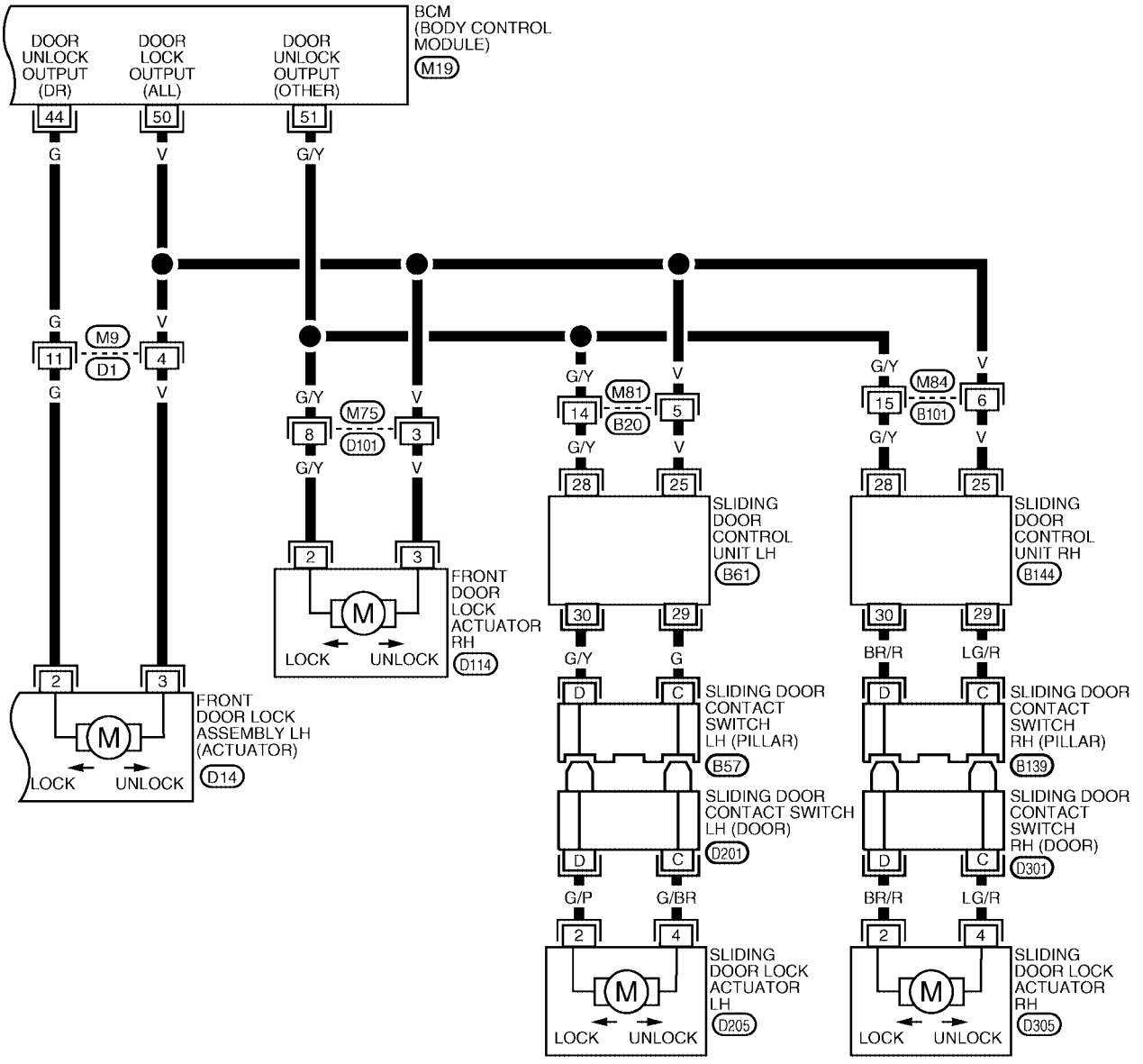


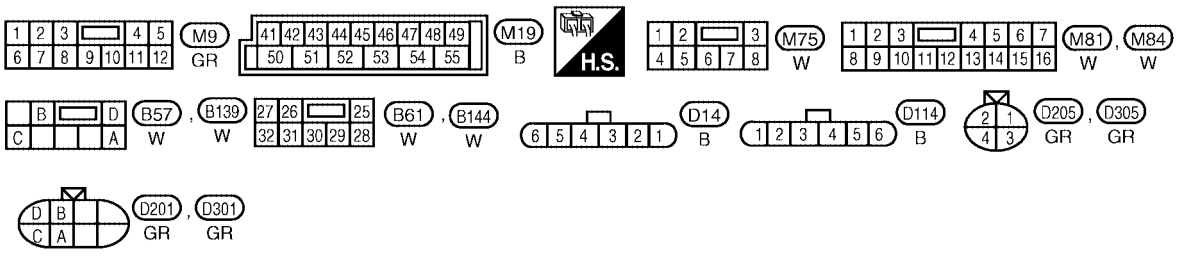


WIWA0493E

FIG. 12

BL-D/LOCK-12

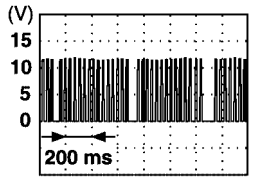




LIWA0477E

Terminals and Reference Value for BCM

EIS001PU

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
12	Y/L	Front door switch RH	Door open (ON) → Door close (OFF)	0 → Battery voltage
13	O/B	Sliding door switch RH	Door open (ON) → Door close (OFF)	0 → Battery voltage
22	Y/B	Power window serial link	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	Y	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
49*	B	Ground	—	—
50	V	All door lock actuator (lock)	Driver door lock knob (neutral → lock)	0 → Battery voltage
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
52	B/W	Ground	—	—
55	W/B	BAT 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

*: Early production

Work Flow

EIS001PV

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-18, "System Description" .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to BL-38, "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)

EIS0071Y

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

BCM diagnostic test item	Diagnostic mode	Content
Inspection by part	WORK SUPPORT	Changes setting of each function.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis results.
	CAN DIAG SUPPORT MNTR	The results of transmit/receive diagnosis of CAN communication can be read.
	ECU PART NUMBER	BCM part number can be read.
	CONFIGURATION	Performs BCM configuration read/write functions.

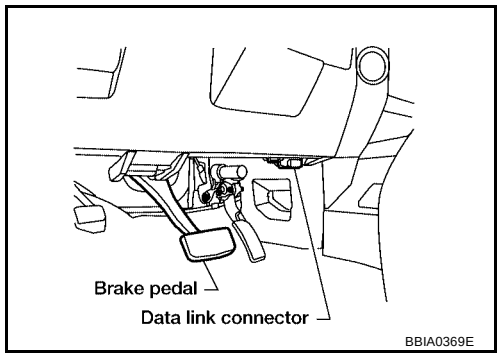
CONSULT–II INSPECTION PROCEDURE

"DOOR LOCK"

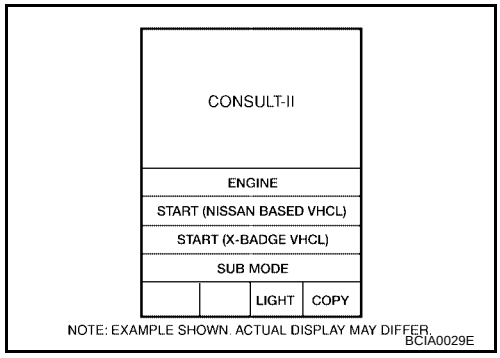
CAUTION:

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.

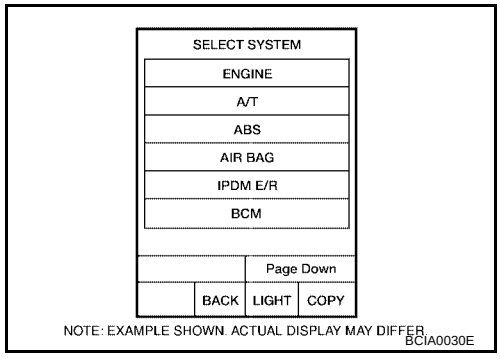
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



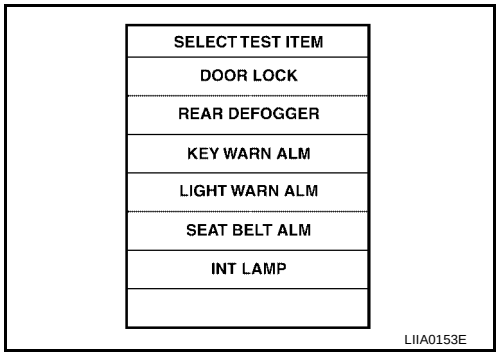
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



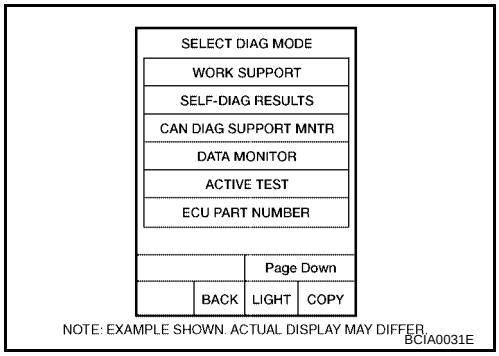
5. Touch “BCM”.
   If "BCM" is not indicated, refer to GI-37, "CONSULT-II Data Link Connector (DLC) Circuit" .



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

EIS001PX

Symptom	Repair order	Refer to page
Key reminder door function does not operate properly.	1. Door switch check	BL-40
	2. Key switch (Insert) check	BL-44
	3. Replace BCM.	BCS-19

Symptom	Repair order	Refer to page
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-45
Front door lock assembly LH (actuator) does not operate.	1. Front door lock assembly LH (actuator) check	BL-47
Specific door lock actuator does not operate.	1. Door lock actuator check (Front RH, Rear LH/RH)	BL-49
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-51
	2. Replace BCM.	BCS-19
Power door lock does not operate.	1. BCM power supply and ground circuit check	BL-39
	2. Door lock/unlock switch check	BL-45

BCM Power Supply and Ground Circuit Check

EIS001PY

1. CHECK FUSE

- 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-17, "Component Parts and Harness Connector Location" .

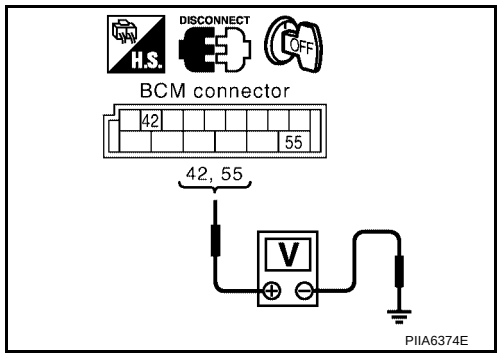
OK or NG

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 (Wire color)		Voltage (V) (Approx.)
	(+)	(-)	
M19	42 (Y/G)	Ground	Battery voltage
	55 (W/B)		



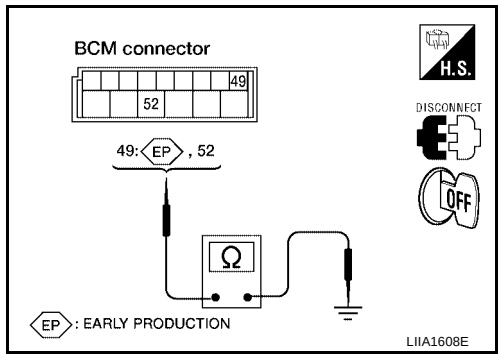
OK or NG

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M19 terminals 49 (early production), 52 and ground.

Connector	Terminals (Wire color)		Continuity
	(+)	(-)	
M19	49 (B)	Ground	Yes
	52 (B/W)		



OK or NG

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

Door Switch Check (Without Automatic Back Door System)

EIS001PZ

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

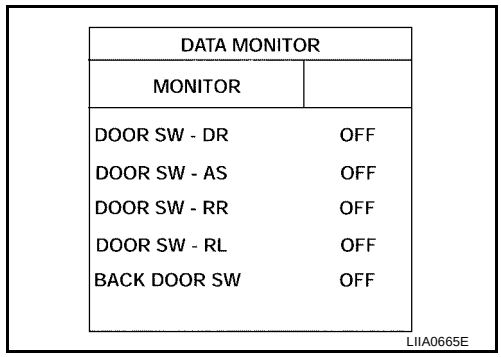
Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", "BACK DOOR SW") in DATA MONITOR mode with CONSULT–II.Refer to BL-38, "DATA MONITOR" .

- When any doors are open:

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

- When any doors are closed:

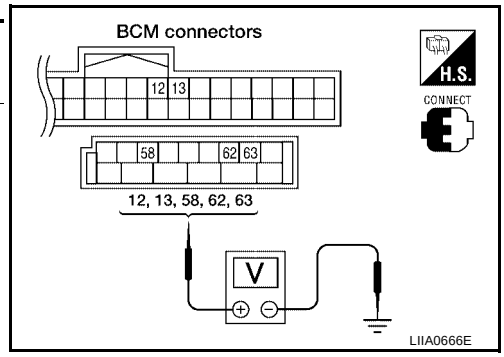
DOOR SW-DR :OFF
DOOR SW-AS :OFF
DOOR SW-RL :OFF
DOOR SW-RR :OFF
BACK DOOR SW :OFF



Without CONSULT-II

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

Connector	Item	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
		(+)	(–)		
M20	Back door switch	58 (O)	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62 (GR/R)			
	Sliding door switch LH	63 (W/G)			
M18	Front door switch RH	12 (Y/L)			
	Sliding door switch RH	13 (O/B)			



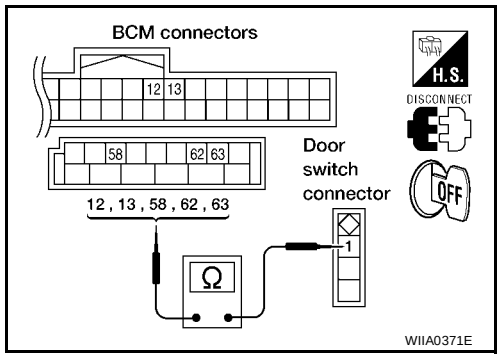
OK or NG

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 B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) or D512 (Back) terminal 1 and BCM connector M18, M20 terminals 12, 13, 58, 62 and 63

1 (GR/R) - 62 (GR/R) :Continuity should exist
1 (Y/L) - 12 (Y/L) :Continuity should exist
1 (W/G) - 63 (W/G) :Continuity should exist
1 (R/W) - 13 (O/B) :Continuity should exist
1 (O) - 58 (O) :Continuity should exist



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

1 (GR/R, Y/L, W/G, R/W or O) - Ground :Continuity should not exist

OK or NG

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

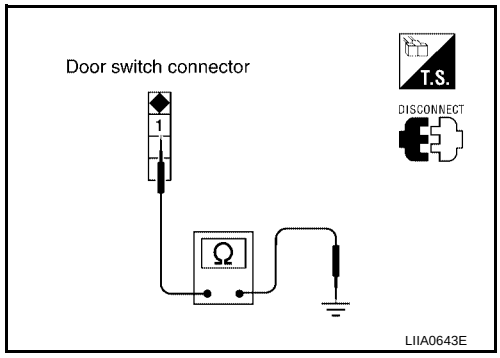
3. CHECK DOOR SWITCHES

- Disconnect door switch harness.
- Check continuity between door switch connector terminals.

	Terminal	Condition	Continuity
Door switch	1 – Ground	Open	Yes
		Closed	No

OK or NG

OK >> Check door switch case ground condition (front and sliding door) or ground circuit (back door).
NG >> Replace door switch.



Door Switch Check (With Automatic Back Door System)

EIS001XL

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-38, "DATA MONITOR" .

- When any doors are open:

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

- When any doors are closed:

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

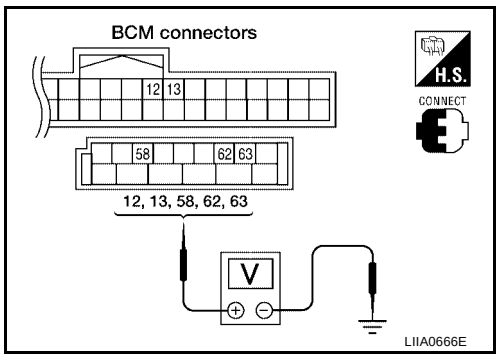
DATA MONITOR	
MONITOR	
DOOR SW - DR	OFF
DOOR SW - AS	OFF
DOOR SW - RR	OFF
DOOR SW - RL	OFF
BACK DOOR SW	OFF

LIIA0665E

Without CONSULT-II

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

Connec-tor	Item	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
		(+)	(–)		
M20	Back door latch	58 (O)	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62 (GR/R)			
	Sliding door switch LH	63 (W/G)			
M18	Front door switch RH	12 (Y/L)			
	Sliding door switch RH	13 (O/B)			



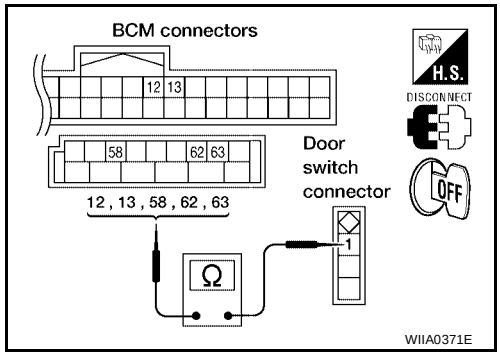
OK or NG

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 B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) terminal 1 or back door latch actuator D511 terminal 7 and BCM connector M18, M20 terminals 12, 13, 58, 62 and 63

1 (GR/R) - 62 (GR/R) :Continuity should exist
1 (Y/L) - 12 (Y/L) :Continuity should exist
1 (W/G) - 63 (W/G) :Continuity should exist
1 (R/W) - 13 (O/B) :Continuity should exist
7 (O) - 58 (O) :Continuity should exist



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

1 (GR/R, Y/L, W/G or R/W) - Ground :Continuity should not exist
7 (O) - Ground :Continuity should not exist

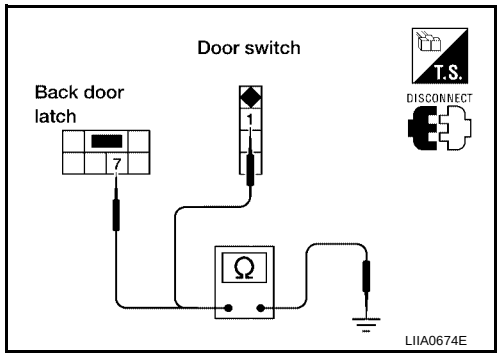
OK or NG

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

3. CHECK DOOR SWITCHES

- Disconnect door switch harness.
- Check continuity between door switch connector terminals.

	Terminal	Condition	Continuity
Door switch	1 – Ground	Open	Yes
		Closed	No
Back door latch	7 – Ground	Open	Yes
		Closed	No



OK or NG

OK >> Check door switch case ground condition.
NG >> Replace door switch.

Key Switch (Insert) Check

EIS001Q0

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

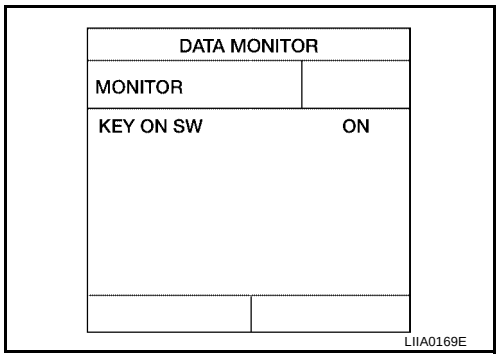
Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT–II. Refer to BL-38, "DATA MONITOR" .

- When key is inserted to ignition key cylinder:

  KEY ON SW :ON

- When key is removed from ignition key cylinder:

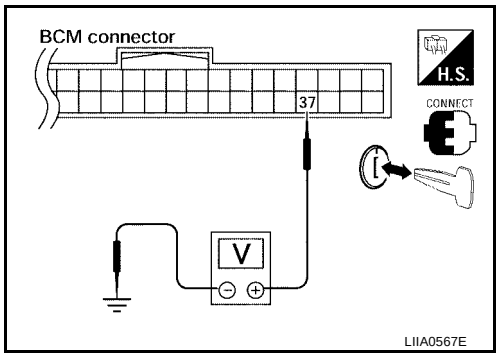
  KEY ON SW :OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 37 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(–)		
M18	37 (B/R)	Ground	Key is inserted.	Battery voltage
			Key is removed.	0



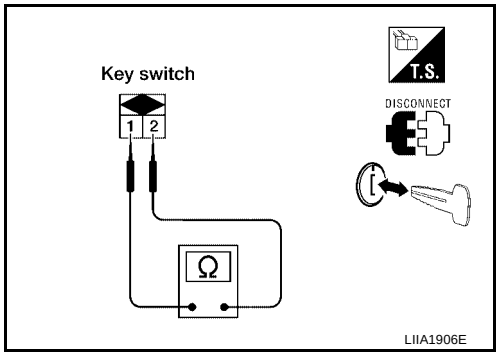
OK or NG

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

2. CHECK KEY SWITCH (INSERT)

Check continuity between key switch terminals.

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 Lock/Unlock Switch Check

EIS001Q1

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-II

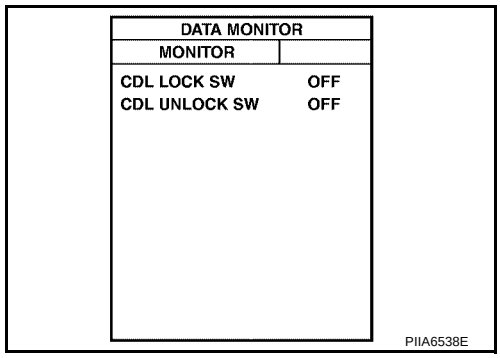
Check door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT–II. Refer to BL-38, "DATA MONITOR"

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

  CDL LOCK SW :ON

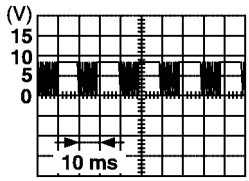
- When door lock/unlock switch is turned to UNLOCK:

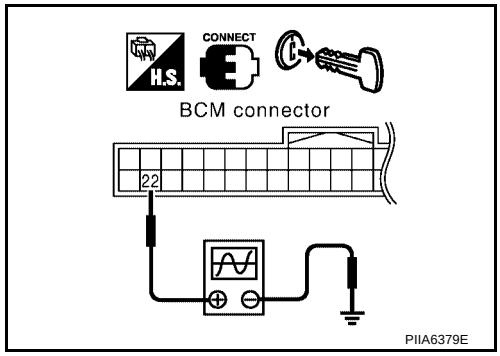
  CDL UNLOCK SW :ON



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 (Wire color)		Voltage (V)
	(+)	(–)	
M18	22 (Y/B)	Ground	



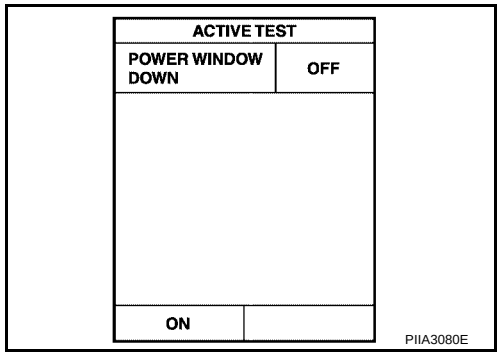
OK or NG

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-66, "Active Test" .

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

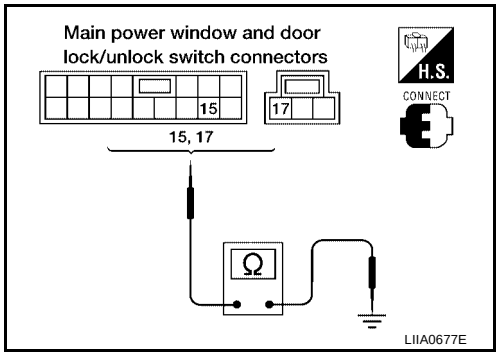


OK or NG

OK >> GO TO 3.
NG >> Replace BCM. Refer to BCS-19, "Removal and Installation of BCM" .

3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

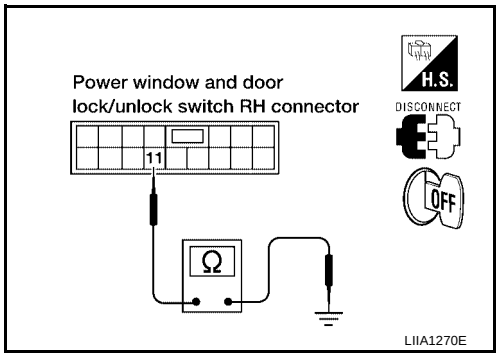
1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch or power window and door lock/unlock switch RH.
3. Check continuity between main power window and door lock/unlock switch connector D7 terminal 15 (without automatic back door system) or D8 terminal 17 (with automatic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



15 (B) - Ground : Continuity should exist.

17 (B) - Ground : Continuity should exist.

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



11 (B) - Ground : Continuity should exist.

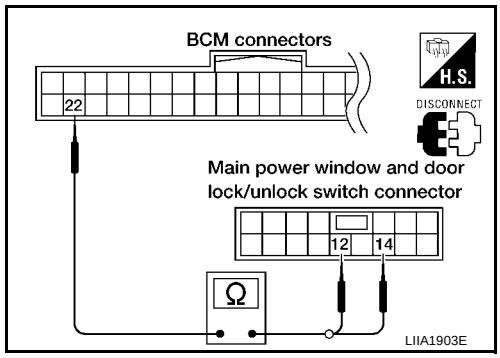
OK or NG

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 (Y/B) - 12 (Y) **: Continuity should exist.**
22 (Y/B) - 14 (Y) **: Continuity should exist.**

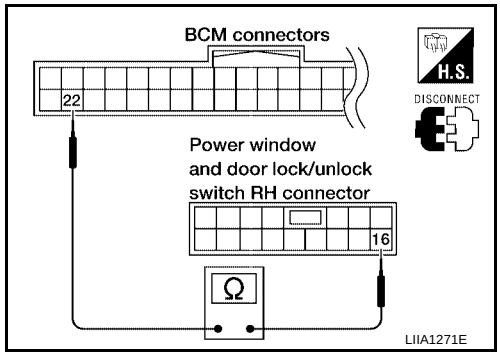


3. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

22 (Y/B) - 16 (Y/B) **: 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-28, "Removal and Installation" .
NG >> Repair or replace harness.



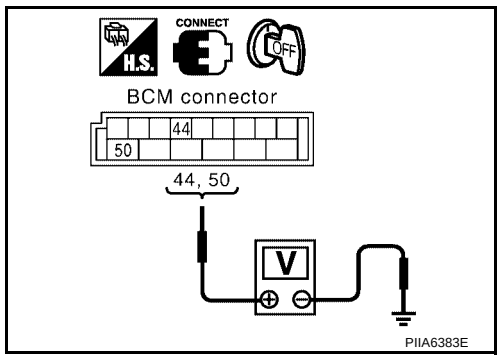
Front Door Lock Assembly LH (Actuator) Check

EIS001Q2

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

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M19 terminals 44, 50 and ground.

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

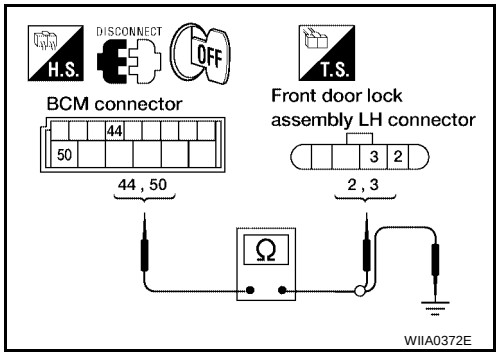


OK or NG

OK >> GO TO 2.
NG >> Replace BCM. Refer to BCS-19, "Removal and Installation of BCM" .

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

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



Connector	Terminals (Wire color)	Connector	Terminals (wire color)	Continuity
M19	44 (G)	D14	2 (G)	Yes
	50 (V)		3 (V)	Yes

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

Connector	Terminals (Wire color)		Continuity
M19	44 (G)	Ground	No
	50 (V)		No

OK or NG

OK >> Replace front door lock assembly LH (actuator). Refer to BL-166, "Removal and Installation" .
NG >> Repair or replace harness.

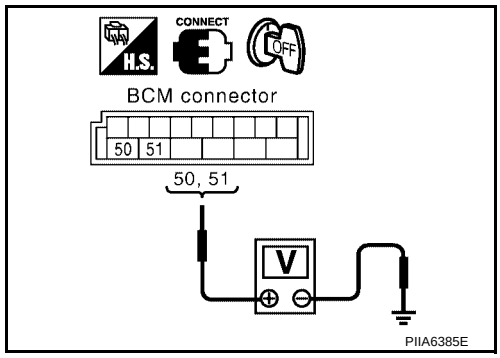
Front Door Lock Actuator RH Check

EIS001Q3

1. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M19 terminals 50, 51 and ground.

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



OK or NG

OK >> GO TO 2.
NG >> Replace BCM. Refer to BCS-19, "Removal and Installation of BCM" .

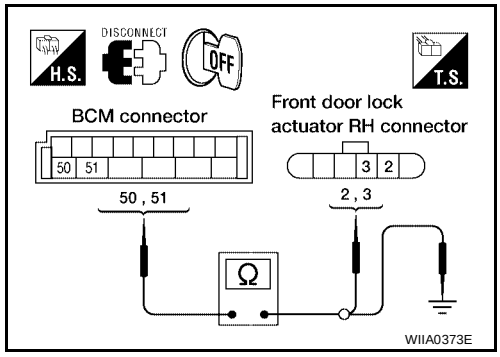
2. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminal		Continuity
50 (V)	3 (V)	Yes
51 (G/Y)	2 (G/Y)	Yes

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

Terminals (Wire color)		Continuity
50 (V)	Ground	No
51 (G/Y)		No



OK or NG

OK >> Replace front door lock actuator RH. Refer to BL-166, "Removal and Installation" .
NG >> Repair or replace harness.

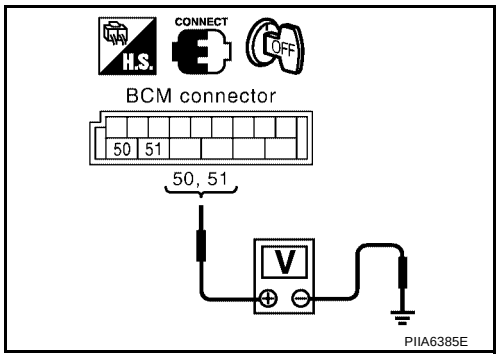
Door Lock Actuator Check (Sliding Door)

EIS0020I

1. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M19 terminals 50, 51 and ground.

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



OK or NG

OK >> GO TO 2.
NG >> Replace BCM. Refer to BCS-19, "Removal and Installation of BCM" .

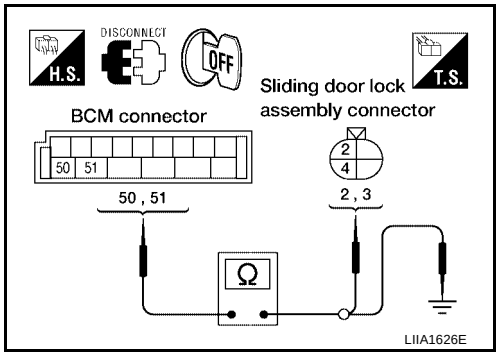
2. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminal		Continuity
50 (V)	4 (V)	Yes
51 (G/Y)	2 (G/Y)	Yes

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

Terminals (Wire color)		Continuity
50 (V)	Ground	No
51 (G/Y)		No



OK or NG

OK >> Replace sliding door lock actuator. Refer to BL-169, "SLIDE DOOR LOCK" .
NG >> Repair or replace harness.

Front Door Lock Assembly LH (Key Cylinder Switch) Check

EIS001Q4

1. CHECK DOOR KEY CYLINDER SWITCH LH

With CONSULT-II

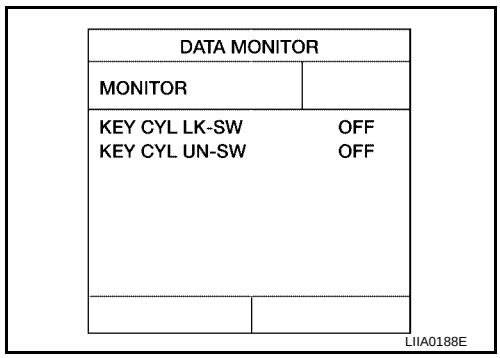
Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode in CONSULT–II.Refer to BL-38, "DATA MONITOR" .

- 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

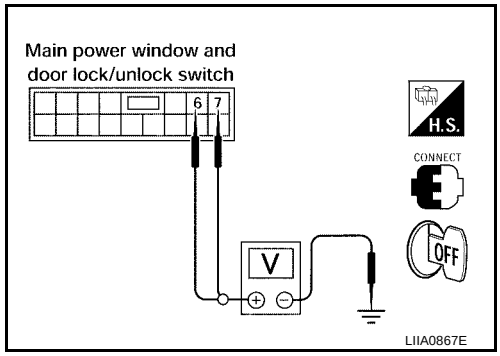


Without CONSULT-II

Check voltage between main power window and door lock/unlock switch connector D7 terminals 6, 7 and ground.

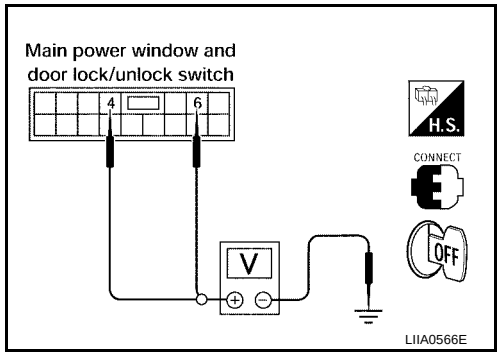
Without Automatic Sliding Door System

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



With Automatic Sliding Door System

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



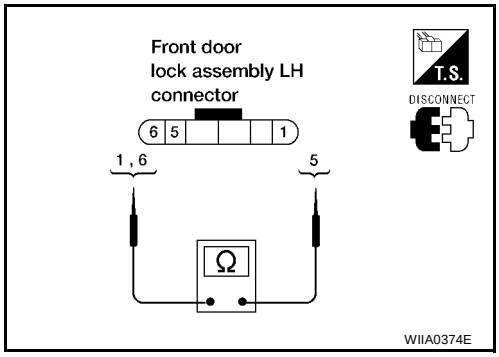
OK or NG

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

2. CHECK DOOR KEY CYLINDER SWITCH LH

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 terminals 1, 5 and 6.

Terminals	Condition	Continuity
1 – 5	Key is turned to LOCK.	Yes
6 – 5	Key is turned to UNLOCK.	Yes



OK or NG

OK >> Check the following.

- Front door lock assembly LH (key cylinder switch) ground circuit.
- Harness for open or short between main power window and door lock/unlock switch and front door lock assembly LH (key cylinder switch).

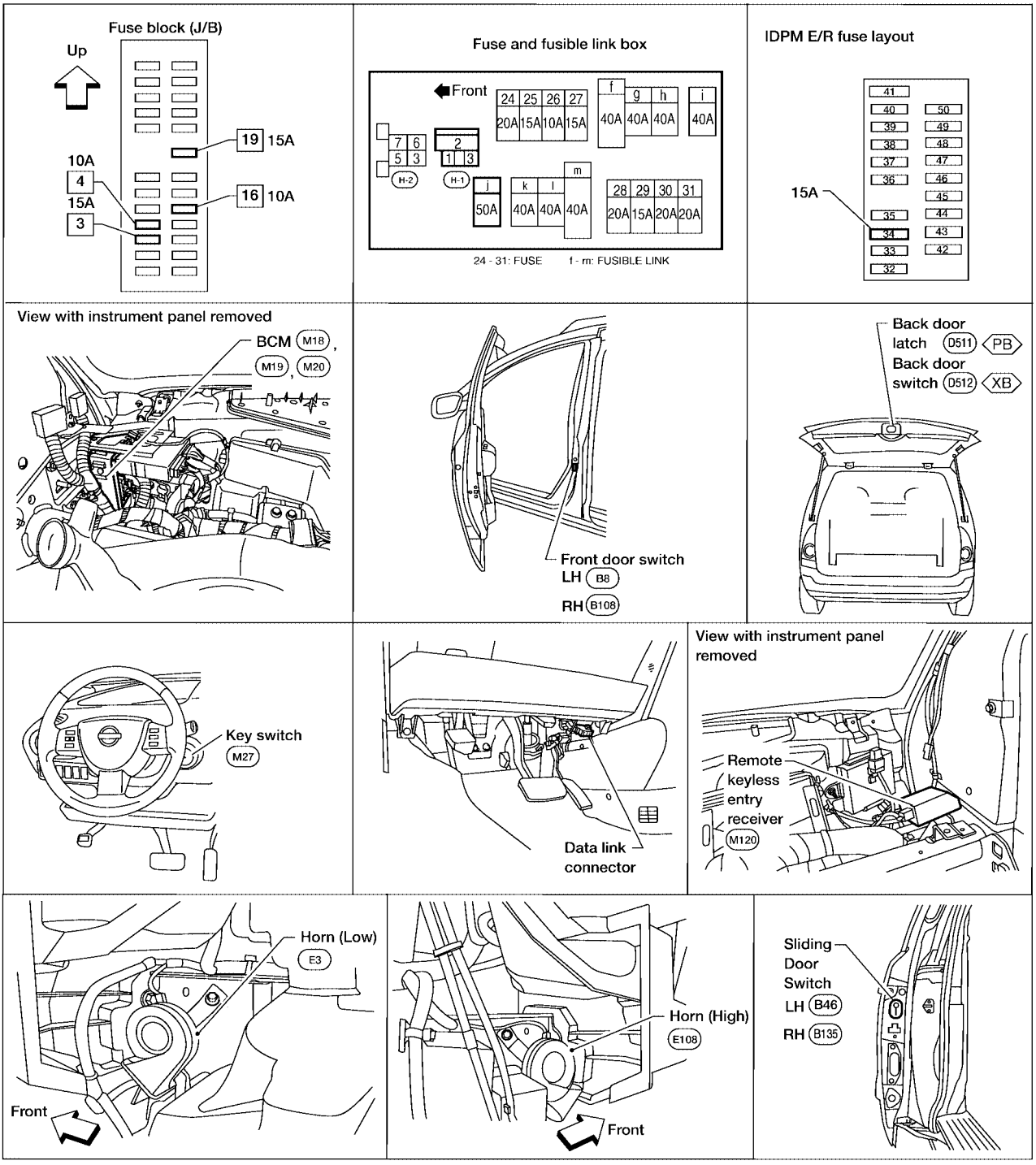
NG >> Replace front door lock assembly LH. Refer to BL-166, "FRONT DOOR LOCK" .

REMOTE KEYLESS ENTRY SYSTEM

PFP:28596

Component Parts and Harness Connector Location

EIS001Q5



PB : WITH POWER BACK DOOR

XB : WITHOUT POWER BACK DOOR

LIIA1904E

System Description

EIS001Q6

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 key switch is ON, 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 key 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 key 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
- to 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
- to 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
- to 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
- to 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 back door closure system) or,
- through back door latch terminal 7 (with back door closure system)
- through back door switch terminal 3 (without back door closure system),.
- through back door latch terminal 8 (with back door closure system),.
- to body grounds D403 and D404.

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

- power door lock
- sliding door opener
- back door opener
- 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 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 lock/unlock signal to each door lock actuator.
- When the door lock actuators receive this signal, each operates to lock/unlock its door.

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 Auto Slide 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-86, "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 back door closure system)] 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-86, "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 uses communication to send 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);
- interior lamp switch is in DOOR position.

Remote keyless entry system turns on interior lamp and ignition illumination (for 30 seconds) with input of UNLOCK signal from keyfob.
For detailed description, refer to LT-131, "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 3 seconds, 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.

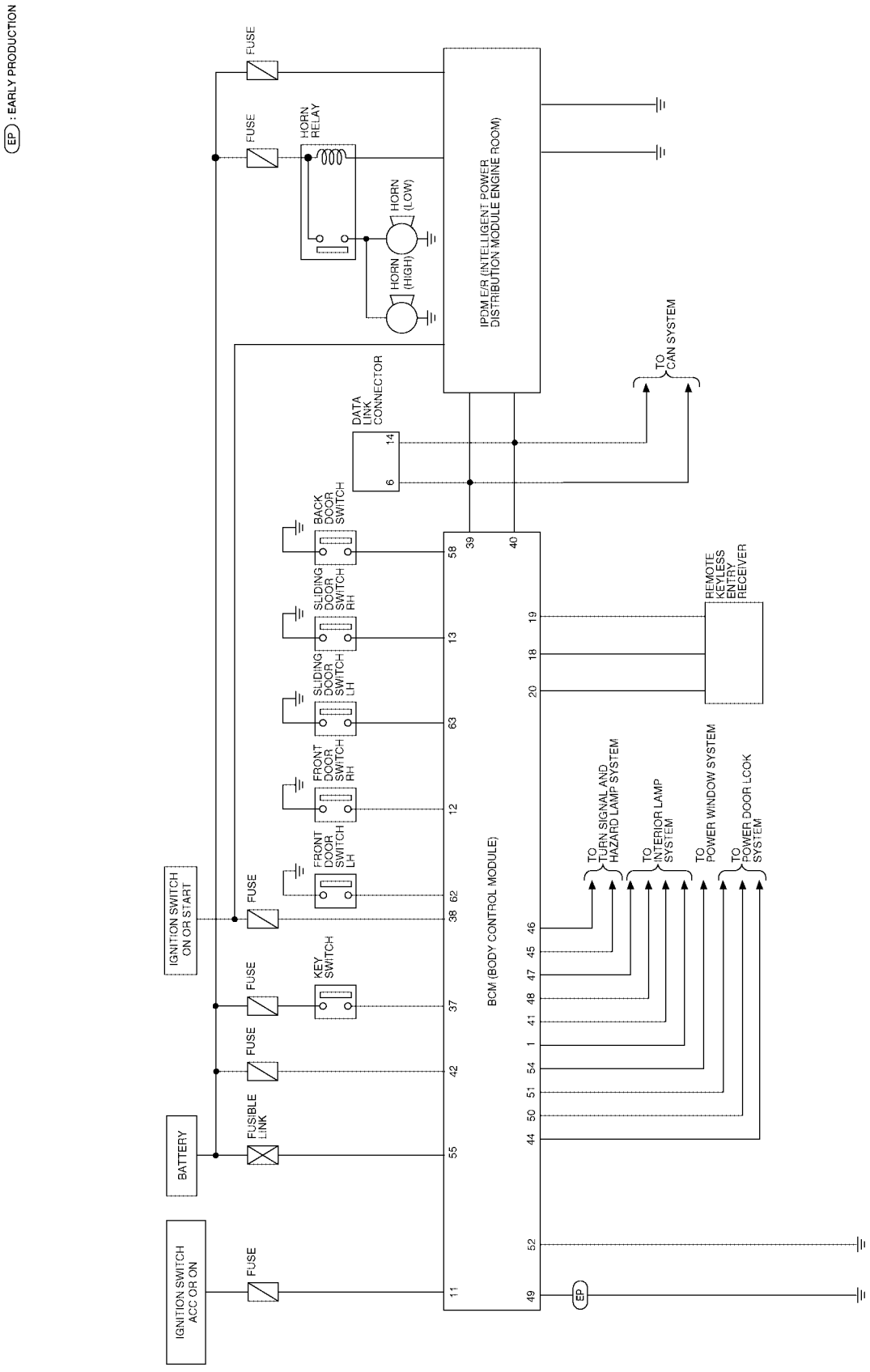
CAN Communication System Description

EIS001Q7

Refer to LAN-6, "CAN COMMUNICATION" .

Schematic

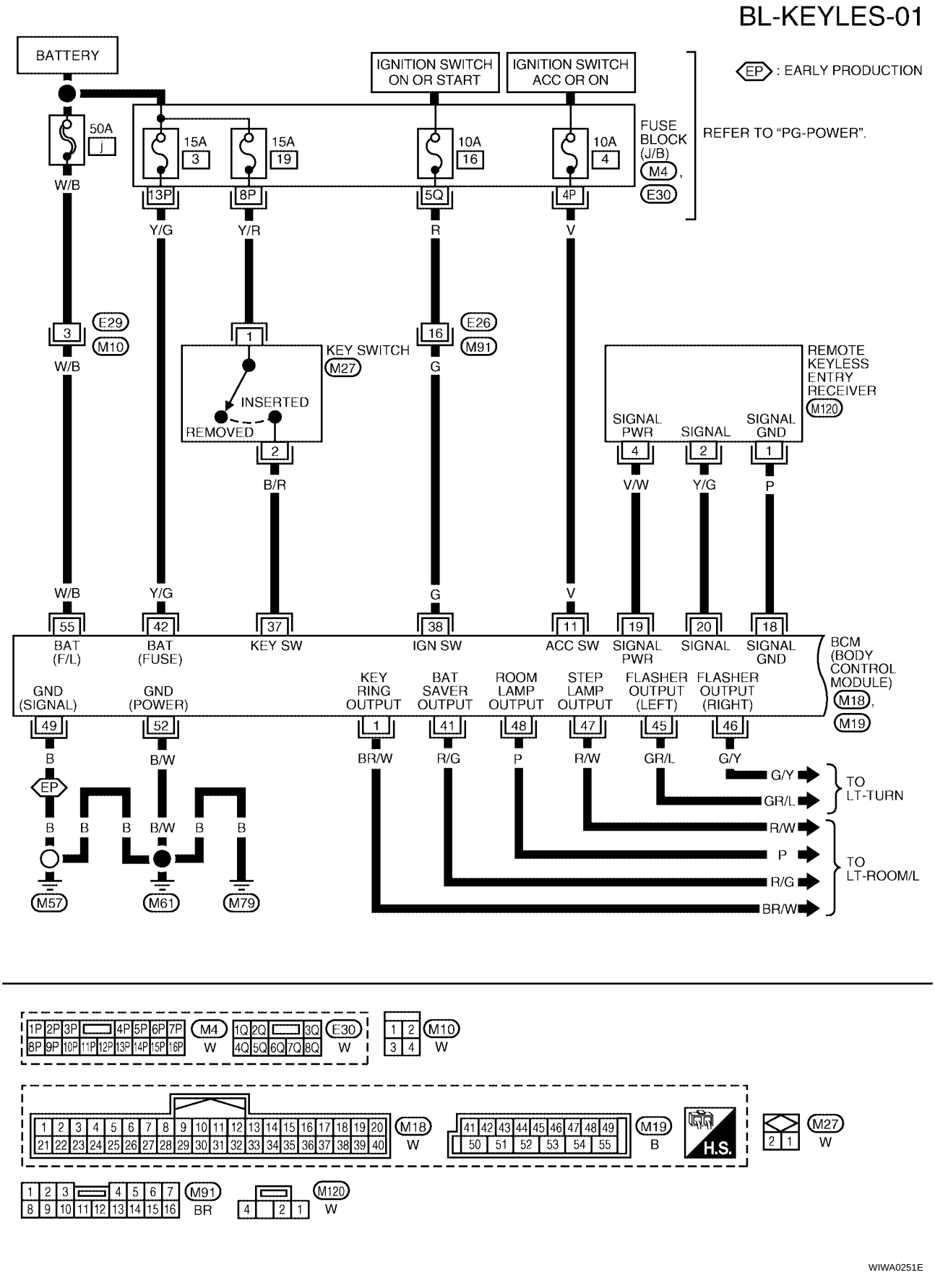
EIS001Q8



Wiring Diagram — KEYLES—

EIS001Q9

FIG. 1



WIWA0251E

FIG. 2

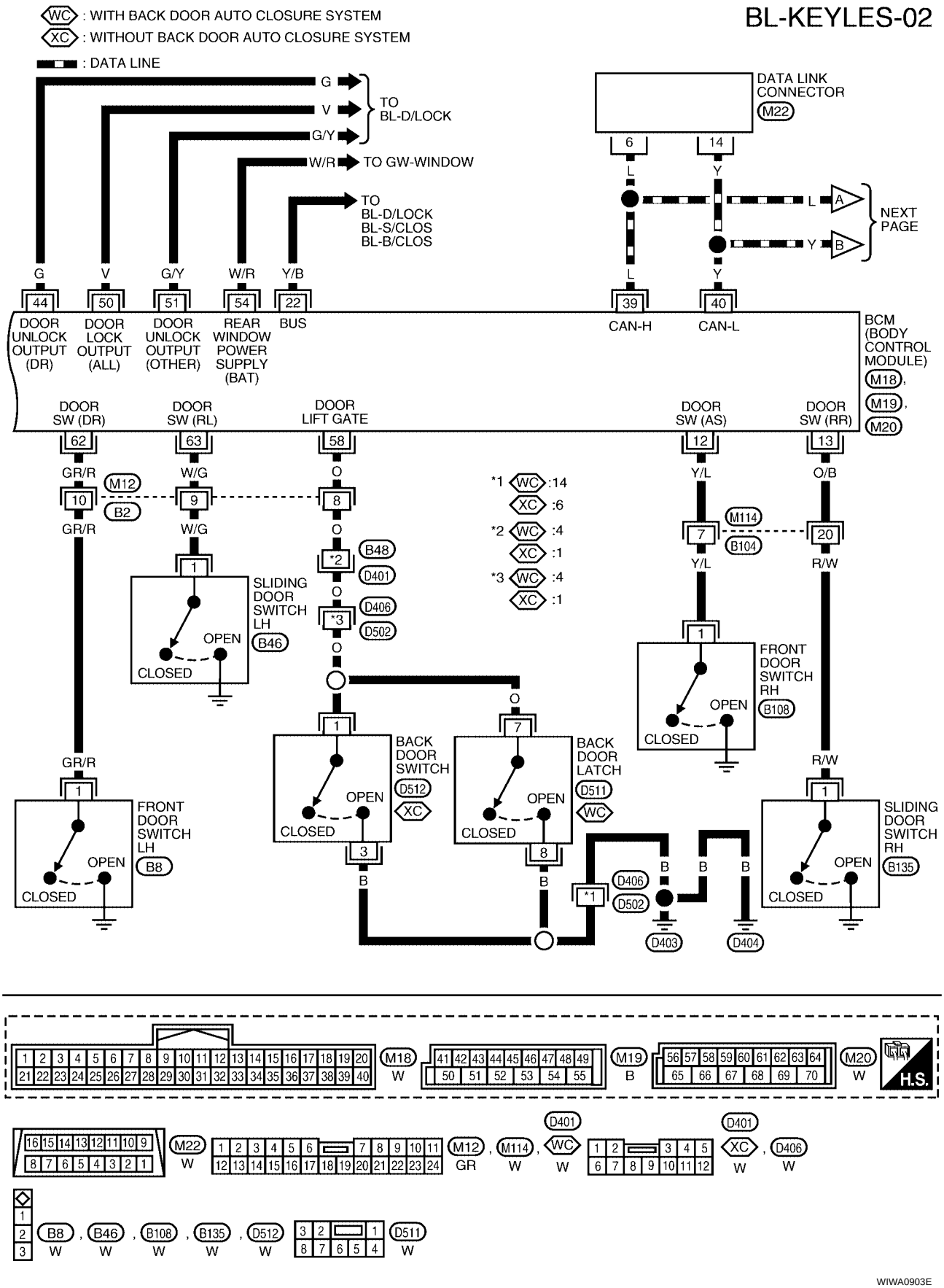
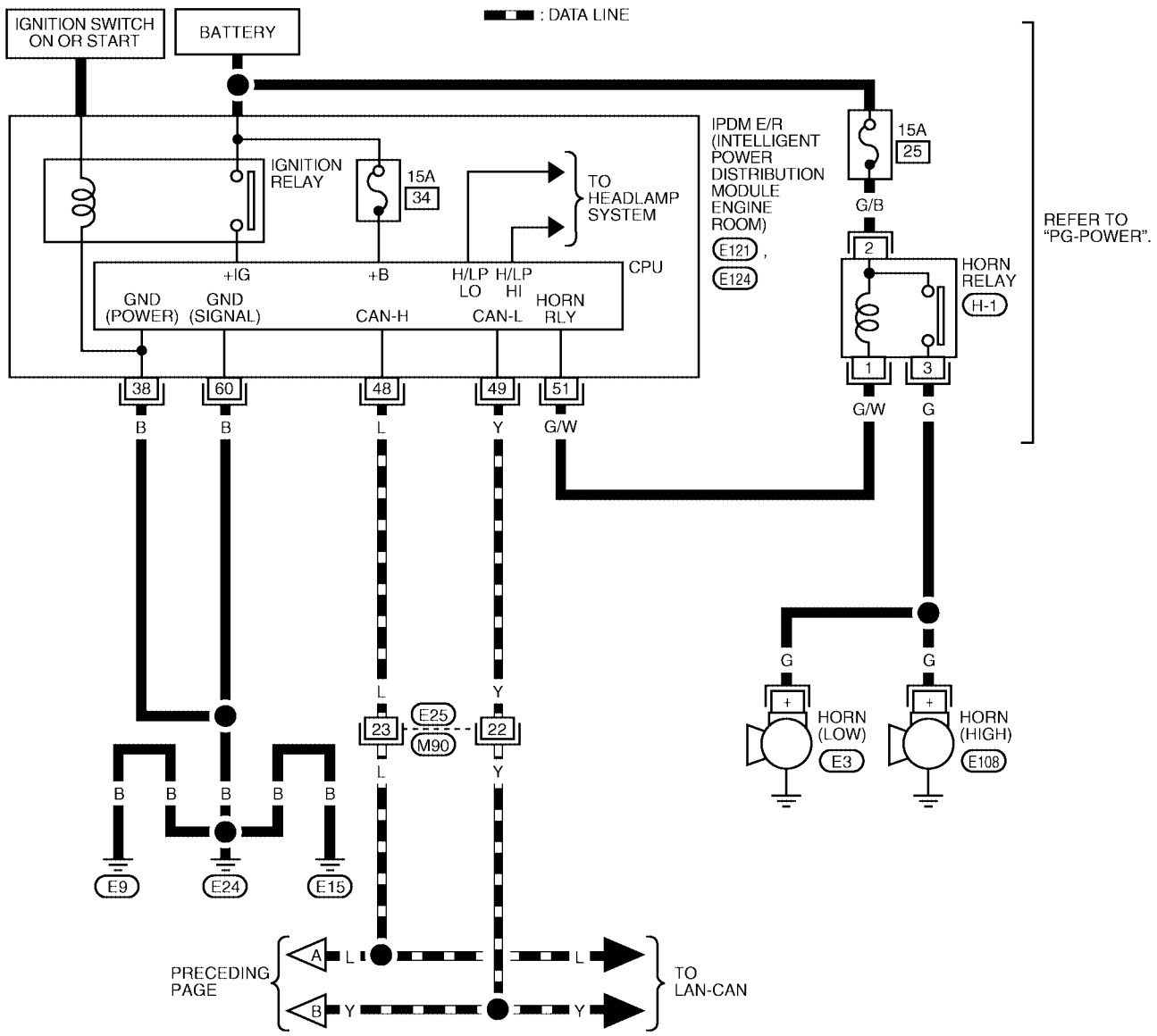
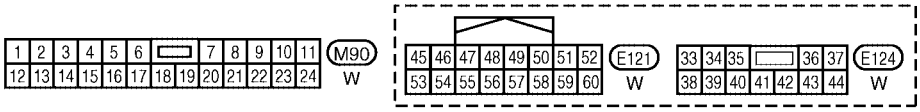
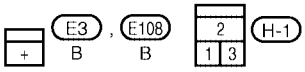

WC : WITH BACK DOOR AUTO CLOSURE SYSTEM
XC : WITHOUT BACK DOOR AUTO CLOSURE SYSTEM
: DATA LINE
BL-KEYLES-02
TO BL-D/LOCK
TO GW-WINDOW
TO BL-D/LOCK BL-S/CLOS BL-B/CLOS
DATA LINK CONNECTOR M22
NEXT PAGE
DOOR UNLOCK OUTPUT (DR)
DOOR LOCK OUTPUT (ALL)
DOOR UNLOCK OUTPUT (OTHER)
REAR WINDOW POWER SUPPLY (BAT)
BUS
CAN-H
CAN-L
BCM (BODY CONTROL MODULE) M18, M19, M20
DOOR SW (DR)
DOOR SW (RL)
DOOR LIFT GATE
DOOR SW (AS)
DOOR SW (RR)
*1 WC :14 XC :6
*2 WC :4 XC :1
*3 WC :4 XC :1
SLIDING DOOR SWITCH LH B46
FRONT DOOR SWITCH LH B8
BACK DOOR SWITCH D512 XC
BACK DOOR LATCH D511 WC
FRONT DOOR SWITCH RH B108
SLIDING DOOR SWITCH RH B135
OPEN
CLOSED
M18 W
M19 B
M20 W
H.S.
M22 W
M12 GR
M114 W
D401 WC W
D401 XC W
D406 W
B8 W
B46 W
B108 W
B135 W
D512 W
D511 W
WIWA0903E

FIG. 3

BL-KEYLES-03



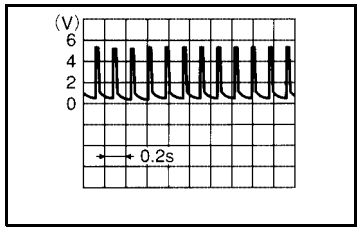
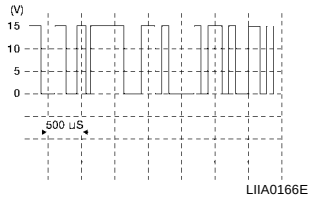




LIWA0506E

Terminals and Reference Value for BCM

EIS001QA

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	Y/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	Ground	—	0
19	V/W	Remote keyless entry receiver power supply	—	5
20	Y/G	Remote keyless entry receiver signal	—	
22	Y/B	Power window serial link	—	
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	Y	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
45	GR/L	Turn signal LH	When doors are locked or unlocked using keyfob (OFF → ON) *2	0 → Battery voltage
46	G/Y	Turn signal RH	When doors are locked or unlocked using keyfob (OFF → ON) *2	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 *1	Battery voltage
			Room Lamp OFF *1	0
49 *3	B	Ground	—	0
50	V	Door lock actuators	Door lock & unlock switch (Neutral → Lock)	0 → Battery voltage
51	G/Y	Passenger and rear doors lock actuator	Door lock & unlock switch (Neutral → Unlock)	0 → Battery voltage
52	B/W	Ground	—	0

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
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 room lamp switch is in "DOOR" position.
- *2: when hazard reminder is ON.
- *3 early production.

Terminals and Reference Value for IPDM E/R

EIS001QB

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
38	B	Ground	—	0
48	L	CAN-H	—	—
49	Y	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)

EIS0071Z

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

BCM diagnostic test item	Diagnostic mode	Content
Inspection by part	WORK SUPPORT	Changes setting of each function.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis results.
	CAN DIAG SUPPORT MNTR	The results of transmit/receive diagnosis of CAN communication can be read.
	ECU PART NUMBER	BCM part number can be read.
	CONFIGURATION	Performs BCM configuration read/write functions.

CONSULT-II Inspection Procedure

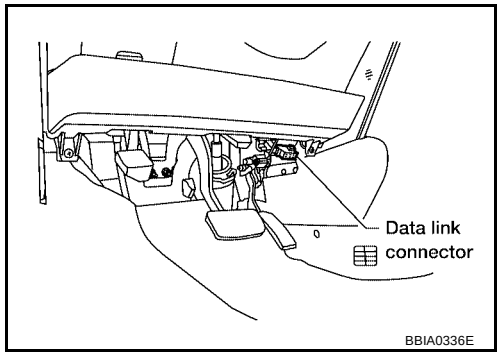
EIS001QD

“MULTI REMOTE ENT”

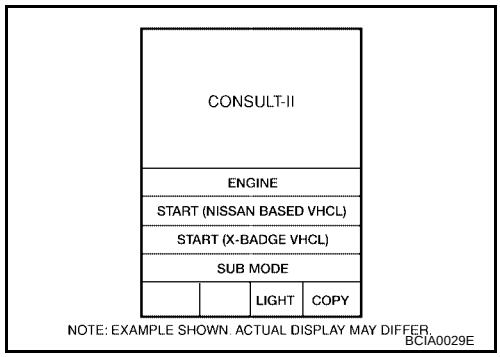
CAUTION:

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.

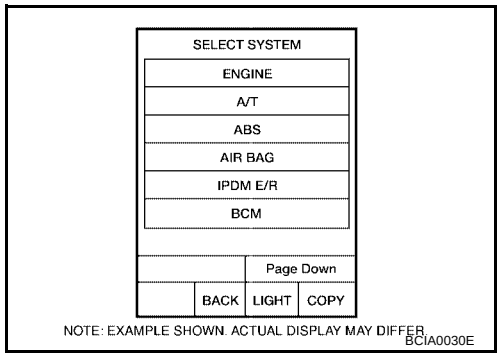
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



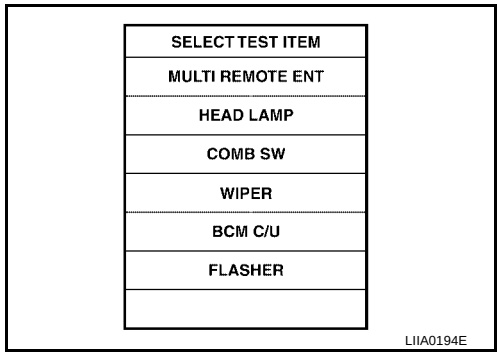
3. Turn ignition switch ON.
4. Touch “START”.



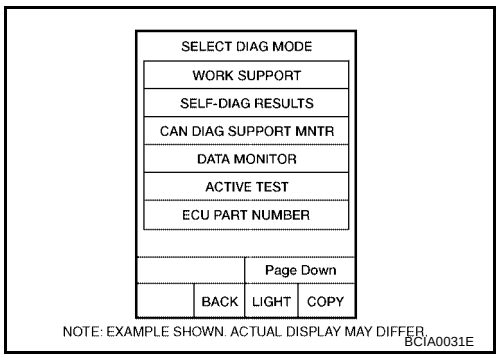
5. Touch “BCM”.
   If "BCM" is not indicated, refer to GI-37, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Touch “MULTI REMOTE ENT”.



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



CONSULT-II Application Items

EIS001QE

“MULTI REMOTE ENT”

Data Monitor

Monitored Item	Description
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
PANIC BTN	Indicates [ON/OFF] condition of panic signal from keyfob.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from keyfob.
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from keyfob.
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.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch.
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch.
DOOR SW-RL	Indicates [ON/OFF] condition of sliding door switch LH.
DOOR SW-RR	Indicates [ON/OFF] condition of sliding door switch RH.
LK/UN BTN ON	Indicates [ON/OFF] condition of lock/unlock signal at the same time from keyfob.
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 illumination operation. The ignition 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.
HORN	This test is able to check panic alarm and horn reminder operations. The alarm activate 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 CONFIR	It can be checked whether keyfob ID code is registered or not in this mode.
REMO CONT ID REGIST	Keyfob ID code can be registered.
REMO CONT ID ERASUR	Keyfob ID code can be erased.
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	Trunk lid 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

EIS001QF

1. Check the symptom and customer's requests.
2. Understand outline of system. Refer to BL-54, "System Description" .
3. Confirm system operation. that
   - Check that the power door lock system operates normally. Refer to BL-17, "POWER DOOR LOCK SYSTEM" .
   - Check that the automatic sliding door system operates normally. Refer to BL-85, "AUTOMATIC SLIDING DOOR SYSTEM" .
   - Check that the automatic back door system operates normally. Refer to BL-134, "AUTOMATIC BACK DOOR SYSTEM" .
4. Perform pre-diagnosis inspection. Refer to BL-68, "Pre-Diagnosis Inspection" .
5. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts. Refer to BL-69, "Trouble Diagnoses" .
6. **Inspection End.**

Pre-Diagnosis Inspection

EIS001QG

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
	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
	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	49*, 52	Ground	OFF	Yes

*: Early production

OK or NG

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

Trouble Diagnoses

EIS001QH

SYMPTOM CHART

NOTE:

- Always check the "Trouble Diagnosis Procedure" before troubleshooting. Refer to BL-68, "Trouble Diagnosis Procedure" .
- Always check keyfob battery before replacing keyfob. Refer to BL-75, "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 function 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-75
	2. Check BCM and keyless receiver.	BL-77
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-75
	2. Key switch (insert) check	BL-71
	3. Door switch check	BL-72, BL-74
	4. ACC power check	BL-78
	5. Replace BCM.	BCS-19
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-17, "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-75
	2. Replace BCM.	BCS-19
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-66
	2. Door switch check	BL-72, BL-74
	3. Replace BCM.	BCS-19
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-66
	2. Check hazard function with hazard switch	—
	3. Replace BCM.	BCS-19

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-66
	2. Check horn function with horn switch	—
	3. IPDM E/R operation check	BL-79
	4. Replace BCM.	BCS-19
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)	BL-75
	2. Key switch (insert) check	BL-71
	3. Remote keyless entry receiver system	BL-77
	4. Replace BCM.	BCS-19
Room lamp, ignition key illumination and step lamp operation do not activate properly.	1. Room lamp operation check	BL-79
	2. Ignition key illumination operation check	BL-80
	3.Step lamp operation check	LT-129
	4. Door switch check	BL-72, BL-74
	5. Replace BCM.	BCS-19
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-75
	2. Key switch (insert) check	BL-71
	3. Replace BCM.	BCS-19
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-67
	2. Replace BCM.	BCS-19
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-67
	2. Check power window function with switch	—
	3. Replace BCM.	BCS-19

Key Switch Check

EIS001QM

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

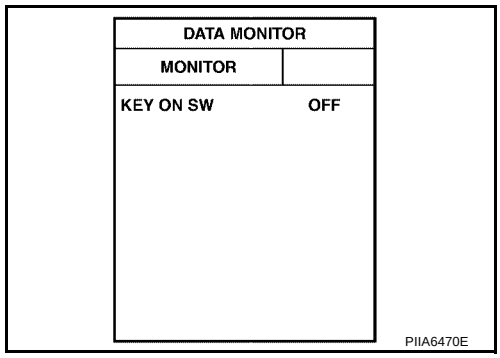
Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT–II. Refer to BL-38, "DATA MONITOR" .

- When key is inserted to ignition key cylinder:

  KEY ON SW :ON

- When key is removed from ignition key cylinder:

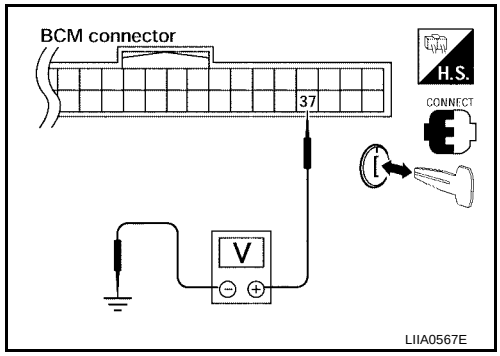
  KEY ON SW :OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 37 and ground.

