SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

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

NIS0015N

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

NIS0015O

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

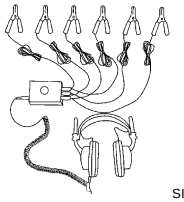
PREPARATION

PFP:00002

Special Service Tools

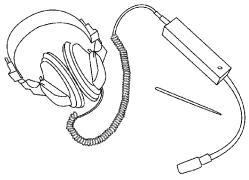
NIS0015Q

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

Commercial Service Tools

NIS0015R

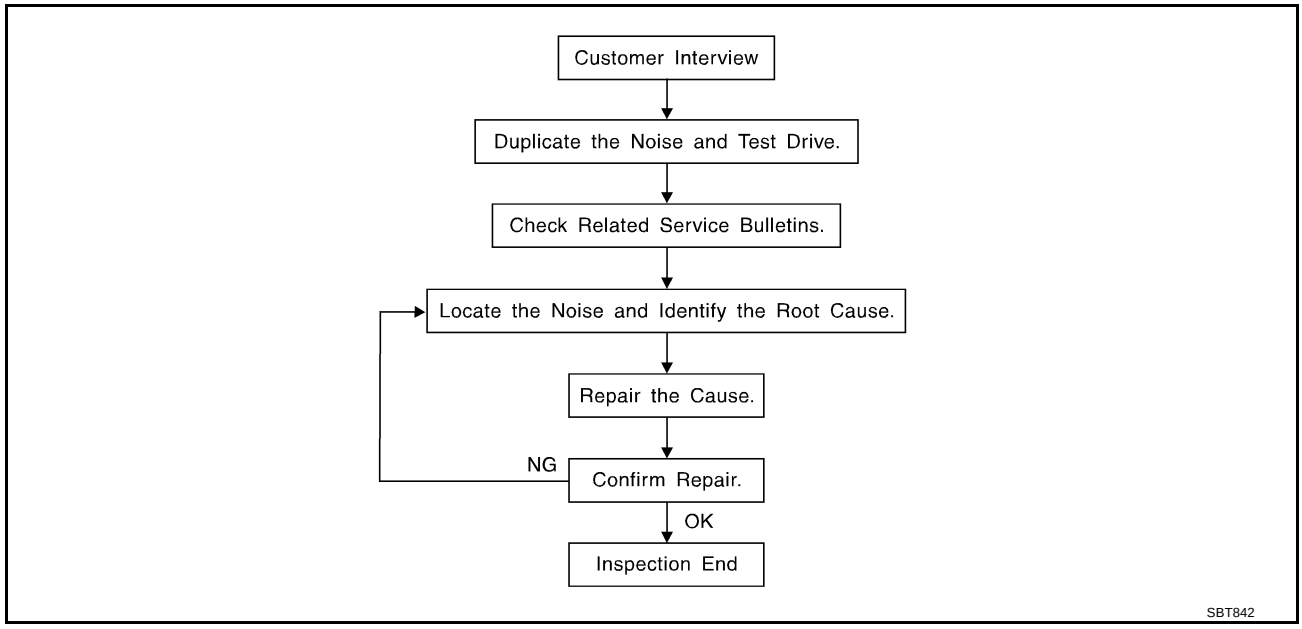
Tool name	Description
Engine ear  SIIA0995E	Locating the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSIS

PFP:00000

Work Flow

NIS0015S



CUSTOMER INTERVIEW

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

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

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when you confirm the repair.
If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

1) Close a door.
2) Tap or push/pull around the area where the noise appears to be coming from.
3) Rev the engine.
4) Use a floor jack to recreate vehicle “twist”.
5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on A/T model).
6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.

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

CHECK RELATED SERVICE BULLETINS

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear and mechanics 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 fastener can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise.
  Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks.
  Refer to BL-9, "Generic Squeak and Rattle Troubleshooting" .

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
  - separate components by repositioning or loosening and retightening the component, if possible.
  - insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A Nissan Squeak and Rattle Kit (J-43980) is available through your authorized Nissan Parts Department.

CAUTION:
Do not use excessive force as many components are constructed of plastic and may be damaged.

NOTE:
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 CLOTHTAPE
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 in place 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

NIS0015T

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 silicon 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 dumpers 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. Sunvisor shaft shaking in the holder
3. Front or rear windshield touching headlining 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.

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.

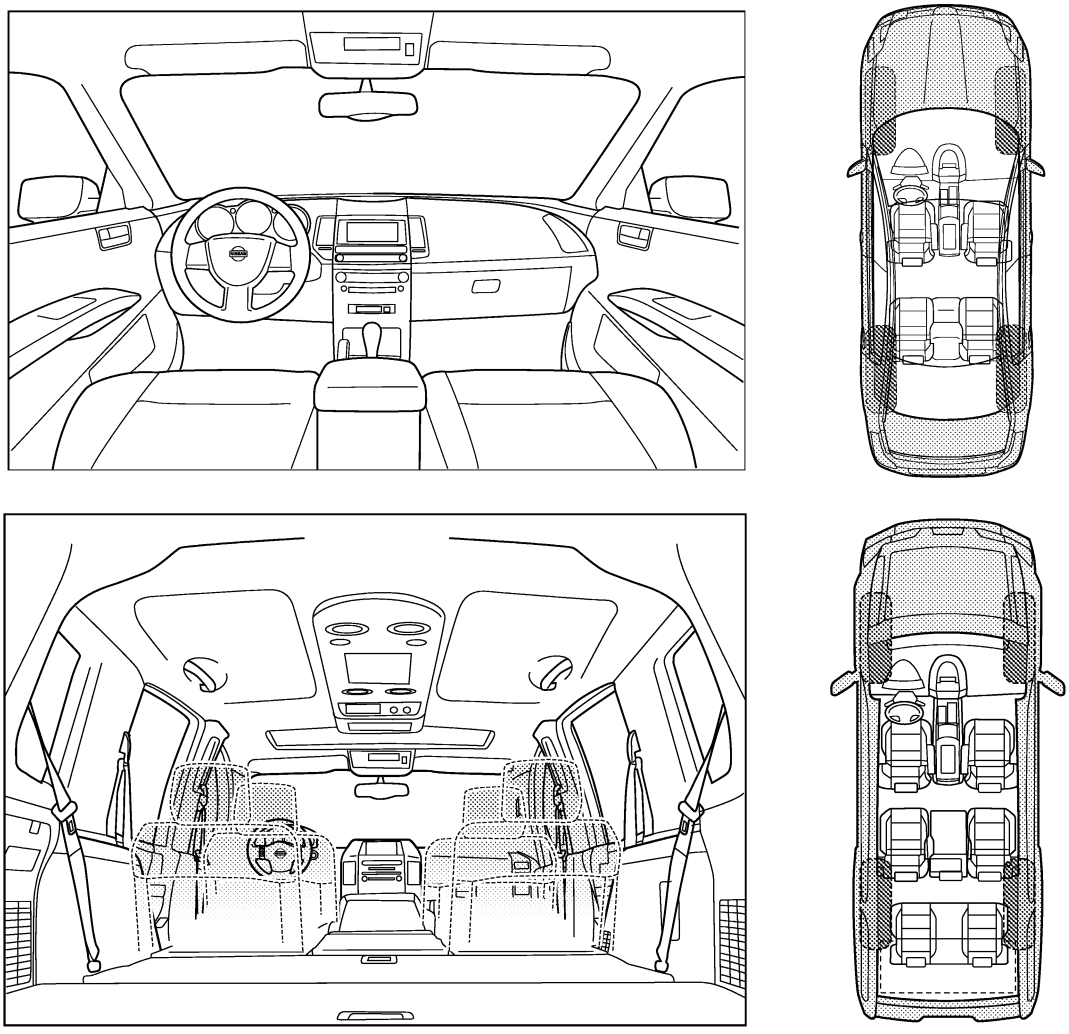
Diagnostic Worksheet

NIS0015U

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



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

PIIB8740E

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

_____

_____

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

- ☐ anytime
- ☐ 1st time in the morning
- ☐ only when it is cold outside
- ☐ only when it is hot outside
- ☐ after sitting out in the rain
- ☐ when it is raining or wet
- ☐ dry or dusty conditions
- ☐ other:

III. WHEN DRIVING:

- ☐ through driveways
- ☐ over rough roads
- ☐ over speed bumps
- ☐ only about ____ mph
- ☐ on acceleration
- ☐ coming to a stop
- ☐ on turns: left, right or either (circle)
- ☐ with passengers or cargo
- ☐ other: _____
- ☐ after driving _____ miles or _____ minutes

IV. WHAT TYPE OF NOISE

- ☐ squeak (like tennis shoes on a clean floor)
- ☐ creak (like walking on an old wooden floor)
- ☐ rattle (like shaking a baby rattle)
- ☐ knock (like a knock at the door)
- ☐ tick (like a clock second hand)
- ☐ thump (heavy, muffled knock noise)
- ☐ buzz (like a bumble bee)

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

_____

_____

_____

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

VIN: _____ Customer Name: _____

W.O.# _____ Date: _____

This form must be attached to Work Order

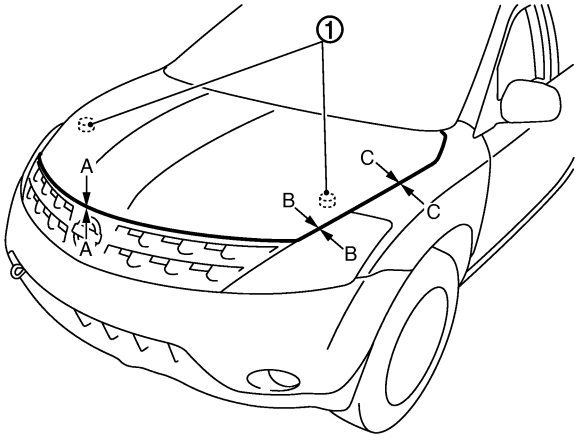
PIIB8742E

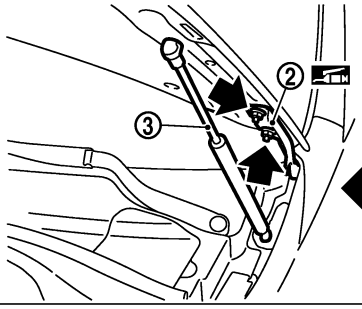
HOOD

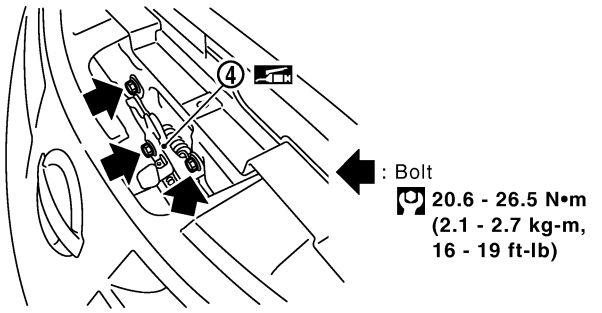
PFP:F5100

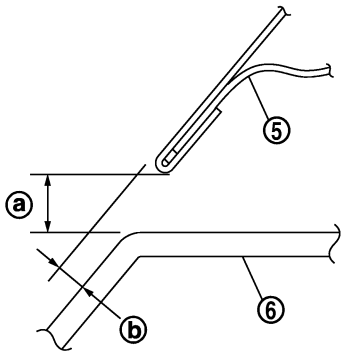
Fitting Adjustment

NIS0015V

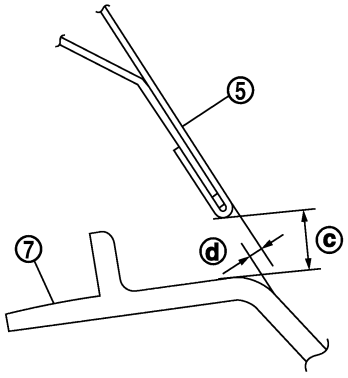




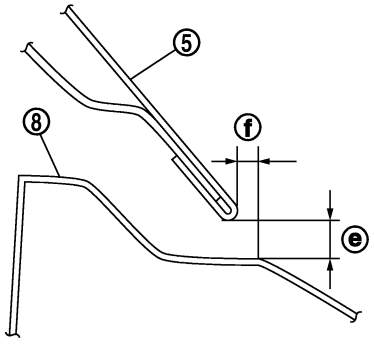




A - A



B - B



C - C

CLEARANCE	ⓐ	4.0 - 8.0 (0.157 - 0.315)
	ⓒ	4.0 - 8.0 (0.157 - 0.315)
	ⓔ	2.3 - 6.3 (0.091 - 0.248)
SURFACE HEIGHT	ⓑ	0.5 - 4.5 (0.020 - 0.177)
	ⓓ	-1.0 - 2.0 (-0.039 - 0.079)
	ⓕ	0.9 - 3.9 (0.035 - 0.154)

Unit: mm (in)

: Apply body grease.

PIIB1217E

1. Bumper rubber
2. Hood hinge
3. Hood stay
4. Hood lock assembly
5. Hood assembly
6. Front grille
7. Headlamp
8. Front fender

LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

1. Remove hood lock assembly, loosen the hood hinge nuts and close the hood.
2. Adjust the lateral and longitudinal clearance, and open the hood to tighten the hood hinge mounting bolts to the specified torque.
3. Install the hood lock temporarily, and align the hood striker and lock so that the centers of striker and lock become vertical viewed from the front, by moving the hood lock laterally.
4. Tighten hood lock mounting bolts to the specified torque.

CAUTION:

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

Hood and headlamp (B–B) : Less than 2.0 mm (0.08in)

FRONT END HEIGHT ADJUSTMENT

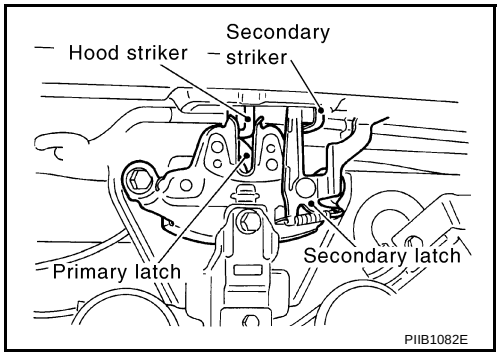
1. Remove the hood lock and adjust the height by rotating the bumper rubber until the hood becomes 1 to1.5 mm (0.04 to 0.059 in) lower than the fender.
2. Temporarily tighten the hood lock, and position it by engaging it with the hood striker. Check the lock and striker for looseness, and tighten the hood lock mounting bolts to the specified torque.

SURFACE HEIGHT ADJUSTMENT

1. Remove hood lock, and adjust the surface height difference of hood, fender and headlamp according to the fitting standard dimension, by rotating RH and LH bumper rubbers.
2. Install hood lock temporarily, and move hood lock laterally until the centers of striker and lock become vertical when viewed from the front.
3. Make sure that the hood lock secondary latch is properly engaged with the secondary striker with hood's own weight.
4. Make sure that the hood lock primary latch is securely engaged with the hood striker with hood's own weight by dropping hood from approx. 200 mm(7.87in) height.

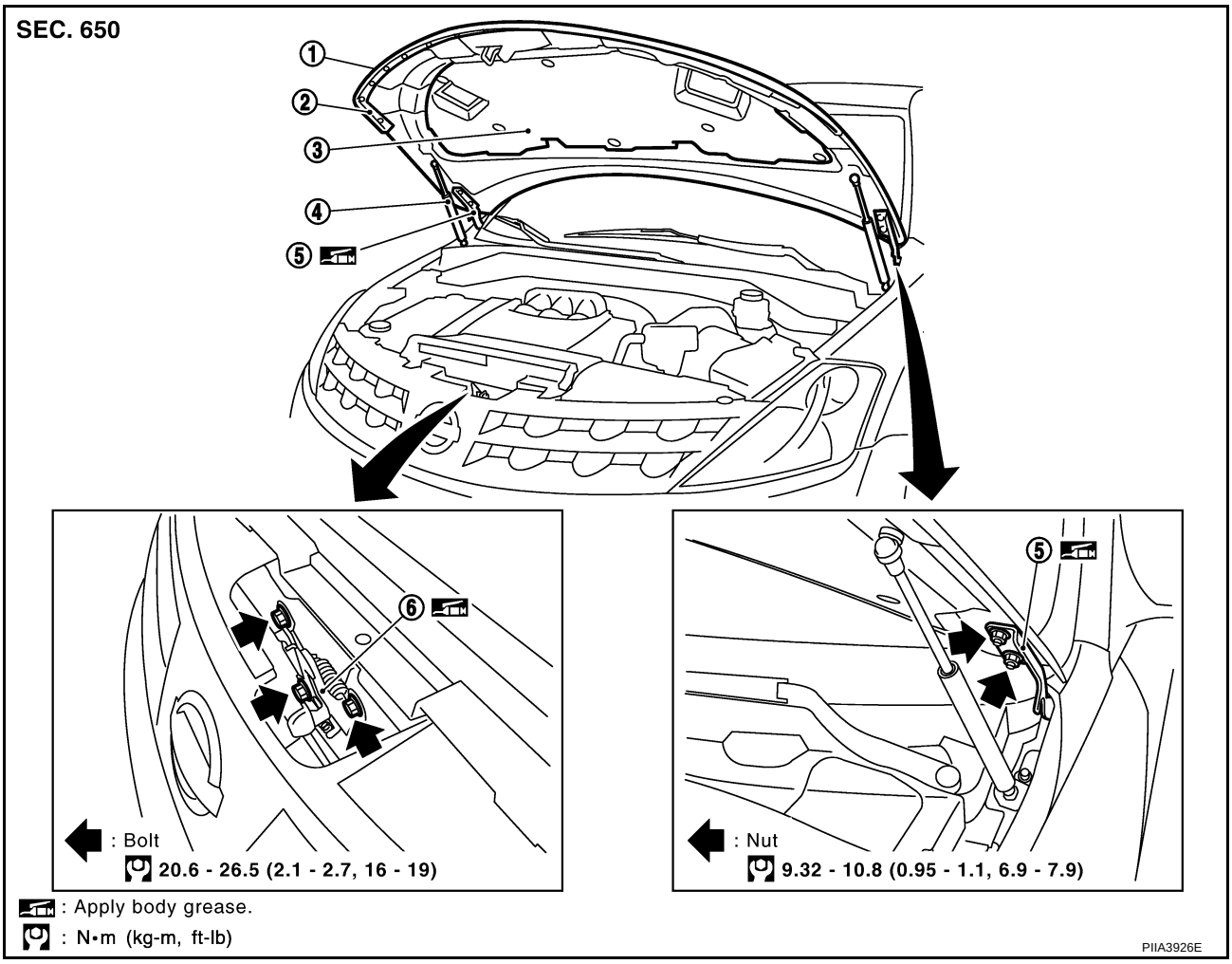
   CAUTION:

   Do not drop hood from a height of 300 mm (11.81 in) or more.
5. Move hood lockup and down until striker smoothly engages the lock when the hood is closed.
6. When pulling the hood opener lever gently, make sure that front end of the hood rises by approximately 20 mm (0.79 in) and that hood striker and hood lock primary latch is disengaged. Also make sure that hood opener returns to the original position.
7. After adjustment, tighten lock bolts to the specified torque.



Removal and Installation of Hood Assembly

NIS0015W

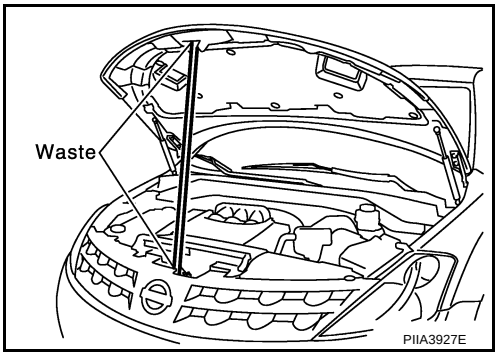


1. Hood assembly
2. Hood front sealing rubber
3. Hood insulator
4. Hood stay
5. Hood hinge
6. Hood lock assembly

REMOVAL

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 hood stays from the stud balls on the body side.
3. Remove the hinge mounting nuts on the hood to remove the hood assembly.

CAUTION:
Operate with two workers, because of its heavy weight.

INSTALLATION

Install in the reverse order of removal.

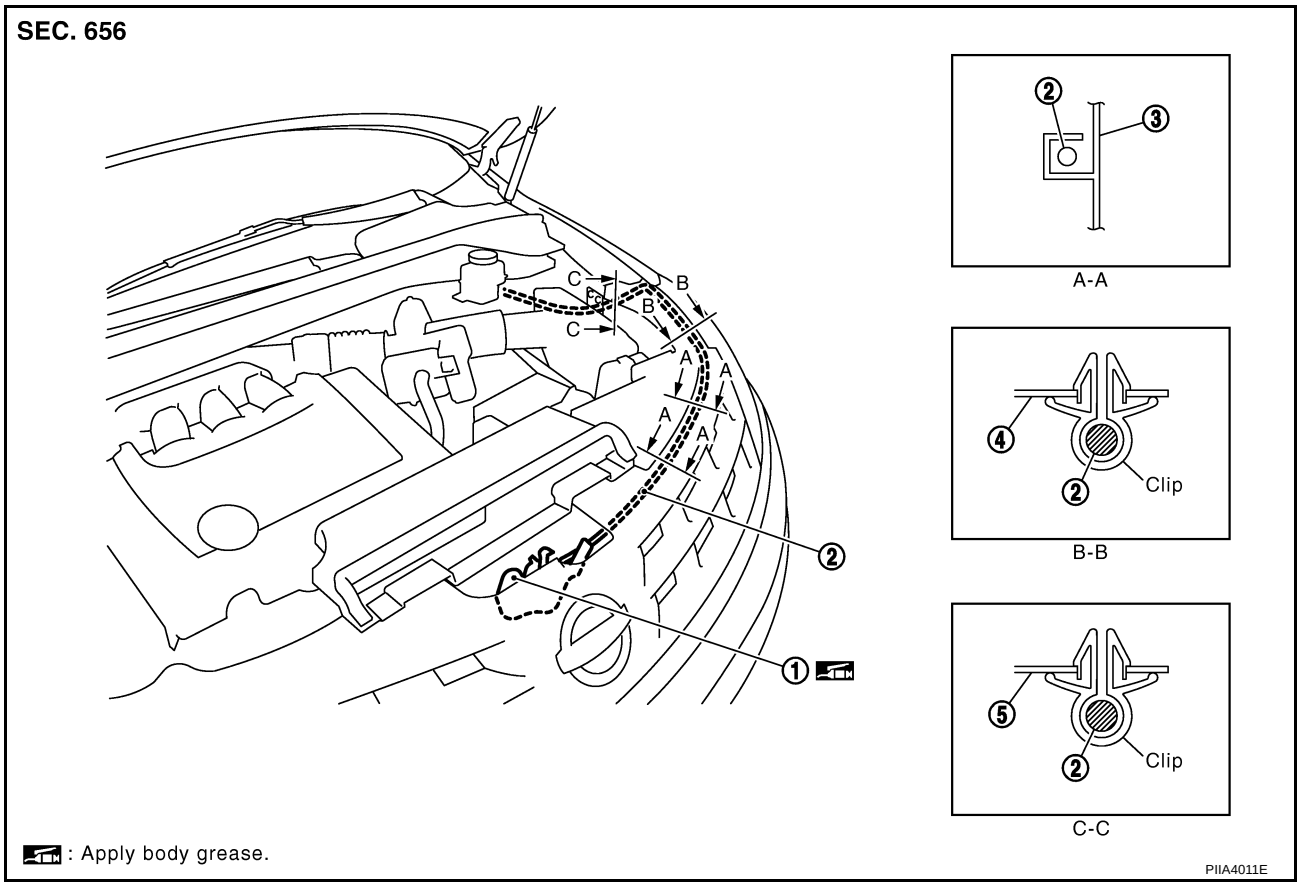
CAUTION:

- **Before installing hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.**

- **After installing, perform hood fitting adjustment. Refer to BL-13, "Fitting Adjustment" .**

Removal and Installation of Hood Lock Control

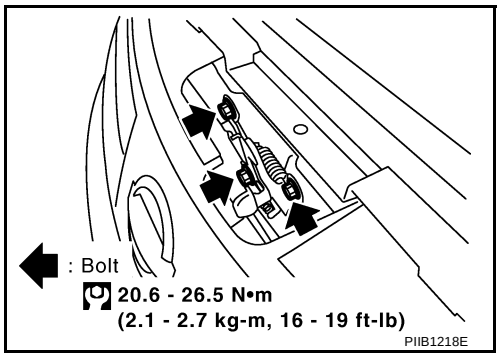
NIS0015X



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

REMOVAL

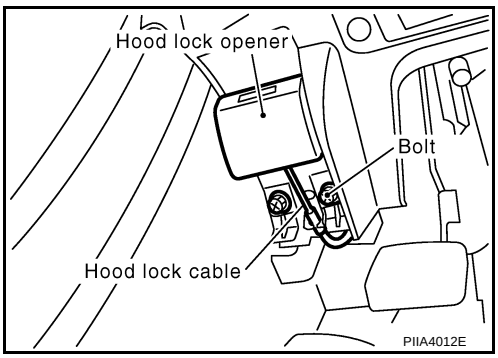
1. Remove the front grill. Refer to EI-19, "Removal and Installation" .
2. Remove the front fender protector (LH). Refer to EI-21, "Removal and Installation" .
3. Remove the hood lock assembly.



4. Disconnect the hood lock cable from the hood lock, and clip it from the radiator core support upper and hood ledge.

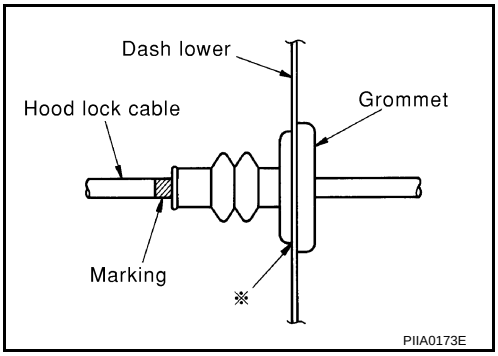
5. Remove the hood lock opener mounting bolts, and remove the hood lock opener.
6. Remove the grommet on the dashboard, and pull the hood lock cable toward the passenger room.

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

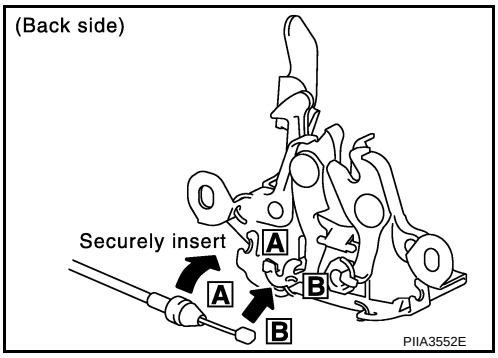


INSTALLATION

1. Pull the hood lock cable through the 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.



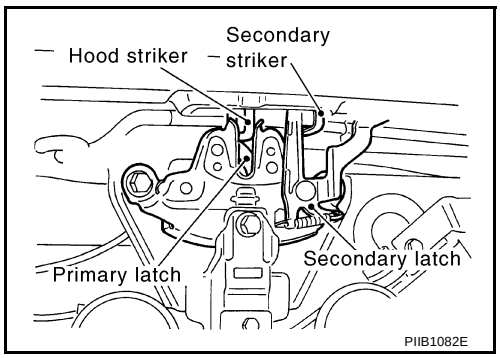
Hood Lock Control Inspection

NIS0015Y

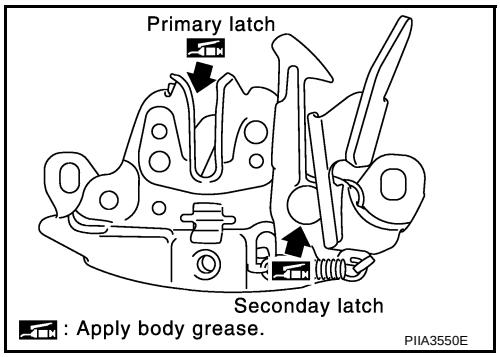
CAUTION:
If the hood lock cable is bent or deformed, replace it.

1. Make sure that the hood lock secondary latch is properly engaged with the secondary striker with hood's own weight.
2. Make sure that the hood lock primary latch is securely engaged with the hood striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.

   CAUTION:
   Do not drop hood from a height of 300 mm (11.81in) or more.



3. When pulling hood opener lever gently, make sure that front end of the hood rises by approximately 20 mm (0.79 in) and that hood striker and hood lock primary latch are disengaged. Also make sure that hood opener returns to the original position.
4. Confirm hood lock is properly lubricated. If necessary, apply grease at the point shown in the figure.

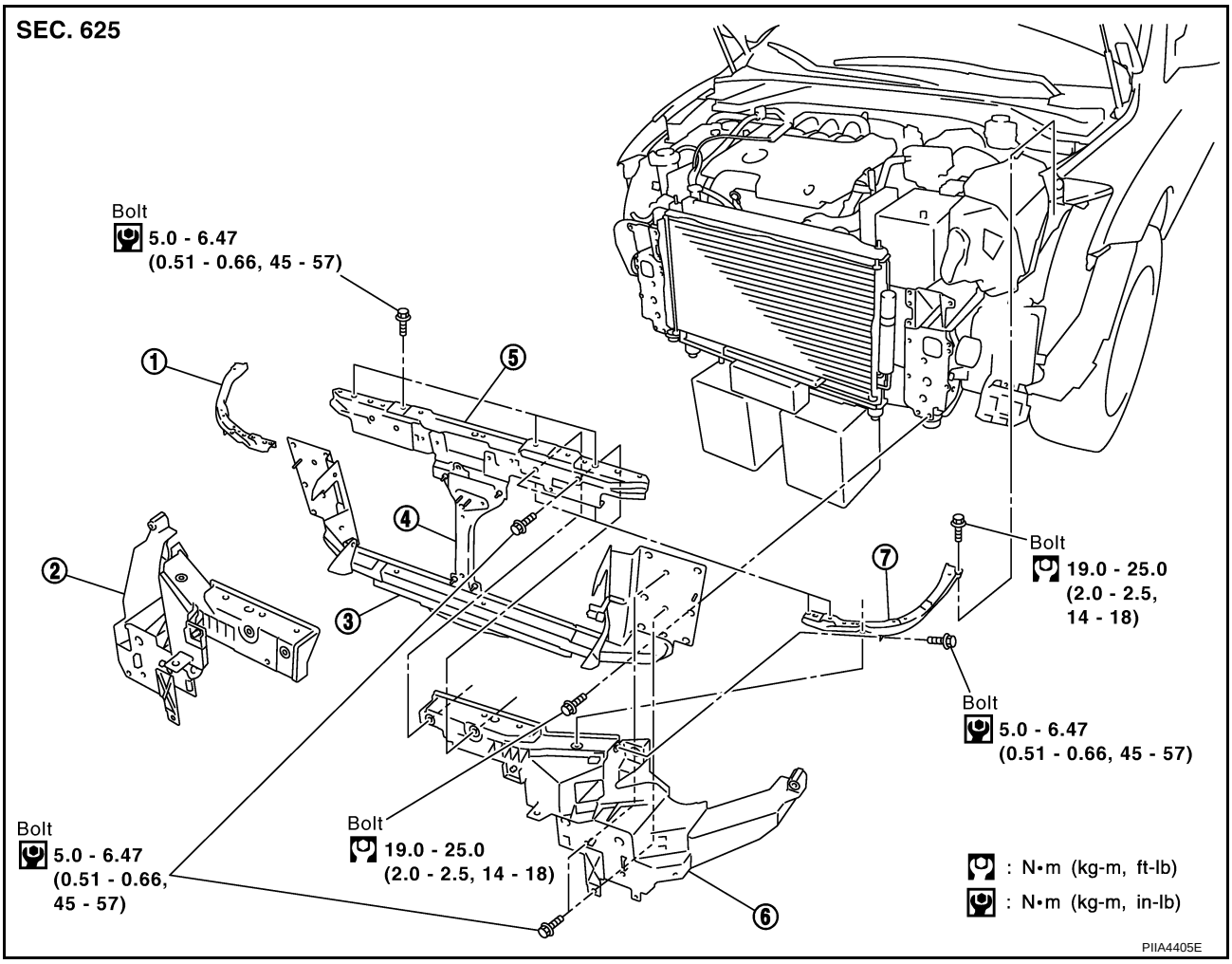


RADIATOR CORE SUPPORT

PFP:62500

Removal and Installation

NIS0015Z

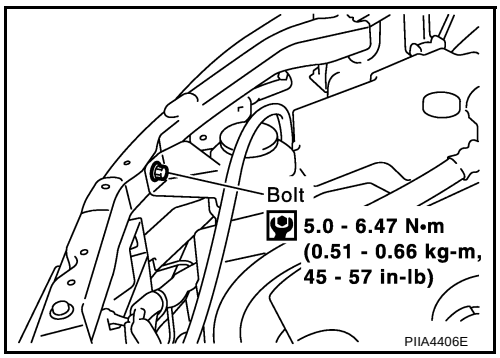


1. Radiator core support upper side (RH)
2. Radiator core support side (RH)
3. Radiator core support lower
4. Radiator core support center
5. Radiator core support upper center
6. Radiator core support side (LH)
7. Radiator core support upper side (LH)

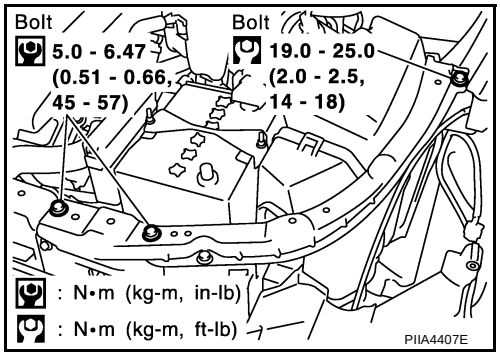
REMOVAL

1. Remove radiator cover grill. Refer to EM-16, "AIR CLEANER AND AIR DUCT" .
2. Remove air duct. Refer to EM-16, "AIR CLEANER AND AIR DUCT" .
3. Remove front bumper, bumper reinforcement and bumper stay. Refer to EI-14, "Removal and Installation" .
4. Remove hood lock assembly, remove hood lock cable. Refer to BL-16, "Removal and Installation of Hood Lock Control" .
5. Remove headlamp (LH/RH). Refer to LT-35, "Removal and Installation" or LT-64, "Removal and Installation" .
6. Remove crash zone sensor. Refer to SRS-51, "Removal and Installation" .
7. Remove the hood switch Refer to BL-204, "Component Parts and Harness Connector Location" .
8. Remove the undercover.
9. Remove the ambient sensor. Refer to ATC-108, "Removal and Installation" .

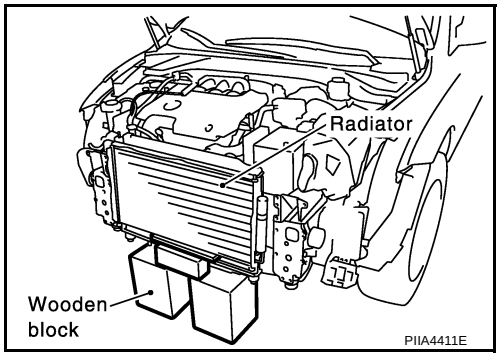
10. Remove mounting bolt washer tank.



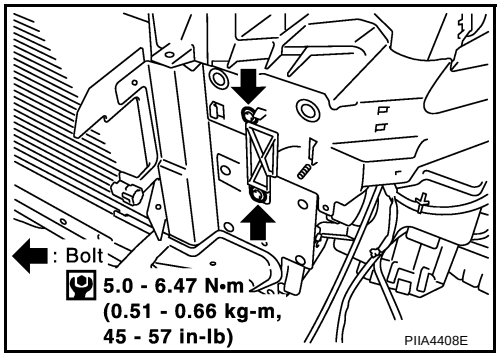
11. Remove mounting harness clip on radiator core support assembly, the harness is separate.
12. Remove the radiator core support upper side.



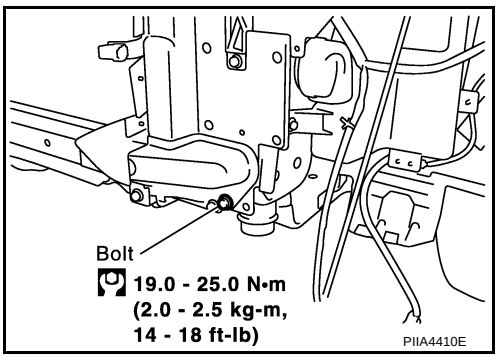
CAUTION:
Put a wooden block under the radiator assembly to prevent the radiator assembly from falling.



13. Remove the radiator core support center.
14. Remove the radiator core support upper center.
15. Remove the radiator core support side.



16. Remove radiator core support assembly.
17. After removing radiator core support assembly, the following parts are separated.
    Radiator core support lower



INSTALLATION

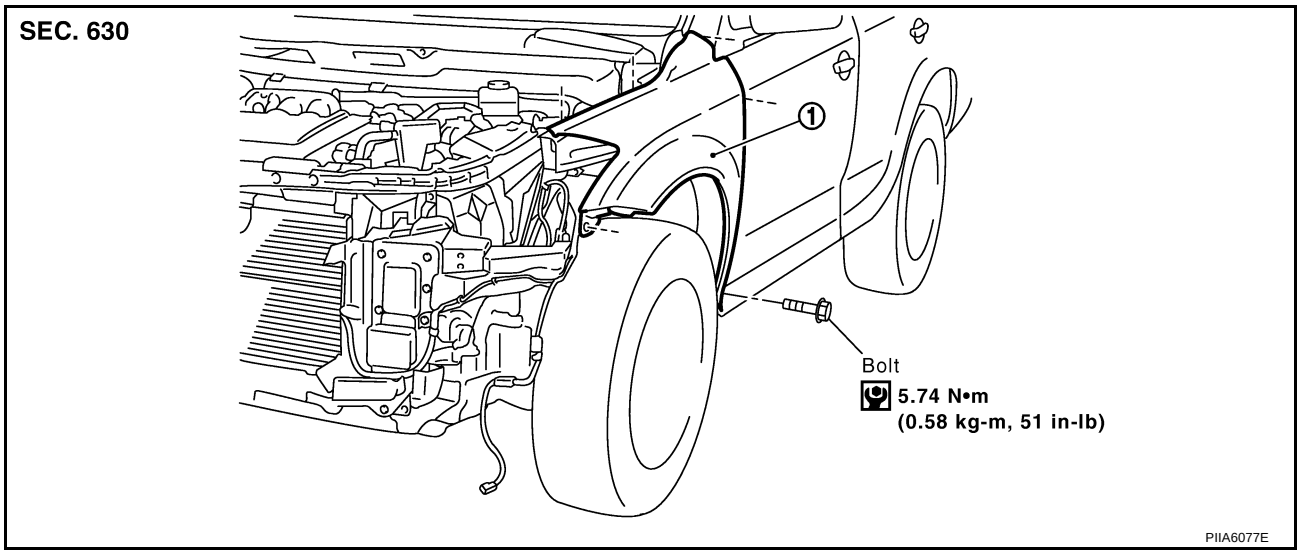
Install in the reverse order of removal.

FRONT FENDER

PFP:63100

Removal and Installation

NIS00160



1. Front fender

REMOVAL

1. Remove the front bumper. Refer to EI-14, "Removal and Installation" .
2. Remove the headlamp. Refer to LT-35, "Removal and Installation" or LT-64, "Removal and Installation" .
3. Remove the front fender protector. Refer to EI-21, "Removal and Installation" .
4. Remove the mounting bolt and remove the front fender.