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



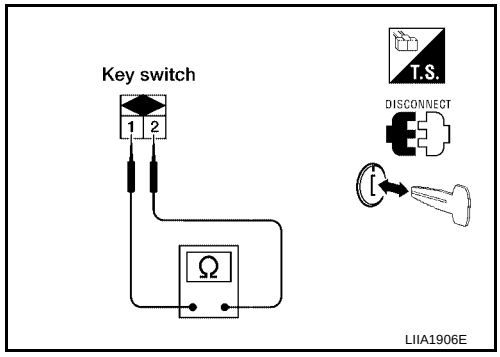
OK or NG

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

2. CHECK KEY SWITCH (INSERT)

Check continuity between key switch terminals.

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)

EIS0020L

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-38, "DATA MONITOR" .

- When any doors are open:

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

- When any doors are closed:

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

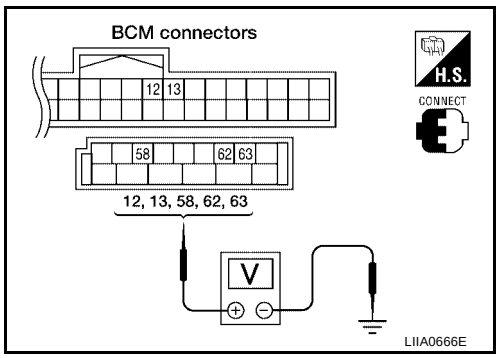
DATA MONITOR	
MONITOR	
DOOR SW - DR	OFF
DOOR SW - AS	OFF
DOOR SW - RR	OFF
DOOR SW - RL	OFF
BACK DOOR SW	OFF

LIIA0665E

Without CONSULT-II

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

Connector	Item	Terminals (Wire color) (+)	Terminals (Wire color) (–)	Condition	Voltage (V) (Approx.)
M20	Back door switch	58 (O)	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62 (GR/R)			
	Sliding door switch LH	63 (W/G)			
M18	Front door switch RH	12 (Y/L)			
	Sliding door switch RH	13 (O/B)			



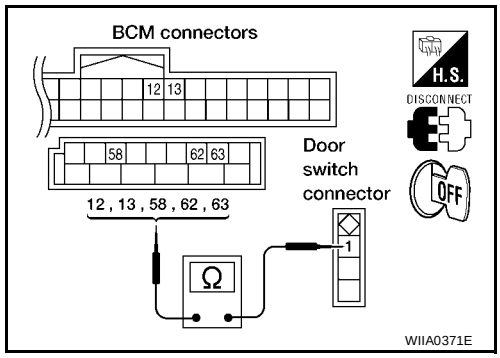
OK or NG

OK >> System 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 B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) or D512 (Back) terminal 1 and BCM connector M18, M20 terminals 12, 13, 58, 62 and 63

1 (GR/R) - 62 (GR/R) :Continuity should exist
1 (Y/L) - 12 (Y/L) :Continuity should exist
1 (W/G) - 63 (W/G) :Continuity should exist
1 (R/W) - 13 (O/B) :Continuity should exist
1 (O) - 58 (O) :Continuity should exist



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

1 (GR/R, Y/L, W/G, R/W or O) - Ground :Continuity should not exist

OK or NG

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

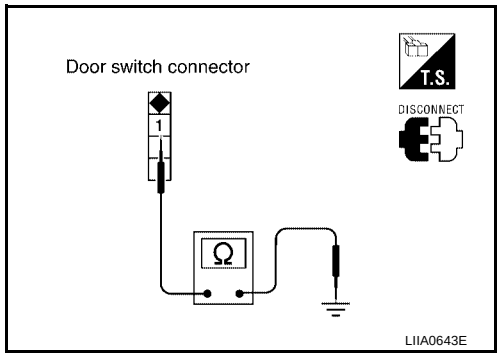
3. CHECK DOOR SWITCHES

- Disconnect door switch harness.
- Check continuity between door switch connector terminals.

	Terminal	Condition	Continuity
Door switch	1 – Ground	Open	Yes
		Closed	No

OK or NG

OK >> Check door switch case ground condition (front and sliding door) or ground circuit (back door).
NG >> Replace door switch, or repair or replace harness.



Door Switch Check (With Automatic Back Door System)

EIS0020M

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-38, "DATA MONITOR" .

- When any doors are open:

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

- When any doors are closed:

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

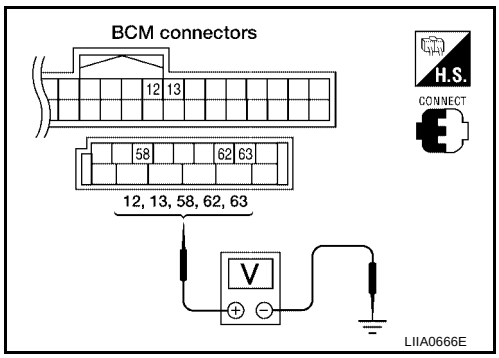
DATA MONITOR	
MONITOR	
DOOR SW - DR	OFF
DOOR SW - AS	OFF
DOOR SW - RR	OFF
DOOR SW - RL	OFF
BACK DOOR SW	OFF

LIIA0665E

Without CONSULT-II

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

Connector	Item	Terminals (Wire color) (+)	Terminals (Wire color) (–)	Condition	Voltage (V) (Approx.)
M20	Back door lock actuator	58 (O)	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Front door switch LH	62 (GR/R)			
	Sliding door switch LH	63 (W/G)			
M18	Front door switch RH	12 (Y/L)			
	Sliding door switch RH	13 (O/B)			



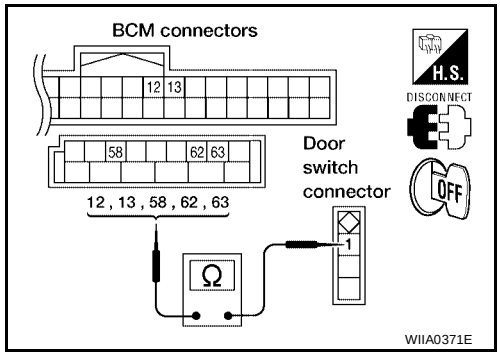
OK or NG

OK >> System 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 B8 (Front LH), B108 (Front RH), B46 (Sliding LH), B135 (Sliding RH) terminal 1 or back door latch actuator D511 terminal 7 and BCM connector M18, M20 terminals 12, 13, 58, 62 and 63

1 (GR/R) - 62 (GR/R) :Continuity should exist
1 (Y/L) - 12 (Y/L) :Continuity should exist
1 (W/G) - 63 (W/G) :Continuity should exist
1 (R/W) - 13 (O/B) :Continuity should exist
7 (O) - 58 (O) :Continuity should exist



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

1 (GR/R, Y/L, W/G or R/W) - Ground :Continuity should not exist
7 (O) - Ground :Continuity should not exist

OK or NG

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

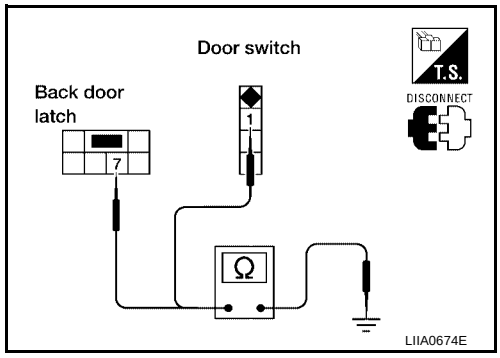
3. CHECK DOOR SWITCHES

- Disconnect door switch harness.
- Check continuity between door switch connector terminals.

	Terminal	Condition	Continuity
Door switch	1 – Ground	Open	Yes
		Closed	No
Back door latch actuator	7 – Ground	Open	Yes
		Closed	No

OK or NG

OK >> Check door switch case ground condition.
NG >> Replace door switch.



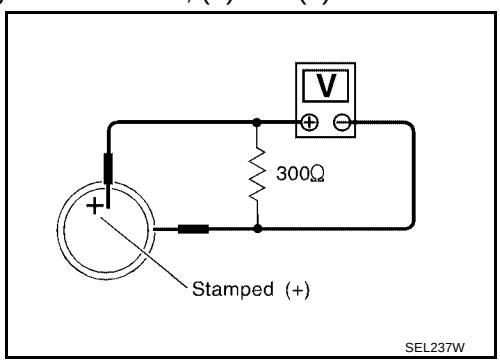
Keyfob Battery and Function Check

EIS001QI

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-84, "Keyfob Battery Replacement" .

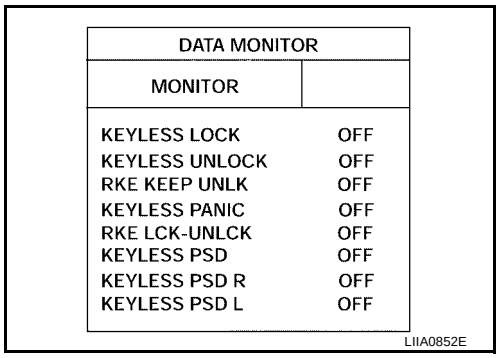
2. CHECK KEYFOB FUNCTION

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-19, "Removal and Installation of BCM" .

OK >> WITHOUT CONSULT-II: Keyfob is OK. Further inspection is necessary. Refer to BL-69, "SYMPTOM CHART" .

NG >> WITH CONSULT-II: Further inspection is necessary. Refer to BL-69, "SYMPTOM CHART" .

NG >> WITHOUT CONSULT-II: Replace keyfob. Refer to BL-81, "ID Code Entry Procedure" .

Remote Keyless Entry Receiver System Inspection

EIS00720

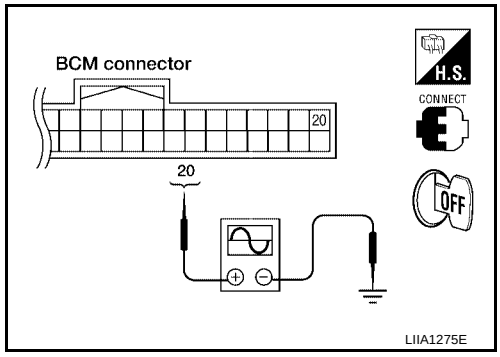
1. REMOTE KEYLESS ENTRY RECEIVER SIGNAL

Check signal voltage waveform between BCM connector M18 terminal 20 (Y/G) and ground using an oscilloscope.

Condition:

Keyfob buttons released : **Refer to BL-63, "Terminals and Reference Value for BCM" .**

Keyfob buttons pressed : **Refer to BL-63, "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-19, "Removal and Installation of BCM" .

NG >> GO TO 2.

2. REMOTE KEYLESS ENTRY RECEIVER POWER SUPPLY INSPECTION

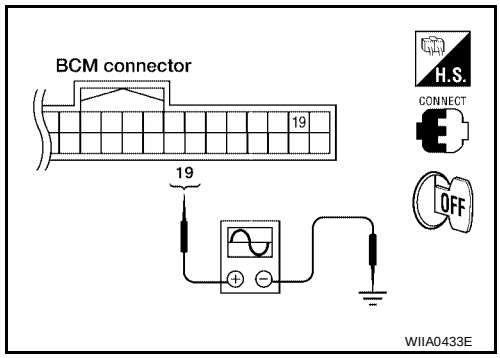
Check signal voltage waveform between BCM connector M18 terminal 19 (V/W) and ground using an oscilloscope.

19 (V/W) - Ground : **Refer to BL-63, "Terminals and Reference Value for BCM" .**

OK or NG

OK >> GO TO 3.

NG >> Replace BCM. Refer to BCS-19, "Removal and Installation of BCM" .



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

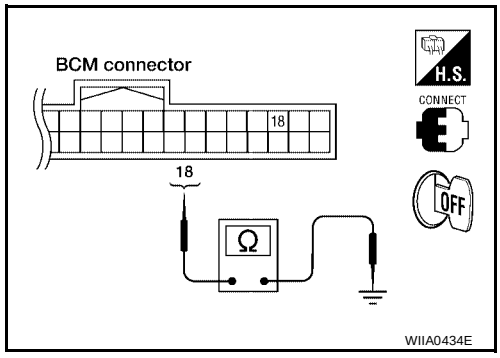
Check continuity between BCM connector M18 terminal 18 (P) and ground.

18 (P) - Ground : **Continuity should exist.**

OK or NG

OK >> GO TO 4.

NG >> Replace BCM. Refer to BCS-19, "Removal and Installation of BCM" .



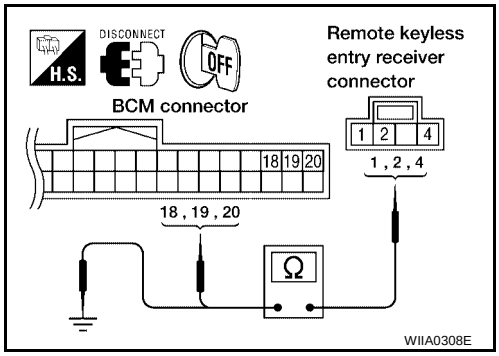
4. HARNESS INSPECTION BETWEEN BCM AND REMOTE KEYLESS ENTRY RECEIVER

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 (P) - 18 (P) : Continuity should exist.
2 (Y/G) - 20 (Y/G) : Continuity should exist.
4 (V/W) - 19 (V/W) : Continuity should exist.

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

1 (P) - Ground : Continuity should not exist.
2 (Y/G) - Ground : Continuity should not exist.
4 (V/W) - 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

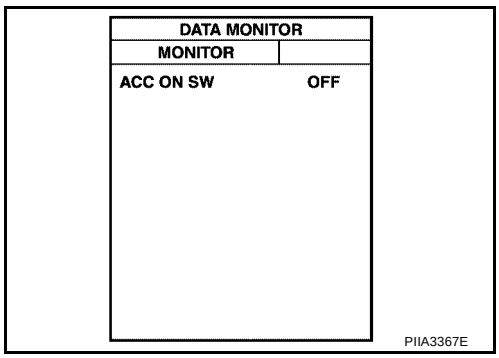
EIS001QJ

1. CHECK ACC POWER

With CONSULT-II

Check "ACC ON SW" in DATA MONITOR mode with CONSULT–II. Refer to BL-38, "DATA MONITOR" .

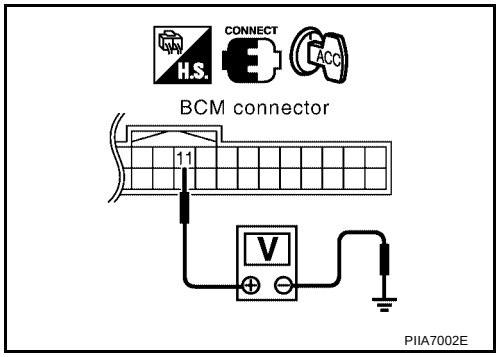
Monitor Item	Condition	
ACC ON SW	Ignition switch position is ACC	: ON
	Ignition switch position is OFF	: OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 11 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M18	11 (V)	Ground	ACC	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.

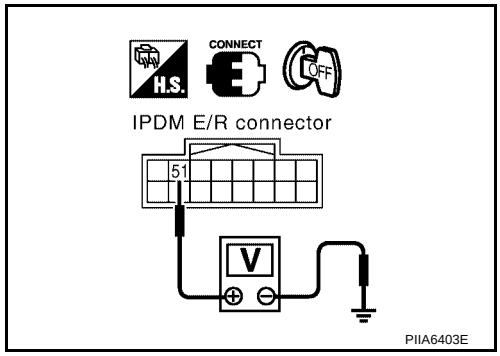
IPDM E/R Operation Check

EIS001QK

1. CHECK IPDM E/R INPUT VOLTAGE

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

Connector	Terminal (Wire color)		Voltage (V) (Approx.)
	(+)	(–)	
E121	51 (G/W)	Ground	Battery voltage



OK or NG

OK >> Replace IPDM E/R. Refer to PG-27, “Removal and Installation of IPDM E/R“.

NG >> GO TO 2.

2. CHECK HORN RELAY CIRCUIT

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 (G/W) - 1 (G/W) :Continuity should exist.

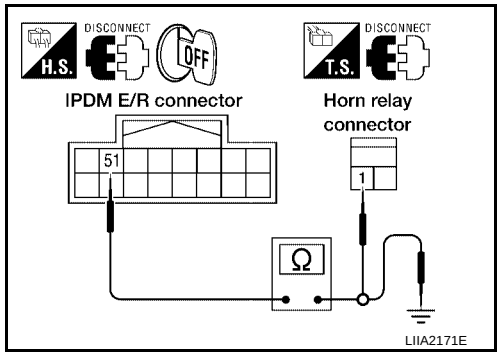
4. Check continuity between IPDM E/R connector E121 terminal 51 and ground.

51 (G/W) - Ground :Continuity should not exist.

OK or NG

OK >> Further inspection is necessary. Refer to BL-69, "SYMPTOM CHART" .

NG >> Repair or replace harness



Check Hazard Function

EIS001QO

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 to LT-69, “TURN SIGNAL AND HAZARD LAMPS“.

Check Horn Function

EIS001QP

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-49, “HORN“.

Check Headlamp Function

EIS001QQ

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-6, "HEADLAMP (FOR USA)" .

Check Map Lamp and Ignition Key Illumination Function

EIS001QR

1. CHECK MAP LAMP AND IGNITION KEY ILLUMINATION FUNCTION

When map lamp switch is in DOOR position, open the front door LH or RH.

Map lamp and ignition key illumination should illuminate.

OK or NG

OK >> System is OK.
NG >> Check ignition illumination circuit. Refer to LT-153, "ILLUMINATION" .

ID Code Entry Procedure

EIS001QS

KEYFOB ID SET UP WITH CONSULT-II

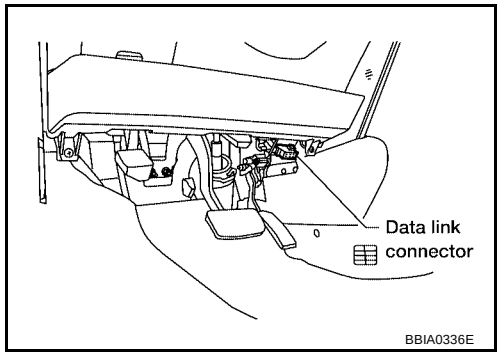
NOTE:

- **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.**

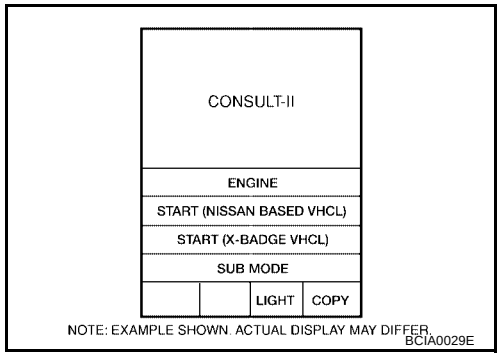
CAUTION:

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 out CAN communication.

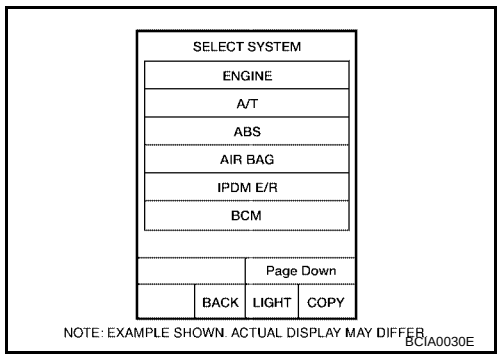
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



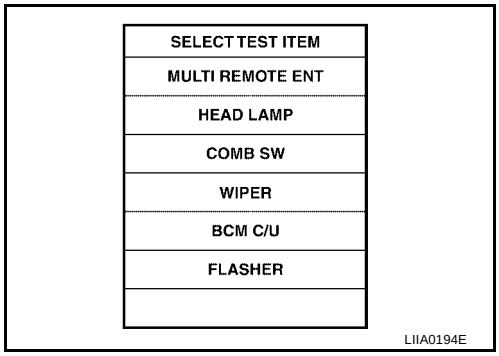
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



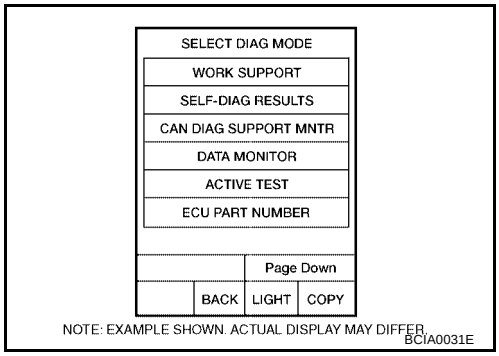
5. Touch “BCM”.
   If "BCM" is not indicated, refer to GI-37, "CONSULT-II Data Link Connector (DLC) Circuit" .



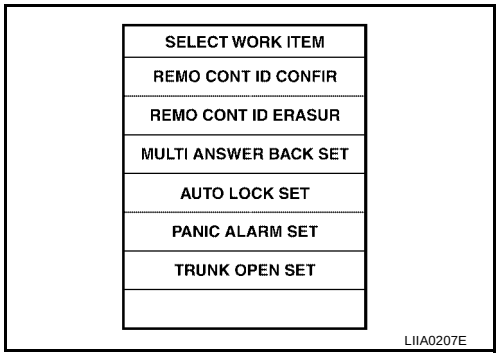
6. Touch “MULTI REMOTE ENT”.



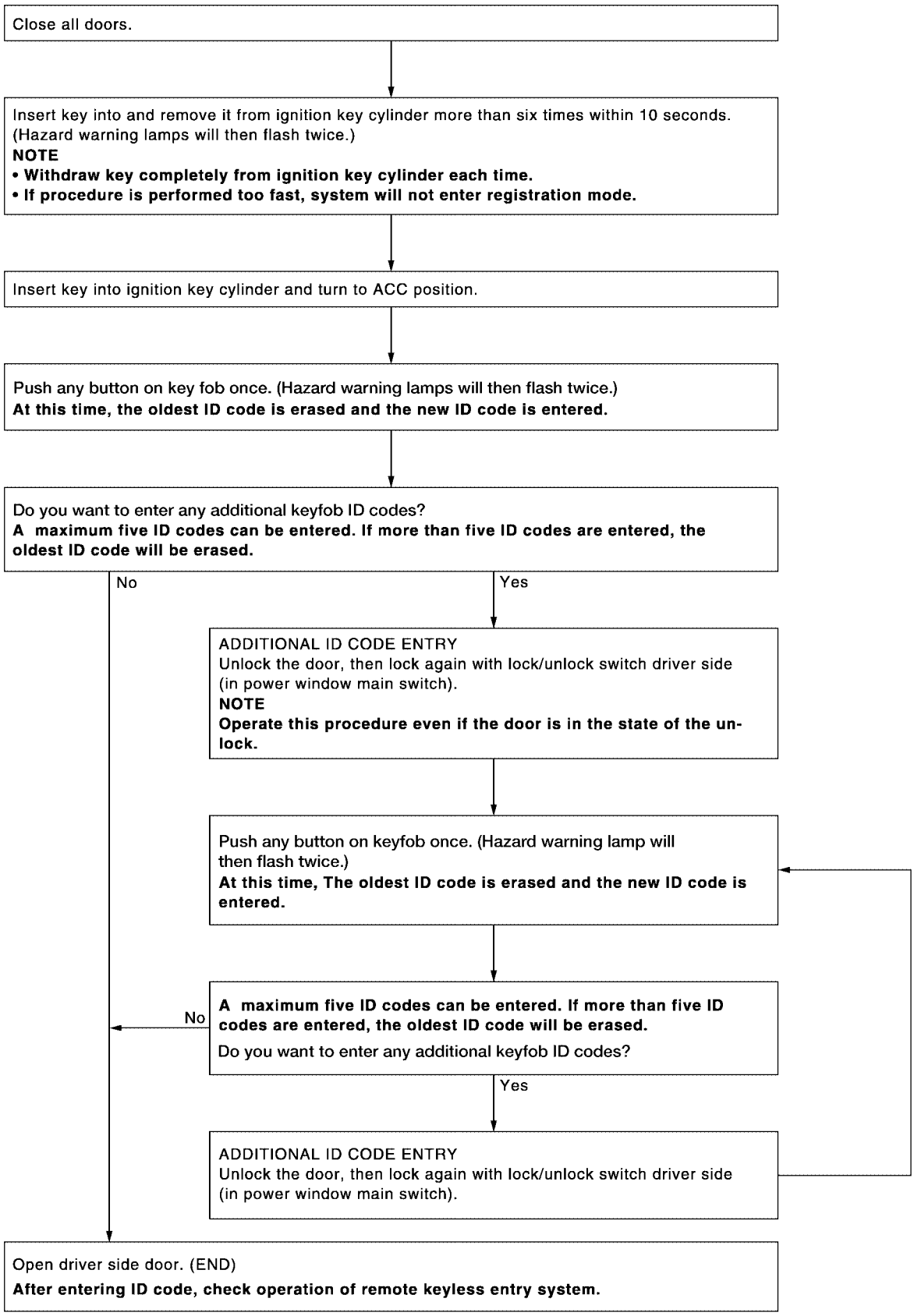
7. Touch “WORK SUPPORT”.



8. The items are shown on the figure at left 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.

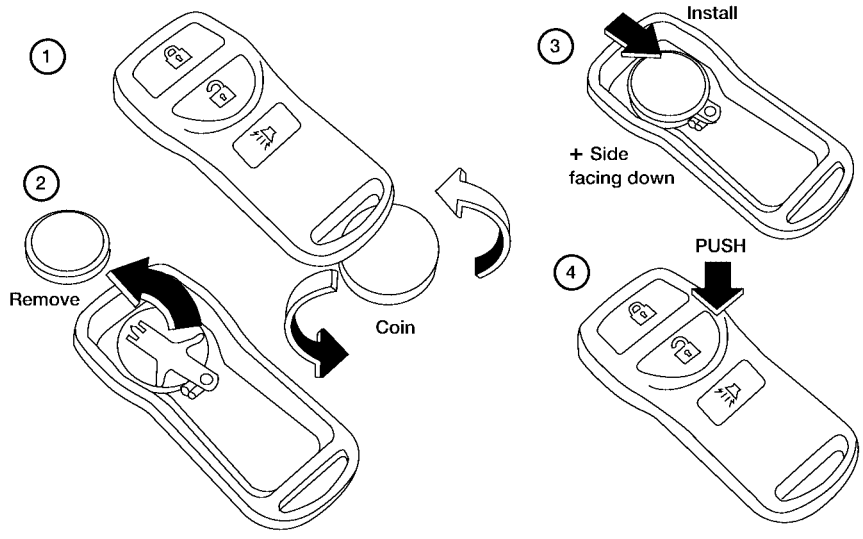
Keyfob Battery Replacement

EIS001QT

NOTE:

• Be careful not to touch the circuit board or battery terminal.
• The key fob 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 key fob buttons two or three times to check operation.



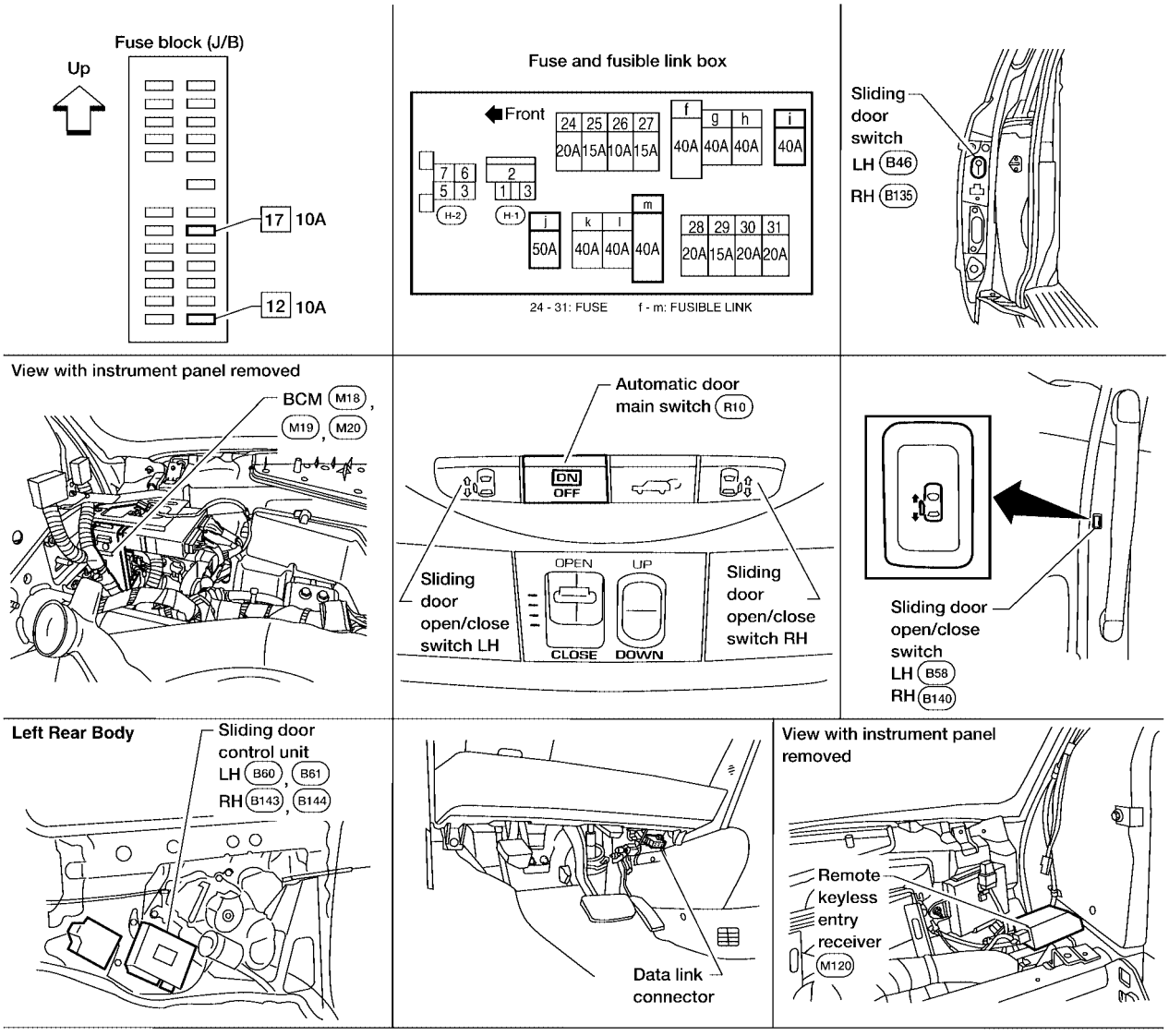
UIA0203E

AUTOMATIC SLIDING DOOR SYSTEM

PFP:28572

Component Parts and Harness Connector Location

EIS001X6



LIIA2162E

System Description

EIS001X7

- 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, 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, 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, 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 siding 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, 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.

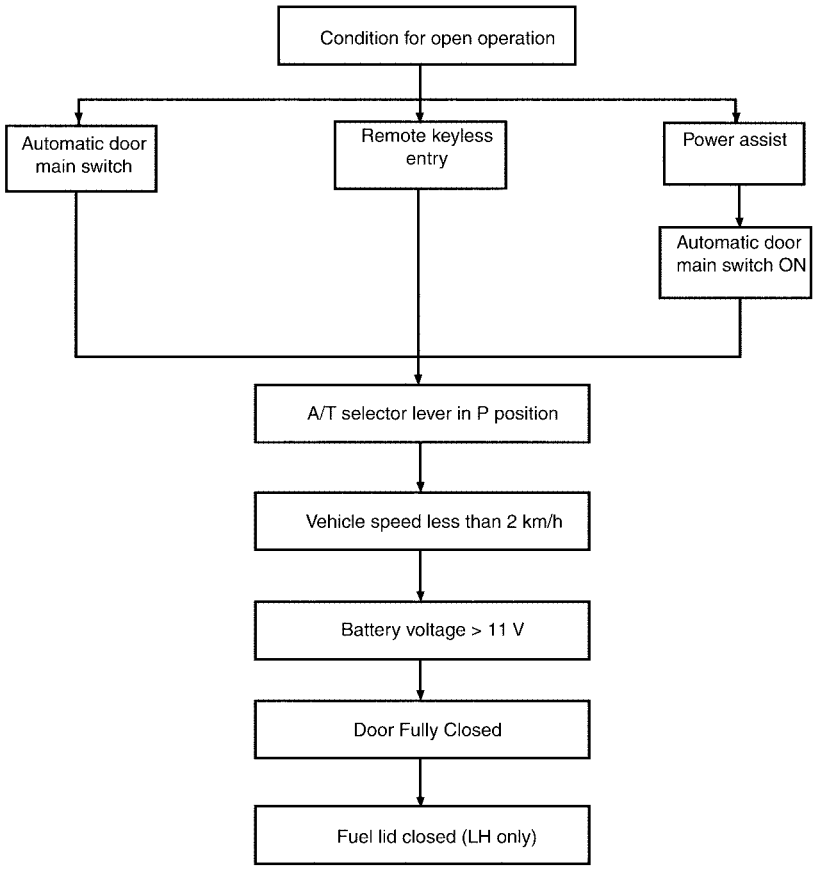
Operation status	Operation or conditions	Warning chime pattern
When reverse operation starts	When reverse operation detected	Friendly chime 1.33 seconds, 2 dings
During power close	When vehicle not in P position	Friendly chime Continuous
During power open or close	Obstacle is detected	Warning chime 2 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.

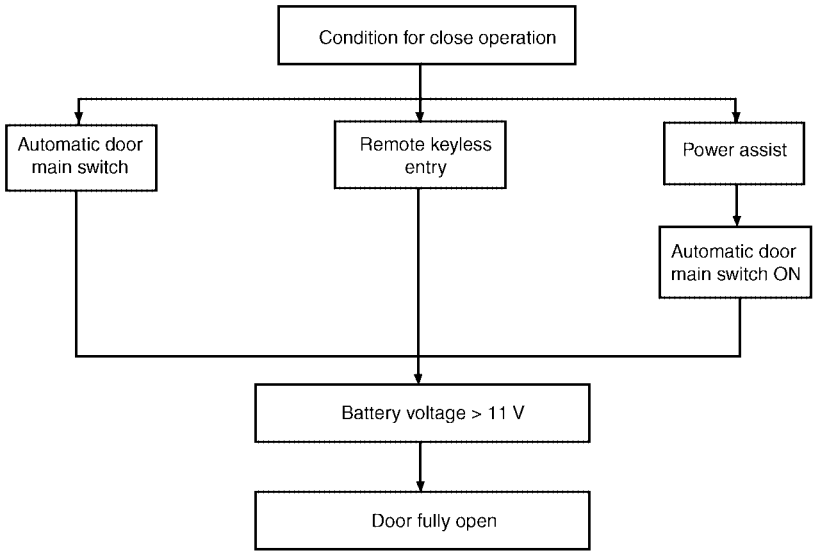
Operation Chart

- Open operation from fully closed



LIIA0748E

- Close operation from fully open



LIIA1628E

Initialization Mode

Initialization mode is used to set the default values of door full open and closed positions 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.

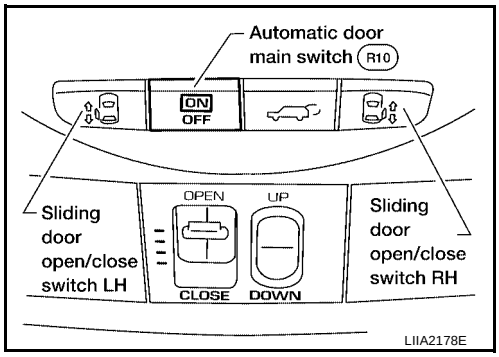
The sliding door control unit may be manually set to initialization mode by performing the following procedure.

SLIDING DOOR INITIALIZATION PROCEDURE

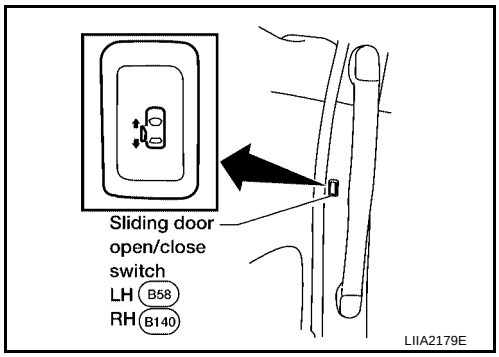
NOTE:

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.



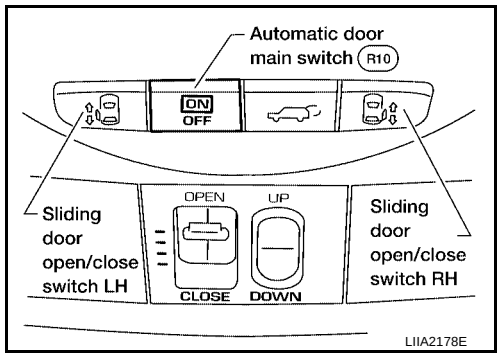
4. Within 3 seconds after step 3, press the door pillar Sliding Door Open/Close Switch of the door being initialized 10 times within 10 seconds.



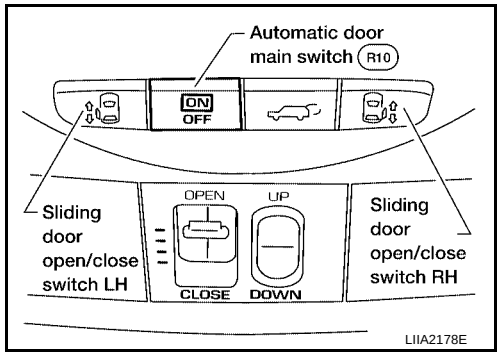
5. Within 3 seconds after step 4, turn ignition switch ON.
   - You should hear three sliding door warning chimes.

- 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 intialization 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.

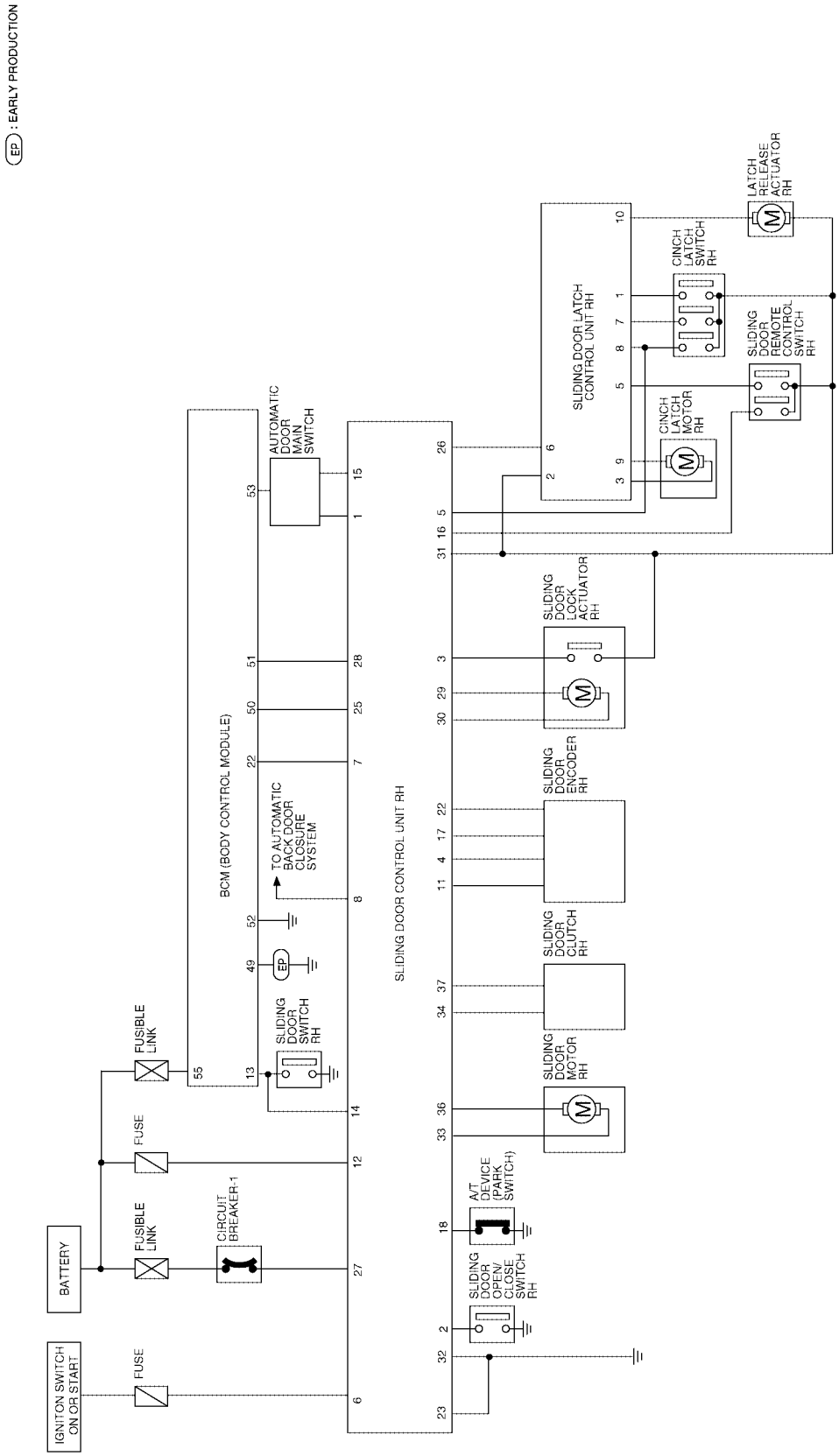
SLIDING DOOR LATCH AUTO CLOSURE OPERATION DESCRIPTION

- 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

EIS001X8

WITH RIGHT HAND SLIDE DOOR AUTO CLOSURE SYSTEM



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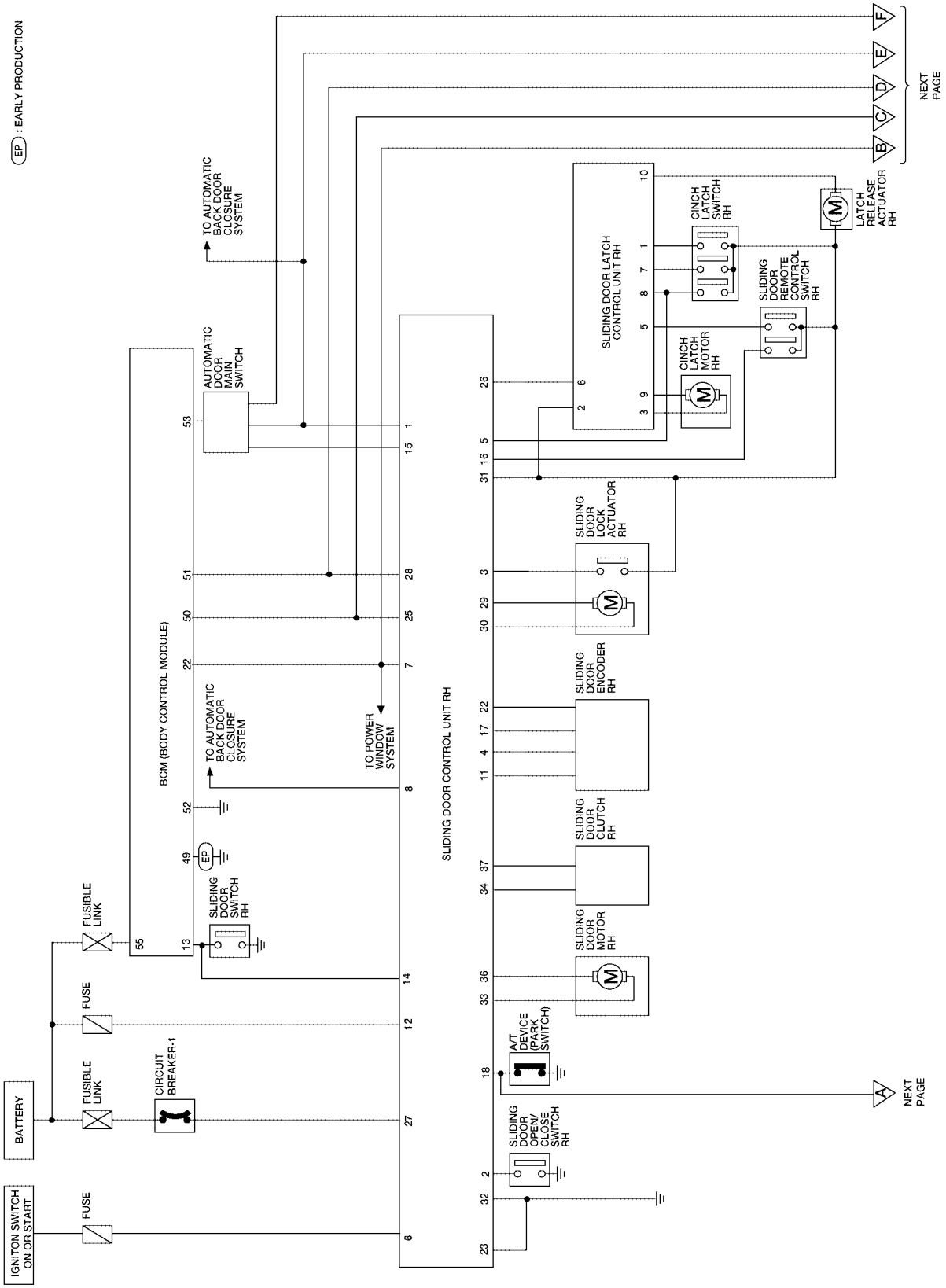
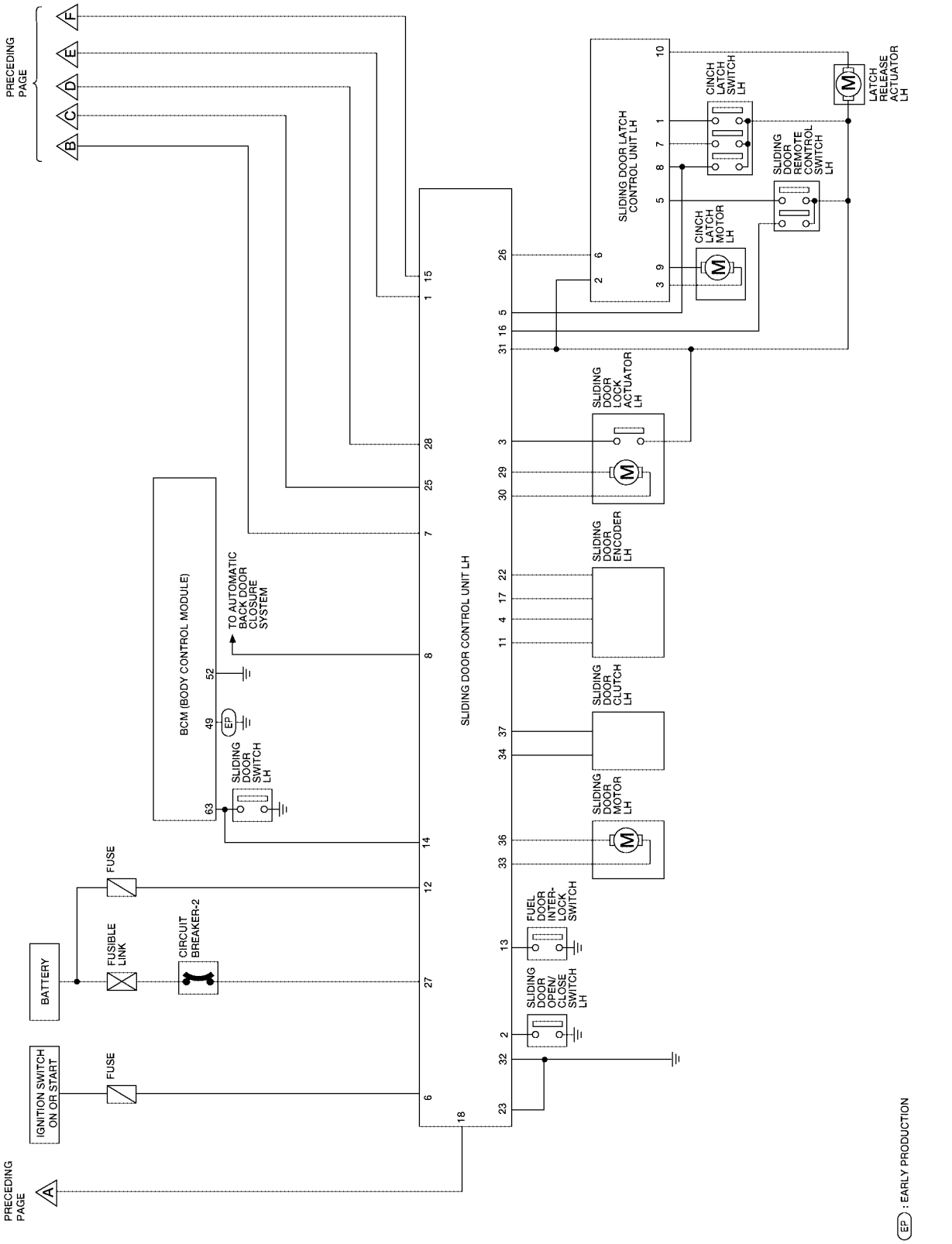
WITH RIGHT AND LEFT HAND SLIDE DOOR AUTO CLOSURE SYSTEM



LIWA0516E


PRECEDING PAGE
F
E
D
C
B
A
BATTERY
IGNITION SWITCH ON OR START
FUSIBLE LINK
FUSE
CIRCUIT BREAKER-2
FUSE
BCM (BODY CONTROL MODULE)
TO AUTOMATIC BACK DOOR CLOSURE SYSTEM
SLIDING DOOR SWITCH LH
EP
SLIDING DOOR CONTROL UNIT LH
SLIDING DOOR OPEN/ CLOSE SWITCH LH
FUEL DOOR INTER-LOCK SWITCH
SLIDING DOOR MOTOR LH
SLIDING DOOR CLUTCH LH
SLIDING DOOR ENCODER LH
SLIDING DOOR LOCK ACTUATOR LH
SLIDING DOOR LATCH CONTROL UNIT LH
CINCH LATCH MOTOR LH
SLIDING DOOR REMOTE CONTROL SWITCH LH
CINCH LATCH SWITCH LH
LATCH RELEASE ACTUATOR LH
EP : EARLY PRODUCTION

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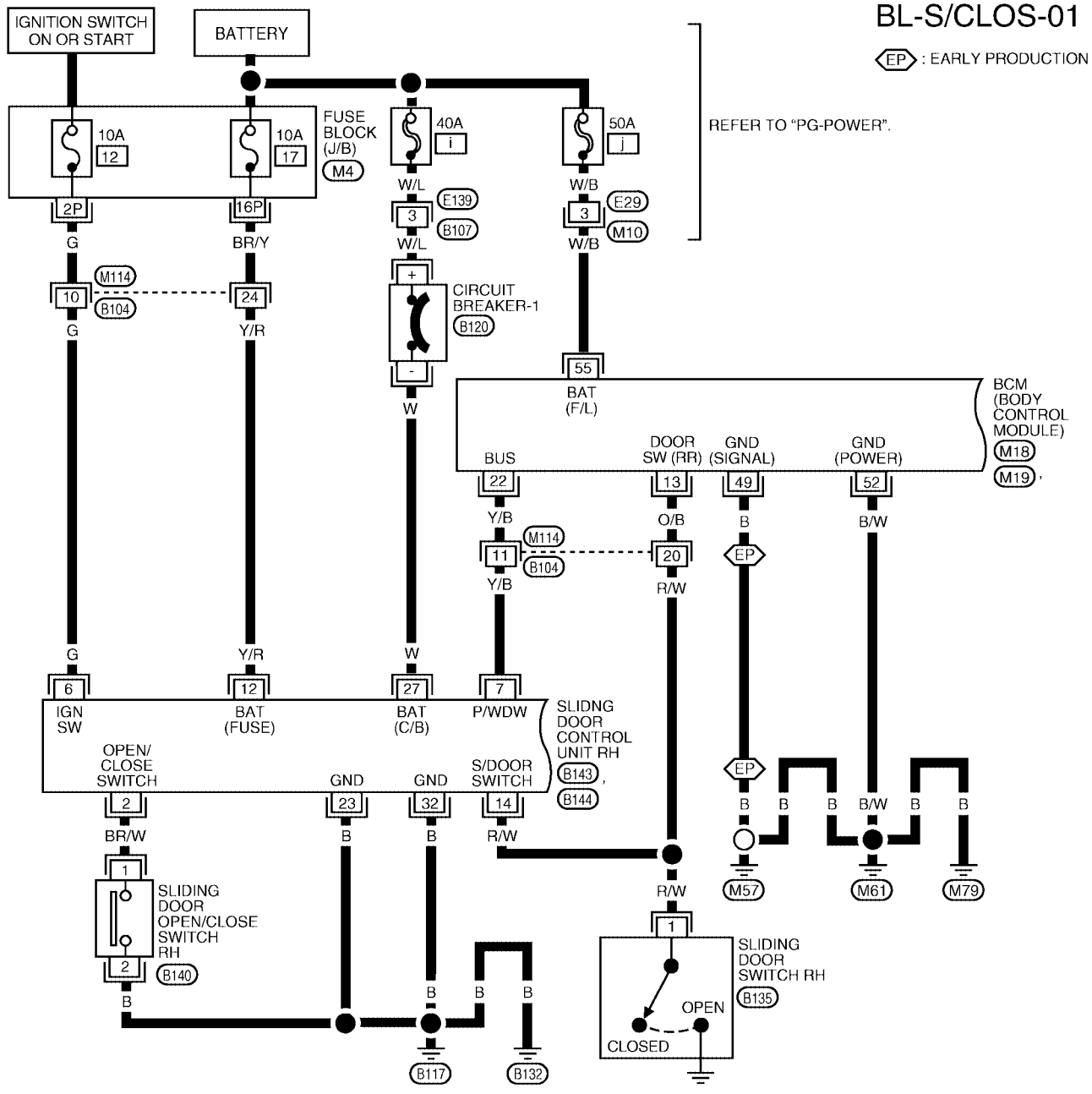
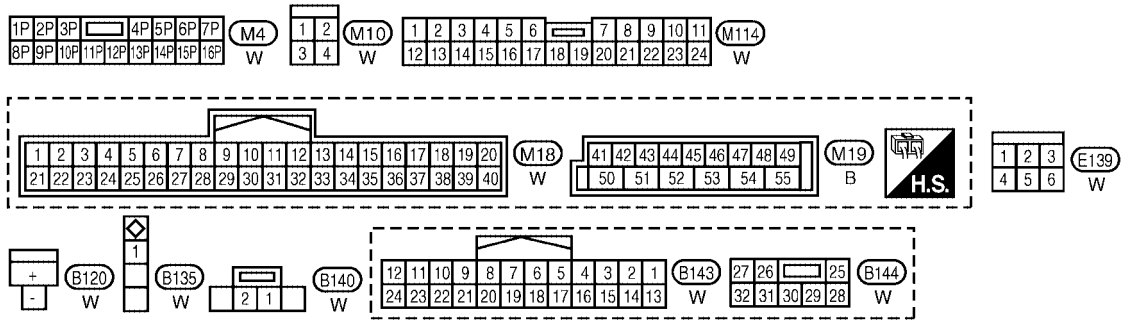
Wiring Diagram -S/CLOS-

EIS001X9

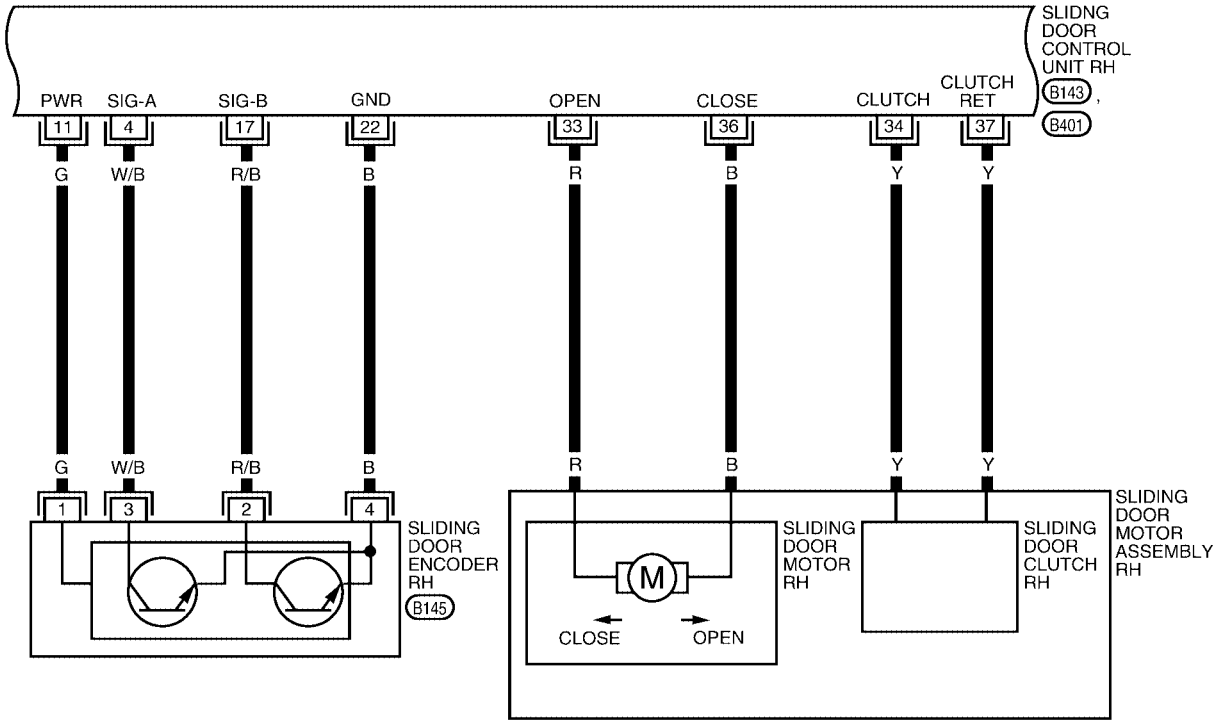
WITH RIGHT HAND SLIDE DOOR AUTO CLOSURE SYSTEM

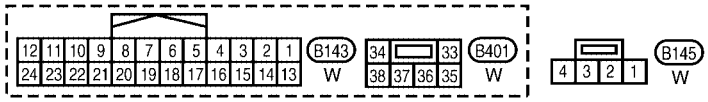




WIWA0305E

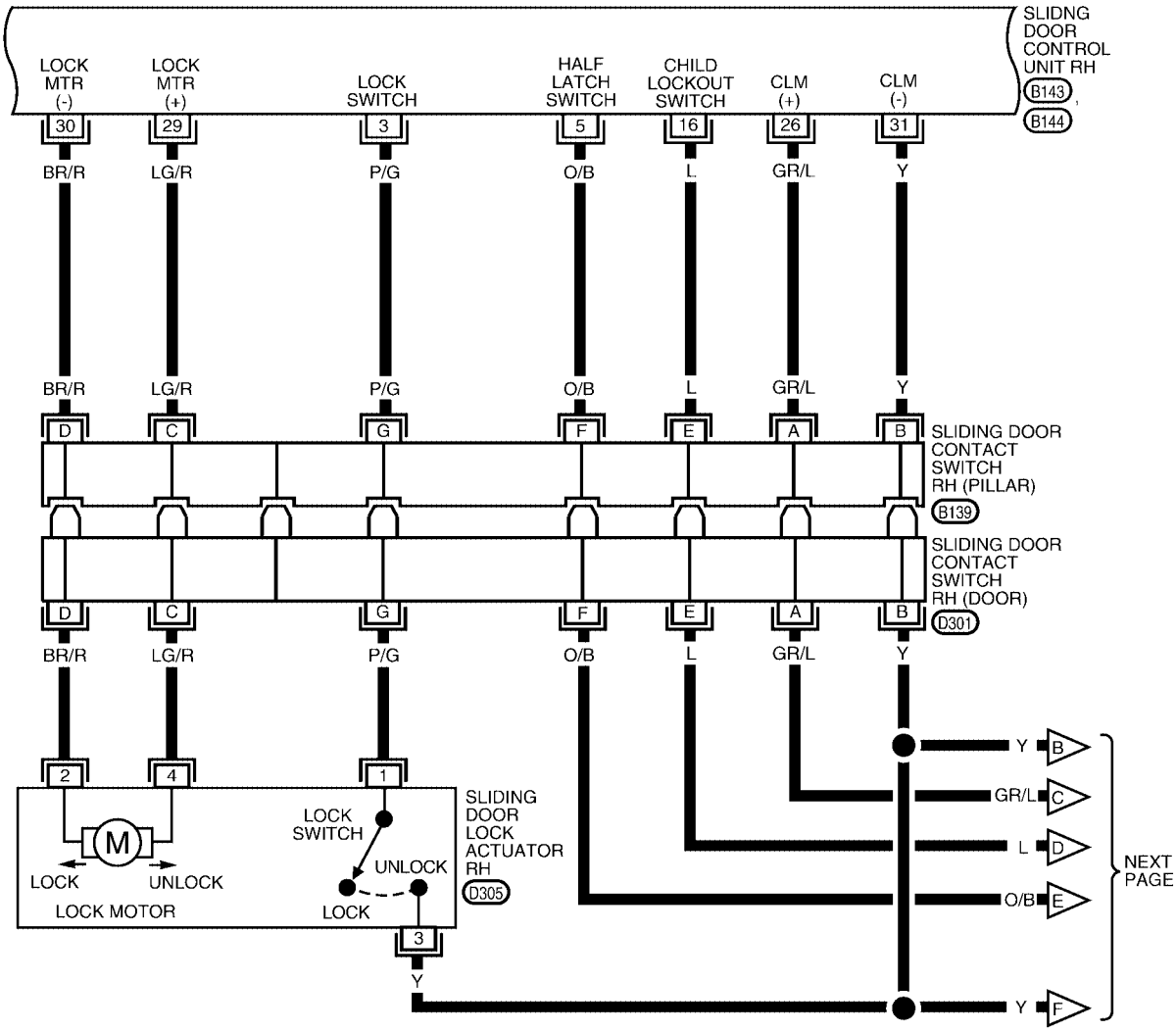
BL-S/CLOS-02

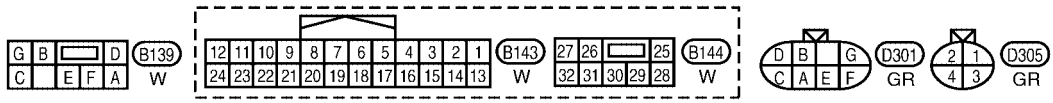




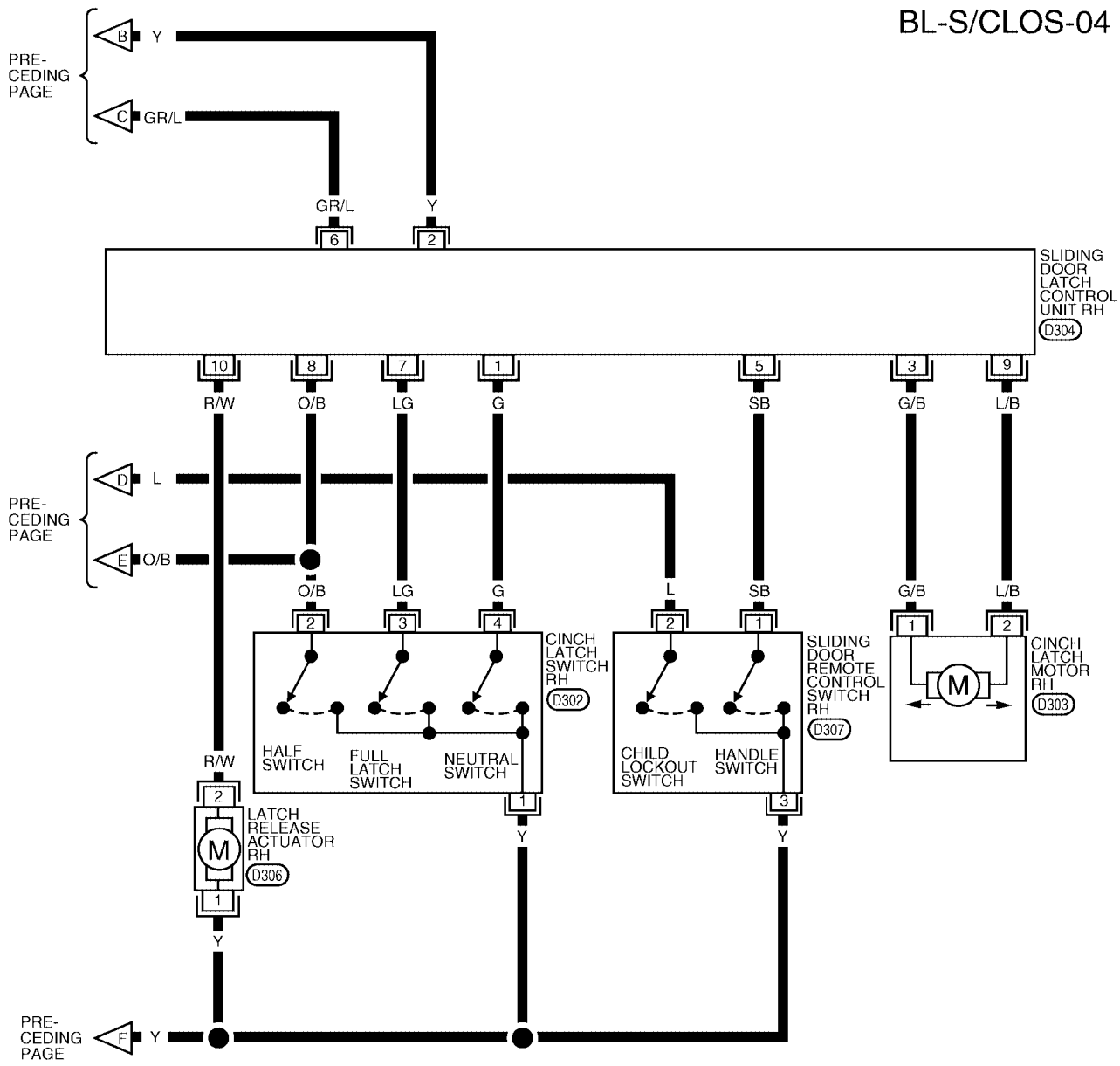
LIWA0133E

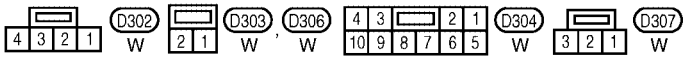
BL-S/CLOS-03





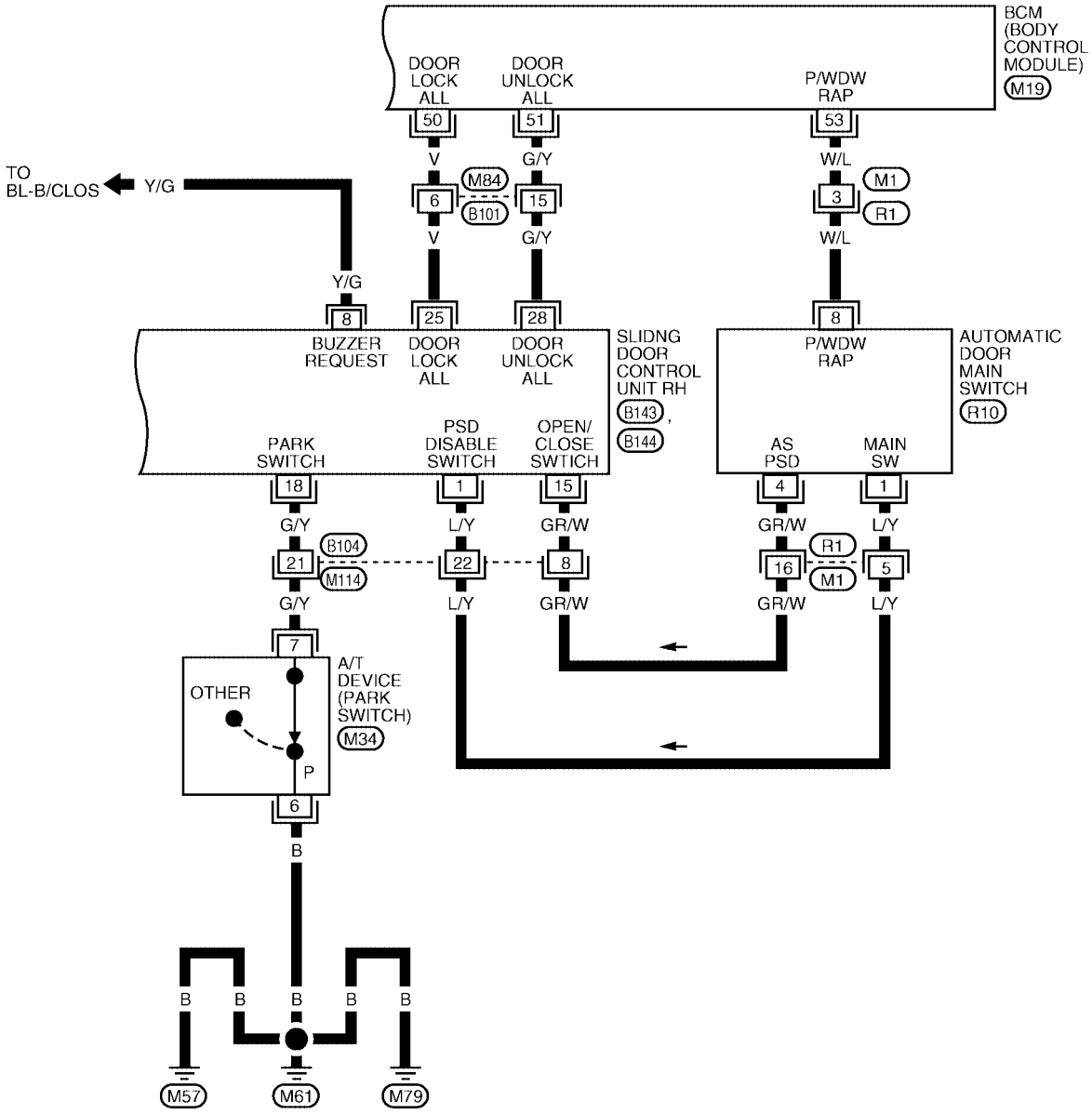
LIWA0134E

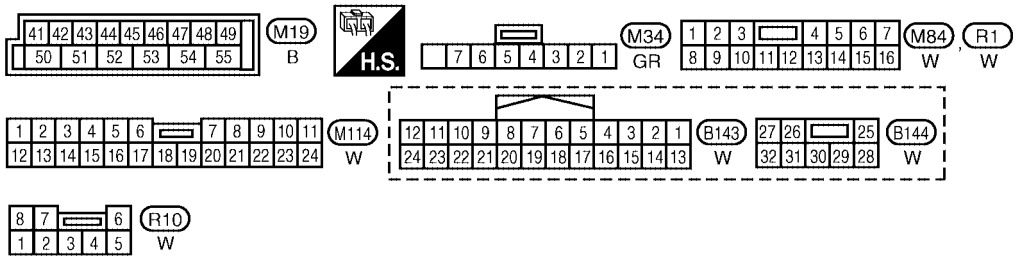

BL-S/CLOS-04
PRE-CEDING PAGE
B Y
C GR/L
GR/L
Y
6
2
SLIDING DOOR LATCH CONTROL UNIT RH
D304
10
8
7
1
5
3
9
R/W
O/B
LG
G
SB
G/B
L/B
PRE-CEDING PAGE
D L
E O/B
O/B
LG
G
L
SB
G/B
L/B
2
3
4
2
1
1
2
CINCH LATCH SWITCH RH
D302
HALF SWITCH
FULL LATCH SWITCH
NEUTRAL SWITCH
SLIDING DOOR REMOTE CONTROL SWITCH RH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


D302
W
D303
W
D306
W
D304
W
D307
W

LIWA0518E

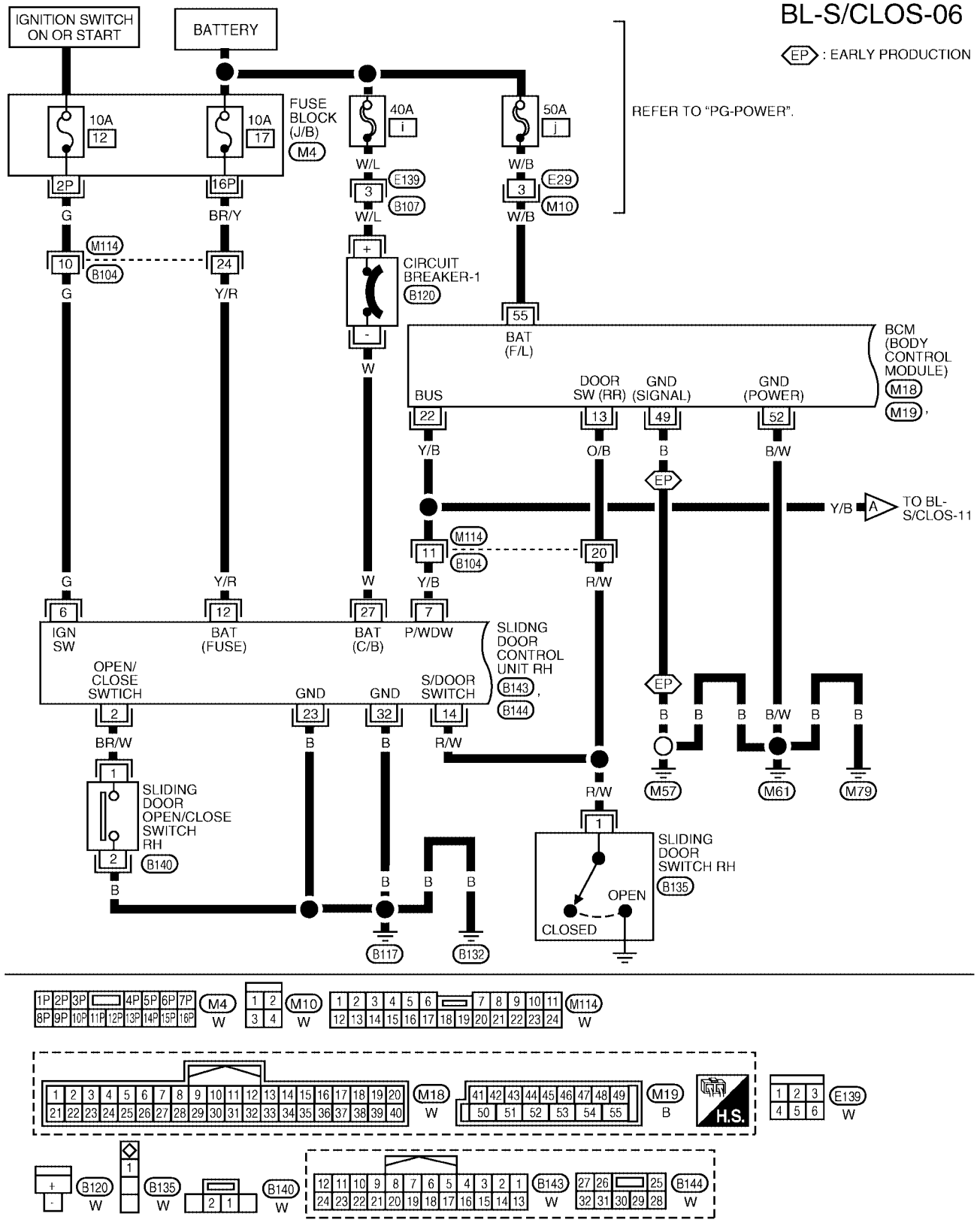
BL-S/CLOS-05





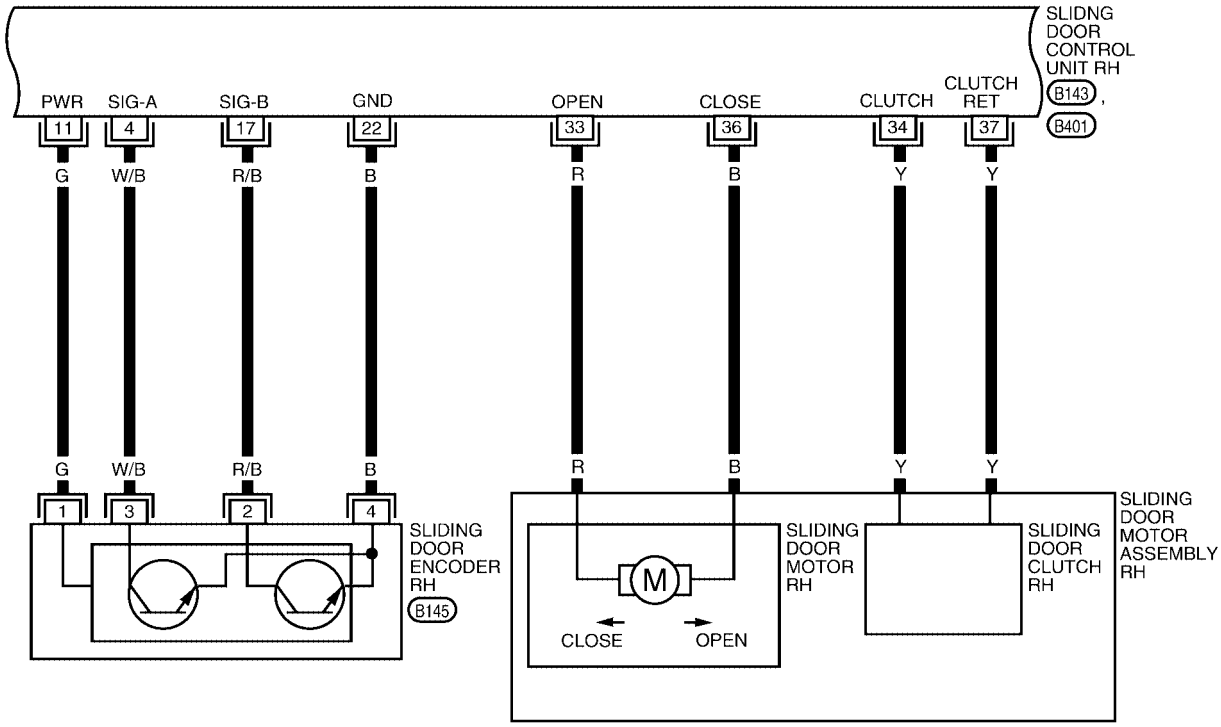
LIWA0500E

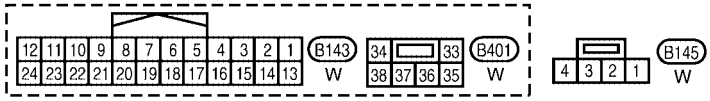
WITH RIGHT AND LEFT HAND SLIDE DOOR AUTO CLOSURE SYSTEM



WIWA0246E

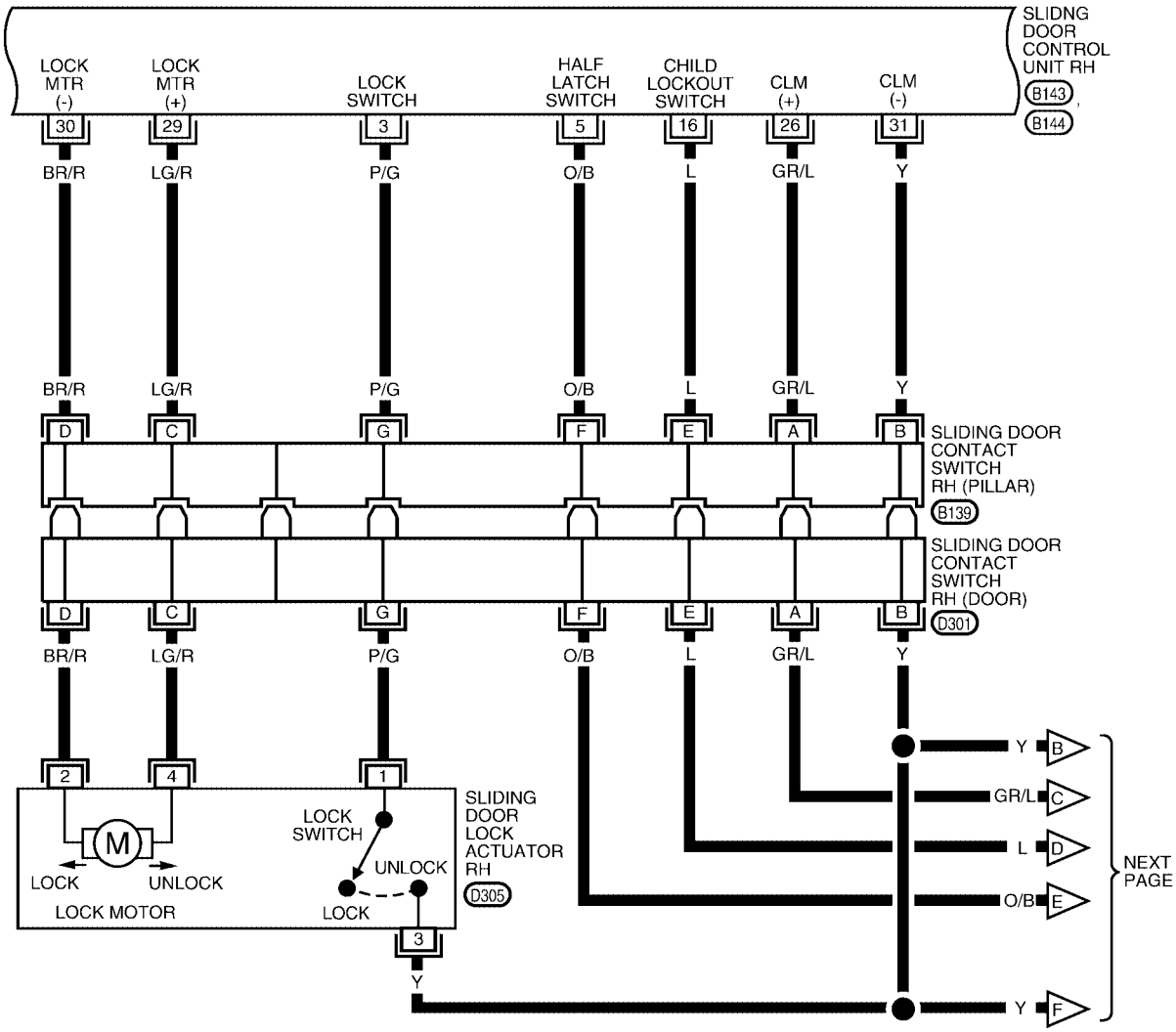
BL-S/CLOS-07

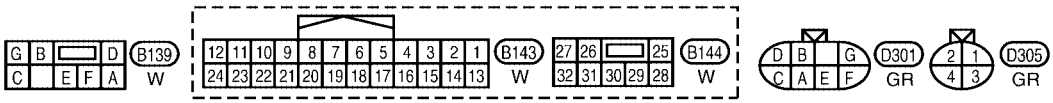




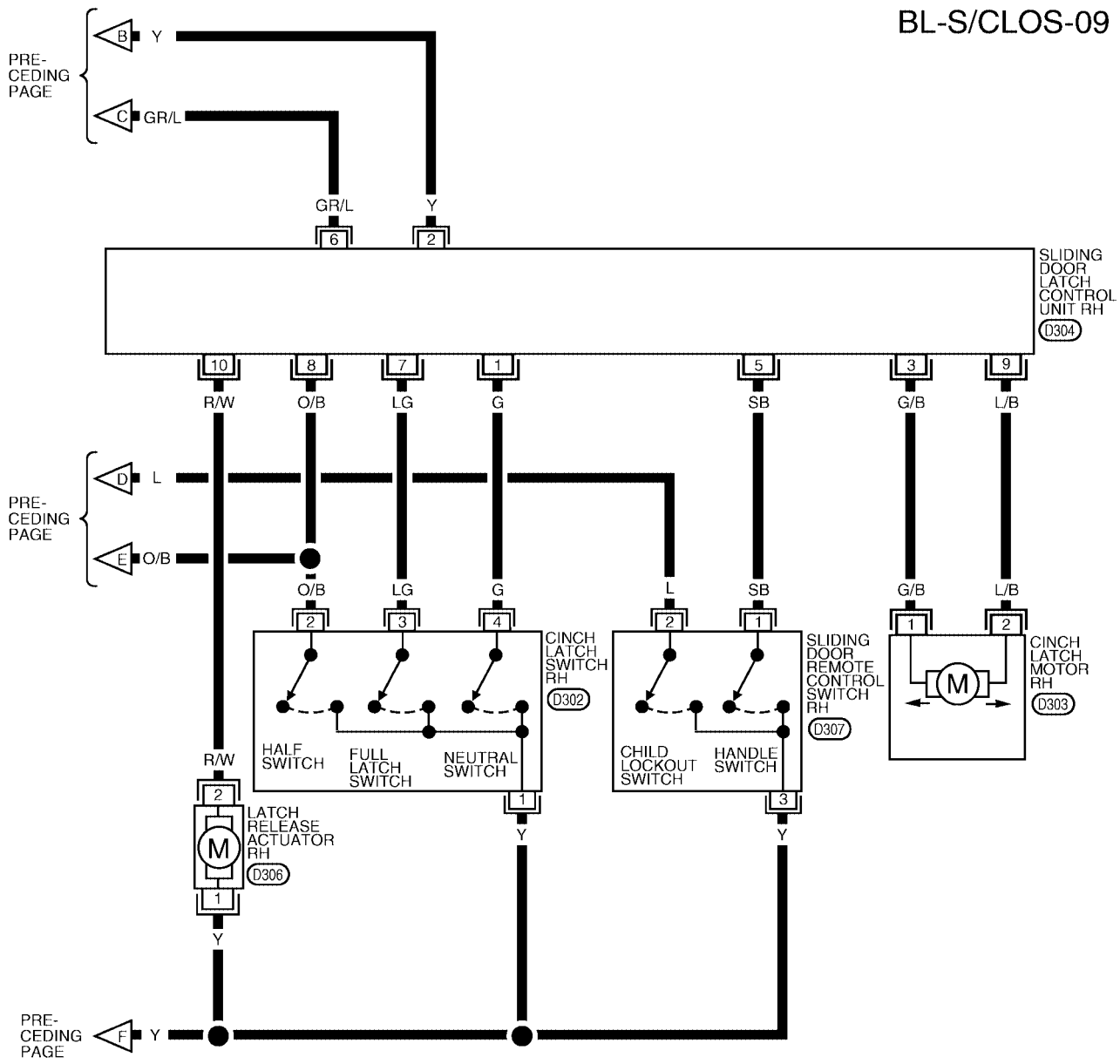
LIWA0138E

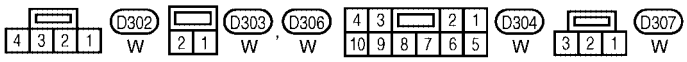
BL-S/CLOS-08



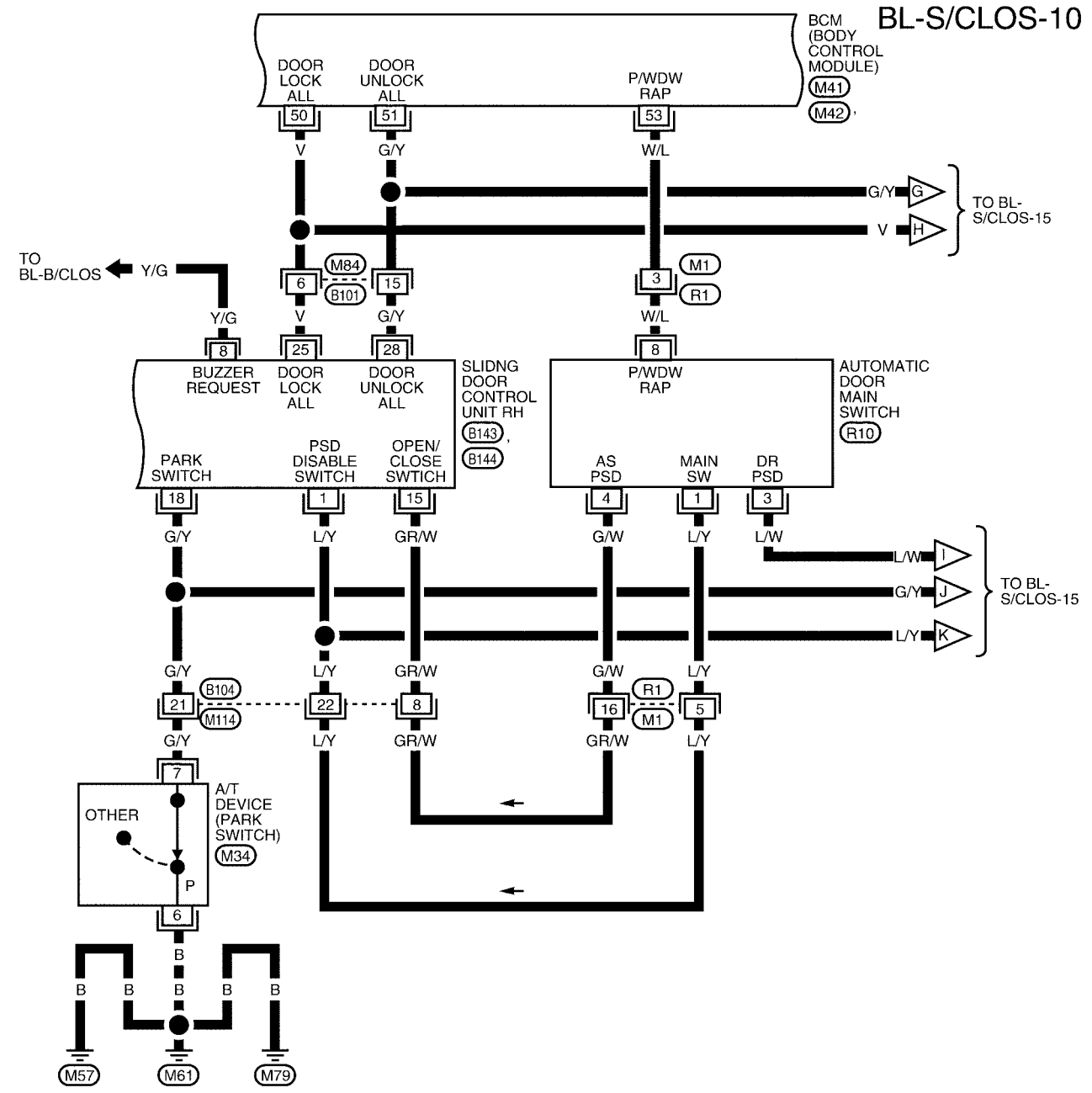


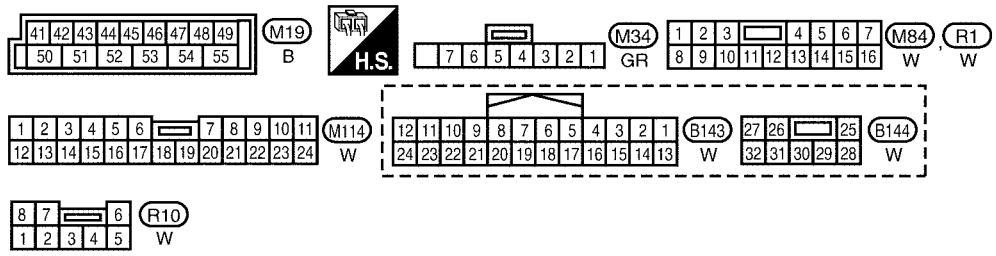
LIWA0139E


BL-S/CLOS-09
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
M
R/W
2
LATCH RELEASE ACTUATOR RH
D306
M
1
Y
1
Y
3
Y
PRE-CEDING PAGE
F Y


D302
W
D303
W
D306
W
D304
W
D307
W

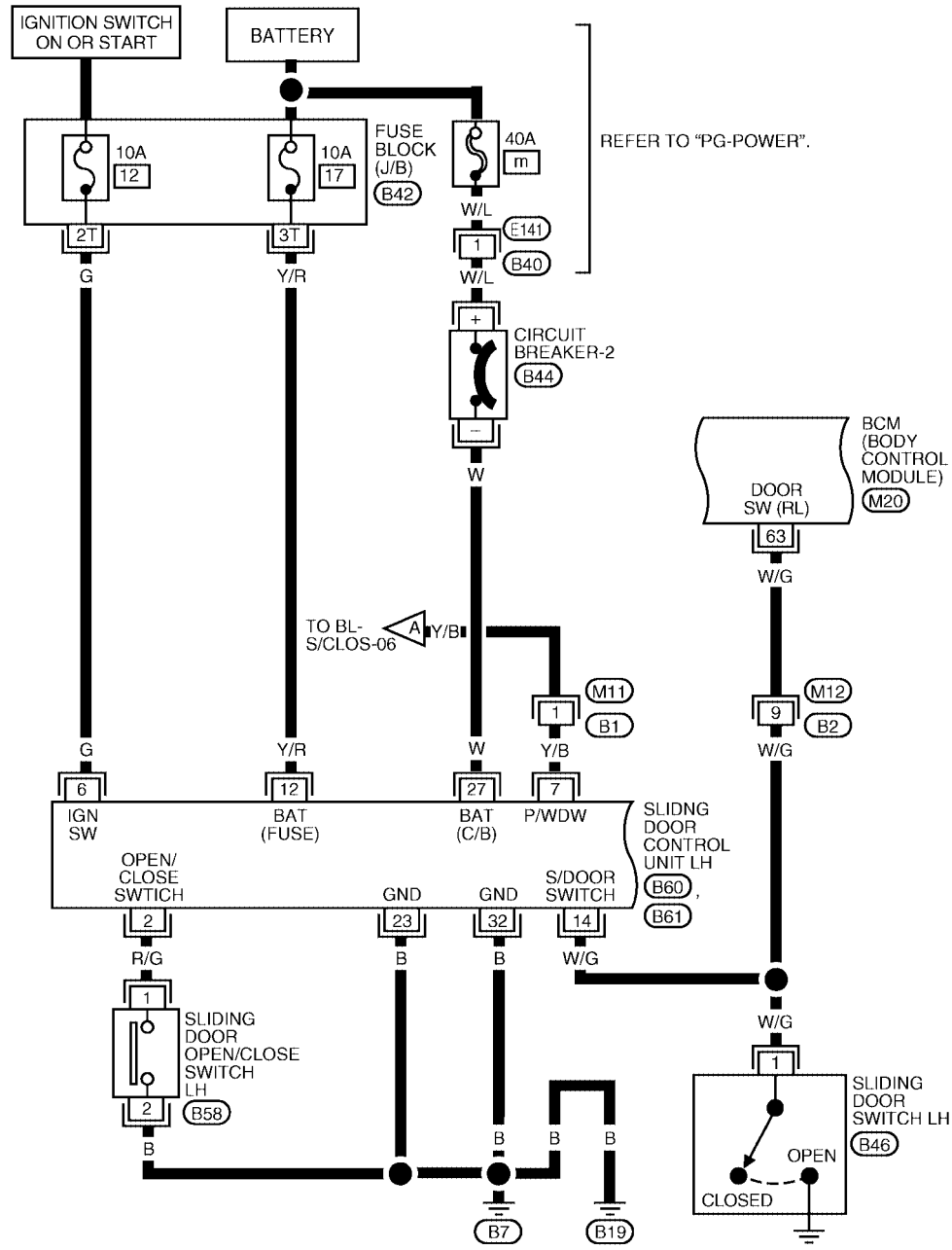
LIWA0519E

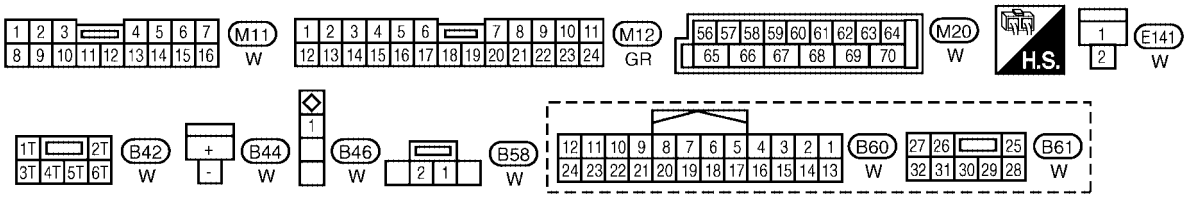

BL-S/CLOS-10
BCM (BODY CONTROL MODULE)
M41
M42
DOOR LOCK ALL
50
DOOR UNLOCK ALL
51
P/WDW RAP
53
V
G/Y
W/L
G/Y
G
V
H
TO BL-S/CLOS-15
TO BL-B/CLOS
Y/G
M84
B101
6
15
3
M1
R1
Y/G
V
G/Y
W/L
8
25
28
8
BUZZER REQUEST
DOOR LOCK ALL
DOOR UNLOCK ALL
SLIDNG DOOR CONTROL UNIT RH
B143
B144
P/WDW RAP
AUTOMATIC DOOR MAIN SWITCH
R10
PARK SWITCH
PSD DISABLE SWITCH
OPEN/ CLOSE SWTICH
AS PSD
MAIN SW
DR PSD
18
1
15
4
1
3
G/Y
L/Y
GR/W
G/W
L/Y
L/W
L/W
I
G/Y
J
L/Y
K
TO BL-S/CLOS-15
G/Y
L/Y
GR/W
G/W
L/Y
B104
M114
21
22
8
16
5
R1
M1
G/Y
L/Y
GR/W
GR/W
L/Y
7
OTHER
A/T DEVICE (PARK SWITCH)
M34
P
6
B
B
B
B
B
B
M57
M61
M79


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

LIWA0141E

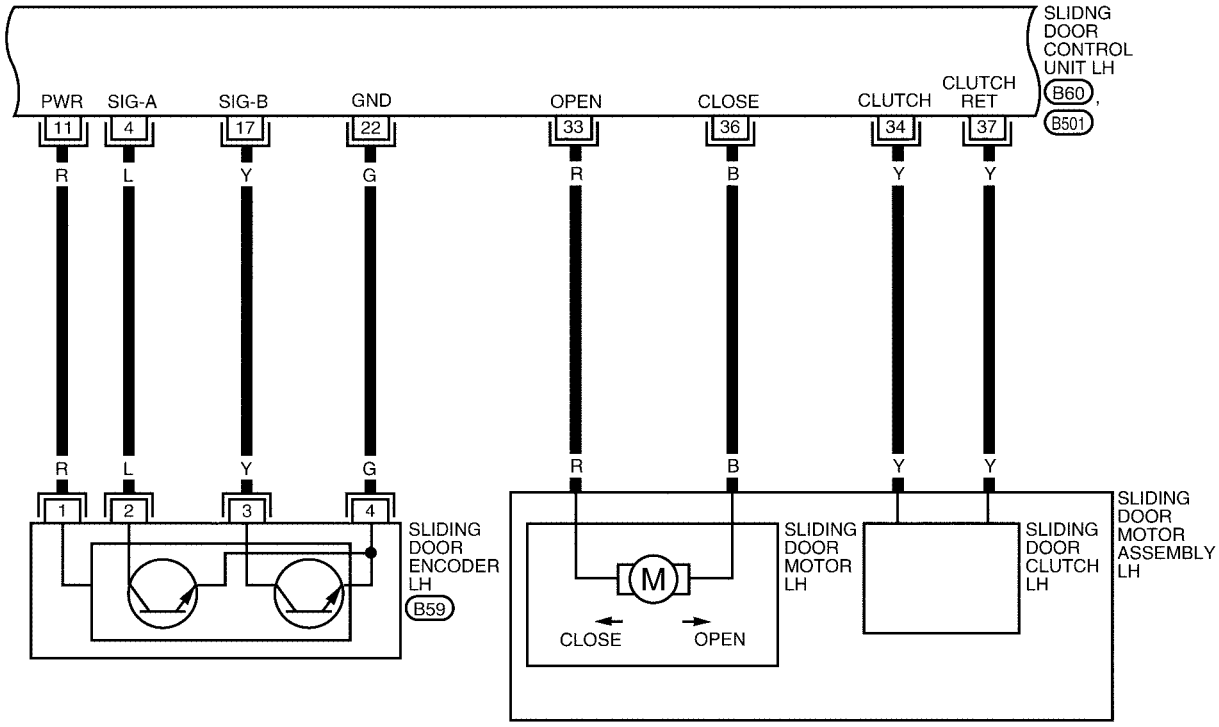
BL-S/CLOS-11

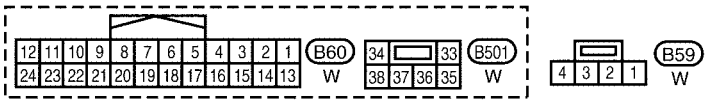




LIWA0520E

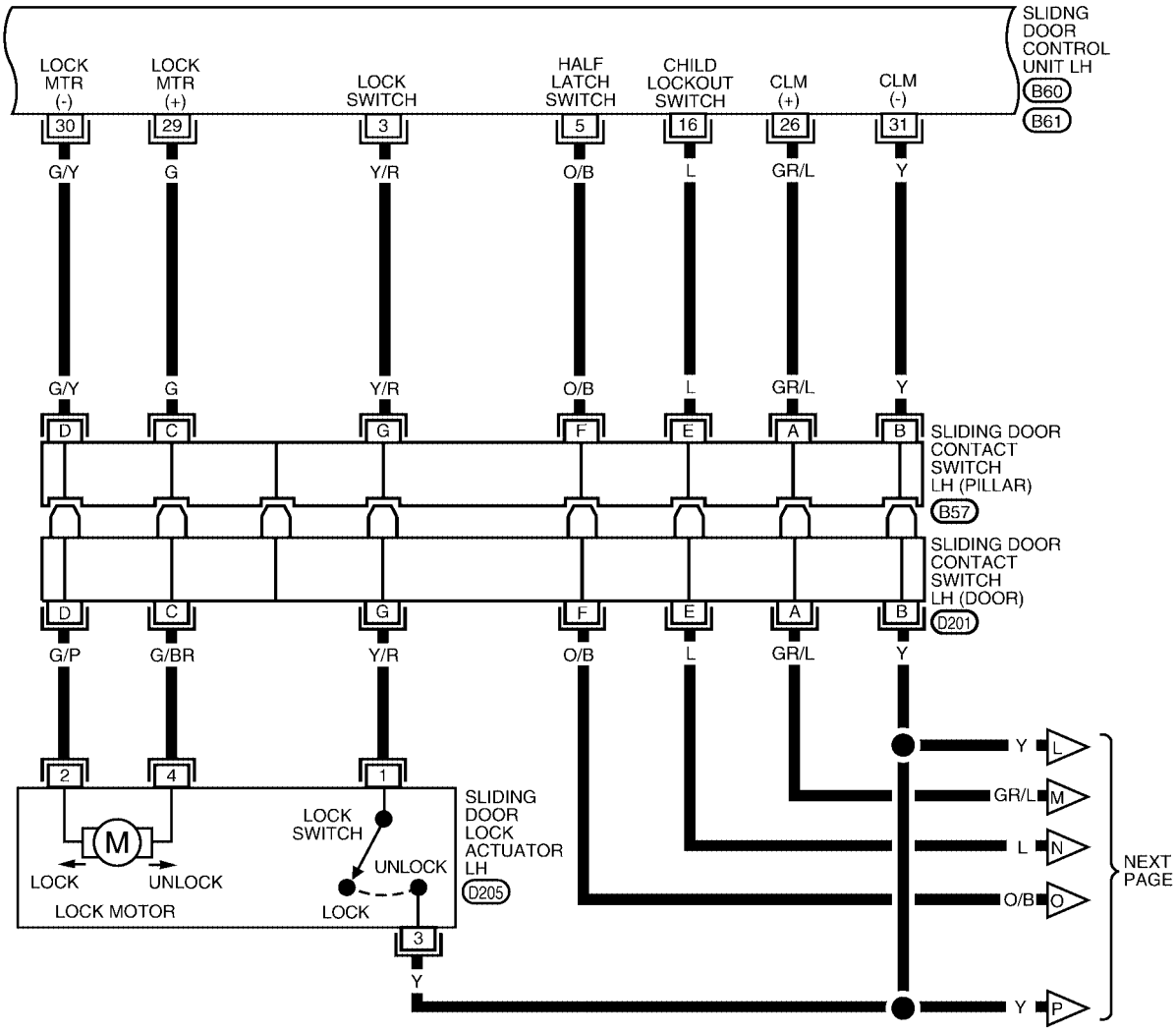
BL-S/CLOS-12

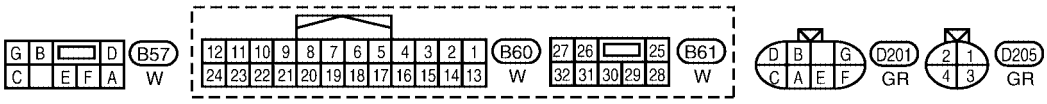




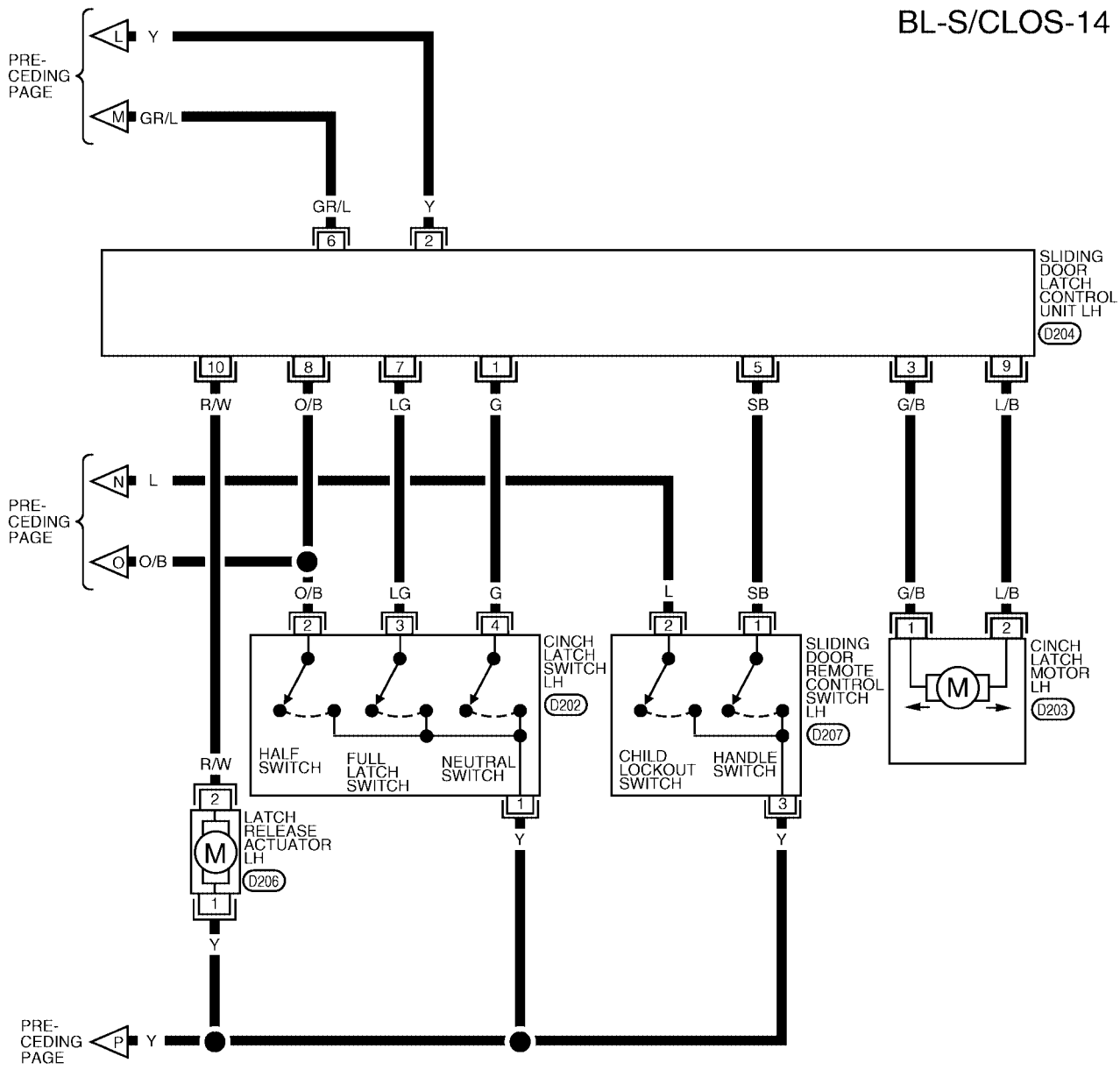
LIWA0143E

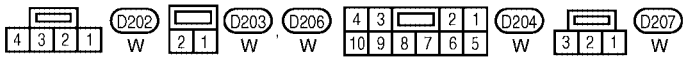
BL-S/CLOS-13



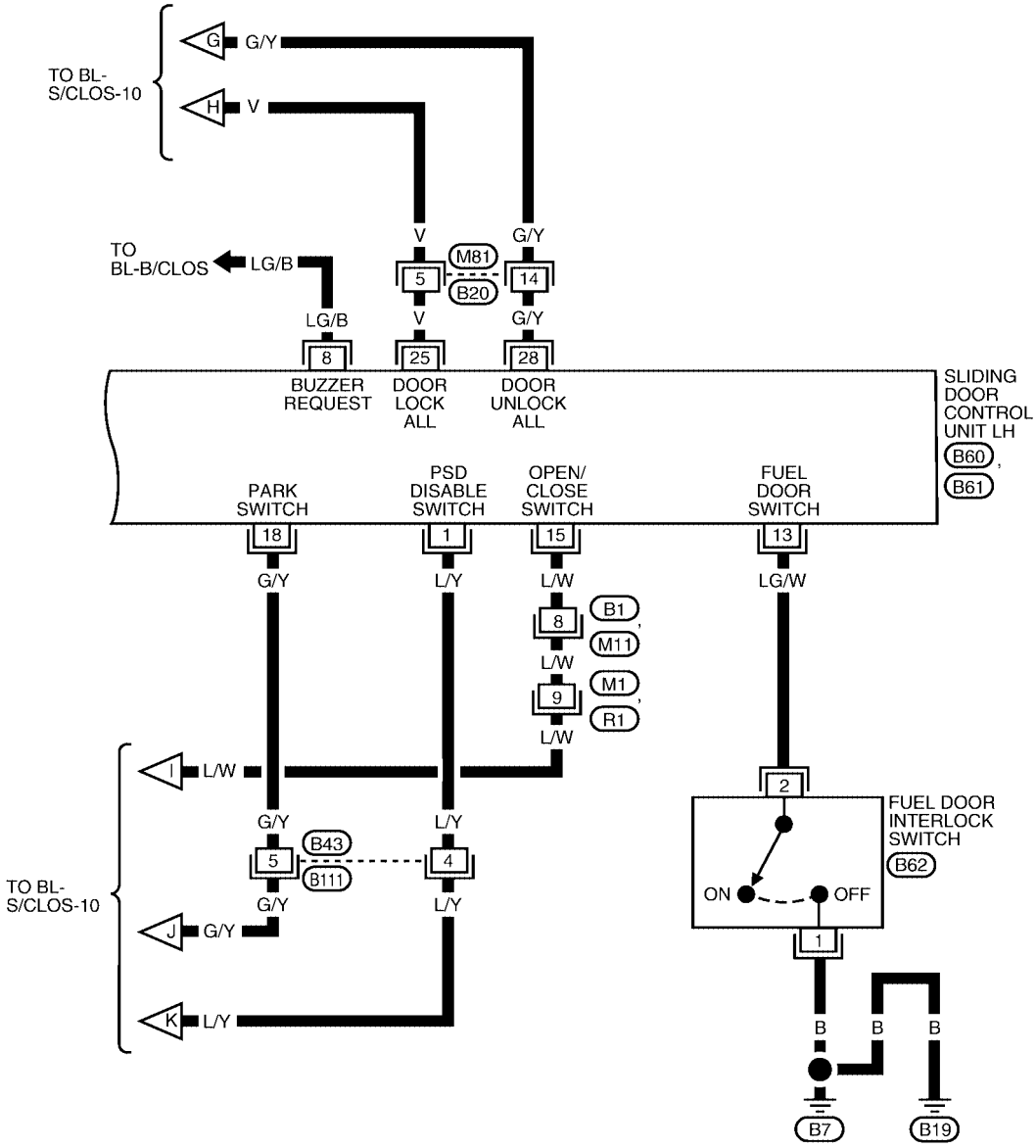


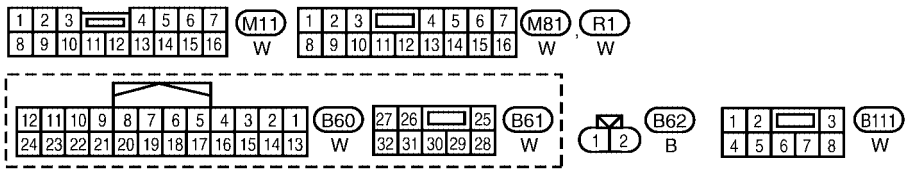
LIWA0144E


BL-S/CLOS-14
PRE-CEDING PAGE
L Y
M GR/L
GR/L
Y
6
2
SLIDING DOOR LATCH CONTROL UNIT LH
D204
10 8 7 1 5 3 9
R/W O/B LG G SB G/B L/B
PRE-CEDING PAGE
N L
O O/B
O/B LG G L SB G/B L/B
2 3 4 2 1 1 2
CINCH LATCH SWITCH LH
D202
HALF SWITCH
FULL LATCH SWITCH
NEUTRAL SWITCH
SLIDING DOOR REMOTE CONTROL SWITCH LH
D207
CHILD LOCKOUT SWITCH
HANDLE SWITCH
CINCH LATCH MOTOR LH
D203
R/W
2
LATCH RELEASE ACTUATOR LH
D206
1
Y
1
Y
3
Y
PRE-CEDING PAGE
P Y


D202
W
D203
W
D206
W
D204
W
D207
W

LIWA0521E

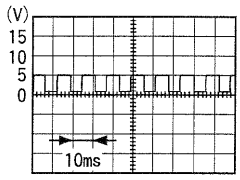
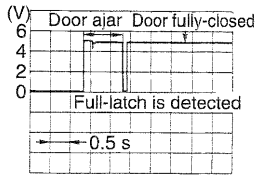
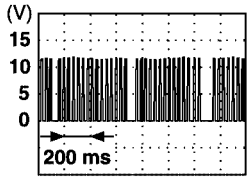
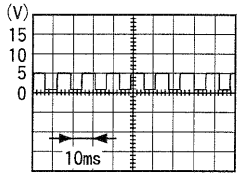

TO BL-S/CLOS-10
G
G/Y
H
V
TO BL-B/CLOS
LG/B
V
M81
5
B20
G/Y
14
LG/B
8
BUZZER REQUEST
V
25
DOOR LOCK ALL
G/Y
28
DOOR UNLOCK ALL
SLIDING DOOR CONTROL UNIT LH
B60
B61
PARK SWITCH
18
G/Y
PSD DISABLE SWITCH
1
L/Y
OPEN/ CLOSE SWITCH
15
L/W
8
B1
M11
L/W
9
M1
R1
L/W
FUEL DOOR SWITCH
13
LG/W
I
L/W
G/Y
5
B43
B111
G/Y
L/Y
4
L/Y
TO BL-S/CLOS-10
J
G/Y
K
L/Y
2
FUEL DOOR INTERLOCK SWITCH
B62
ON
OFF
1
B
B
B
B7
B19

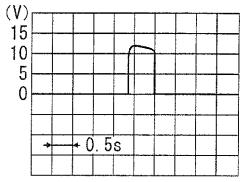
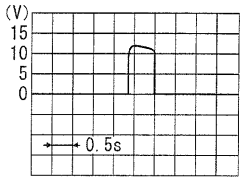
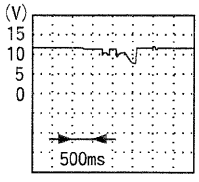

M11
W
M81
R1
W
W
B60
W
B61
W
B62
B
B111
W

WIWA0904E

Terminals and Reference Value for Sliding Door Control Unit RH

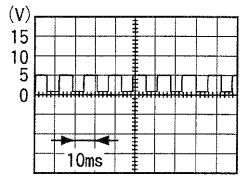
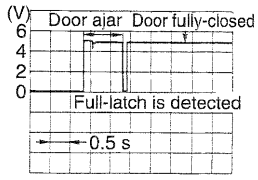
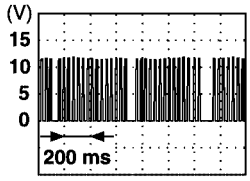
EIS001XA

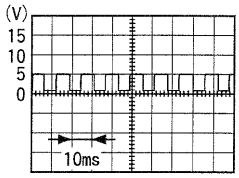
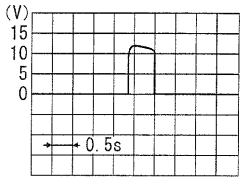
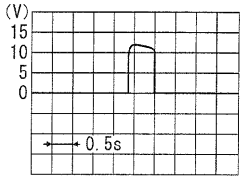
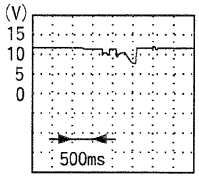
Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	L/Y	Automatic door main switch ON/OFF switch	Automatic door main switch ON	0
			Automatic door main switch OFF	5
2	BR/W	Sliding door open/close switch	Sliding door open/close switch ON	0
			Sliding door open/close switch OFF	5
3	P/G	Sliding door 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	Park switch	P position	0
			Other than above	5
22	B	Encoder ground	—	—
23	B	Ground	—	—
25	V	Door lock input	Door lock & unlock switch (Neutral → Lock)	0 → Battery voltage
26	GR/L	Closure motor CLOSE output signal	Sliding door Fully open → half → fully closed	 SIIA1480E
27	W	Battery power	—	Battery voltage
28	G/Y	Door unlock input	Door lock & unlock switch (Neutral → Unlock)	0 → Battery voltage
29	LG/R	Sliding door lock motor lock signal	Door lock (Neutral → Lock)	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

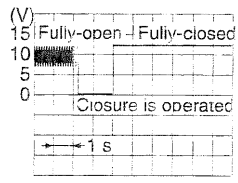
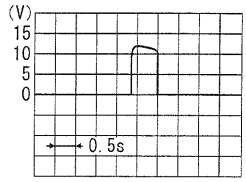
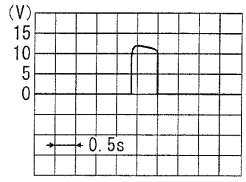
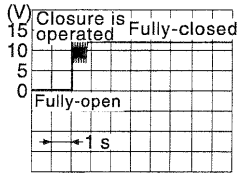
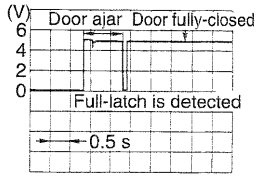
EIS0022K

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/B	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	Park switch	P position	0
			Other than above	5
22	G	Encoder ground	—	—
23	B	Ground	—	—
25	V	Door lock input	Door lock & unlock switch (Neutral → Lock)	0 → Battery voltage
26	GR/L	Closure motor CLOSE output signal	Sliding door Fully open → half → fully closed	 SIIA1480E
27	W	Battery power	—	Battery voltage
28	G/Y	Door unlock input	Door lock & unlock switch (Neutral → Unlock)	0 → Battery voltage
29	G	Sliding door lock motor lock signal	Door lock (Neutral → Lock)	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	—	—

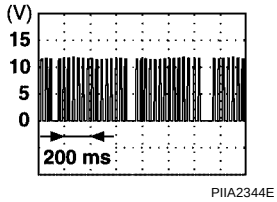
Terminals and Reference Value for Sliding Door Latch Control Unit

EIS001XB

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

EIS001XC

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	Power window serial link	When ignition switch is ON or power window timer operates	 PIIA2344E
49*	B	Ground	—	0
50	V	Door lock actuators	Door lock & unlock switch (Neutral → Lock)	0 → Battery voltage
51	G/Y	Passenger and rear 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	Power source (BAT)	—	Battery voltage
63	W/G	Sliding door switch LH	Door Close (OFF) → Open (ON)	Battery voltage → 0

*: Early production

Trouble Diagnosis Procedure

EIS0020O

1. Check the symptom and customer's requests.
2. Understand outline of system. Refer to BL-54, "System Description" .
3. Confirm system operation.
4. Perform pre-diagnosis inspection. Refer to BL-68, "Pre-Diagnosis Inspection" .
5. Perform self-diagnosis procedures. Refer to BL-118, "Self-Diagnosis Procedures" .
6. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts. Refer to BL-69, "Trouble Diagnoses" .
7. **Inspection End.**

Self-Diagnosis Procedures

EIS00721

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-121
Automatic door main sliding door open/close switch RH or LH	OFF → ON	BL-122
Sliding door open/close switch RH or LH	OFF → ON	BL-122
Sliding door switch RH or LH	OFF (door closed) → ON (door open)	BL-42
A/T device (park switch)	P position → other than P position	RE4F04B AT-245 RE5F22A AT-578
Fuel door interlock switch	OFF (fuel door closed) → ON (fuel door open)	BL-177
Sliding door lock/unlock signal	LOCK → UNLOCK	BL-121
Vehicle speed*	Vehicle speed	RE4F04B AT-209 RE5F22A AT-578
Remote keyless entry signal	Keyfob switch OFF → ON	BL-77
Door lock/unlock signal	LOCK → UNLOCK	BL-45

*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-124
3. Sliding door clutch diagnosis result	Sliding door clutch does not operate	BL-123
4. Sliding door motor diagnosis result	Sliding door motor does not operate (no operating current)	BL-123
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	BL-132

Turn ignition switch OFF to end input signal check mode.

Diagnosis Chart

EIS0020P

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-128

Symptom	Suspect systems	Refer to
Automatic operations are not carried out together with open/close operations. (Manual operations are normal.)	Automatic door main switch system inspection	BL-121
	Sliding door open/close switch system inspection	BL-122
	Magnetic clutch line check	BL-123
	Auto sliding door power supply and ground circuit system inspection.	BL-120
Power window serial link	Power window main switch	BL-117
Stops midway through sliding door open/close operations, power assist does not operate.	Encoder system inspection	BL-124
Warning chime does not sound	Warning chime system inspection	BL-129
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Encoder system inspection	BL-124
During cinching operations, the door does not operate in reverse if the sliding door handle is operated.	Handle switch system	BL-125
When the keyfob is operated, the sliding door does not operate automatically.	Remote keyless entry system inspection	BL-53
Auto closure does not operate	Half-latch switch system	BL-129
	Cinch latch motor system	BL-132
	Handle switch system	BL-125
	Contact switch	—
The sliding door does not open. (Closure motor rotation is not reversed.)	Neutral switch system	BL-131
	Full-latch switch	BL-130
	Handle switch system	BL-125
	Door switch	BL-42
Auto closure operation works, but the sliding door is not fully closed	Full-latch switch system	BL-130
	Handle switch system	BL-125
	Cinch latch motor system	BL-132
	Sliding door latch assembly mechanism damaged or worn.	BL-128

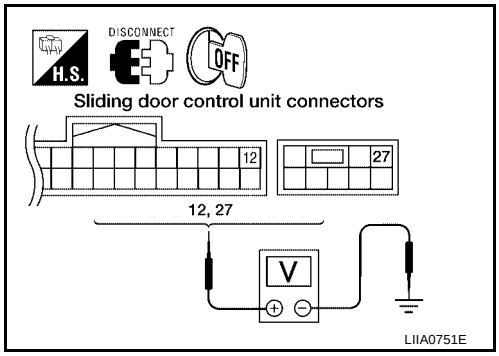
Auto Sliding Door Power Supply and Ground Circuit Inspection

EIS0020Q

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 B143, B144 terminals 12, 27 and ground.

12 (Y/R) - Ground :Approx. battery voltage
27 (W) - Ground :Approx. battery voltage



OK or NG

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

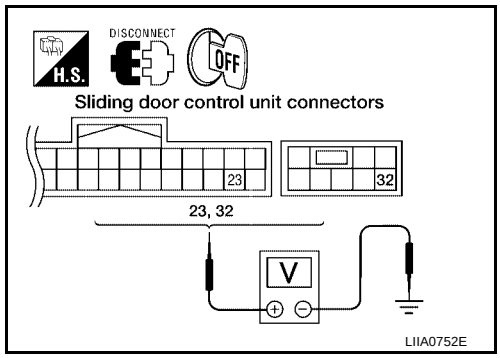
2. AUTO SLIDING DOOR GROUND CIRCUIT INSPECTION

Check continuity between sliding door control unit connector B143, B144 terminals 23, 32 and ground.

23 (B) - Ground : Continuity should exist.
32 (B) - Ground : Continuity should exist.

OK or NG

OK >> Circuit is OK.
NG >> Repair or replace harness.



Automatic Door Main Switch System Inspection

EIS0020R

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.

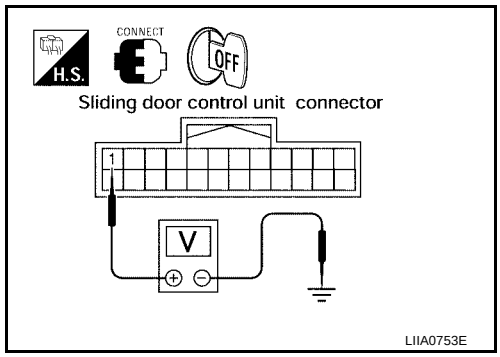
2. AUTOMATIC DOOR MAIN SWITCH SIGNAL INSPECTION

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

Connector terminal		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
1 (L/Y)	Ground	Automatic door main switch	ON	0
			OFF	5

OK or NG

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



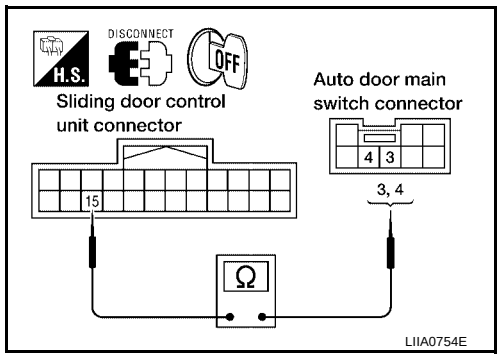
3. AUTOMATIC DOOR MAIN SWITCH CIRCUIT INSPECTION

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

3 (L/W) - 15 (L/W) : Continuity should exist.
4 (GR/W) - 15 (GR/W) : Continuity should exist.

OK or NG

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



Sliding Door Open/Close Switch System Inspection

EIS0020S

1. SLIDING DOOR OPEN/CLOSE SWITCH FUNCTION INSPECTION

Check sliding door open/close switch using switch operation.

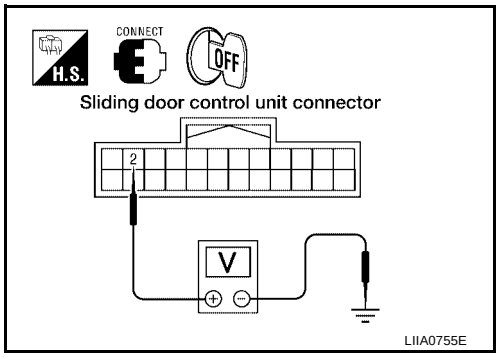
OK or NG

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 (LH or RH) connector terminals 2 and ground.

Connector terminal		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
2 (BR/W)	Ground	Automatic door main switch	ON	0
			OFF	5



OK or NG

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

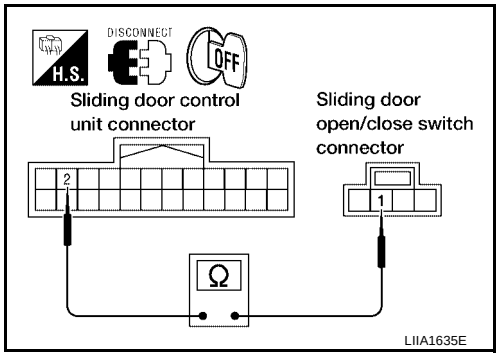
3. SLIDING DOOR OPEN/CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect sliding door open/close switch and sliding door control unit.
2. Check continuity between sliding door open/close switch connector terminal 1 and sliding door control unit connectors terminal 2.

1 (BR/W) - 2 (BR/W) : Continuity should exist.

OK or NG

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



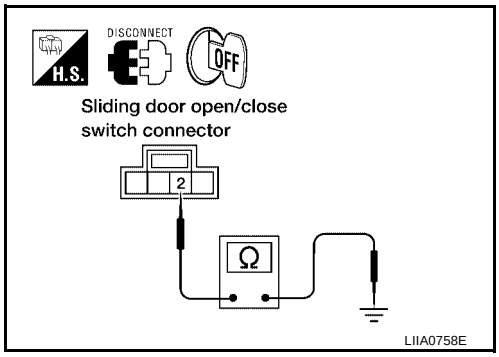
4. SLIDING DOOR OPEN/CLOSE SWITCH GROUND INSPECTION

Check continuity between sliding door open/close switch connector terminal 2 and ground.

2 (B) - Ground : Continuity should exist.

OK or NG

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



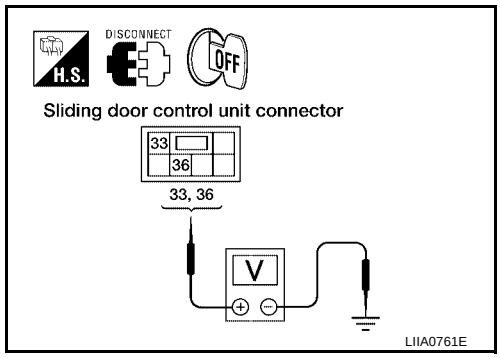
Sliding Door Motor System Inspection

EIS0020T

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 terminals 33, 36 and ground.

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



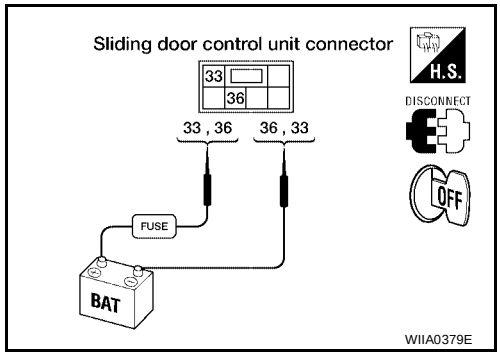
OK or NG

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 and check motor operation.

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



OK or NG

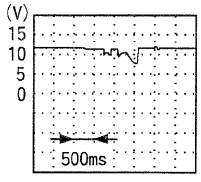
OK >> Motor is OK.
NG >> Replace the sliding door motor.

Magnetic Clutch Line Check

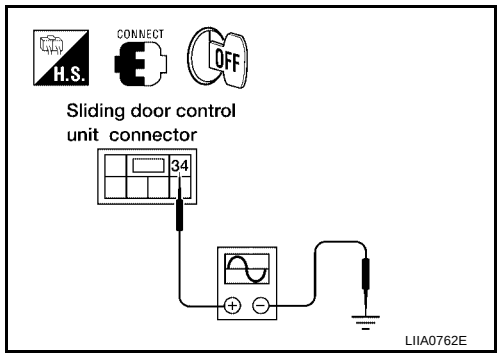
EIS0020U

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 terminal 34 and ground using an oscilloscope.

34 (Y) - Ground	

PIIA1798E



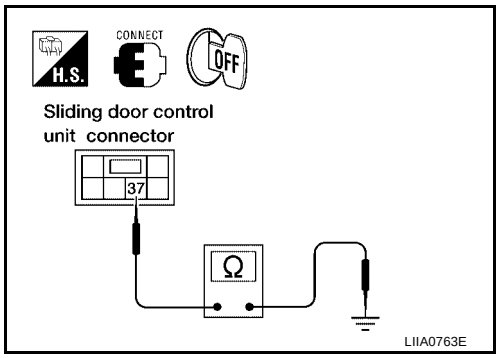
OK or NG

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

2. MAGNETIC CLUTCH GROUND CIRCUIT INSPECTION

Check continuity between sliding door control unit connector terminal 37 and ground.

37 (Y) - Ground : Continuity should exist.



OK or NG

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

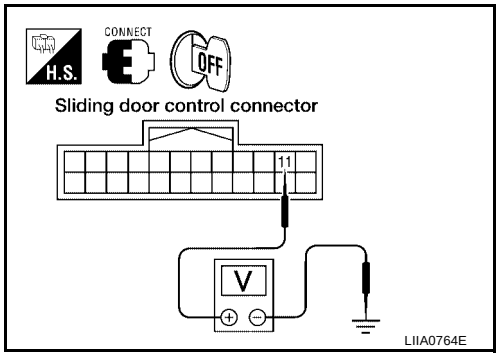
Sliding Door Encoder System Inspection

EIS0020V

1. SLIDING DOOR ENCODER POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Check voltage between sliding door control unit connector terminal 11 and ground.

11 (G) - Ground : Approx. 9V



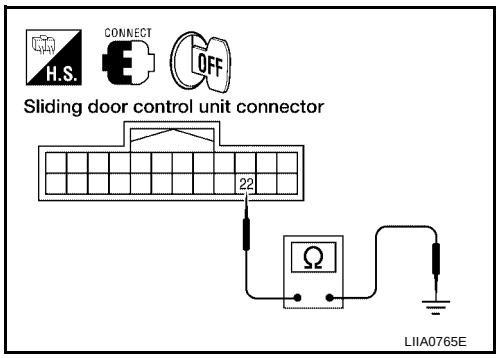
OK or NG

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

2. SLIDING DOOR ENCODER GROUND CIRCUIT INSPECTION

Check continuity between sliding door control unit connector terminal 22 and ground.

22 (B) - Ground : Continuity should exist.

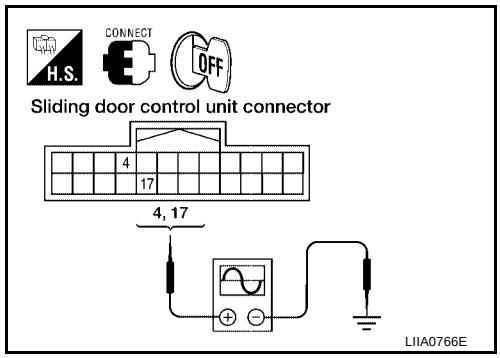


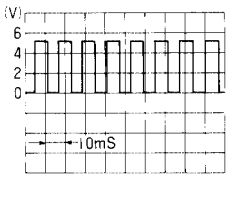
OK or NG

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 terminals 4, 17 and ground using an oscilloscope.