CAUTION:

While removing use a shop cloth to protect body from damaging.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

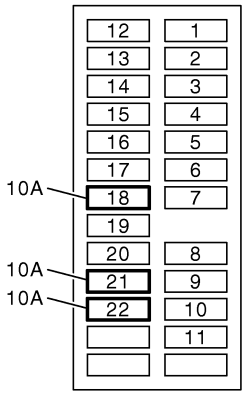
- **After installing, apply touch-up paint (the body color) onto the head of the front fender mounting bolts.**
- **After installing, check front fender adjustment. Refer to BL-13, "Fitting Adjustment" and BL-169, "Fitting Adjustment" .**

POWER DOOR LOCK SYSTEM

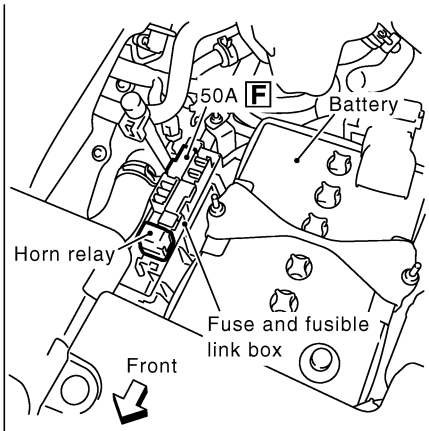
PFP:24814

Component Parts and Harness Connector Location

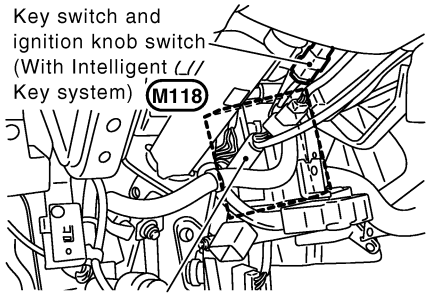
NIS00161

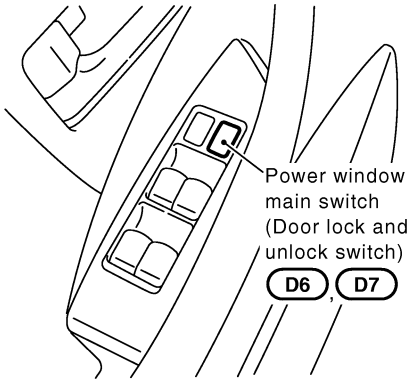


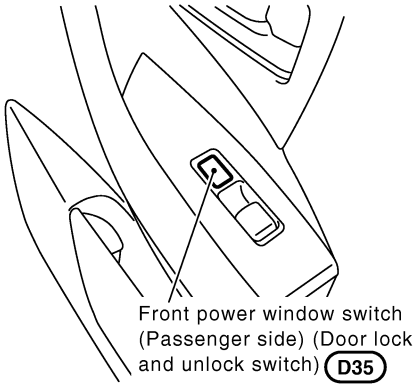
Fuse block (J/B) fuse layout



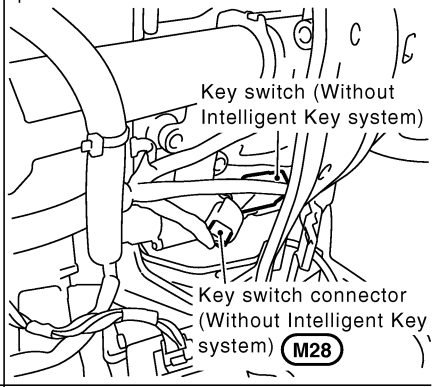
View with instrument lower driver panel removed

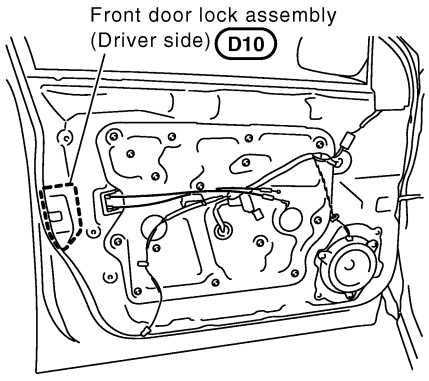


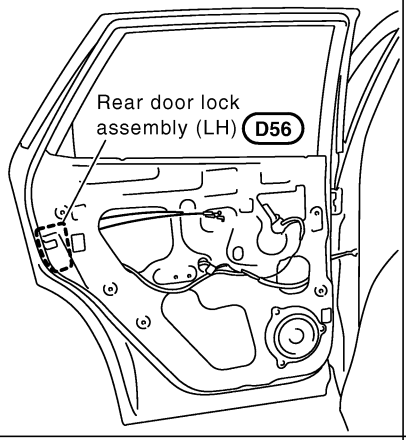


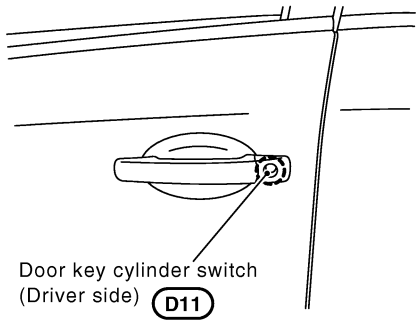


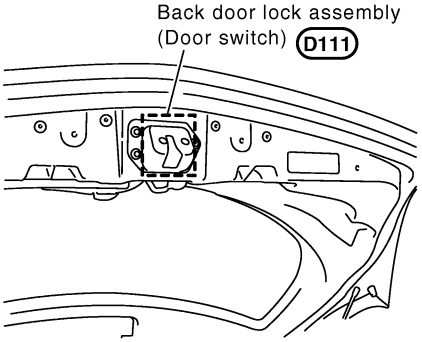
View with the instrument lower driver panel removed



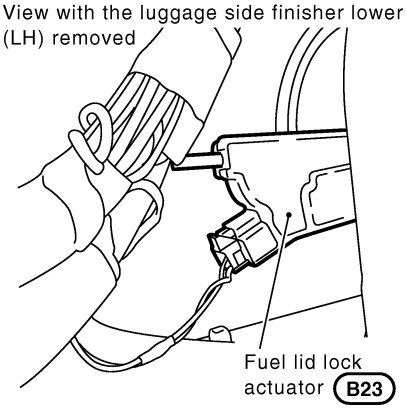




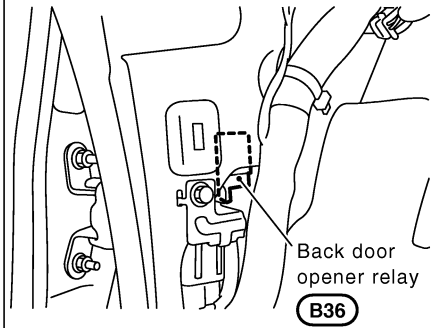




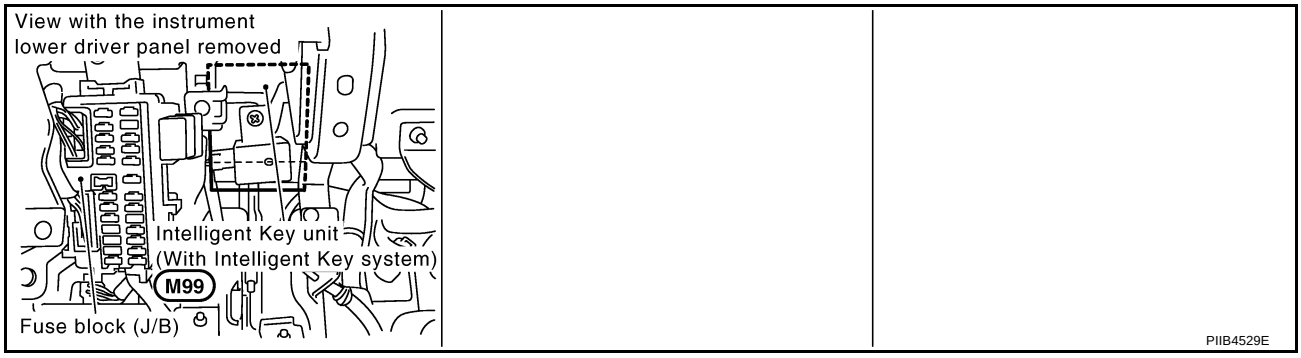
View with the luggage side finisher lower (LH) removed



View with dash side finisher (LH) removed



PIIB4525E



System Description

NIS00162

Power is supplied at all times

- through 50A fusible link (letter **F** , located in the fuse and fusible link box)
- to BCM terminal 55
- through 10A fuse [No. 18, located in the fuse block (J/B)]
- to BCM terminal 42
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to key switch terminal 3 (without Intelligent Key system)
- through 10A fuse [No. 22, located in the fuse block (J/B)]
- to key switch and ignition knob switch terminal 1 and 3 (with Intelligent Key system)

When key switch is ON (key is inserted in ignition key cylinder), power is supplied

- through key switch terminal 4 (without Intelligent Key system)
- through key switch and ignition switch terminal 4 (with Intelligent Key system)
- to BCM terminal 37.

Ground is supplied

- to BCM terminal 52
- through body grounds M14 and M78.

When front door switch (driver side) is ON (door is OPEN), ground is supplied

- to BCM terminal 62
- through front door switch (driver side) terminals 4 and 5
- through body grounds M14 and M78.

When front door switch (passenger side) is ON (door is OPEN), ground is supplied

- to BCM terminal 12
- through front door switch (passenger side) terminals 4 and 5
- through body grounds M14 and M78.

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

- to BCM terminal 63
- through rear door switch LH terminals 4 and 5
- through body grounds B7 and B20.

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

- to BCM terminal 13
- through rear door switch RH terminals 4 and 5
- through body grounds B105 and B116.

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

- to BCM terminal 58
- through back door switch terminals 3 and 4
- through body grounds B7 and B20.

When door is locked and unlocked with power window main switch (door lock and unlock switch), ground is supplied

- to CPU of power window main switch
- through power window main switch (door lock and unlock switch) terminal 17
- through body grounds M14 and M78.

Then power window main switch (door lock and unlock switch) operation signal is supplied.

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

When door is locked and unlocked with front power window switch (passenger side) (door lock and unlock switch), ground is supplied

- to CPU of front power window switch (passenger side)
- through front power window switch (passenger side) (door lock and unlock switch) terminal 11
- through body grounds M14 and M78.

Then front power window switch (passenger side) (door lock and unlock switch) operation signal is supplied

- to BCM terminal 22
- through front power window switch (passenger side) (door lock and unlock switch) terminal 16.

When door is locked with door key cylinder switch, ground is supplied (without Intelligent Key system)

- to power window main switch (door lock and unlock switch) terminal 4
- through door key cylinder switch terminals 1 and 5
- through body grounds M14 and M78.

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

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

When door is locked with door key cylinder switch, ground is supplied (with Intelligent Key system)

- to power window main switch (door lock and unlock switch) terminal 4
- through door key cylinder switch terminals 1 and 2
- through body grounds M14 and M78.

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

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

When the door is unlocked with door key cylinder switch, ground is supplied (without Intelligent Key system)

- to power window main switch (door lock and unlock switch) terminal 6
- through front door key cylinder switch (driver side) terminal 6 and 5
- through grounds M14 and M78.

Then door key cylinder switch operation signal (unlock) is supplied

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

When the door is unlocked with door key cylinder switch, ground is supplied (with Intelligent Key system)

- to power window main switch (door lock and unlock switch) terminal 6
- through front door key cylinder switch (driver side) terminal 3 and 2
- through grounds M14 and M78.

Then door key cylinder switch operation signal (unlock) is supplied

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

BCM is connected to power window main switch and front power window switch (passenger side) as serial link.

FUEL LID OPERATION

When door is unlocked with power window main switch (door lock and unlock switch), fuel lid lock actuator is unlocked.
Ground is supplied

- to BCM terminal 44

- through fuel lid lock actuator terminal 1 and 2
- through BCM terminal 50.

In this condition, fuel lid can be opened if it is pushed

POWER WINDOW SERIAL LINK

Power window main switch, front power window switch (passenger side) and BCM transmit and receive the signal by power window serial link.
The under mentioned signal is transmitted from power window main switch to BCM.

- Door lock and unlock switch signal.

The under mentioned signal is transmitted from front power window switch (passenger side) to BCM.

- Door lock and unlock switch signal.

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

Functions Available By Operating the Door Key Cylinder Switch

- Interlocked with the locking operation of door key cylinder, door lock actuators of all doors and fuel lid lock actuator are locked.
- When door key cylinder is unlocked, door lock actuator driver side 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 and fuel lid lock actuator are unlocked.

Unlock mode can be changed using “DOOR LOCK-UNLOCK SET” mode in “WORK SUPPORT”.
Refer to BL-40, "Work Support" .

Key Reminder Door System

When door lock and unlock switch is operated to lock doors with ignition key put in ignition key cylinder and any door (include back door) open, all door lock actuators are locked and then unlocked.
Key reminder mode can be changed using “ANTI-LOCK OUT SET” mode in “WORK SUPPORT”.
Refer to BL-40, "Work Support" .

CAN Communication System Description

NIS00163

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

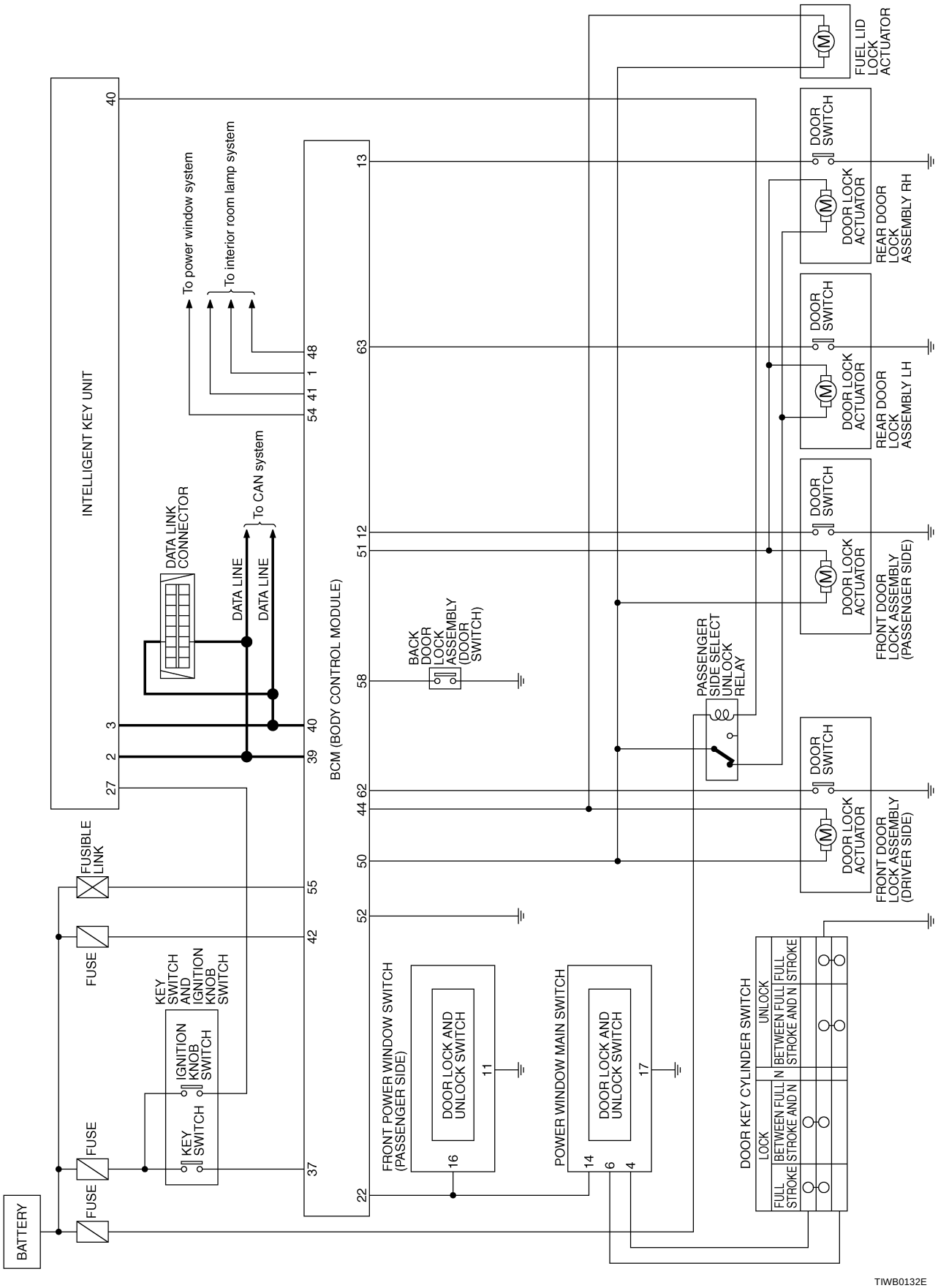
CAN Communication Unit

NIS00164

Refer to LAN-49, "CAN System Specification Chart" .

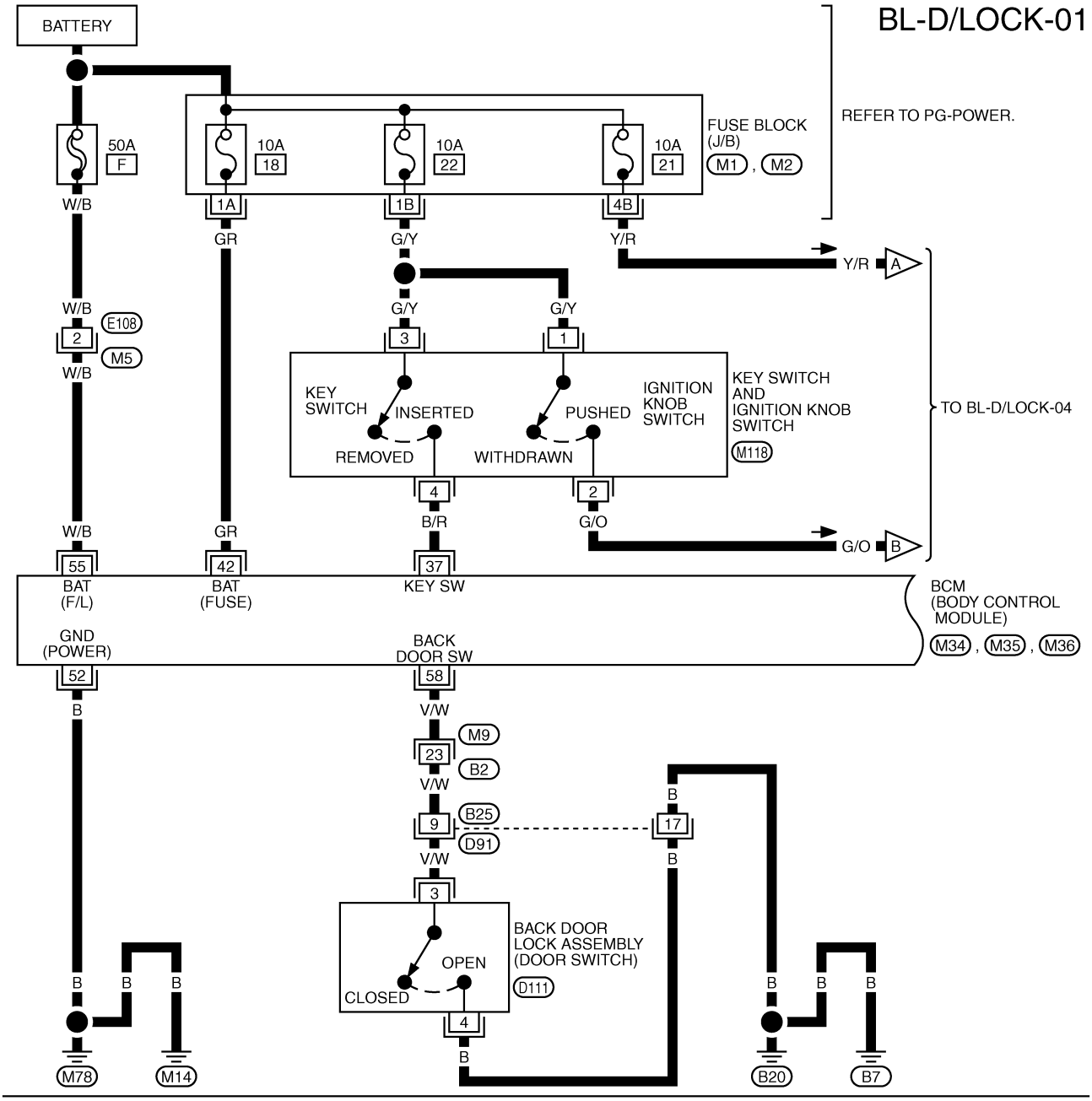
Schematic / With Intelligent Key

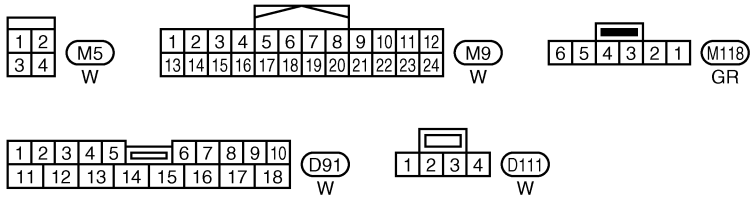
NIS00165



Wiring Diagram -D/LOCK- / With Intelligent Key

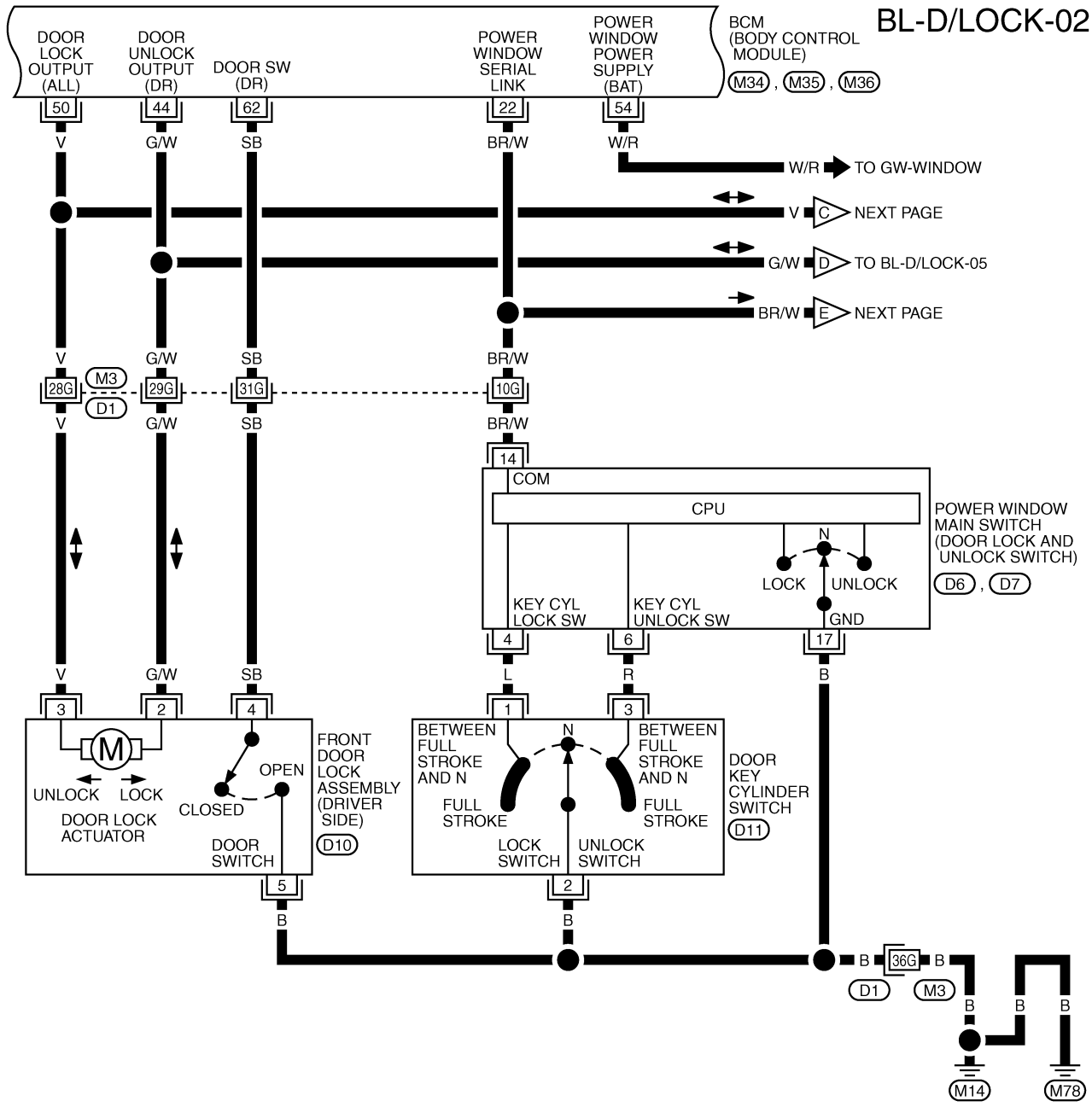
NIS00166





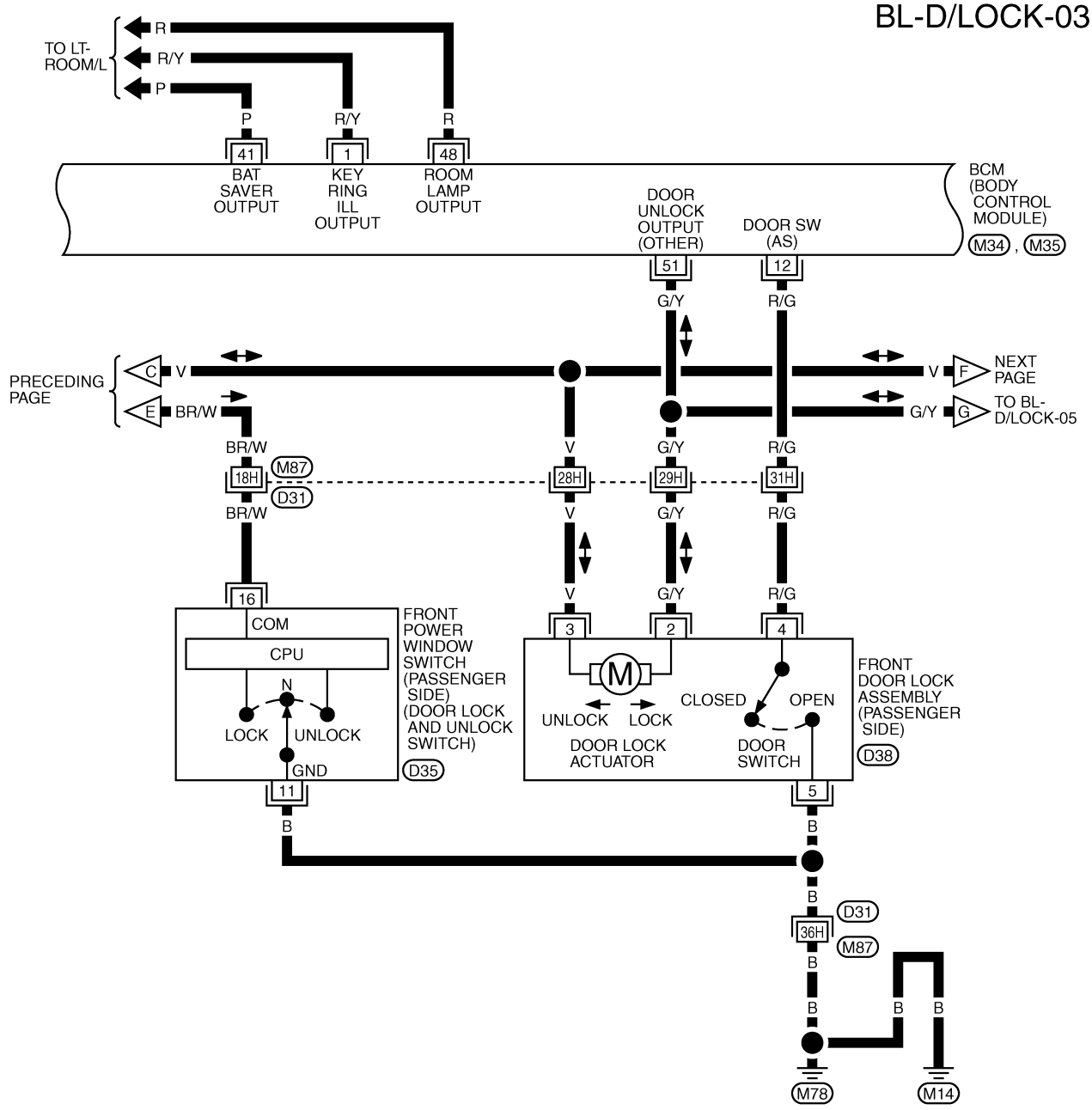
REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-
JUNCTION BOX (J/B)
M34 , M35 , M36
-ELECTRICAL UNITS

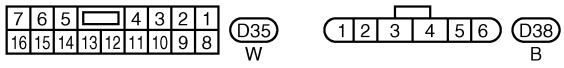
TIWB0769E


BL-D/LOCK-02
DOOR LOCK OUTPUT (ALL)
DOOR UNLOCK OUTPUT (DR)
DOOR SW (DR)
POWER WINDOW SERIAL LINK
POWER WINDOW POWER SUPPLY (BAT)
BCM (BODY CONTROL MODULE)
M34 , M35 , M36
50
44
62
22
54
V
G/W
SB
BR/W
W/R
W/R TO GW-WINDOW
V C NEXT PAGE
G/W D TO BL-D/LOCK-05
BR/W E NEXT PAGE
28G
M3
D1
29G
31G
10G
14
COM
CPU
POWER WINDOW MAIN SWITCH (DOOR LOCK AND UNLOCK SWITCH)
D6 , D7
N
LOCK
UNLOCK
GND
KEY CYL LOCK SW
KEY CYL UNLOCK SW
4
6
17
L
R
B
3
2
4
1
3
M
UNLOCK
LOCK
OPEN
CLOSED
DOOR LOCK ACTUATOR
DOOR SWITCH
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)
D10
BETWEEN FULL STROKE AND N
FULL STROKE
LOCK SWITCH
UNLOCK SWITCH
DOOR KEY CYLINDER SWITCH
D11
5
2
36G
M14
M78
7 6 5 4 3 2 1
16 15 14 13 12 11 10 9 8
D6
W
19 18 17
D7
6 5 4 3 2 1
D10
B
3 2 1
D11
BR
REFER TO THE FOLLOWING.
D1 -SUPER MULTIPLE JUNCTION (SMJ)
M34 , M35 , M36
-ELECTRICAL UNITS

TIWB0134E

BL-D/LOCK-03



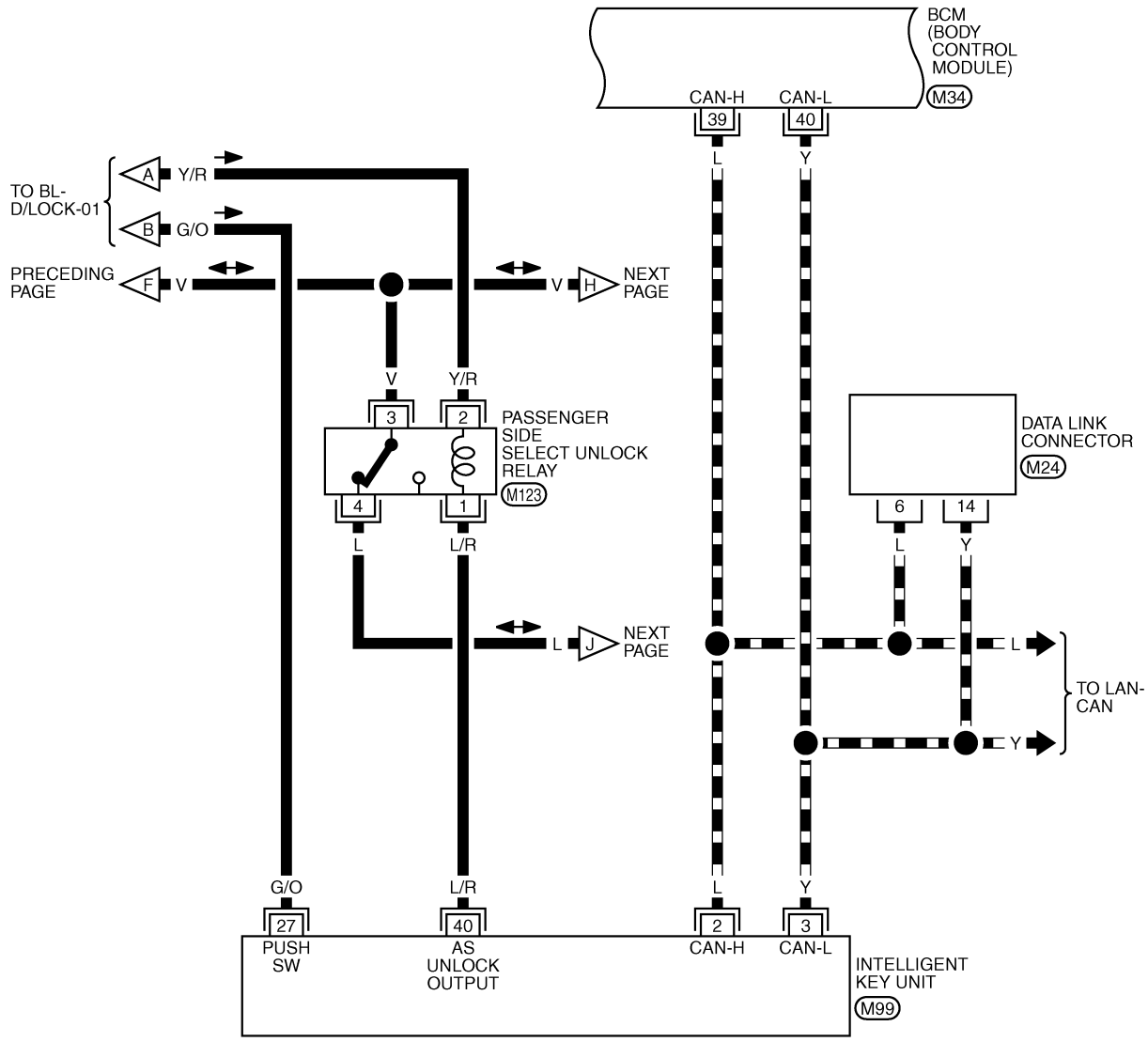


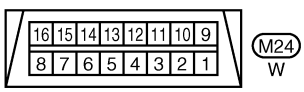
REFER TO THE FOLLOWING.
D31 -SUPER MULTIPLE JUNCTION (SMJ)
M34 , M35 -ELECTRICAL UNITS

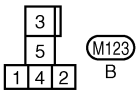
TIWB0135E

BL-D/LOCK-04

: DATA LINE



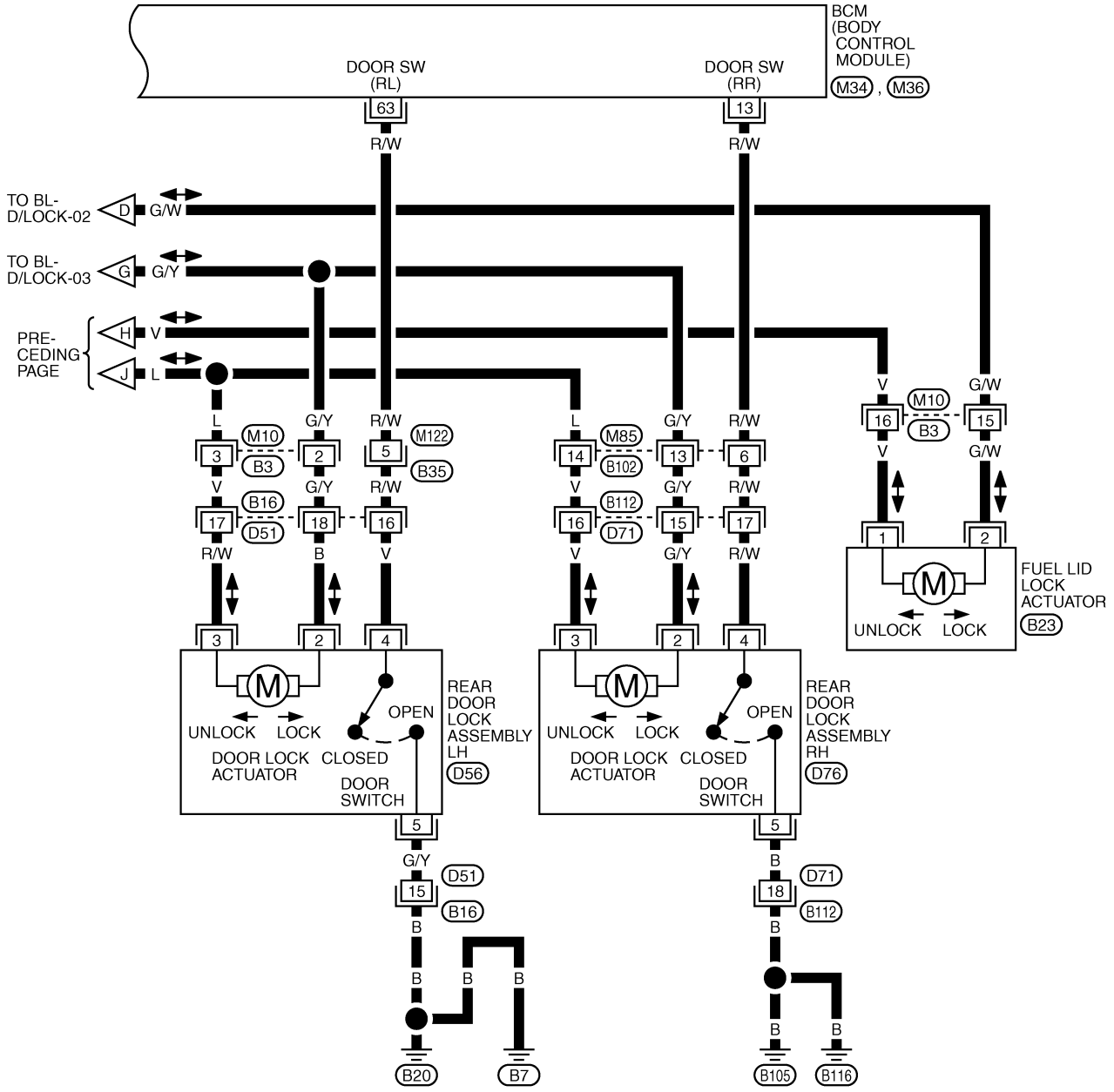


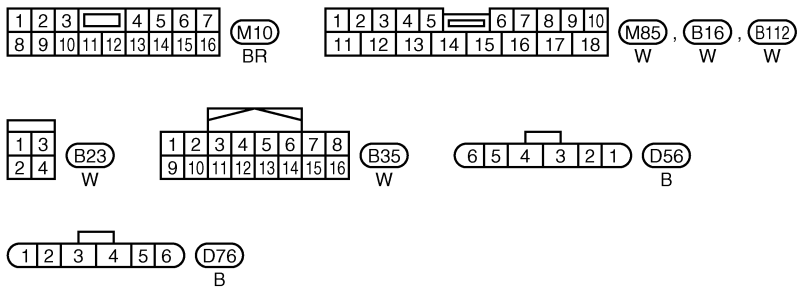


REFER TO THE FOLLOWING.
M34 , M99 -ELECTRICAL UNITS

TIWB0136E

BL-D/LOCK-05



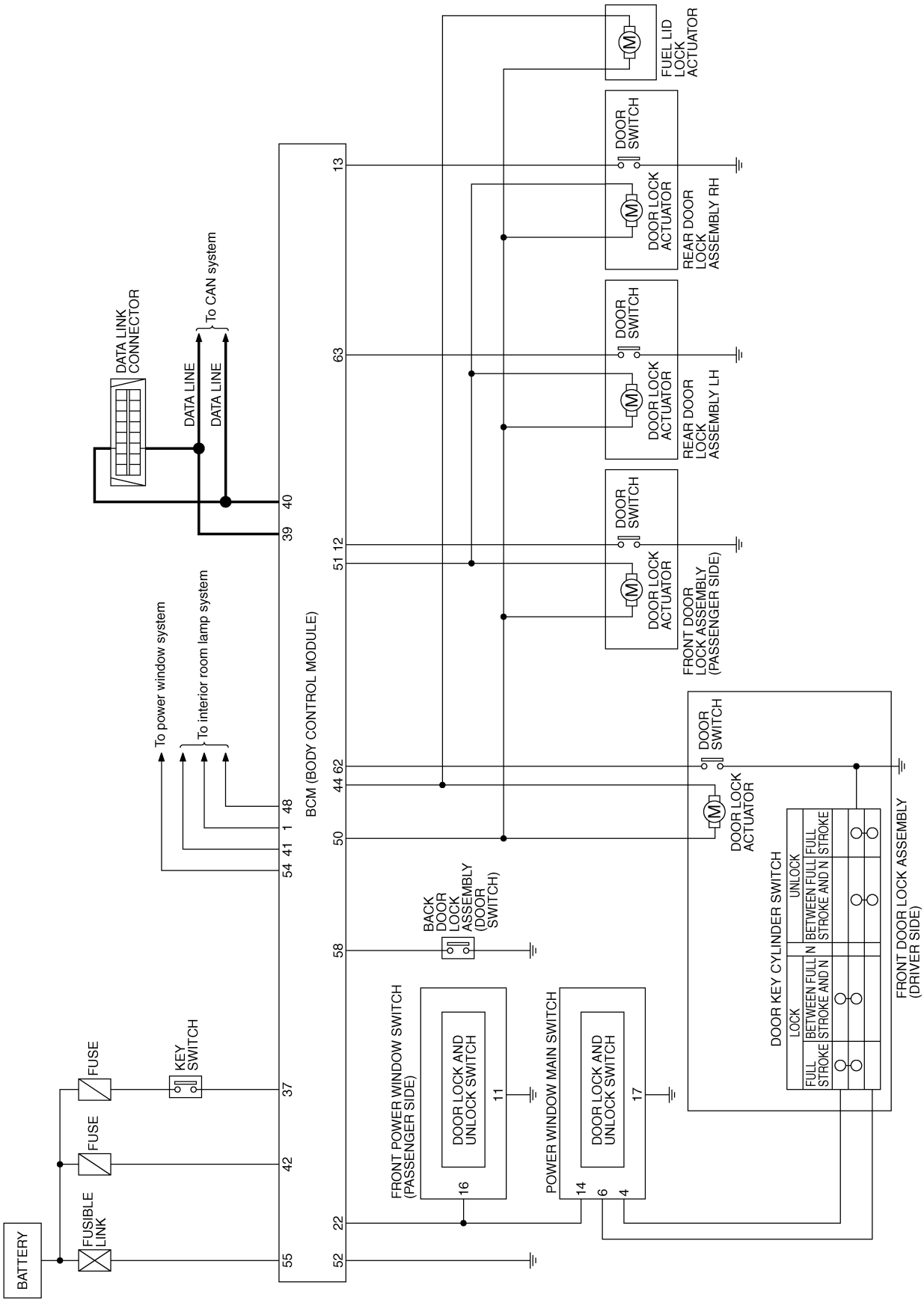


REFER TO THE FOLLOWING.
M34, M36 -ELECTRICAL UNITS

TIWB0770E

Schematic / Without Intelligent Key

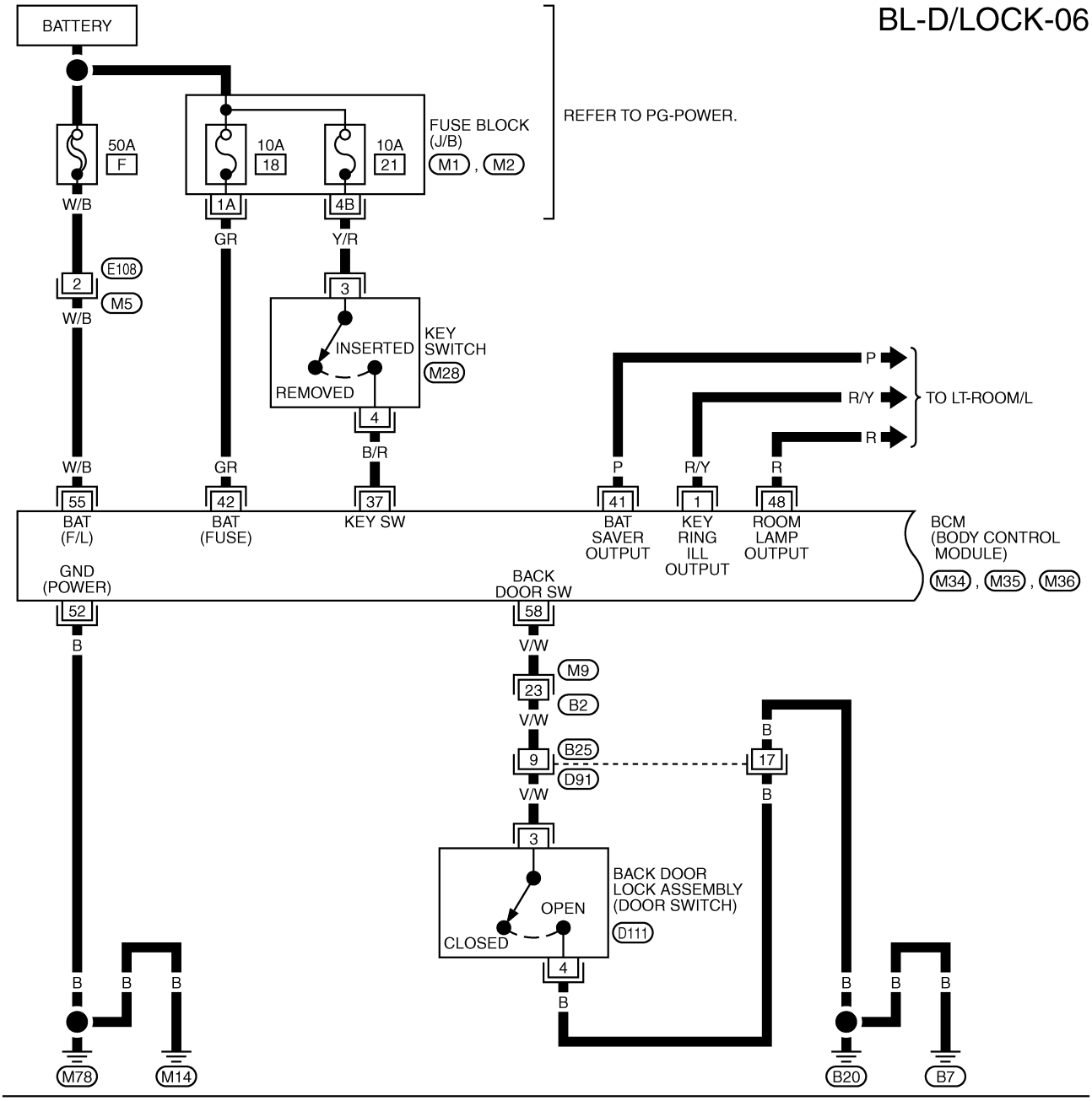
NIS00167

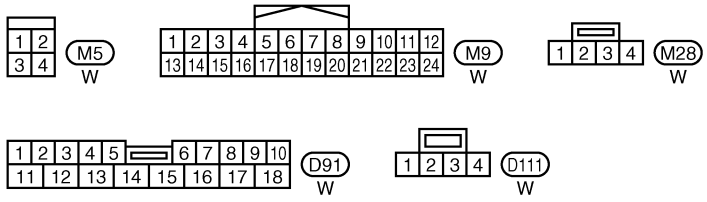


TIWB0138E

Wiring Diagram -D/LOCK- / Without Intelligent Key

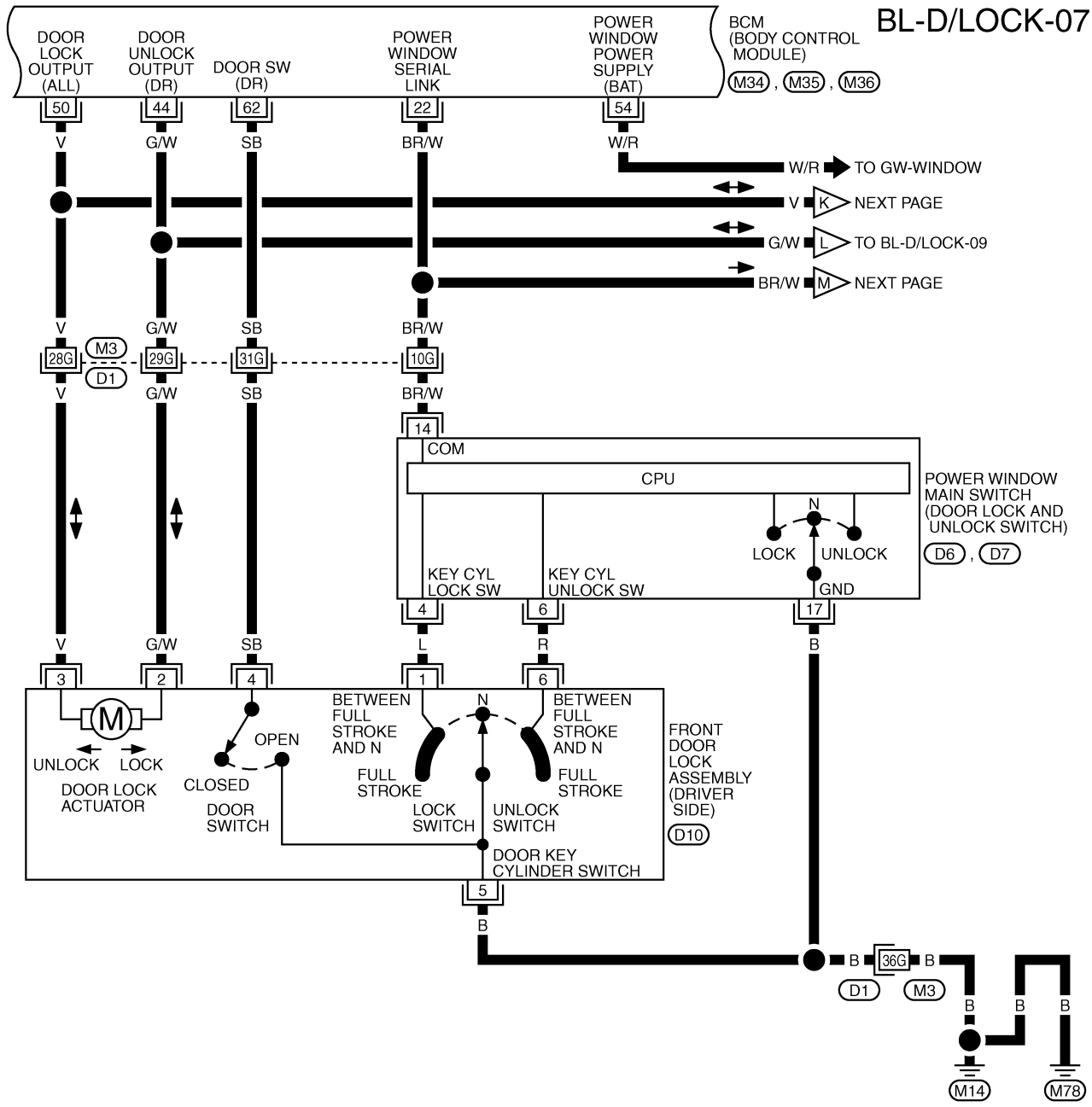
NIS00168

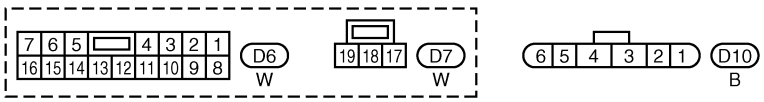




REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)
M34 , M35 , M36 -ELECTRICAL UNITS