4 (W/B) - Ground 17 (R/B) - Ground	 OCC3383D

OK or NG

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

4. SLIDING DOOR ENCODER CIRCUIT INSPECTION

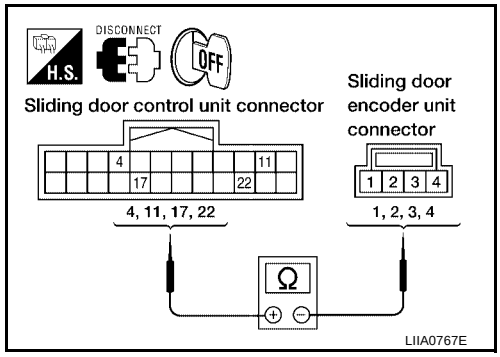
1. Disconnect sliding door control unit and sliding door encoder.
2. Check continuity between sliding door control unit connector terminals 4, 11, 17, 22 and sliding door encoder terminals 1, 2, 3, 4 and ground.

Sliding Door RH

11 (G) - 1 (G)	**: Continuity should exist.**
17 (R/B) - 2 (R/B)	**: Continuity should exist.**
22 (B) - 4 (B)	**: Continuity should exist.**
4 (W/B) - 3 (W/B)	**: Continuity should exist.**

Sliding Door LH

11 (R) - 1 (R)	**: Continuity should exist.**
17 (Y) - 3 (Y)	**: Continuity should exist.**
22 (G) - 4 (G)	**: Continuity should exist.**
4 (L) - 2 (L)	**: Continuity should exist.**



OK or NG

OK >> System is OK.
NG >> Repair or replace harness.

Sliding Door Remote Control Switch System Inspection

EIS0020W

1. SLIDING DOOR REMOTE CONTROL SWITCH FUNCTION INSPECTION

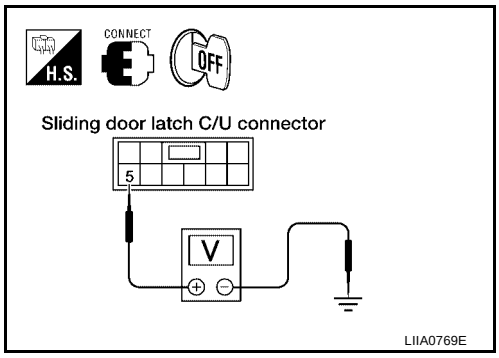
Check sliding door remote control switch operation.

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 terminals 5 and ground.



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

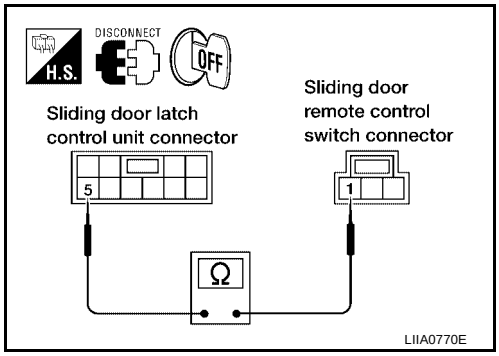
OK or NG

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 terminal 1 and sliding door latch control unit connector terminal 5.

1 (SB) - 5 (SB) : Continuity should exist.



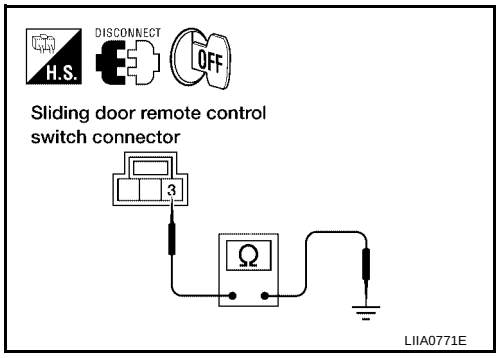
OK or NG

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 terminal 3 and ground.

3 (Y) - Ground : Continuity should exist.



OK or NG

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

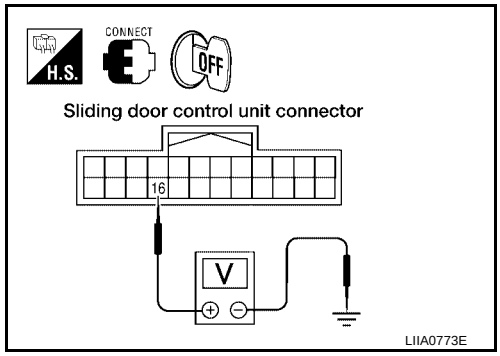
Child Lockout Switch System Inspection

EIS0020X

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 terminals 16 and ground.

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



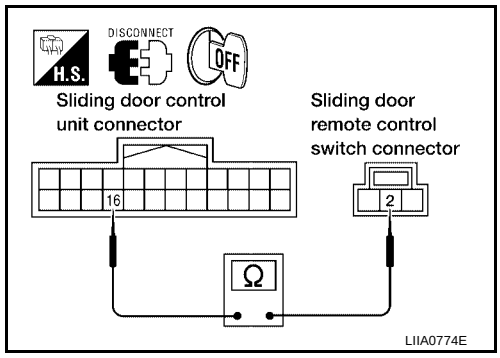
OK or NG

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 terminal 2 and sliding door control unit connector terminal 16.

2 (L) - 16 (L) : Continuity should exist.



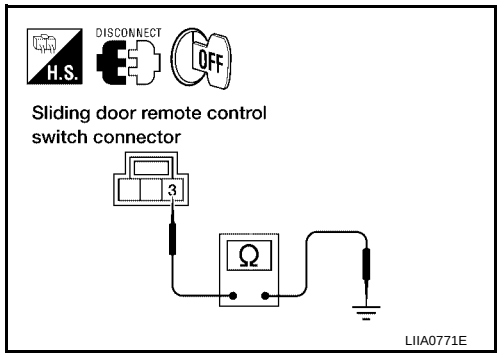
OK or NG

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 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.

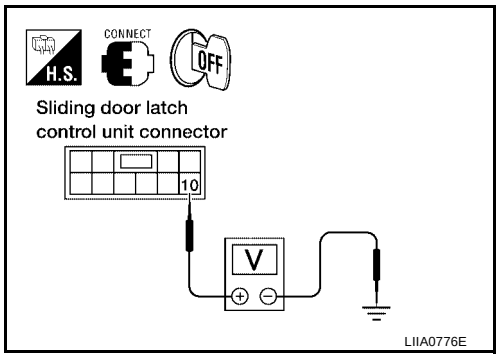
Latch Release Actuator System Inspection

EIS0020Y

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 terminal 10 and ground.

Connector terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
10 (R/W)	Ground	Latch release actuator operation	Battery voltage
		Other than above	0



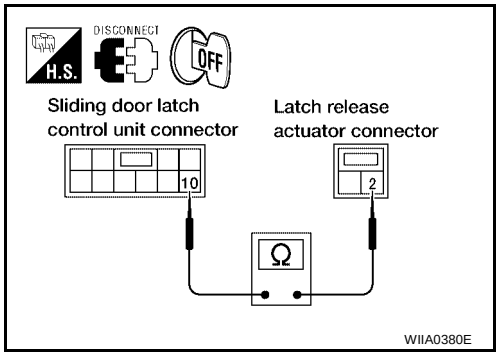
OK or NG

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 terminal 2 and sliding door latch control unit connectors terminal 10.

2 (R/W) - 10 (R/W) : Continuity should exist.



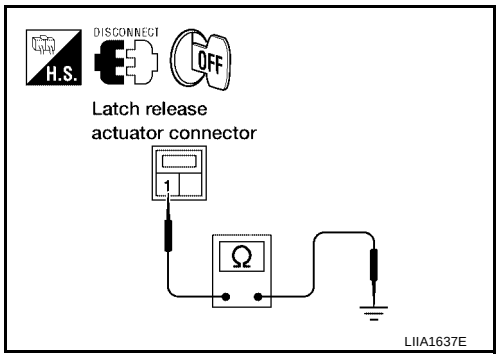
OK or NG

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 terminal 1 and ground.

1 (Y) - Ground : Continuity should exist.



OK or NG

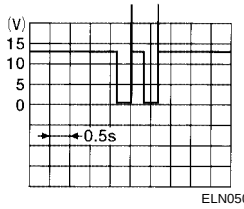
OK >> Replace the latch release actuator.
NG >> Repair or replace harness.

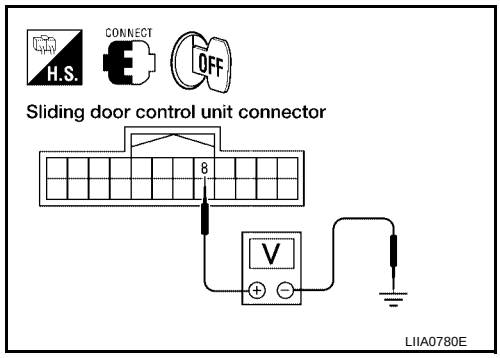
Warning Chime System Inspection

EIS0020Z

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 terminal 8 and ground using an oscilloscope.

8 (Y/G) RH or (LG/B) LH - Ground	 ELN0505D



LIIA0780E

OK or NG

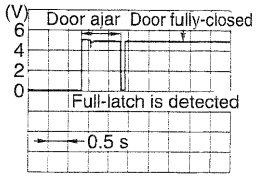
OK >> Warning chime system is OK.
NG >> Replace sliding door control unit.

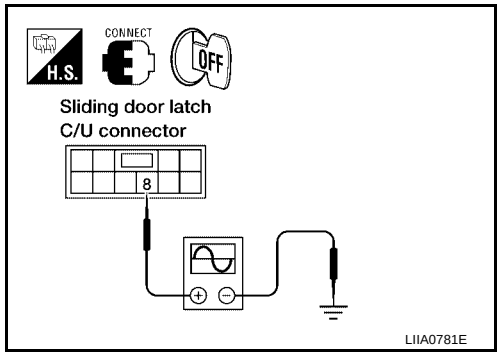
Half-Latch Switch System Inspection

EIS00210

1. HALF-LATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the sliding door, check voltage between sliding door latch control unit connector terminal 8 and ground.

8 (O/B) - Ground	 PIIA2169E



LIIA0781E

OK or NG

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

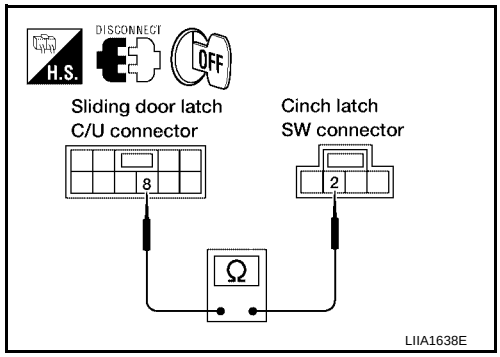
2. HALF-LATCH SWITCH CIRCUIT INSPECTION

1. Disconnect cinch latch switch and sliding door latch control unit.
2. Check continuity between cinch latch switch connector terminal 2 and sliding door latch control unit connectors terminal 8.

2 (O/B) - 8 (O/B) : Continuity should exist.

OK or NG

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

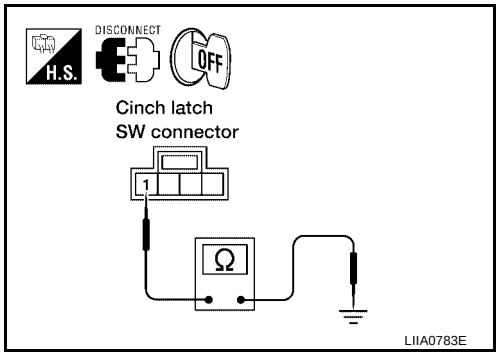


LIIA1638E

3. HALF-LATCH SWITCH GROUND INSPECTION

1. Close the sliding door.
2. Check continuity between cinch latch switch connector terminal 1 and ground.

1 (Y) - Ground : Continuity should exist.



OK or NG

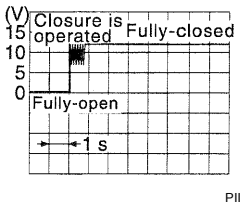
OK >> Replace the cinch latch switch.
NG >> Repair or replace harness.

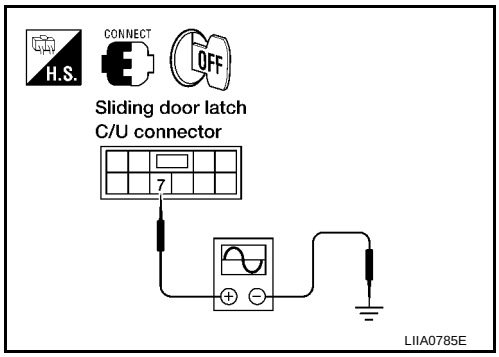
Full-Latch Switch System Inspection

EIS00211

1. FULL-LATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully closing and opening the sliding door, check voltage between sliding door latch control unit connector terminal 7 and ground.

7 (LG) - Ground	



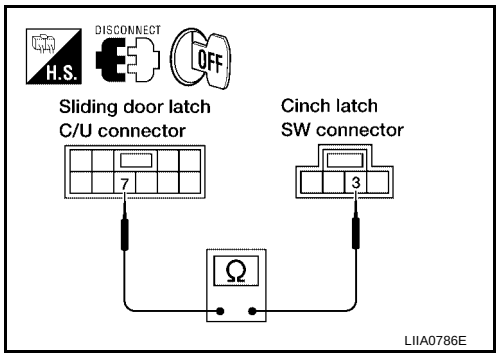
OK or NG

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 terminal 3 and sliding door latch control unit connectors terminal 7.

3 (LG) - 7 (LG) : Continuity should exist.



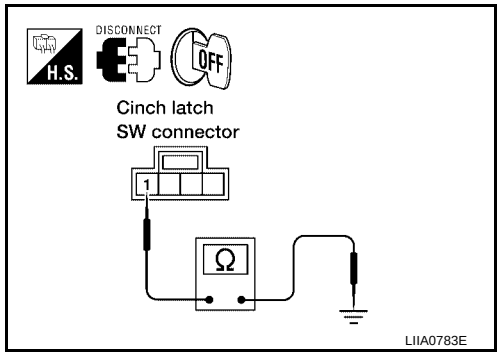
OK or NG

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 terminal 1 and ground.

1 (Y) - Ground : Continuity should exist.



OK or NG

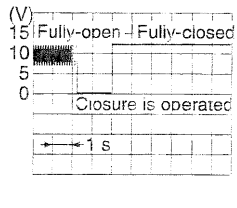
OK >> Replace the cinch latch switch.
NG >> Repair or replace harness.

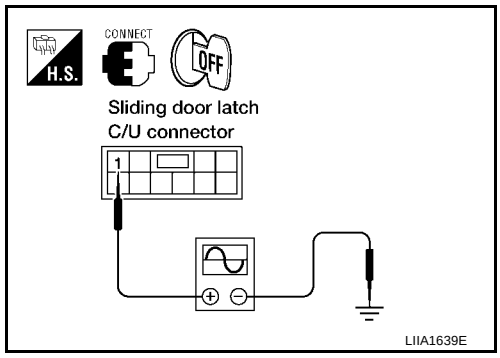
Neutral Switch System Inspection

EIS00212

1. NEUTRAL SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the sliding door, check voltage between sliding door latch control unit connector terminal 1 and ground.

1 (G) - Ground	



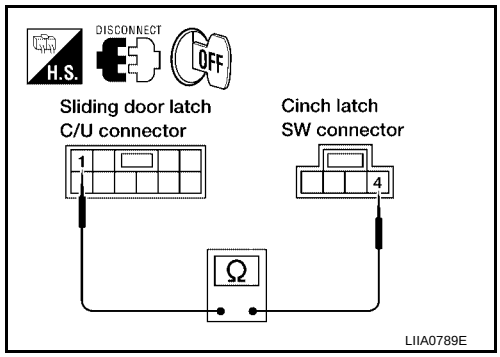
OK or NG

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 terminal 4 and sliding door latch control unit connectors terminal 1.

4 (G) - 1 (G) : Continuity should exist.



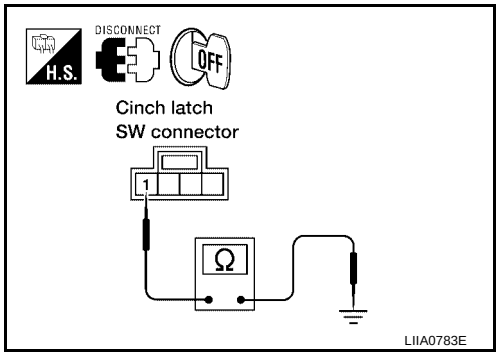
OK or NG

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 terminal 1 and ground.

1 (Y) - Ground : Continuity should exist.



OK or NG

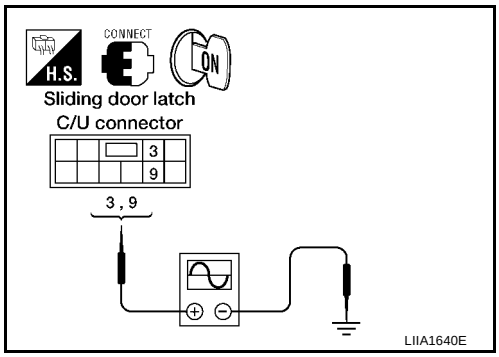
OK >> Replace the cinch latch switch.
NG >> Repair or replace harness.

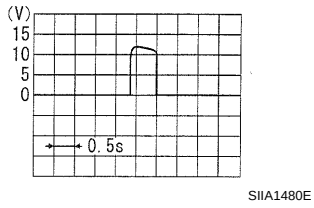
Cinch Latch Motor System Inspection

EIS00213

1. CINCH LATCH MOTOR SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the sliding door, check voltage between sliding door latch control unit connector terminals 3, 9 and ground.



3 (G/B) - Ground 9 (L/B) - Ground	 SIIA1480E

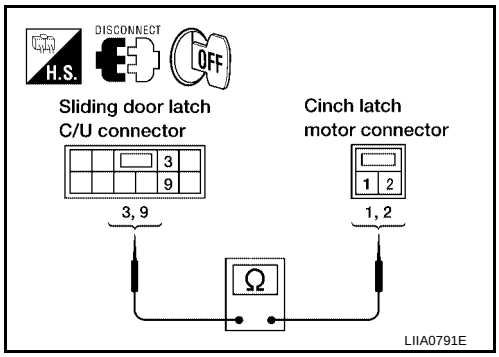
OK or NG

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 terminals 1, 2 and sliding door latch control unit connectors terminals 3, 9.

1 (G/B) - 3 (G/B) : Continuity should exist.
2 (L/B) - 9 (L/B) : Continuity should exist.



OK or NG

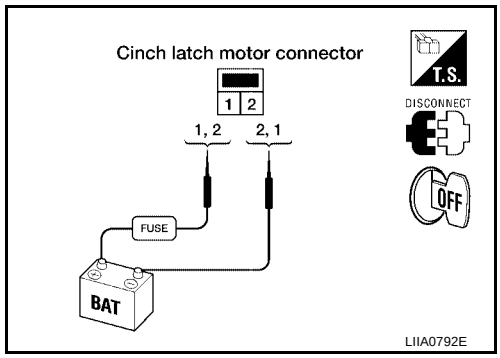
OK >> GO TO 3.
NG >> Repair or replace harness.

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

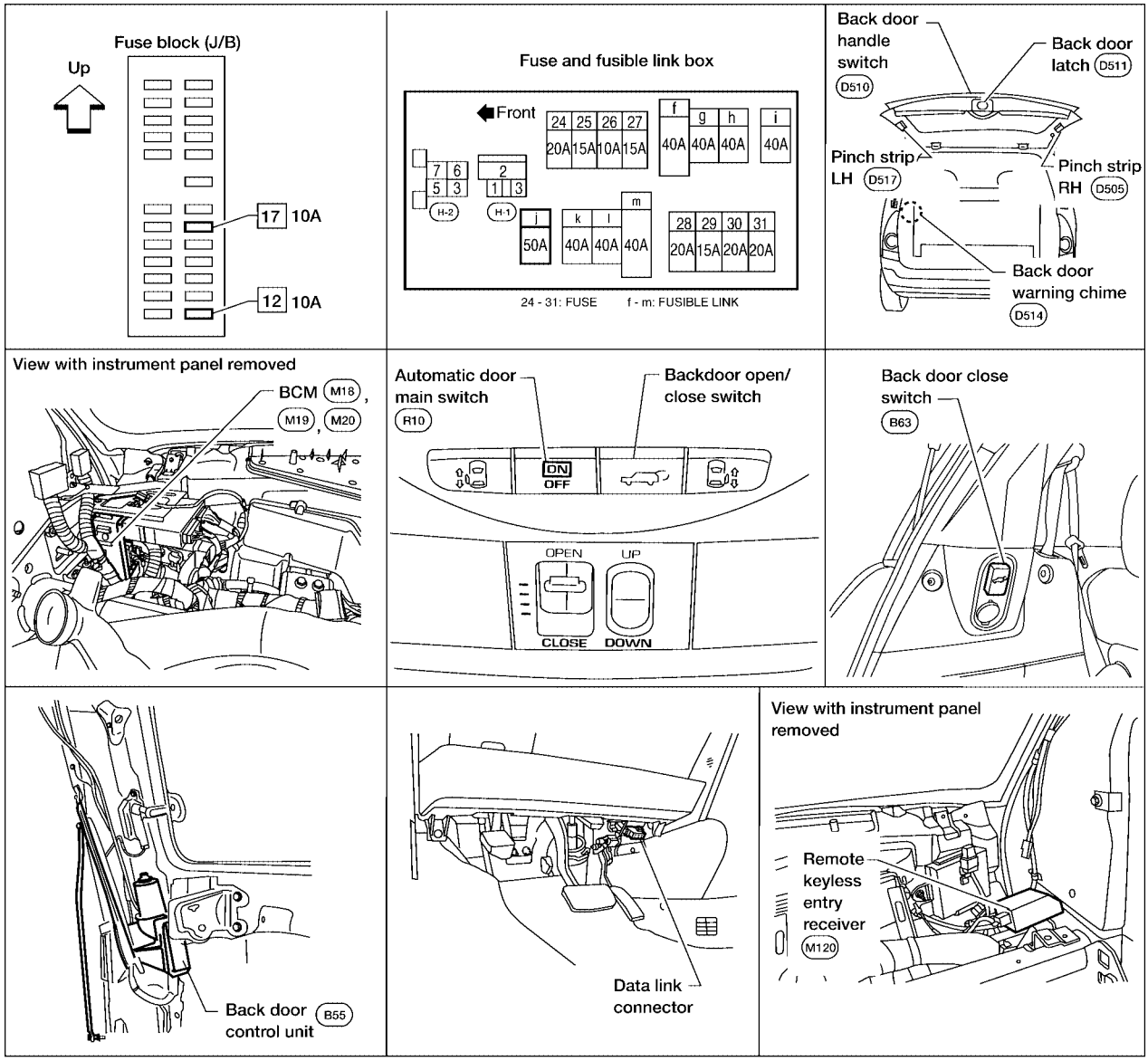
OK >> Motor is OK.
NG >> Replace the cinch latch motor.

AUTOMATIC BACK DOOR SYSTEM

PFP:82580

Component Parts and Harness Connector Location

EIS001XD



LIIA1914E

System Description

EIS001XE

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 you close the back door to the halfway-sate.

- 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, if you 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 release the latch. The back door motor then raises the door to the full open position.
  With the back door open, if you 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	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 waring 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.

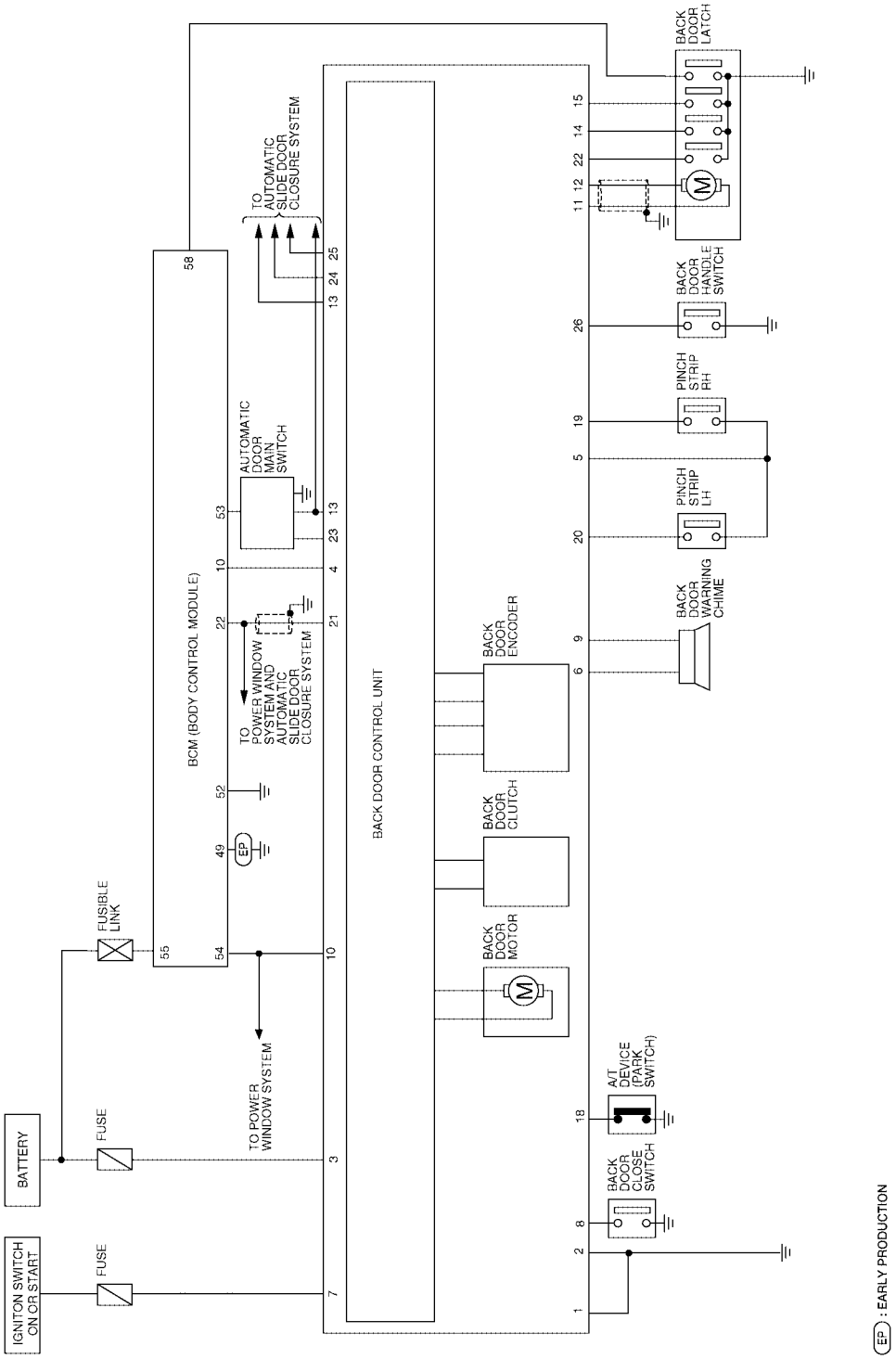
Operation status	Operation or conditions	Warning chime pattern
When auto operation starts	Automatic door main switch operation	Friendly chime 2 seconds, 3 dings
	Back door handle switch operation	
	Back door close switch operation	
When reverse operation starts	When reverse request is detected from automatic 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

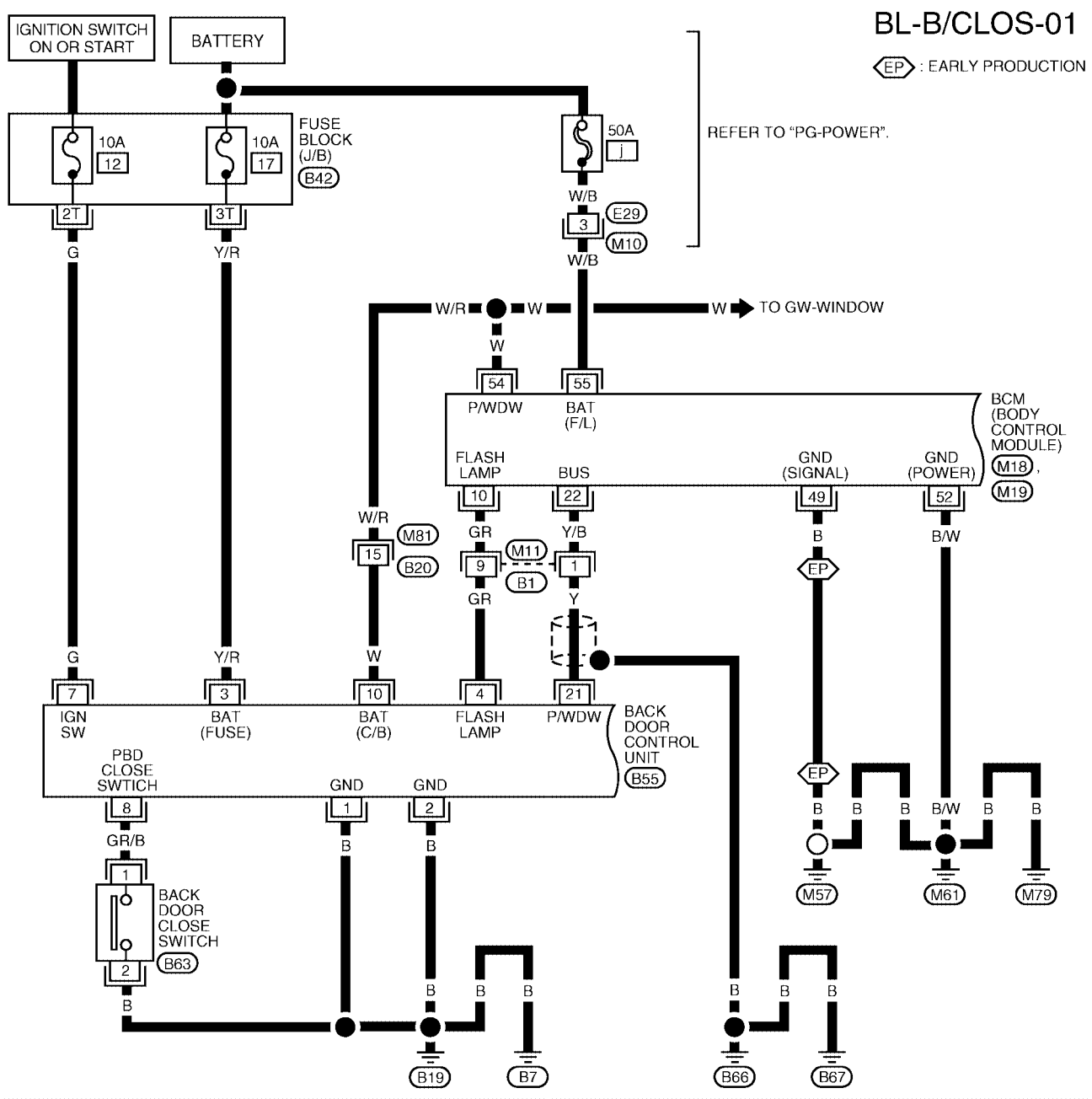
EIS001XF

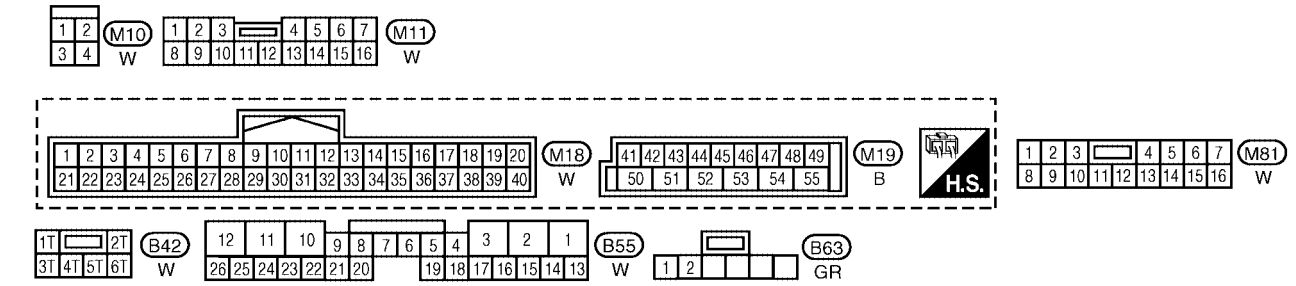


LIWA0522E

Wiring Diagram -B/CLOS-

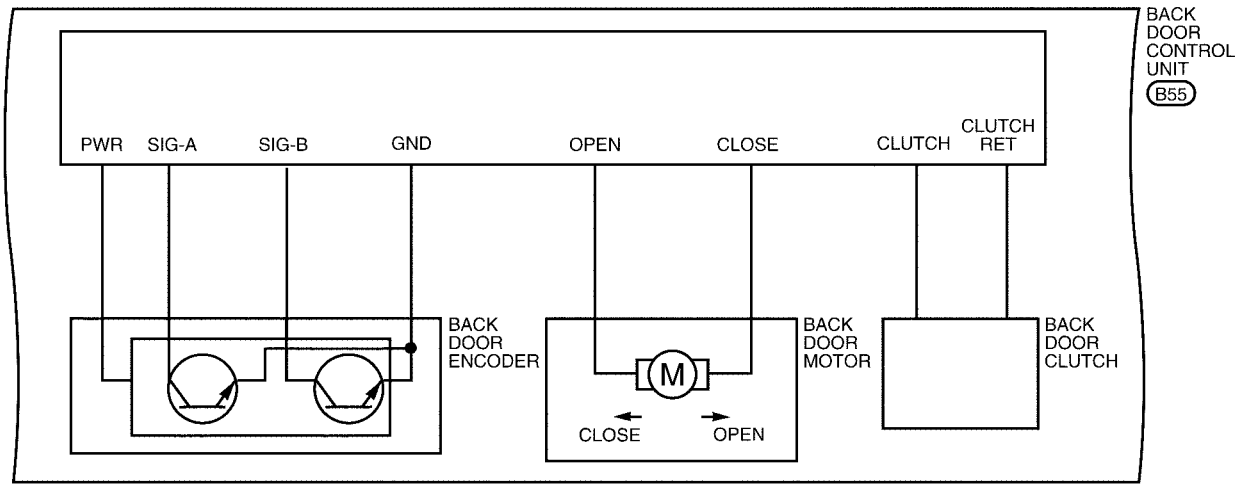
EIS001XG





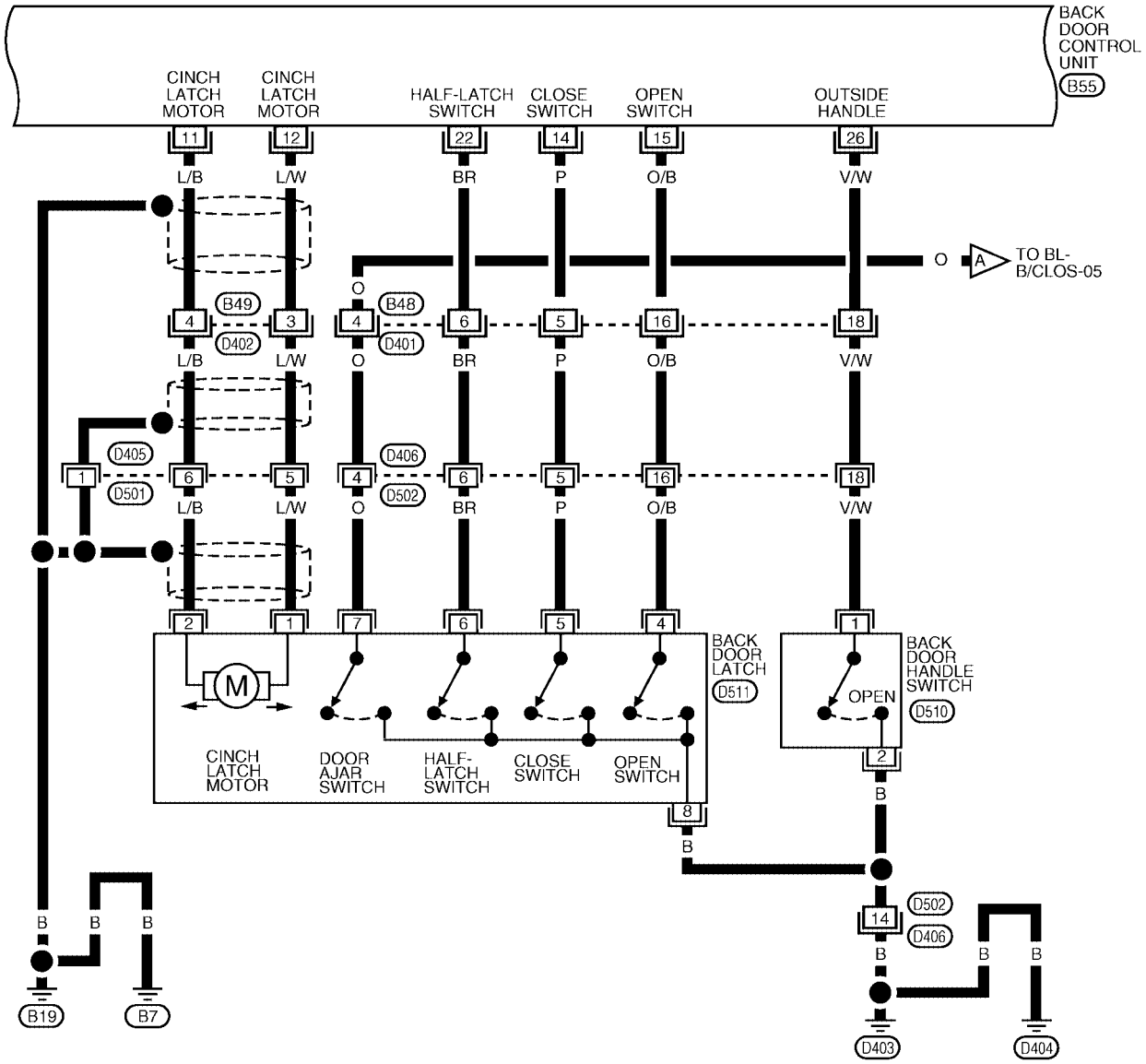
WIWA0247E

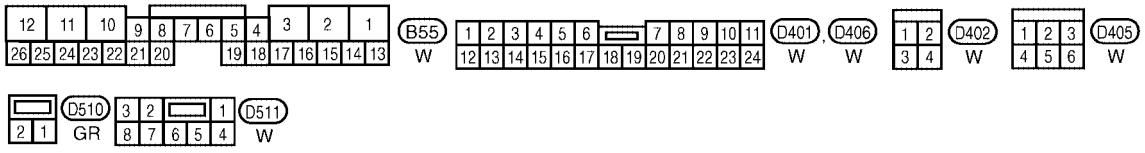
BL-B/CLOS-02



LIWA0149E

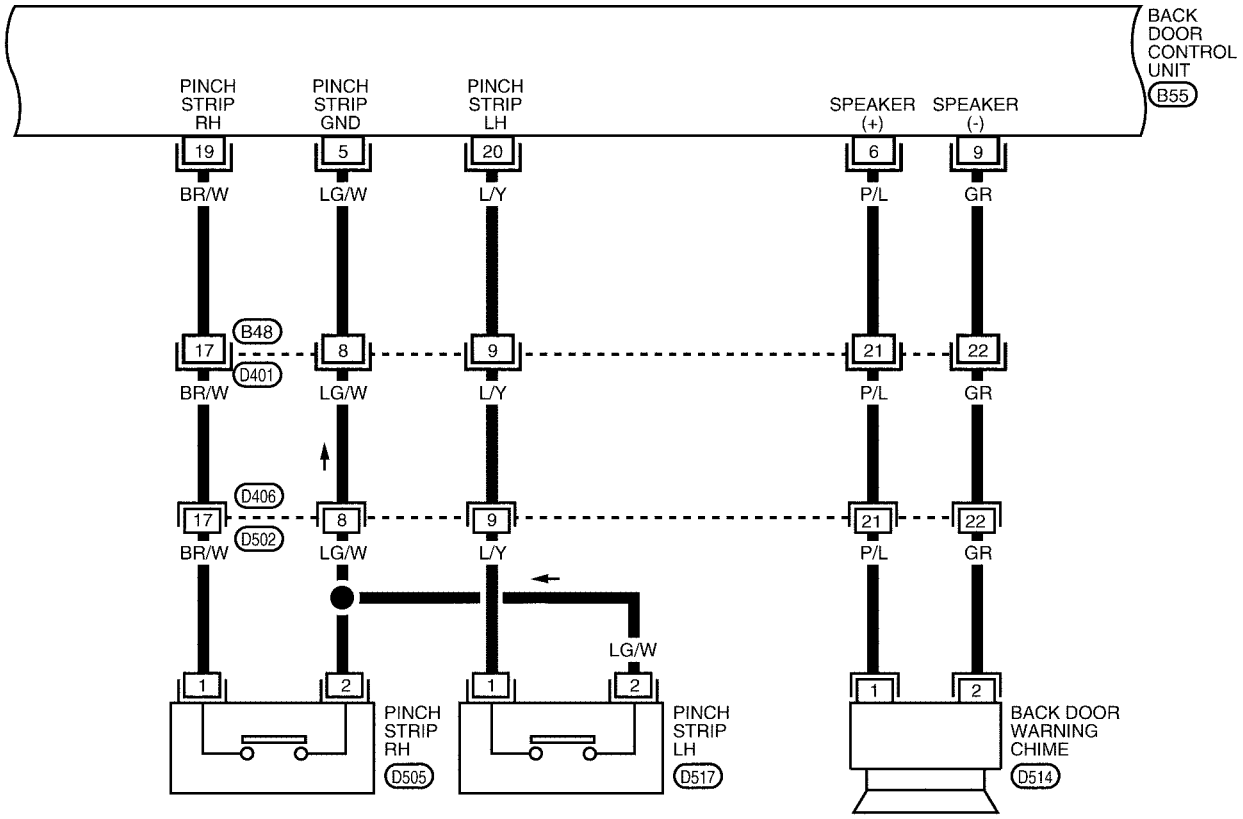
BL-B/CLOS-03

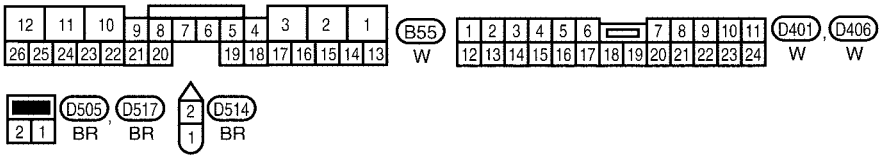




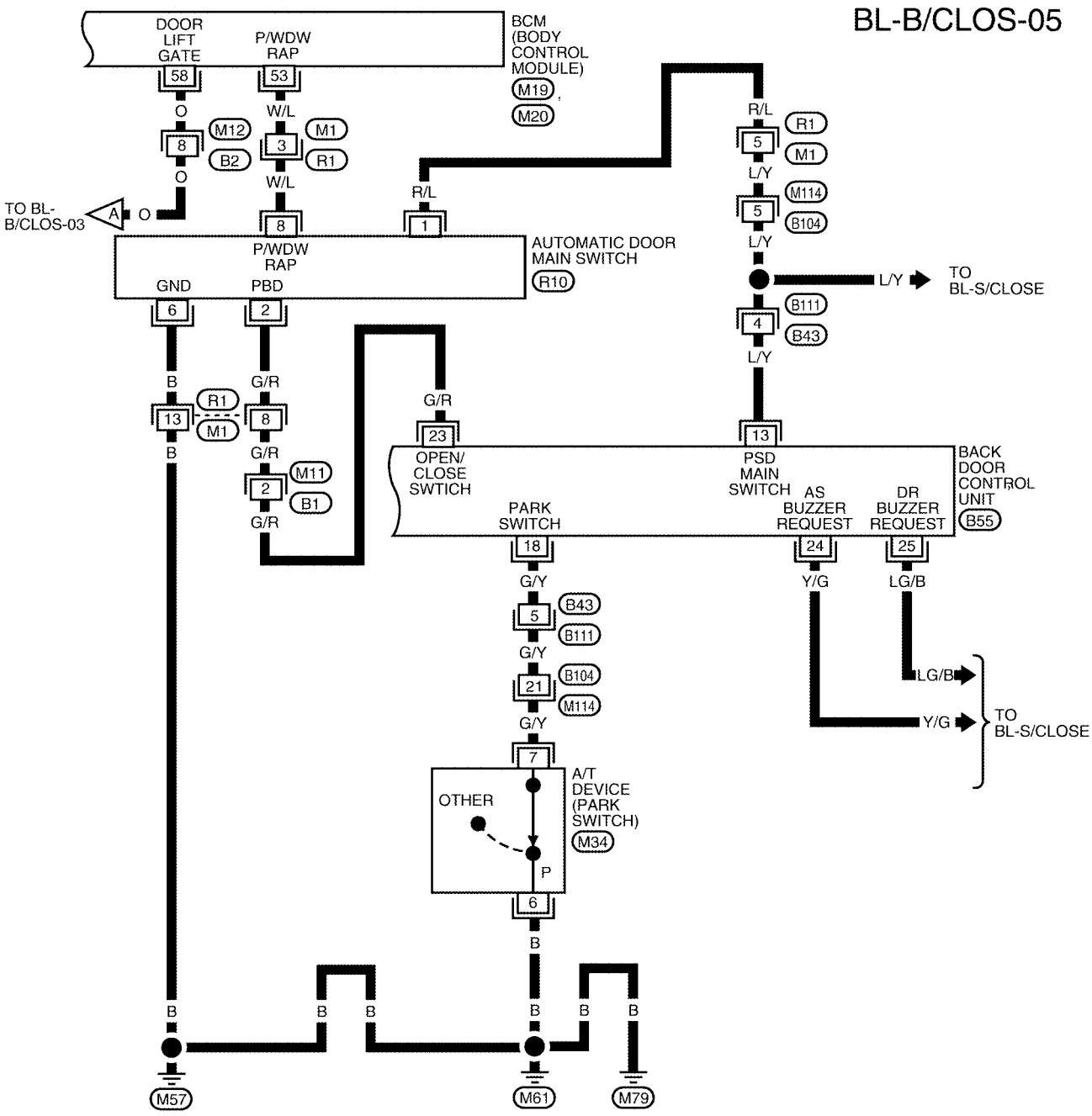
LIWA0523E

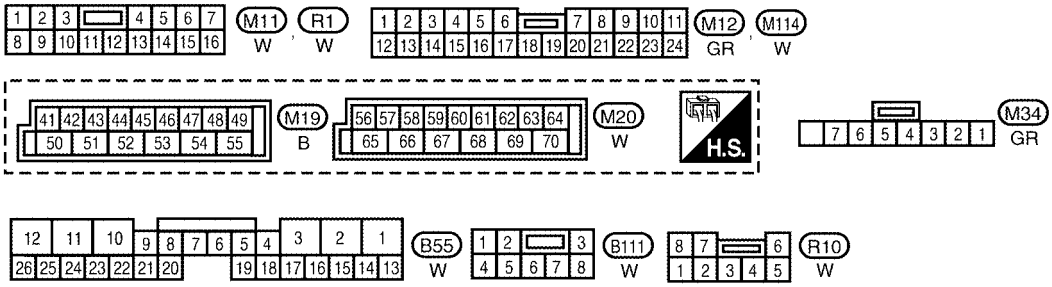
BL-B/CLOS-04





LIWA0151E


BL-B/CLOS-05
DOOR LIFT GATE
P/WDW RAP
BCM (BODY CONTROL MODULE)
M19
M20
58
53
O
W/L
M12
M1
8
3
B2
R1
TO BL-B/CLOS-03
A
P/WDW RAP
AUTOMATIC DOOR MAIN SWITCH
R10
GND
PBD
6
2
B
G/R
R1
M1
13
8
M11
B1
2
R/L
1
R1
M1
5
L/Y
M114
B104
TO BL-S/CLOSE
B111
B43
4
23
OPEN/ CLOSE SWTICH
PARK SWITCH
18
PSD MAIN SWITCH
AS BUZZER REQUEST
DR BUZZER REQUEST
24
25
BACK DOOR CONTROL UNIT
B55
G/Y
Y/G
LG/B
21
7
OTHER
A/T DEVICE (PARK SWITCH)
M34
P
6
M57
M61
M79


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

WIWA0888E

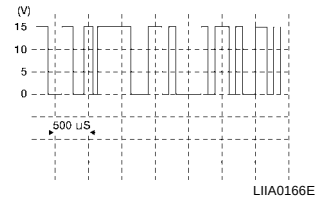
Terminals and Reference Value for Back Door Control Unit

EIS001XH

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	5
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	Back door close operation	5
15	O/B	Open switch signal	Back door open operaton	5
18	G/Y	A/T Device (park switch)	P position	0
			Other than above	5
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	5
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	5

Terminals and Reference Value for BCM

EIS001XJ

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
10	GR	Hazard lamp flash input	Back door active	0
			Other	5
22	Y/B	Power window serial link	—	
49*	B	Ground	—	0
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	Power source (BAT)	—	Battery voltage
58	O	Back door switch	Open	0
			Closed	5

*: Early production

Trouble Diagnosis Procedure

EIS00214

1. Check the symptom and customer's requests.
2. Understand outline of system. Refer to BL-54, "System Description" .
3. Confirm system operation.
4. Perform pre-diagnosis inspection. Refer to BL-68, "Pre-Diagnosis Inspection" .
5. Perform self-diagnosis procedures. Refer to BL-148, "Self-Diagnosis Procedures" .
6. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts. Refer to BL-69, "Trouble Diagnoses" .
7. **Inspection End.**

Self-Diagnosis Procedures

EIS00723

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-151
Automatic door main back door open/close switch	OFF → ON	BL-151
Back door close switch	OFF → ON	BL-152
Back door handle switch	OFF → ON	BL-158
A/T device (park switch)	P position → other than P position	RE4F04B AT-245 RE5F22A AT-578
Vehicle speed*	Vehicle speed	RE4F04B AT-209 RE5F22A AT-578
Remote keyless entry signal	Keyfob switch OFF → ON	BL-77
Door lock/unlock signal	LOCK → UNLOCK	BL-45
Pinch strip LH signal	OFF → ON	BL-153
Pinch strip RH signal	OFF → ON	BL-153

*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-150
3. Back door clutch diagnosis result	Back door clutch does not operate	BL-155
4. Back door motor diagnosis result	Back door motor does not operate (no operating current)	BL-150
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	BL-159

Turn ignition switch OFF to end input signal check mode.

Diagnosis Chart

EIS00215

Symptom	Suspect systems	Refer to
Automatic operations are not executed from the back door fully closed or fully open position. (Auto closure operate normally.)	Automatic door main switch system inspection	BL-151
	A/T Device (park switch)	—
	Pinch strip system inspection	BL-153
Automatic operations are not carried out together with open/close operations. (Manual operations are normal.)	Automatic door main switch system inspection	BL-151
	Back door close switch system inspection	BL-152
	Auto back door power supply and ground circuit system inspection.	BL-150

Symptom	Suspect systems	Refer to
The auto closure function does not operate. (Stops at the halfway position for auto closing operations.)	Pinch strip system inspection	BL-153
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-158
When the key fob is operated, the back door does not operate automatically.	Remote keyless entry system inspection	BL-53
	Power window serial link	BL-147
	Pinch strip system inspection	BL-153
Auto closure does not operate	Half-latch switch system	BL-155
	Cinch latch motor system	BL-159
	Handle switch system	BL-158
The back door does not open. (Closure motor rotation is not reversed.)	Open switch system	BL-156
	Handle switch system	BL-158
Warning chime does not sound	Back door warning chime system	BL-154
Auto closure operation works, but the back door is not fully closed	Close switch system	BL-157
	Handle switch system	BL-158
	Cinch latch motor system	BL-159
	Back door latch assembly mechanism damaged or worn.	—

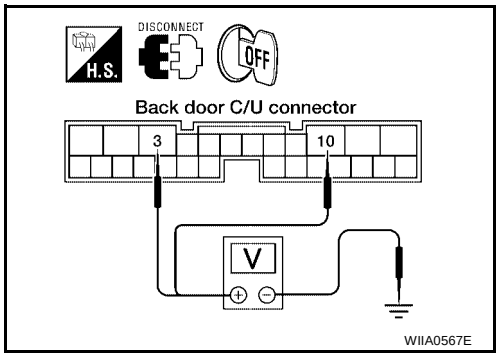
Back Door Power Supply and Ground Circuit Inspection

EIS00216

1. BACK DOOR 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 (Y/R) - Ground :Approx. battery voltage
10 (W) - Ground :Approx. battery voltage



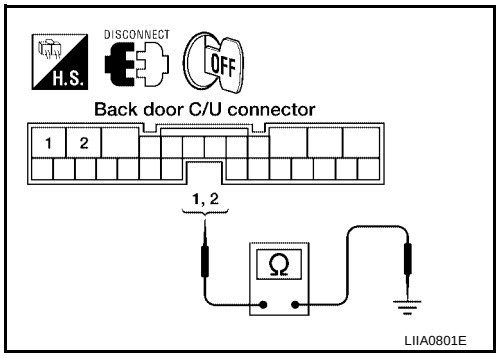
OK or NG

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

2. BACK DOOR GROUND CIRCUIT INSPECTION

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

1 (B) - Ground : Continuity should exist.
2 (B) - Ground : Continuity should exist.



OK or NG

OK >> Circuit is OK.
NG >> Repair or replace harness.

Automatic Door Main Switch System Inspection

EIS00217

1. AUTOMATIC DOOR MAIN SWITCH FUNCTION INSPECTION

Check automatic door main switch using switch operation.

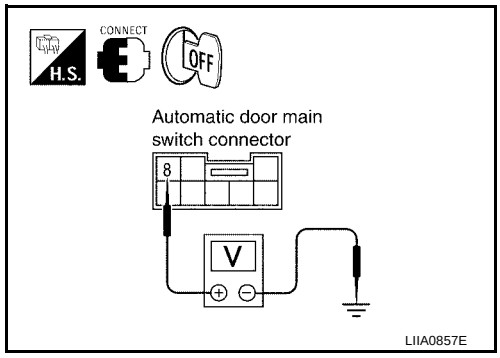
OK or NG

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 (W/L) - Ground :Approx. battery voltage



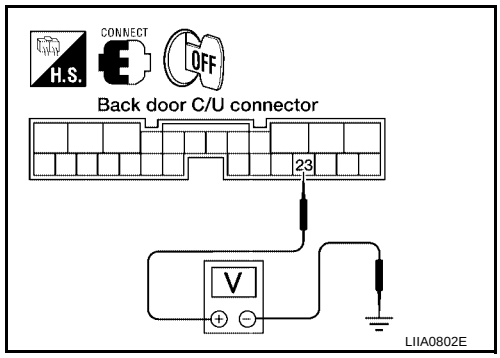
OK or NG

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

3. AUTOMATIC DOOR MAIN SWITCH SIGNAL INSPECTION

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

Connector terminal (Wire color)		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
23 (G/R)	Ground	Automatic door main switch	ON	0
			OFF	5



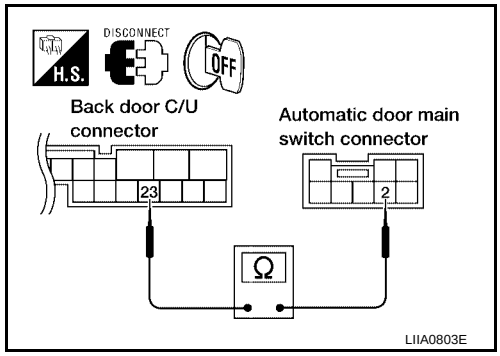
OK or NG

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 R10 terminal 2 and back door control unit connector B55 terminal 23.

2 (G/R) - 23 (G/R) : Continuity should exist.



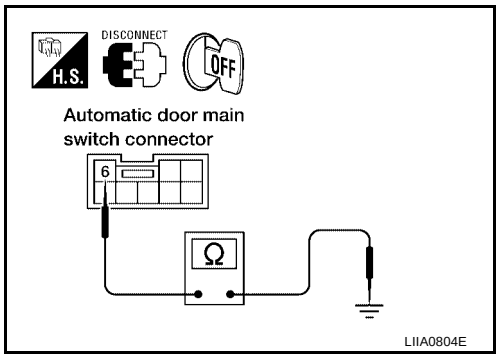
OK or NG

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 (B) - 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

EIS00218

1. BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

Check back door close switch using switch operation.

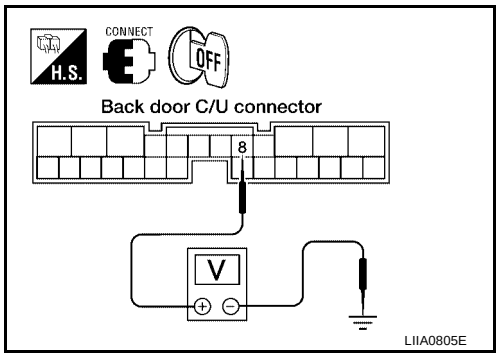
OK or NG

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.

Connector terminal (Wire color)		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
8 (GR/B)	Ground	Back door close switch	ON	0
			OFF	5



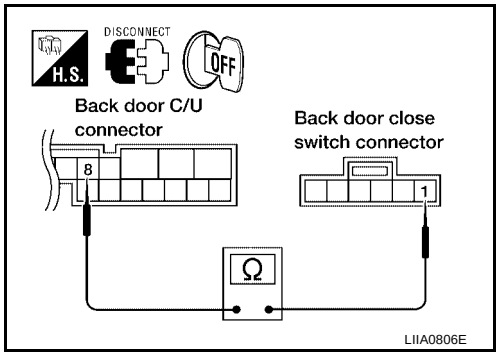
OK or NG

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 B63 terminal 1 and back door control unit connector B55 terminal 8.

1 (GR/B) - 8 (GR/B) : Continuity should exist.



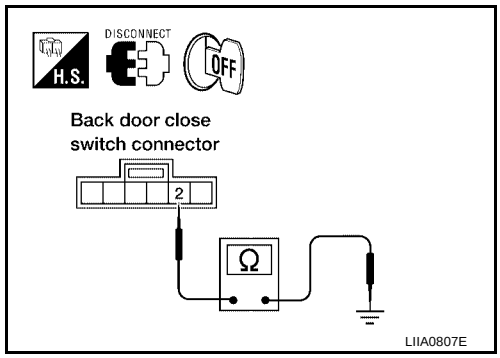
OK or NG

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 (B) - Ground : Continuity should exist.



OK or NG

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

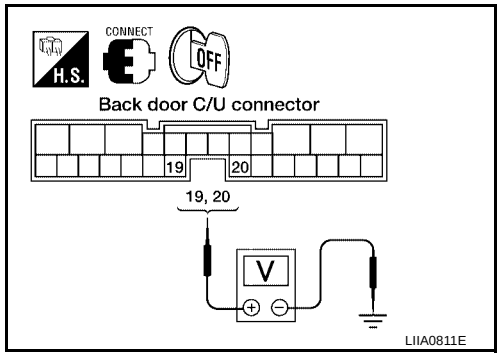
Pinch Strip System Inspection

EIS00219

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.

Connector terminal (Wire color)		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
19 (BR/W) 20 (L/Y)	Ground	Pinch strip operation	0
		Other	4



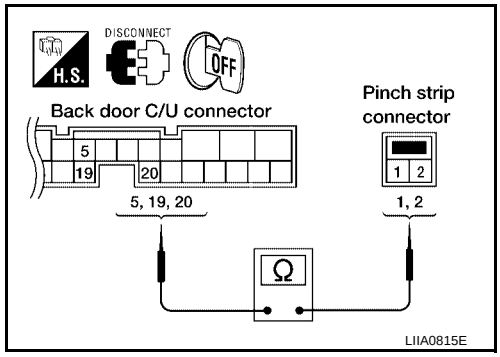
OK or NG

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 D505 (RH), D517 (LH) terminal 1, 2 and back door control unit connector B55 terminal 5, 19 (RH), 20 (LH).

1 (BR/W) - 19 (BR/W) : Continuity should exist.
1 (L/Y) - 20 (L/Y) : Continuity should exist.
2 (LG/W) - 5 (LG/W) : Continuity should exist.



OK or NG

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

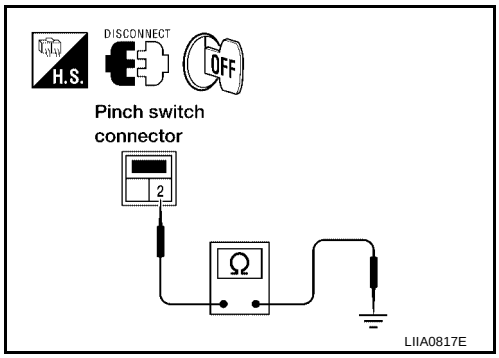
3. PINCH STRIP GROUND INSPECTION

Check continuity between pinch strip connector terminal 2 and ground.

2 (LG/W) - Ground : Continuity should exist.

OK or NG

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



Back Door Warning Chime System Inspection

EIS0021A

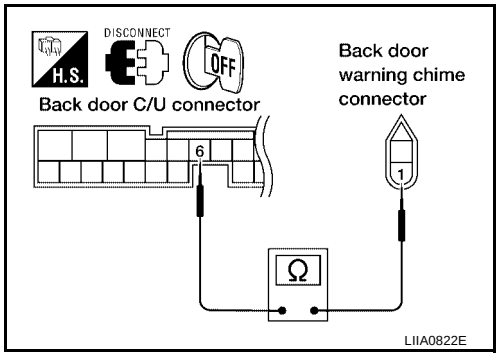
1. BACK DOOR WARNING CHIME CIRCUIT INSPECTION

1. Disconnect back door warning chime and back door control unit.
2. Check continuity between back door warning chime connector D514 terminal 1 and back door control unit connector B55 terminal 6.

1 (P/L) - 6 (P/L) : Continuity should exist.

OK or NG

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



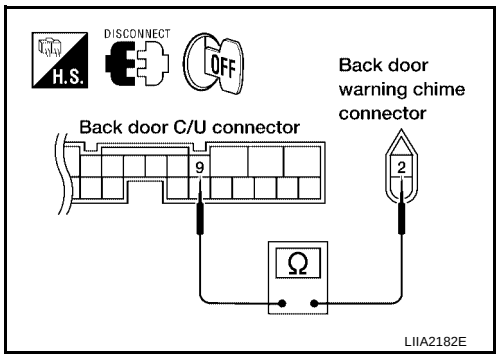
2. WARNING CHIME CIRCUIT INSPECTION

Check continuity between back door warning chime connector D514 terminal 2 and back door control unit connector B55 terminal 9.

2 (GR) - 9 (GR) : Continuity should exist.

OK or NG

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

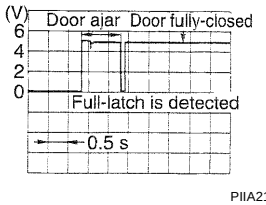


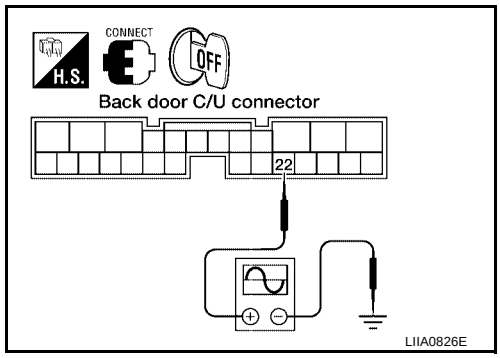
Half-Latch Switch System Inspection

EIS0021B

1. HALF-LATCH SWITCH SIGNAL INSPECTION

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

22 (BR) - Ground	 PIIA2169E



OK or NG

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

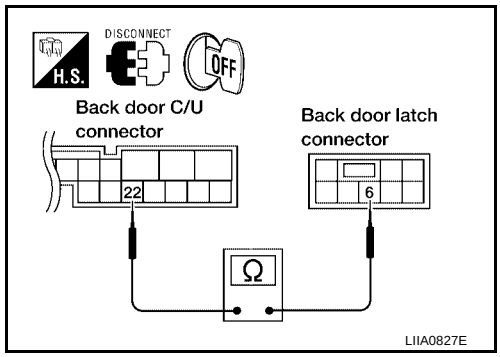
2. HALF-LATCH SWITCH CIRCUIT INSPECTION

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

6 (BR) - 22 (BR) : Continuity should exist.

OK or NG

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



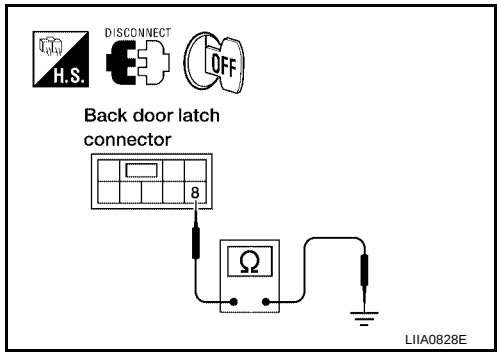
3. HALF-LATCH SWITCH GROUND INSPECTION

Check continuity between back door latch (half-latch switch) connector D511 terminal 8 and ground.

8 (B) - Ground : Continuity should exist.

OK or NG

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

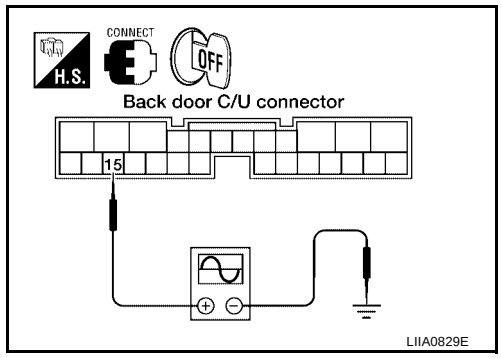


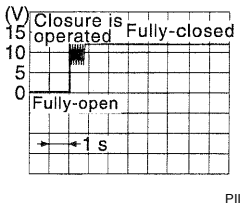
Open Switch System Inspection

EIS0021C

1. OPEN SWITCH SIGNAL INSPECTION

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



15 (O/B) - Ground	

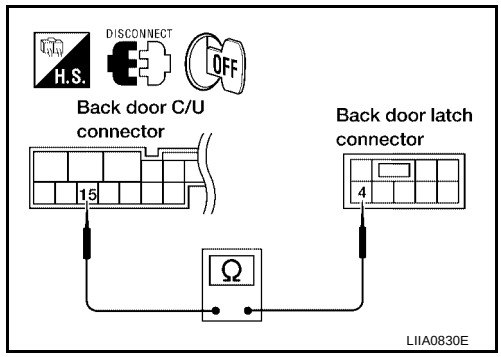
OK or NG

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 D511 terminal 4 and back door control unit connector B55 terminal 15.

4 (O/B) - 15 (O/B) : Continuity should exist.



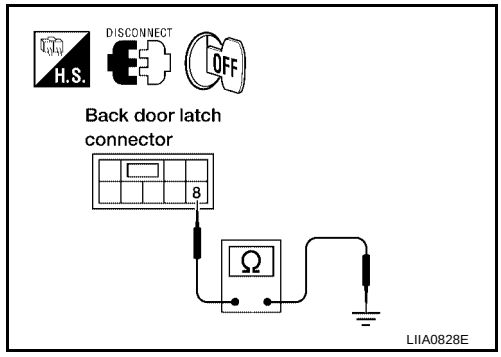
OK or NG

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 8 and ground.

8 (B) - Ground : Continuity should exist.



OK or NG

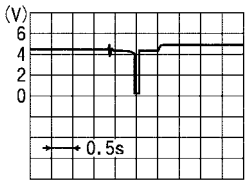
OK >> Replace the back door latch.
NG >> Repair or replace harness.