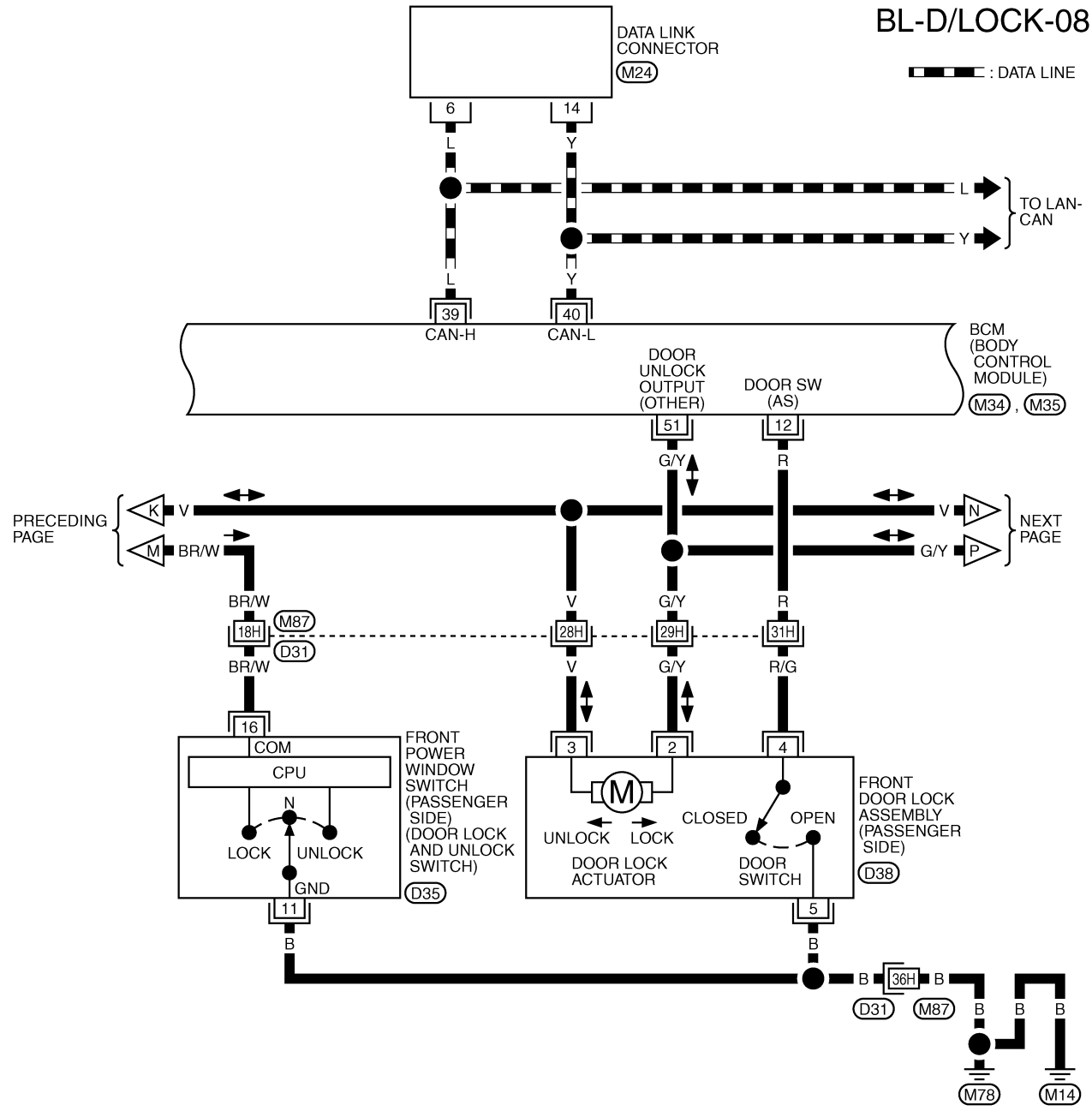
TIWB0771E

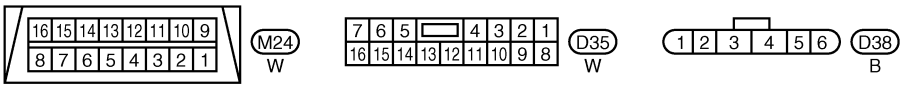




REFER TO THE FOLLOWING.
D1 -SUPER MULTIPLE JUNCTION (SMJ)
M34 , M35 , M36 -ELECTRICAL UNITS

TIWB0140E

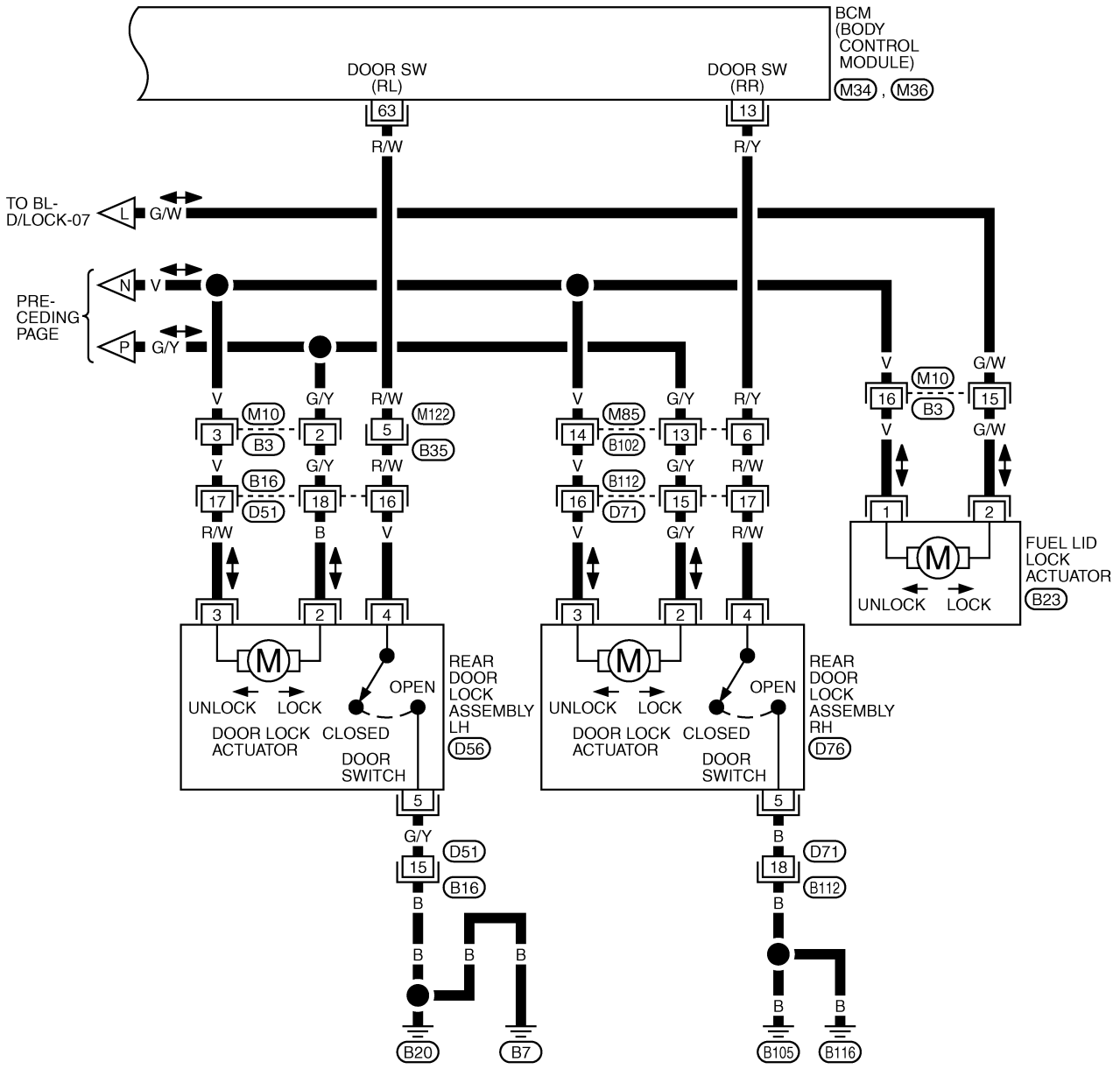


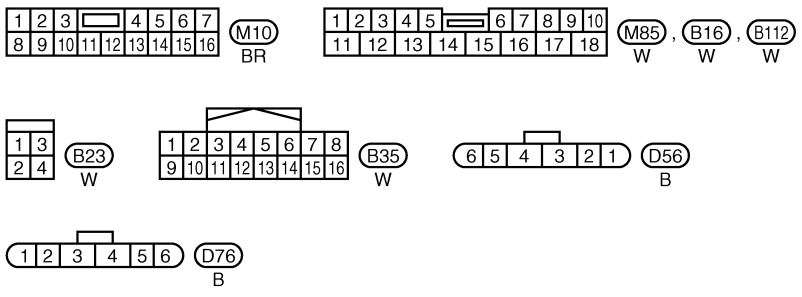


REFER TO THE FOLLOWING.
D31 -SUPER MULTIPLE JUNCTION (SMJ)
M34 , M35 -ELECTRICAL UNITS

TIWB0141E

BL-D/LOCK-09



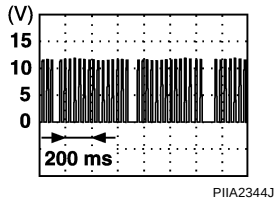


REFER TO THE FOLLOWING.
M34 , M36 -ELECTRICAL UNITS

TIWB0772E

Terminals and Reference Value for BCM

NIS00169

Terminal	Wire color	Item	Signal input/output	Condition	Voltage [V] (Approx.)
1	R/Y	Key ring illumination output signal	Output	Key ring illumination is lighting.	Battery voltage
				Key ring illumination is being turned off.	0
12	R R/G*1	Front door switch (Passenger side)	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
13	R/Y R/W*1	Rear door switch RH	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
22	BR/W	Power window serial link	Input/Output	Ignition switch (ON or power window timer operating)	 PIIA2344J
37	B/R	Key switch	Input	Key switch ON (key is inserted in ignition key cylinder)	Battery voltage
				Key switch OFF (key is removed from ignition key cylinder)	0
39	L	CAN-H	Input/Output	—	—
40	Y	CAN-L	Input/Output	—	—
41	P	Battery saver output signal	Output	30 minutes after ignition switch is turned to OFF	0
				Ignition switch is in ON position	Battery voltage
42	GR	Power source (Fuse)	Input	—	Battery voltage
44	G/W	Driver door lock actuator and fuel lid opener actuator (Unlock)	Output	Door lock and unlock switch (Free → Unlock)	0 → Battery voltage → 0
48	R	Room lamp output signal	Output	Room lamp is lighting.*2	0
				Room lamp is being turned off.*2	Battery voltage
50	V	All door lock actuators (lock)	Output	Door lock and unlock switch (Free → Lock)	0 → Battery voltage → 0
51	G/Y	Passenger and rear doors lock actuator (unlock)	Output	Door lock and unlock switch (Free → Unlock)	0 → Battery voltage → 0
52	B	Ground	—	—	0
55	W/B	Power source (Fusible link)	Input	—	Battery voltage
58	V/W	Back door switch	Input	ON (Back door is opened) → OFF (Back door is closed)	0 → Battery voltage
62	SB	Front door switch (Driver side)	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
63	R/W	Rear door switch LH	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage

*1 : With Intelligent Key

*2 : In the state that room lamp switch is in "DOOR" position.

CONSULT-II Function (BCM)

NIS0016A

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

BCM diagnosis part	Inspection item, self-diagnosis mode	Content
BCM	SELF-DIAG RESULTS	Carries out the self-diagnosis.
	CAN DIAG SUPPORT MNTR	Displays CAN communication system diagnosis, disabled transmission status, and communication status of each unit communicated with BCM
	DATA MONITOR	Displays the input data to BCM on real-time basis.
DOOR LOCK	WORK SUPPORT	Changes the setting for each function.
	DATA MONITOR	Displays the input data of BCM in real time.
	ACTIVE TEST	Give a drive signals to load to check the operation.

*: Refer to BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

CONSULT-II START PROCEDURE

Refer toGI-37, "CONSULT-II Start Procedure"

CONSULT-II APPLICATION ITEMS

Work Support

Work item	Description
DOOR LOCK-UNLOCK SET	Select unlock mode can be changed in this mode. Selects ON-OFF of select unlock mode.
ANTI-LOCK OUT SET	Key reminder door mode can be changed in this mode. Selects ON-OFF of key reminder door mode.

Data Monitor

Monitor item	Content
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock and unlock switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch driver side.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch passenger side.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from key cylinder.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from key cylinder.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from key fob.

Active Test

Test item in “DOOR LOCK”	Content
ALL LOCK	This test is able to check all door lock actuators lock operation. These actuators lock when “ALL LOCK” on CONSULT-II screen is touched.
ALL UNLOCK	This test is able to check all door lock actuators unlock operation. These actuators unlock when “ALL UNLOCK” on CONSULT-II screen is touched.
DR UNLOCK	This test is able to check door lock actuator (driver side) lock/unlock operation. This actuator unlock when “DR UNLOCK” on CONSULT-II screen is touched.
OTHER UNLOCK	This test is able to check all door lock actuators (except driver side) unlock operation. These actuators unlock when “OTHER UNLOCK” on CONSULT-II screen is touched.

Work Flow

NIS0016B

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-24, "System Description" .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to BL-41, "Trouble Diagnoses Chart by Symptom" .
4. Does power door lock system operate normally?
   YES: GO TO 5.
   NO: GO TO 3.
5. INSPECTION END.

Trouble Diagnoses Chart by Symptom

NIS0016C

NOTE:
Always check the “Work Flow” before troubleshooting. Refer to BL-41, "Work Flow" .

Symptom	Diagnoses service procedure	Refer to page
Power door lock does not operate with door lock and unlock switch on power window main switch or front power window switch (passenger side).	1. Check power supply and ground circuit	BL-42
	2. Check door lock and unlock switch.	BL-49
	3. Replace BCM.	BCS-14
Specific door lock actuator does not operate.	1. Check door lock actuator.	BL-51*1 BL-52*2
	2. Replace BCM.	BCS-14
Power door lock does not operate with front door key cylinder operation, but operates with door lock and unlock switch.	1. Check front door key cylinder switch.	BL-53 BL-54
	2. Replace power window main switch.	–
Fuel lid opener actuator does not operate at all. (All door lock actuators are activate properly.)	1. Check fuel lid lock actuator circuit.	BL-55
	2. Replace BCM.	BCS-14
Key reminder door system does not operate properly.	1. Check key reminder door mode.* *: Key reminder door mode can be changed. First check key reminder door mode.	
	2. Check power supply and ground circuit	BL-42
	3. Check key switch.	BL-47
	4. Check ignition knob switch.*3	
	5. Check door switch.	BL-43
	6. Replace BCM.	BCS-14

*1 : Driver side

*2 : Passenger side, rear LH, RH

*3 : With Intelligent Key

Power Supply and Ground Circuit Check

NIS0016D

1. FUSE INSPECTION

Check the following.

- 50A fusible link (letter **F** , located in the fuse and fusible link box)
- 10A fuse [No.18 located in the fuse block (J/B)]

NOTE:
Refer to BL-23, "Component Parts and Harness Connector Location" .

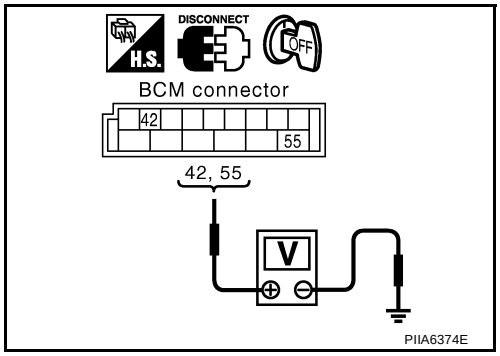
OK or NG

OK >> GO TO 2.
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to PG-3, "POWER SUPPLY ROUTING CIRCUIT" .

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM connector M35 terminals 42, 55 and ground.

42 (GR) – Ground : Battery voltage.
55 (W/B) – Ground : Battery voltage.



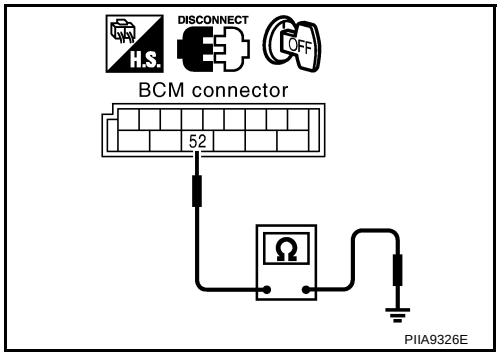
OK or NG

OK >> GO TO 3.
NG >> Repair or replace BCM power supply circuit.

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M35 terminal 52 and ground.

52 (B) – Ground : Continuity should exist.



OK or NG

OK >> BCM power supply and ground circuit is OK.
NG >> Repair or replace BCM ground circuit.

Check Door Switch

NIS0016E

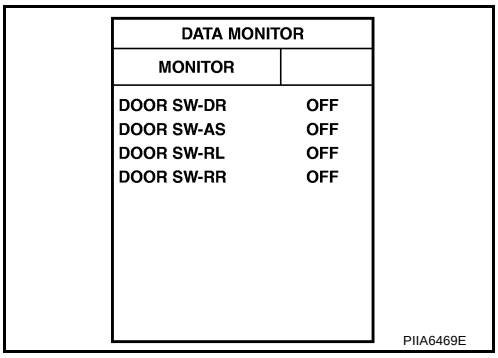
CHECK DOOR SWITCH (EXCEPT BACK DOOR SWITCH)

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR SW-DR”, “DOOR SW-AS”, “DOOR SW-RL” and “DOOR SW-RR”) in “DATA MONITOR” mode with CONSULT-II.

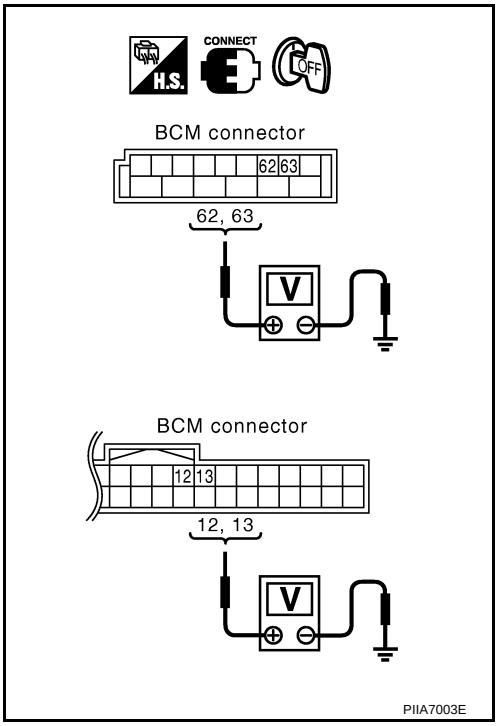
Monitor item	Condition	
DOOR SW-DR	Door is closed ↓ Door is opened	OFF ↓ ON
DOOR SW-AS		
DOOR SW-RL		
DOOR SW-RR		



Without CONSULT-II

Check voltage between BCM and ground.

Door switch	Connector	Terminals (wire color) (+)	Terminals (wire color) (–)	Condition	Voltage [V] (Approx.)
Driver side	M36	62 (SB)	Ground	Door close ↓ Door open	Battery voltage ↓ 0
Rear LH		63 (R/W)			
Passenger side	M34	12 (R or R/G)			
Rear RH		13 (R/Y or R/W)			



OK or NG

OK >> Door switch circuit is OK.

NG >> GO TO 2

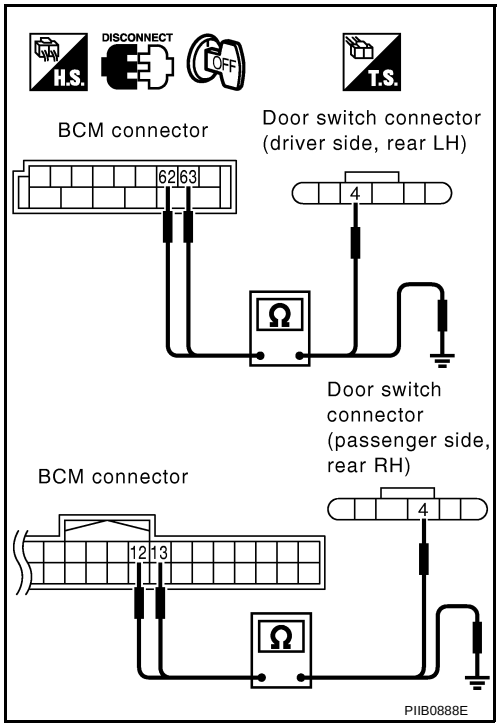
2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch and unified BCM connectors.
3. Check continuity between BCM and door switch.

Door switch	Connector	Terminal (wire color)	Connector	Terminal (wire color)	Continuity
Driver side	M36	62 (SB)	D10	4 (SB)	Yes
Rear LH		63 (R/W)	D56	4 (V)	
Passenger side	M34	12 (R or R/G)	D38	4 (R/G)	
Rear RH		13 (R/Y or R/W)	D76	4 (R/W)	

4. Check continuity between BCM and ground.

Door switch	Connector	Terminal (wire color)		Continuity
Driver side	M36	62 (SB)	Ground	No
Rear LH		63 (R/W)		
Passenger side	M34	12 (R or R/G)		
Rear RH		13 (R/Y or R/W)		



OK or NG

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

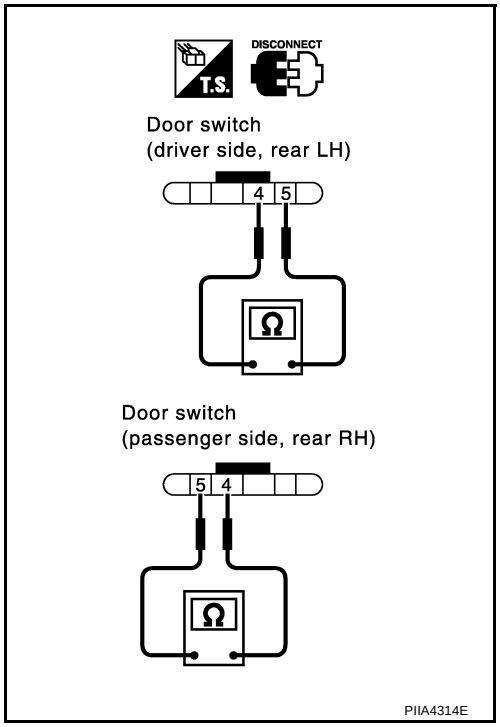
3. CHECK DOOR SWITCH

Check continuity between door switch terminals 4 and 5.

Terminal		Door switch condition	Continuity
4	5	Open position	Yes
		Closed position	No

OK or NG

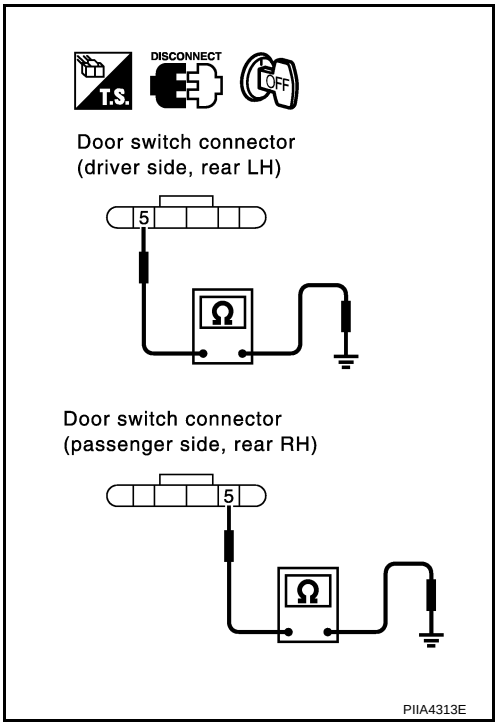
OK >> GO TO 4.
NG >> Replace door switch.



4. CHECK DOOR SWITCH GROUND HARNESS

Check continuity between door switch connectors and ground.

Door switch	Connector	Terminal		Continuity
Driver side	D10	5 (B)	Ground	Yes
Passenger side	D38			
Rear RH	D76			
Rear LH	D56	5 (G/Y)		



OK or NG

OK >> Check harness connector.
NG >> Repair or replace harness.

CHECK BACK DOOR SWITCH

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

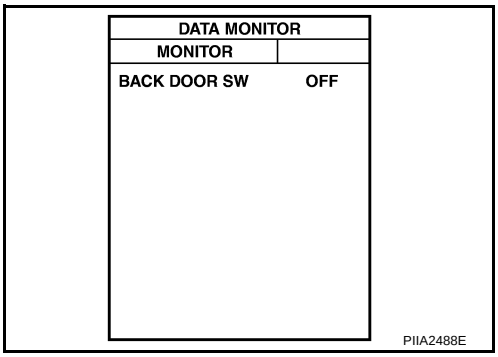
Check back door switch (“BACK DOOR SW”) in “DATA MONITOR” mode with CONSULT-II.

- When back door is open

  BACK DOOR SW : ON

- When back door is closed

  BACK DOOR SW : OFF

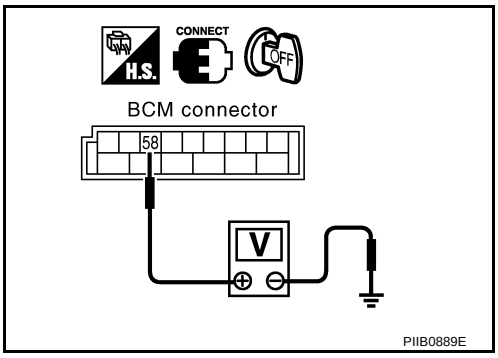


Without CONSULT-II

Check voltage between BCM connector and ground.

Item	Con-nector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
		(+)	(–)		
Back door switch	M36	58 (V/W)	Ground	OPEN	0
				CLOSE	Battery voltage*

*. When interior lamp battery saver control is OFF: Approx. 5V.



OK or NG

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

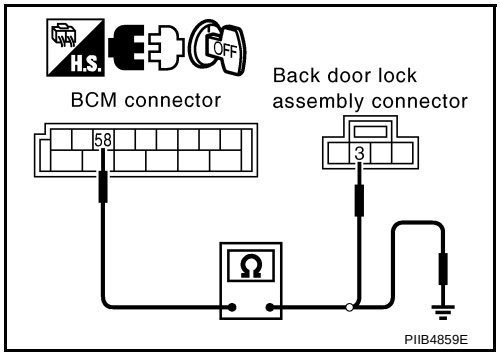
2. CHECK BACK DOOR SWITCH HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and back door lock assembly connectors.
3. Check continuity between BCM connector M36 terminal 58 and back door lock assembly connector D111 terminal 3.

58 (V/W) – 3 (V/W) : Continuity should exist.

4. Check continuity between BCM connector M36 terminal 58 and ground.

58 (V/W) – Ground : Continuity should not exist.



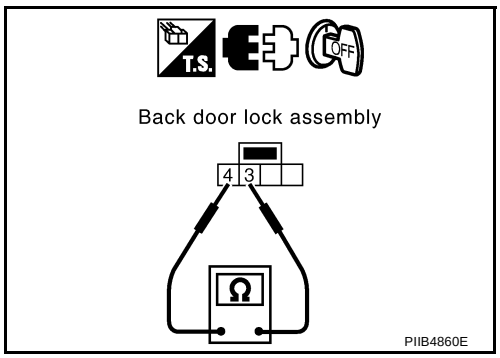
OK or NG

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

3. CHECK BACK DOOR SWITCH

Check continuity between back door lock assembly terminals 3 and 4.

Terminal		Back door condition	Continuity
3	4	Open position	Yes
		Closed position	No



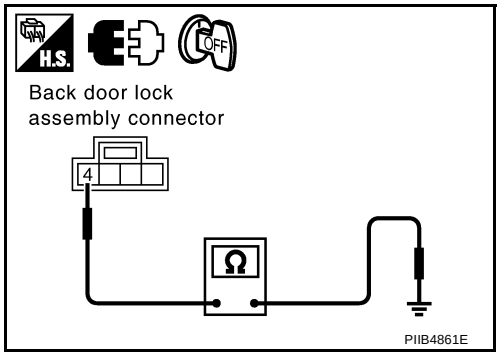
OK or NG

OK >> GO TO 4.
NG >> Replace back door switch.

4. CHECK BACK DOOR SWITCH GROUND HARNESS

Check continuity between back door lock assembly connector D111 terminal 4 and ground.

4 (B) - Ground : Continuity should exist.



OK or NG

OK >> Check harness connection.
NG >> Repair or replace harness.

Check Key Switch

NIS0016F

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

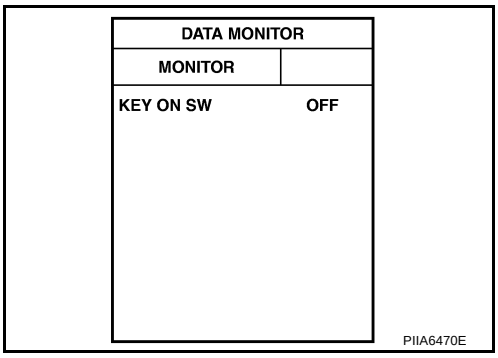
Check ignition key switch “IGN ON SW” in “DATA MONITOR” mode with CONSULT-II.

- When key is inserted in ignition key cylinder

  KEY ON SW : ON

- When key is removed from ignition key cylinder

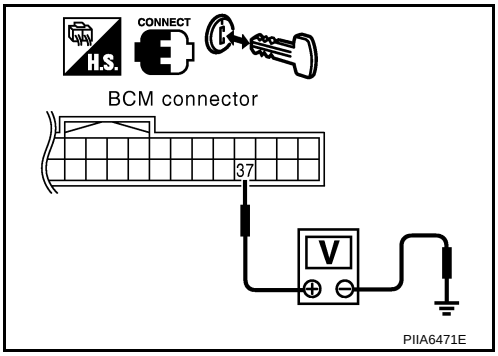
  KEY ON SW : OFF



Without CONSULT-II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage [V] (Approx.)
	(+)	(–)		
M34	37 (B/R)	Ground	Key is removed from ignition key cylinder.	0
			Key is inserted in ignition key cylinder.	Battery voltage



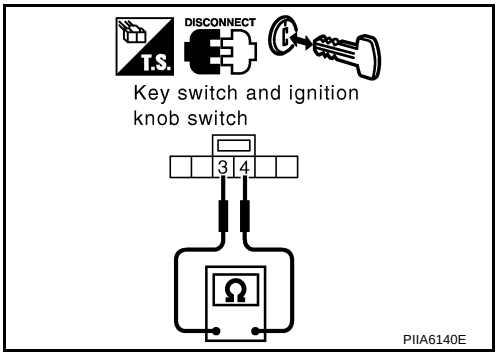
OK or NG

OK >> Key switch circuit is OK.
NG >> GO TO 2. (with Intelligent Key system)
NG >> GO TO 3. (without Intelligent Key system)

2. CHECK KEY SWITCH (WITH INTELLIGENT KEY SYSTEM)

1. Turn ignition switch OFF.
2. Disconnect key switch and ignition knob switch connector.
3. Check continuity between key switch and ignition knob switch connector M118 terminals 3 and 4.

Terminal		Condition	Continuity
3	4	Key is removed from ignition key cylinder.	No
		Key is inserted in ignition key cylinder.	Yes



OK or NG

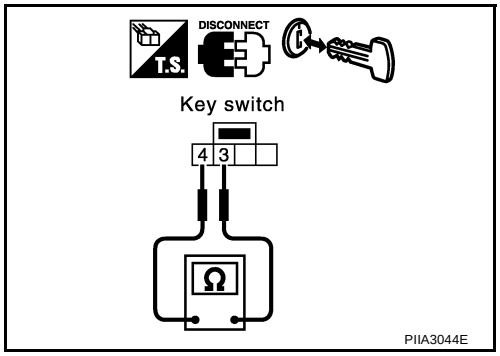
OK >> Check the following
- 10A fuse [No.22, located in the fuse block (J/B)]
- Harness for open or short between key switch and ignition knob switch and fuse.
- Harness for open short between BCM and key switch and ignition knob switch.

NG >> Replace key switch and ignition knob switch.

3. CHECK KEY SWITCH (WITHOUT INTELLIGENT KEY SYSTEM)

1. Turn ignition switch OFF.
2. Disconnect key switch connector.
3. Check continuity between key switch connector M28 terminals 3 and 4.

Terminal		Condition	Continuity
3	4	Key is removed from ignition key cylinder.	No
		Key is inserted in ignition key cylinder.	Yes



OK or NG

OK >> Check the following
- 10A fuse [No.21, located in the fuse block (J/B)]
- Harness for open or short between key switch and fuse.
- Harness for open short between BCM and key switch.

NG >> Replace key switch.

Check Door Lock and Unlock Switch

NIS0016G

1. CHECK POWER WINDOW OPERATION

Does power window system operate normally?

OK or NG

OK >> GO TO 2.
NG >> Refer to GW-17, "POWER WINDOW SYSTEM" .

2. CHECK DOOR LOCK AND UNLOCK SWITCH INPUT SIGNAL

With CONSULT-II

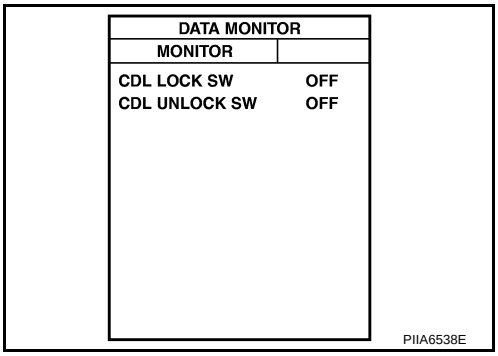
Check door lock and unlock switch (“LOCK SW DR/AS” and “UNLK SW DR/AS”) in DATA MONITOR mode with CONSULT-II.

- When door lock and unlock switch is turned to “LOCK”:

  CDL LOCK SW : ON

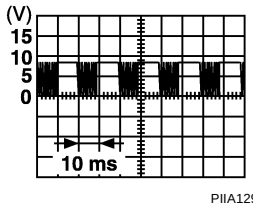
- When door lock and unlock switch is turned to “UNLOCK”:

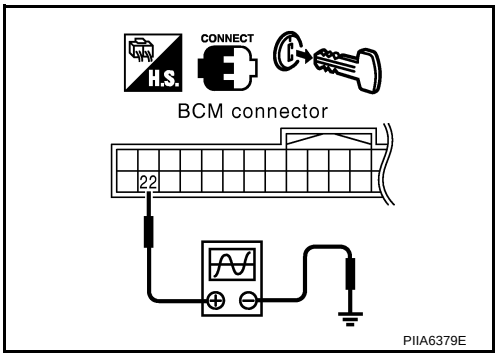
  CDL UNLOCK SW : ON



Without CONSULT-II

1. Remove key from ignition key cylinder.
2. Check the signal between BCM connector M34 terminal 22 and ground when door lock and unlock switch is turned “LOCK” or “UNLOCK”.
3. Make sure signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch is turned “LOCK” or “UNLOCK”.

Connector	Terminal (+)	Terminal (–)	Signal (Reference value)
M34	22 (BR/W)	Ground	



OK or NG

OK >> Door lock and unlock switch circuit is OK.
NG >> GO TO 3.

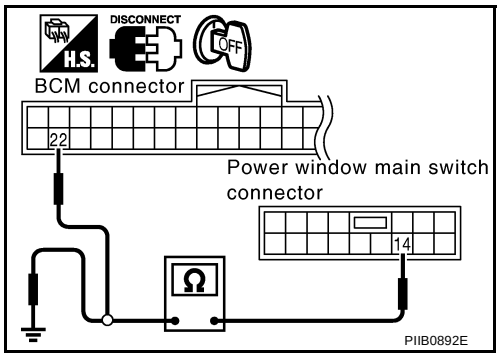
3. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM, power window main switch and front power window switch (passenger side) connectors.
2. Check continuity between BCM connector M34 terminal 22 and power window main switch (door lock and unlock switch) connector D6 terminal 14.

   22 (BR/W) – 14 (BR/W) : Continuity should exist.

3. Check continuity between power window main switch connector D6 terminal 14 and ground.

   14 (BR/W) – Ground : Continuity should not exist.

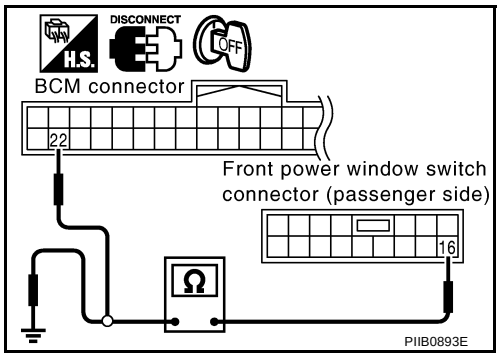


4. Check continuity between BCM connector M34 terminal 22 and front power window switch (passenger side) connector D35 terminal 16.

   22 (BR/W) – 16 (BR/W) : Continuity should exist.

5. Check continuity between front power window switch (passenger side) connector D35 terminal 16 and ground.

   16 (BR/W) – Ground : Continuity should not exist.