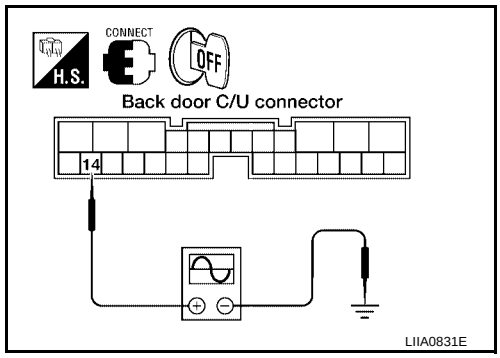
Close Switch System Inspection

EIS0021D

1. CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminal 14 and ground.

14 (P) - Ground	 PIIA2172E



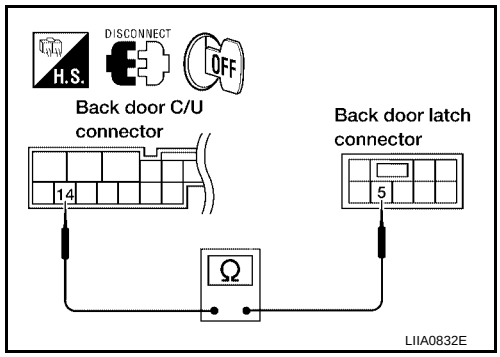
OK or NG

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 D511terminal 5 and back door control unit connector B55 terminal 14.

5 (P) - 14 (P) : Continuity should exist.



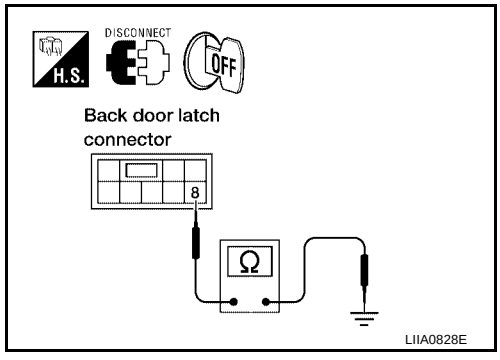
OK or NG

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 8 and ground.

8 (B) - Ground : Continuity should exist.



OK or NG

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

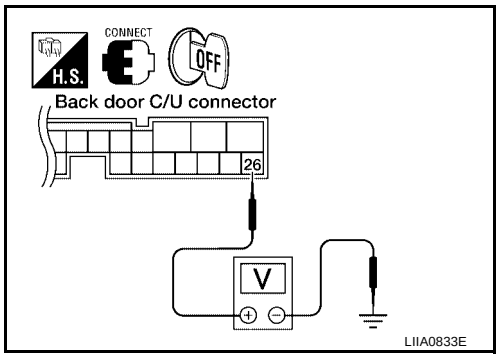
Back Door Handle Switch System Inspection

EIS0021E

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.

Connector terminal (Wire color)		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
26 (V/W)	Ground	Pull the back door handle switch (ON)	0
		Other (OFF)	5



OK or NG

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

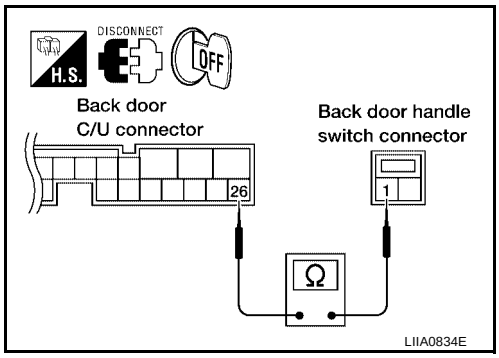
2. BACK DOOR HANDLE SWITCH CIRCUIT INSPECTION

1. Disconnect back door handle switch and back door control unit.
2. Check continuity between back door handle switch connector D510 terminal 1 and back door control unit connector B55 terminal 26.

1 (V/W) - 26 (V/W) : Continuity should exist.

OK or NG

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



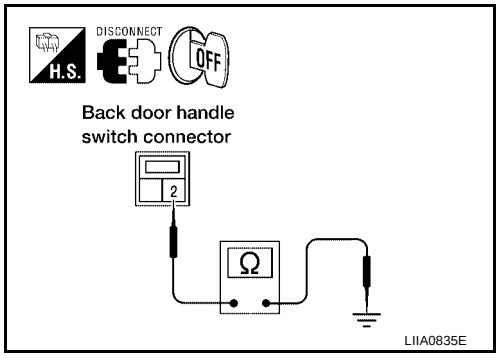
3. BACK DOOR HANDLE SWITCH GROUND INSPECTION

Check continuity between back door handle switch connector D510 terminal 2 and ground.

2 (B) - Ground : Continuity should exist.

OK or NG

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

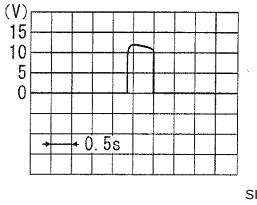


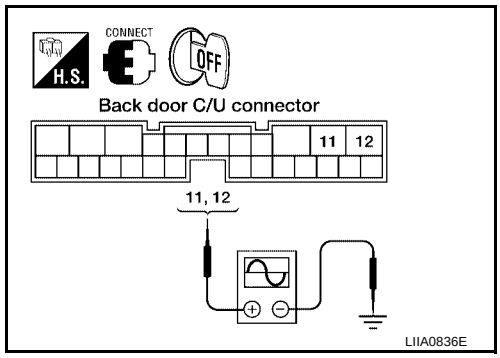
Cinch Latch Motor System Inspection

EIS0021F

1. CINCH LATCH MOTOR SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminals 11, 12 and ground.

11 (L/B) - Ground 12 (L/W) - Ground	 SIIA1480E



OK or NG

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

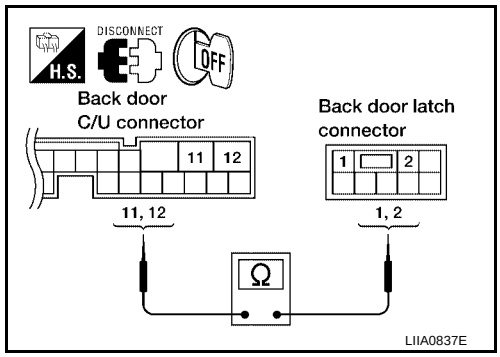
2. CINCH LATCH MOTOR CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit.
2. Check continuity between back door latch (cinch latch motor) connector D511 terminals 1, 2 and back door control unit connector B55 terminals 11, 12.

1 (L/W) -12 (L/W) : Continuity should exist.
2 (L/B) - 11 (L/B) : Continuity should exist.

OK or NG

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



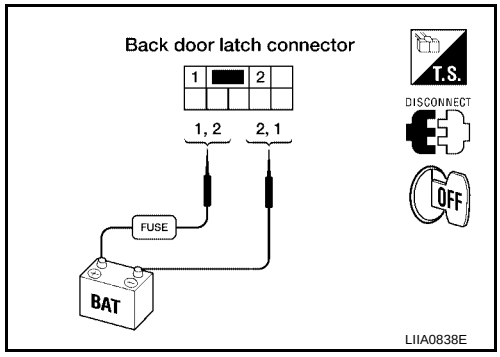
3. CINCH LATCH MOTOR OPERATION INSPECTION

Connect battery power to terminals 1 and 2 on the back door latch connector and check motor operation.

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

OK or NG

OK >> Motor is OK.
NG >> Replace the back door latch.

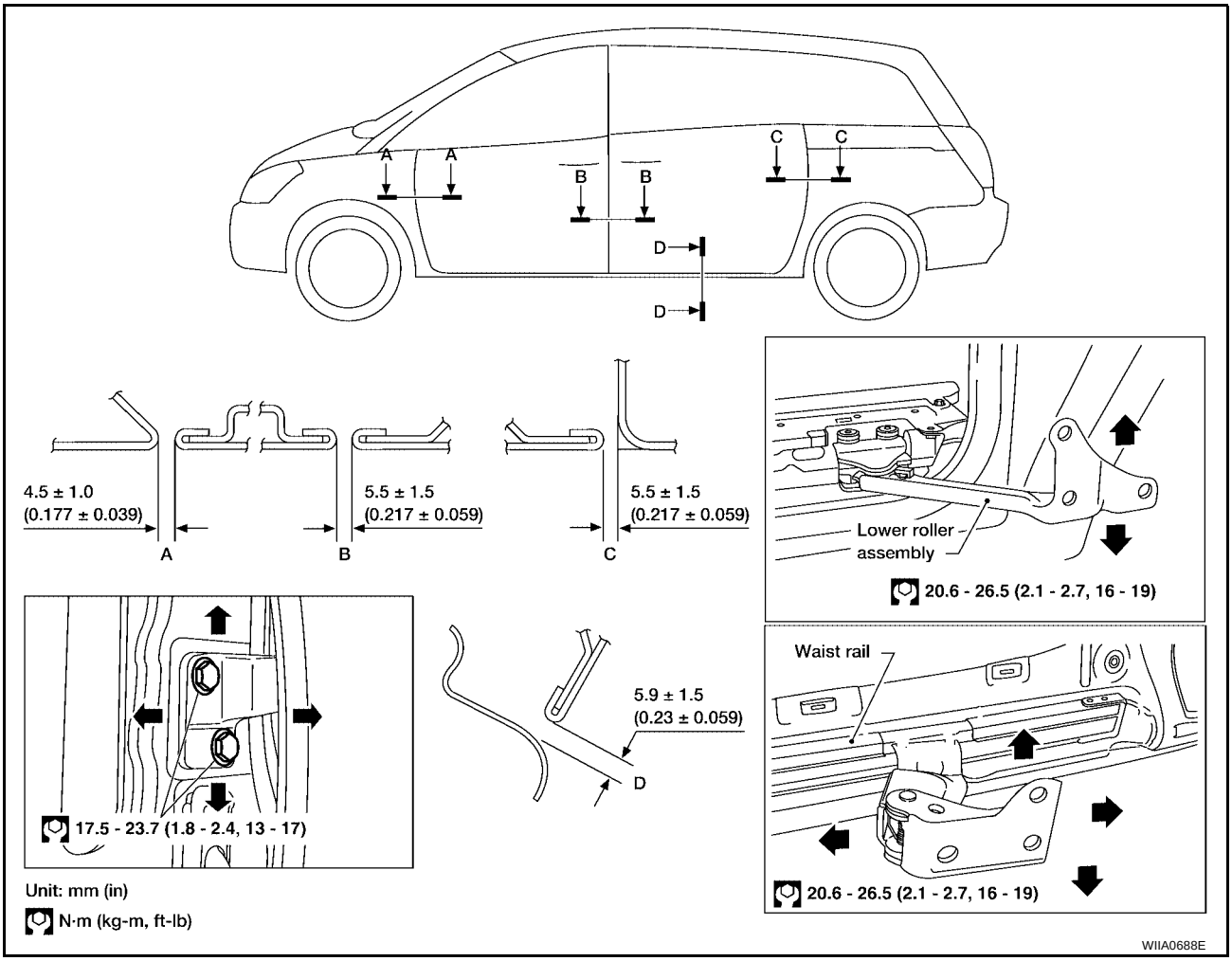


DOOR

PFP:80100

Fitting Adjustment

EIS007CC



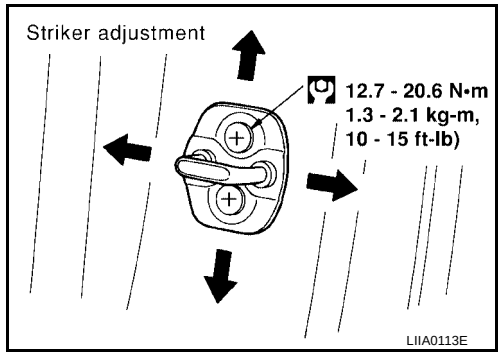
FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the fender. Refer to EI-20, "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

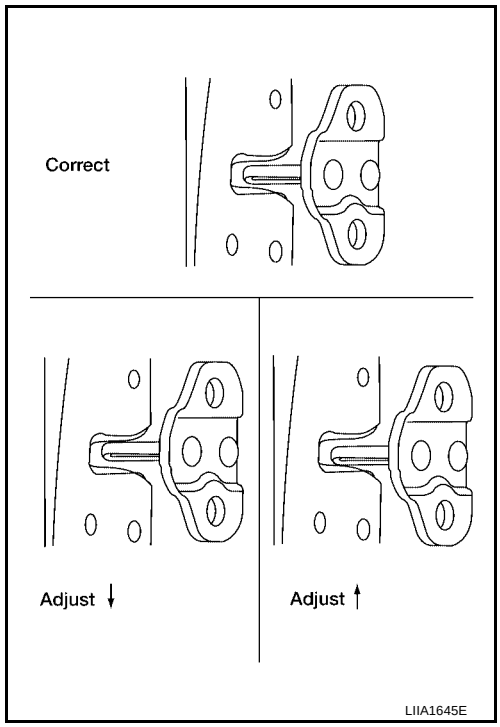
Longitudinal clearance, surface height and outboard adjustment at front end

1. Remove the sliding door trim panel. Refer to EI-29, "Sliding Door" .
2. Accessing from inside the vehicle, loosen the nuts. Open the sliding door and adjust as needed.

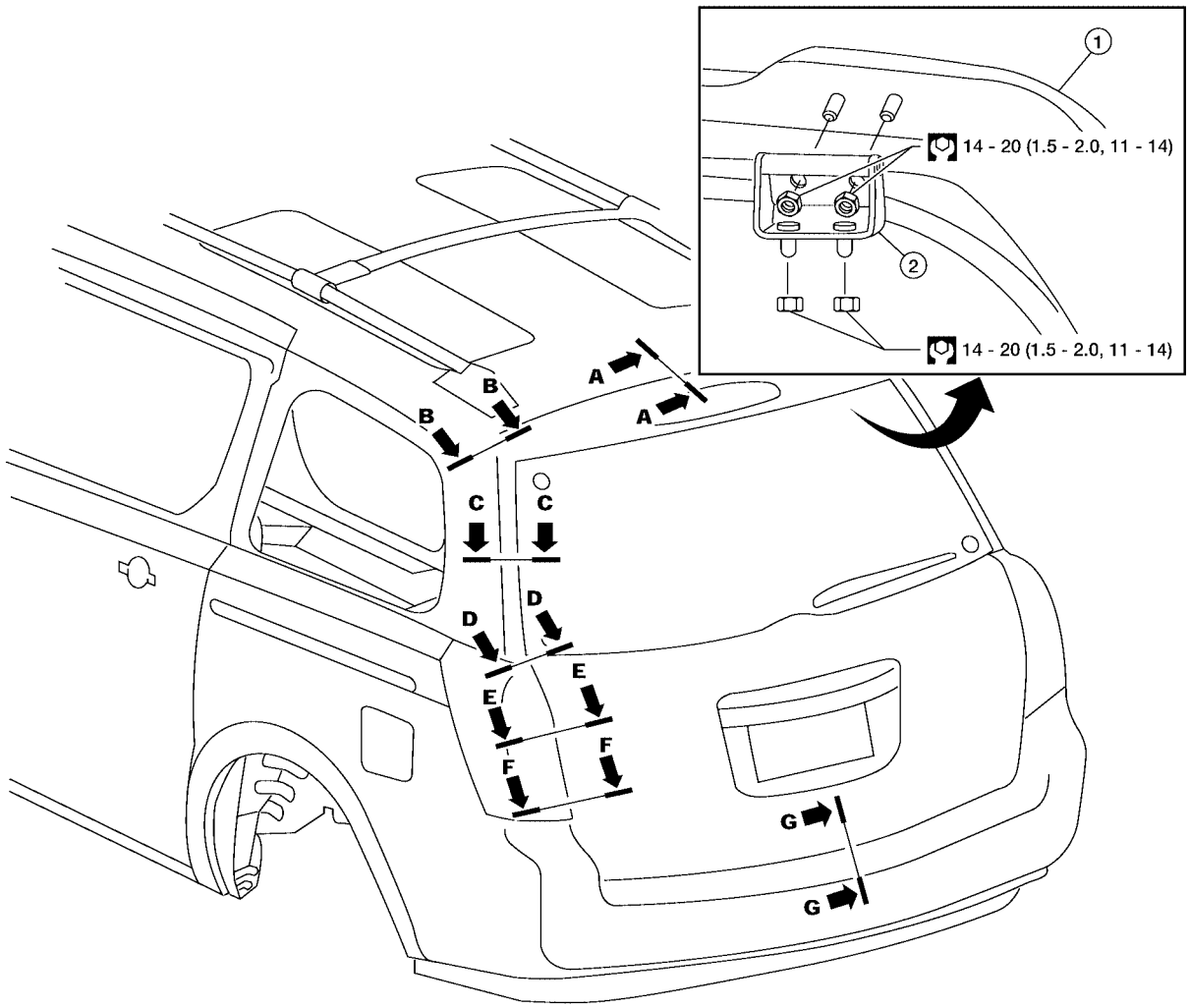
Striker Adjustment

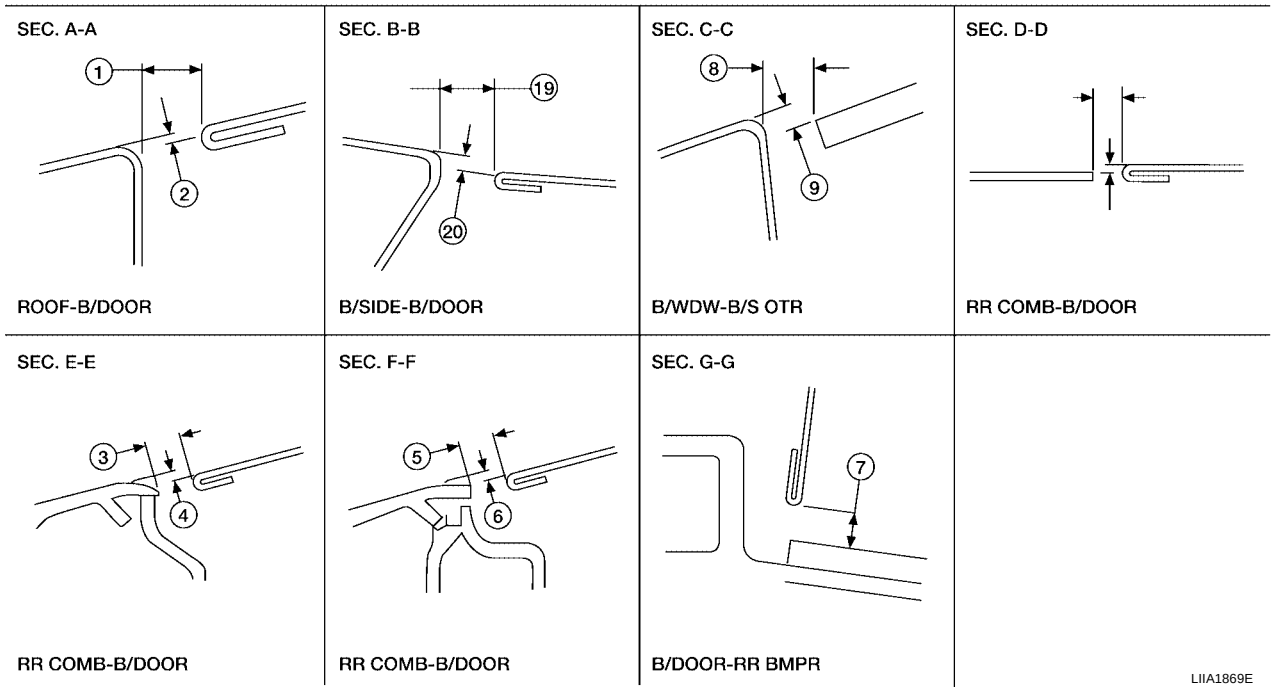
NOTE:
Turn OFF automatic sliding door system, if equipped.

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
14 - 20 (1.5 - 2.0, 11 - 14)
2
14 - 20 (1.5 - 2.0, 11 - 14)
A
A
B
B
C
C
D
D
E
E
F
F
G
G

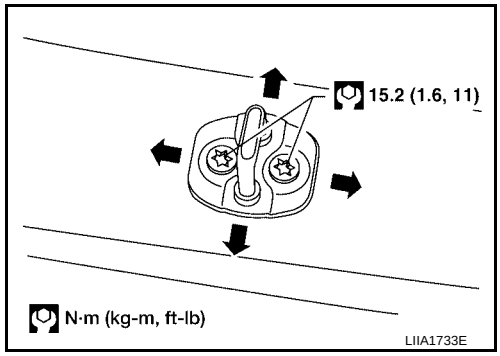

SEC. A-A
1
2
ROOF-B/DOOR
SEC. B-B
19
20
B/SIDE-B/DOOR
SEC. C-C
8
9
B/WDW-B/S OTR
SEC. D-D
RR COMB-B/DOOR
SEC. E-E
3
4
RR COMB-B/DOOR
SEC. F-F
5
6
RR COMB-B/DOOR
SEC. G-G
7
B/DOOR-RR BMPR
LIIA1869E

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

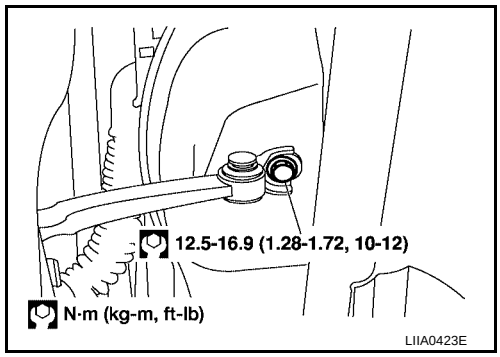
EIS007CD

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".**

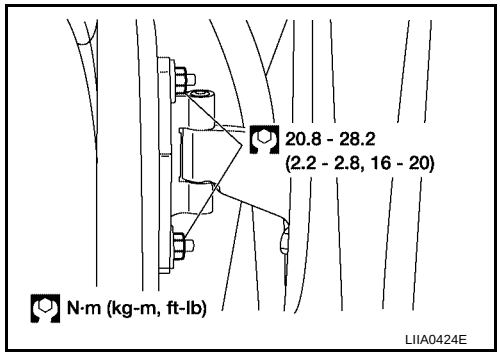
1. Remove the door window and module assembly. Refer to GW-74, "Front Door Glass" .
2. Remove the door harness.
3. Remove the check link cover.
4. Remove the check link bolt from the vehicle.



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-160, "Longitudinal clearance and surface height adjustment at front end" .

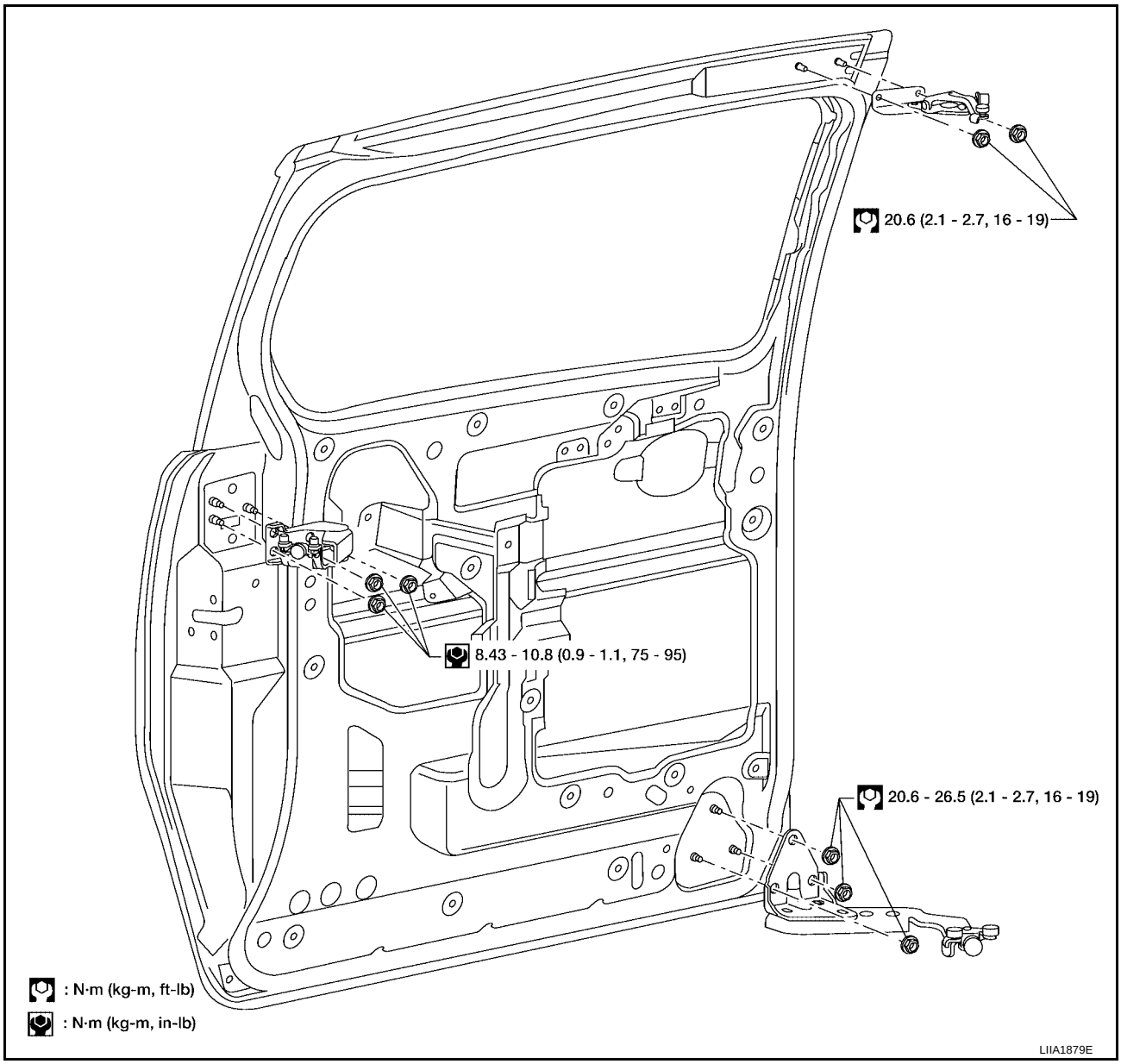


SLIDE DOOR

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-29, "Sliding Door" .
2. Remove the door glass. Refer to GW-78, "SLIDE DOOR GLASS" .
3. Remove the door lock and handle assemblies. Refer to BL-169, "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-160, "Longitudinal clearance and surface height adjustment at front end" .

- Automatic sliding door system must be initialized following adjustment. Refer to BL-92, "Initialization Mode" .

BACK DOOR

WARNING:

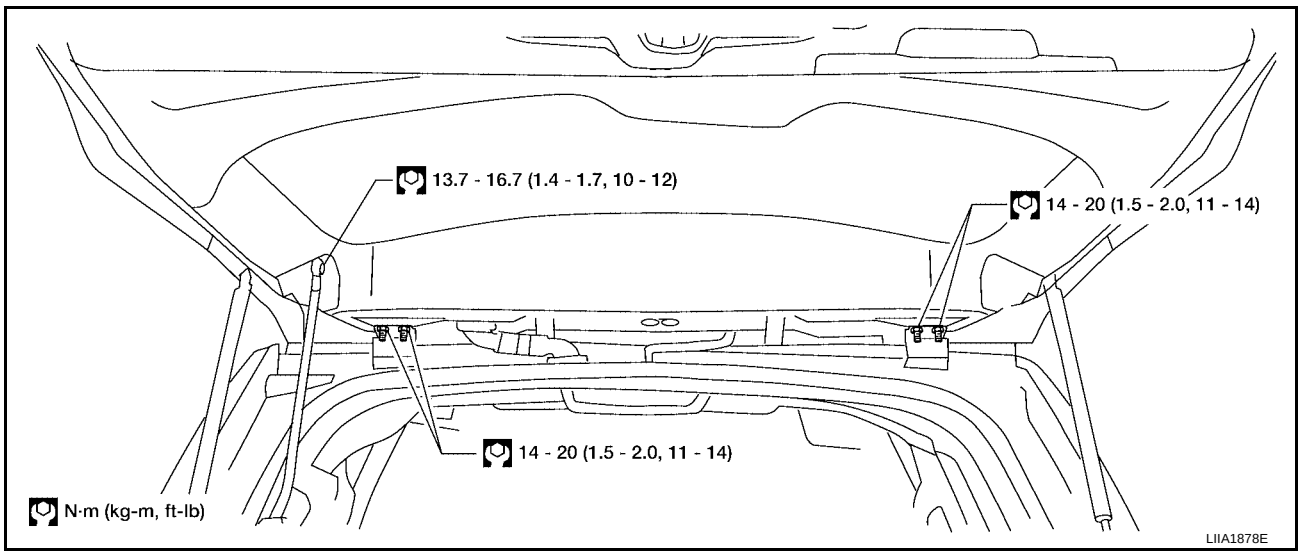
Always support the back door when removing or replacing the back door stays. Power back door opener will not support back door with back door stays removed.

1. Remove the back door glass. Refer to GW-13, "REAR WINDOW GLASS AND MOLDING" .
2. Remove the license lamp finisher. Refer to EI-22, "LICENSE LAMP FINISHER" .
3. Remove the back door lock assembly. Refer to BL-173, "BACK DOOR LOCK" .
4. Remove the rear wiper motor. Refer to WW-46, "Removal and Installation for Washer Motor" .
5. Remove the back door wire harness.
6. Remove the rear washer nozzle and hose from the back door. Refer to WW-45, "Removal and Installation for Rear Washer Nozzle" .

CAUTION:

Two technicians should be used to avoid damaging the back door during removal.

7. Support the back door.
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.

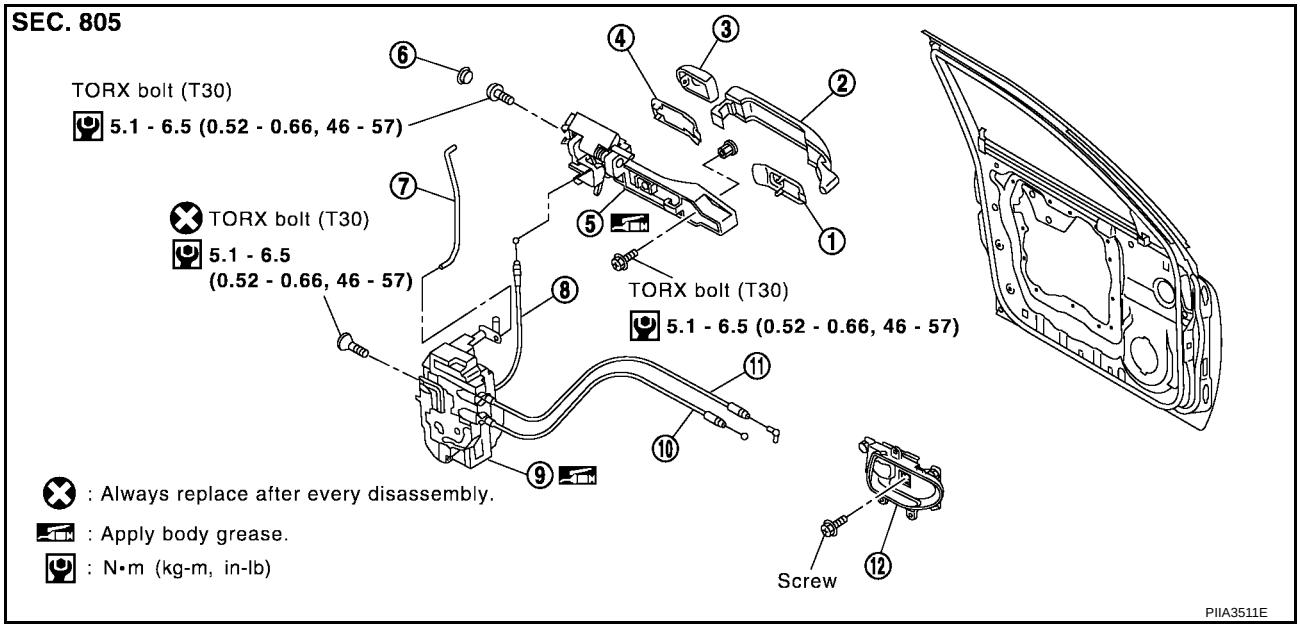
- Align the back door. Refer to BL-162, "BACK DOOR" .

FRONT DOOR LOCK

PFP:80502

Component Structure

EIS001QX

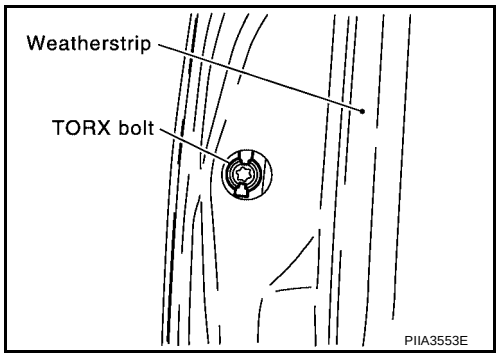


1. Front gasket	2. Outside handle	3. Door key cylinder assembly (Driver side) Outside handle escutcheon (Passenger side)
4. Rear gasket	5. Outside handle bracket	6. Grommet
7. Key cylinder rod (Driver side only)	8. Outside handle cable	9. Door lock assembly
10. Inside handle cable	11. Lock knob cable	12. Inside handle

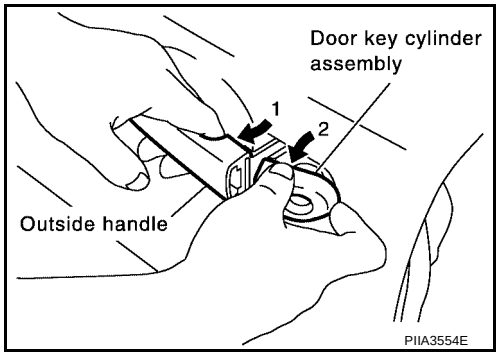
Removal and Installation

EIS001QY

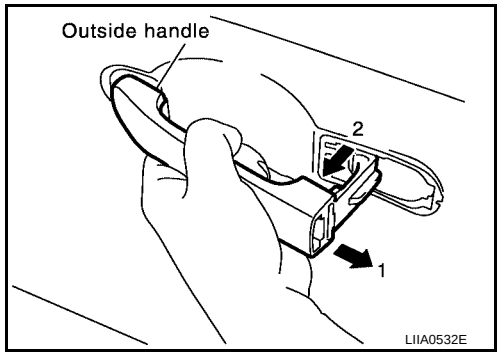
1. Remove the front door glass regulator. Refer to GW-75, "Front Door Glass Regulator" .
2. Remove door side grommet, and remove door key cylinder assembly (driver side) and outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.



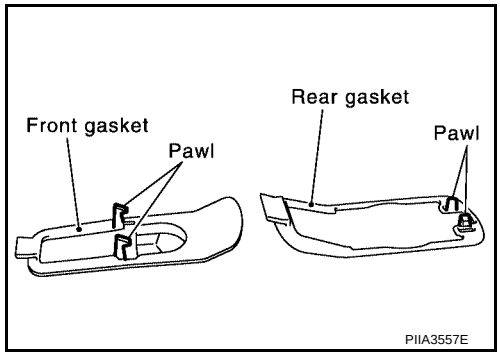
3. If equipped, separate the key cylinder rod from outside handle.
4. While pulling the outside handle, remove door key cylinder assembly or escutcheon.



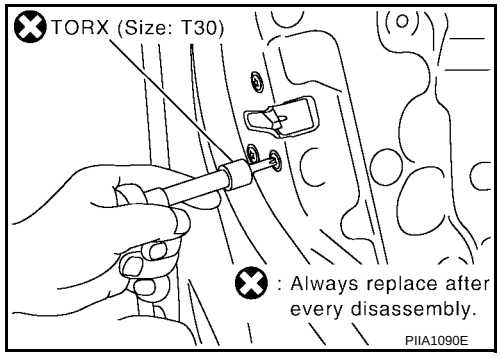
5. While pulling outside handle, slide toward rear of vehicle to remove outside handle.



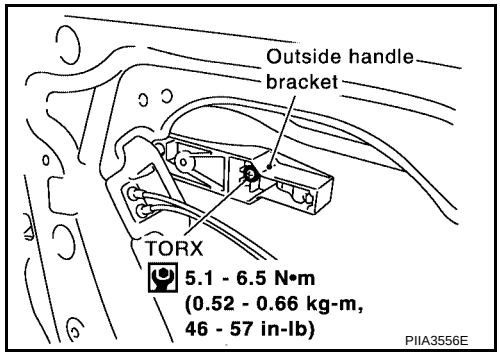
6. Remove the front and rear gaskets.



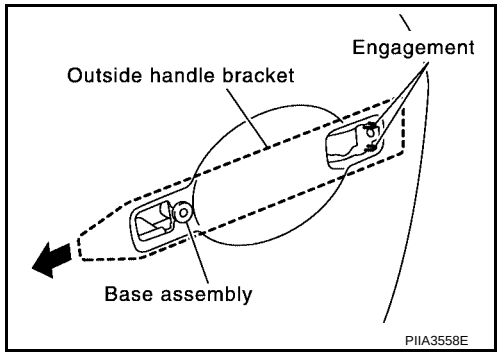
7. Remove the TORX bolts (T30), remove the door lock assembly.



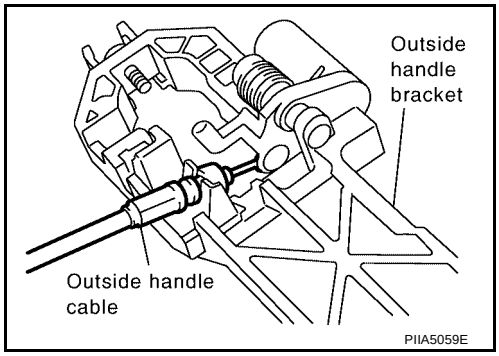
8. Remove the TORX bolt (T30) of the outside handle bracket.



9. While pulling outside handle bracket, slide toward rear of vehicle to remove outside handle bracket and door lock assembly.



10. Disconnect the door lock actuator connector.
11. Separate the outside handle cable connection.



Installation is in the reverse order of removal.

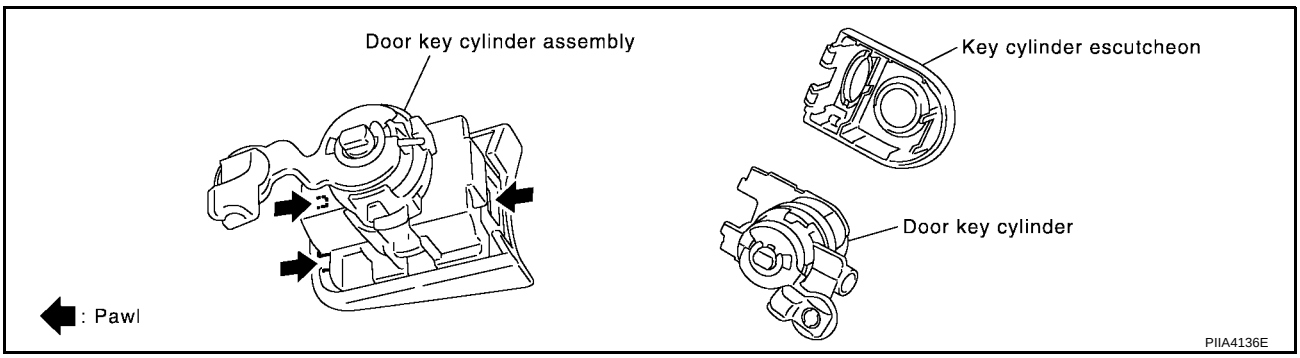
CAUTION:

To install each rod, be sure to rotate the rod holder until a click is felt.

Disassembly and Assembly

EIS001QZ

DOOR KEY CYLINDER ASSEMBLY



Remove the key cylinder escutcheon pawl and remove the door key cylinder.

SLIDE DOOR LOCK

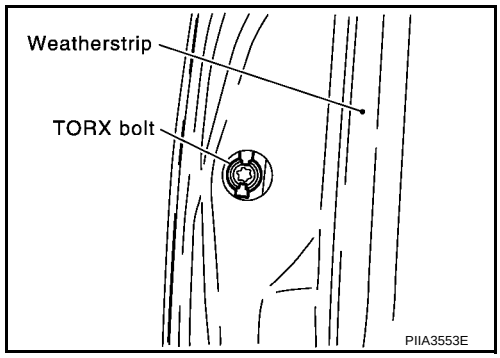
PFP:82504

Removal and Installation

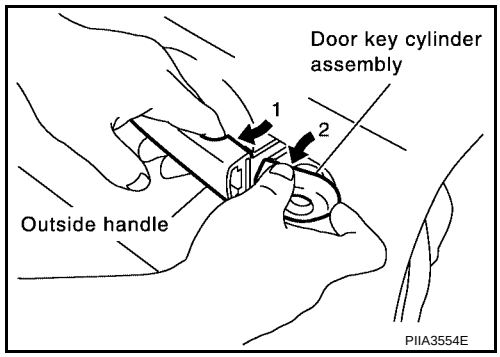
EIS0021P

OUTSIDE HANDLE

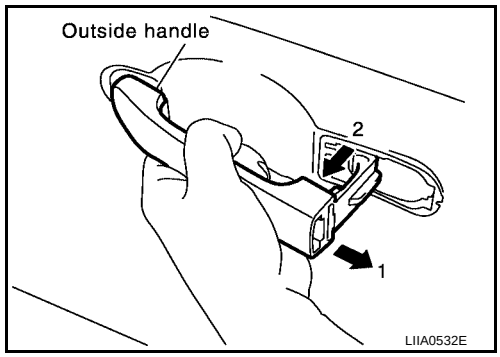
1. Remove the sliding door finisher. Refer to EI-28, "Removal and Installation" .
2. Remove door side grommet, and remove outside handle escutcheon bolt (TORX T30) from grommet hole.



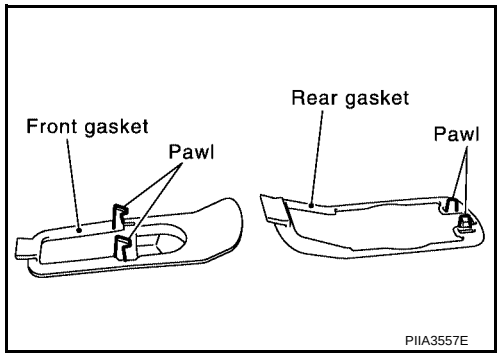
3. While pulling the outside handle, remove outside handle escutcheon.



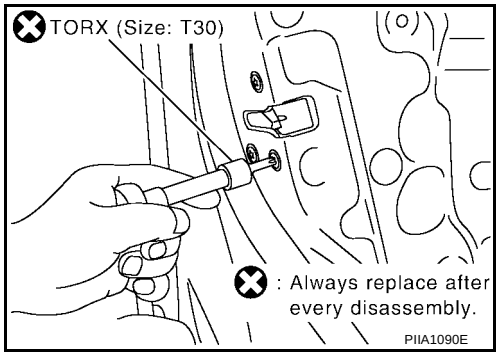
4. While pulling outside handle, slide toward rear of vehicle to remove outside handle.



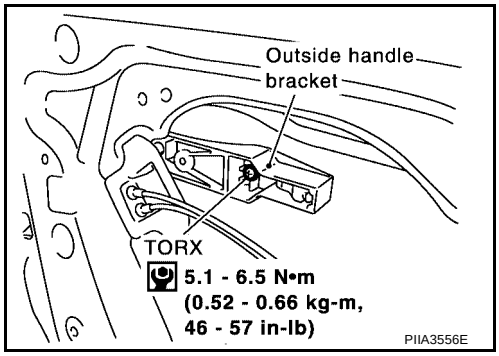
5. Remove the front gasket and rear gasket.



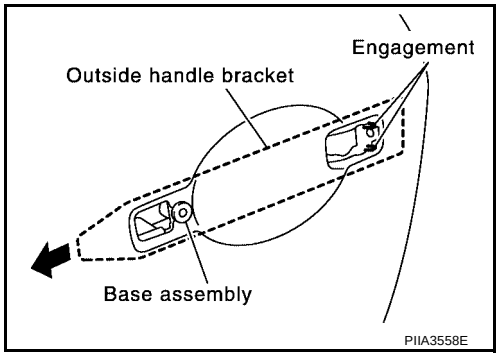
6. Remove the TORX bolts (T30), remove the door lock assembly.



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.

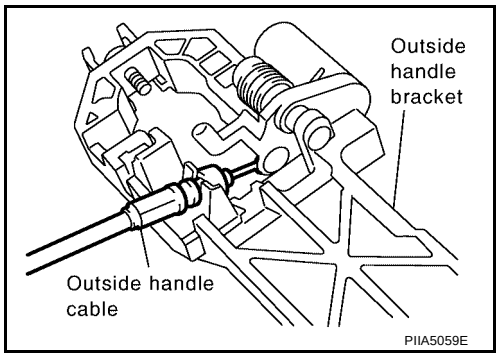


9. Disconnect the door lock actuator connector.

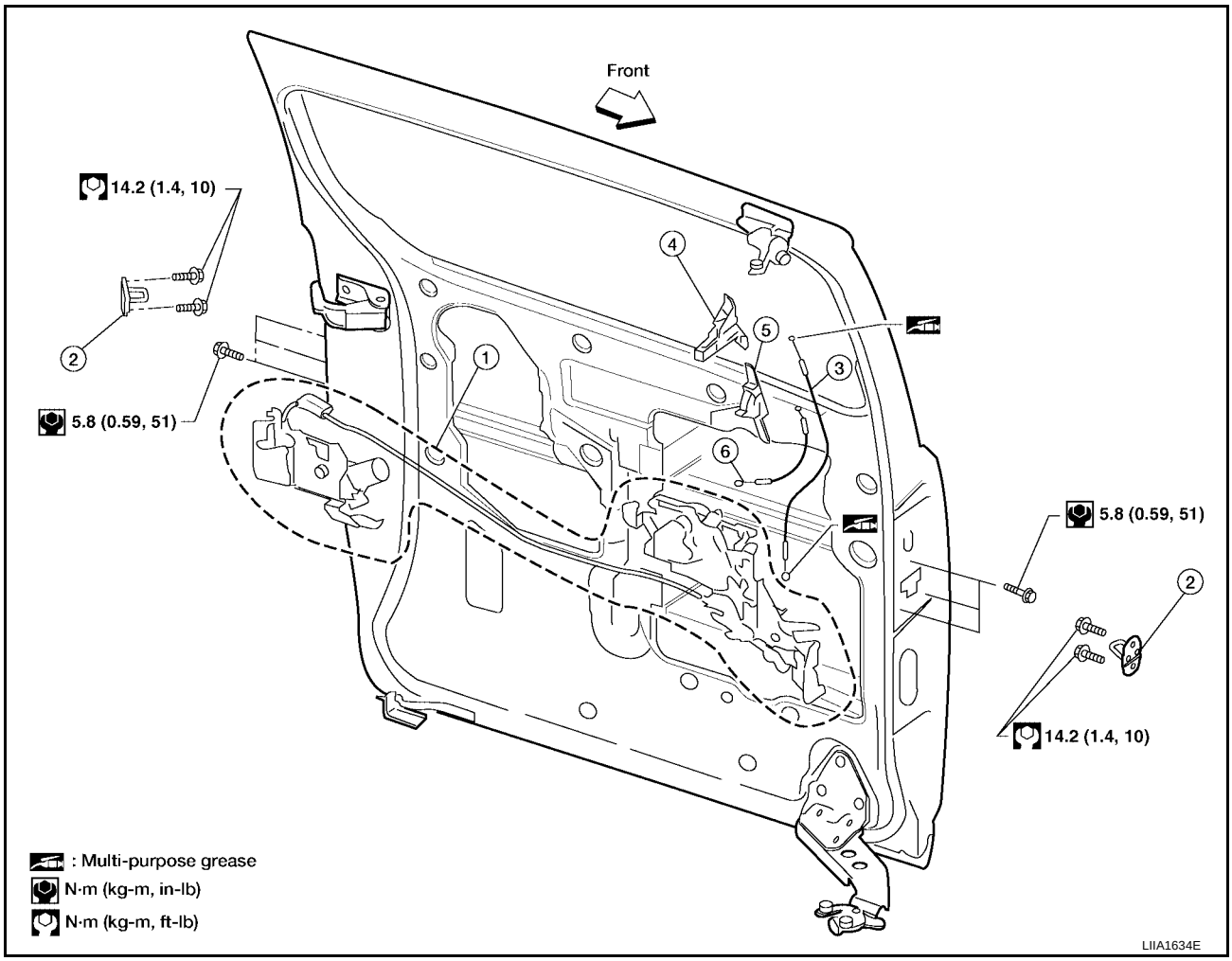
10. Separate the outside handle cable connection.

Installation is in the reverse order of removal.

- Automatic sliding door system must be initialized following adjustment. Refer to BL-92, "Initialization Mode" .



SLIDING DOOR LOCK ASSEMBLY



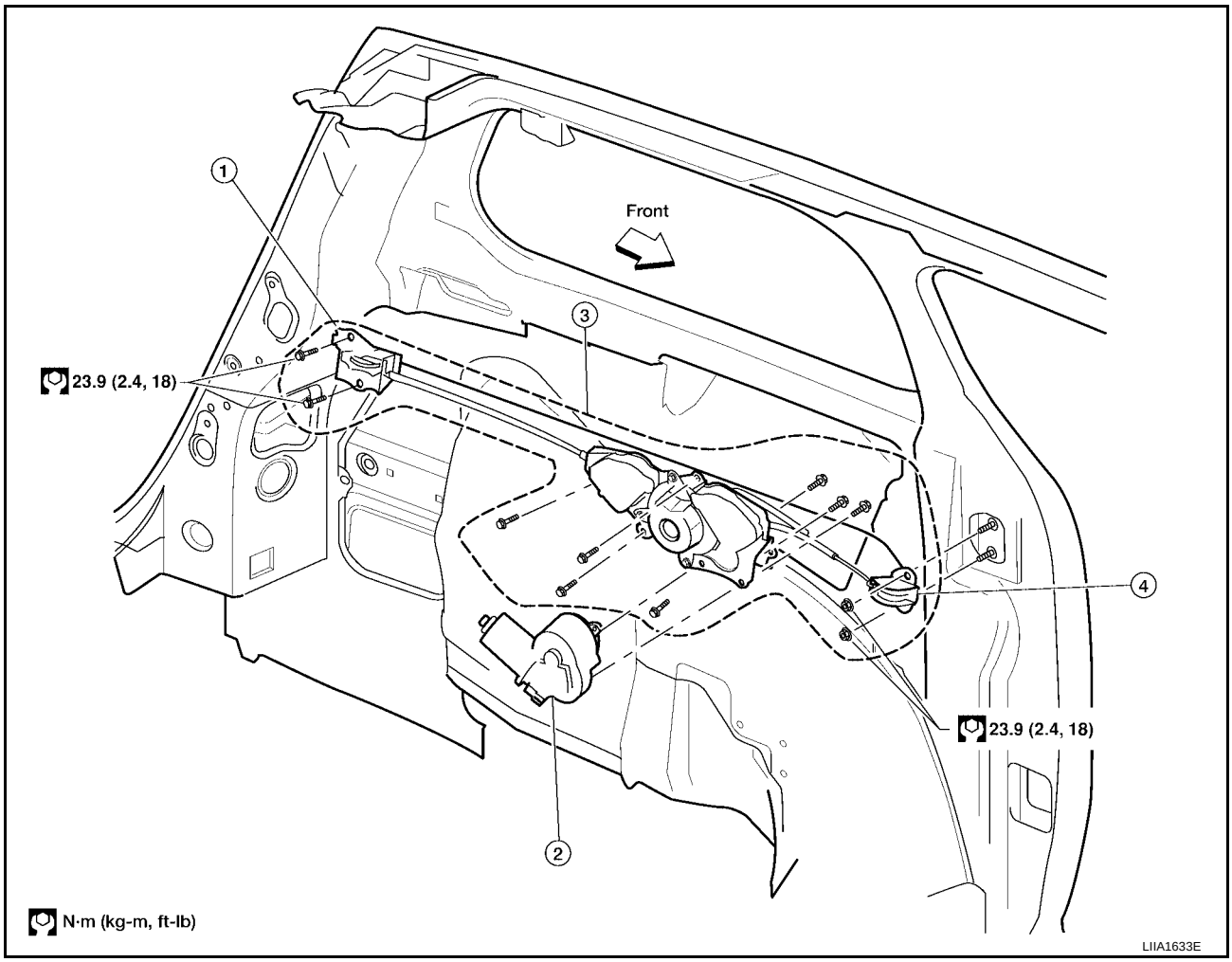
1. Sliding door lock assembly
2. Striker
3. Sliding door inside handle cable
4. Sliding door inside handle
5. Sliding door inside lock
6. Sliding door inside lock cable

1. Remove exterior door handle. Refer to BL-169, "OUTSIDE HANDLE" .
2. Disconnect sliding door lock assembly electrical connectors.
3. Remove sliding door lock assembly.
   - Remove screws from front and rear latches.

Installation is in the reverse order of removal.

- Automatic sliding door system must be initialized following adjustment. Refer to BL-92, "Initialization Mode" .

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-26, "SIDE GUARD MOLDING" .
2. Disconnect slide door cables.
3. Remove luggage lower trim. Refer to EI-34, "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.

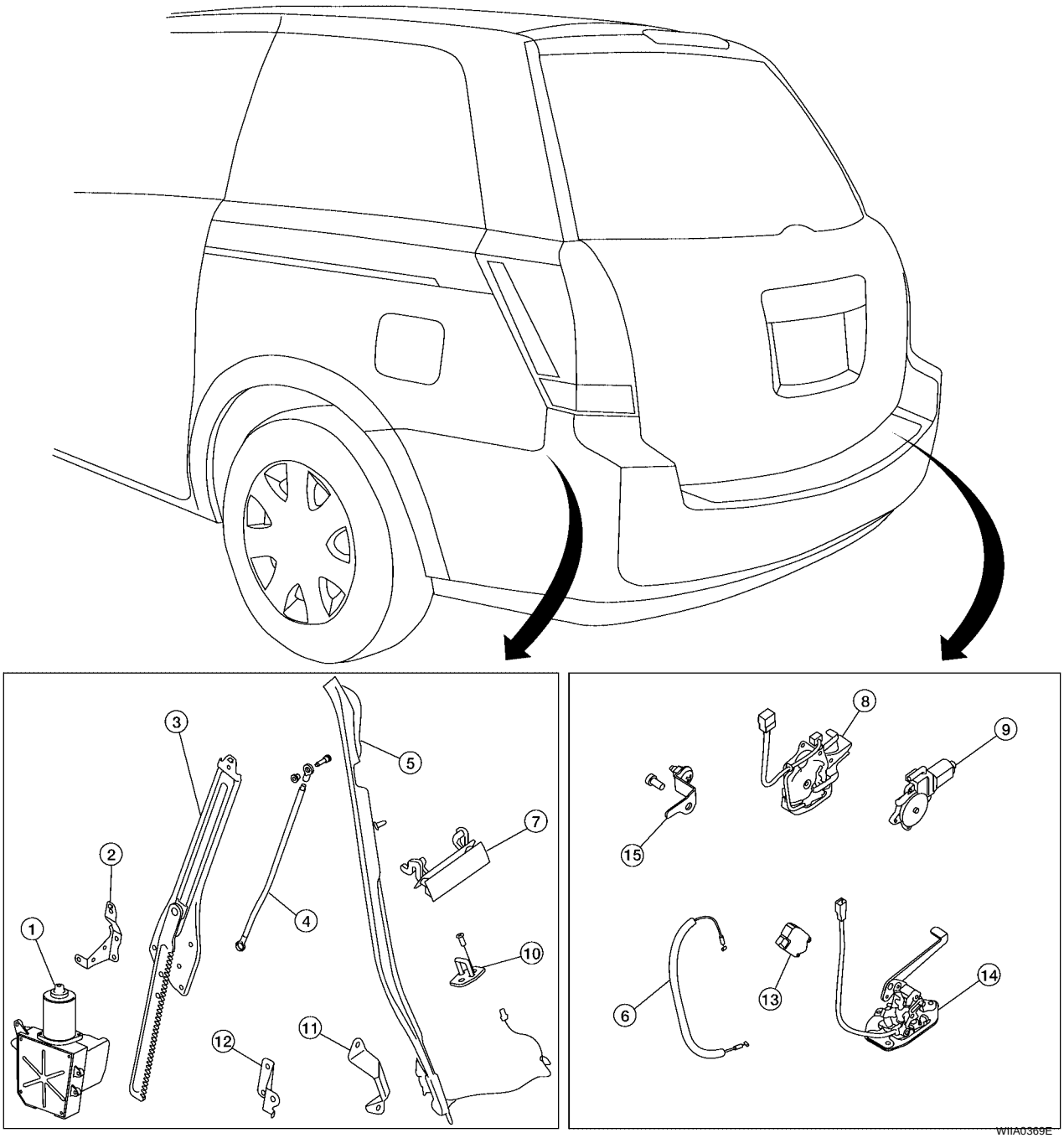
- Automatic sliding door system must be initialized following adjustment. Refer to BL-92, "Initialization Mode" .

BACK DOOR LOCK

PFP:90504

Component Structure

EIS007CG

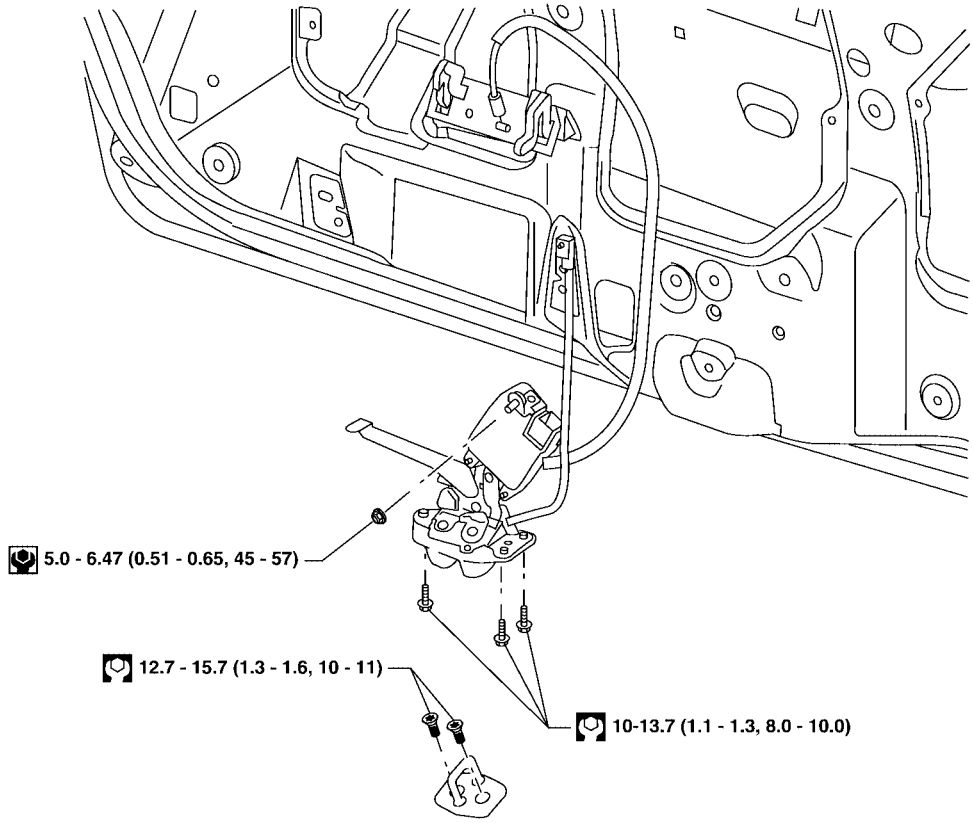


1. Back door motor assembly
2. Back door motor assembly bracket
3. Back door motor gear assembly
4. Back door closure rod
5. Pinch strip
6. Back door latch release cable
7. Back door handle
8. Power back door latch assembly
9. Power back door latch cinch motor
10. Back door striker
11. Dovetail (door side)
12. Dovetail (body side)
13. Back door opener actuator assembly
14. Lower back door lock assembly
15. Back door lock bracket

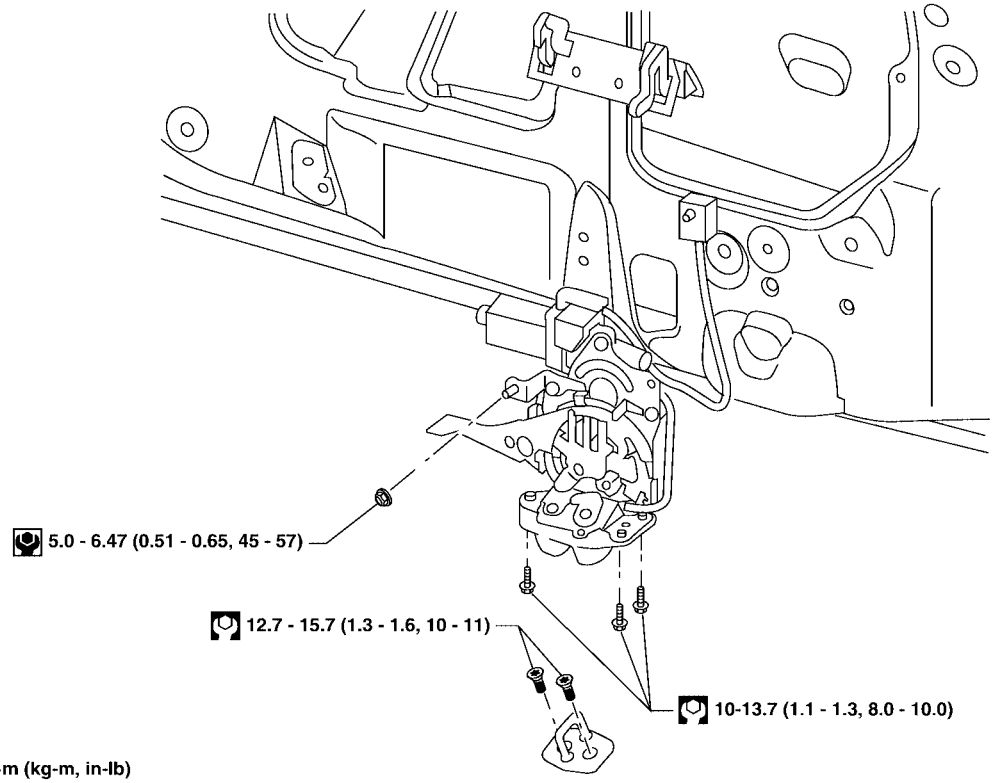
Back Door Latch

EIS007CH

Manual



Power



N·m (kg-m, in-lb)

N·m (kg-m, ft-lb)

LIIA1867E

REMOVAL

1. Remove the back door lower finisher. Refer to EI-34, "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).

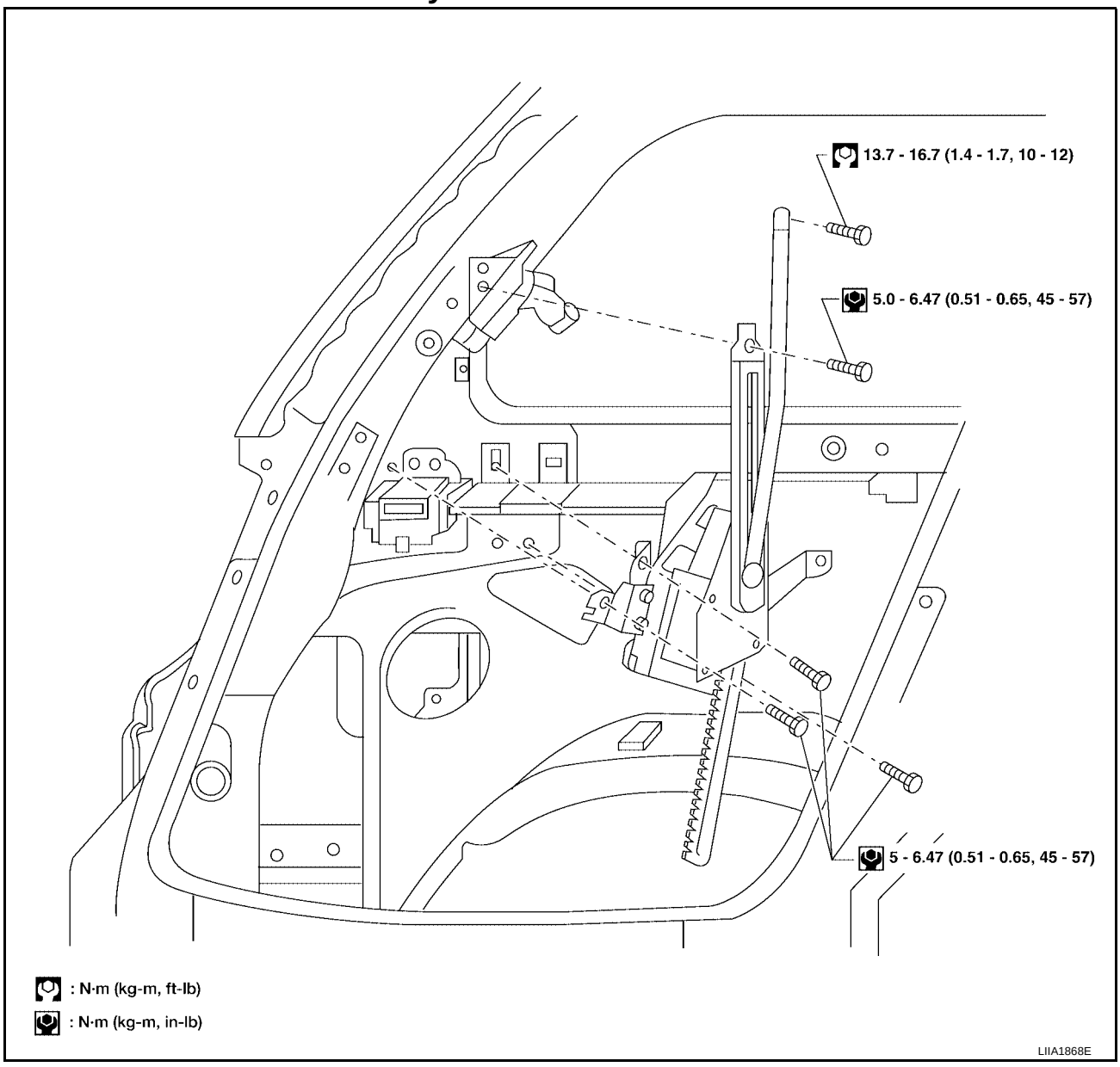
INSTALLATION

Installation is in the reverse order of removal.

- Align the back door latch. Refer to BL-162, "BACK DOOR" .

Back Door Power Lift Assembly

EIS007CI



REMOVAL

1. Remove the LH rear pillar upper finisher. Refer to EI-34, "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.

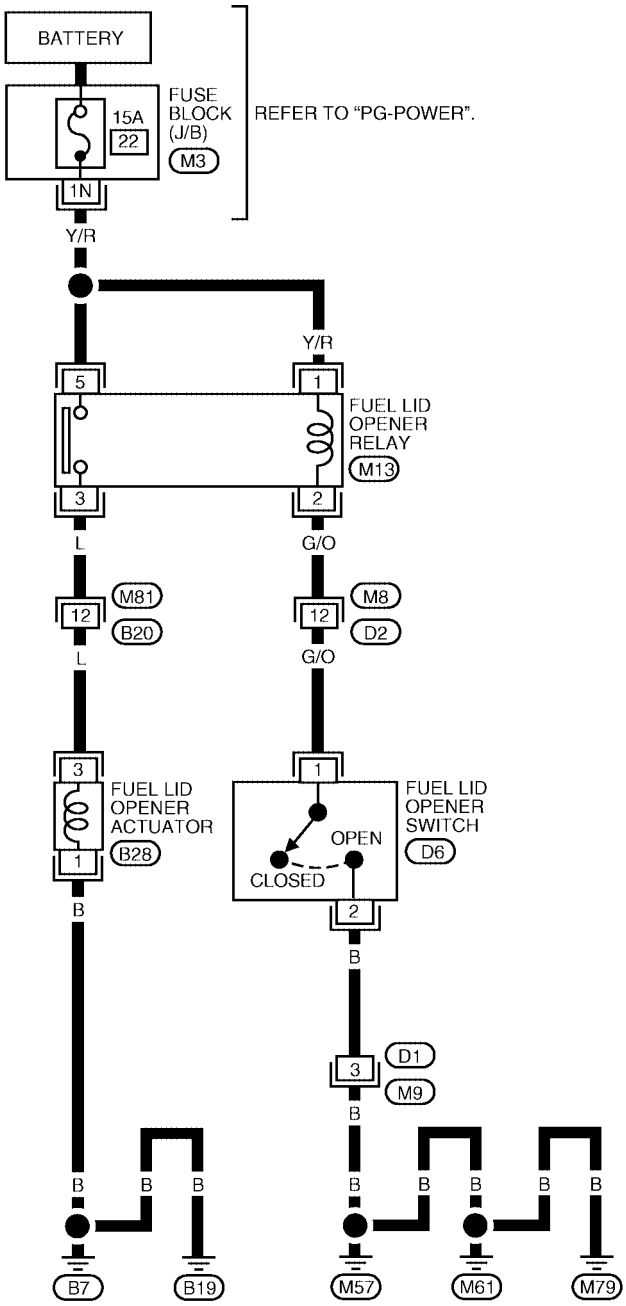
FUEL FILLER LID OPENER

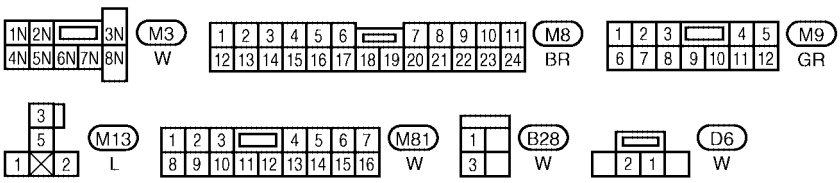
PFP:78820

Wiring Diagram -F/LID-

EIS0020J

BL-F/LID-01





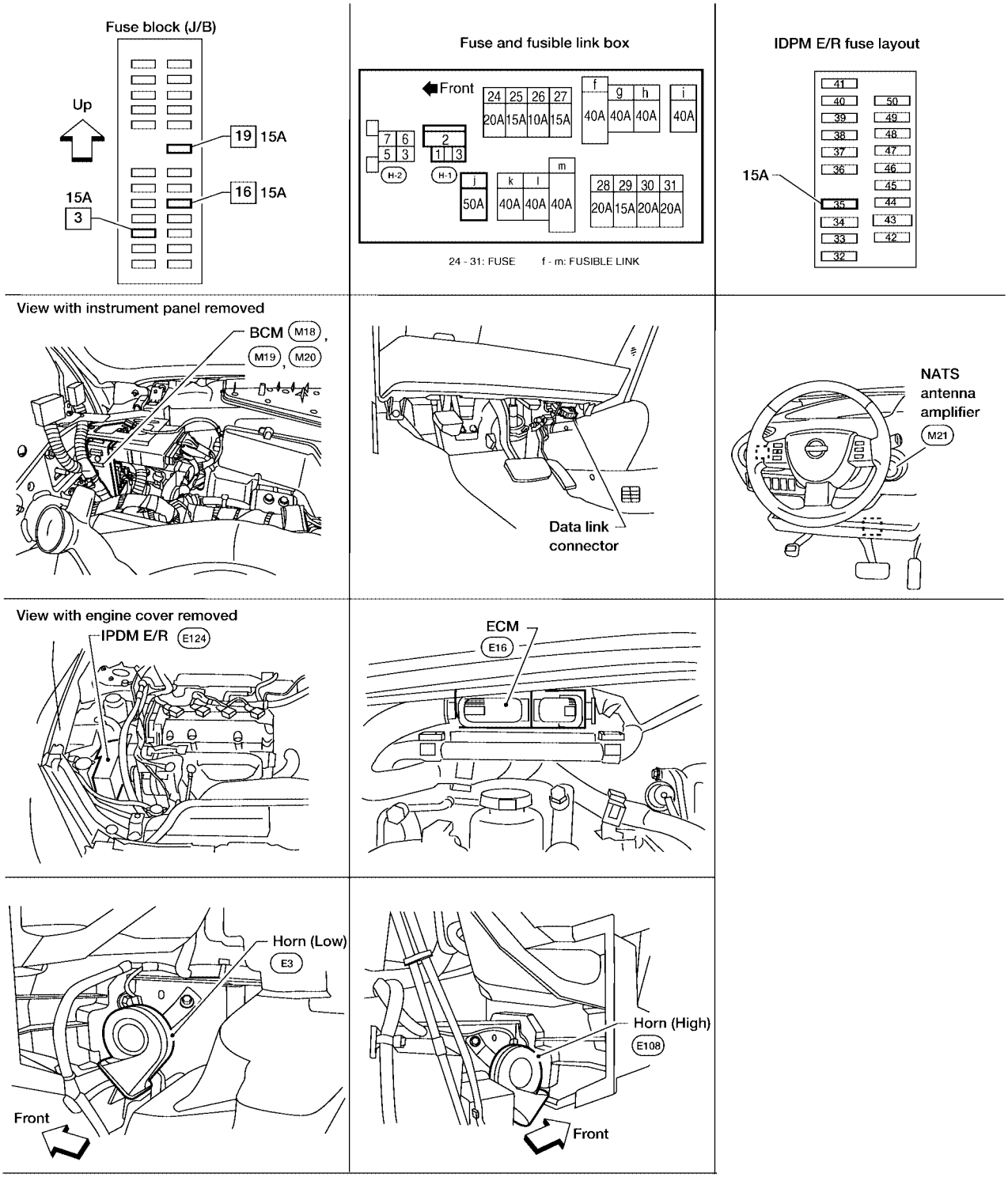
WIWA0516E

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

PFP:28591

Component Parts and Harness Connector Location

EIS001RN



LIIA1916E

System Description

EIS001RO

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 trouble, 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.**

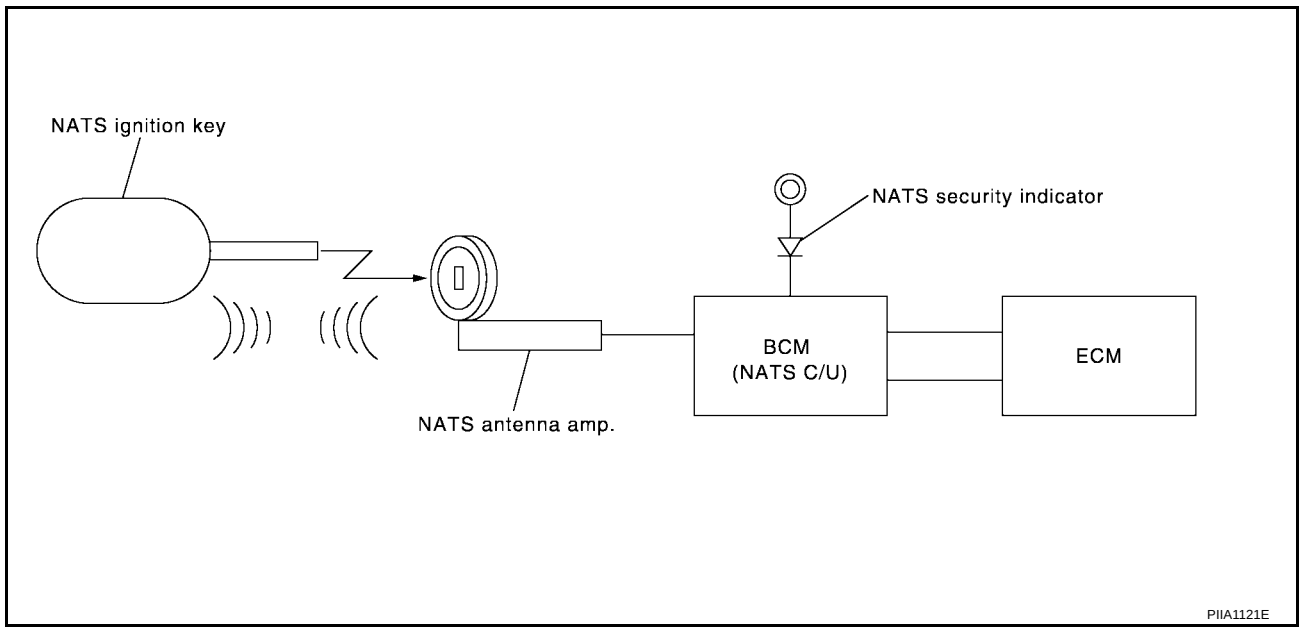
System Composition

EIS001RP

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

EIS001RQ

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)

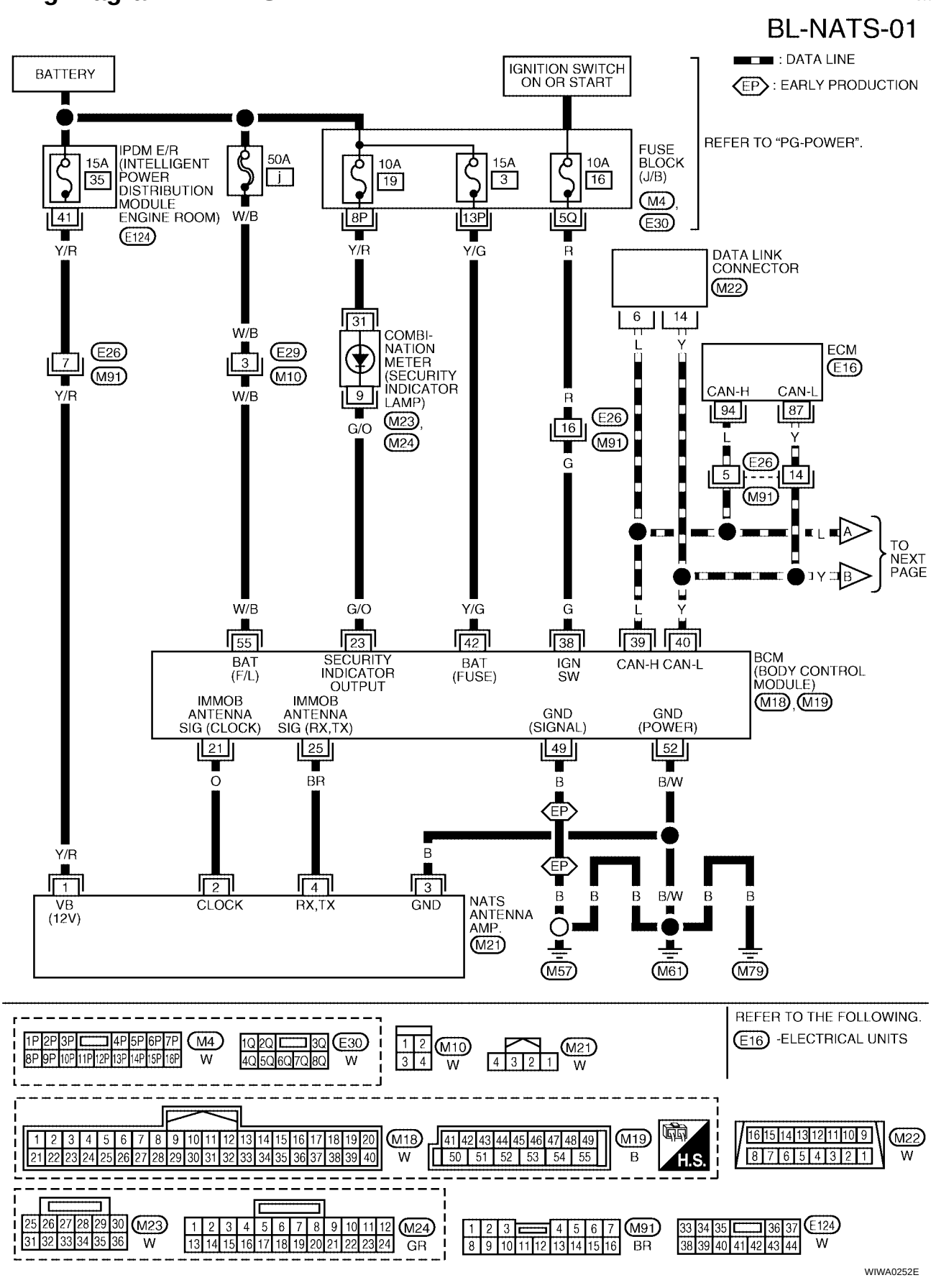
NOTE:

- **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.**

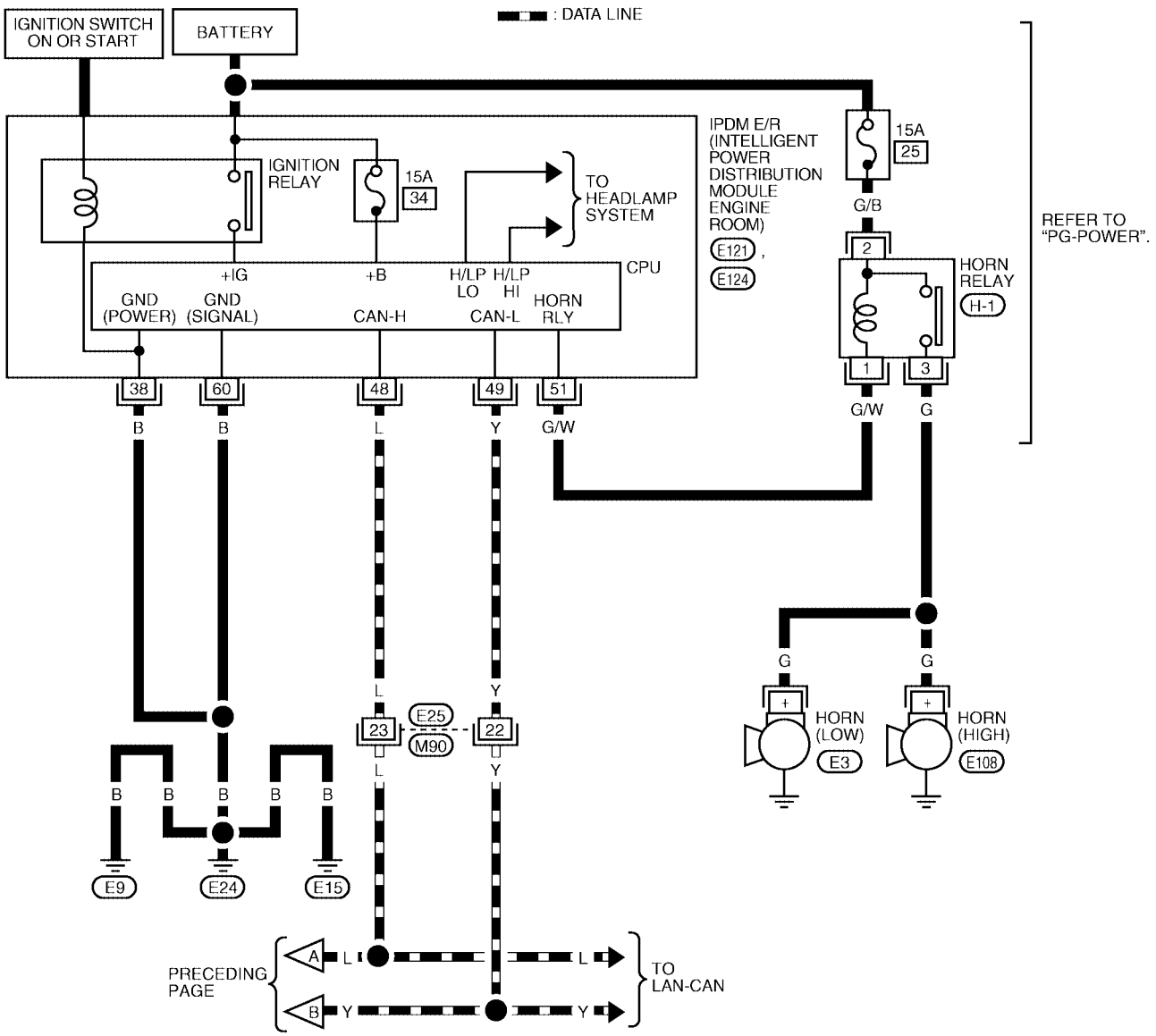
1. Install ECM.
2. Using a registered key (*1), turn ignition switch to ON.
   *1: To perform this step, use the key that has been used before performing ECM replacement.
3. Maintain ignition switch in ON position for at least 5 seconds.
4. Turn ignition switch to OFF.
5. Start engine.
   If engine can be started, procedure is completed.
   If engine cannot be started, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS and initialize control unit.

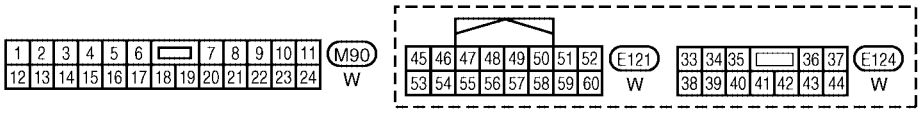
Wiring Diagram — NATS —

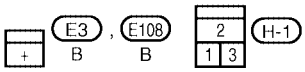
EIS001RR



BL-NATS-02







LIWA0508E

Terminals and Reference Value for BCM

EIS001RS

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	Y	CAN-L	—	—
42	Y/G	Power source (Fuse)	—	Battery voltage
49*	B	Ground	—	0
52	B/W	Ground	—	0
55	W/B	Power source (Fusible link)	—	Battery voltage

*: Early production

CONSULT-II

EIS001RT

CONSULT-II INSPECTION PROCEDURE

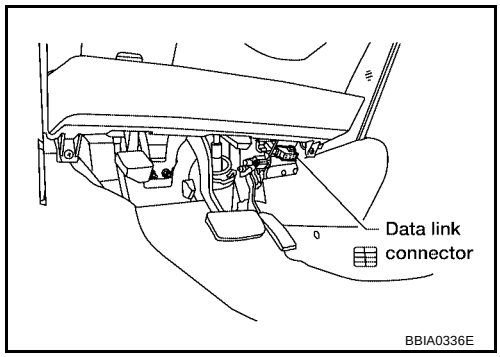
CAUTION:

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.

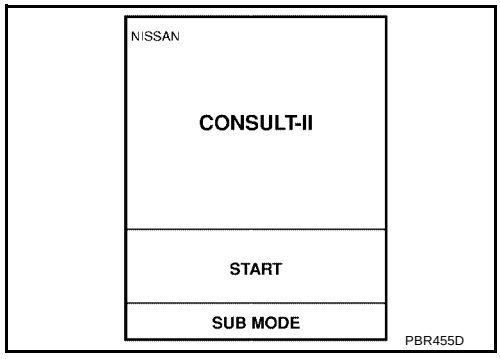
1. Turn ignition switch OFF.
2. Insert NVIS (NATS) program card into CONSULT-II.

   Program card : NATS (AEN02C-1 or later)

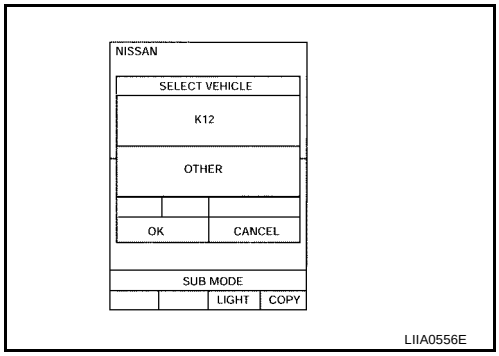
3. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.



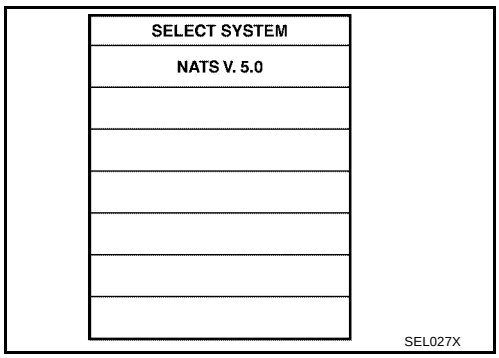
4. Turn ignition switch ON.
5. Touch “START”.



6. Touch "OTHER".

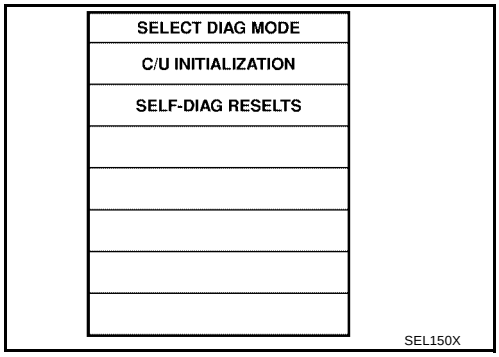


7. Select “NATS V.5.0”.
If “NATS V5.0” is not indicated, go to GI-37, "CONSULT-II Data Link Connector (DLC) Circuit" .



8. Perform each diagnostic test mode according to each service procedure.

For further information, see the CONSULT-II Operation Manual NATS-IVIS/NVIS.



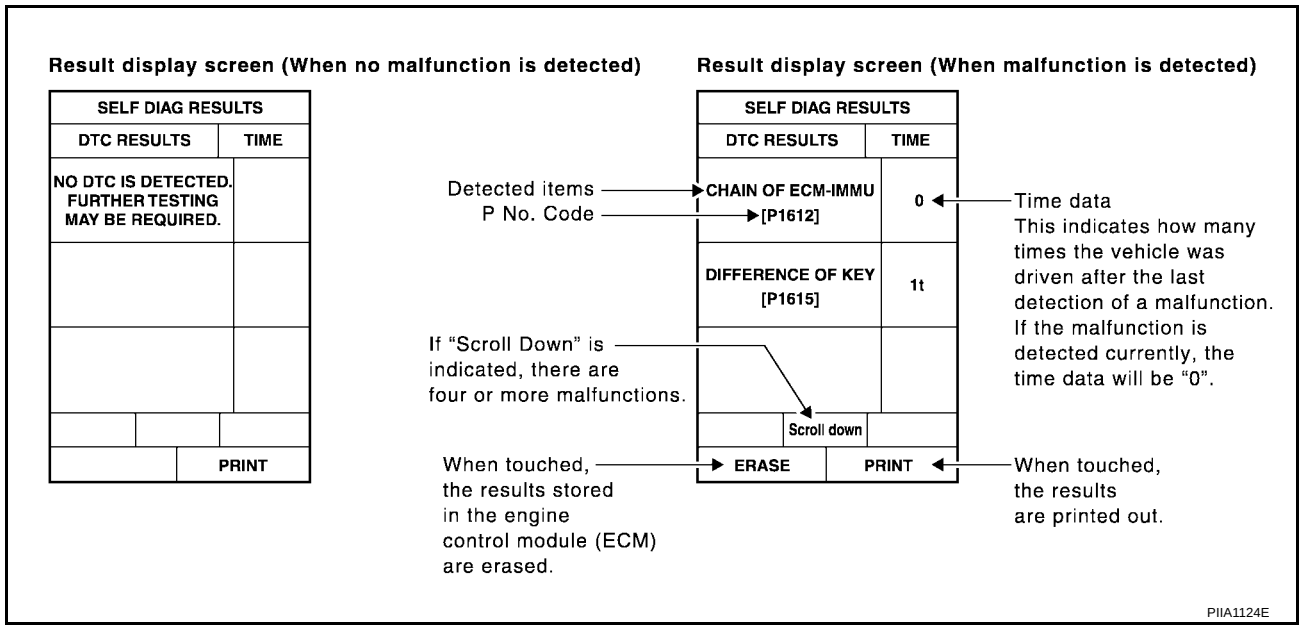
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

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-185, "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

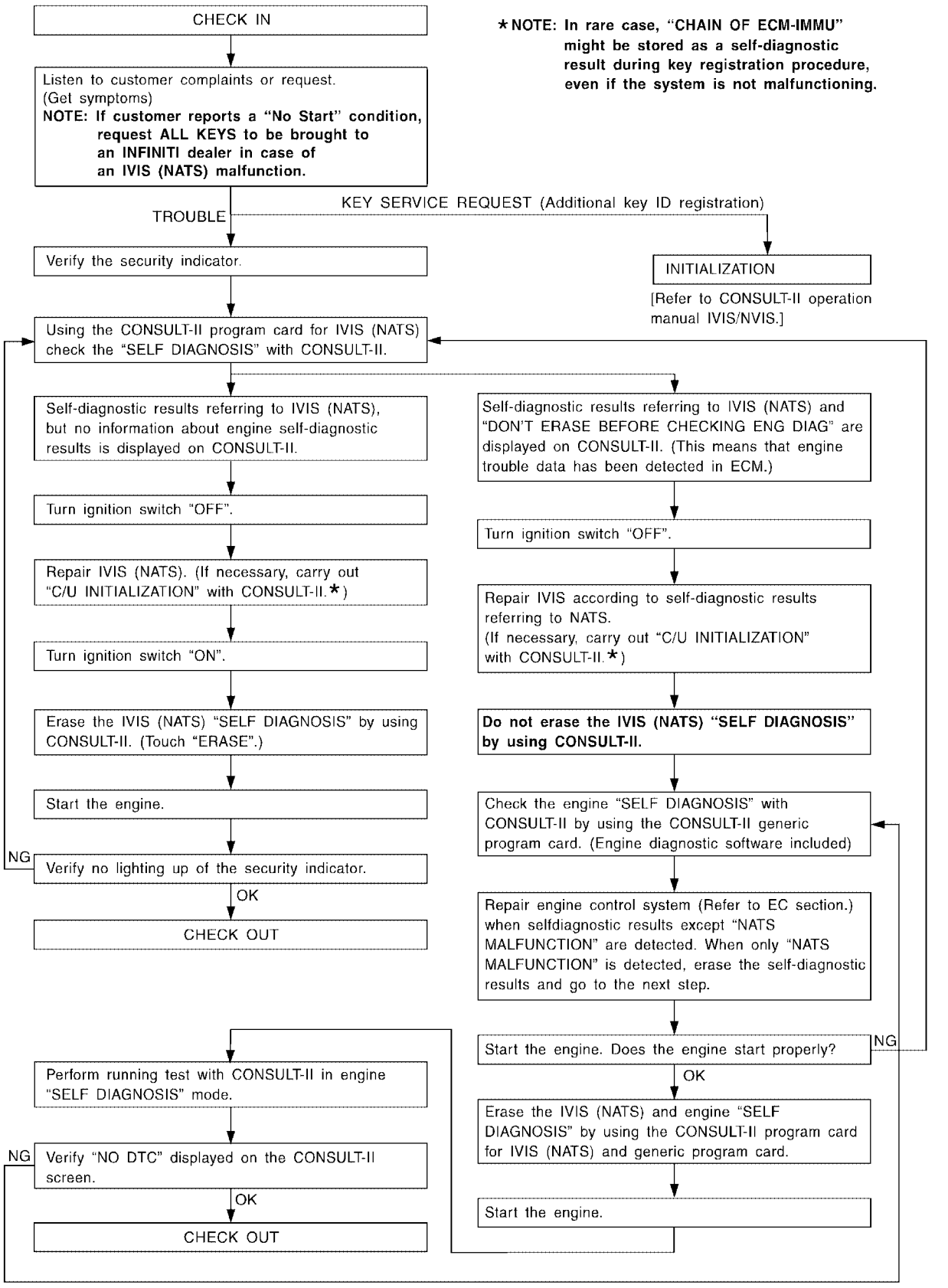


NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART

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-189 .
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-190 .
CHAIN OF IMMU-KEY [P1614]	NATS MAL-FUNCTION P1614	BCM cannot receive the key ID signal.	Refer to BL-193 .
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-191 .
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-192 .
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-186 .

Work Flow

EIS001RU



SEL024X

Trouble Diagnoses

EIS001RV

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-189)	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-190)	Unregistered key	D
			BCM	A
	CHAIN OF IMMU-KEY [P1614]	PROCEDURE 5 (BL-193)	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
				E2
			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-191)	System initialization has not yet been completed.	F
			ECM	B
	LOCK MODE [P1610]	PROCEDURE 4 (BL-192)	LOCK MODE	D
Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-186)	Engine trouble data and NVIS (NATS) trouble data have been detected in ECM	—

*: When NVIS (NATS) detects trouble, the security indicator lights up while ignition key is in the “ON” position.

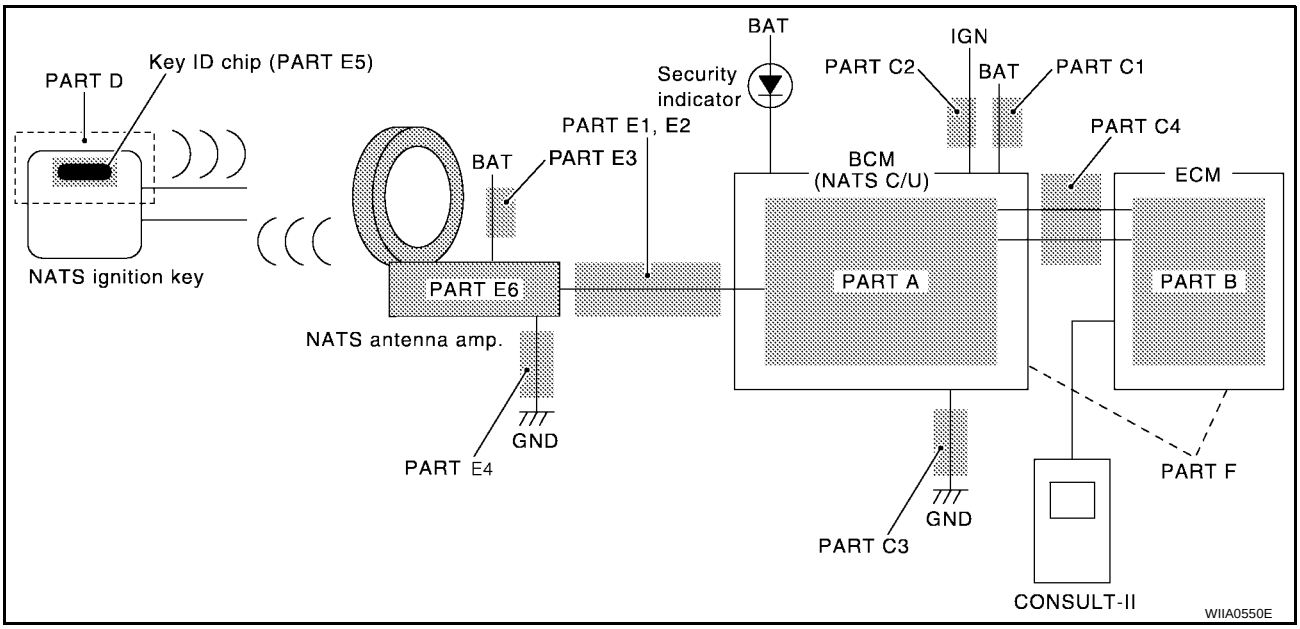
SYMPTOM MATRIX CHART 2

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-196)	Combination meter (security indictor lamp)	—
		Open circuit between Fuse and BCM	—
		BCM	A

*: CONSULT-II self-diagnostic results display screen “no malfunction is detected”.

DIAGNOSTIC SYSTEM DIAGRAM



Diagnostic Procedure 1

EIS001RW

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-183, "CONSULT-II" .

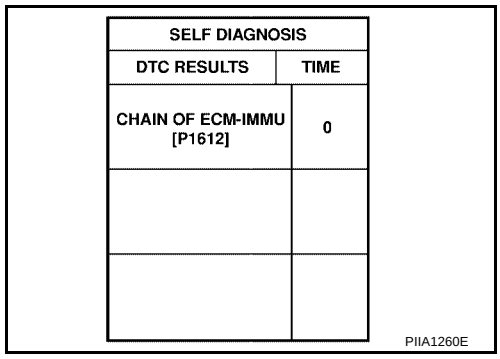
1. CONFIRM SELF-DIAGNOSTIC RESULTS

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-187, "SYMPTOM MATRIX CHART 1" .



2. CHECK POWER SUPPLY CIRCUIT FOR BCM

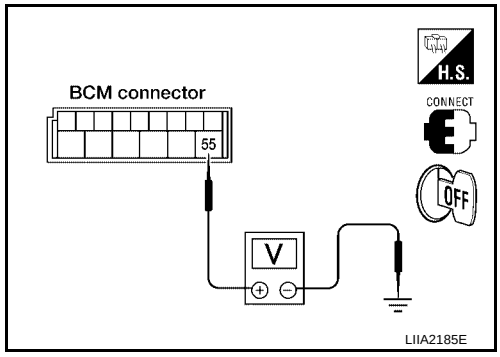
1. Disconnect BCM.
2. Check voltage between BCM connector M19 terminal 55 and ground.

55 (W/B) – 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

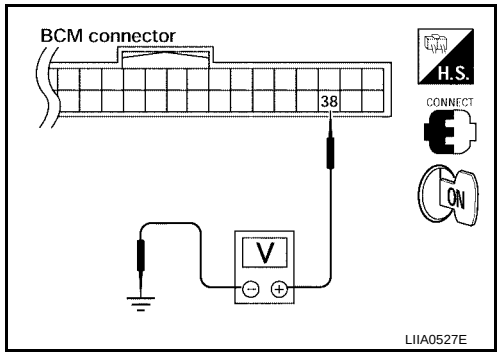
1. Turn ignition switch ON.
2. Check voltage between BCM connector M18 terminal 38 and ground.

38 (G) – Ground :Battery voltage

OK or NG

OK >> GO TO 4.
NG >> Check the following.

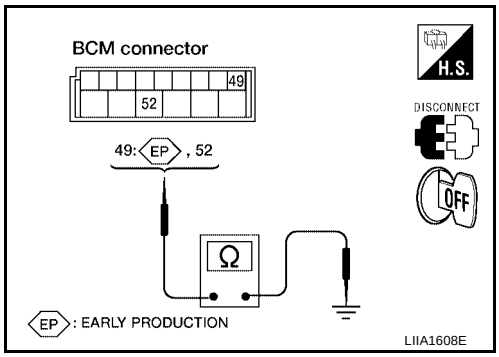
- 10A fuse [No. 16, located in the fuse block (J/B)]
- Harness for open or short between fuse and BCM connector
  Ref. part No. C2



4. CHECK GROUND CIRCUIT FOR BCM

1. Turn ignition switch OFF.
2. Check continuity between BCM connector M18 terminals 49 (early production), 52 and ground.

49 (B) – Ground :Continuity should exist.
52 (B/W) – 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. **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-180, "ECM Re-communicating Function" .

Diagnostic Procedure 2

EIS001RX

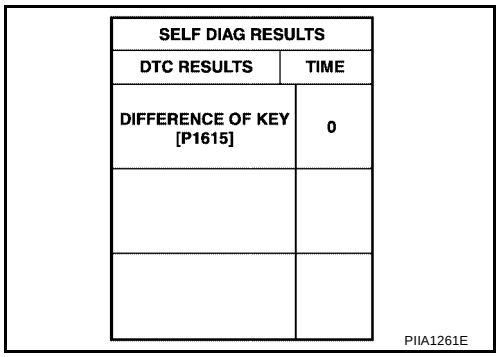
Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

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-187, "SYMPTOM MATRIX CHART 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

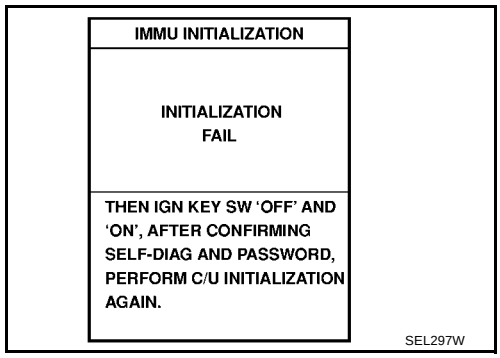
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization and registration of NATS ignition key IDs, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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. **Ref. part No. A**
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.



Diagnostic Procedure 3

EIS001RY

Self-diagnostic results:
“ID DISCORD, IMM-ECM” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

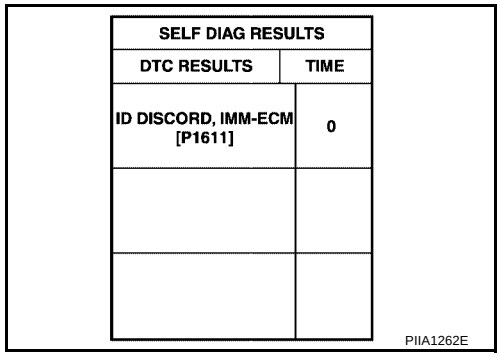
Confirm SELF-DIAGNOSTIC RESULTS “ID DISCORD, IMM-ECM” displayed on CONSULT-II screen.

NOTE:
“ID DISCORD IMM-ECM”:
Registered ID of BCM is in discord with that of ECM.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.

No >> GO TO BL-187, "SYMPTOM MATRIX CHART 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

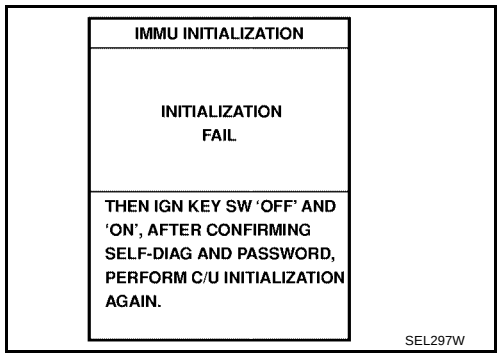
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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

EIS001RZ

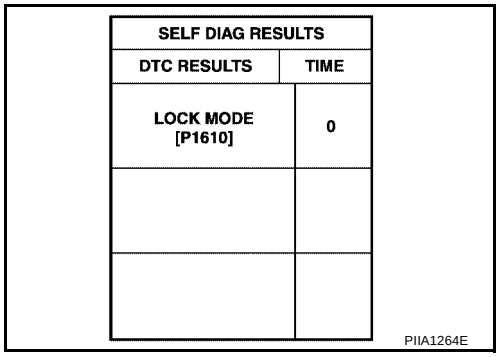
Self-diagnostic results:
“LOCK MODE” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “LOCK MODE” is displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2.
No >> GO TO BL-187, "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.

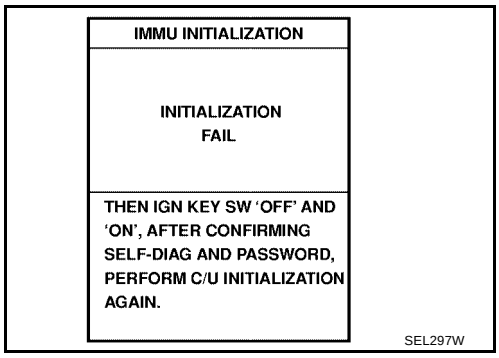
3. PERFORM INITIALIZATION WITH CONSULT-II

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?

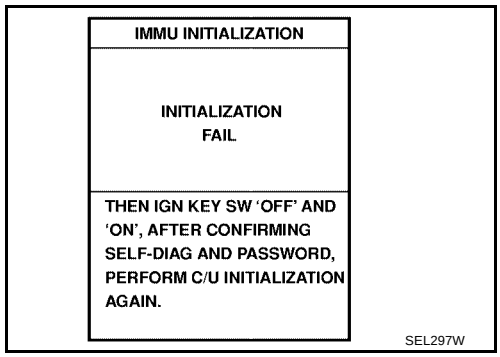
Yes >> System is OK.
No >> GO TO 4.



4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

1. Replace BCM.
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”.

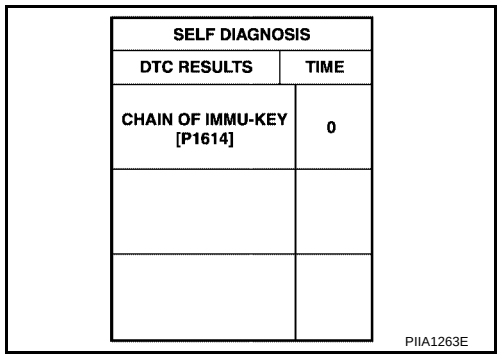
Diagnostic Procedure 5

EIS001S0

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 above?

Yes >> GO TO 2.
No >> GO TO BL-187, "SYMPTOM MATRIX CHART 1" .

2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to BL-197, "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?

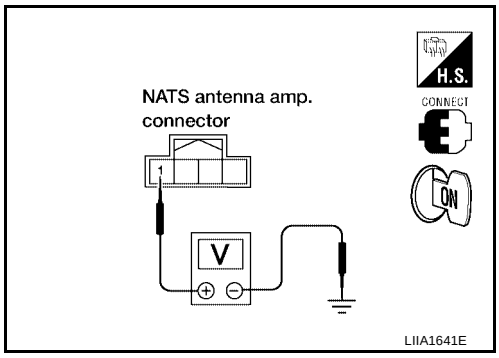
Yes >>
- Ignition key ID chip is malfunctioning.
- Replace the ignition key.
  Ref. part No. E5
- Perform initialization with CONSULT-II.
  For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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 (Y/R) – 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.

2 (O) – Ground

Before inserting key into ignition key cylinder

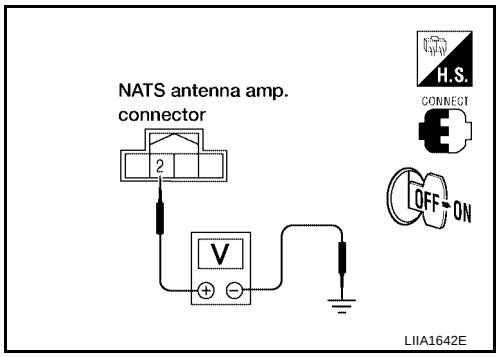
Voltage: Battery voltage

After inserting key into ignition key cylinder

: Pointer of tester should move for 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

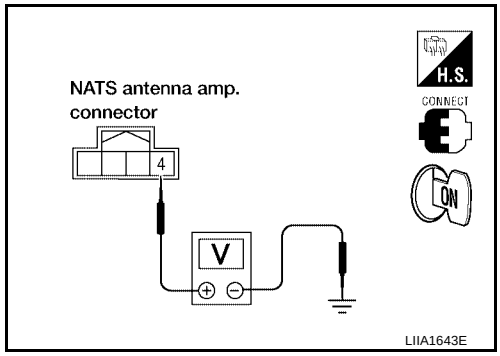
OK >> GO TO 6.
NG >> ● Repair or replace harness.

NOTE:
If harness is OK, replace BCM, 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.

4 (BR) – Ground	**Before inserting key into ignition key cylinder** **Voltage: Battery voltage** **After inserting key into ignition key cylinder** **: Pointer of tester should move for 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.

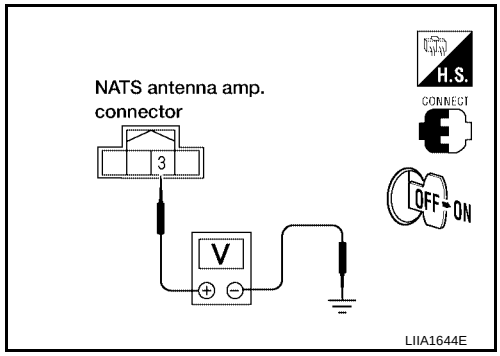
NG >> ● Repair or replace harness.

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 (B) – 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, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

Diagnostic Procedure 6

EIS001S1

“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.

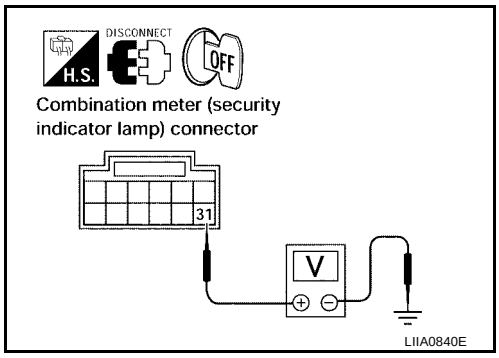
OK or NG

OK >> Inspection END.
NG >> GO TO 3.

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect security indicator lamp.
2. Check voltage between security indicator lamp connector M23 terminal 31 and ground.

31 (Y/R) – Ground : Battery voltage



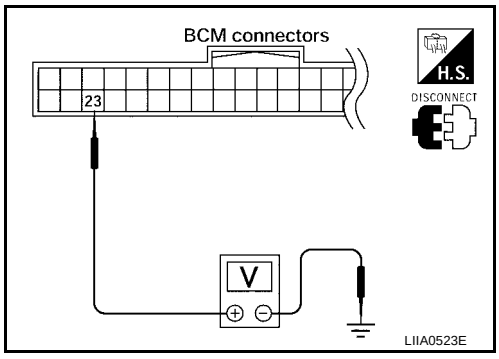
OK or NG

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

4. CHECK BCM (NATS CONTROL UNIT) FUNCTION

1. Connect security indicator lamp.
2. Disconnect BCM.
3. Check voltage between BCM connector M18 terminal 23 and ground.

23 (G/O) – Ground :Battery voltage



OK or NG

OK >> BCM is malfunctioning.
- Replace BCM.
  Ref. part No. A
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

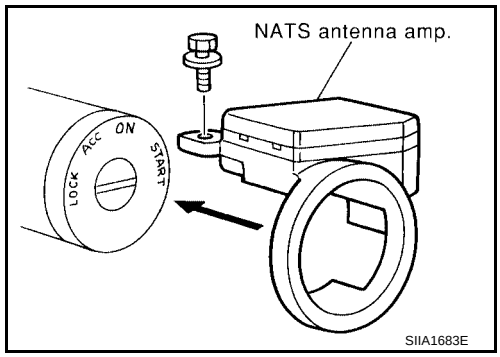
NG >> Check the following.
- Harness for open or short between security indicator lamp and BCM (NATS control unit).
- Indicator lamp condition

How to Replace NATS Antenna Amp.

EIS001S2

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 only when NATS antenna amp. is replaced with a new one.**



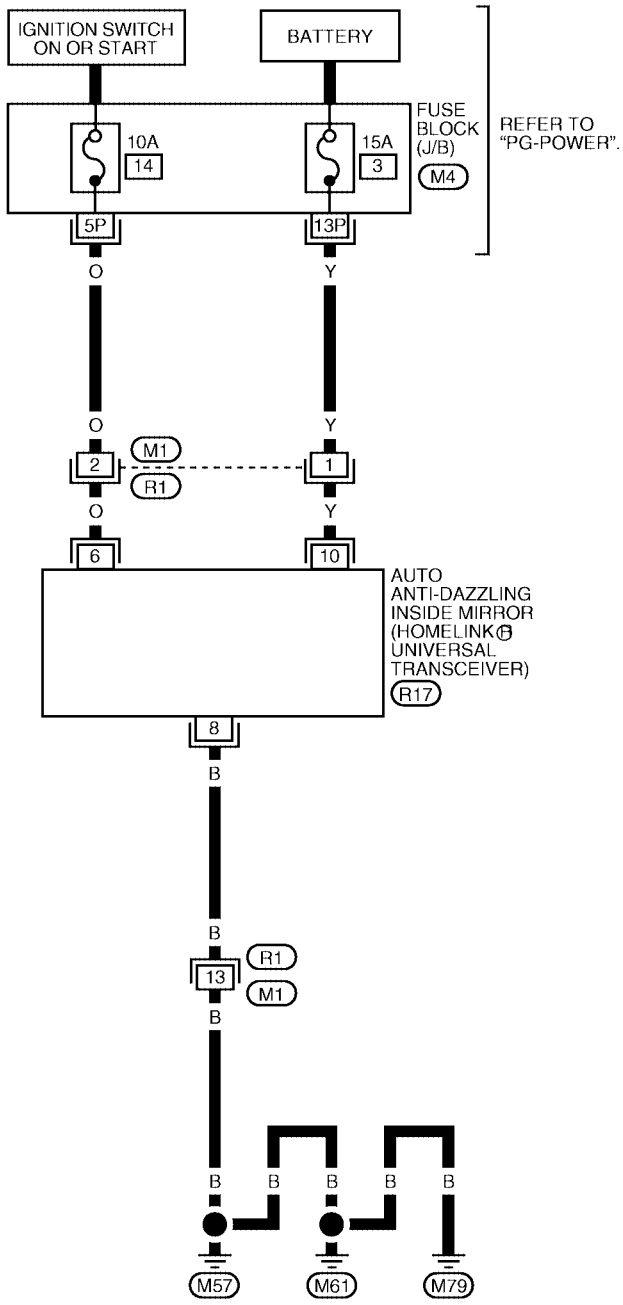
HOMELINK UNIVERSAL TRANSCEIVER

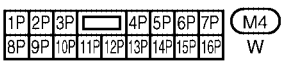
PFP:96401

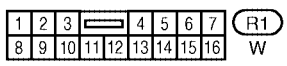
Wiring Diagram — TRNSCV —

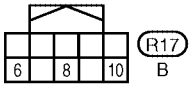
EIS007CE

BL-TRNSCV-01









WIWA0519E

Trouble Diagnoses

EIS007CF

DIAGNOSTIC PROCEDURE

SYMPTOM: Transmitter does not activate receiver.

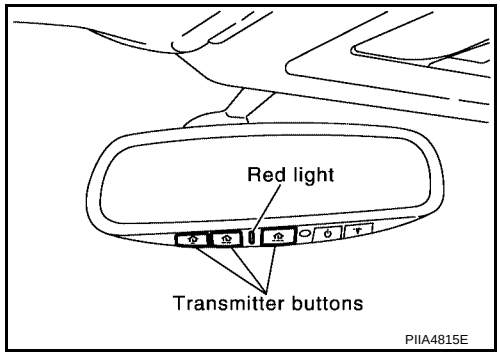
Before conducting the procedure given below, make sure that system receiver (garage door opener, etc.) operates with original, hand-held transmitter. If NG, receiver or hand-held transmitter is at fault, not vehicle related.

1. ILLUMINATE CHECK

1. Turn ignition switch OFF.
2. Does red light (LED) of transmitter illuminate when any button 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 compass and thermometer assembly. Refer to EI-36, "Removal and Installation" .

3. CHECK BCM OUTPUT POWER SUPPLY

Does room lamp come on when driver side door is opened? Refer to LT-128, "INTERIOR ROOM LAMP" .

Yes or No?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning part.

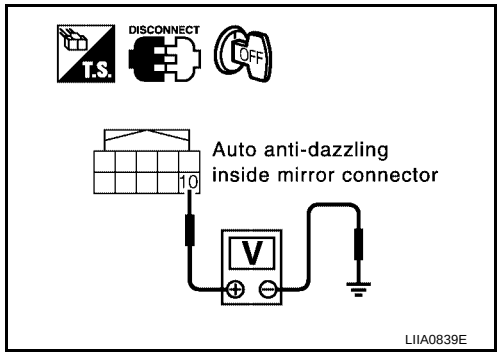
4. POWER SUPPLY CHECK

1. Disconnect transmitter.
2. Check voltage between auto anti-dazzling inside mirror connector R17 terminal 10 and ground.

10 (Y) - Ground : Battery voltage

OK or NG

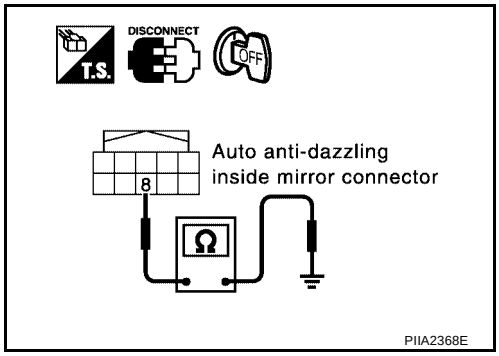
OK >> GO TO 5.
NG >> Repair or replace harness.



5. GROUND CIRCUIT CHECK

Check continuity between auto anti-dazzling inside mirror connector R17 terminal 8 (B) and body ground.

8 (B) - Ground : Continuity should exist.



OK or NG

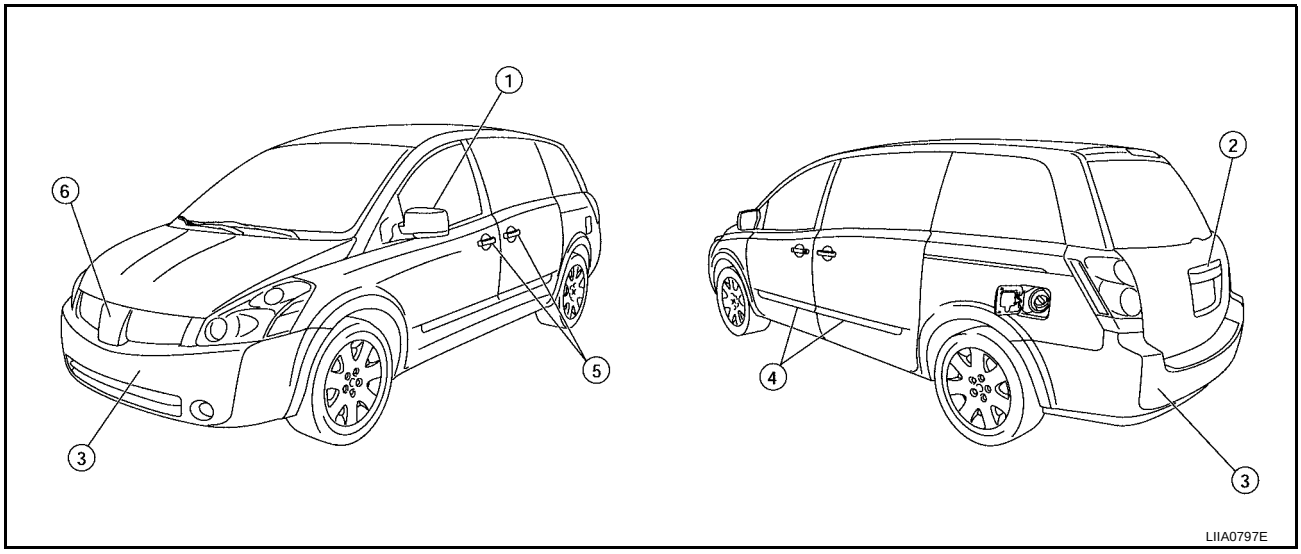
OK >> Replace inside mirror assembly.
NG >> Repair or replace harness.

BODY REPAIR

PFP:60100

Body Exterior Paint Color

EIS001S5



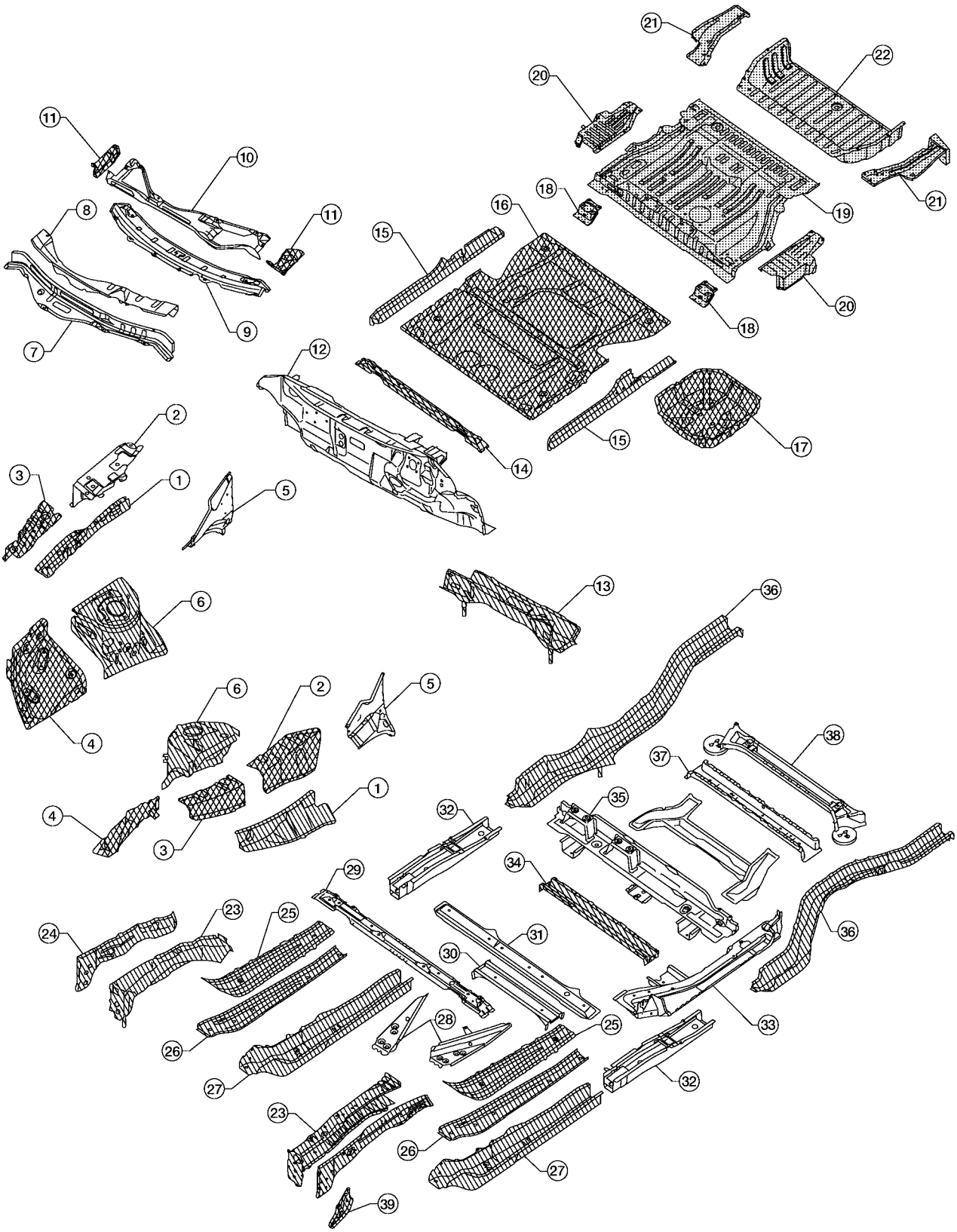
Component			Color code	A14	BW9	C10	C12	D11	K11	K12	Q11
			Description	Autumn Red	Majestic Blue	Sahara Gold	Coral Sand	Green Tea	Smoke	Silver Mist	Nordic White Pearl
			Paint type	M	M	M	M	M	M	M	3P
			Clear coat	t	t	t	t	t	t	t	t
1	Outside mirror	Body	Body color	A14	BW9	C10	C12	D11	K11	K12	Q11
		Base	Black	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01
2	Lift gate Finisher		Body color	A14	BW9	C10	C12	D11	K11	K12	Q11
3	Bumper fascia	Body	Body color	A14	BW9	C10	C12	D11	K11	K12	Q11
4	Side guard molding	Body	Body color	A14	BW9	C10	C12	D11	K11	K12	Q11
5	Outside handle		Body color	A14	BW9	C10	C12	D11	K11	K12	Q11
6	Radiator grille	Center	Chromium-plate +Smoke Clear	Cr+HFM09	Cr+HFM09	Cr+HFM09	Cr+HFM09	Cr+HFM09	Cr+HFM09	Cr+HFM09	Cr+HFM09

M: Metallic; 2S: 2-Coat Solid, 2P: 2-Coat Pearl; 3P: 3-Coat Pearl; t: New Cross Linking Clear Coat

Body Component Parts

EIS001S6

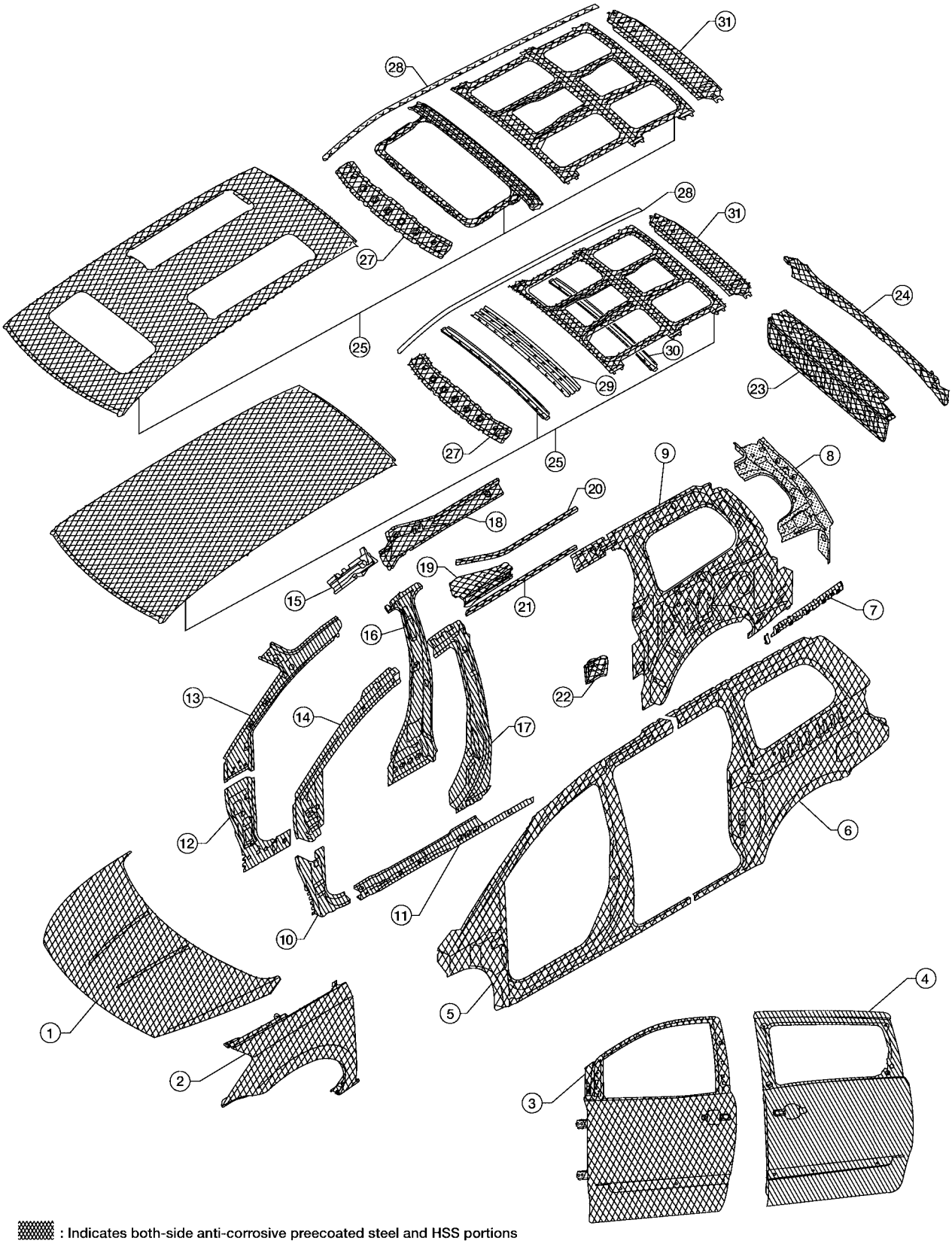
UNDERBODY COMPONENT PARTS



WIIA0689E

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



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

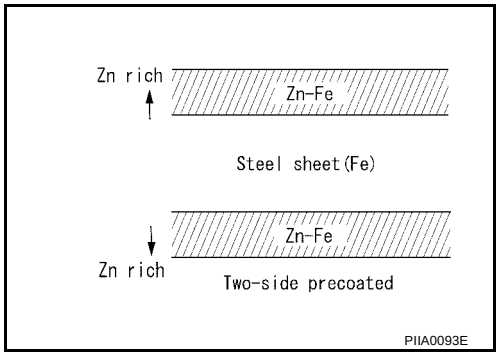
EIS001S7

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.



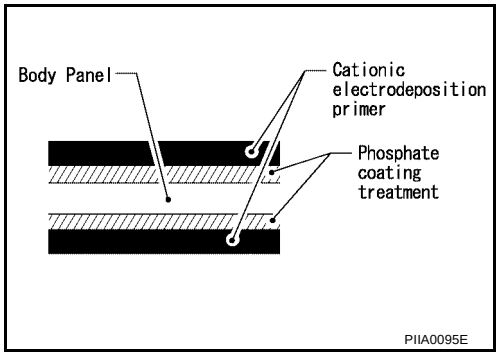
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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:

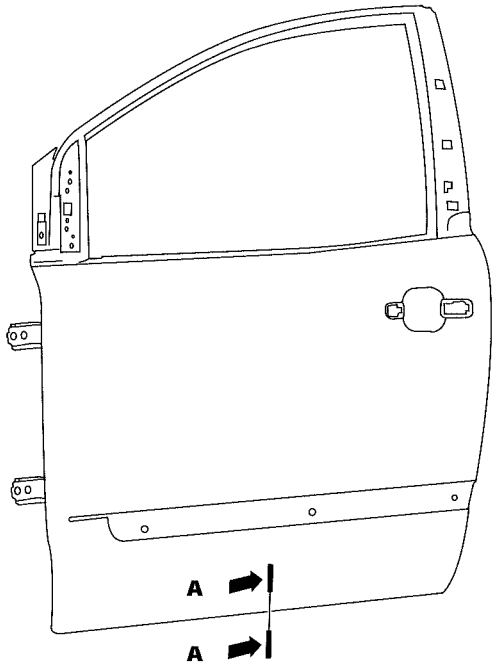
Confine paint removal during welding operations to an absolute minimum.



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.

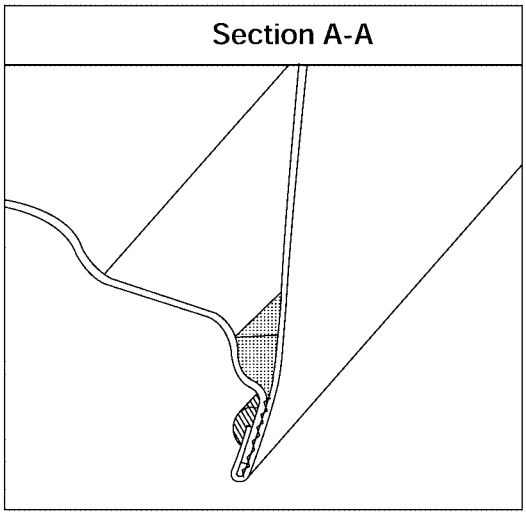
ANTI-CORROSIVE WAX

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

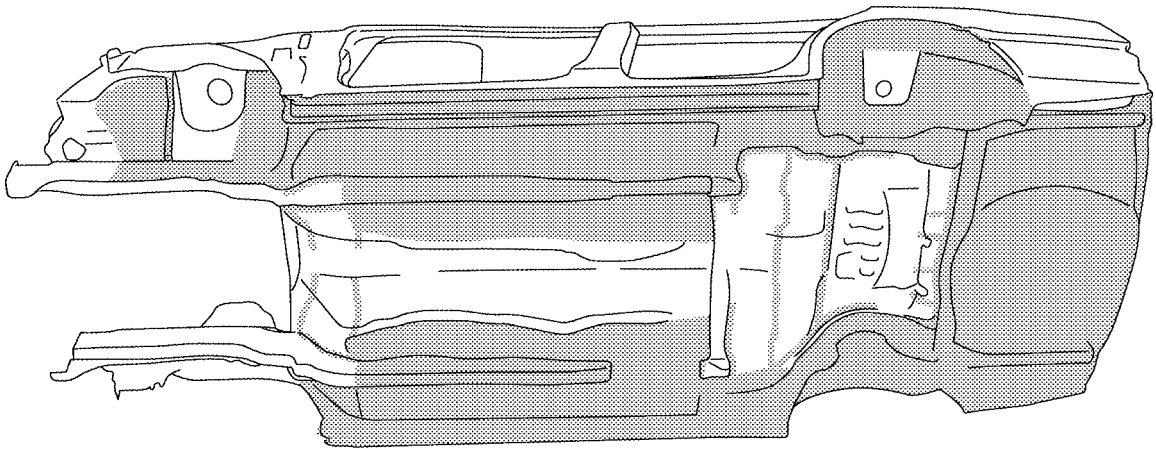
UNDERCOATING

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.