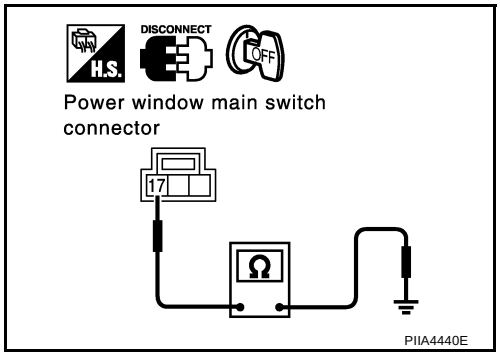
OK or NG

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

4. CHECK DOOR LOCK AND UNLOCK SWITCH GROUND HARNESS

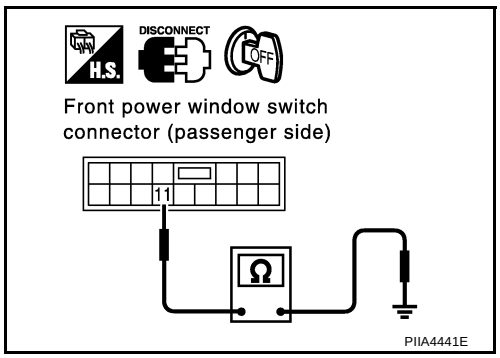
1. Check continuity between power window main switch (door lock and unlock switch) connector D7 terminal 17 and ground.

   17 (B) – Ground : Continuity should exist.



2. Check continuity between front power window switch (passenger side) connector D35 terminal 11 and ground.

   11 (B) – Ground : Continuity should exist.



OK or NG

OK >> Check harness connection.
- If harness connection is OK, replace power window main switch or front power window switch (passenger side).
- If harness connection is NG, repair or replace malfunction part of harness connection.

NG >> Repair or replace harness.

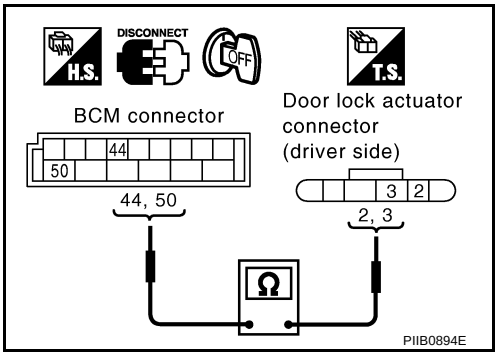
Check Door Lock Actuator (Driver Side)

NIS0016H

1. CHECK DOOR LOCK ACTUATOR HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and door lock actuator (driver side) connector.
3. Check continuity between BCM connector M35 terminals 44, 50 and door lock actuator (driver side) connector D10 terminals 2, 3.

44 (G/W) – 2 (G/W) : Continuity should exist.
50 (V) – 3 (V) : Continuity should exist.



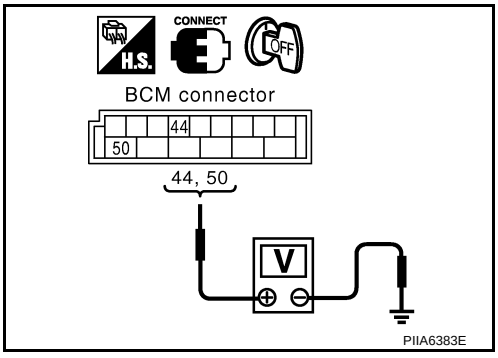
OK or NG

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

2. CHECK OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M35 terminals 44, 50 and ground.

Connector	Terminal (+)	Terminal (–)	Condition	Voltage [V] (Approx.)
M35	44 (G/W)	Ground	Driver door lock and unlock switch is turned to UNLOCK.	0 → Battery voltage → 0
	50 (V)		Driver door lock and unlock switch is turned to LOCK.	0 → Battery voltage → 0



OK or NG

OK >> Replace front door lock assembly (driver side).
NG >> Replace BCM.

Check Door Lock Actuator (Passenger Side and Rear LH/RH)

NIS0016I

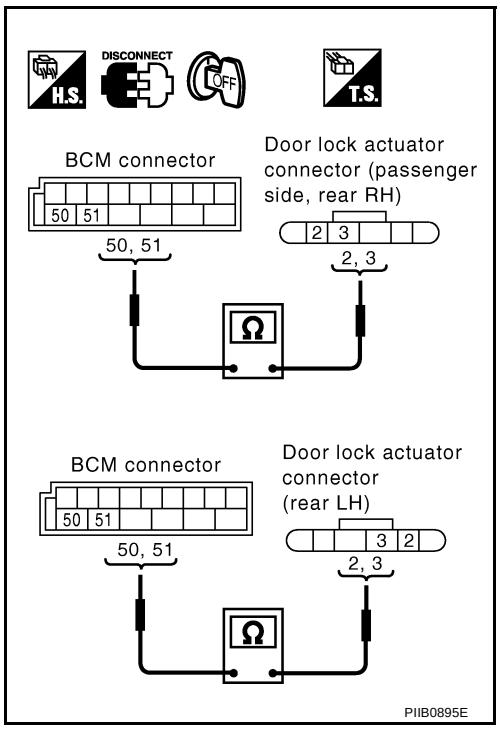
1. CHECK DOOR LOCK ACTUATOR HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and all door lock actuator connectors.
3. Check continuity between BCM connector M35 terminals 50, 51 and front door lock actuator passenger side, rear door lock actuator LH/RH connector D38, D56, D76 terminals 2, 3.

50 (V) – 3 (V) : Continuity should exist.
51 (G/Y) – 2 (G/Y) : Continuity should exist.

Rear door lock actuator LH

50 (V) – 3 (R/W) : Continuity should exist.
51 (G/Y) – 2 (B) : Continuity should exist.



OK or NG

OK >> Replace door lock assembly (door lock actuator).
NG >> Repair or replace harness.

Check Door Key Cylinder Switch / Without Intelligent Key System

NIS0016J

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

With CONSULT-II

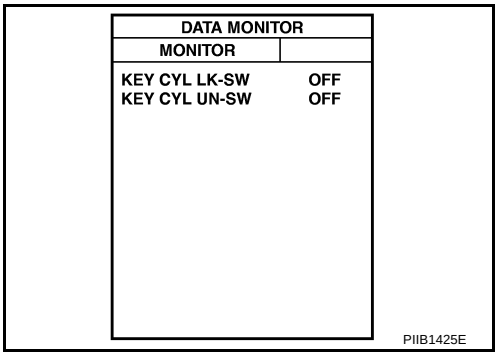
Check door key cylinder switch (“KEY CYL LK-SW”, "KEY CYL UN-SW") in “DATA MONITOR” mode with CONSULT-II.

- When key cylinder switch is turn to “LOCK”

  KEY CYL LK-SW : ON

- When key cylinder switch is turn to “UNLOCK"

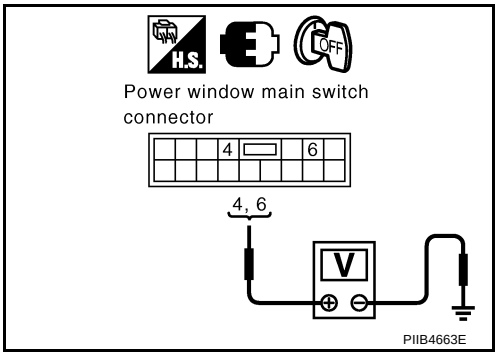
  KEY CYL UN-SW : ON



Without CONSULT-II

Check voltage between power window main switch (door lock and unlock switch) connector and ground.

Connector	Terminal (Wire color)		Door key cylinder switch position	Voltage [V] (Approx.)
	(+)	(–)		
D6	4 (L)	Ground	Neutral / Unlock	5
			Lock	0
	6 (R)		Neutral / Lock	5
			Unlock	0



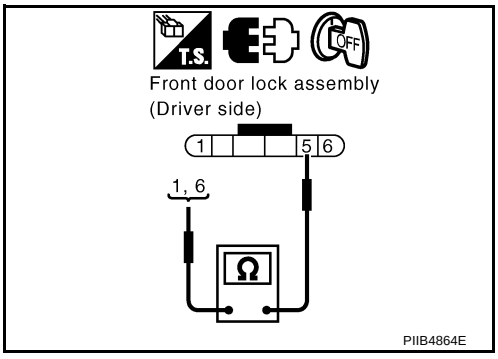
OK or NG

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

2. CHECK DOOR KEY CYLINDER SWITCH

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly (driver side) connector.
3. Check continuity between front door lock assembly terminals 1, 6 and 5.

Terminal		Door key cylinder switch position	Continuity
1	5	Neutral / Unlock	No
		Lock	Yes
6		Neutral / Lock	No
		Unlock	Yes



OK or NG

OK >> Check the following.

- Harness for open or short between power window main switch (door lock and unlock switch) and front door lock assembly (driver side).
- Front door lock assembly (driver side) ground circuit.

NG >> Replace front door lock assembly (driver side).

Check Door Key Cylinder Switch / With Intelligent Key System

NIS0016K

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

With CONSULT-II

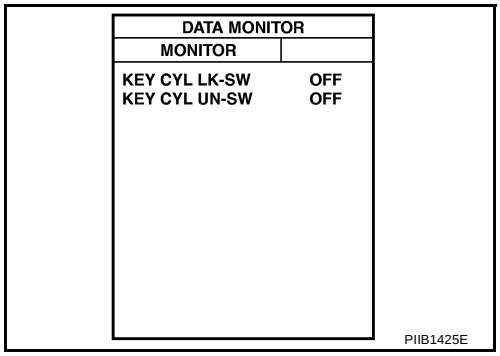
Check door key cylinder switch (“KEY CYL LK-SW”, "KEY CYL UN-SW") in “DATA MONITOR” mode with CONSULT-II.

- When key cylinder switch is turn to “LOCK”

  KEY CYL LK-SW : ON

- When key cylinder switch is turn to “UNLOCK”

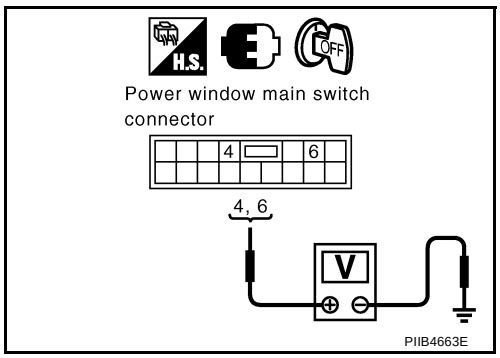
  KEY CYL UN-SW : ON



Without CONSULT-II

Check voltage between main power window (door lock and unlock switch) connector and ground.

Connector	Terminal (Wire color)		Door key cylinder switch position	Voltage [V] (Approx.)
	(+)	(–)		
D6	6 (R)	Ground	Neutral / Lock	5
			Unlock	0
	4 (L)		Neutral / Unlock	5
			Lock	0



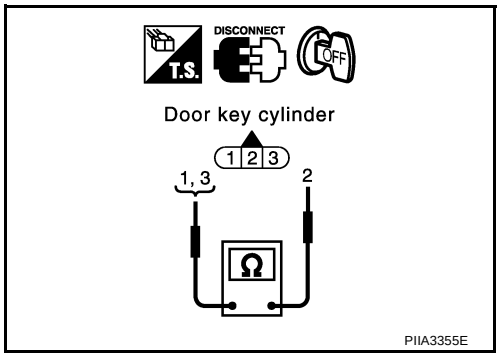
OK or NG

OK >> Door key cylinder switch (unlock) circuit is OK.
NG >> GO TO 2.

2. CHECK FRONT DOOR KEY CYLINDER SWITCH

1. Turn ignition switch OFF.
2. Disconnect door key cylinder switch connector.
3. Check continuity between door key cylinder switch terminals 1, 3 and 2.

Terminal		Door key cylinder switch position	Continuity
3	2	Neutral/Lock	No
		Unlock	Yes
1		Neutral/Unlock	No
		Lock	Yes



OK or NG

OK >> Check the following.

- Harness for open or short between power window main switch (door lock and unlock switch) and door key cylinder switch
- Door key cylinder switch ground circuit

NG >> Replace front door lock assembly (driver side).

Check Select Unlock Relay Circuit

NIS0016L

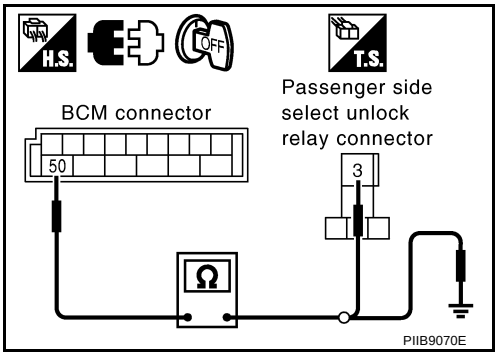
1. CHECK PASSENGER SIDE SELECT UNLOCK RELAY CIRCUIT 1

1. Turn ignition switch OFF.
2. Disconnect BCM and passenger side select unlock relay connector.
3. Check continuity between BCM connector M35 terminal 50 and passenger side select unlock relay connector M123 terminal 3.

50 (V) – 3 (V) : Continuity should exist.

4. Check continuity between BCM connector M35 terminal 50 and ground.

50 (V) – Ground : Continuity should not exist.



OK or NG

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

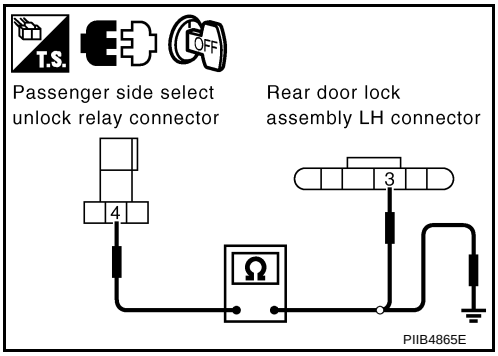
2. CHECK PASSENGER SIDE SELECT UNLOCK RELAY CIRCUIT 2

1. Disconnect rear door lock actuator assembly LH connector.
2. Check continuity between passenger select unlock relay connector M123 terminal 4 and rear door lock actuator assembly connector D56 terminal 3.

4 (L) – 3 (R/W) : Continuity should exist.

3. Check continuity between passenger select unlock relay connector M123 terminal 4 and ground.

4 (L) – Ground : Continuity should not exist.



OK or NG

OK >> Refer to BL-161, "Check Select Unlock Relay"
NG >> Repair or replace harness.

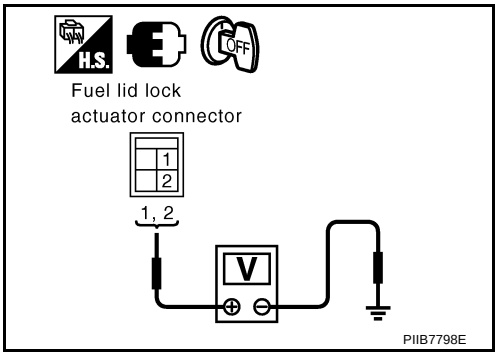
Check Fuel Lid Lock Actuator

NIS0016M

1. CHECK FUEL LID LOCK ACTUATOR POWER SUPPLY

Check voltage between fuel lid lock actuator connector and ground.

Connector	Terminal (+)	Terminal (–)	Condition	Voltage [V] (Approx.)
B23	1 (V)	Ground	Door lock and unlock switch is turned to “UNLOCK”.	0 → Battery voltage → 0
	2 (G/W)		Door lock and unlock switch is turned to “LOCK”.	0 → Battery voltage → 0

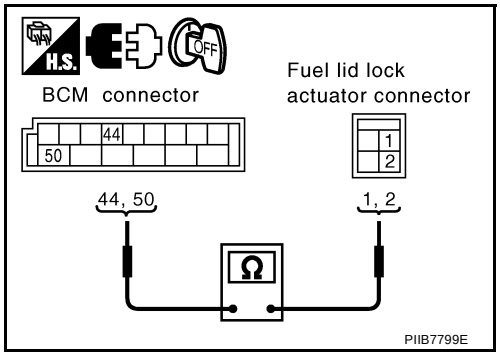


OK >> Replace fuel lid lock actuator.
NG >> GO TO 2.

2. CHECK FUEL LID LOCK ACTUATOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and fuel lid lock actuator connector.
3. Check continuity between BCM connector M35 terminal 44, 50 and fuel lid lock actuator connector B23 terminal 1, 2.

44 (G/W) – 2 (G/W) : Continuity should exist.
50 (V) – 1 (V) : Continuity should exist.



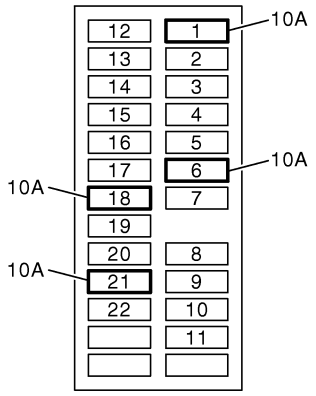
OK >> Check the condition of harness and connector.
NG >> Repair or replace harness.

REMOTE KEYLESS ENTRY SYSTEM

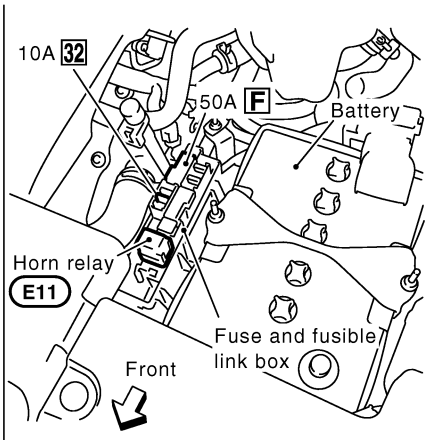
PFP:28596

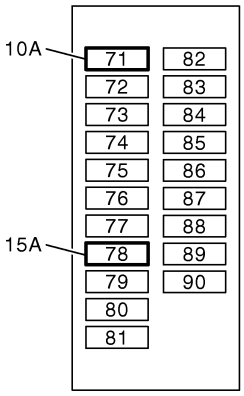
Component Parts and Harness Connector Location

NIS0016N



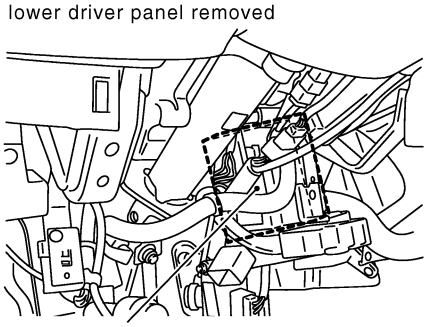
Fuse block (J/B) fuse layout



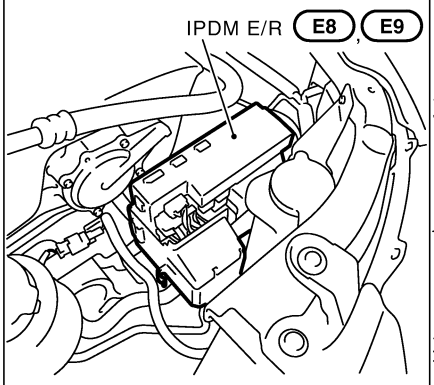


IPDM E/R fuse layout

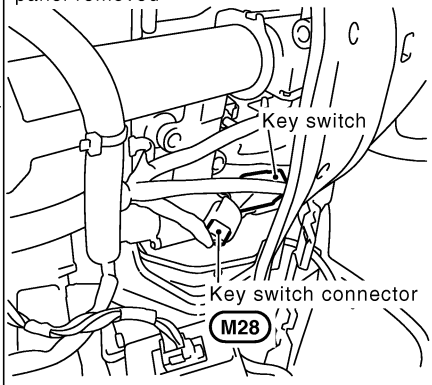
View with the instrument lower driver panel removed

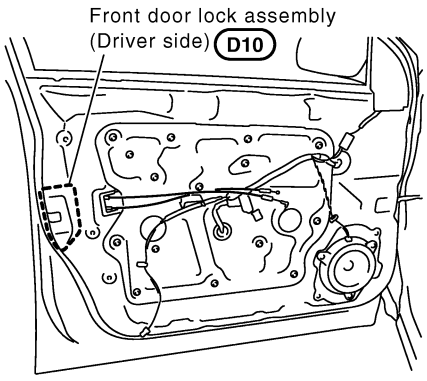


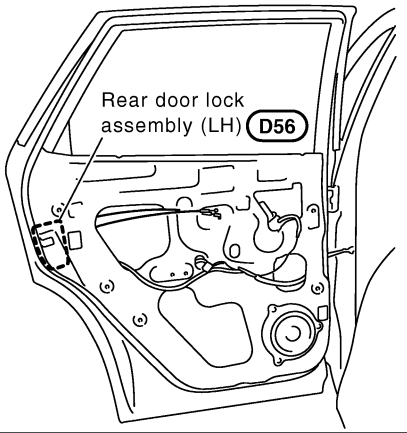
BCM (Body control module)
M34 , M35 , M36

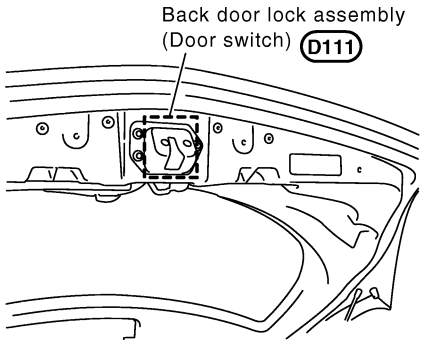


View with the instrument lower driver panel removed

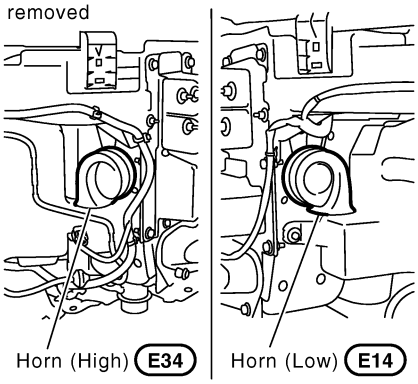




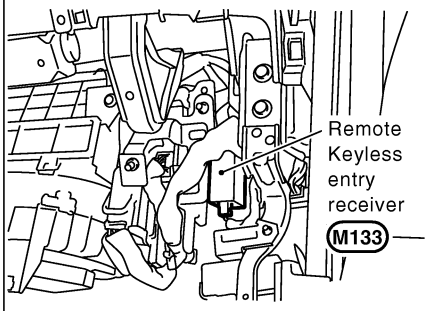




View with the front bumper fascia removed



View with the instrument passenger lower panel removed



PIIB7856E

System Description

NIS0016O

INPUTS

Power is supplied at all times

- to BCM terminal 55
- through 50A fusible link (letter **F** , located in the fuse and fusible link box).
- to BCM terminal 42
- through 10A fuse [No. 18, located in the fuse block (J/B)].
- to key switch terminal 3
- through 10A fuse [No. 21, located in the fuse block (J/B)].

When key switch is ON (key is inserted in ignition key cylinder), power is supplied

- to BCM terminal 37
- through key switch terminal 4.

When ignition switch is ACC or ON, power is supplied

- to BCM terminal 11
- through 10A fuse [No. 6, located in the fuse block (J/B)].

When ignition switch is ON or START, power is supplied

- to BCM terminal 38
- through 10A fuse [No. 1, located in the fuse block (J/B)].

Ground is supplied

- to BCM terminal 52
- through body grounds M14 and M78.

When front door switch (driver side) is ON (door is OPEN), ground is supplied

- to BCM terminal 62
- through front door switch (driver side) terminals 4 and 5
- through body grounds M14 and M78.

When front door switch (passenger side) is ON (door is OPEN), ground is supplied

- to BCM terminal 12
- through front door switch (passenger side) terminals 4 and 5
- through body grounds M14 and M78.

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

- to BCM terminal 63
- through rear door switch LH terminals 4 and 5
- through body grounds B7 and B20.

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

- to BCM terminal 13
- through rear door switch RH terminals 4 and 5
- through body grounds B105 and B116.

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

- to BCM terminal 58
- through back door switch terminals 3 and 4
- through body grounds B7 and B20.

Key fob signal is inputted to BCM (the antenna of remote keyless entry system is combined with BCM).
The remote keyless entry system controls operation of the

- power door lock
- hazard and horn reminder
- auto door lock
- room lamp and ignition keyhole illumination
- panic alarm
- keyless power window down (open)

OPERATED PROCEDURE

Power Door Lock Operation

BCM locks all doors with receiving LOCK signal from key fob.
When an UNLOCK signal is sent from key fob once, driver's door will be unlocked.
Then, if an UNLOCK signal is sent from key fob again within 5 seconds, all other door will be unlocked.

Hazard and Horn Reminder

Power is supplied at all times

- to horn relay terminal 2
- through 10A fuse (No. 32, located in the fuse and fusible link box).

When BCM receives LOCK or UNLOCK signal from key fob with all doors closed, BCM sends horn chirp signal to IPDM E/R.
IPDM E/R grounds horn relay

- to horn relay terminal 1
- through IPDM E/R terminal 51, and
- to BCM terminals 45 and 46 from hazard warning lamp system

Horn relay is now energized, and hazard warning lamp flashes and horn sounds as a reminder.
The hazard and horn reminder has C mode (horn chirp mode) and S mode (non-horn chirp mode).

Operating function of hazard and horn reminder

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

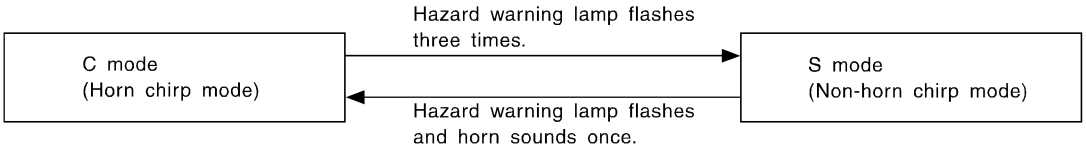
How to change hazard and horn reminder mode

With CONSULT-II

Hazard and horn reminder can be changed using “MULTI ANSWER BACK SET” mode in “WORK SUPPORT”. Refer toBL-67, "Work Support" .

Without CONSULT-II

When LOCK and UNLOCK signals are sent from the key fob for more than 2 seconds at the same time, the hazard and horn reminder mode is changed and hazard warning lamp flashes and horn sounds as follows:



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Auto Door Lock Operation

Auto lock function signal is sent for operation when any of the following signals are not sent within 1 minute after the unlock signal is sent from the key fob:

- when door switch is turned ON for open.
- when the key switch is turned ON.
- when the lock signal is sent from the key fob.

Auto door lock mode can be changed using “AUTO LOCK SET” mode in “WORK SUPPORT”.
Refer to BL-67, "Work Support" .

Room Lamp and Keyhole Illumination Operation

When the following conditions come:

- condition of room lamp switch is DOOR position;
- door switch OFF (when all the doors are closed);

Remote keyless entry system turns on room lamp and key ring illumination (for 30 seconds) with input of UNLOCK signal from key fob.
For detailed description, refer to LT-185, "INTERIOR ROOM LAMP" .

Panic Alarm Operation

When key switch is OFF (when ignition key is not inserted in ignition key cylinder), BCM turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from key fob.
The alarm automatically turns off after 25 seconds or when BCM receives any signal from key fob.
Panic alarm operation mode can be changed using “PANIC ALARM SET” mode in “WORK SUPPORT”.
Refer to BL-67, "Work Support" .
For detailed description, refer to BL-204, "VEHICLE SECURITY (THEFT WARNING) SYSTEM" .

Keyless Power Window Down (Open) Operation

When key fob unlock switch is turned ON with ignition switch OFF, and key fob unlock 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 key fob unlock switch is pressed.
Keyless power window down operation mode can be changed using “PW DOWN SET” mode in “WORK SUPPORT”.
Refer to BL-67, "Work Support" .

CAN Communication System Description

NIS0016P

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

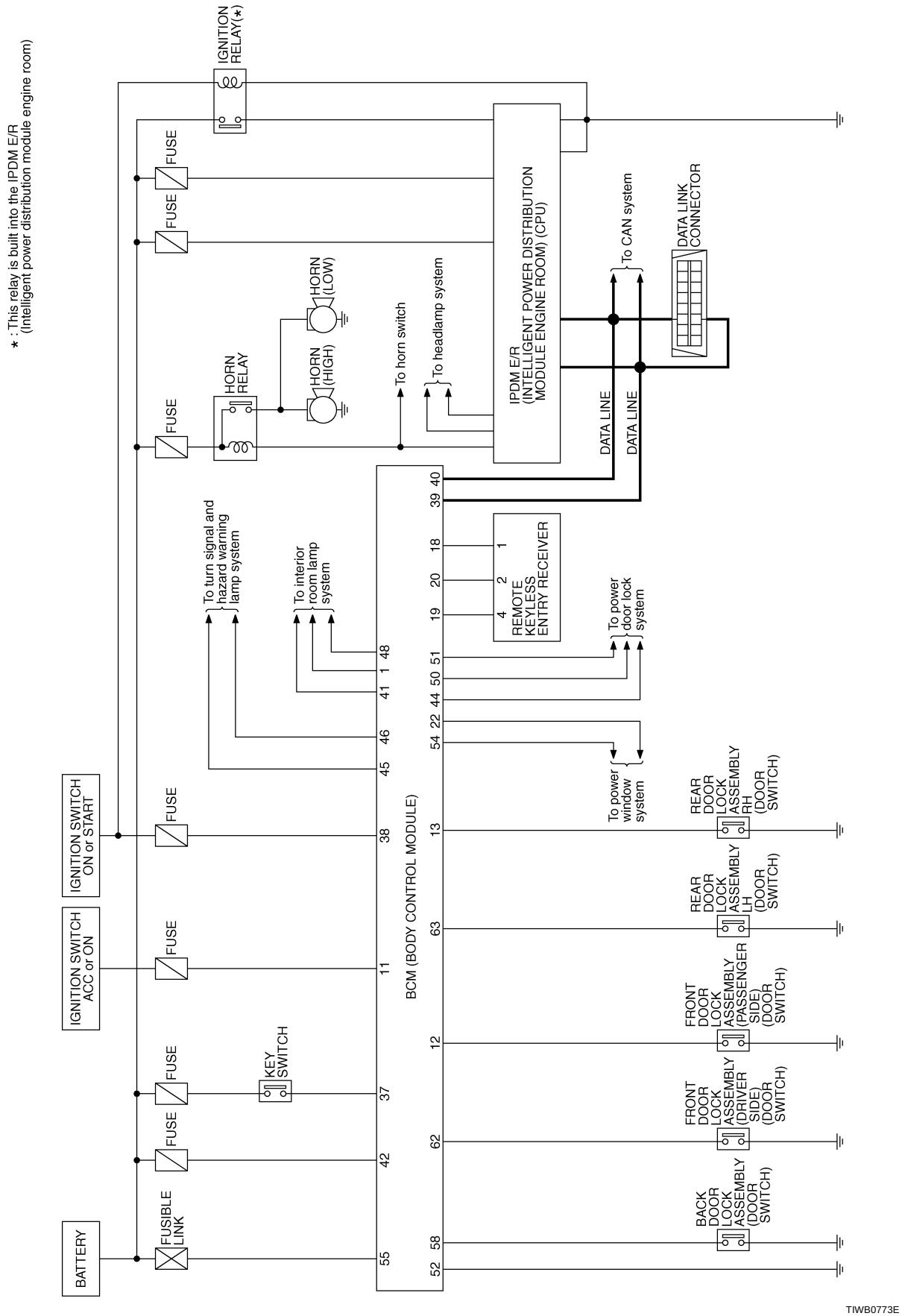
CAN Communication Unit

NIS0016Q

Refer to LAN-49, "CAN System Specification Chart" .

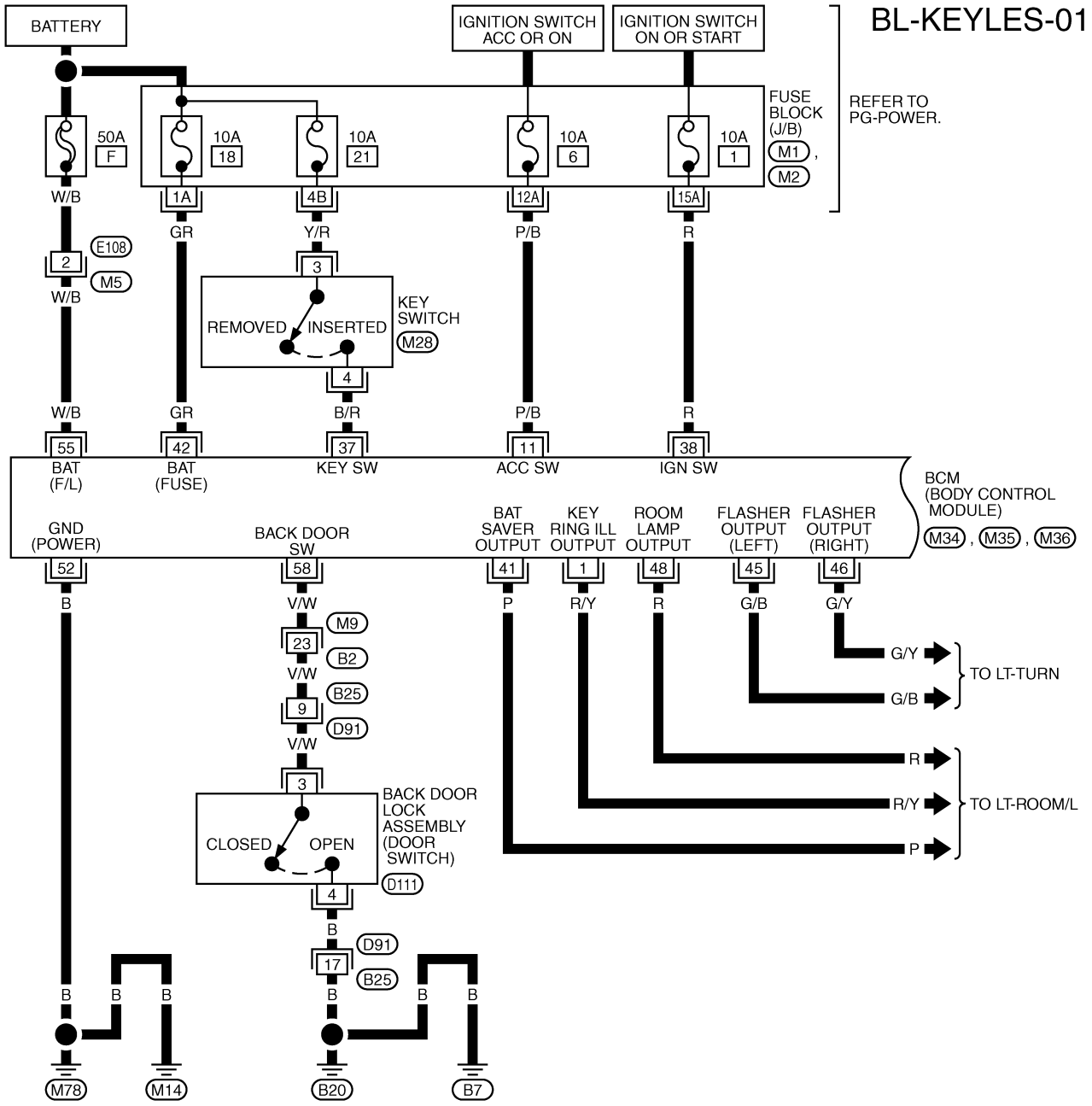
Schematic

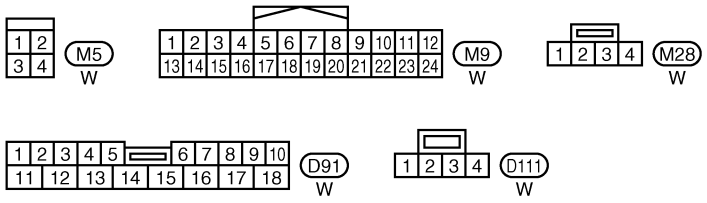
NIS0016R



Wiring Diagram — KEYLES—

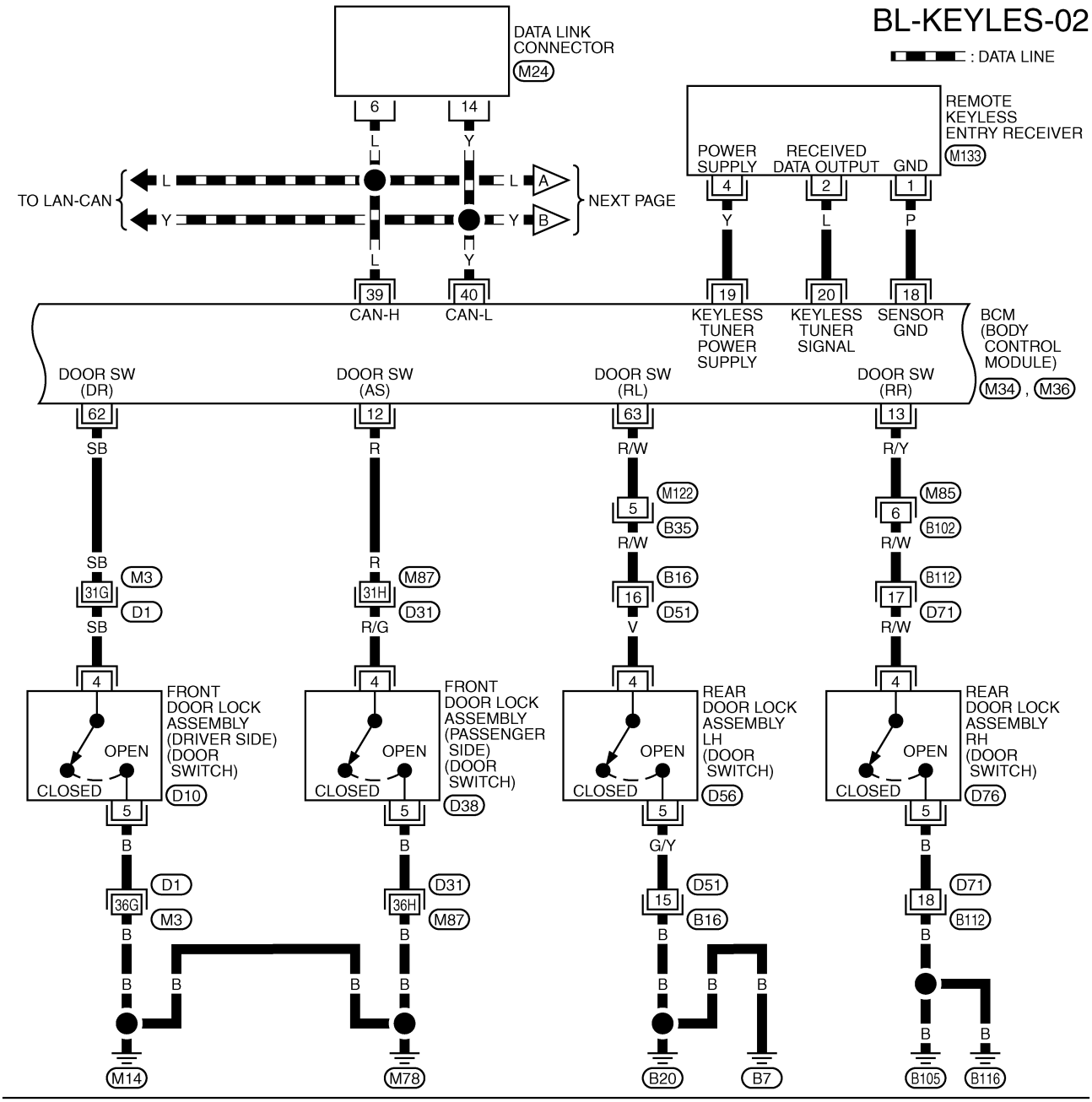
NIS0016S

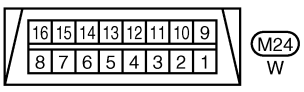


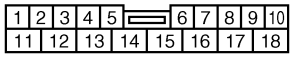


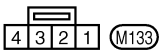
REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)
M34, M35, M36 -ELECTRICAL UNITS

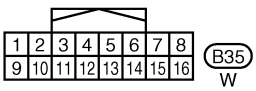
TIWB0774E

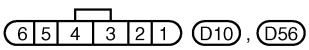


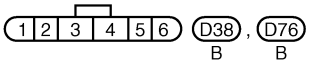










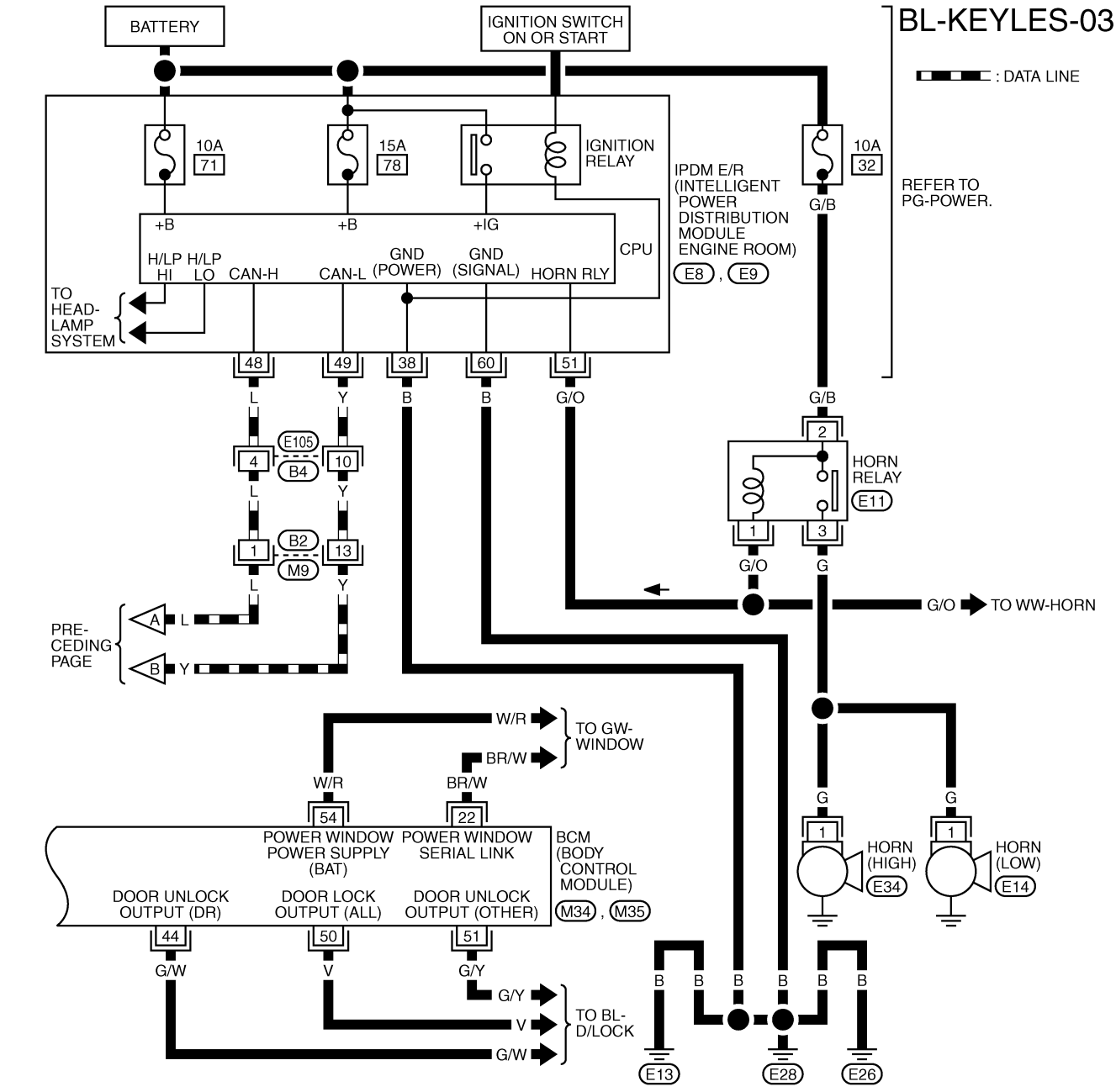


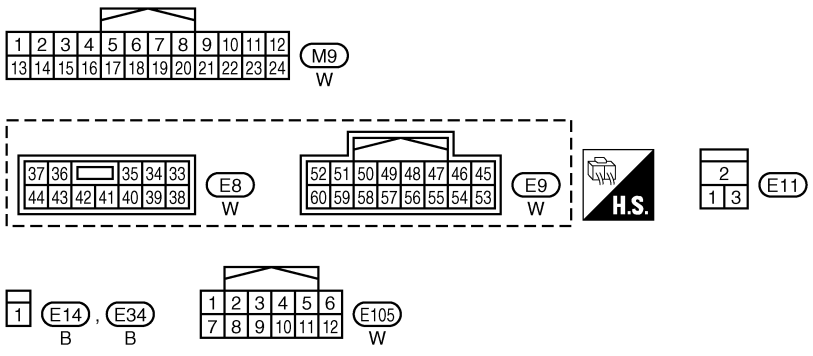
REFER TO THE FOLLOWING.