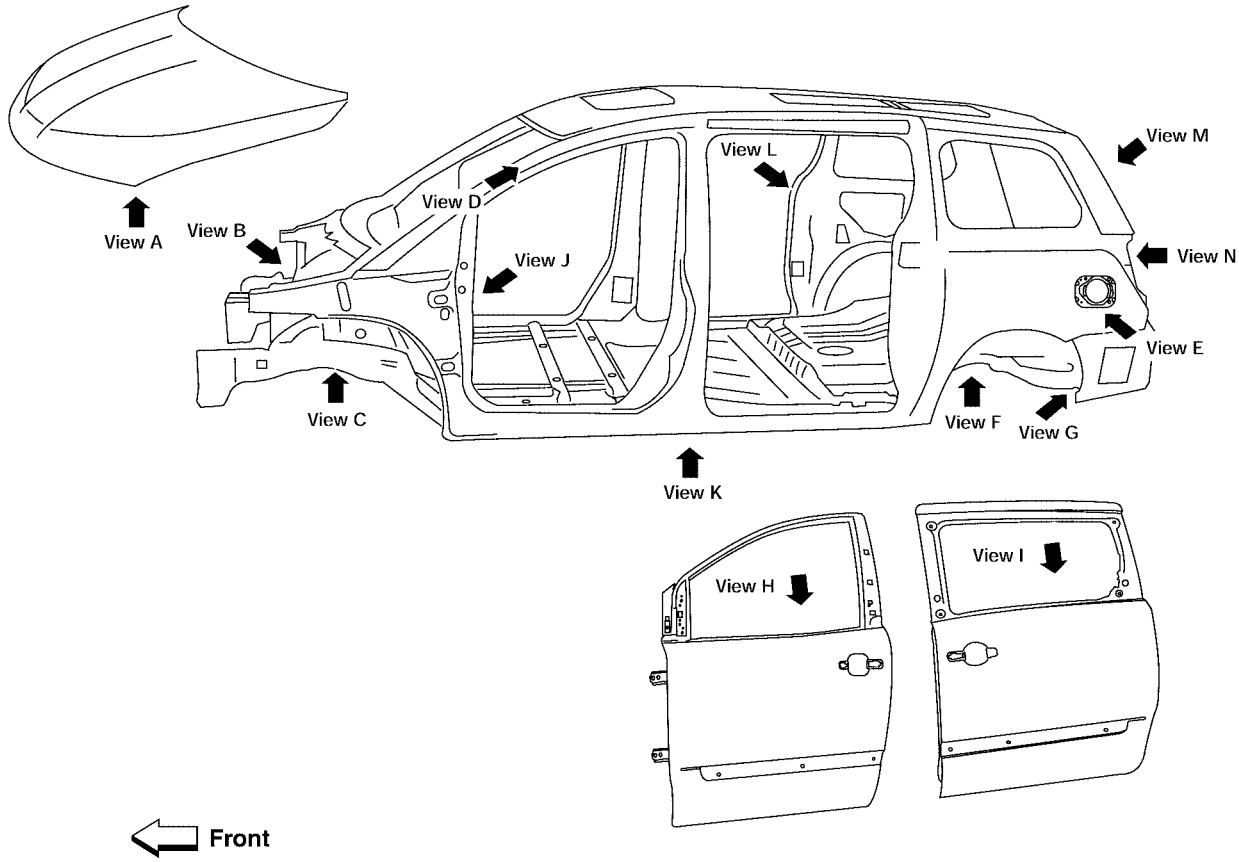
LIIA0129E

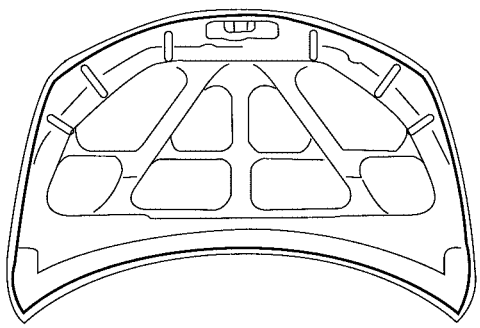
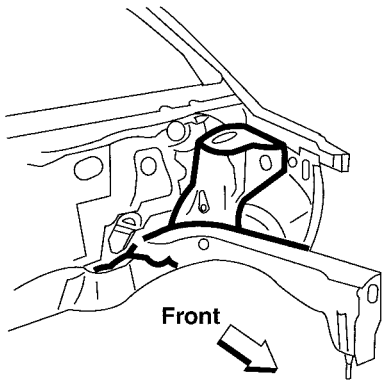
Body Sealing

EIS001S8

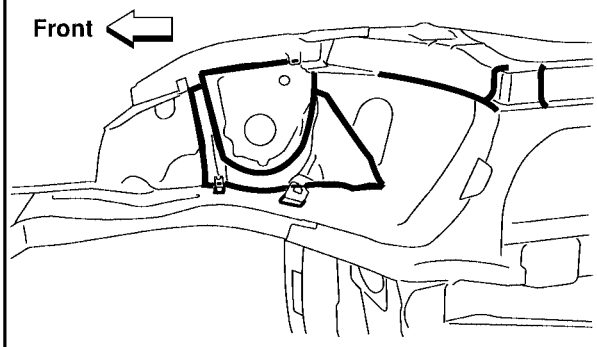
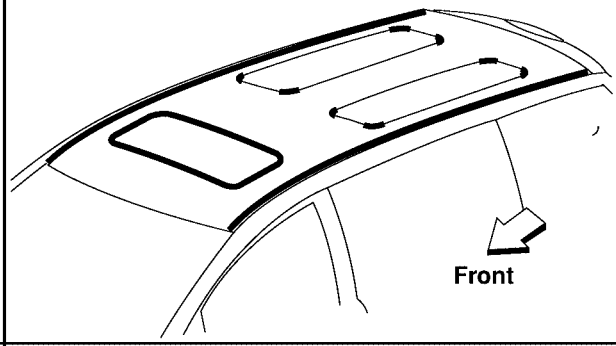
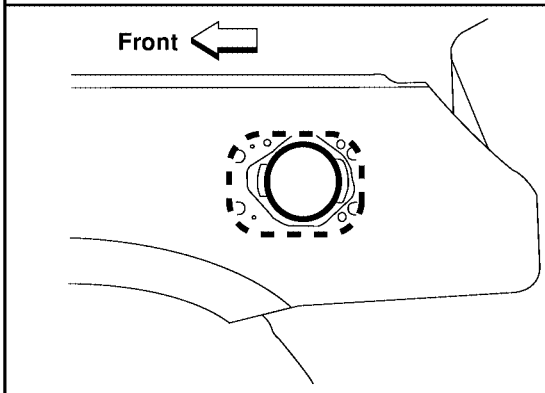
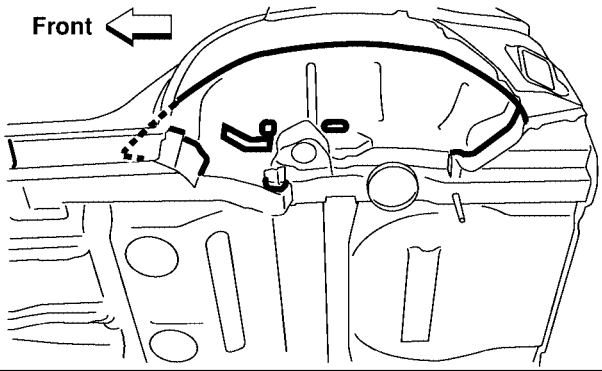
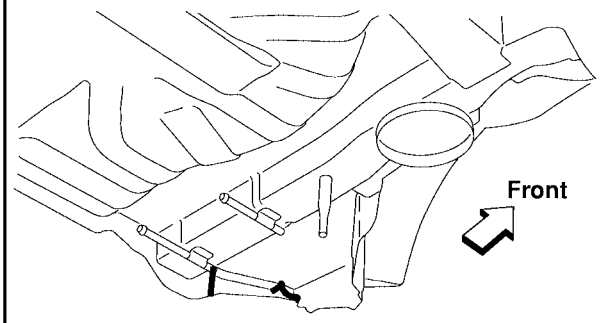
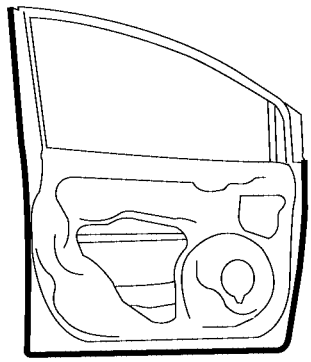
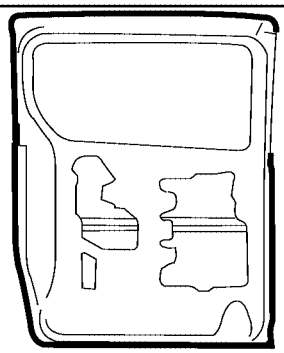
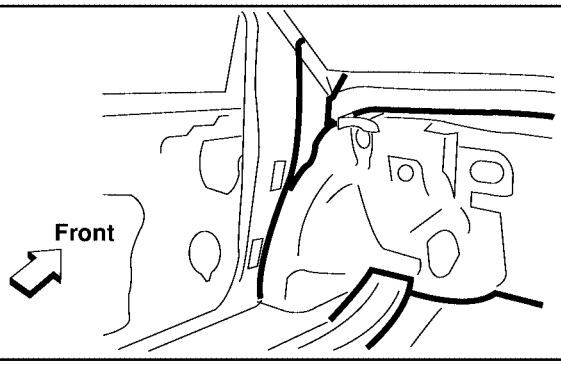
DESCRIPTION

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.

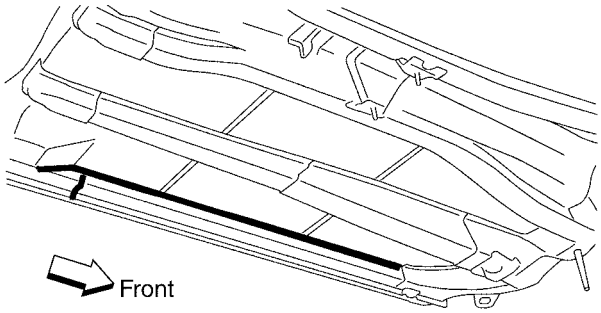
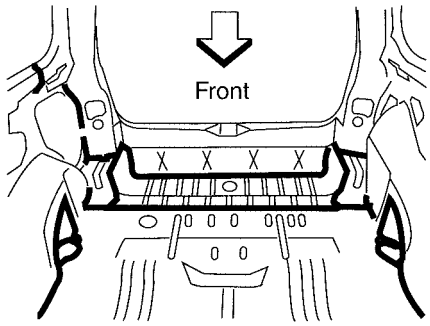
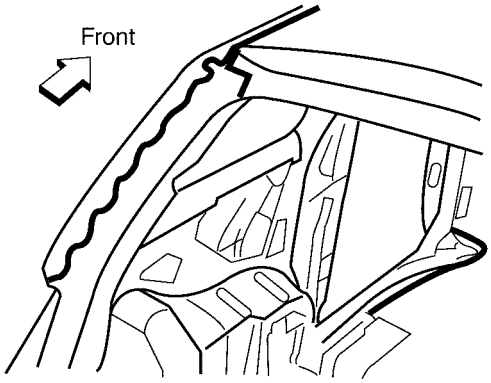
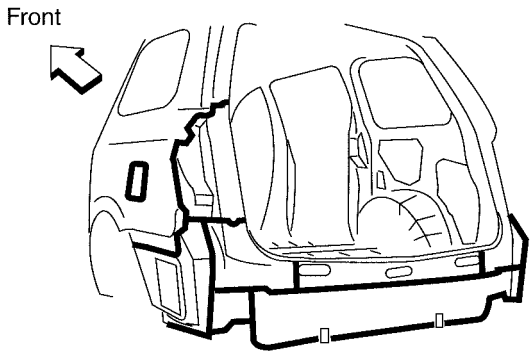


View A	View B
	

LIIA0812E

View C	View D
	
View E	**View F**
	
View G	**View H**
	
View I	**View J**
	

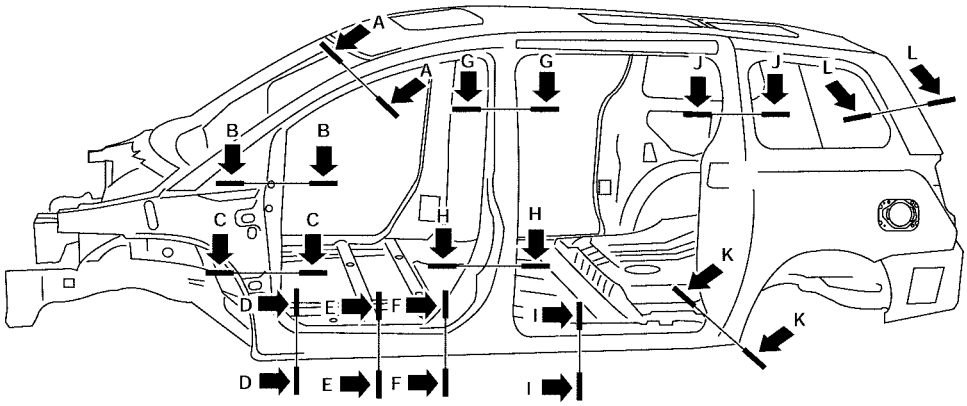
WIIA0368E

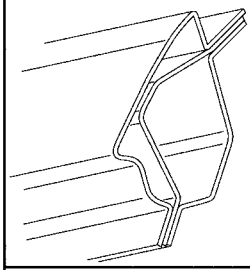
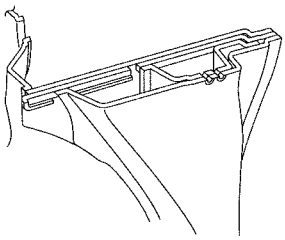
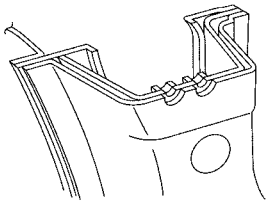
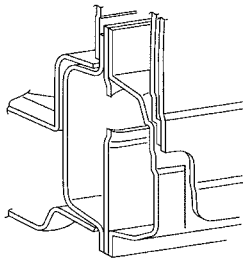
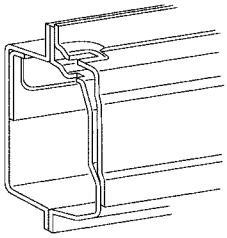
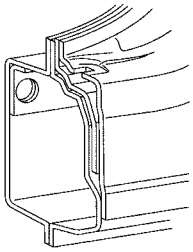
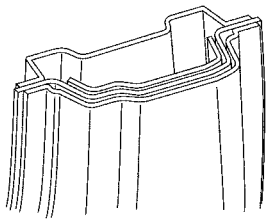
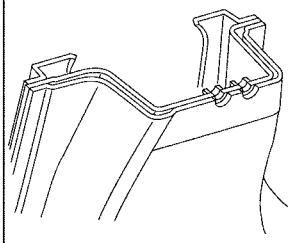
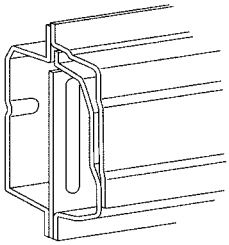
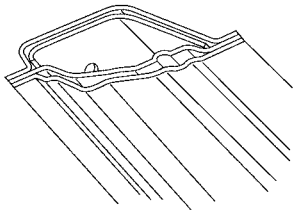
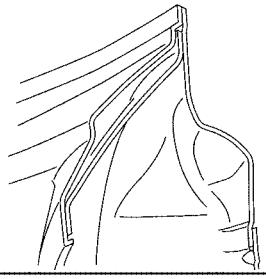
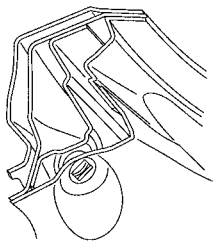
View K	View L
	
View M	**View N**
	

LIIA0816E

Body Construction
BODY CONSTRUCTION

EIS001S9



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**
			

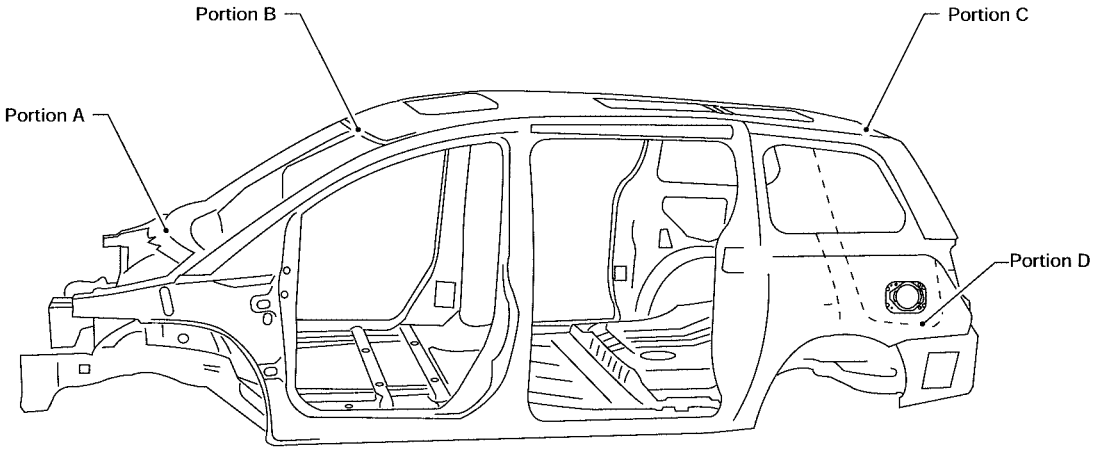
LIIA0818E

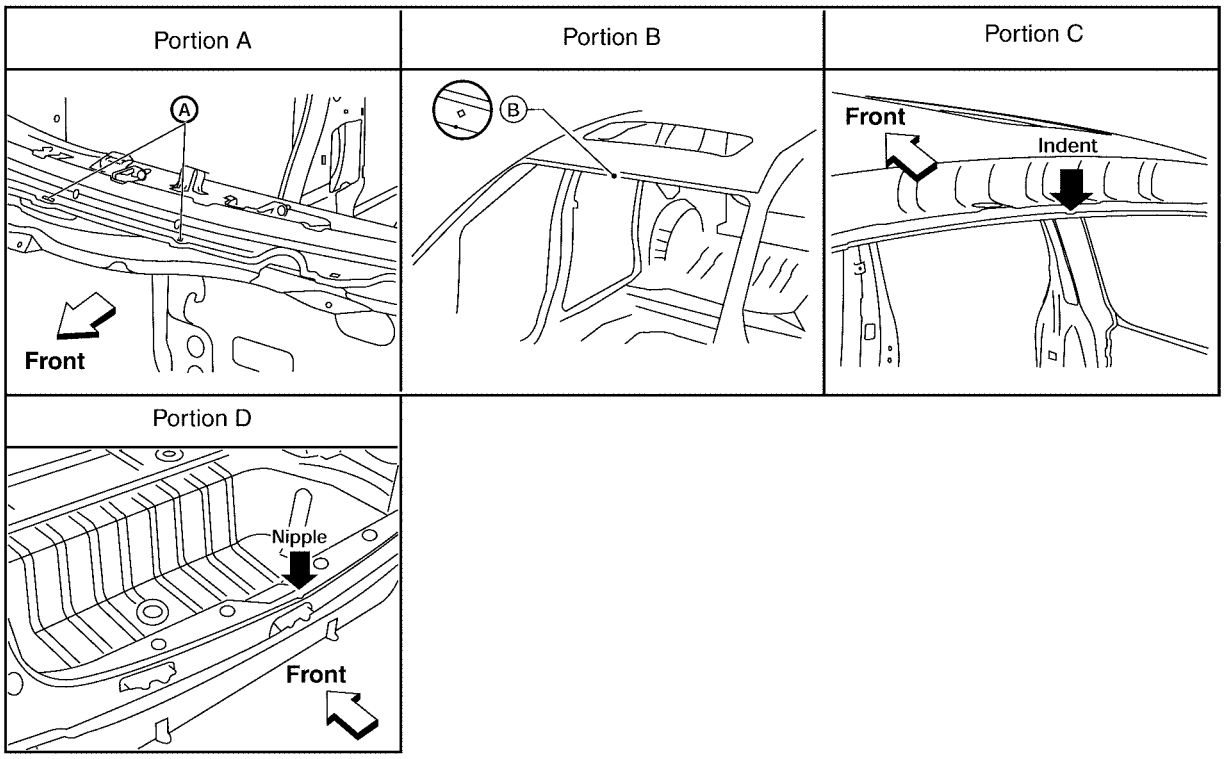
Body Alignment

EIS001SA

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.

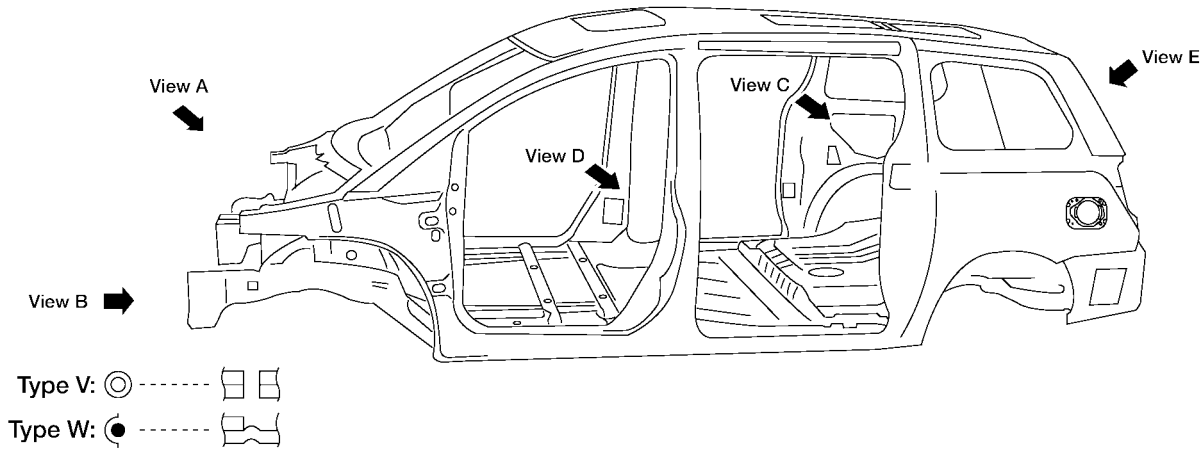

Portion B
Portion C
Portion A
Portion D


Portion A
A
Front
Portion B
B
Portion C
Front
Indent
Portion D
Nipple
Front

LIIA0819E

PANEL PARTS MATCHING MARKS

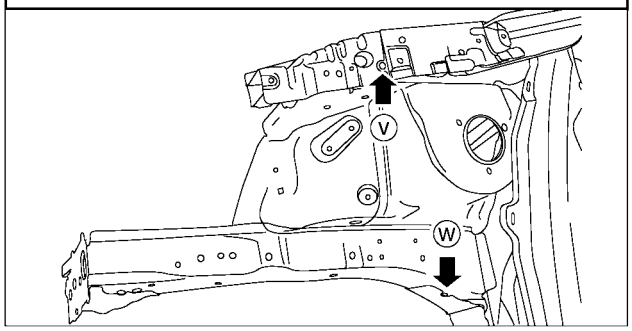
A mark has been placed on each body panel to indicate the parts matching positions. When repairing parts damaged by an accident which might affect the vehicle structure (members, pillars, etc.), more accurate and effective repair will be possible by using these marks together with body alignment specifications.



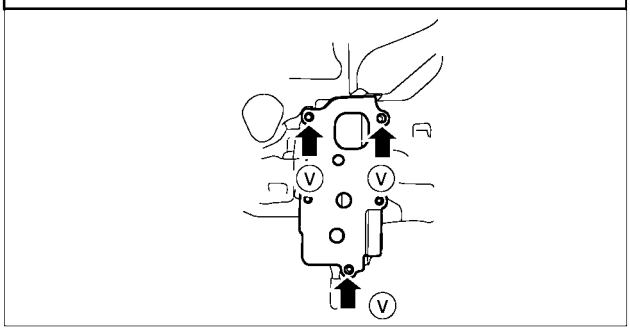
Type V: ⊚ -------

Type W: ● -------

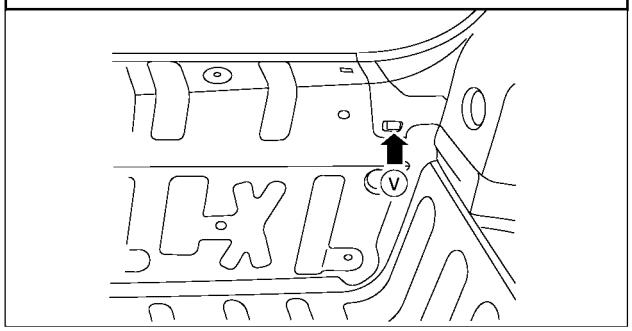
View A



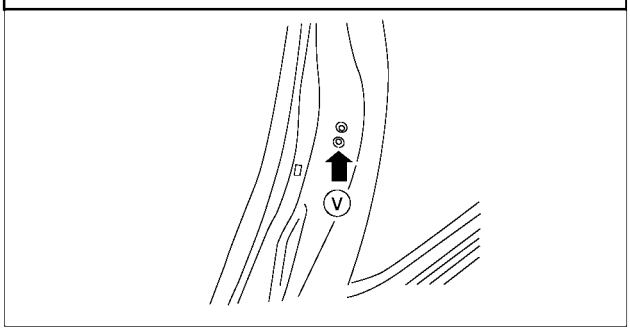
View B



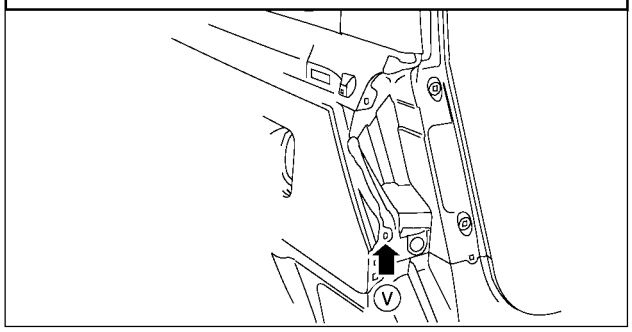
View C



View D



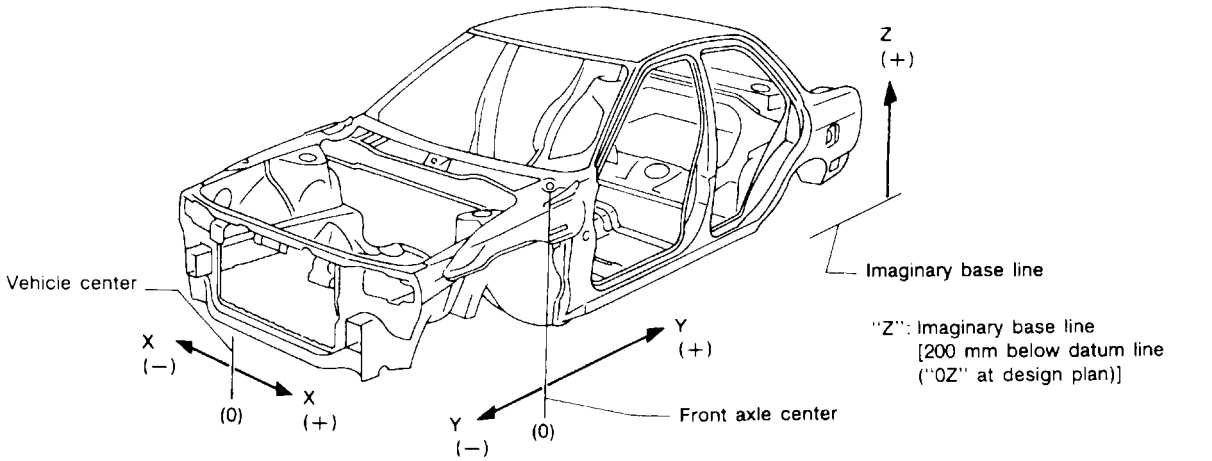
View E



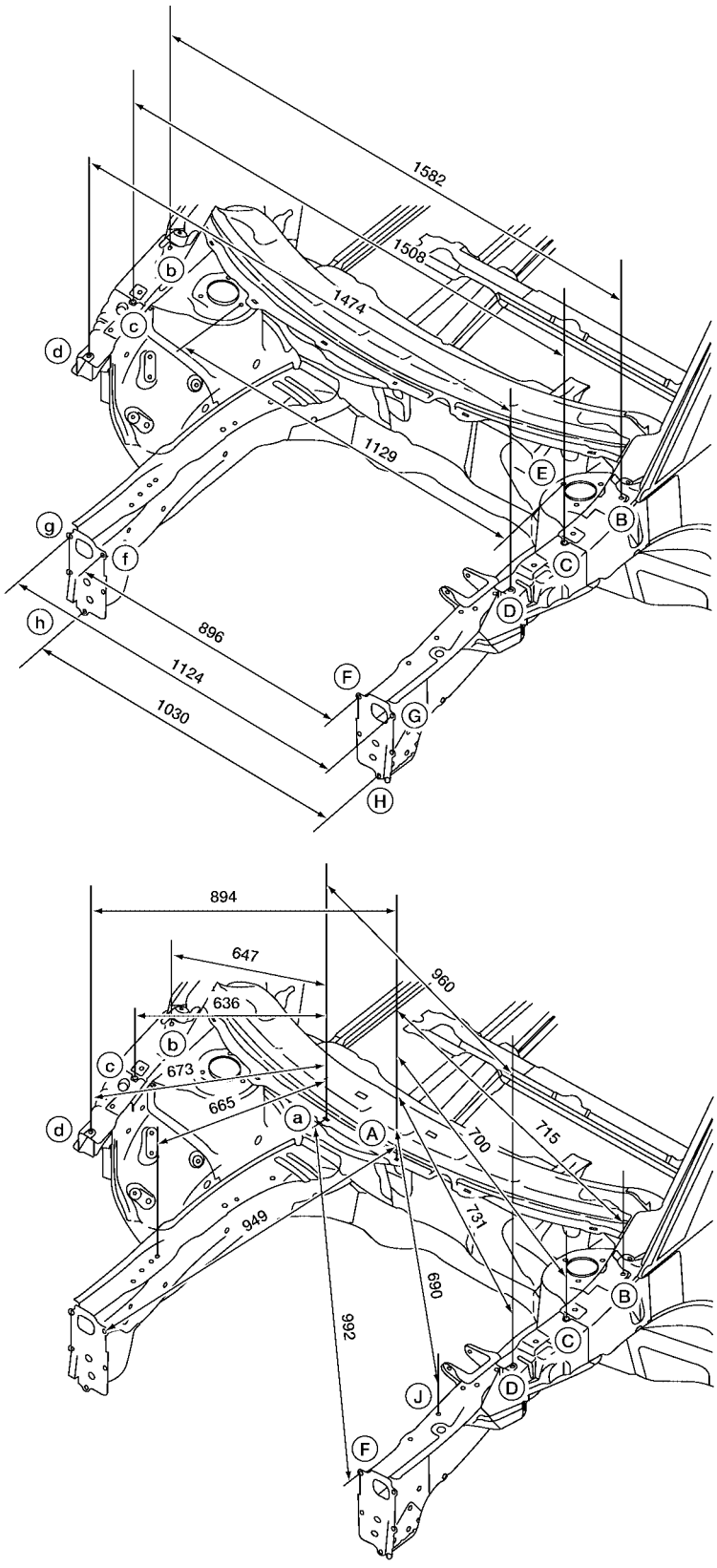
WIIA0364E

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

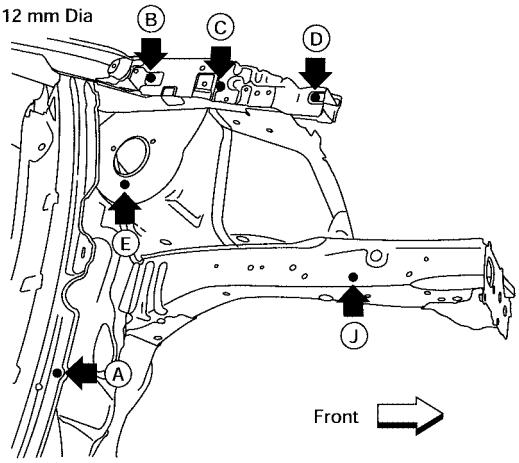


Unit: mm

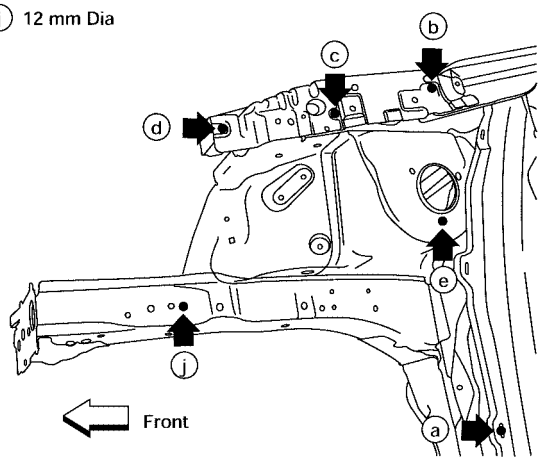
WIIA0536E

MEASUREMENT POINTS

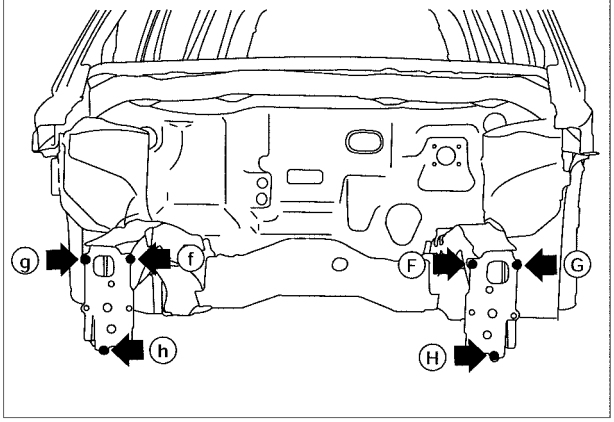
Ⓐ LH cowl
Ⓑ Fender installation hole center
Ⓒ Panel alignment hole
Ⓓ Front end module installation hole center
Ⓔ Strut installing hole center
Ⓙ 12 mm Dia



ⓐ LH cowl
ⓑ Fender installation hole center
ⓒ Panel alignment hole
ⓓ Front end module installation hole center
ⓔ Strut installing hole center
ⓙ 12 mm Dia

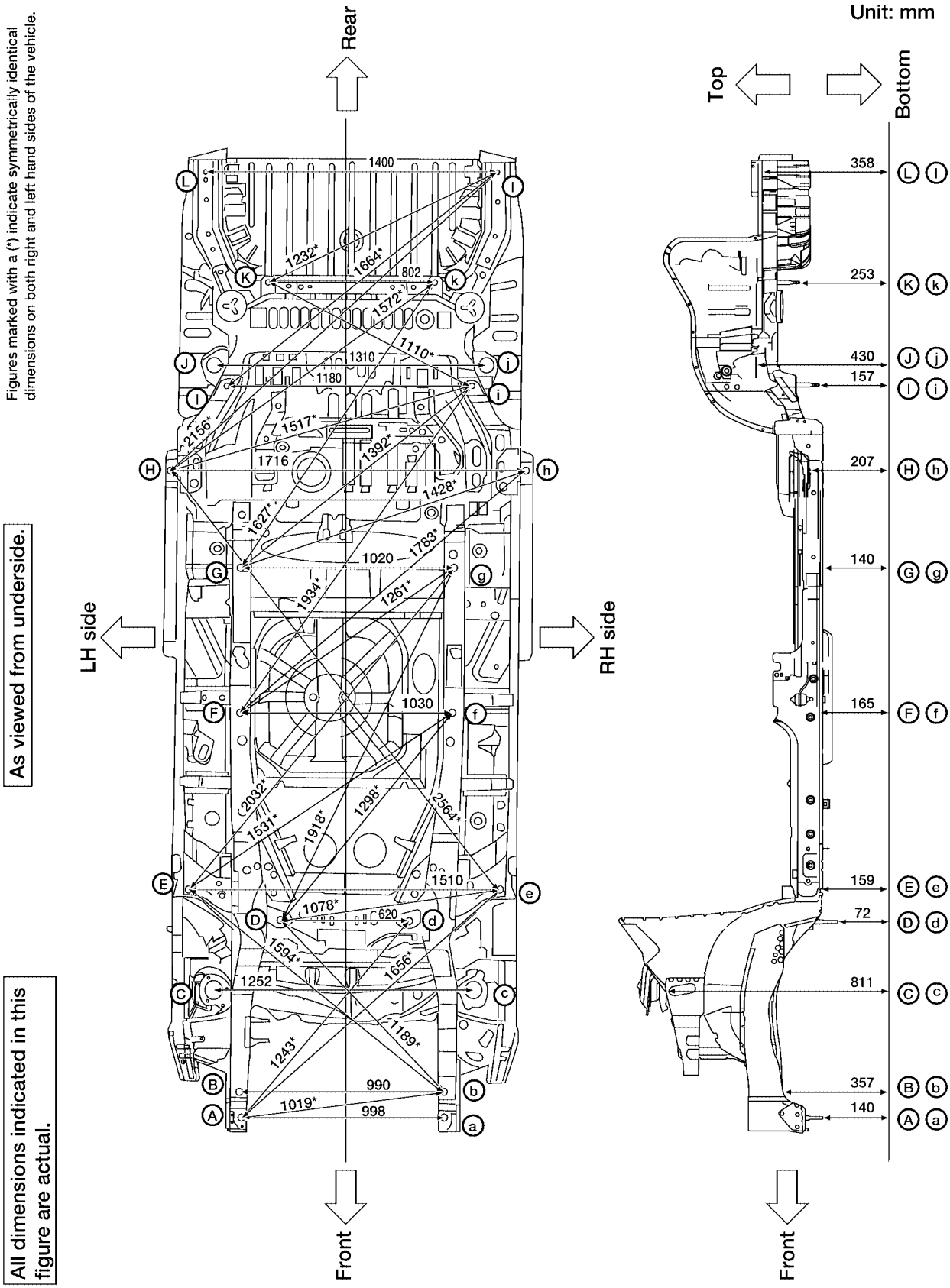


Ⓕ, ⓕ, Ⓖ, ⓖ, Ⓗ, ⓗ Front side member extension front

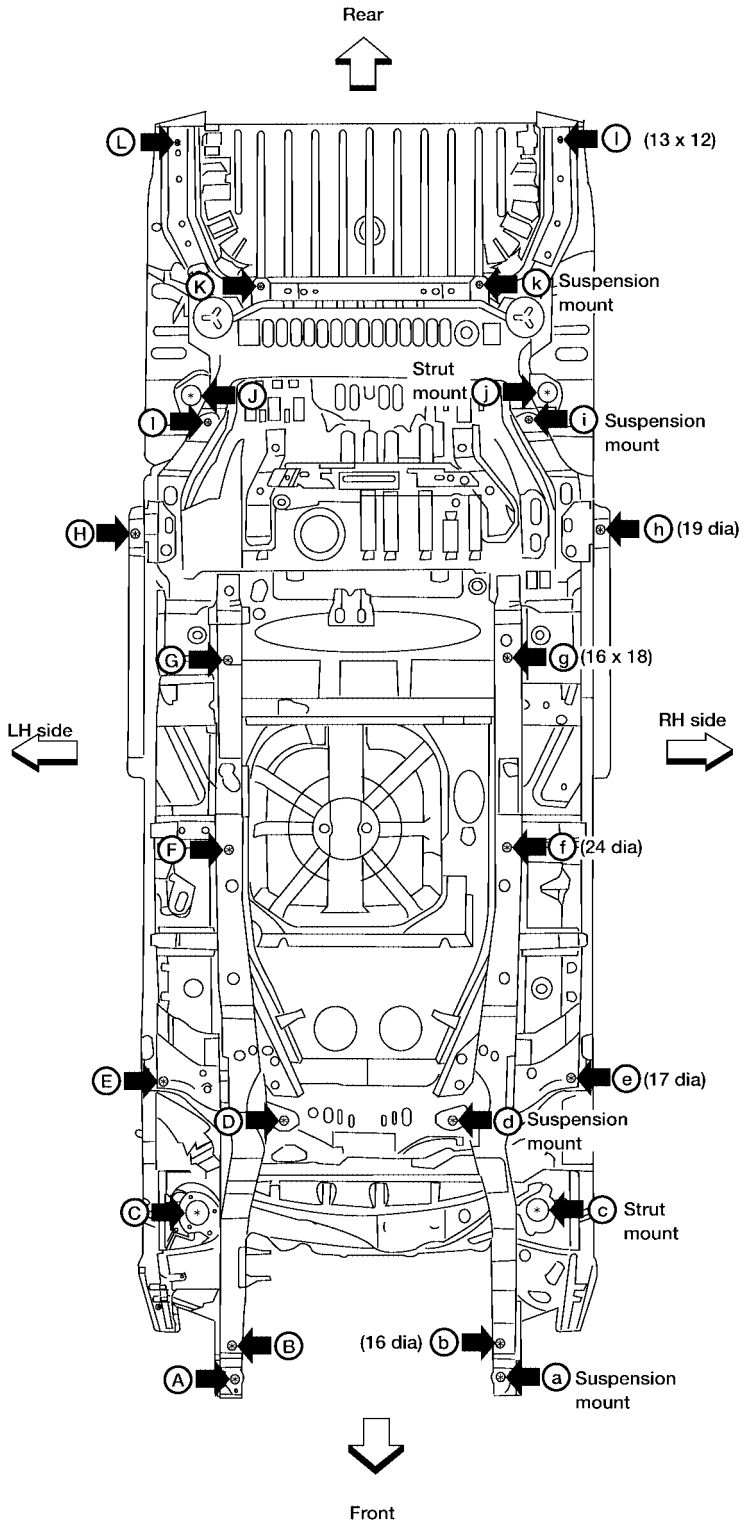


LIIA0860E

UNDERBODY MEASUREMENT



MEASUREMENT POINTS



Coordinates:

Ⓐ,ⓐ
X : ±494
Y : -617
Z : 140

Ⓑ,ⓑ
X : ±495
Y : -500
Z : 357

Ⓓ,ⓓ
X : ±310
Y : 328
Z : 72

Ⓔ,ⓔ
X : ±755
Y : 470
Z : 159

Ⓕ,ⓕ
X : ±515
Y : 1326
Z : 165

Ⓖ,ⓖ
X : ±510
Y : 2060
Z : 140

Ⓗ,ⓗ
X : ±858
Y : 2463
Z : 207

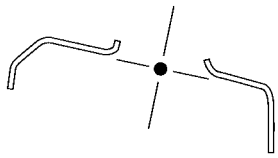
Ⓘ,ⓘ
X : ±590
Y : 2913
Z : 157

Ⓚ,ⓚ
X : ±401
Y : 3403
Z : 253

Ⓛ,ⓛ
X : ±700
Y : 3945
Z : 358

Coordinates:

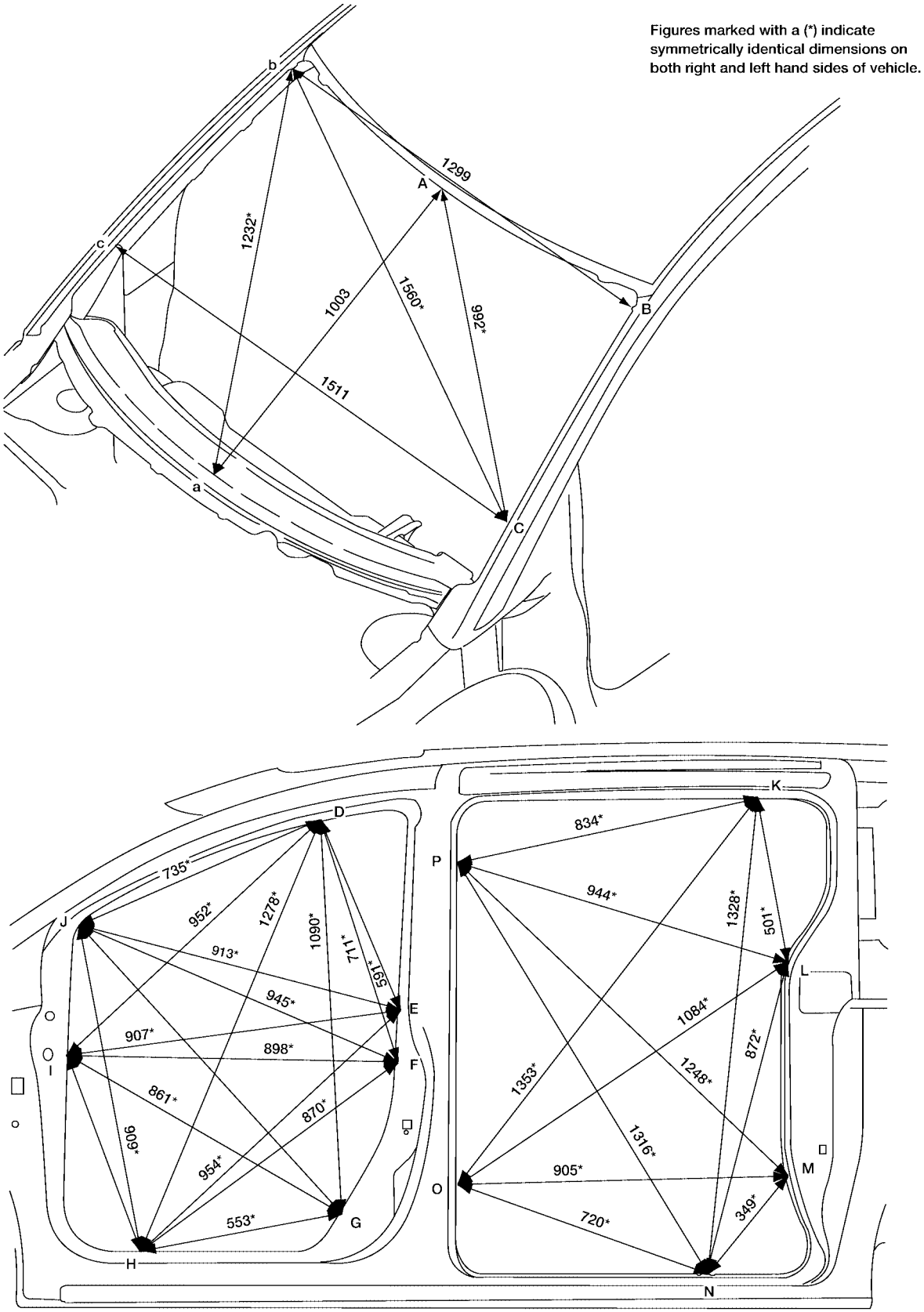
Ⓒ,ⓒ
X : ±626
Y : 28
Z : 811



Ⓙ,ⓙ
X : ±655
Y : 3023
Z : 430

WIIA0359E

PASSENGER COMPARTMENT MEASUREMENT

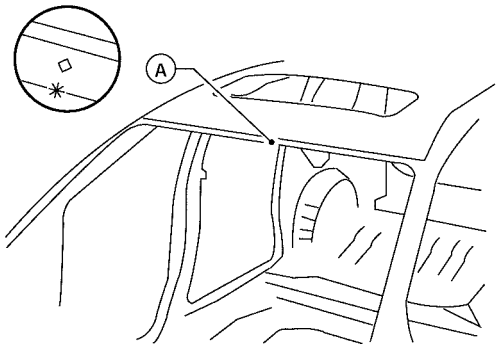


Unit: mm

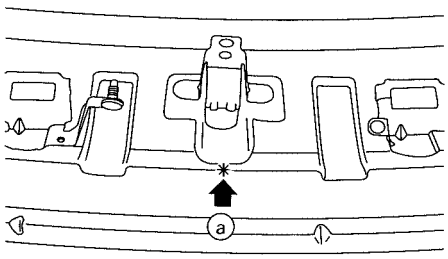
WIIA0537E

MEASUREMENT POINTS

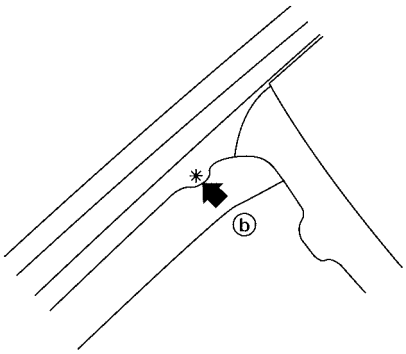
Ⓐ Front roof flange end of center position mark



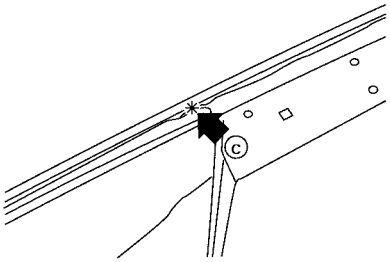
ⓐ Center of upper dash panel.



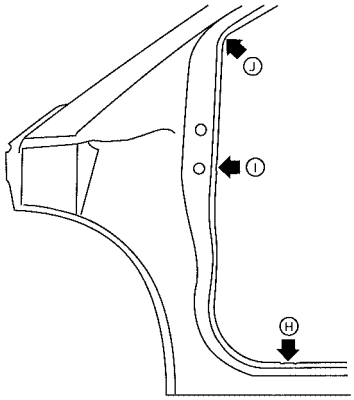
Ⓑ, ⓑ Outer front pillar upper position mark.



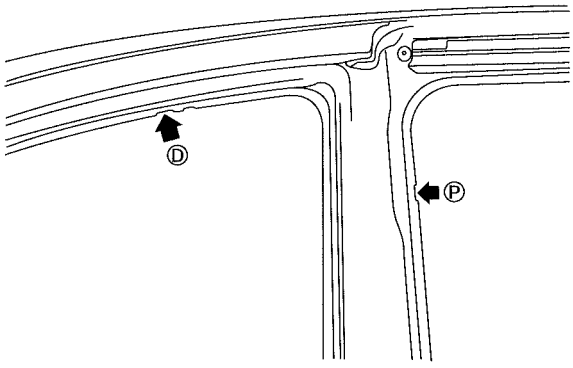
Ⓒ, ⓒ Inner front pillar lower reinforcement panel overlap.



Ⓗ, ⓗ Outer sill front fold over tab center.
Ⓘ, ⓘ Dash side pannel joggle center.
Ⓙ, ⓙ Center of pillar radius.

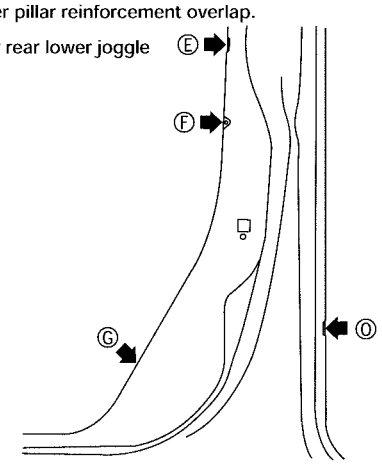


Ⓓ, ⓓ Upper door opening front joggle center.
Ⓟ, ⓟ Center pillar rear upper joggle center.

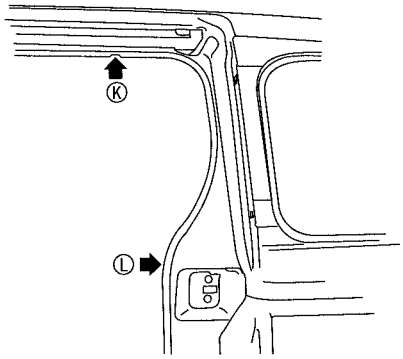


LIIA0862E

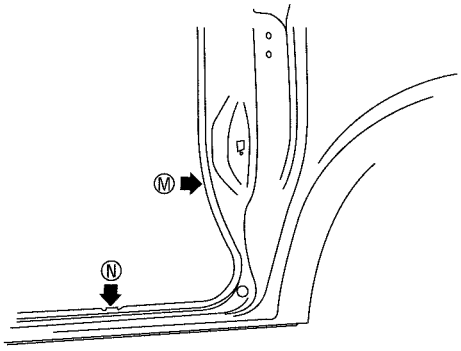
Ⓔ, ⓔ Center pillar lower joggle center.
Ⓕ, ⓕ Center pillar center position mark.
Ⓖ, ⓖ Lower center pillar reinforcement overlap.
Ⓞ, ⓞ Center pillar rear lower joggle center.



Ⓚ, ⓚ Upper sliding door opening rear joggle center.
Ⓛ, ⓛ Rear fender inner reinforcement upper panel overlap.



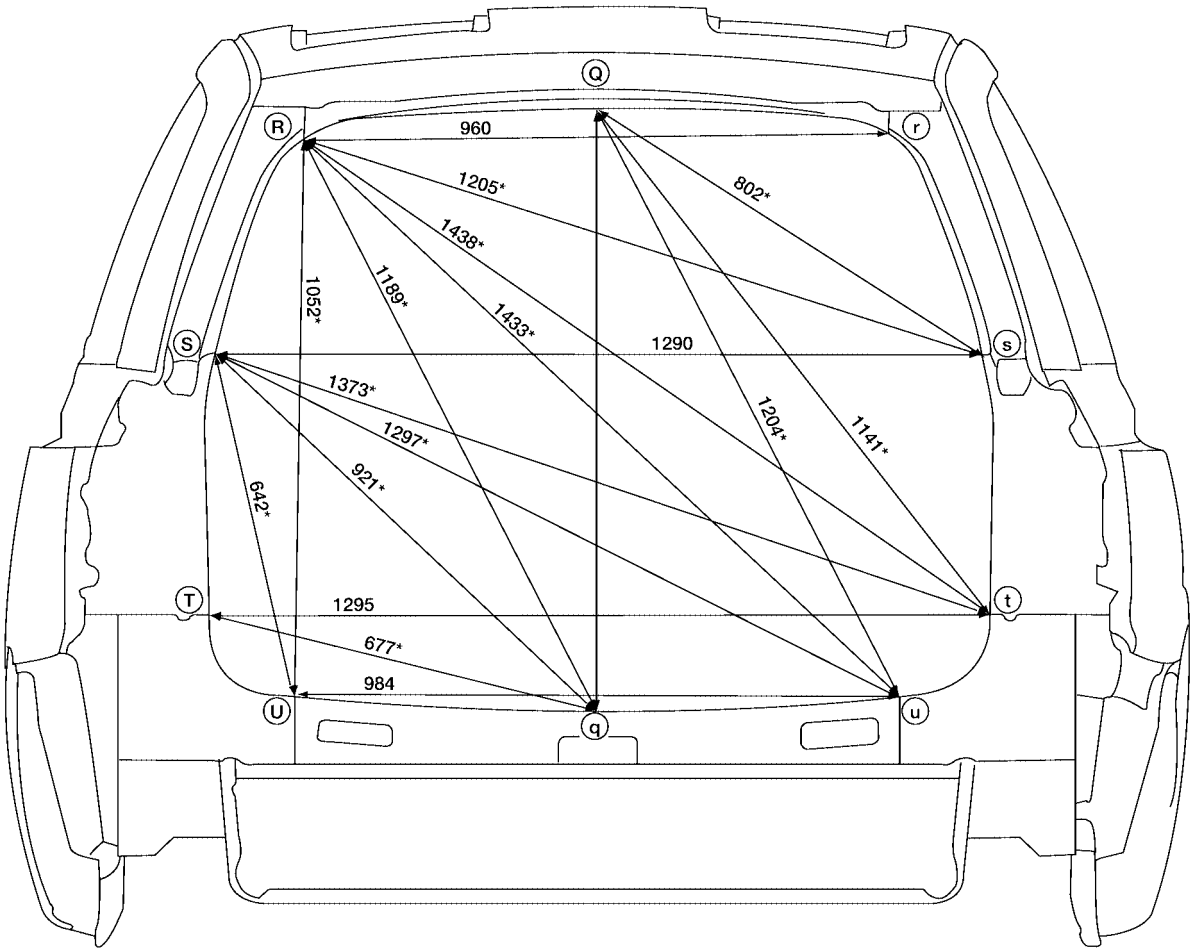
Ⓜ, ⓜ Outer sill rear fold over tab center.
Ⓝ, ⓝ Center pillar rear upper joggle center.



LIIA0903E

REAR BODY MEASUREMENT

Figures marked with a (*) indicate symmetrically identical dimensions on both right and left hand sides of vehicle.

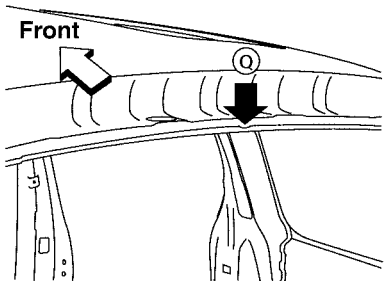


Unit: mm

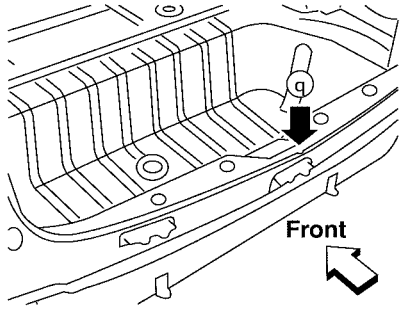
WIIA0539E

MEASUREMENT POINTS

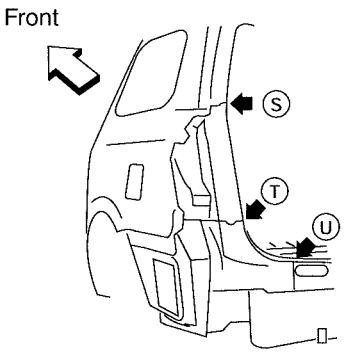
Ⓠ Rear roof flange center of indent.



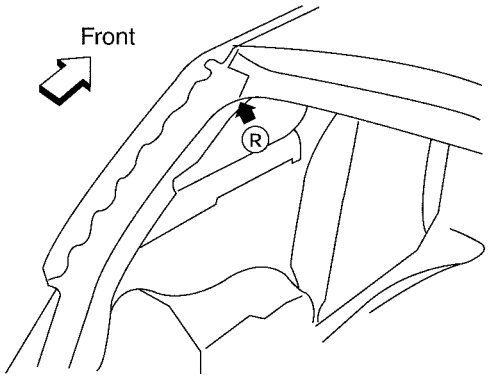
ⓠ Rear sill center nipple.



Ⓢ, ⓢ 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

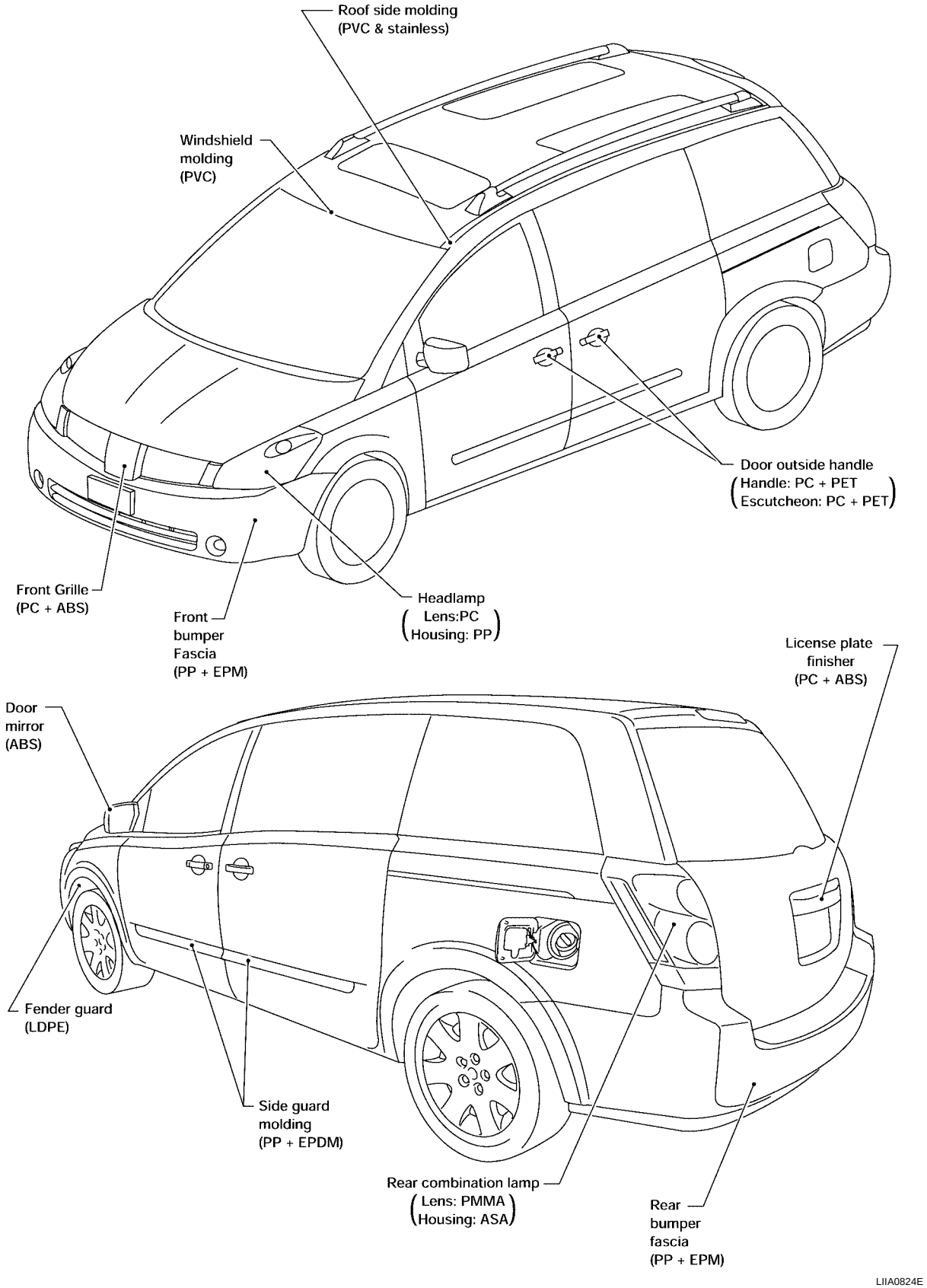
EIS001SB

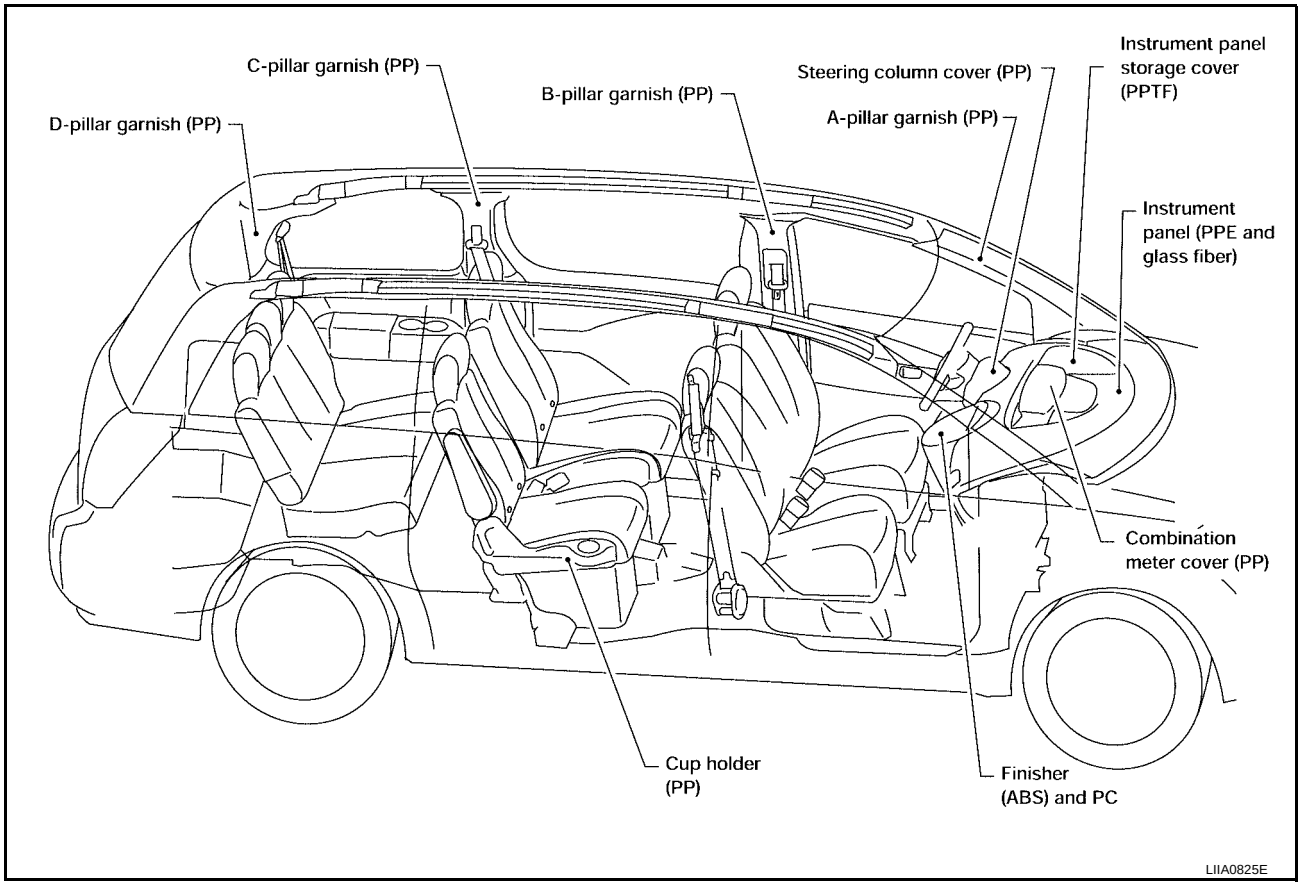
HANDLING PRECAUTIONS FOR PLASTICS

Abbreviation	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

EIS001SC

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

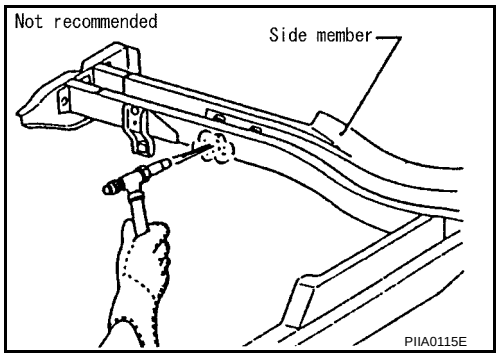
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm^2 (38kg/mm^2 ,54klb/sq in)	SP130	● Front side member assembly ● Upper hoodledge ● Upper pillar hinge brace assembly ● Rear side member extension ● Other reinforcements
785-981 N/mm^2 (80-100kg/mm^2 114-142klb/sq in)	SP150	● 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.

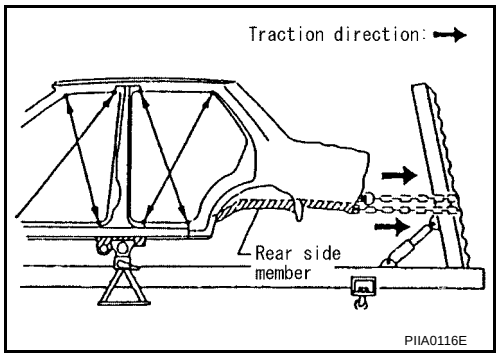
Read the following precautions when repairing HSS:

1. Additional points to consider

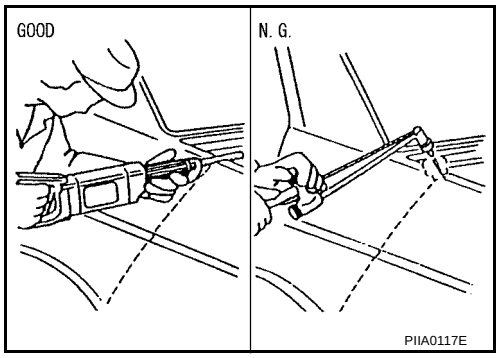
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).
  Verify heating temperature with a thermometer.
  (Crayon-type and other similar type thermometer are appropriate.)



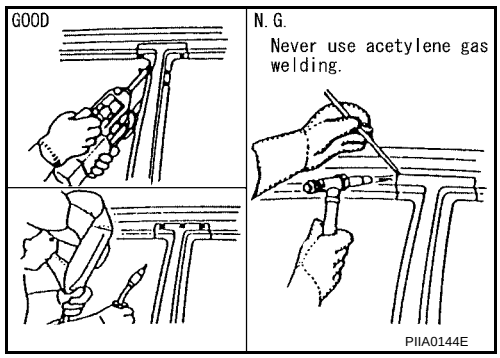
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



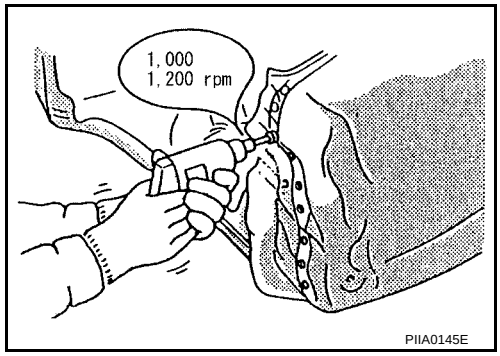
- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



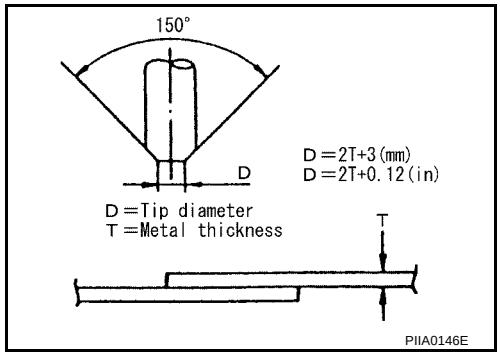
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



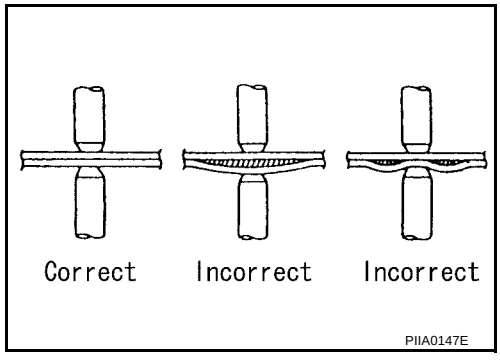
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.
- SP150 HSS panels with a tensile strength of 785 to 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.



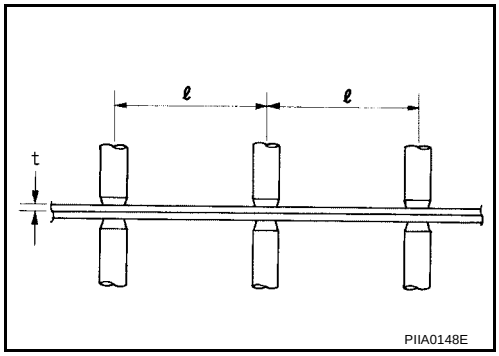
- The panel surfaces must fit flush to each other, leaving no gaps.



- 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



Replacement Operations

EIS001SD

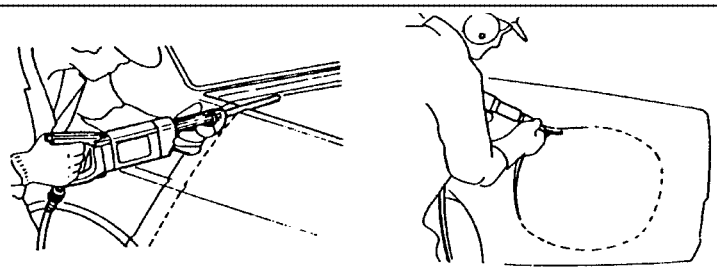
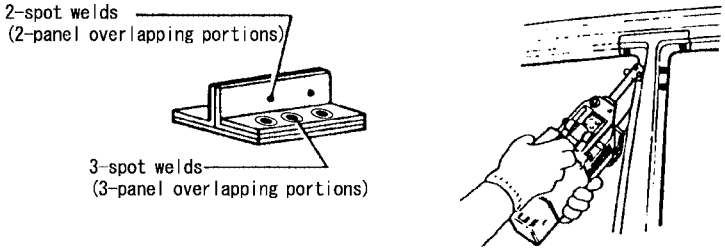
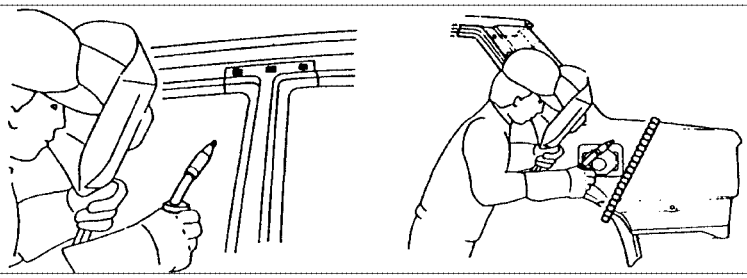
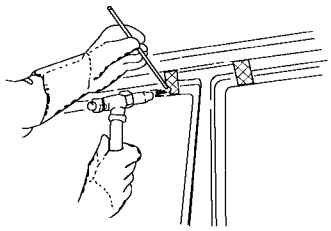
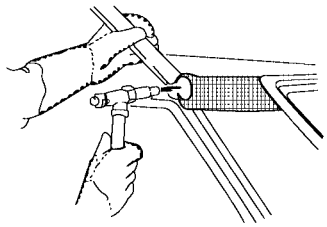
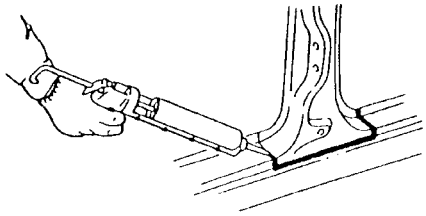
DESCRIPTION

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.

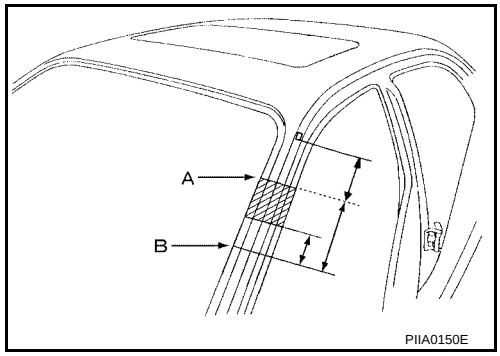
Please note that this information is prepared for worldwide usage, and as such, certain procedures may not apply in some regions or countries.

The symbols used in this section for cutting and welding / brazing operations are shown below.

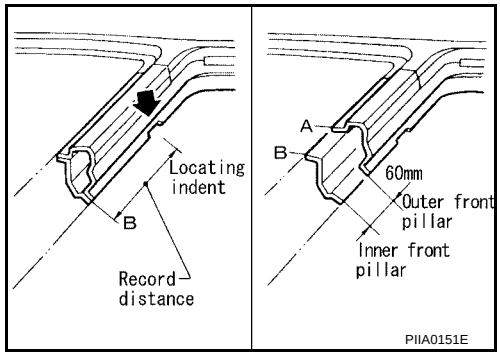
Saw cut or air chisel cut	
Spot weld 2-spot welds 3-spot welds	
MIG plug weld	
MIG seam weld/ Point weld	
Brazing	
Soldering	
Sealing	

PIIA0149E

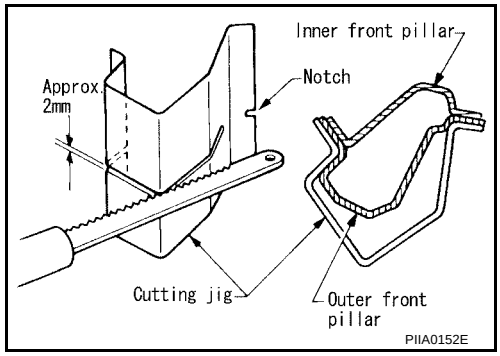
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- 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.

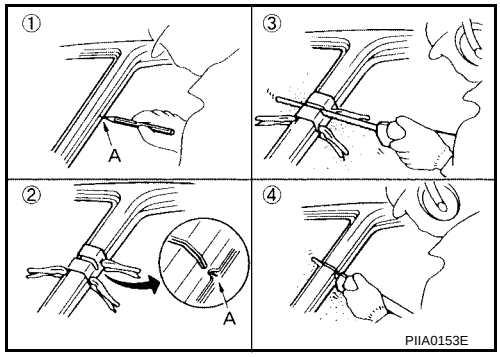


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- An example of cutting operation using a cutting jig is as follows.

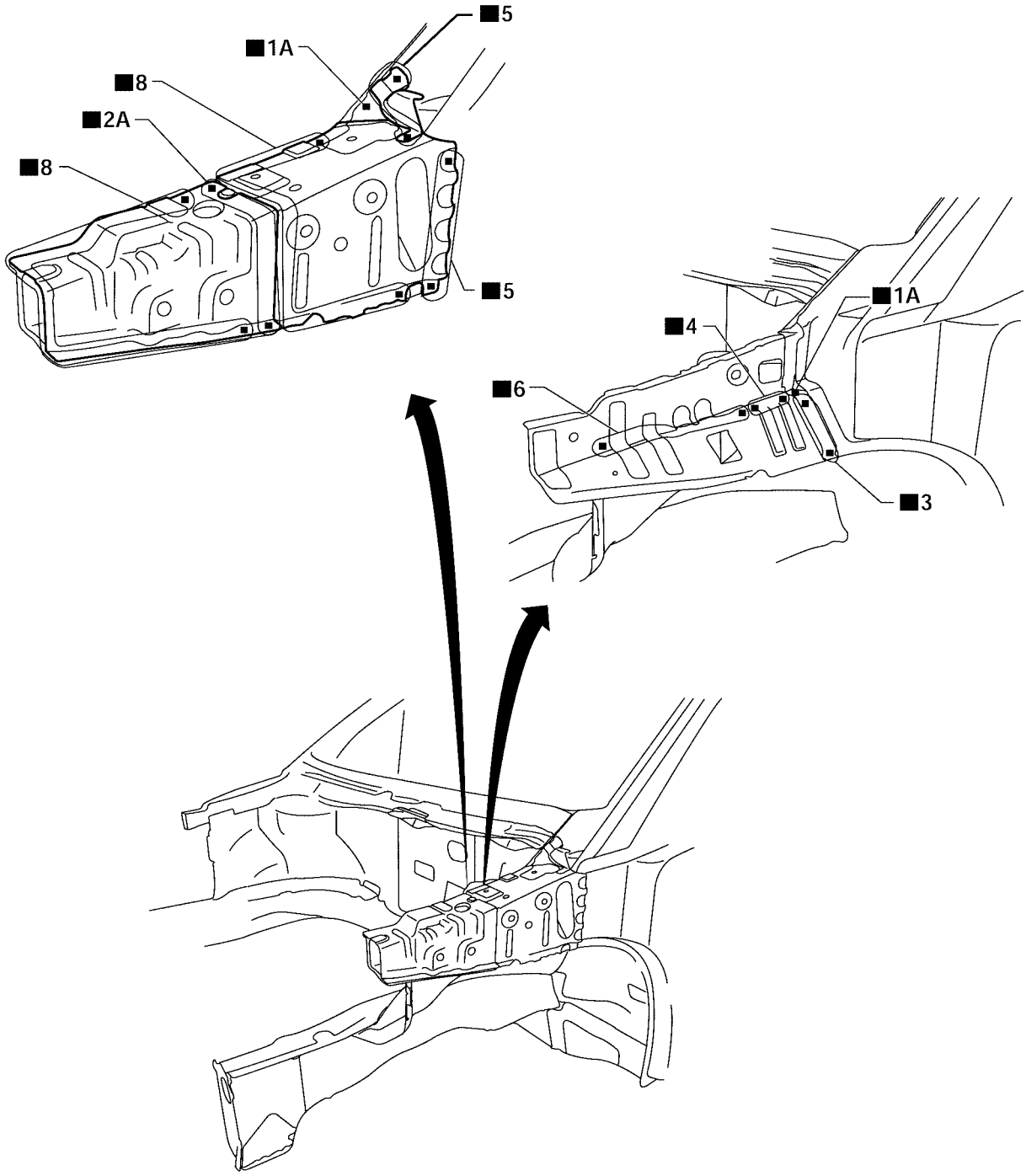
1. Mark cutting lines.
   A: Cut position of outer pillar
   B: Cut position of inner pillar
2. Align cutting line with notch on jig. Clamp jig to pillar.
3. Cut outer pillar along groove of jig. (At position A)
4. Remove jig and cut remaining portions.
5. Cut inner pillar at position B in same manner.

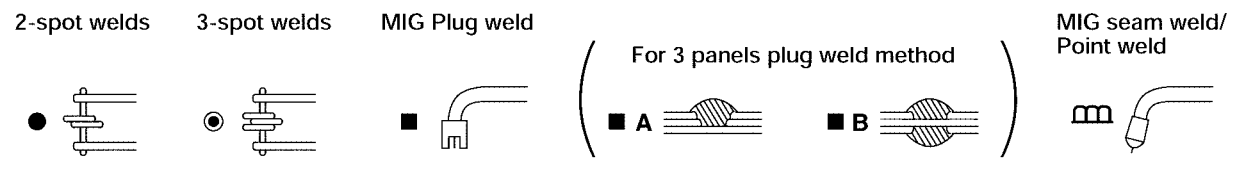


HOODLEDGE

- Work after radiator core support has been removed.

Service Joint

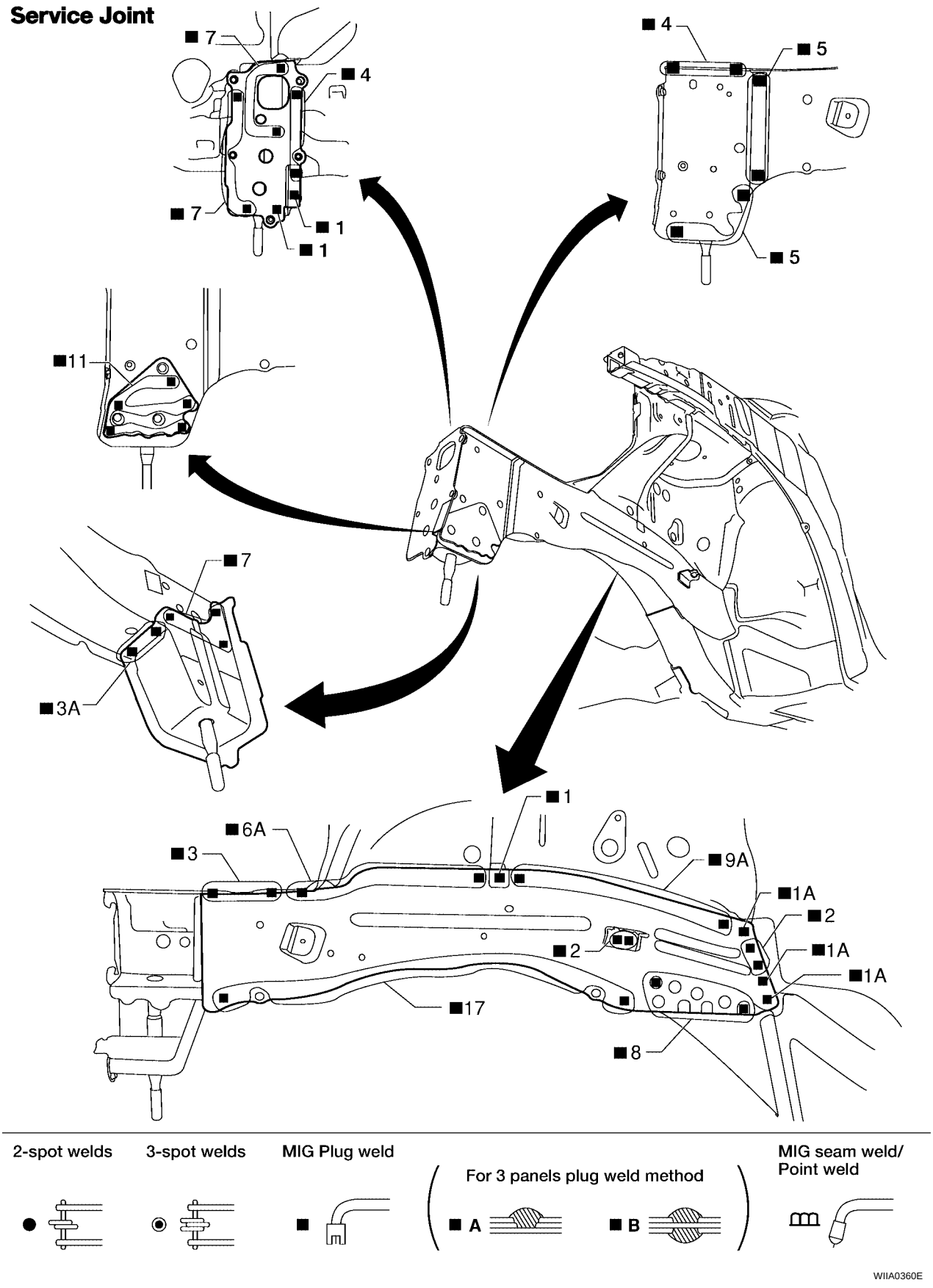




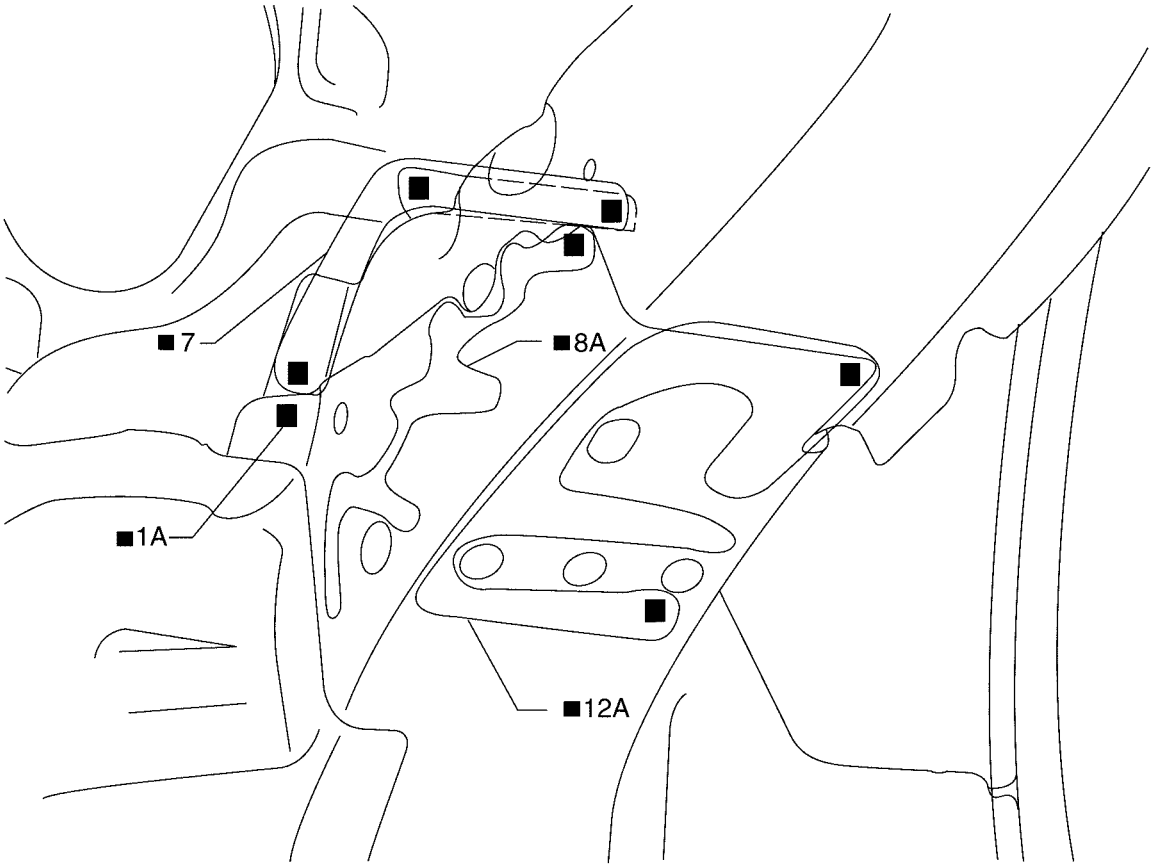
LIIA0866E

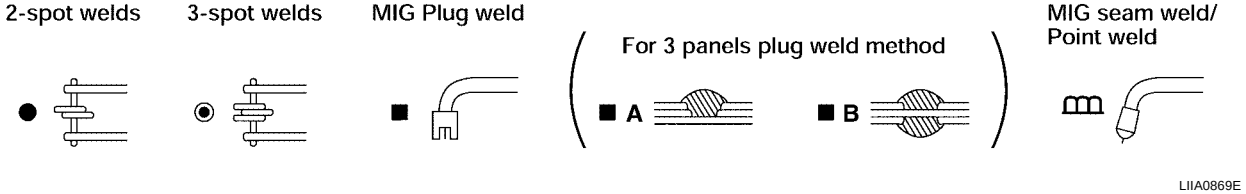
FRONT SIDE MEMBER

- Work after hoodledge and radiator core support have been removed.



Service Joint

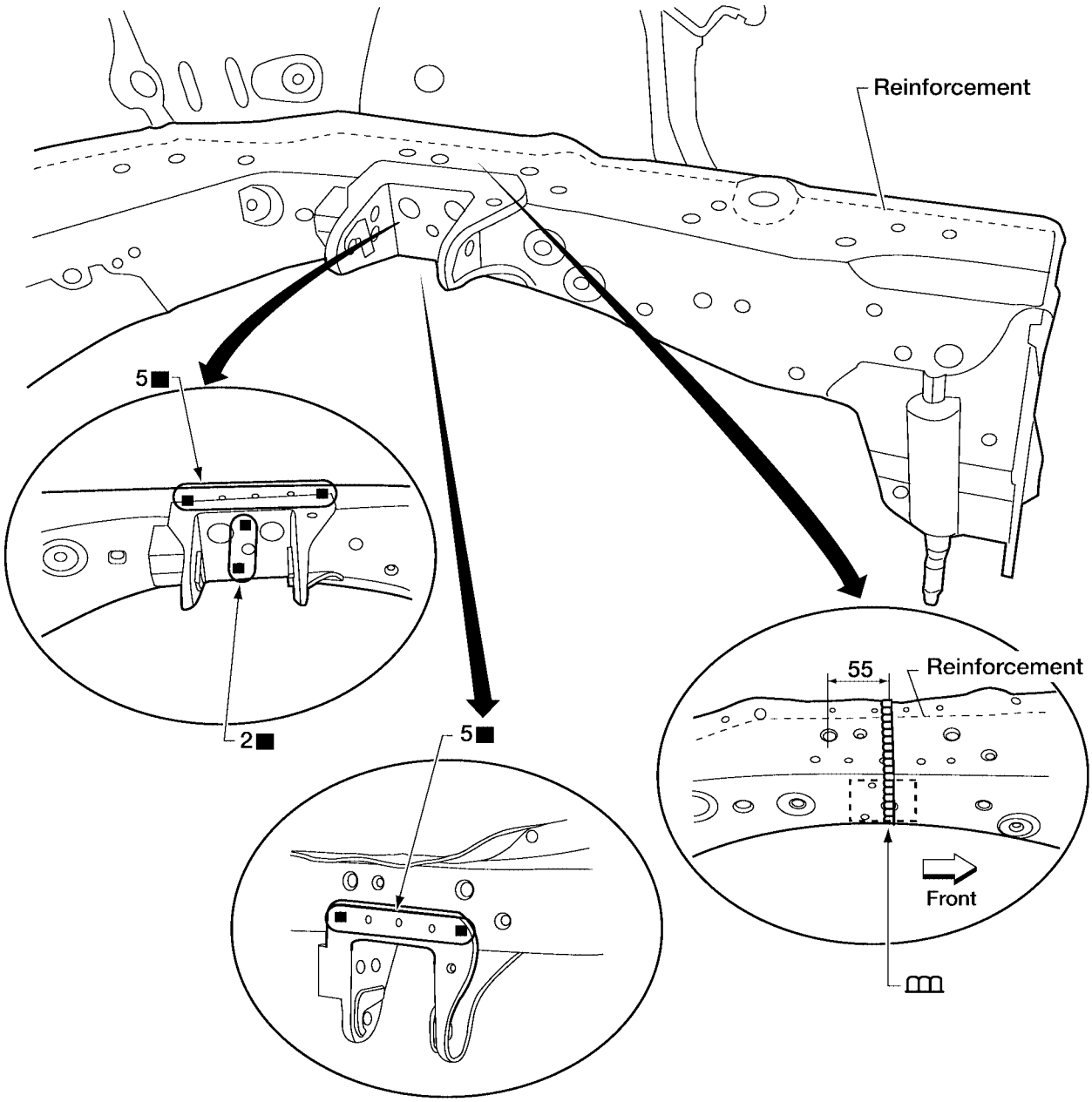




FRONT SIDE MEMBER (PARTIAL REPLACEMENT)

- Work after radiator core support has been removed.

Service Joint



Unit : mm

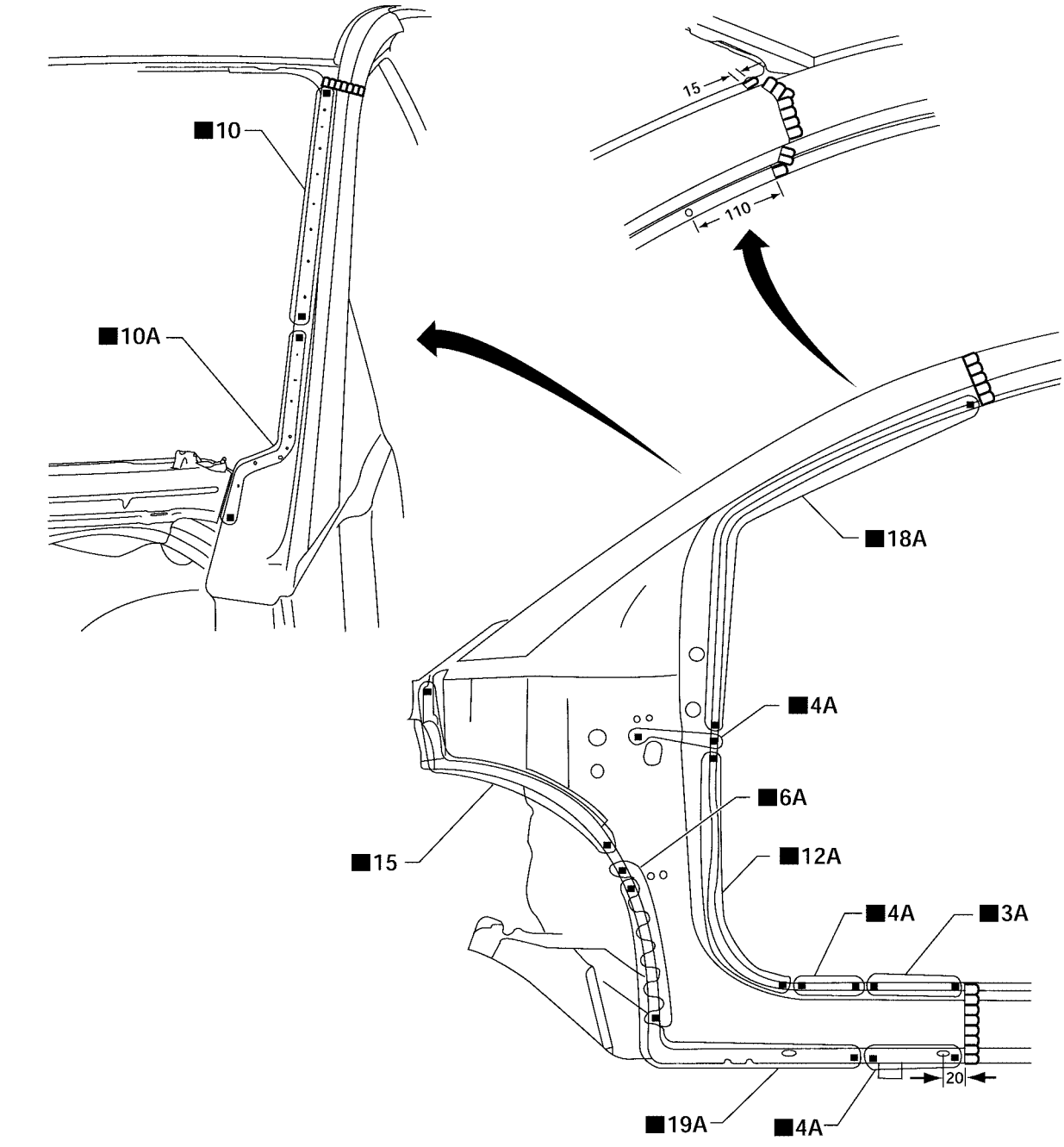
2-spot welds	3-spot welds	MIG Plug weld	For 3 panels plug weld method	MIG seam weld/ Point weld
●	◉	■	■ A ■ B	

WIIA0361E

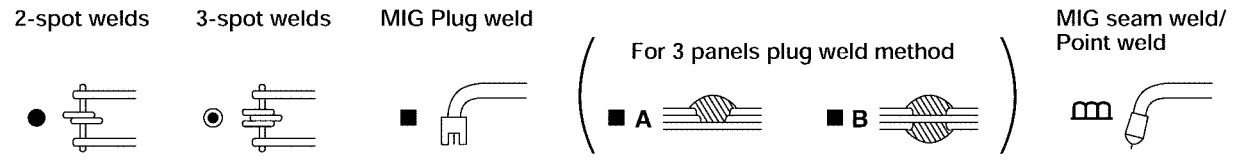
FRONT PILLAR

- Work after rear hoodledge reinforcement has been removed.

Service Joint

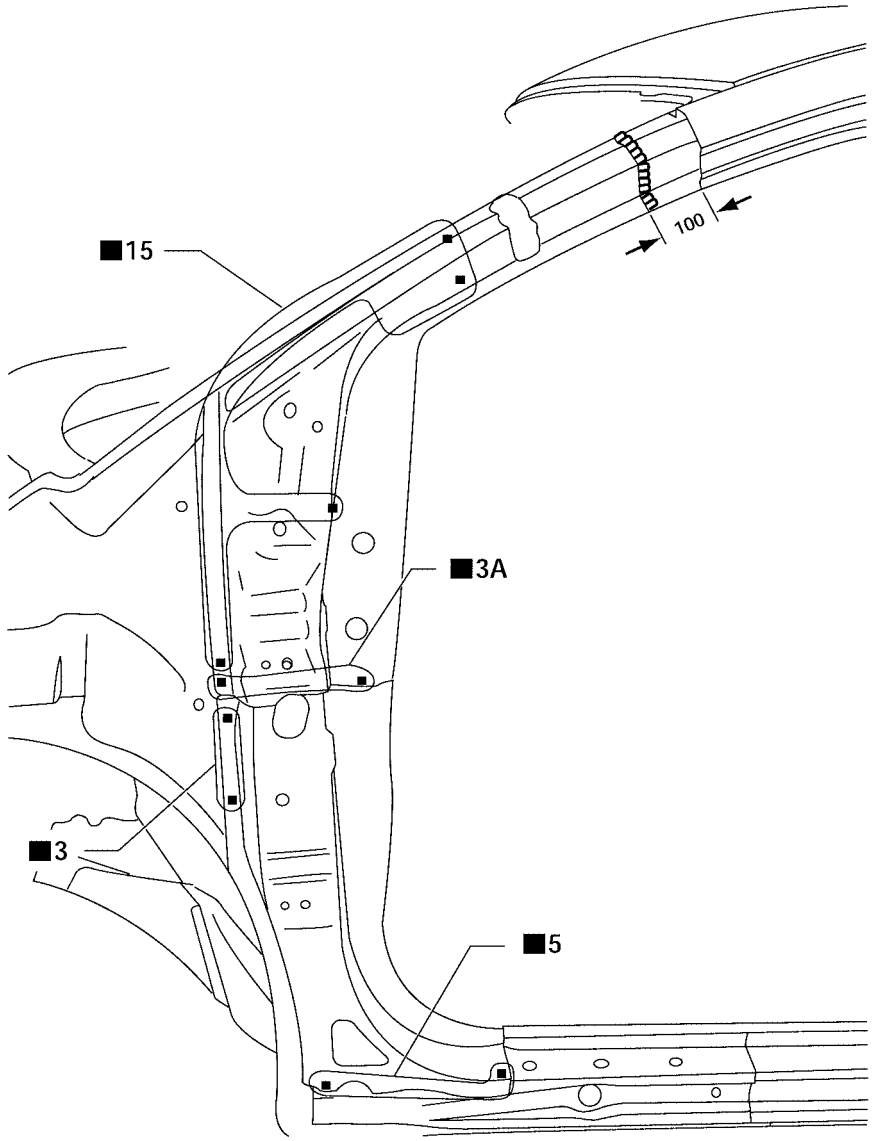


Unit: mm



LIIA0870E

Service Joint

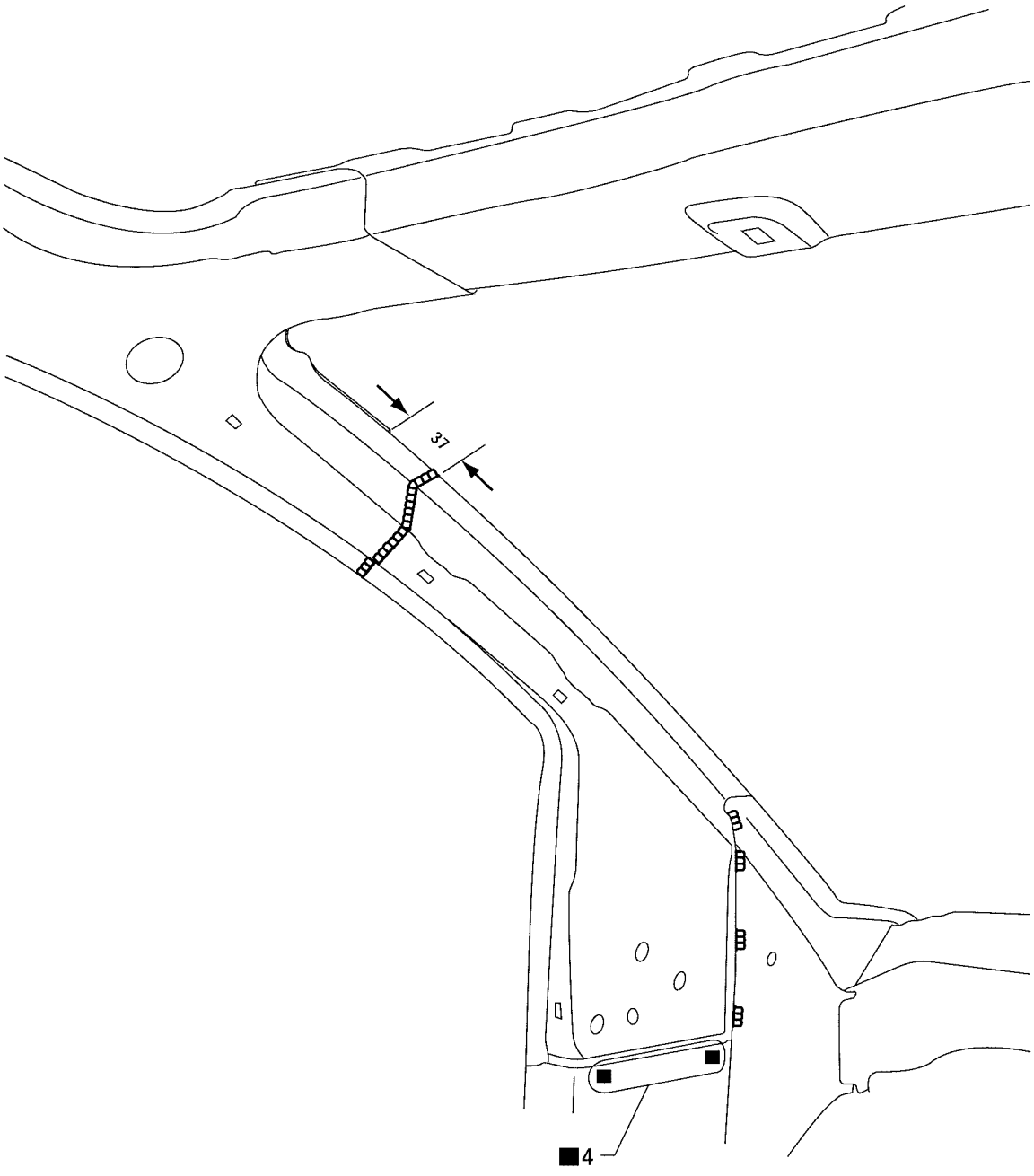


Unit: mm

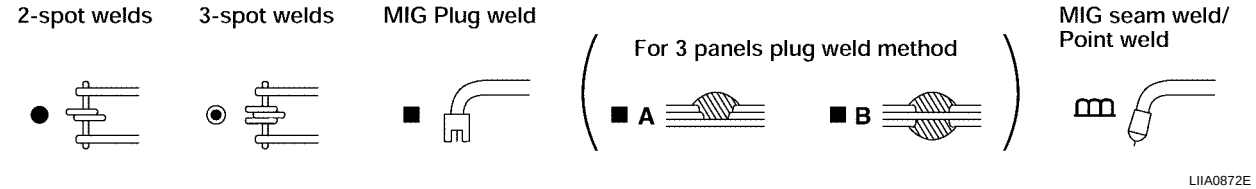
2-spot welds	3-spot welds	MIG Plug weld	For 3 panels plug weld method	MIG seam weld/ Point weld
●	◉	■	■ A ■ B	

LIIA0871E

Service Joint



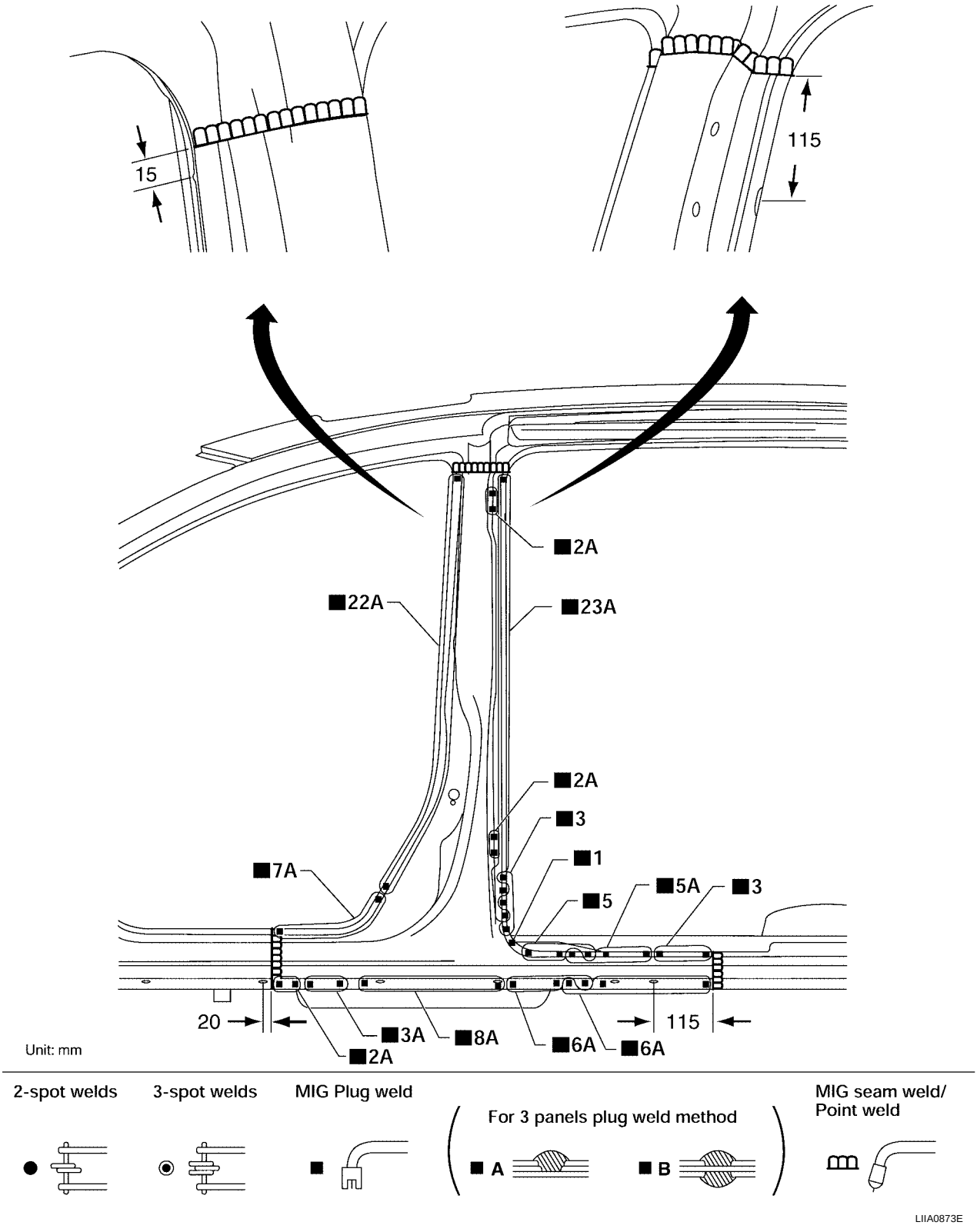
Unit: mm



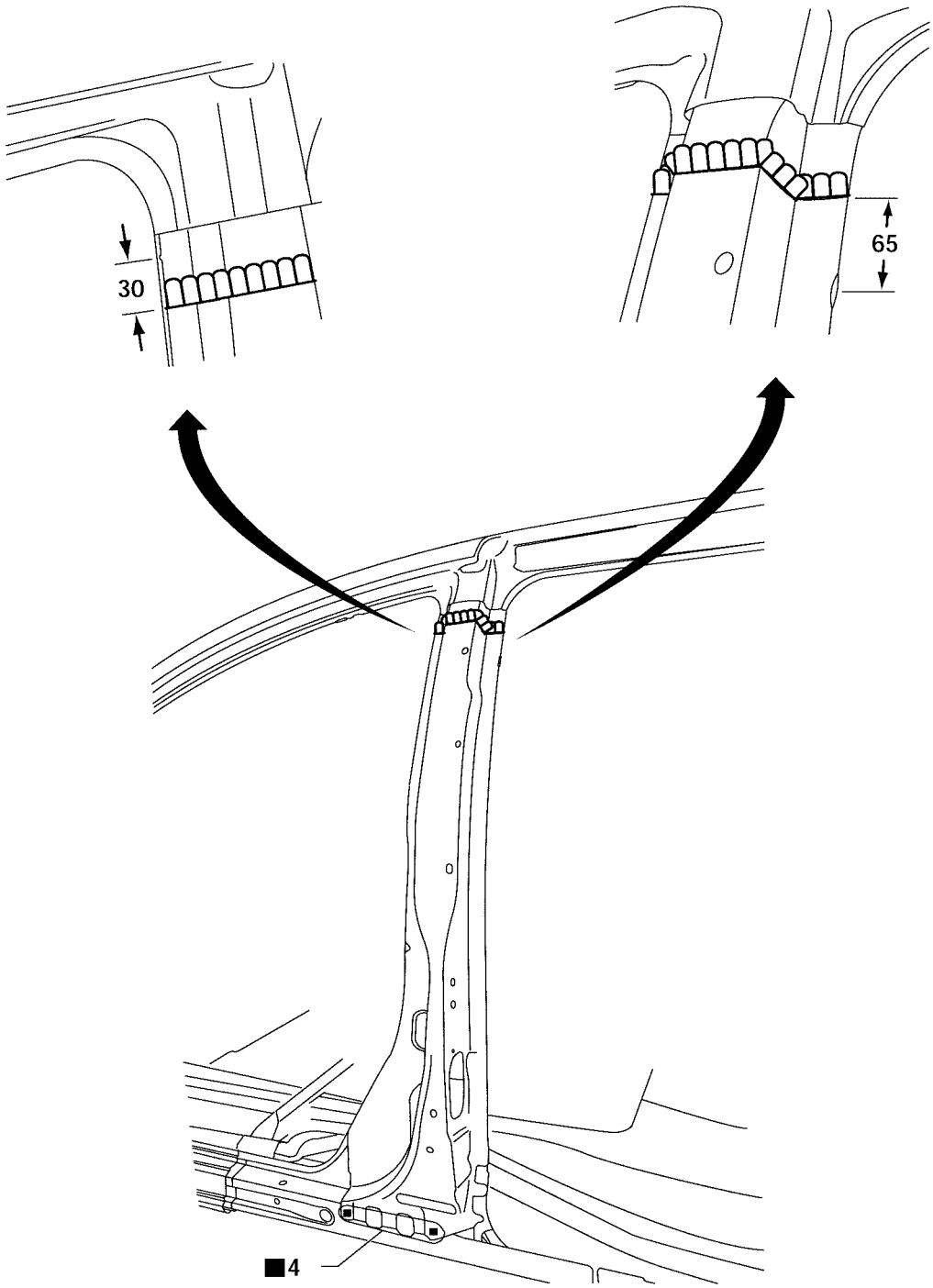
LIIA0872E

CENTER PILLAR

Service Joint



Service Joint

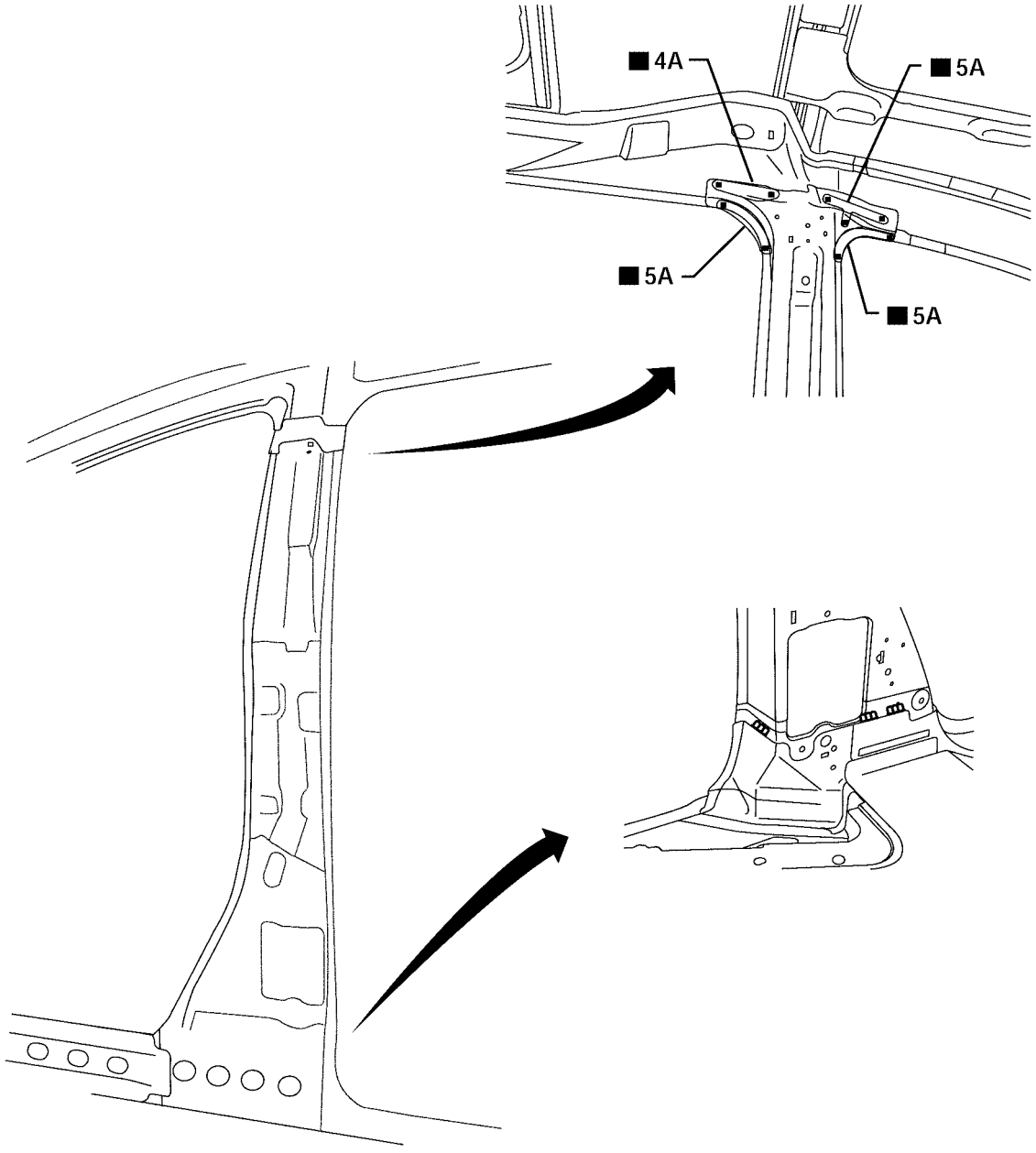


Unit: mm

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

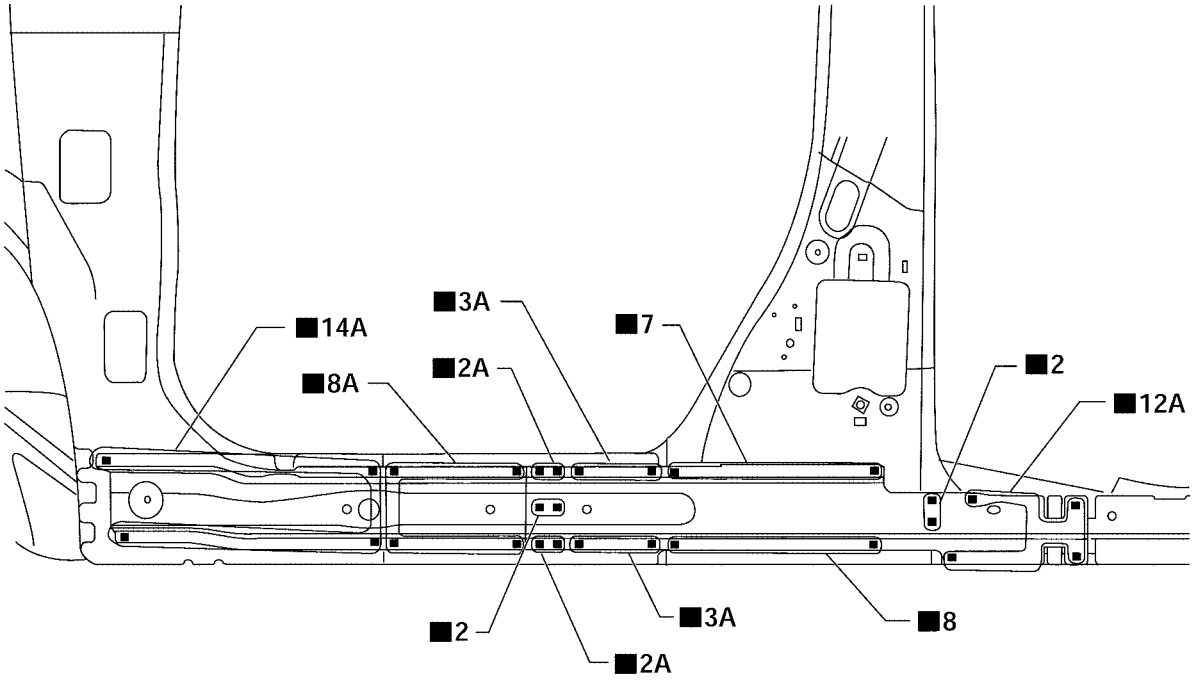


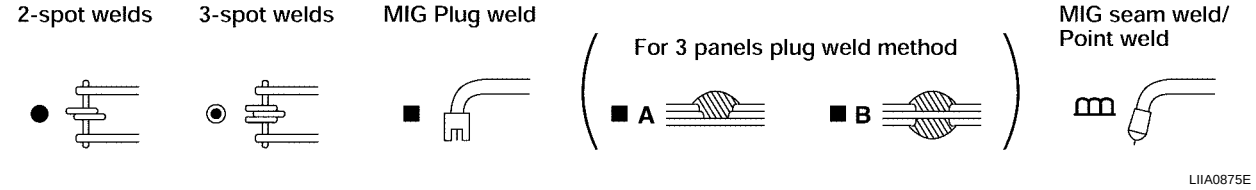
2-spot welds | 3-spot welds | MIG Plug weld | For 3 panels plug weld method (A | B) | MIG seam weld/ Point weld

LIIA0904E

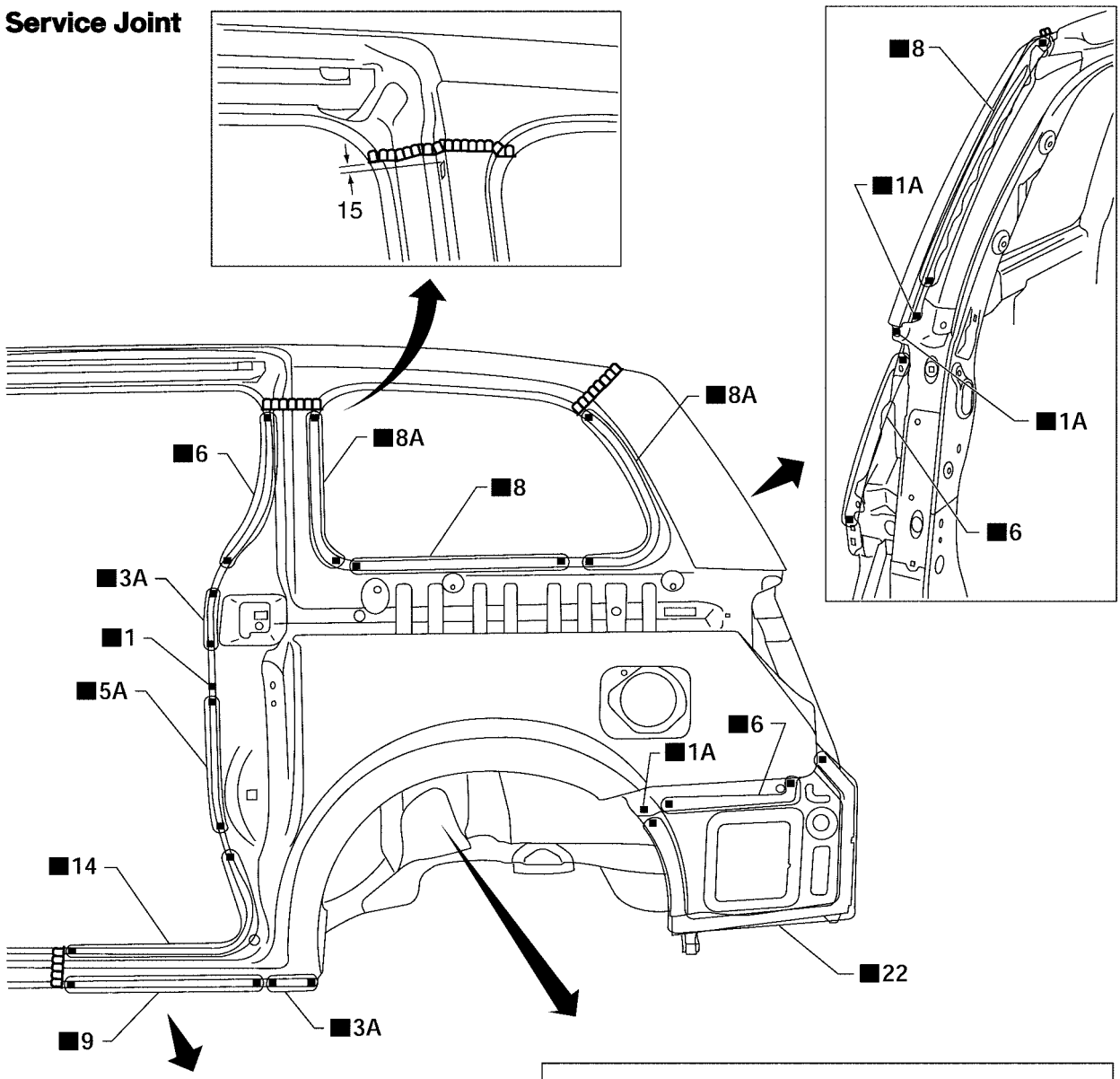
OUTER SILL

Service Joint





REAR FENDER



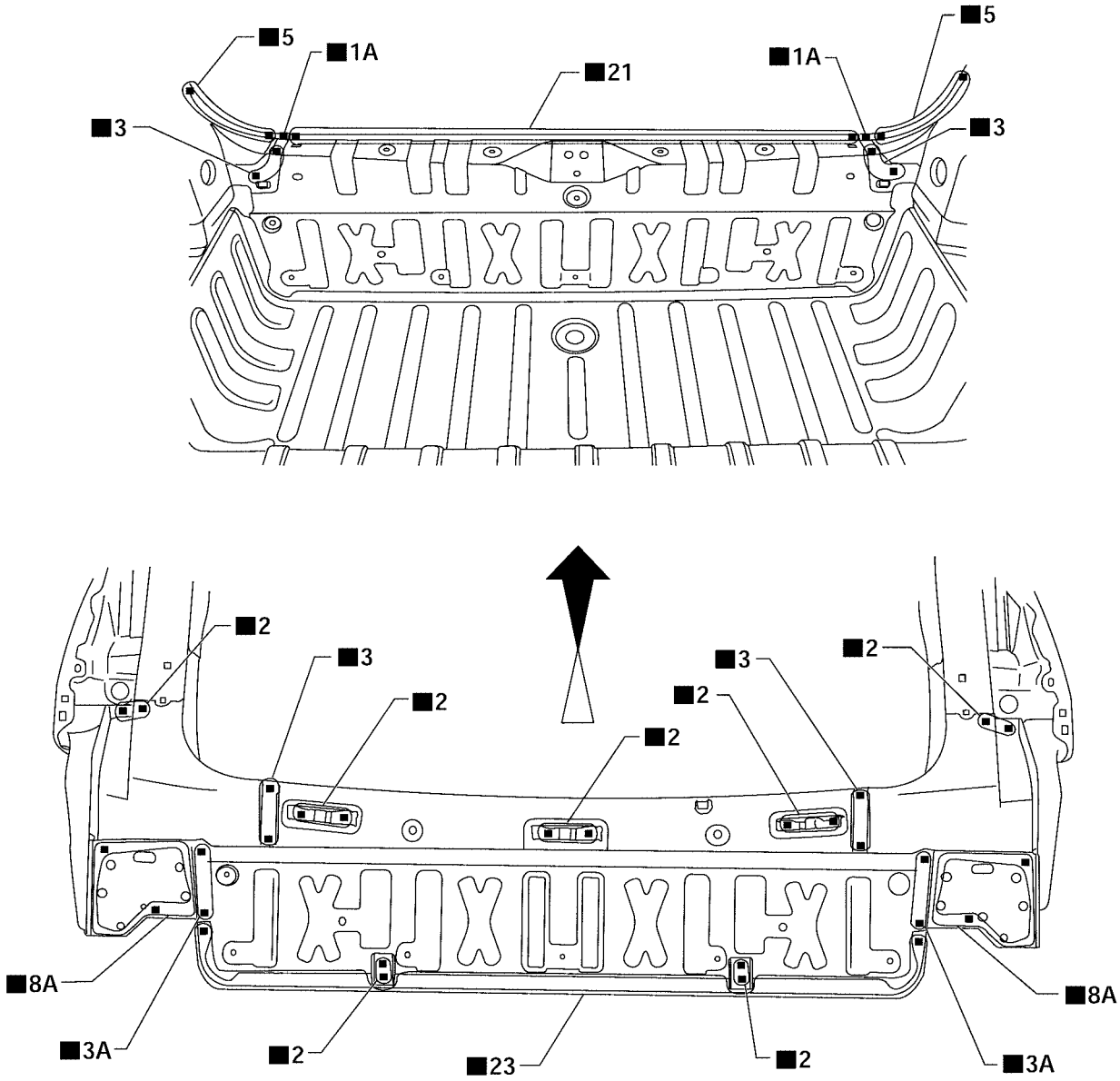
Unit: mm

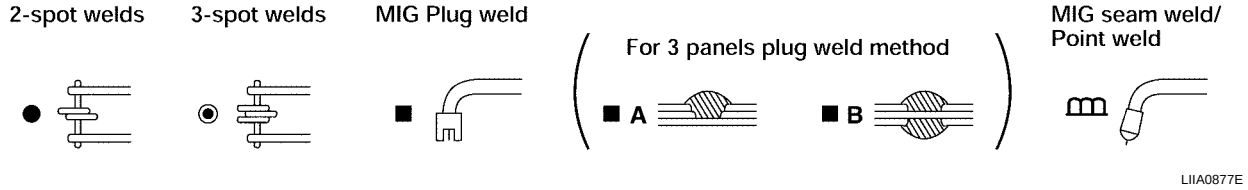
2-spot welds | 3-spot welds | MIG Plug weld | For 3 panels plug weld method (■ A, ■ B) | MIG seam weld/ Point weld

LIIA0876E

REAR PANEL

Service Joint

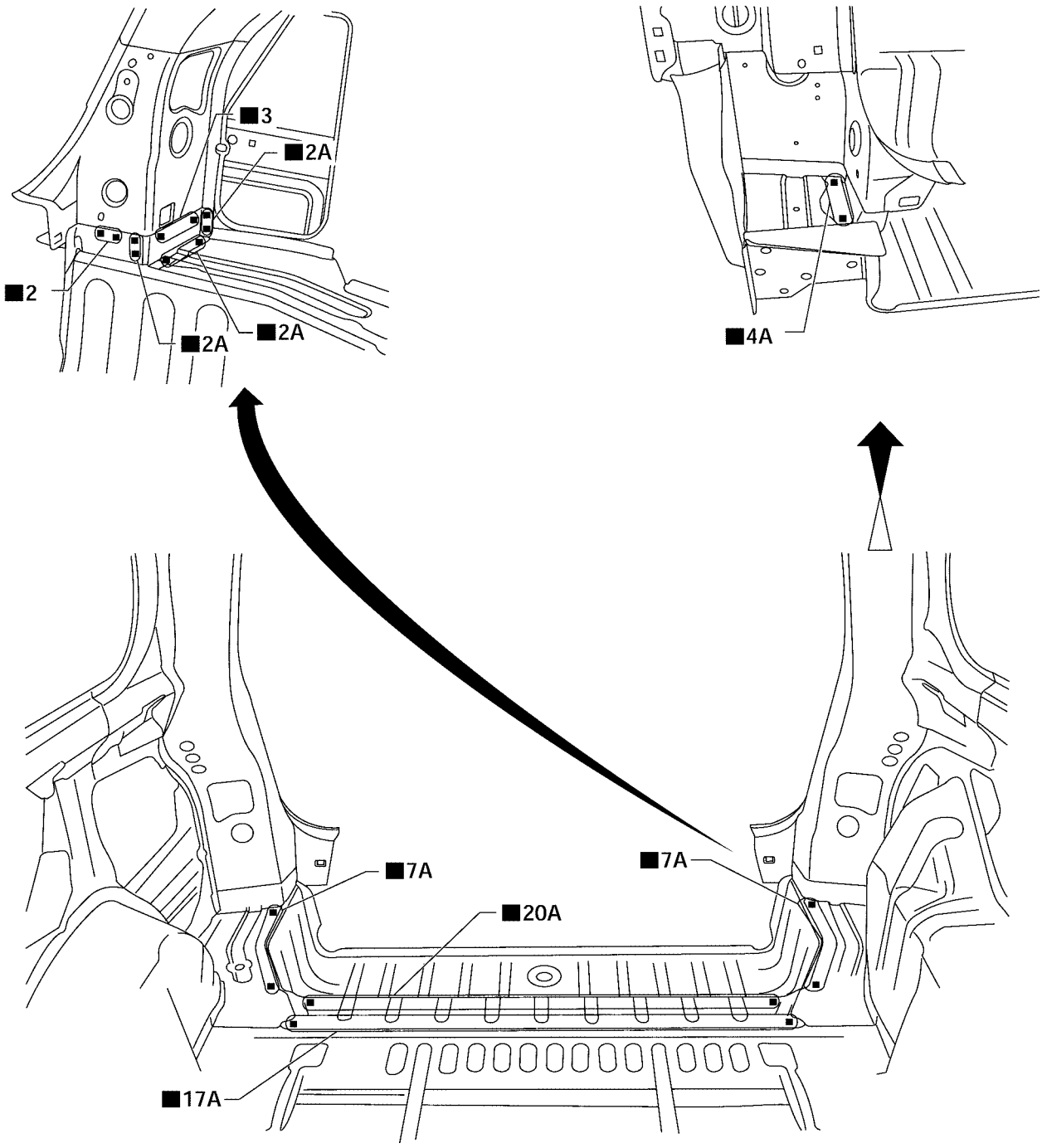




REAR FLOOR REAR

- Work after rear panel has been removed.

Service Joint



2-spot welds | 3-spot welds | MIG Plug weld | For 3 panels plug weld method (A | B) | MIG seam weld/ Point weld

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REAR SIDE MEMBER EXTENSION

- Work after rear panel and rear end crossmember have been removed.

Service Joint