D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

M34 , M36 -ELECTRICAL UNITS

TIWB0775E



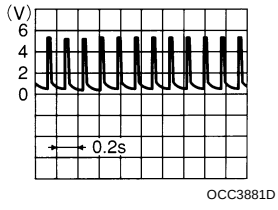
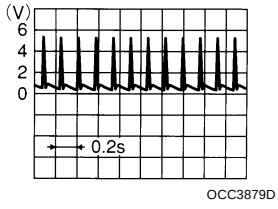
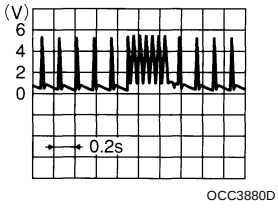


REFER TO THE FOLLOWING.
M34 , M35 -ELECTRICAL UNITS

TIWB0776E

Terminals and Reference Value for BCM

NIS0016T

Terminal	Wire color	Item	Signal input/output	Condition	Voltage [V] (Approx.)
1	R/Y	Key ring illumination output signal	Output	Key ring illumination is lighting.	Battery voltage
				Key ring illumination is being turned off.	0
11	P/B	Ignition switch (ACC)	Input	Ignition switch is in ACC position	Battery voltage
12	R	Front door switch signal (passenger side)	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
13	R/Y	Rear door switch RH	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
18	P	Remote keyless entry receiver (Ground)	—	—	0
19	Y	Remote keyless entry receiver (Power supply)	Output	key is inserted in IGN key cylinder	0
				ALL door closed	 OCC3881D
20	L	Remote keyless entry receiver (Signal)	Input	Key is inserted in IGN key cylinder	0
				Waiting (All door closed)	 OCC3879D
				When signal is received (All door closed)	 OCC3880D
37	B/R	Key switch input signal	Input	Key switch ON (key is inserted in ignition key cylinder)	Battery voltage
				Key switch OFF (key is removed from ignition key cylinder)	0
38	R	Ignition switch (ON)	Input	Ignition switch is in ON position	Battery voltage
39	L	CAN-H	Input/output	—	—
40	Y	CAN-L	Input/output	—	—

Terminal	Wire color	Item	Signal input/output	Condition	Voltage [V] (Approx.)
41	P	Battery saver output signal	Output	30 minutes after ignition switch is turned off	0
				Ignition switch is in ON position	Battery voltage
42	GR	Power source (fuse)	Input	—	Battery voltage
45	G/B	Left turn signal lamp	Output	When door lock or unlock is operated using key fob.*1 (ON→ OFF)	Battery voltage → 0
46	G/Y	Right turn signal lamp	Output	When door lock or unlock is operated using key fob.*1 (ON→ OFF)	Battery voltage → 0
48	R	Room lamp output signal	Output	Room lamp is lighting.*2	0
				Room lamp is being turned off.*2	Battery voltage
52	B	Ground	—	—	0
55	W/B	Power source (Fusible link)	Input	—	Battery voltage
58	V/W	Back door switch signal	Input	ON (Back door is opened) → OFF (Back door is closed)	0 → Battery voltage
62	SB	Front door switch signal (driver side)	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
63	R/W	Rear door switch LH	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage

*1: In the state that hazard reminder operates.
*2: In the state that room lamp switch is in "DOOR" position.

Terminals and Reference Value for IPDM E/R

NIS0016U

Terminal	Wire color	Item	Signal input/output	Condition	Voltage [V] (Approx.)
38	B	Ground	—	—	0
48	L	CAN – H	Input/Output	—	—
49	Y	CAN – L	Input/Output	—	—
51	G/O	Horn relay	Input	When door lock or panic alarm are operated using key fob* (ON → OFF)	0 → Battery voltage
60	B	Ground	—	—	0

*: In the state that horn reminder and panic alarm operates.

CONSULT-II Function

NIS0016V

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

BCM diagnosis part	Inspection items and diagnosis mode	Description
BCM*	SELF-DIAG RESULTS	Carries out the self-diagnosis.
	CAN DIAG SUPPORT MNTR	Displays CAN communication system diagnosis, disabled transmission status, and communication status of each unit communicated with BCM.
	DATA MONITOR	Displays the input data to BCM on real-time basis.
MULTI REMOTE ENT	DATA MONITOR	Displays the input data of BCM in real time.
	ACTIVE TEST	Gives a drive to a load to check the operation.
	WORK SUPPORT	Changes the setting for each function.

*:Refer to BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

CONSULT-II Start Procedure

NIS0016W

Refer toGI-37, "CONSULT-II Start Procedure"

CONSULT-II Application Items

NIS0016X

“MULTI REMOTE CONTENT”

Work Support

Test Item	Description
HORN CHIRP SET*	Horn reminder mode can be changed in this mode. The horn reminder mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
HAZARD LAMP SET*	Hazard reminder mode can be changed in this mode. The hazard reminder mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
MULTI ANSWER BACK SET	Hazard and horn reminder mode can be changed in this mode. The hazard and horn reminder mode will be changed when “CHANGE 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 “CHANGE 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 “CHANGE 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 “MODE SET” 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“CHANGE SETT” on CONSULT-II screen is touched.

*: Perform this mode always in the state of C mode. Refer to BL-59, "Hazard and Horn Reminder" .

HORN CHIRP SET*

Horn chirp function	ON	OFF

*: Perform this mode always in the state of C mode. Refer to BL-59, "Hazard and Horn Reminder" .

HAZARD LAMP BACK SET*

	MODE1	MODE2	MODE3	MODE4
Hazard lamp operation mode	Nothing	Unlock only	Lock only	Lock and Unlock

*: Perform this mode always in the state of C mode. Refer to BL-59, "Hazard and Horn Reminder" .

MULTI ANSWER BACK SET

	MODE 1 (C mode)		MODE 2 (S mode)	
Key fob operation	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—
Horn sound	Once	—	—	—

AUTO LOCK SET

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

PANIC ALARM SET

	MODE 1	MODE 2	MODE 3
Key fob operation	0.5 seconds	Nothing	1.5 seconds

TRUNK OPEN SET

	MODE 1	MODE 2	MODE 3
Key fob operation	0.5 seconds	Nothing	1.5 seconds

PW DOWN SET

	MODE 1	MODE 2	MODE 3
Key fob operation	3 seconds	Nothing	5 seconds

Data Monitor

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from key fob.
KEYLESS PANIC	Indicates [ON/OFF] condition of panic signal from key fob.
KEYLESS TRUNK	Indicates [ON/OFF] condition of panic signal from key fob.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch driver side.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch passenger side.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	This is displayed even when it is not equipped.
TRUNK OPN MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock and unlock switch.
RKE LCK-UNLOCK	Indicates [ON/OFF] condition of simultaneous signal of lock and unlock from key fob.
RKE KEEP UNLK	Indicates [ON/OFF] condition of unlock continuousness signal from key fob.
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.

Active Test

Test Item	Description
FLASHER	This test is able to check right hazard reminder operation. The right hazard lamp turns on when “ON” on CONSULT-II screen is touched.
POWER WINDOW DOWN	This test is able to check power window open operation. The front power windows activate for 10 seconds after “ON” on CONSULT-II screen is touched.
HORN	This test is able to check panic alarm and horn reminder operations. The horn activate for 0.5 seconds after “ON” on CONSULT-II screen is touched.
DOOR LOCK	This test is able to check door lock actuator operation. ● The all door lock actuator are locked when “ALL LOCK” on CONSULT-II screen is touched. ● The all door lock actuator are unlocked when “ALL UNLOCK” on CONSULT-II screen is touched. ● The door lock actuator (driver side) is unlocked when “DR UNLOCK” on CONSULT-II screen is touched. ● The all door lock actuator (except driver side) are unlocked when “OTHER UNLOCK” on CONSULT-II screen is touched.
TRUNK/BACK DOOR	This is displayed even when it is not equipped.
PSD PBD OPEN TEST	This is displayed even when it is not equipped.

Work Flow

NIS0016Y

1. Check the trouble symptom and customer's requests.
2. Understand outline of system. Refer to BL-58, "System Description" .
3. Confirm that power door lock system operates normally.
   Refer to BL-23, "POWER DOOR LOCK SYSTEM" .
4. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts.
   Refer to BL-69, "Trouble Diagnosis Chart by Symptom" .
5. INSPECTION END

Trouble Diagnosis Chart by Symptom

NIS0016Z

NOTE:

- Always check the “Work Flow” before troubleshooting. Refer to BL-69, "Work Flow" .
- Always check key fob battery before replacing key fob.

Symptom	Diagnoses/service procedure	Reference page
All function of remote keyless entry system do not operate.	1. Check key fob battery.	BL-70
	2. Check key fob function.	BL-71
	3. Replace BCM.	BCS-14
The new ID code of key fob cannot be entered without CONSULT-II.	1. Check key fob battery.	BL-70
	2. Check key switch.	BL-77
	3. Check door switch.	BL-73
	4. Check ACC power supply circuit.	BL-72
	5. Replace BCM.	BCS-14
Door lock or unlock does not function with key fob. (Power door lock system is “OK”.) (Panic alarm activates properly with key fob.)	1. Check key fob function.	BL-71
	2. Replace BCM.	BCS-14
Hazard and horn reminder does not activate properly when pressing lock or unlock button of key fob.	1. Check hazard and horn reminder mode.* *: Hazard and horn reminder mode can be changed. First check the hazard and horn reminder setting.	BL-67
	2. Check door switch.	BL-73
	3. Replace BCM.	BCS-14

Symptom	Diagnoses/service procedure	Reference page
Hazard reminder does not activate properly when pressing lock or unlock button of key fob. (Horn reminder is “OK”.)	1. Check hazard reminder mode.* *: Hazard reminder mode can be changed. First check the hazard reminder setting.	BL-67
	2. Check hazard function.	BL-81
	3. Replace BCM.	BCS-14
Horn reminder does not activate properly when pressing lock button of key fob. (Hazard reminder is “OK”.)	1. Check horn reminder mode.* *: Horn reminder mode can be changed. First check the horn chirp setting.	BL-67
	2. Check horn function.	BL-81
	3. Check IPDM E/R operation.	BL-81
	4. Replace BCM.	BCS-14
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed. (Door lock and unlock activates properly with key fob.)	1. Check panic alarm mode.* *: Panic alarm mode can be changed. First check the panic alarm setting.	BL-67
	2. Check key fob function.	BL-71
	3. Check key switch.	BL-77
	4. Check headlamp function.	BL-81
	5. Check horn function.	BL-81
	6. Check IPDM E/R operation.	BL-81
	7. Replace BCM.	BCS-14
Auto door lock operation does not activate properly. (All other remote keyless entry system function is OK.)	1.Check auto door lock operation mode.* *: Auto door lock operation mode can be changed. First check the auto door lock operation setting.	BL-67
	2. Replace BCM.	BCS-14
Keyless power window down (open) operation does not activate properly. (All other remote keyless entry system function is OK.)	1. Check power window down operation mode.* *: Power window down operation mode can be changed. First check the power window down setting.	BL-67
	2. Check power window function.	GW-18
	3. Replace BCM.	BCS-14
Map lamp and ignition keyhole illumination function does not activate properly. (All other remote keyless entry system function is OK.)	1. Check room lamp and ignition keyhole illumination function.	BL-82
	2. Replace BCM.	BCS-14

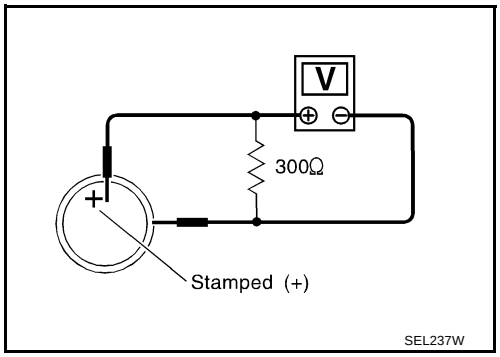
Check Key Fob Battery

NIS00170

1. CHECK KEY FOB BATTERY

1. Remove key fob battery. Refer to BL-86, "Key Fob Battery Replacement" .
2. Check voltage between battery positive and negative terminals, (+) and (–).

Voltage : 2.5V - 3.0V



NOTE:
Key fob does not function if battery is not set correctly.

OK or NG

OK >> Key fob battery is OK.
NG >> Replace key fob battery.

Check Key Fob Function

NIS00171

1. CHECK KEY FOB FUNCTION

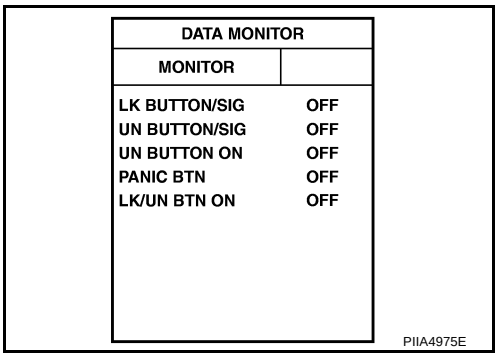
With CONSULT-II

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

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

Key fob switch condition	Monitor item	
Pushing LOCK	LK BUTTON/SIG	: ON
Pushing UNLOCK	UN BUTTON/SIG	: ON
Keep pushing UNLOCK	UN BUTTON ON	: ON*
Pushing PANIC	PANIC BTN	: ON
Pushing LOCK and UNLOCK at the same time	LK/UN BTN ON	: ON

*: UN BUTTON ON turns to ON 3 seconds after UNLOCK button keeps pushing.



OK or NG

OK >> Key fob is OK.

NG >> Replace key fob and register key fob ID code. Refer to BL-83, "ID Code Entry Procedure" .

Check ACC Power Supply Circuit

NIS00172

1. CHECK ACC POWER

With CONSULT-II

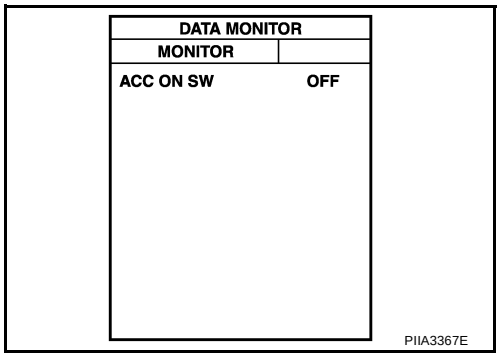
Check ACC power (“ACC ON SW”) in “DATA MONITOR” mode with CONSULT-II.

- When ignition switch is in “ACC” position

  ACC ON SW : ON

- When ignition switch is in “OFF” position

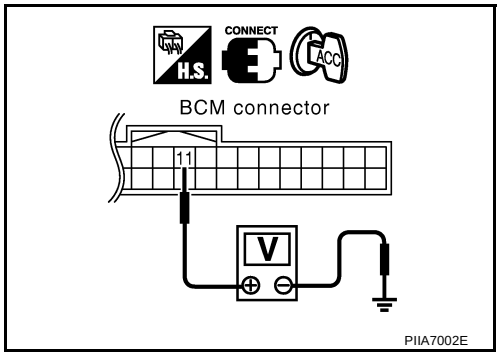
  ACC ON SW : OFF



Without CONSULT-II

Check voltage between BCM connector and ground.

Terminals (Wire color)			Condition	Voltage (V) (Approx.)
(+)		(–)		
Connector	Terminal (Wire color)			
M34	11 (P/B)	Ground	ACC	Battery voltage
			OFF	0



OK or NG

OK >> ACC power supply circuit is OK.

NG >> Check the following.

- 10A fuse [No. 6, located in fuse block (J/B)]
- Harness for open or short between BCM and fuse.

Check Door Switch

NIS00173

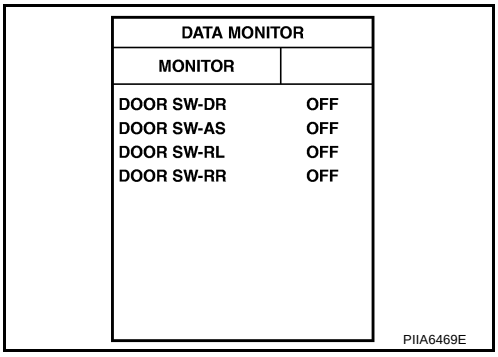
CHECK DOOR SWITCH (EXCEPT BACK DOOR SWITCH)

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR SW-DR”, “DOOR SW-AS”, “DOOR SW-RL” and “DOOR SW-RR”) in “DATA MONITOR” mode with CONSULT-II.

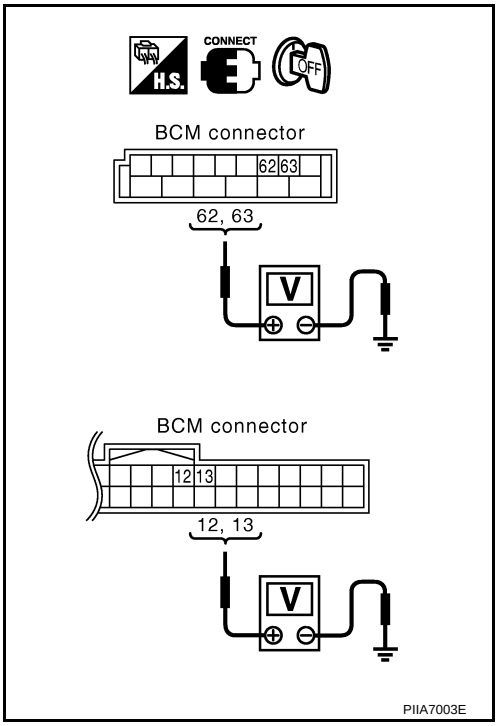
Monitor item	Condition	
DOOR SW-DR	Door is closed ↓ Door is opened	OFF ↓ ON
DOOR SW-AS		
DOOR SW-RL		
DOOR SW-RR		



Without CONSULT-II

Check voltage between BCM and ground.

Door switch	Con-nector	Terminals (wire color)		Condition	Voltage [V] (Approx.)
		(+)	(–)		
Driver side	M36	62 (SB)	Ground	Door close ↓ Door open	Battery voltage ↓ 0
Rear LH		63 (R/W)			
Passenger side	M34	12 (R)			
Rear RH		13 (R/Y)			



OK or NG

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

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch and unified BCM connectors.
3. Check continuity between BCM and door switch.

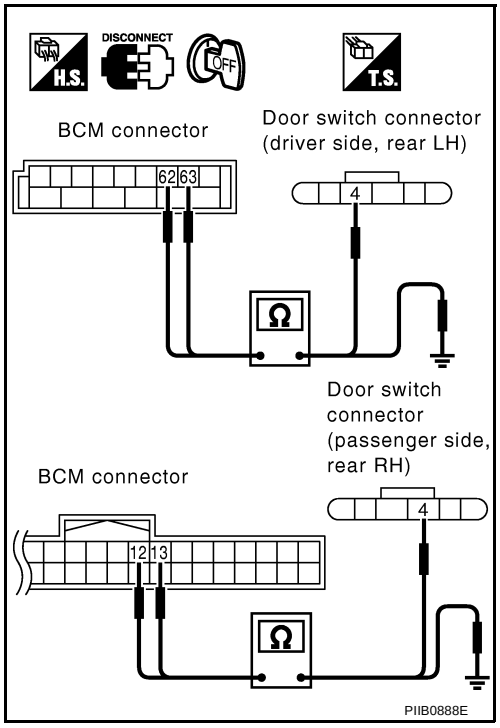
Door switch	Connector	Terminal (wire color)	Connector	Terminal (wire color)	Continuity
Driver side	M36	62 (SB)	D10	4 (SB)	Yes
Rear LH		63 (R/W)	D56	4 (V)	
Passenger side	M34	12 (R)	D38	4 (R/G)	
Rear RH		13 (R/Y)	D76	4 (R/W)	

4. Check continuity between BCM and ground.

Door switch	Connector	Terminal (wire color)		Continuity
Driver side	M36	62 (SB)	Ground	No
Rear LH		63 (R/W)		
Passenger side	M34	12 (R)		
Rear RH		13 (R/Y)		

OK or NG

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



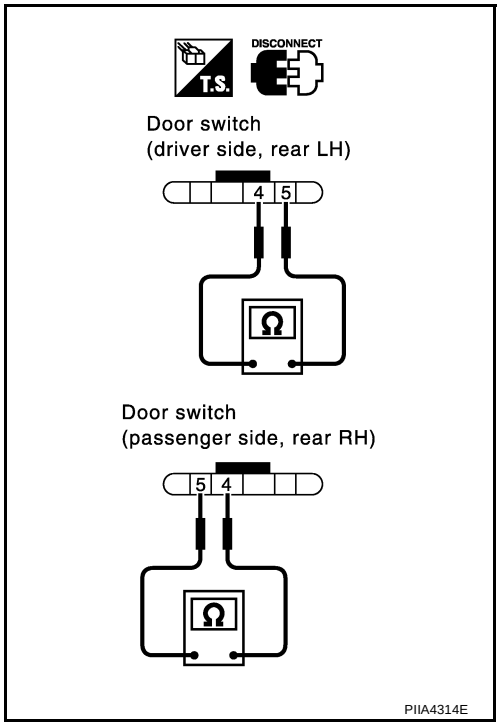
3. CHECK DOOR SWITCH

Check continuity between door switch terminals 4 and 5.

Terminal		Door switch condition	Continuity
4	5	Open position	Yes
		Closed position	No

OK or NG

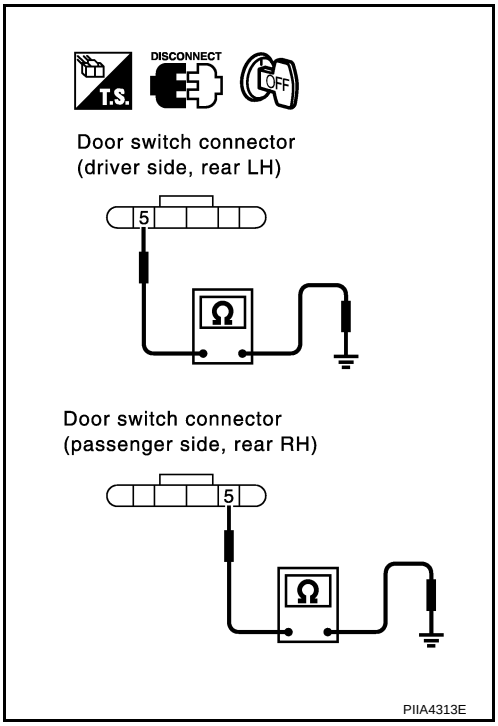
OK >> GO TO 4.
NG >> Replace door switch.



4. CHECK DOOR SWITCH GROUND HARNESS

Check continuity between door switch connectors D10, D38, D56, D76 terminal 5 and ground.

Door switch	Connector	Terminal		Continuity
Driver side	D10	5 (B)	Ground	Yes
Passenger side	D38			
Rear RH	D76			
Rear LH	D56	5 (G/Y)		



OK or NG

OK >> Check harness connector.
NG >> Repair or replace harness.

CHECK BACK DOOR SWITCH

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

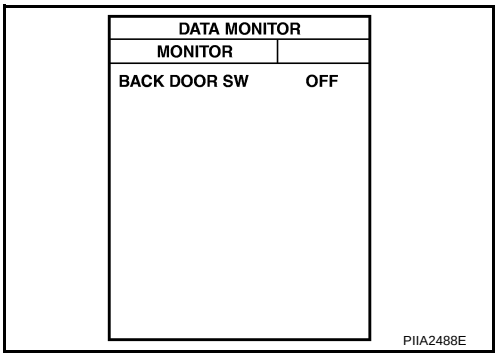
Check back door switch (“BACK DOOR SW”) in “DATA MONITOR” mode with CONSULT-II.

- When back door is open

  BACK DOOR SW : ON

- When back door is closed

  BACK DOOR SW : OFF

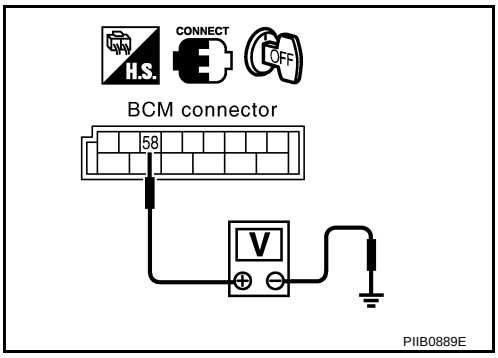


Without CONSULT-II

Check voltage between BCM connector and ground.

Item	Con-nector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
		(+)	(–)		
Back door switch	M36	58 (V/W)	Ground	OPEN	0
				CLOSE	Battery voltage*

*. When interior lamp battery saver control is OFF: Approx. 5V.



OK or NG

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

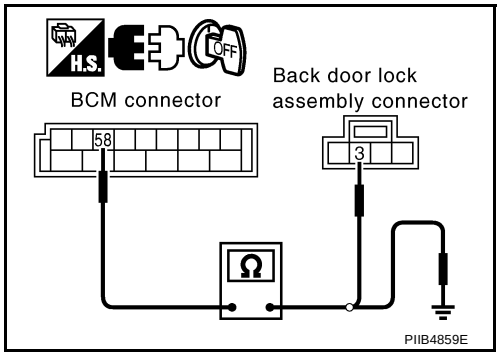
2. CHECK BACK DOOR SWITCH HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and back door lock assembly connectors.
3. Check continuity between BCM connector M36 terminal 58 and back door lock assembly connector D111 terminal 3.

58 (V/W) – 3 (V/W) : Continuity should exist.

4. Check continuity between BCM connector M36 terminal 58 and ground.

58 (V/W) – Ground : Continuity should not exist.



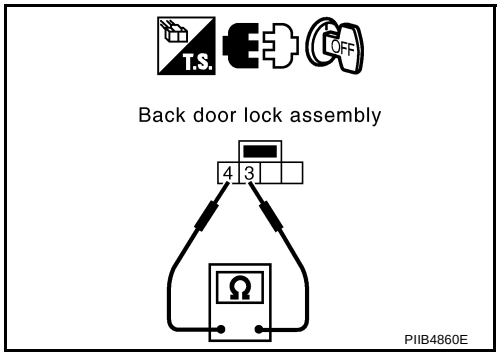
OK or NG

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

3. CHECK BACK DOOR SWITCH

Check continuity between back door lock assembly terminals 3 and 4.

Terminal		Back door condition	Continuity
3	4	Open position	Yes
		Closed position	No



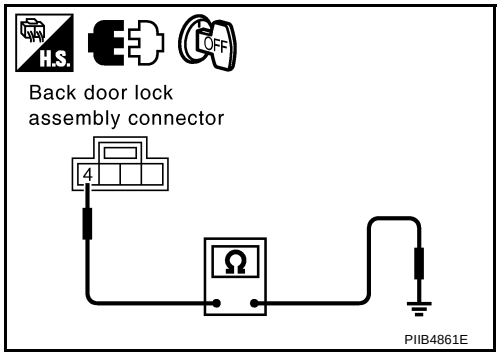
OK or NG

OK >> GO TO 4.
NG >> Replace back door lock assembly.

4. CHECK BACK DOOR SWITCH GROUND HARNESS

Check continuity between back door lock assembly connector D111 terminal 4 and ground.

4 (B) - Ground : Continuity should exist.



OK or NG

OK >> Check harness connection.
NG >> Repair or replace harness.

Check Key Switch

NIS00174

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

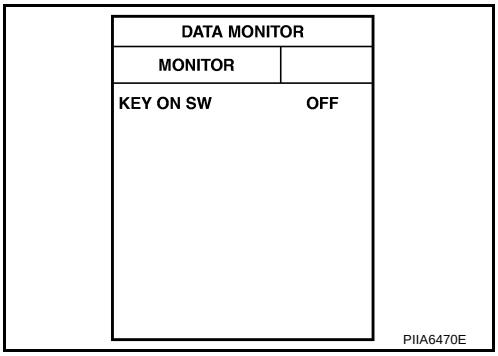
Check ignition key switch “IGN ON SW” in “DATA MONITOR” mode with CONSULT-II.

- When key is inserted in ignition key cylinder

  KEY ON SW : ON

- When key is removed from ignition key cylinder

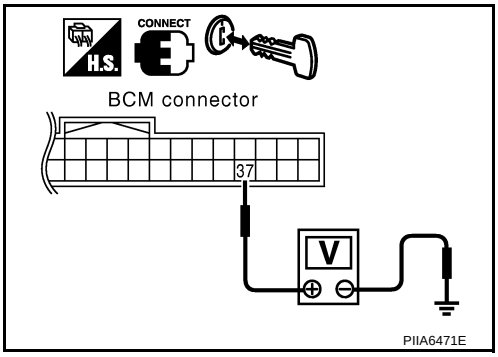
  KEY ON SW : OFF



Without CONSULT-II

Check voltage between BCM connector and ground.

Con-nector	Terminal (Wire color)		Condition	Voltage [V] (Approx.)
	(+)	(–)		
M34	37 (B/R)	Ground	Key is removed from ignition key cylinder.	0
			Key is inserted in ignition key cylinder.	Battery voltage



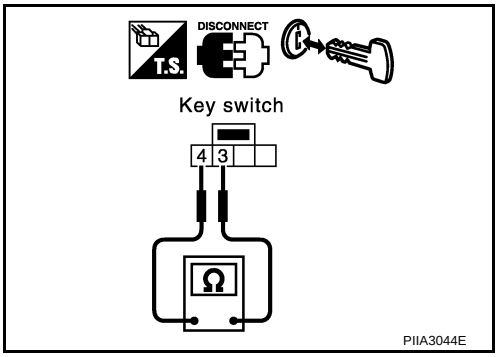
OK or NG

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

2. CHECK KEY SWITCH

Check continuity between key switch connector M28 terminals 3 and 4.

Terminal		Condition	Continuity
3	4	Key is removed from ignition key cylinder.	No
		Key is inserted in ignition key cylinder.	Yes



OK or NG

OK >> GO TO 3.
NG >> Replace key switch.

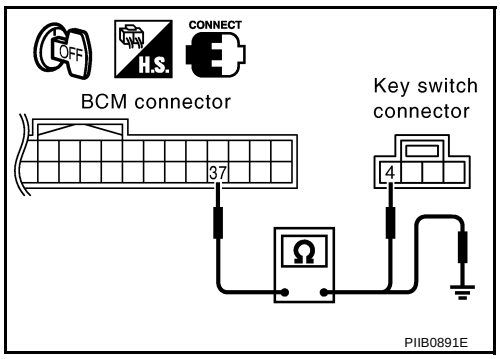
3. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M34 terminal 37 and key switch harness connector M28 terminal 4.

37 (B/R) - 4 (B/R) : Continuity should exist.

3. Check continuity between BCM harness connector M34 terminal 37 and ground.

37 (B/R) - Ground : Continuity should not exist.



OK or NG

OK >> Check the following.
- 10A fuse [No.21, located in the fuse block (J/B)]
- Harness for open or short between key switch and fuse

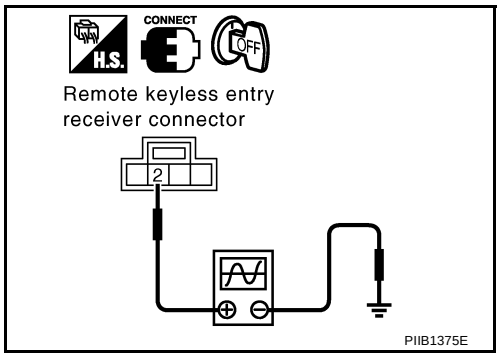
NG >> Repair harness or connector.

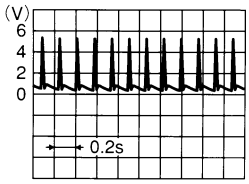
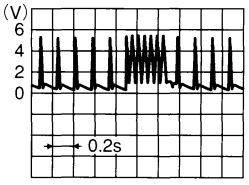
Check Remote Keyless Entry Receiver

NIS001L9

1. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Check remote keyless entry receiver connector M133 terminal 2 (L) and ground signal with oscilloscope.



Connector	Terminal (Wire color)		Condition of keyfob	Voltage (Reference value)
	(+)	(–)		
M133	2	Ground	Key is inserted in IGN key cylinder	0
			Waiting (All door closed)	 OCC3879D
			When signal is received (All door closed)	 OCC3880D

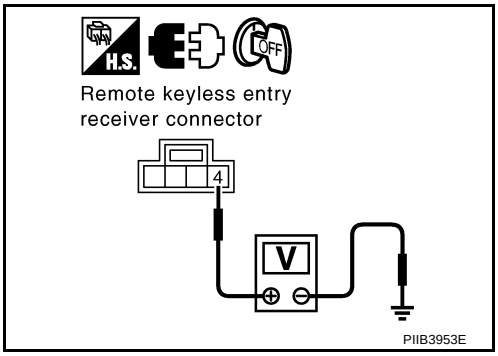
OK or NG

OK >> Remote keyless entry receiver circuit is OK.
NG >> GO TO 2.

2. CHECK REMOTE KEYLESS ENTRY RECEIVER INPUT VOLTAGE

1. Disconnect remote keyless entry receiver connector.
2. Check voltage between remote keyless entry receiver connector M133 terminal 4 and ground.

4 (Y) – Ground : Approx. 4.5V



OK or NG

OK >> GO TO 4.
NG >> GO TO 3.

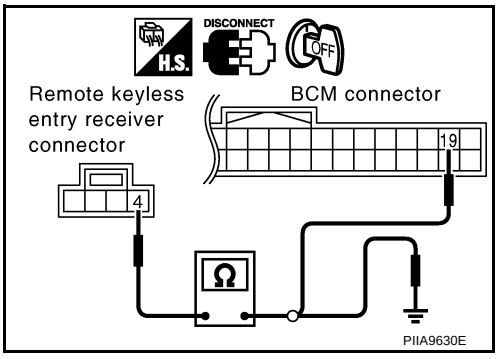
3. CHECK REMOTE KEYLESS ENTRY RECEIVER POWER SUPPLY CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between remote keyless entry receiver connector M133 terminal 4 and BCM connector M34 terminal 19.

4 (Y) – 19 (Y) : Continuity should exist.

3. Check continuity between remote keyless entry receiver connector M133 terminal 4 (Y) and ground.

4 (Y) – Ground : Continuity should not exist.



OK or NG

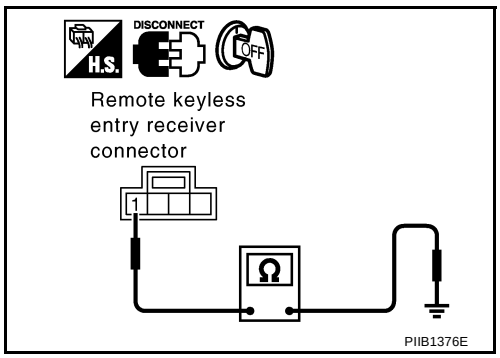
OK >> Check harness connection.
- If it is OK, replace BCM.
- If it is NG, repair or replace malfunction part.

NG >> Repair or replace the harness.

4. CHECK REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT

1. Check continuity between remote keyless entry receiver connector M133 terminal 1 and ground.

1 (P) – Ground : Continuity should exist.



OK or NG

OK >> GO TO 6.
NG >> GO TO 5.

5. CHECK REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT

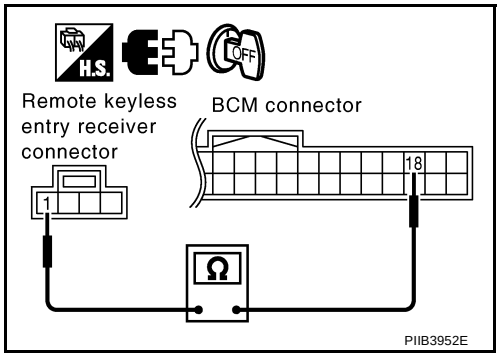
1. Check continuity between remote keyless entry receiver connector M133 terminal 1 and BCM connector M34 terminal 18.

1 (P) – 18 (P) : Continuity should exist.

OK or NG

OK >> Check harness connection.
- If it is OK, replace BCM.
- If it is NG, repair or replace malfunction part.

NG >> Repair or replace the harness.



6. CHECK REMOTE KEYLESS ENTRY RECEIVER SIGNAL CIRCUIT

1. Check continuity between remote keyless entry receiver connector M133 terminal 2 and BCM connector M34 terminal 20.

2 (L) – 20 (L) : Continuity should exist.

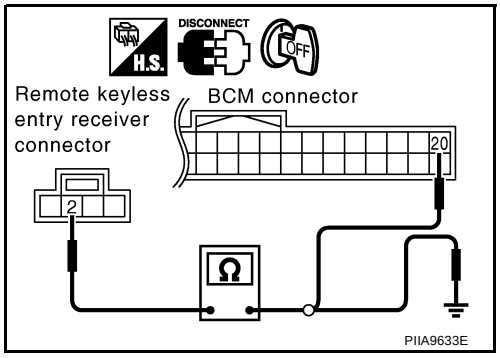
2. Check continuity between remote keyless entry receiver connector M133 terminal 2 (L) and ground.

2 (L) – Ground : Continuity should not exist.

OK or NG

OK >> Check harness connection.
- If it is OK, replace remote keyless entry receiver.
- If it is NG, repair or replace malfunction part.

NG >> Repair or replace harness.



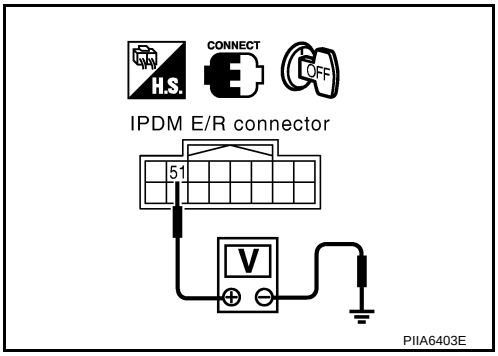
Check IPDM E/R Operation

NIS00175

1. CHECK IPDM E/R INPUT VOLTAGE

1. Turn ignition switch OFF.
2. Check voltage between IPDM E/R connector E9 terminal 51 and ground.

51 (G/O) – Ground : Battery voltage



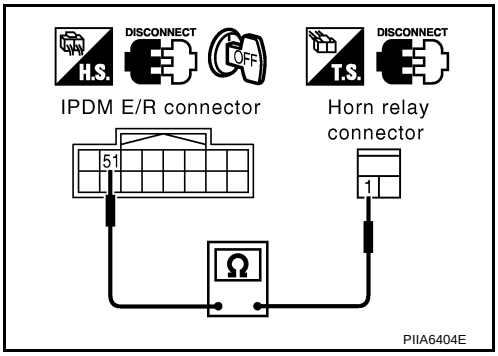
OK or NG

OK >> Replace IPDM E/R.
NG >> GO TO 2.

2. CHECK IPDM E/R HARNESS

1. Disconnect IPDM E/R and horn relay connector.
2. Check continuity between IPDM E/R connector E9 terminal 51 and horn relay connector E11 terminal 1.

51 (G/O) – 1 (G/O) : Continuity should exist.



OK or NG

OK >> Check harness connection.
NG >> Repair or replace harness.

Check Hazard Function

NIS00176

1. CHECK HAZARD WARNING LAMP

Does hazard warning lamp flash with hazard switch?

YES or NO

YES >> Hazard warning lamp circuit is OK.
NO >> Check hazard warning lamp circuit. Refer to LT-117, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

Check Horn Function

NIS00177

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 BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

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-58, "HORN" .

Check Headlamp Function

NIS00178

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 BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

1. CHECK HEADLAMP OPERATION

Does headlamp come on when turning lighting switch “ON”?

YES or NO

YES >> Headlamp circuit is OK.
NO >> Check headlamp system. Refer to LT-6, "HEADLAMP - XENON TYPE -" , LT-37, "HEADLAMP - CONVENTIONAL TYPE-" .

Check Room Lamp and Ignition Keyhole Illumination Function

NIS00179

1. CHECK ROOM LAMP AND KEYHOLE ILLUMINATION OPERATION

When room lamp switch is in “DOOR” position, open the front door (LH or RH).

Room lamp and ignition keyhole illumination should illuminate.

OK or NG

OK >> Room lamp and ignition keyhole illumination circuit is OK.
NG >> Check room lamp and ignition keyhole illumination circuit. Refer to LT-214, "Room Lamp Does Not Illuminate" , LT-217, "Ignition Key Hole Illumination Does Not Illuminate" .

ID Code Entry Procedure

NIS0017A

KEY FOB ID SET UP WITH CONSULT-II

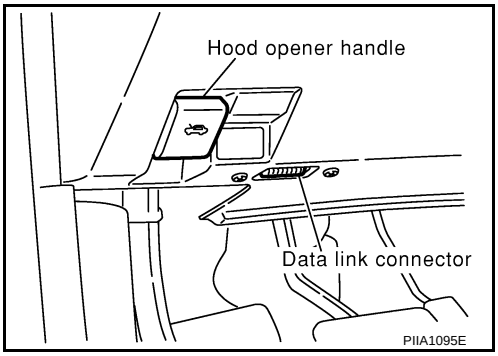
CAUTION:

If CONVERTER is not connected with CONSULT-II, vehicle occur the “FAIL-SAFE MODE” which is “LIGHT UP THE HEADLAMP” and/or “COOLING FAN ROTATING” when CONSULT-II is started.

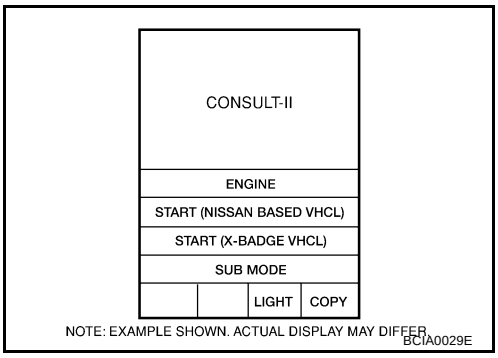
NOTE:

- **If a key fob is lost, the ID code of the lost key fob 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 key fob 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 key fobs must be re-registered.**
- **When registering an additional key fob, 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.**
- **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.**

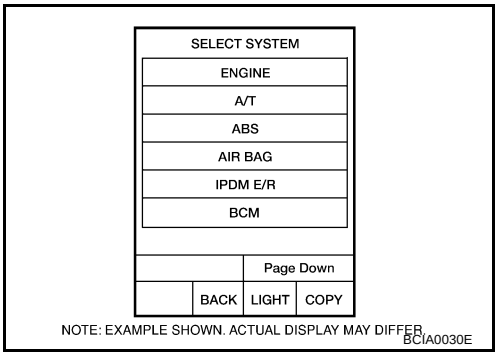
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” and “CONSULT-II CONVERTER” to data link connector.



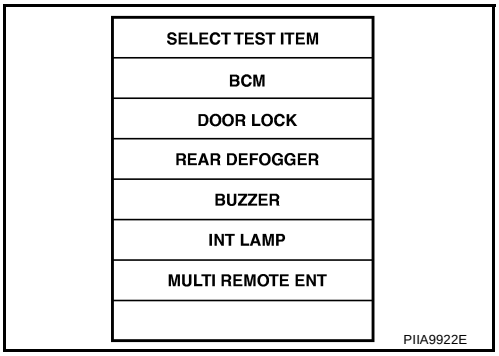
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



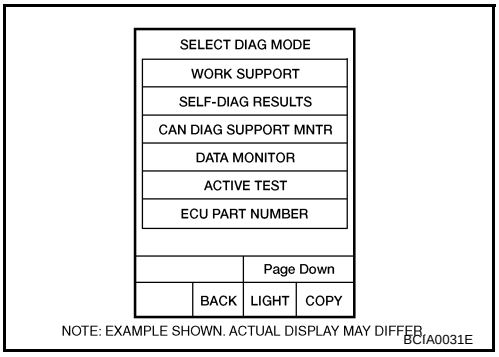
5. Touch “BCM”.
   If “BCM” is not indicated, go to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



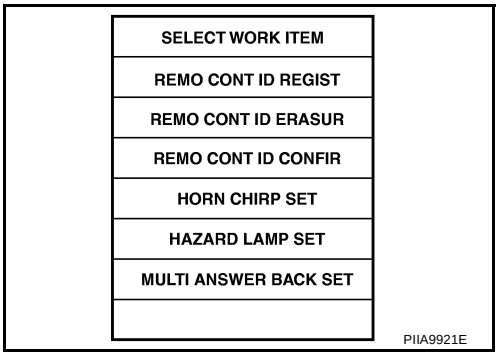
6. Touch “MULTI REMOTE ENT”.



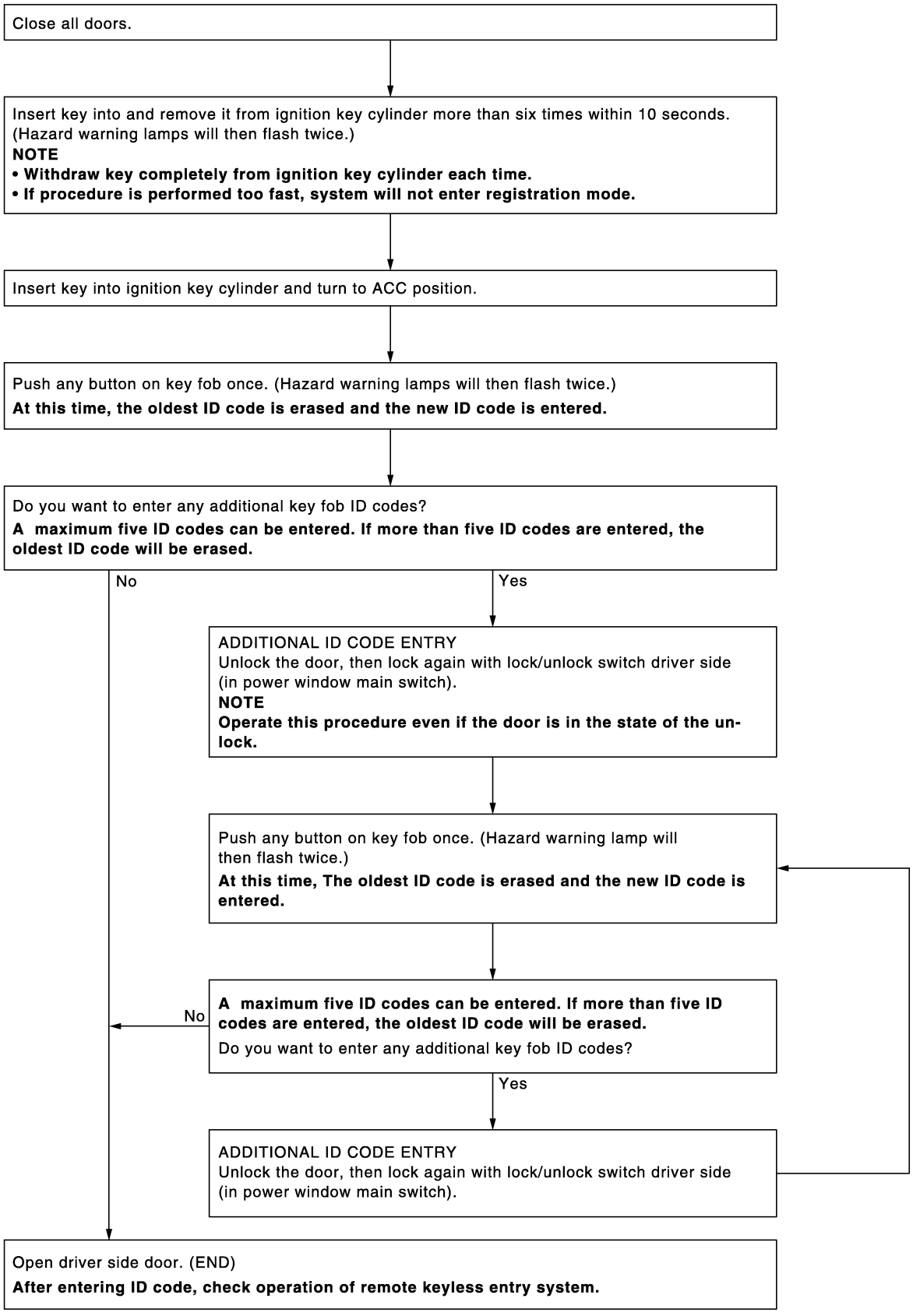
7. Touch “WORK SUPPORT”.



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



KEY FOB ID SET UP WITHOUT CONSULT-II



PIIA2839E

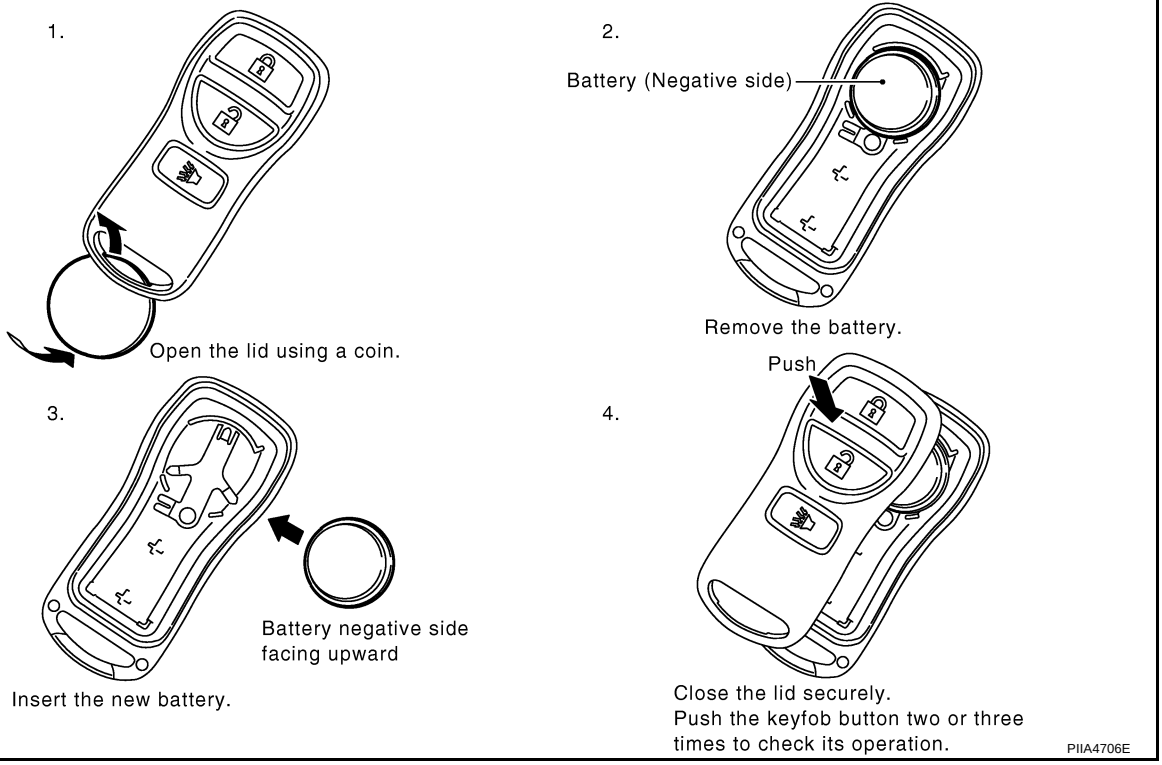
NOTE:

- If a key fob is lost, the ID code of the lost key fob 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 key fob 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 key fobs must be re-registered.
  To erase all ID codes in memory, register one ID code (key fob) five times. After all ID codes are erased, the ID codes of all remaining and/or new key fobs must be re-registered.
- When registering an additional key fob, 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 key fobs, repeat the procedure “Additional ID code entry” for each new key fob.
- 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.

Key Fob Battery Replacement

NIS0017B

SEC. 998
NOTE:
• Be careful not to touch the circuit board or battery terminal.
• The keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.

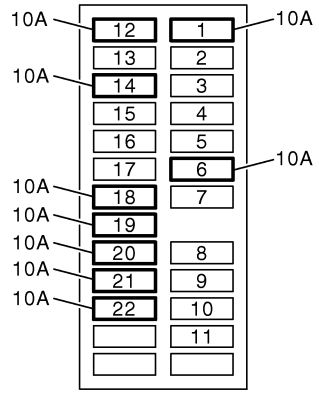


INTELLIGENT KEY SYSTEM

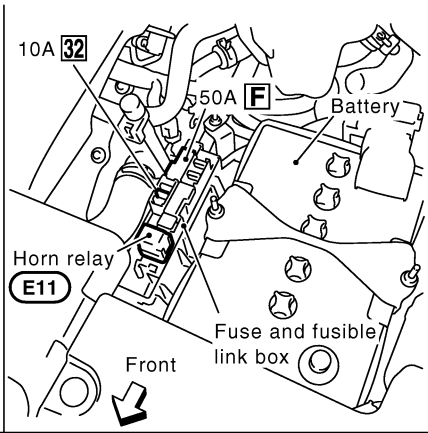
PFP:285e2

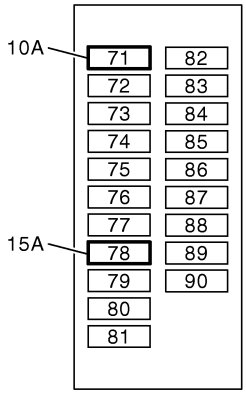
Component Parts and Harness Connector Location

NIS0017C

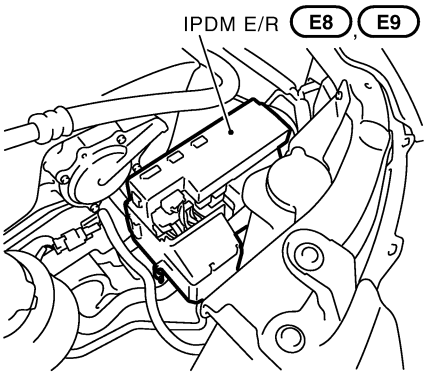


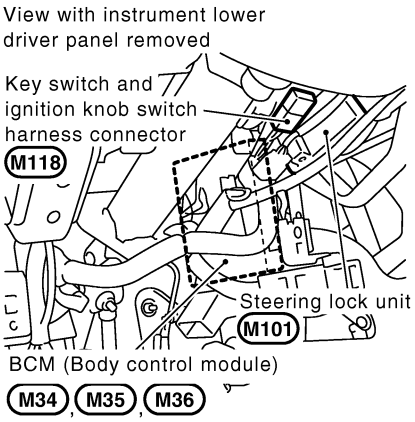
Fuse block (J/B) fuse layout

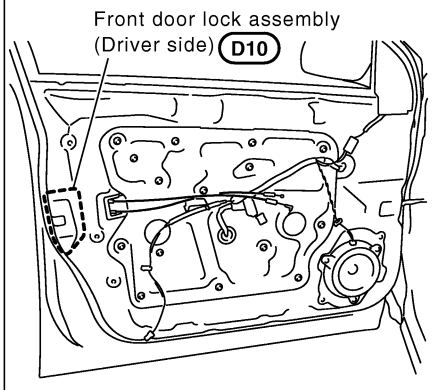


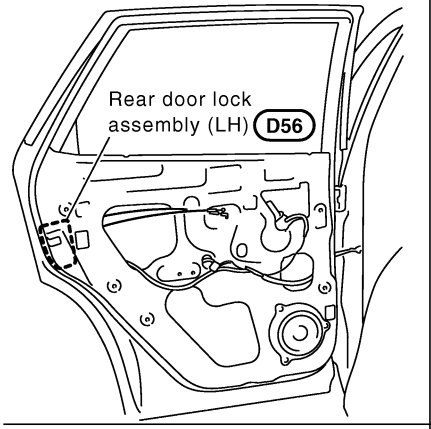


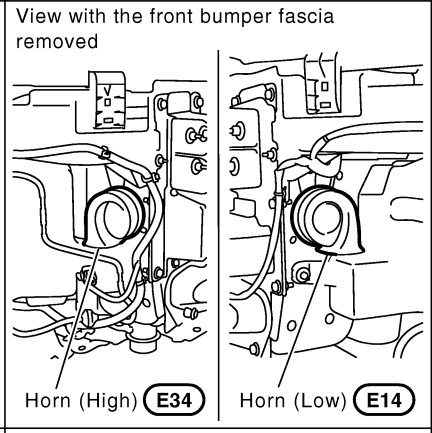
IPDM E/R fuse layout

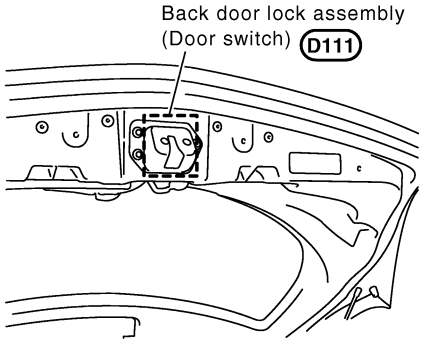


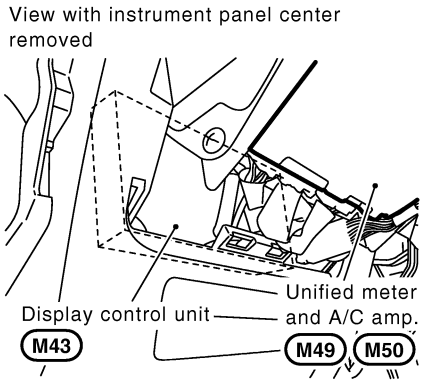


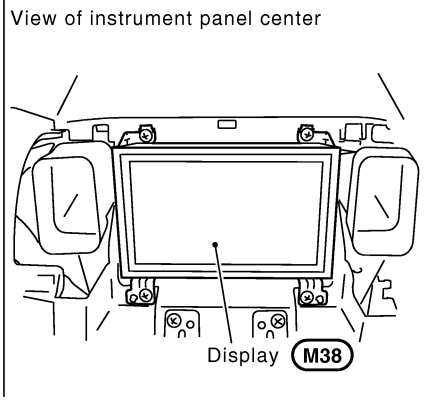


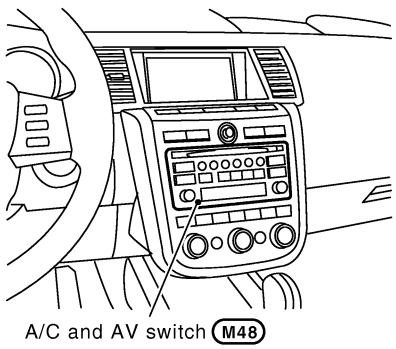












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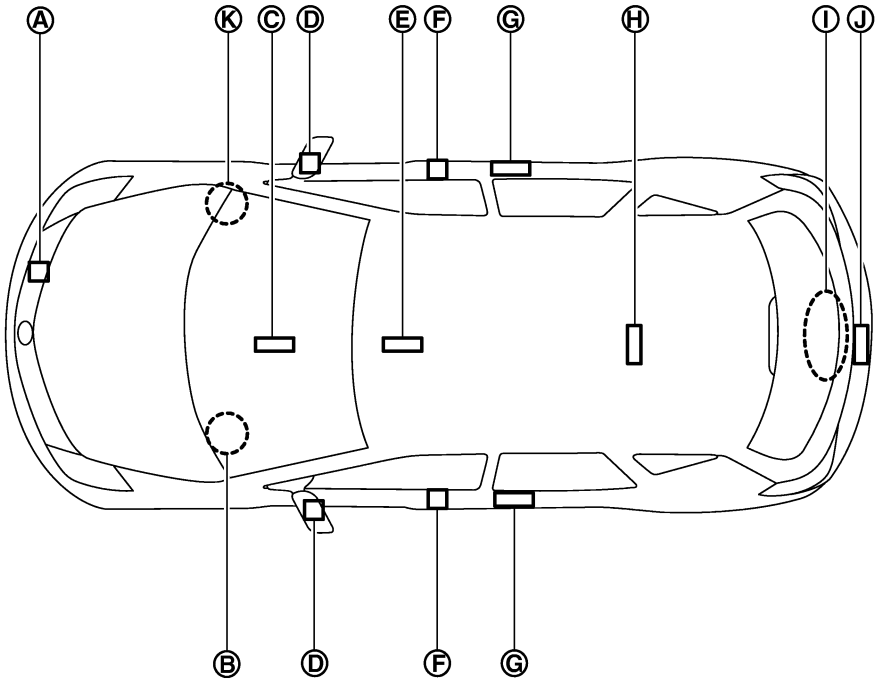

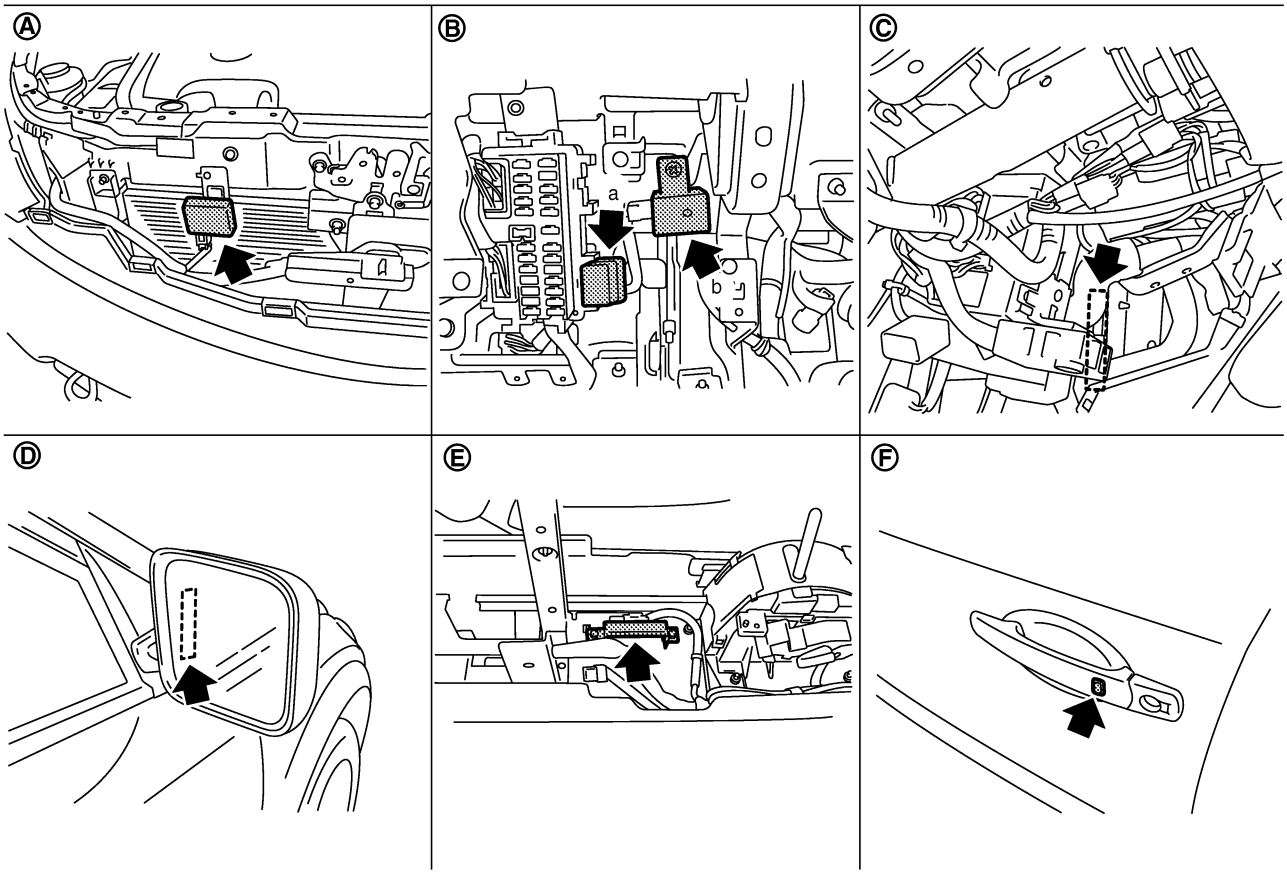

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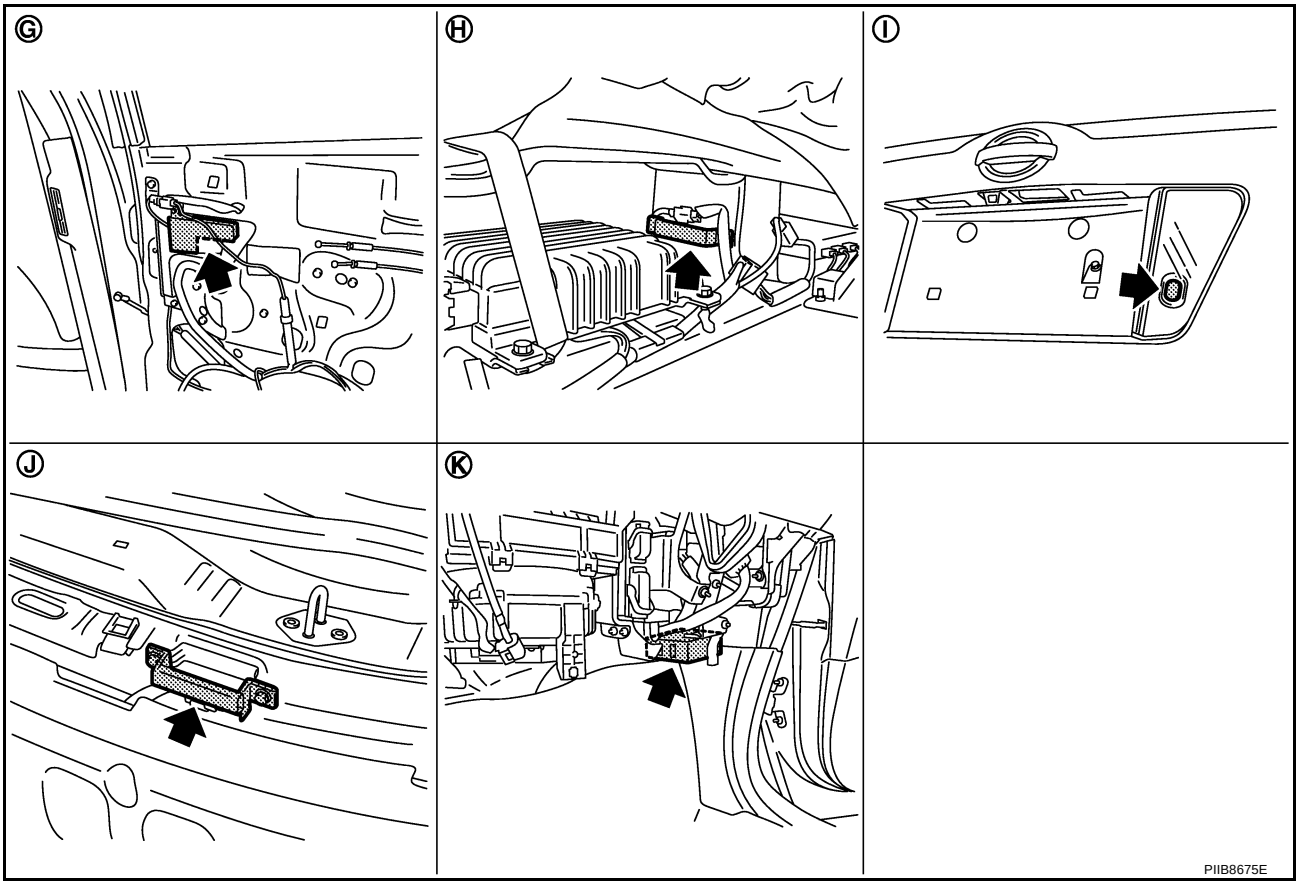


A. Intelligent Key warning buzzer (Eng room) E45	B. a: Passenger side select unlock relay M123 b: Intelligent key warning buzzer (Inside) M100	C. Inside key antenna-2 (Dashboard) M109
D. Door mirror (Passenger side) D32 (Outside antenna)	E. Inside key antenna-1 (Console)M102	F. Front door request switch (Driver side) D12
G. Outside key antenna (Rear door RH) D77	H. Inside key antenna-3 (Luggage room) B122	I. Back door request switch D108
J. Outside key antenna (Rear bumper) B38	K. Intelligent Key unit M99	

System Description

NIS0017D

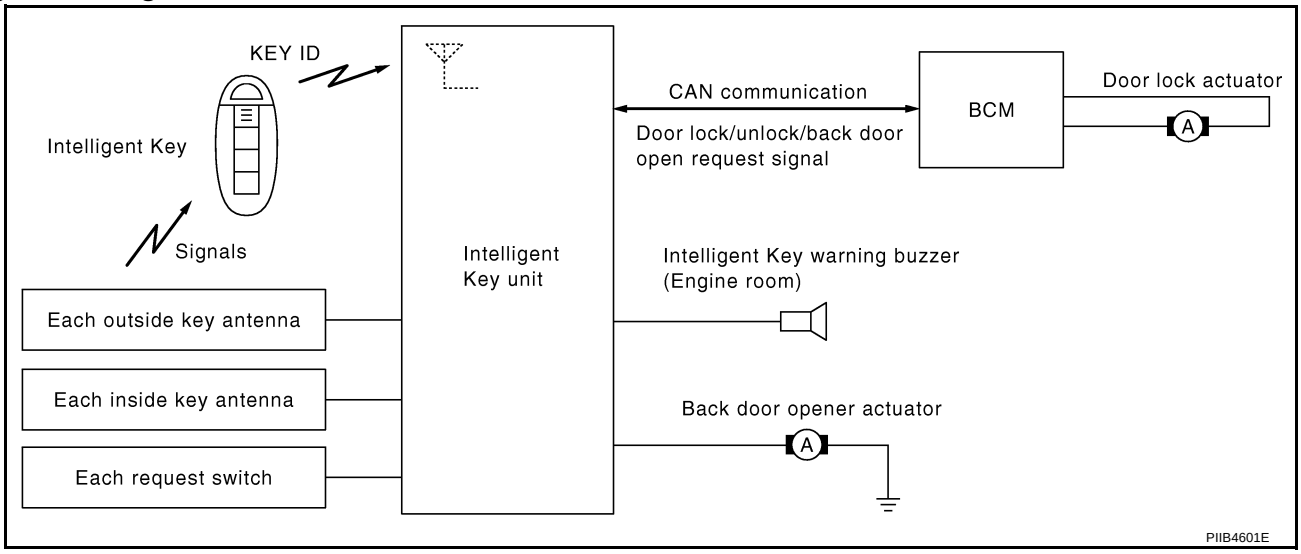
- The Intelligent Key system is a system that makes it possible to lock and unlock the all doors lock (door lock/unlock function), and start the engine (engine start function) by carrying around the Intelligent Key (without some key operation), which operates based on the results of electronic ID verification using two-way communications between the Intelligent Key and the vehicle (Intelligent Key unit).

  CAUTION:
  The driver should always carry the Intelligent Key.
- Operation of the remote controller buttons on the Intelligent Key also provides the same functions as the remote controller entry system. (Remote keyless entry functions)
- If an action that does not meet the operating conditions of the Intelligent Key system is taken, the buzzer goes off to inform the driver. (Warning chime functions)
- When a door lock is locked or unlocked with request switch or remote controller button operation, the hazard lamps flash and the buzzer (outside vehicle) sounds (Hazard and horn reminder function).
- Even if the Intelligent Key battery is completely discharged, the door locks can be locked and unlocked and the engine started with the mechanical key built into the Intelligent Key.
- The settings for each function can be changed with the CONSULT-II.
- If an Intelligent Key is lost, a new Intelligent Key can be registered. A maximum of 4 Intelligent Keys can be registered.
- It has been made possible to diagnose the system and register an Intelligent Key with the CONSULT-II.

DOOR LOCK/UNLOCK FUNCTION

Only when pressing the request switch, it is possible to lock and unlock the all doors by carrying around the Intelligent Key (without some key operation).

System Diagram



Operation Description

- When the Intelligent Key unit detects that each request switch is pressed, it starts the outside antenna corresponding to the pressed request switch and sends the request signal to the Intelligent Key. And then, make sure that the Intelligent Key is near the door.
- If the Intelligent Key is within the outside antenna detection area, it receives the request signal and sends the key ID signal to the Intelligent Key unit.
- Intelligent Key receives the key ID signal and compares it with the registered key ID.
- If the key ID check result is OK, the Intelligent Key unit sends the door lock/unlock request signal to BCM (body control module) via CAN communication line.
- Intelligent Key unit sends the door lock/unlock signal and sounds the Intelligent Key warning buzzer (engine room) (lock: 1 time, unlock: 2 times) at the same time.
- When BCM receives the door lock/unlock signal, it operates door lock actuator and flashes the hazard lamp (lock: 1 time, unlock: 2 times) at the same time as an operation check.

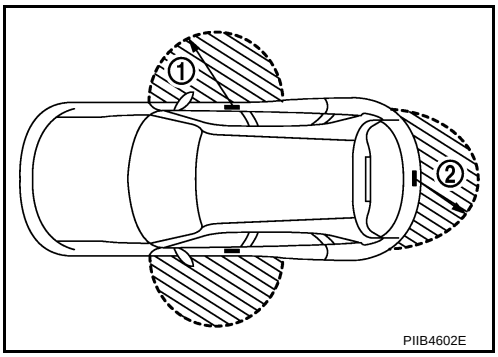
Operation Condition

If the following conditions are not satisfied, door lock/unlock operation is not performed even if the request switch is operated.

Request switch	Operation condition
Lock operation	● All doors are closed ● Intelligent Key is outside the vehicle ● Intelligent Key is with in outside key antenna detection area ● OFF position warning chime is not operated
Unlock operation	● Intelligent Key is outside the vehicle ● Intelligent Key is within outside key antenna detection area

Outside Key Antenna Detection Area

The outside key antenna detection area of door lock/unlock function is in the range of approximately 80 cm (31.50 in) surrounding the front door request switch (driver side, passenger side) (1) and the back door request switch (2). However, this operating range depends on the ambient conditions.



Key Reminder Function

Key reminder functions have the following 2 functions.

Key reminder function	Operation condition	Operation
When the driver door is open	Key reminder function is operated when ● Intelligent Key is inside the vehicle, ● Driver door is open, and ● Door is locked by door lock and unlock switch or door lock knob	All doors unlock operation
When the door is open/closed	Key reminder function is operated when ● Intelligent Key is inside the vehicle, ● Any door is open, ● All doors are locked by door lock and unlock switch or door lock knob, and ● All door are closed.	● All doors unlock operation ● Sound Intelligent Key warning buzzer (engine room) for 3 seconds

CAUTION:

- **The above function operates when the Intelligent Key is inside the vehicle. However, there may be times when the Intelligent Key cannot be detected, and this function will not operate when the Intelligent Key is on the instrument panel, or in the glove box. Also, this system sometimes does not operate if the Intelligent Key is in the door pocket for the open door.**

Selective Unlock Function for Driver Side

When an LOCK signal is sent from door request switch (driver side), all doors will be locked.
When an UNLOCK signal is sent from door request switch (driver side) once, driver's door will be unlocked. Then, if an UNLOCK signal is sent from door request switch (driver side) again within 5 seconds, all other door will be unlocked.

Selective Unlock Function for Passenger Side

When an LOCK signal is sent from request switch (passenger side), all doors will be locked.
When an UNLOCK signal is sent from request switch (passenger side) once, Intelligent Key unit turns on passenger side select unlock relay. And then passenger's door will be unlocked.
If an UNLOCK signal is sent from request switch (passenger side) again within 5 seconds, all other door will be unlocked.

Selective Unlock Function for Back Door

When an LOCK signal is sent from door request switch (back door), all doors will be locked.
When an UNLOCK signal is sent from door request switch (back door) once, back door can be opened.
Then, if an UNLOCK signal is sent from door request switch (back door) again within 5 seconds, all other door will be unlocked.

Hazard and Horn Reminder

When doors are locked or unlocked by door request switch, Intelligent Key unit sends hazard and horn request signal to BCM via CAN communication line.
BCM flashes hazard warning lamps as a reminder and sends horn chirp signal to IPDM E/R, IPDM E/R sounds horn as a reminder.
The hazard and horn reminder has a horn chirp mode (C mode) and a non-horn chirp mode (S mode).

Operating function of hazard and horn reminder

	C mode		S mode	
Remote controller of Intelligent Key operation	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—
Horn sound	Once	—	—	—

Hazard and horn reminder does not operate if any door switch is ON (any door is OPEN).

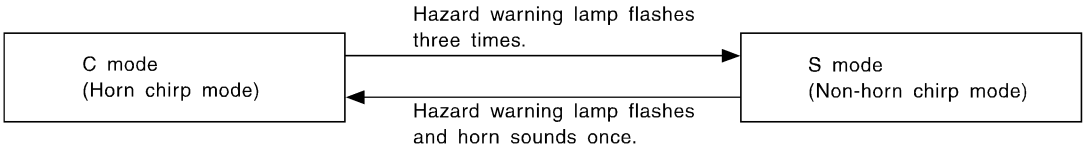
How to change hazard and horn reminder mode

With CONSULT-II

Hazard and horn reminder can be changed using “HAZARD ANSWER BACK”, “ANSWER BACK WITH I-KEY LOCK” and “ANSWER BACK WITH I-KEY UNLOCK” mode in “WORK SUPPORT”.
Refer to BL-125, "WORK SUPPORT" .

Without CONSULT-II

When LOCK and UNLOCK signals are sent from the remote controller of Intelligent Key for more than 2 seconds at the same time, the hazard and horn reminder mode is changed and hazard warning lamp flashes and horn sounds as follows:



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Auto Door Lock Function

When all doors are locked, ignition knob switch is OFF (when ignition switch is not pressed) and key switch is OFF (when mechanical key is not inserted in key cylinder), doors are unlocked with door request switch
When Intelligent Key unit does not receive the following signals within 30 seconds, all doors are locked.

- Door switch is ON (door is opened)
- Door is locked
- Ignition knob switch is ON (ignition knob is pressed)
- Key switch is ON (mechanical key is inserted in key cylinder)

Auto door lock mode can be changed by “AUTO RELOCK TIMER” mode in “WORK SUPPORT”. Refer to BL-125, "WORK SUPPORT" .

Room Lamp Operation

When the following conditions are met:

- Condition of interior lamp switch is in DOOR position
- Door switch OFF (when all the doors are closed)

Intelligent Key system turns on interior lamp (for 30 seconds) by receiving UNLOCK signal from door request switch. For detailed description, refer to LT-188, "ROOM LAMP TIMER OPERATION" .

List of Operation Related Parts

Parts marked with × are the parts related to operation.

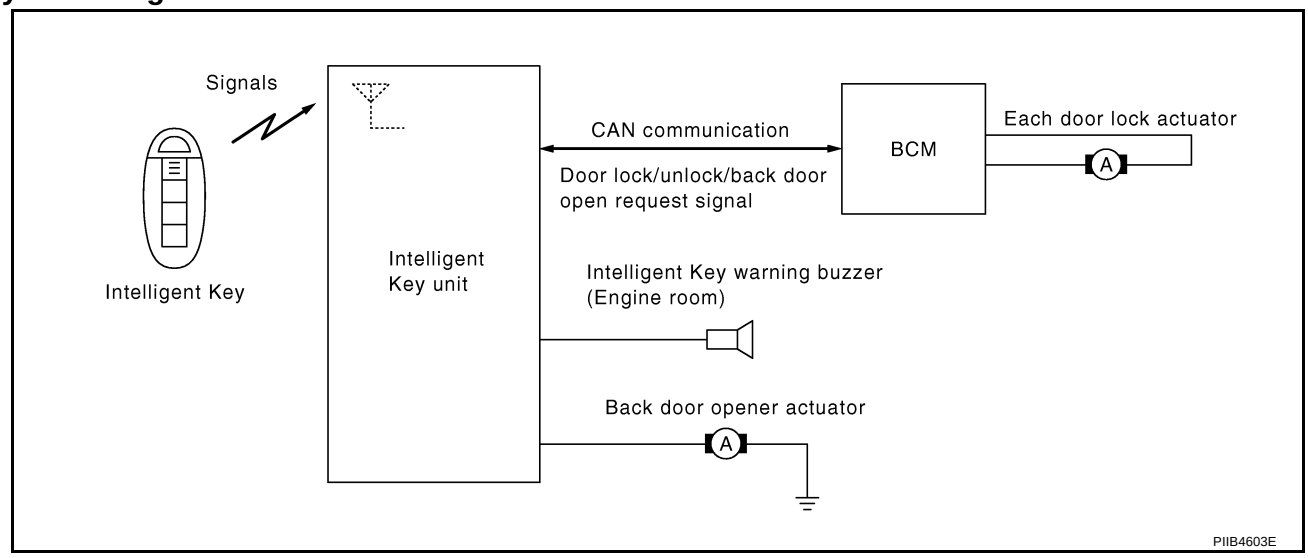
Door lock open function	Intelligent Key	Key switch	Ignition knob switch	Door unlock sensor	Door request switch (Driver, Passenger, Back door)	Door lock actuator	Door switch	Inside key antenna	Outside key antenna (Door mirror, Rear door, Rear bumper)	Intelligent Key warning buzzer	Intelligent Key unit	CAN communication system	BCM	Select unlock relay	Hazard warning lamp
Door lock/unlock function by request switch	×	×	×	×	×	×	×	×	×		×	×	×		
Door lock/unlock function by mechanical key						×							×		
Hazard and horn reminder function										×	×	×	×		×
Key reminder function	×			×	×	×	×	×	×	×	×	×	×		×
Selective unlock function by request switch (driver side)	×				×	×	×	×	×	×	×	×	×		
Selective unlock function by request switch (passenger side)	×				×	×	×	×	×	×	×	×	×	×	
Selective unlock function by request switch (back door)	×				×		×	×	×	×	×	×	×		
Auto door lock function	×	×			×		×				×	×	×		

REMOTE KEYLESS ENTRY FUNCTIONS

Door Lock/Unlock Function

The Intelligent Key has the same functions as the remote control entry system. Therefore, it can be used in the same manner as the remote controller by operating the door lock/unlock button.

System Diagram



Door Lock/Unlock Function

- When door lock/unlock button of the Intelligent Key is passed, lock signal or unlock signal is sent from Intelligent Key to Intelligent Key unit.
- Intelligent Key unit sends the door lock/unlock request signal to BCM via CAN communication line.
- Intelligent Key unit sends the door lock/unlock signal and sounds the Intelligent Key warning buzzer (engine room) (lock: 1 time, unlock: 2 times) at the same time.
- When BCM receives the door lock/unlock signal, it operates door lock actuator and flashes the hazard lamp (lock: 1 time, unlock: 2 times) at the same time as an operation check.

Operation Condition

Remote controller operation	Operation condition
Lock	● All doors closed ● OFF position warning chime is not operated.
Unlock	—

Selective Unlock Function

When an LOCK signal is sent from remote controller of Intelligent Key, all doors will be locked.
When an UNLOCK signal is sent from remote controller of Intelligent Key once, driver's door will be unlocked. Then, if an UNLOCK signal is sent from remote controller of Intelligent Key again within 5 seconds, all other door will be unlocked.

Hazard and Horn Reminder

When doors are locked or unlocked by remote controller of Intelligent Key, Intelligent Key unit sends hazard and horn request signal to BCM via CAN communication line.
BCM flashes hazard warning lamps as a reminder and sends horn chirp signal to IPDM E/R IPDM E/R sounds horn as a reminder.
The hazard and horn reminder has a horn chirp mode (C mode) and a non-horn chirp mode (S mode).

Operating function of hazard and horn reminder

	C mode		S mode	
Remote controller of Intelligent Key operation	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—
Horn sound	Once	—	—	—

Hazard and horn reminder does not operate if any door switch is ON (any door is OPEN).

How to change hazard and horn reminder mode

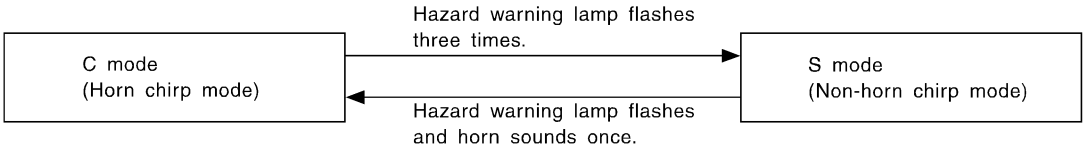
With CONSULT-II

Hazard and horn reminder can be changed using “HORN WITH KEYLESS LOCK” and “HAZARD ANSWER BACK” mode in “WORK SUPPORT”.

Refer to BL-125, "WORK SUPPORT" .

Without CONSULT-II

When LOCK and UNLOCK signals are sent from the remote controller of Intelligent Key for more than 2 seconds at the same time, the hazard and horn reminder mode is changed and hazard warning lamp flashes and horn sounds as follows:



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Auto Door Lock Function

When all doors are locked, ignition knob switch is OFF (when ignition switch is not pressed) and key switch is OFF (when mechanical key is not inserted in key cylinder), doors are unlocked with remote controller of Intelligent Key When Intelligent Key unit does not receive the following signals within 30 seconds, all doors are locked.

- Door switch is ON (door is opened)
- Door is locked
- Ignition knob switch is ON (ignition switch is pressed)
- Key switch is ON (mechanical key is inserted in key cylinder)

Auto door lock mode can be changed by “AUTO RELOCK TIMER” mode in “WORK SUPPORT”. Refer to BL-125, "WORK SUPPORT" .

Panic Alarm Function

When ignition knob switch is OFF (when ignition switch is not pressed) and key switch is OFF (when mechanical key is not inserted in key cylinder), Intelligent Key unit receives PANIC ALARM signal from remote controller of Intelligent Key.

Intelligent Key unit is sends alarm request signal to BCM via CAN communication line.

BCM turns on and off headlamp intermittently and sends theft warning horn signal to IPDM E/R. Then, IPDM E/R turns on and off horn intermittently.

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off:

- After 25 seconds
- When Intelligent Key unit receives any signal from remote controller of Intelligent Key
- When door request switch is pressed (Intelligent Key is outside vehicle)

Panic alarm function mode can be changed by “PANIC ALARM DELAY” mode in “WORK SUPPORT”. Refer to BL-125, "WORK SUPPORT" .

Keyless Power Window Down (Open) Function

All power windows open when the unlock button on remote controller of Intelligent Key is activated and kept pressed for more than 3 seconds with the ignition switch OFF. The windows keep opening if the unlock button is continuously pressed.
The power window opening stops when the following operations are performed:

- When the unlock button is kept pressed more than 15 seconds.
- When the ignition switch is turned ON while the power window opening is operated.
- When the unlock button is released.

While retained power operation activate, Keyless power window down (open) Function cannot be operated.
Keyless power window down operation mode can be changed by “P/W DOWN DELAY” mode in “WORK SUPPORT”. Refer to BL-125, "WORK SUPPORT" .

Room Lamp Illumination Operation

When the following conditions are met:

- Condition of interior lamp switch is in DOOR position
- Door switch OFF (when all the doors are closed)

Intelligent Key system turns on interior lamp (for 30 seconds) by receiving UNLOCK signal from remote controller of Intelligent Key. For detailed description, refer to LT-188, "ROOM LAMP TIMER OPERATION" .

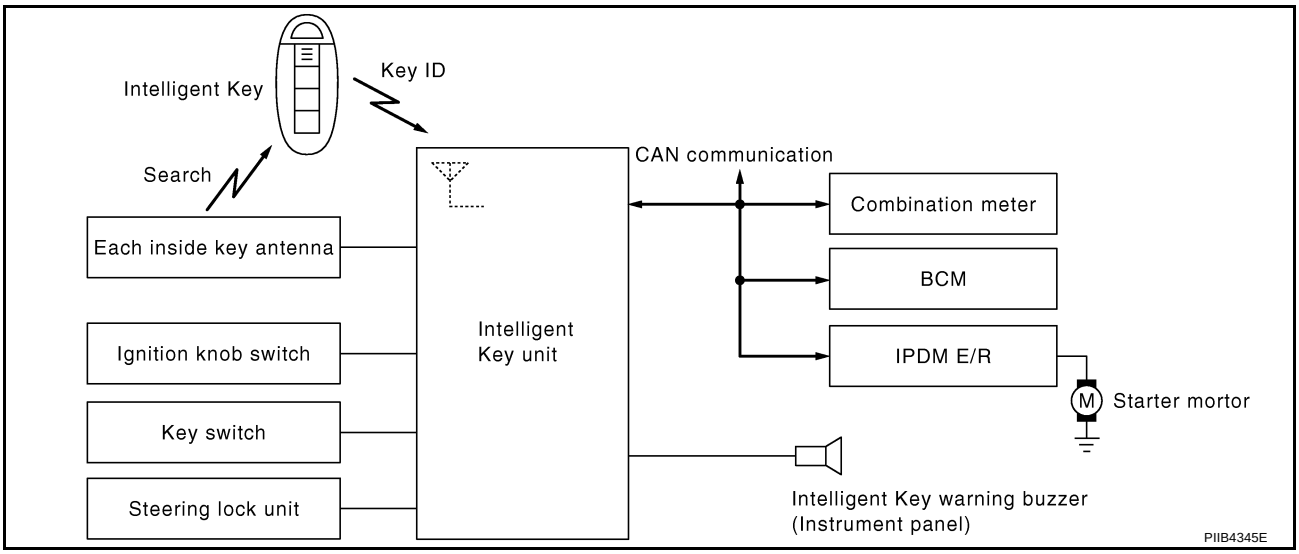
List of Operation Related Parts

Parts marked with × are the parts related to operation.

Remote keyless entry functions	Intelligent Key	Key switch	Ignition knob switch	Door unlock sensor	Door request switch (Driver, Passenger, Back door)	Door switch	Door lock actuator	Intelligent Key warning buzzer	Intelligent Key unit	CAN communication system	BCM	Combination meter	Hazard warning lamp	Horn	IPDM E/R	Head lamp
Door lock function by the remote control button	×	×	×			×	×		×	×	×					
Hazard and horn reminder function	×							×	×	×	×	×	×	×	×	
Keyless power window down (open) function	×	×							×		×					
Auto door lock function	×	×	×			×			×	×	×					
Panic alarm function	×				×				×	×	×			×	×	×

ENGINE START FUNCTION

When the registered Intelligent Key is carried, the engine can be started without inserting the key.



When ignition knob switch is ON (press ignition switch), Intelligent Key unit searches Intelligent Key in the vehicle using inside key antenna.
When Intelligent Key is inside the vehicle, it performs the following operation.

- Illuminate green “KEY” warning lamp in combination meter.
- Released steering lock and ignition switch can be turned from OFF to ACC, ON or START position.

  NOTE:
  If Intelligent Key is not registered, “KEY” warning lamp in combination meter illuminate red.
- Intelligent Key sends engine start signal via CAN communication line.

When ignition switch turns to START position, BCM sends starter request signal to IPDM E/R. Then, engine starts.
Even if Intelligent Key battery runs down, Intelligent key unit can start engine with mechanical key built Intelligent Key. For details, refer toBL-232, "NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)" .
All of the originally supplied Intelligent Key IDs (except for key) have been registered in Intelligent Key system. If requested by the vehicle owner, a maximum of four Intelligent Key IDs can be registered into the Intelligent Key system components.

List of Operation Related Parts

Parts marked with × are the parts related to operation.

Engine start functions	Intelligent Key	Key switch	Ignition knob switch	Inside key antenna	Intelligent Key unit	CAN communication system	BCM	Combination meter	IPDM E/R	NATS antenna amp.	Steering lock unit
Engine start function by the Intelligent Key	×	×	×	×	×	×	×	×	×		×
Engine start function by the mechanical key		×			×	×	×		×	×	×

WARNING CHIME FUNCTION

Operation Description

The warning chimes are as follows and are given to the user as warning information and warnings using combinations of Intelligent Key warning buzzer (inside and engine room), and warning lamps “KEY” and “P-SHIFT”.

- Ignition switch warning chime
- Ignition key warning chime
- OFF position warning chime
- OFF position warning chime (after door closed)
- Take away warning chime
- Take away warning chime (from window)
- Door lock operation warning chime
- Intelligent Key low battery warning
- P position warning

Operation Condition

Operation	Condition	Intelligent Key warning buzzer sounds	Warning lamp illuminates
Ignition switch warning chime	● Key switch is OFF. ● Ignition switch is in the ACC, OFF or LOCK position. [ignition switch is pressed (ignition knob switch is ON).] ● Driver door is open.	Inside	—
Ignition key warning chime (When mechanical key is used)	● Mechanical key is inserted in ignition switch (key switch is ON). ● Ignition switch is in the ACC, OFF or LOCK position. ● Driver door is open.	Combination meter	—
OFF position warning chime	● Ignition switch is turned from ACC to OFF. [ignition switch is pressed (ignition knob switch is ON).] ● Ignition switch is in the LOCK position and pressed for 1 second.	Inside	—
OFF position warning chime (after door closed)	When driver door is opened and then closed while the OFF position warning chime above is operating.	Engine room	—
Take away warning chime	● Engine is running. ● Door open to close. ● Intelligent Key is not found inside vehicle.	Engine room	“KEY” (red)
Take away warning chime (from window)	● Engine is running. ● Door is closed. ● Intelligent Key is not found inside vehicle.	Inside	“KEY” (red)

Operation	Condition	Intelligent Key warning buzzer sounds	Warning lamp illuminates
Door lock operation warning chime	When request switch is pushed under the following conditions ● All door are closed. ● Door is unlocked. ● Intelligent Key is inside vehicle. ● Ignition switch is not pressed.	Engine room	—
	When request switch is pushed under the following conditions ● All door are closed. ● Door is unlocked. ● Ignition switch is pressed. ● Intelligent Key is within the detection area of operated request switch.	Engine room	—
	When request switch is pushed under the following conditions ● Any door is opened. ● Intelligent Key is within the detection area of operated request switch.	Engine room	—
Intelligent Key low battery warning	When Intelligent Key is low battery, Intelligent Key unit is detected after ignition switch is turned ON.	—	“KEY” (green)
P position warning	When selector lever is except for P position, ignition switch is turned from ON to OFF.	—	“P-SHIFT”

List of Operation Related Parts

Parts marked with × are the parts related to operation.

Warning and alarm functions	Intelligent Key	Key switch	Ignition knob switch	Ignition switch ACC position input signal	Ignition switch ON position input signal	Door switch	Door request switch	Inside key antenna	Outside key antenna (Door mirror, Rear door, Rear bumper)	Intelligent Key warning buzzer	Intelligent Key unit	CAN communication system	BCM	Combination meter	Park position switch
Ignition switch warning chime			×		×	×					×				
Ignition key warning chime (When mechanical key used)		×			×	×						×	×	×	
OFF position warning chime			×	×	×					×	×				
OFF position warning chime (after door close)			×	×	×	×				×	×				
Take away warning chime	×		×			×		×		×	×			×	
Take away warning chime (from window)	×		×			×		×		×	×			×	

Warning and alarm functions	Intelligent Key	Key switch	Ignition knob switch	Ignition switch ACC position input signal	Ignition switch ON position input signal	Door switch	Door request switch	Inside key antenna	Outside key antenna (Door mirror, Rear door, Rear bumper)	Intelligent Key warning buzzer	Intelligent Key unit	CAN communication system	BCM	Combination meter	Park position switch
Door lock operation warning chime	×		×			×	×	×	×	×	×				
Intelligent Key low battery warning	×				×			×			×			×	
P position warning					×						×			×	×

CHANGE SETTINGS FUNCTION

The settings for each function can be changed with the CONSULT-II, Display unit or Intelligent Key operation.

NOTE:
Once a function setting is changed, it will remain effective even if the battery is disconnected.

Changing Settings Using CONSULT-II

The settings for the Intelligent Key system functions can be changed using CONSULT-II (WORK SUPPORT). Refer to BL-125, "WORK SUPPORT" .

INTELLIGENT KEY REGISTRATION

Intelligent Key-ID registration is performed using the CONSULT-II.

CAUTION:

- **After a new Intelligent Key-ID is registered, be sure to check the function.**
- **When registering an additional Intelligent Key-ID, take any Intelligent Keys already registered and Intelligent Keys for any other vehicles out of the vehicle before starting.**

CONSULT-II can be used to check and delete Intelligent Key-IDs.
For future information, see the CONSULT-II Operation Manual NATS.

STEERING LOCK UNIT REGISTRATION

Steering Lock Unit ID Registration

CAUTION:

- **The method for registering a steering lock unit ID depends on the status of the steering lock unit and Intelligent Key unit (new or old unit).**
- **After registration is completed, press ignition switch with a portable unit in the vehicle so that it can be turned, and confirm that it cannot be turned even when ignition switch is pressed without a portable unit in the vehicle.**

For future information, see the CONSULT-II Operation Manual NATS.

CAN Communication System Description

NIS0017E

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

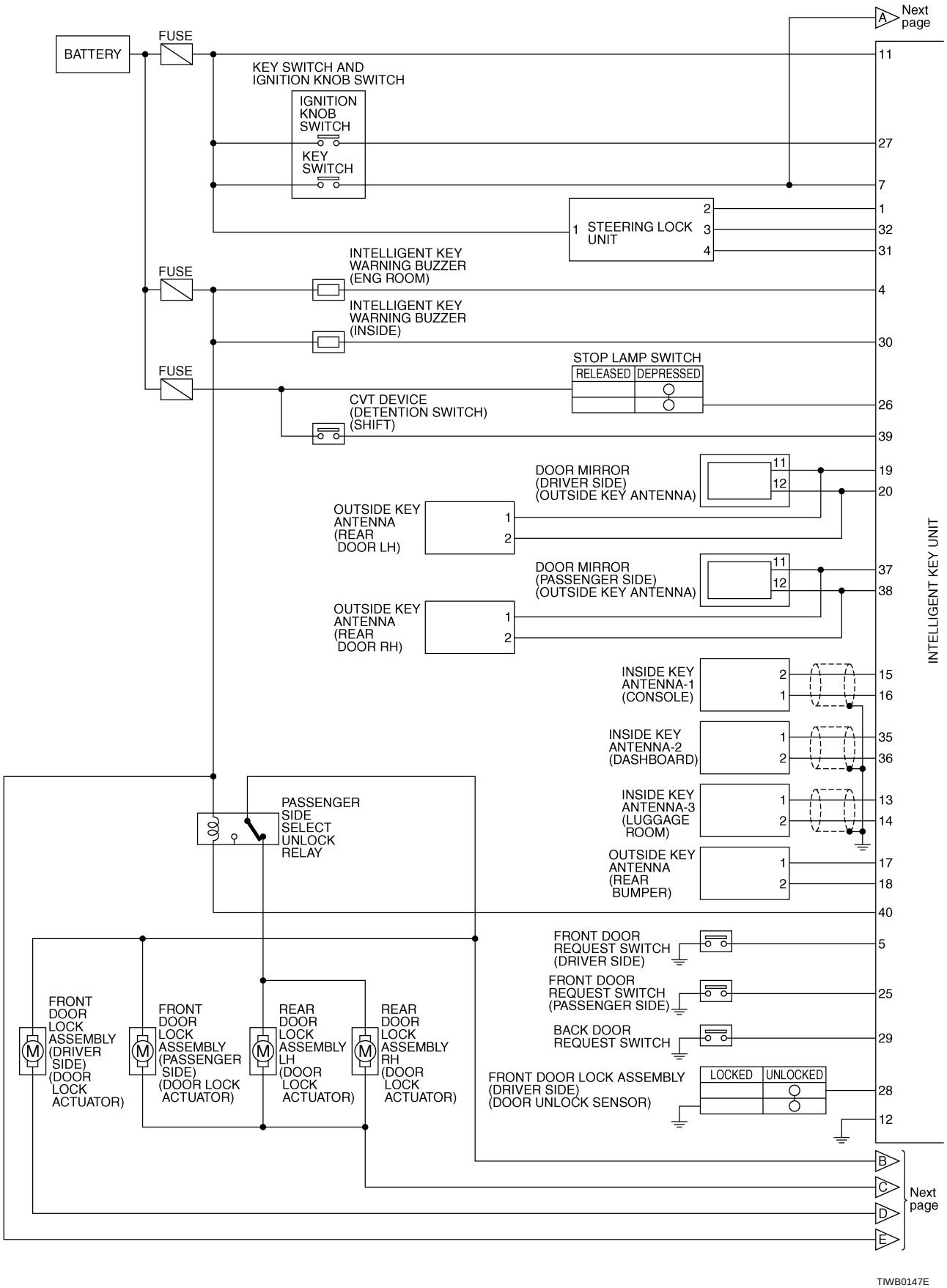
CAN Communication Unit

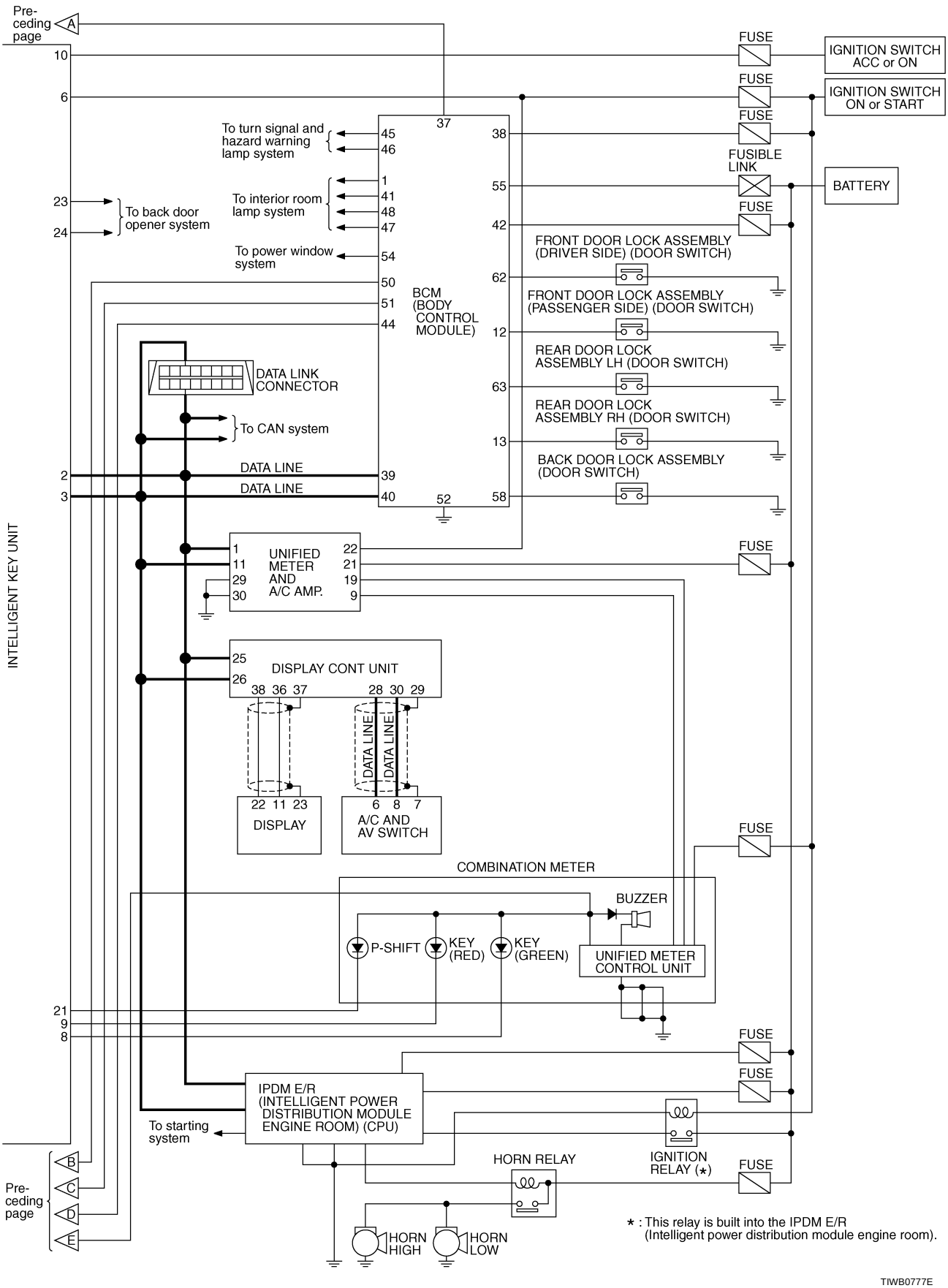
NIS0017F

Refer to LAN-49, "CAN System Specification Chart" .

Schematic

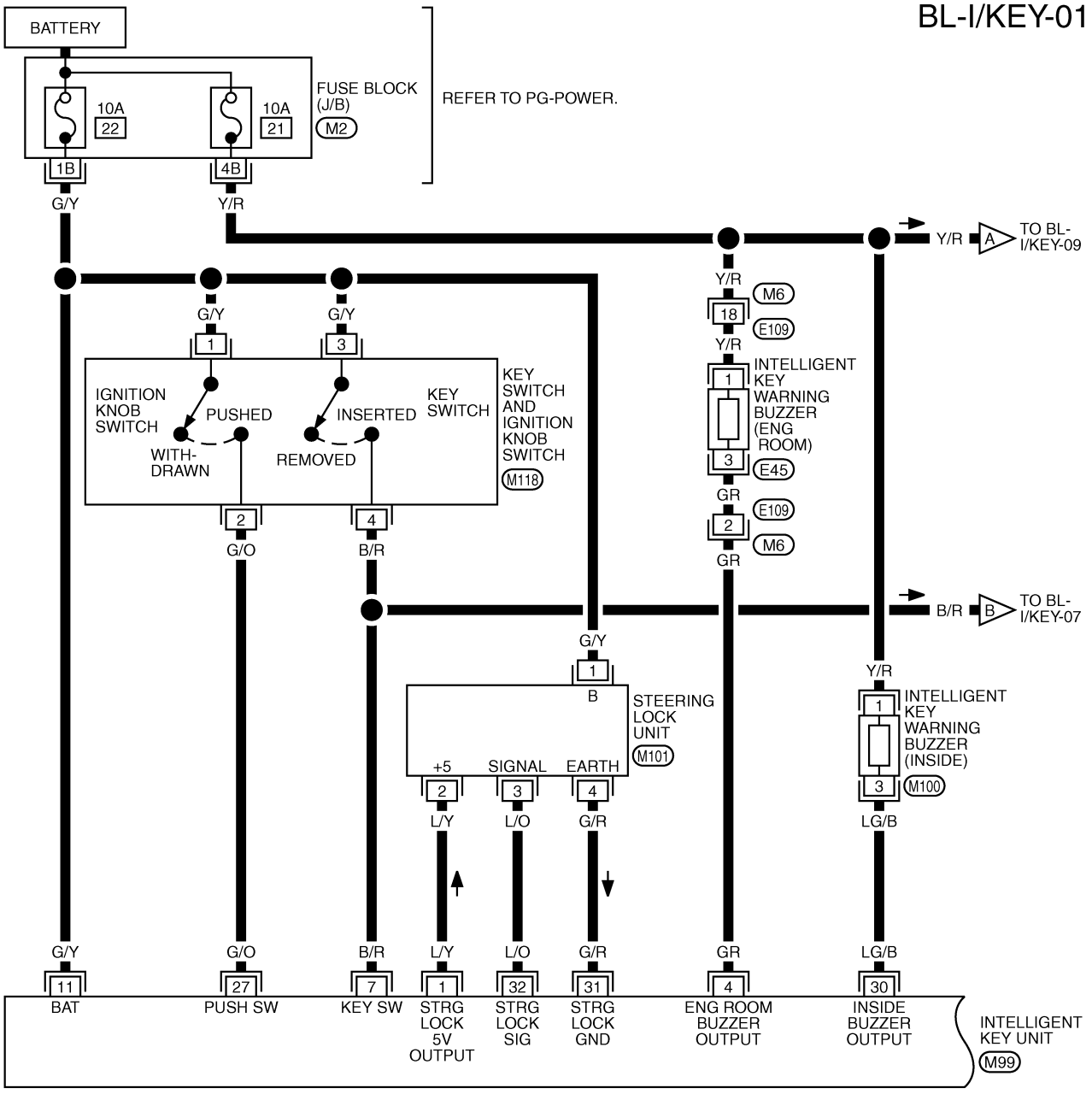
NIS0017G

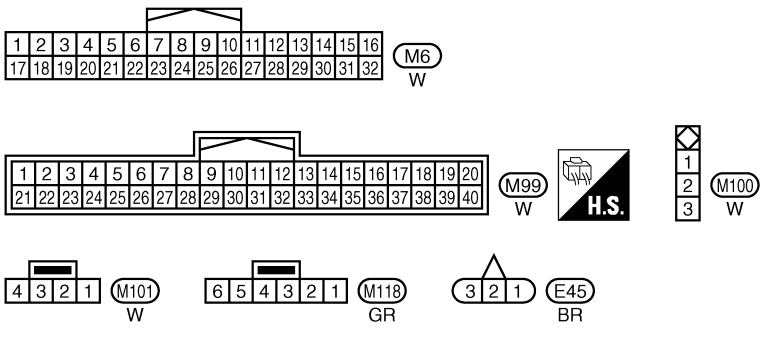



Pre-ceding page
A
10
6
23
24
To back door opener system
To turn signal and hazard warning lamp system
To interior room lamp system
To power window system
37
45
46
1
41
48
47
54
50
51
44
BCM (BODY CONTROL MODULE)
38
55
42
62
12
63
13
58
52
FUSE
FUSIBLE LINK
IGNITION SWITCH ACC or ON
IGNITION SWITCH ON or START
BATTERY
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) (DOOR SWITCH)
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) (DOOR SWITCH)
REAR DOOR LOCK ASSEMBLY LH (DOOR SWITCH)
REAR DOOR LOCK ASSEMBLY RH (DOOR SWITCH)
BACK DOOR LOCK ASSEMBLY (DOOR SWITCH)
DATA LINK CONNECTOR
To CAN system
2
3
DATA LINE
DATA LINE
39
40
INTELLIGENT KEY UNIT
1
11
29
30
UNIFIED METER AND A/C AMP.
22
21
19
9
25
26
DISPLAY CONT UNIT
38 36 37
28 30 29
DATA LINE
DATA LINE
22 11 23
DISPLAY
6 8 7
A/C AND AV SWITCH
COMBINATION METER
BUZZER
P-SHIFT
KEY (RED)
KEY (GREEN)
UNIFIED METER CONTROL UNIT
21
9
8
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (CPU)
To starting system
HORN RELAY
IGNITION RELAY (*)
HORN HIGH
HORN LOW
Pre-ceding page
B
C
D
E
* : This relay is built into the IPDM E/R (Intelligent power distribution module engine room).
TIWB0777E

Wiring Diagram — I/KEY —

NIS0017H



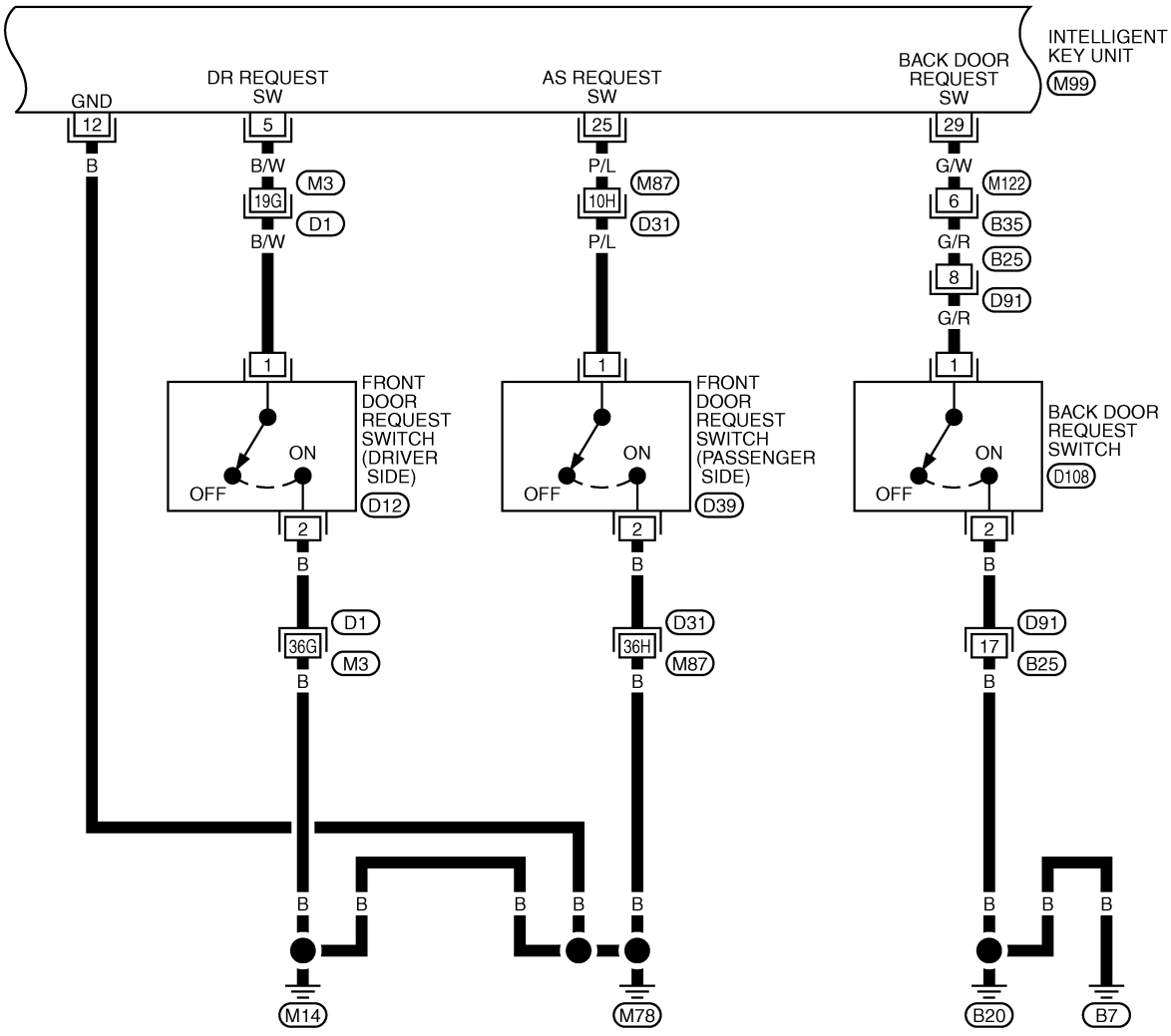


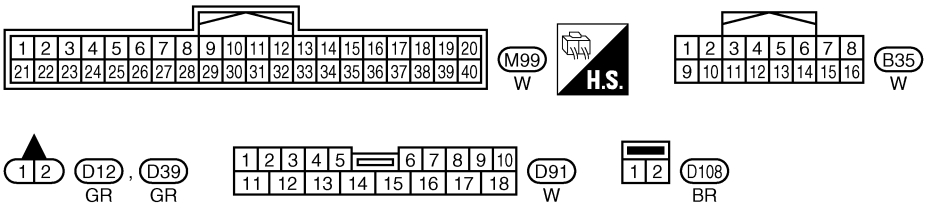
REFER TO THE FOLLOWING.

M2 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWB0149E

BL-I/KEY-02

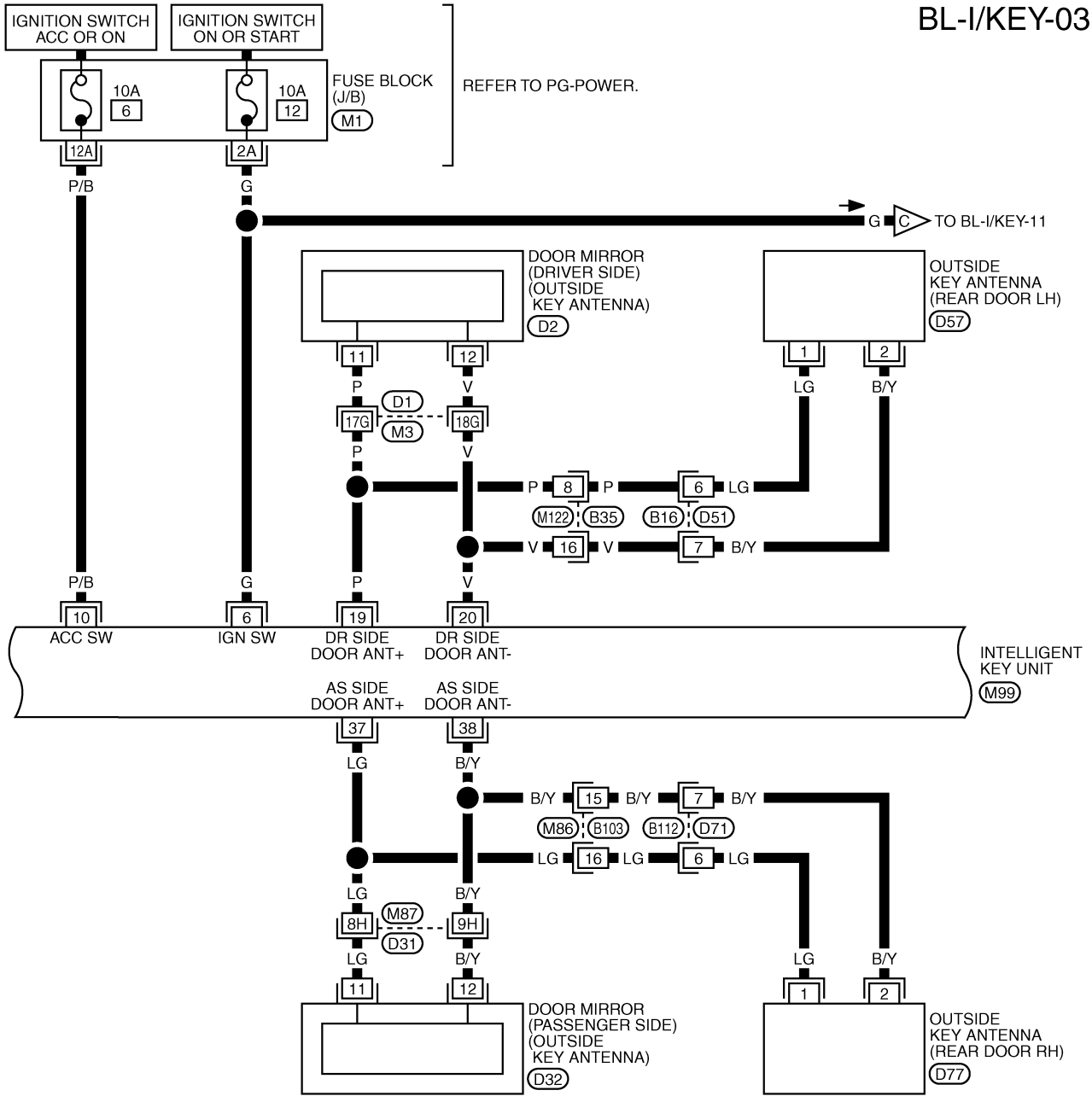


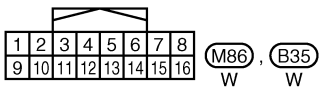


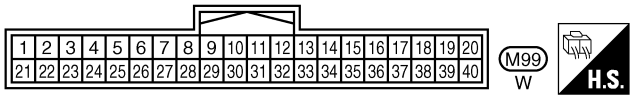
REFER TO THE FOLLOWING.
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

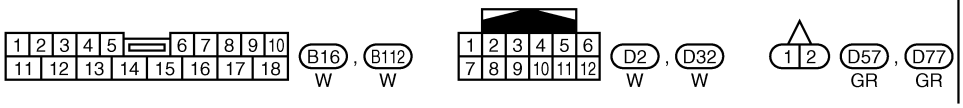
TIWB0150E

BL-I/KEY-03





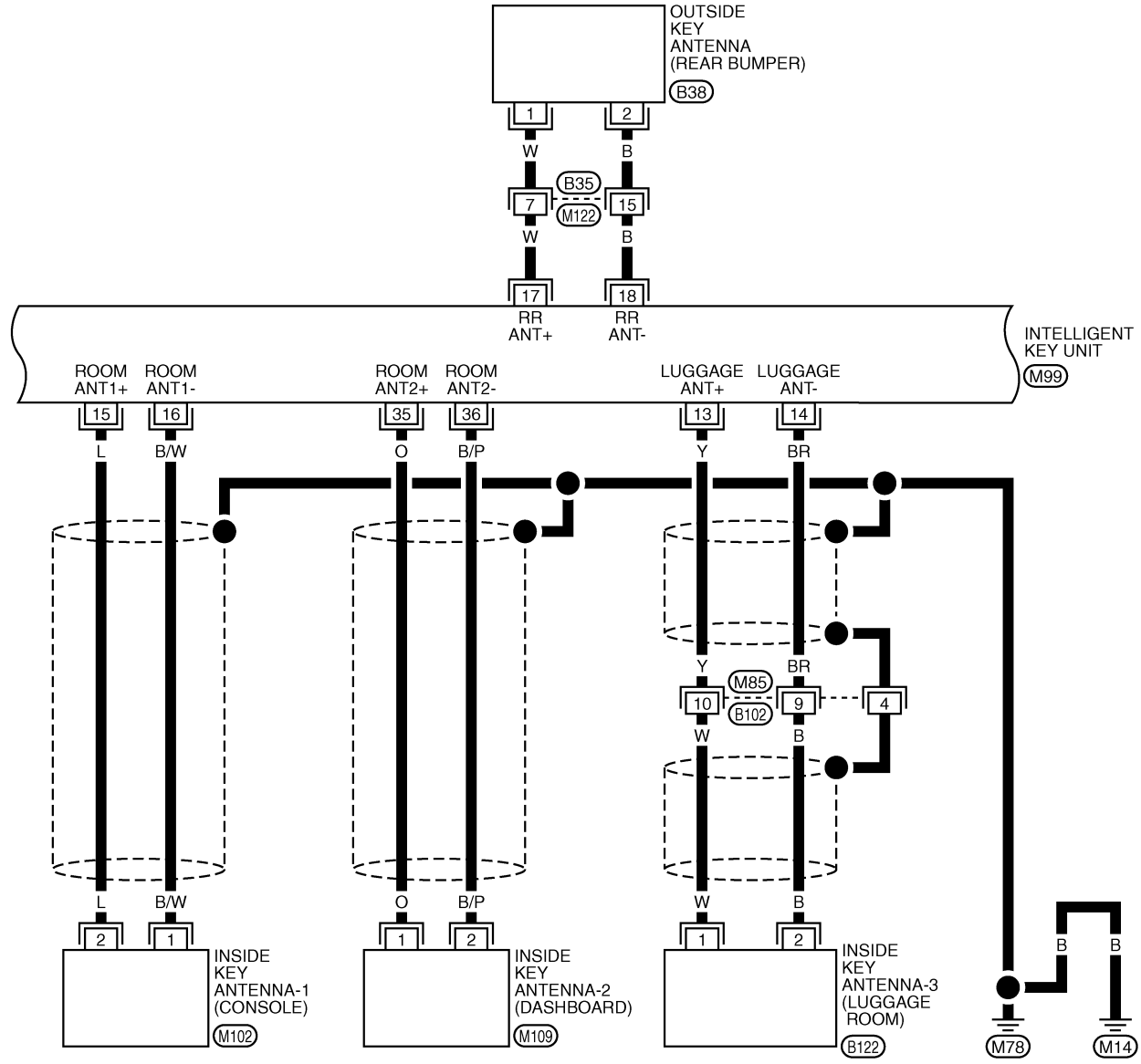


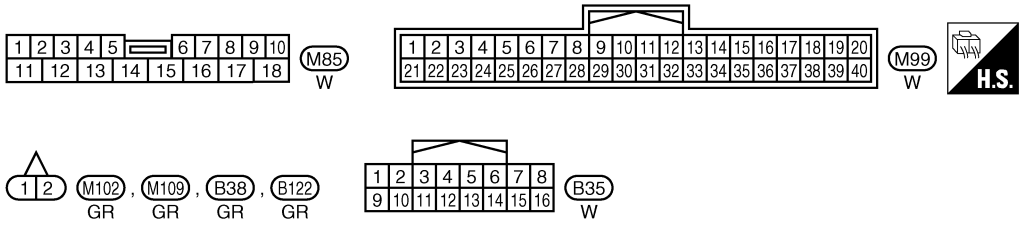


REFER TO THE FOLLOWING.
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)
M1 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWB0778E

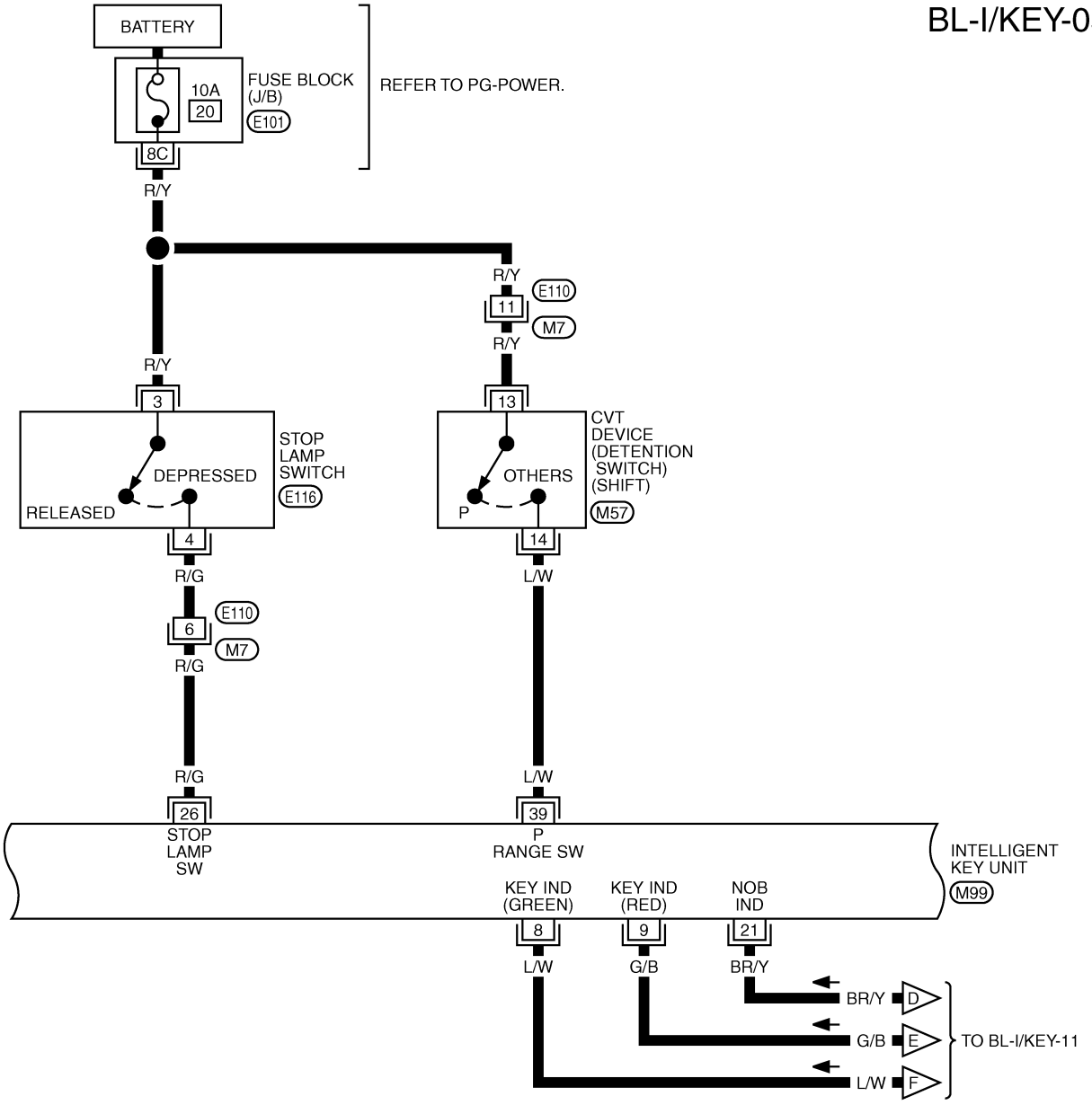
BL-I/KEY-04

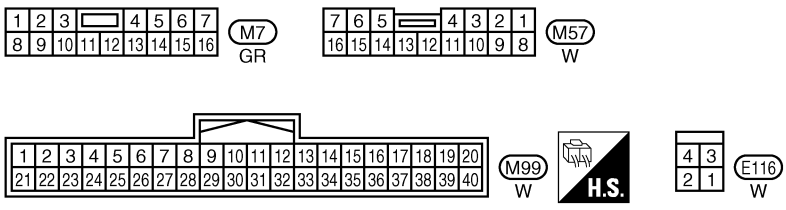




TIWB0152E

BL-I/KEY-05



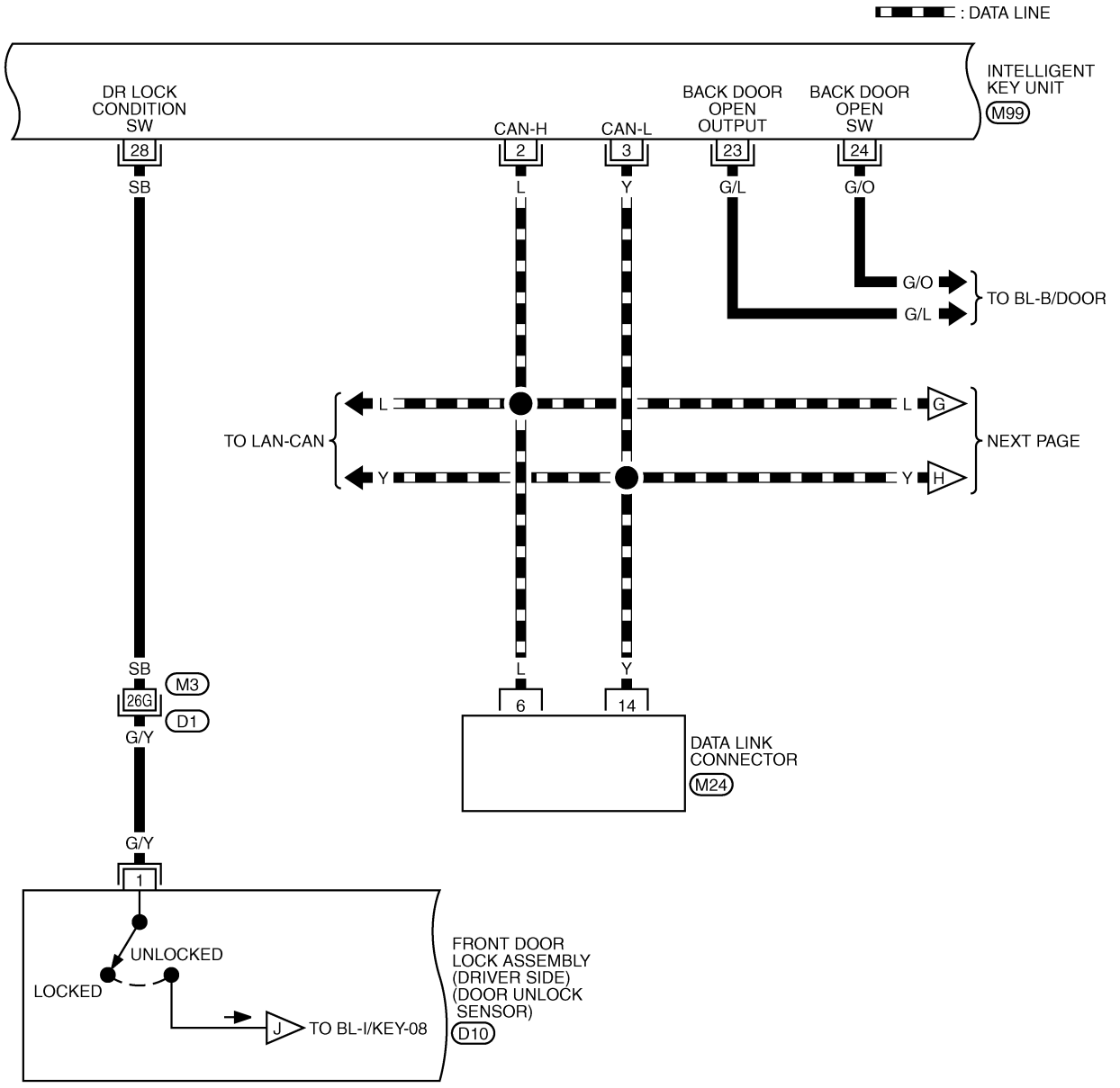


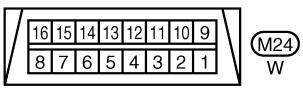
REFER TO THE FOLLOWING.

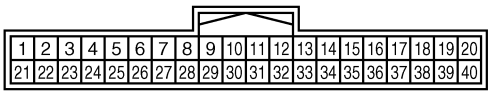
E101 -FUSE BLOCK-JUNCTION BOX (J/B)

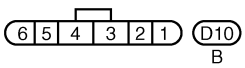
TIWB0779E

BL-I/KEY-06





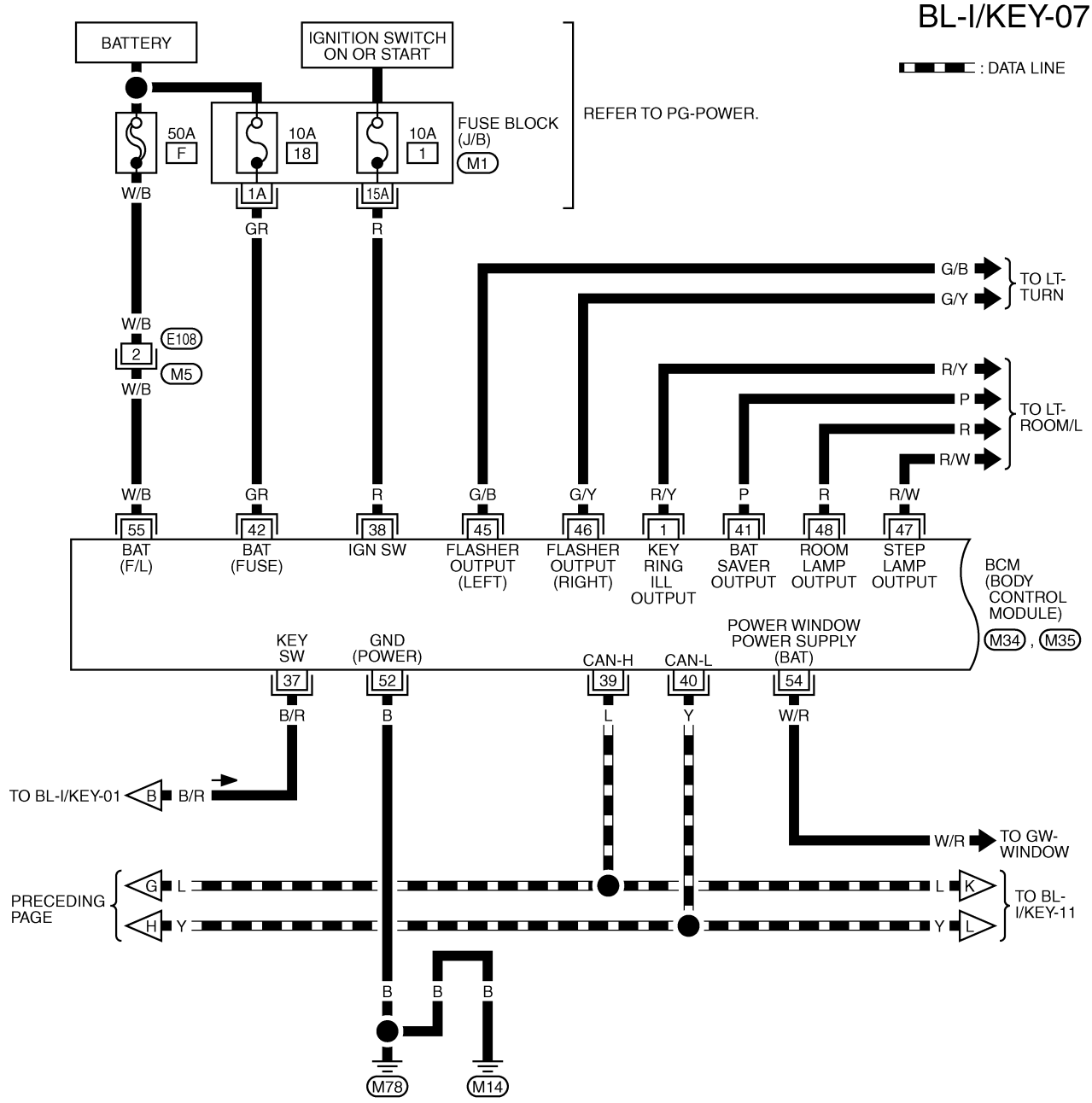




REFER TO THE FOLLOWING.
D1 -SUPER MULTIPLE JUNCTION (SMJ)

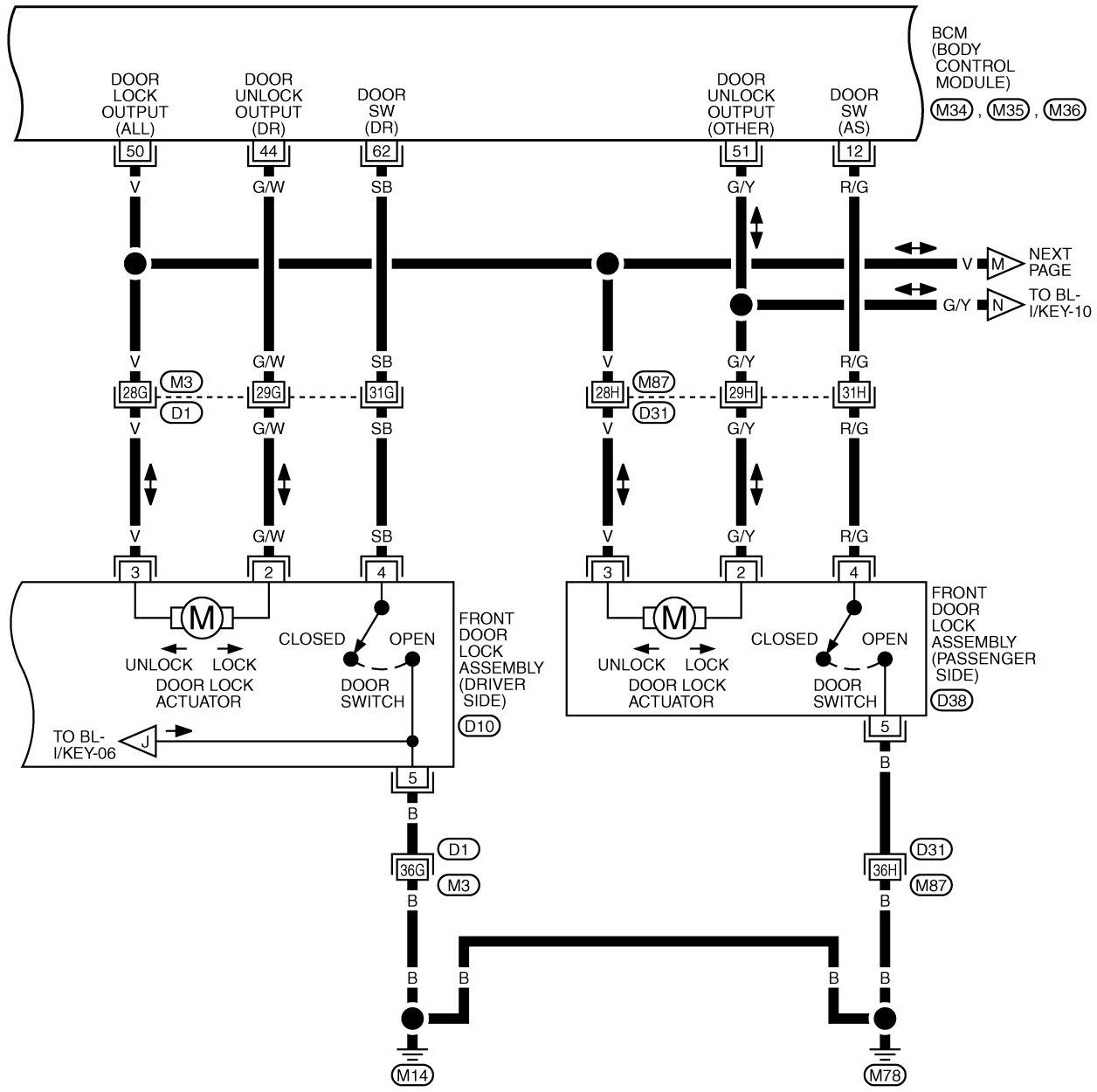
TIWB0154E

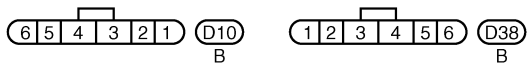
BL-I/KEY-07



TIWB0780E

BL-I/KEY-08

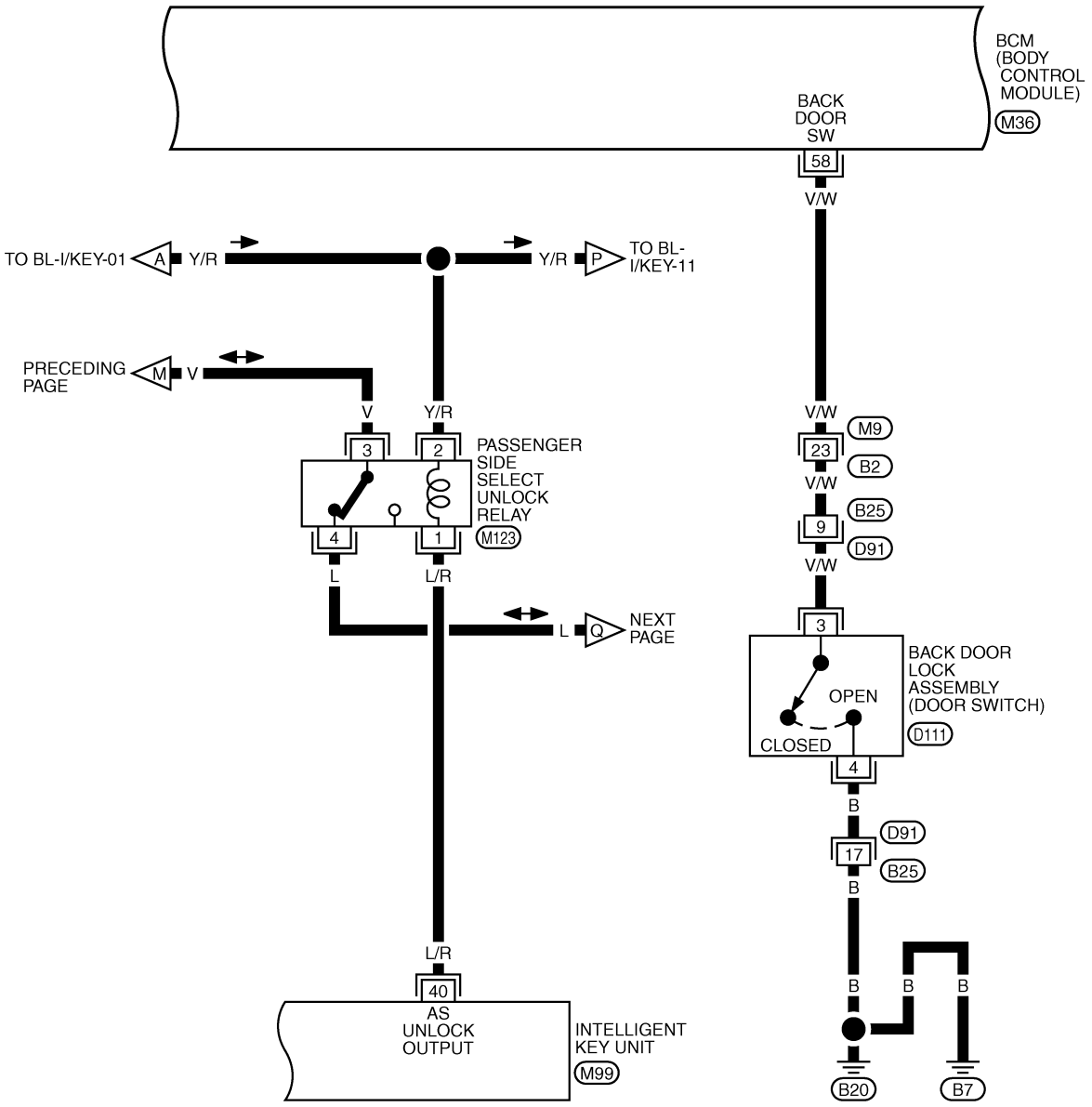


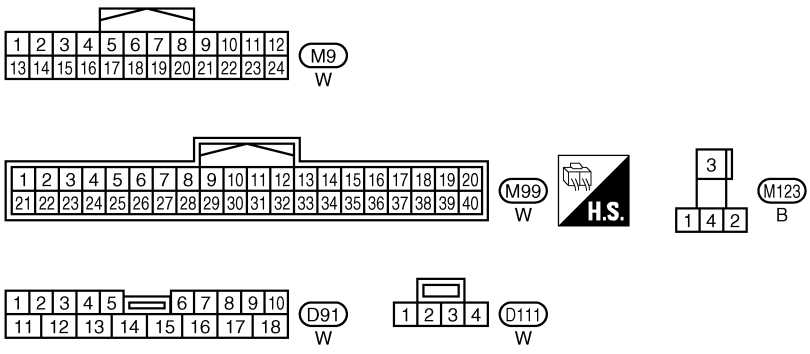


REFER TO THE FOLLOWING.
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)
M34 , M35 , M36 -ELECTRICAL UNITS

TIWB0156E

BL-I/KEY-09

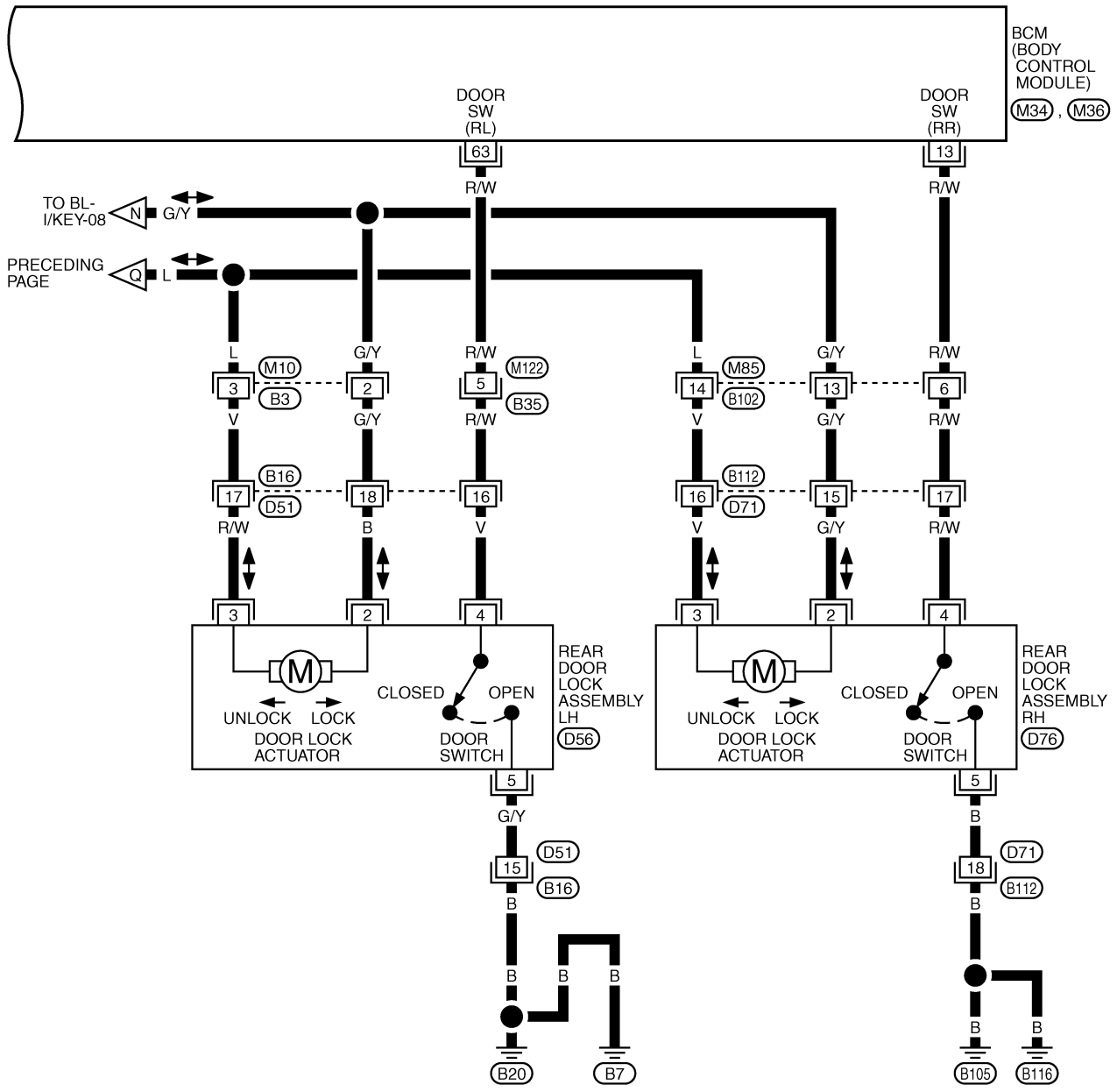


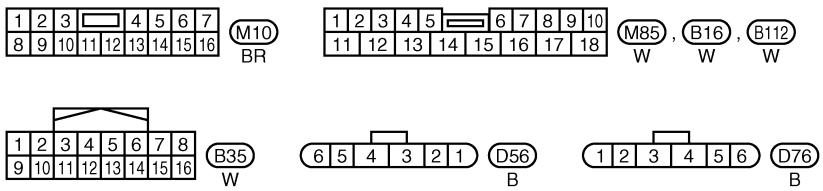


REFER TO THE FOLLOWING.
M36 -ELECTRICAL UNITS

TIWB0157E

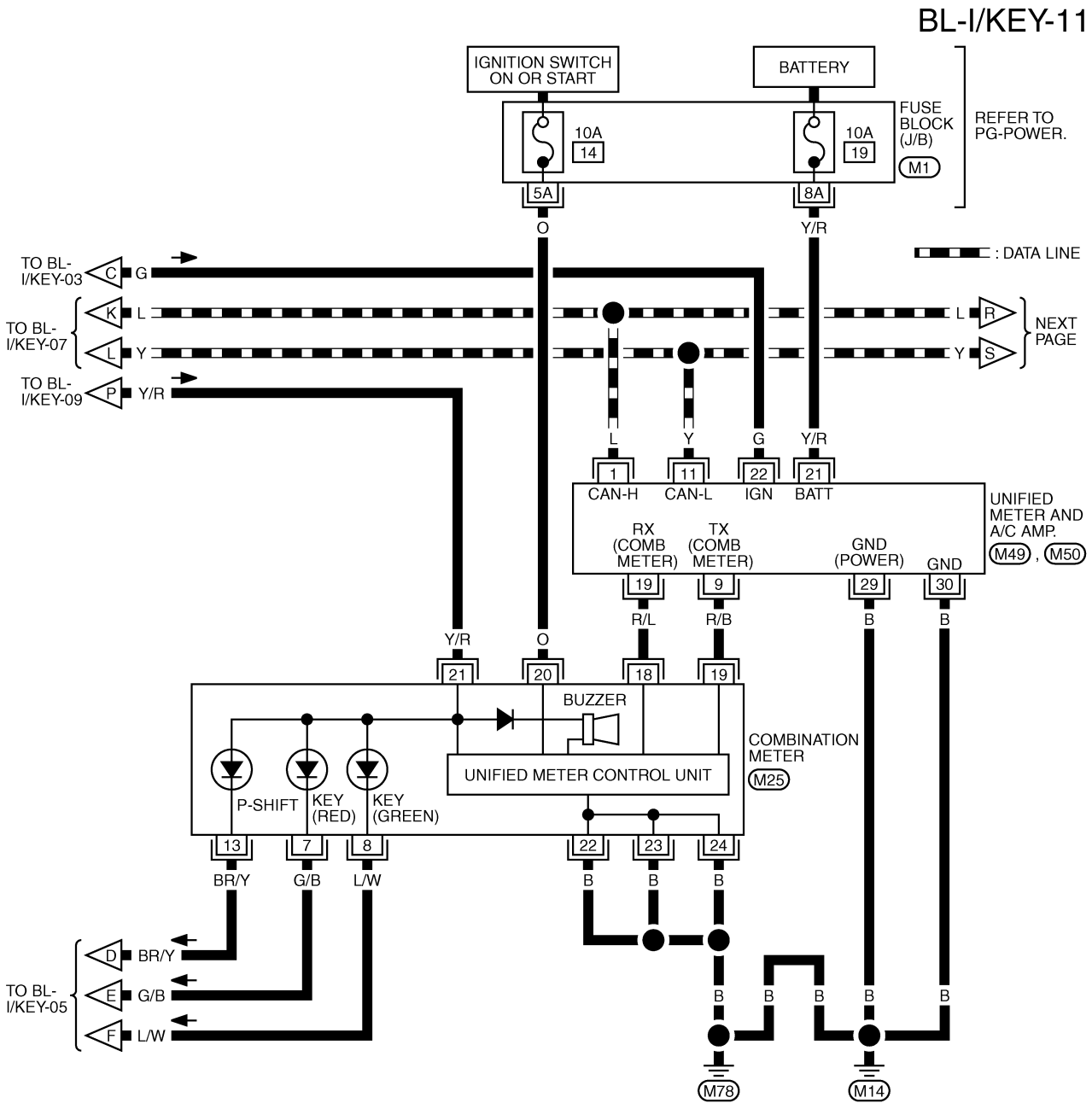
BL-I/KEY-10

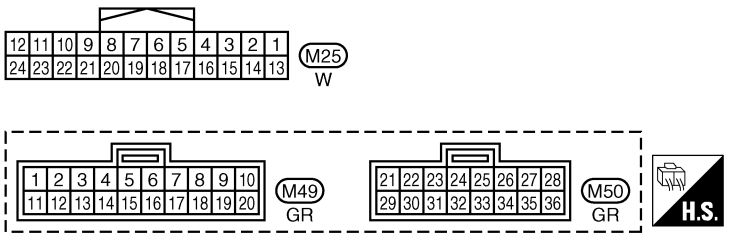




REFER TO THE FOLLOWING.
M34 , M36 -ELECTRICAL UNITS

TIWB0158E



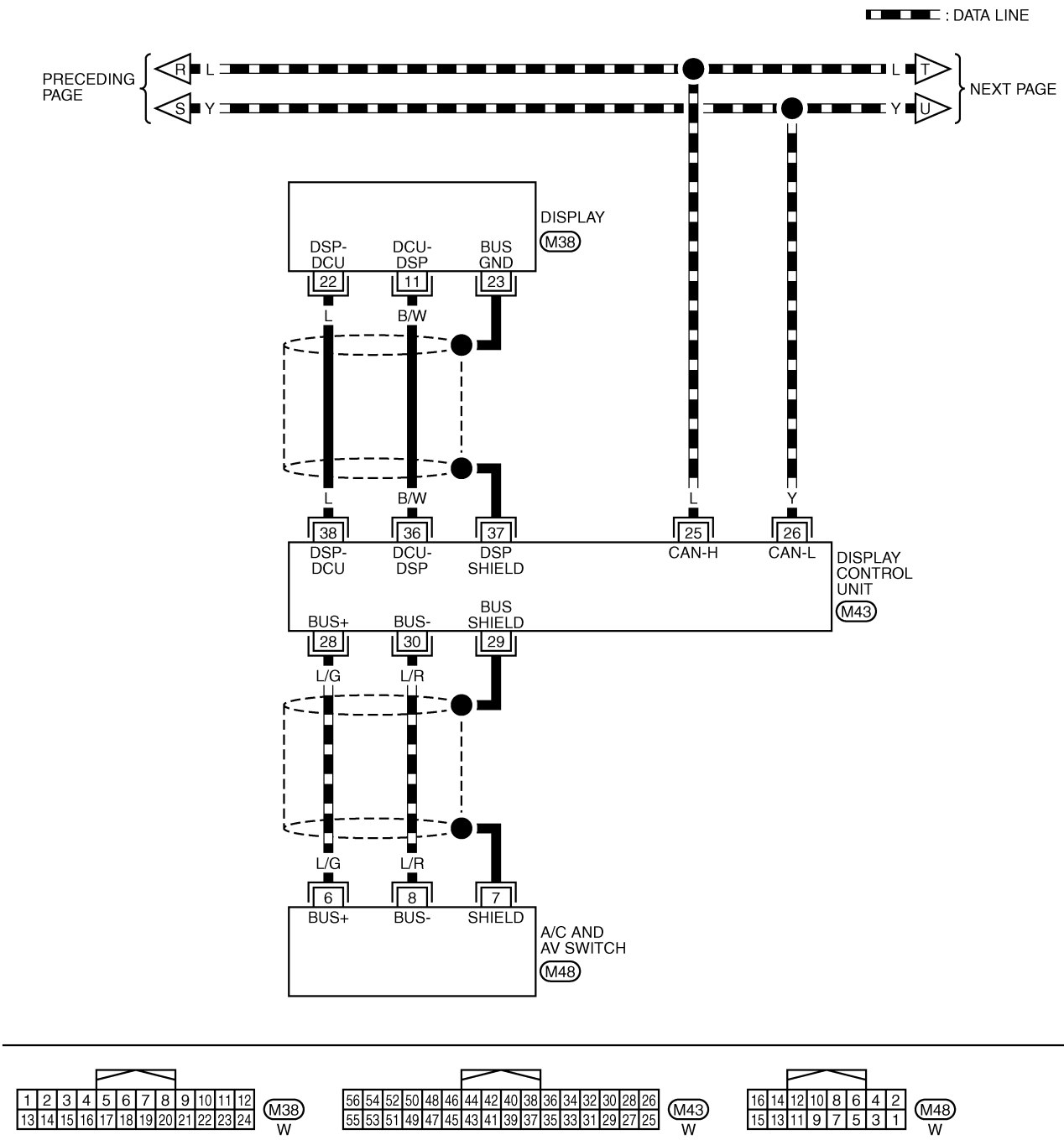


REFER TO THE FOLLOWING.

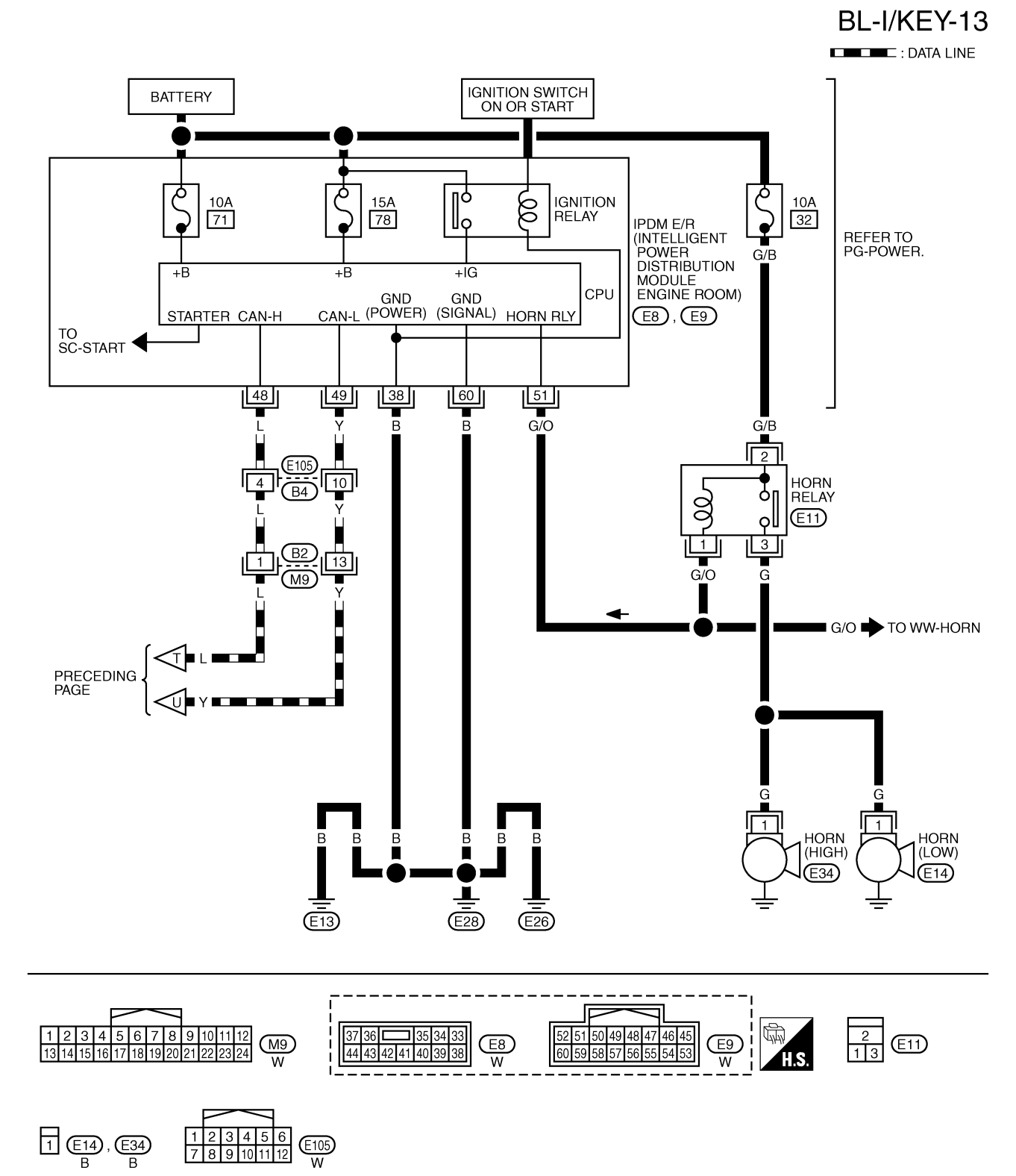
M1 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWB0159E

BL-I/KEY-12



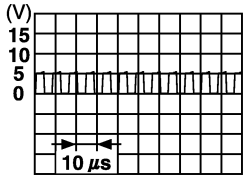
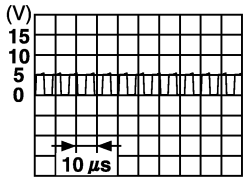
TIWB0781E

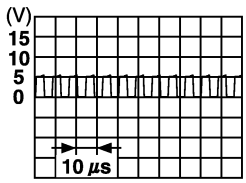
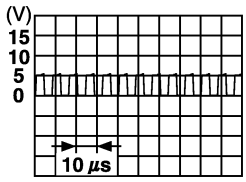
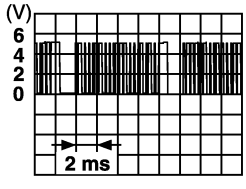

BL-I/KEY-13
: DATA LINE
BATTERY
IGNITION SWITCH ON OR START
10A 71
15A 78
IGNITION RELAY
10A 32
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E8 , E9
REFER TO PG-POWER.
+B
+B
+IG
CPU
STARTER
CAN-H
CAN-L
GND (POWER)
GND (SIGNAL)
HORN RLY
TO SC-START
G/B
48
49
38
60
51
L
Y
B
B
G/O
G/B
E105
B4
B2
M9
HORN RELAY
E11
G/O
G
TO WW-HORN
PRECEDING PAGE
T
U
L
Y
B
B
B
B
B
B
E13
E28
E26
G
G
HORN (HIGH)
E34
HORN (LOW)
E14
M9
W
E8
W
E9
W
H.S.
E11
E14 , E34
B
B
E105
W

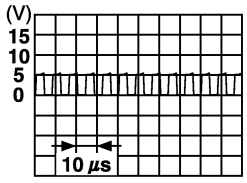
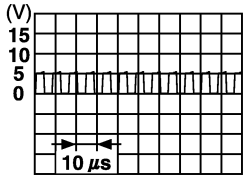
TIWB0782E

Terminals and Reference Value for Intelligent Key Unit

NIS0017I

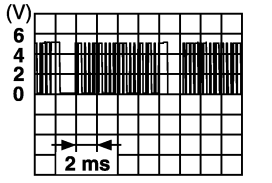
Terminal	Wire Color	Item	Signal input/ output	Condition			Voltage (V) Approx.
				Ignition Switch Position	Operation or Conditions		
1	L/Y	Steering lock unit power supply	Input	LOCK	—		5
2	L	CAN-H	Input/ output	—	—		—
3	Y	CAN-L	Input/ output	—	—		—
4	GR	Intelligent Key warning buzzer (engine room)	Output	LOCK	Operate door request switch.	Buzzer OFF	Battery voltage
						Sound buzzer	0
5	B/W	Front door request switch (driver side)	Input	—	Press front door request switch (driver side).		0
					Other than above		5
6	G	Ignition switch (ON)	Input	ON	—		Battery voltage
7	B/R	Key switch	Input	LOCK	Insert mechanical key into ignition key cylinder.		Battery voltage
					Remove mechanical key from ignition key cylinder.		0
8	L/W	KEY indicator (green)	Output	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.		0
					Ignition knob switch OFF		Battery voltage
9	G/B	KEY indicator lamp (red)	Output	LOCK	When Intelligent Key is outside vehicle, press ignition knob switch.		0
					Ignition knob switch OFF		Battery voltage
10	P/B	Ignition switch (ACC)	Input	ACC	—		Battery voltage
11	G/Y	Power source (Fuse)	Input	—	—		Battery voltage
12	B	Ground	—	—	—		0
13	Y	Inside key antenna (+) signal (Luggage room)	Output	LOCK	Press ignition knob switch: ON (Ignition knob switch)		 SIIA1910J
14	BR	Inside key antenna (-) signal (Luggage room)	Output				
15	L	Inside key antenna (+) signal (Console)	Output	LOCK	Press ignition knob switch: ON (Ignition knob switch)		 SIIA1910J
16	B/W	Inside key antenna (-) signal (Console)	Output				

Terminal	Wire Color	Item	Signal input/ output	Condition		Voltage (V) Approx.
				Ignition Switch Position	Operation or Conditions	
17	W	Outside key antenna (Rear bumper) (+) signal	Output	LOCK	Press back door opener request switch.	 SIIA1910J
18	B	Outside key antenna (Rear bumper) (-) signal	Output			
19	P	Driver side door antenna (+) signal	Output	LOCK	Press door request switch (driver side).	 SIIA1910J
20	V	Driver side door antenna (-) signal	Output			
21	BR/Y	"P-SHIFT" warning lamp	Output	ON	Within 2 seconds after ignition knob switch is turned ON	0
					Other than above	Battery voltage
25	P/L	Front door request switch (passenger side)	Input	—	Press front door request switch (passenger side).	0
					Other than above	5
26	R/G	Stop lamp switch	Input	—	Depress brake pedal.	Battery voltage
					Other than above	0
27	G/O	Ignition knob switch	Input	—	Press ignition switch.	Battery voltage
					Return ignition switch to LOCK position.	0
28	SB	Door unlock sensor (driver side)	Input	—	Door (driver side) is locked.	5
					Door (driver side) is unlocked.	0
29	G/W	Back door request switch	Input	—	Press back door request switch.	0
					Other than above	5
30	LG/B	Intelligent key warning buzzer (inside)	Output	ACC	Driver's door open (sounds buzzer)	0
					Driver's door close (buzzer OFF)	Battery voltage
31	G/R	Steering lock unit ground	—	—	—	0
32	L/O	Steering lock unit communication signal	Input/ output	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	 SIIA1911J
					Other than above	5

Terminal	Wire Color	Item	Signal input/output	Condition		Voltage (V) Approx.
				Ignition Switch Position	Operation or Conditions	
35	O	Inside key antenna (+) signal (Dashboard)	Output	LOCK	Press ignition knob switch: ON (Ignition knob switch)	 SIIA1910J
36	B/P	Inside key antenna (-) signal (Dashboard)	Output			
37	LG	Passenger side door antenna (+) signal	Output	LOCK	Press door request switch (passenger side).	 SIIA1910J
38	B/Y	Passenger side door antenna (-) signal	Output			
39	L/W	P range switch	Input	—	Selector lever is in “P” position.	0
					Other than above	5
40	L/R	Assist select unlock output	Output	—	Press door request switch (passenger side).	Battery voltage → 0 → Battery voltage
					Other than avobe	Battery voltage

Terminals and Reference Value for Steering Lock Unit

NIS0017J

Terminal	Wire Color	Signal Designation	Signal input/output	Condition		Voltage (V) Approx.
				Ignition Switch Position	Operation or Conditions	
1	G/Y	Power source (Fuse)	Input	LOCK	—	Battery voltage
2	L/Y	Steering lock unit power supply	Output	LOCK	—	5
3	L/O	Steering lock unit communication signal	Input/output	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	 SIIA1911J
					Other than the above	5
4	G/R	Steering lock unit ground	—	—	—	0

Terminals and Reference Value for BCM

NIS0017K

Terminal	Wire Color	Item	Signal input/output	Condition	Voltage (V) Approx.
12	R/G	Front door switch passenger side	Input	Door open (ON) → Close (OFF)	0 → Battery voltage
13	R/W	Rear door switch RH	Input	Door open (ON) → Close (OFF)	0 → Battery voltage

Terminal	Wire Color	Item	Signal input/output	Condition	Voltage (V) Approx.
37	B/R	Key switch	Input	Insert mechanical key from ignition key cylinder.	Battery voltage
				Remove mechanical key into ignition key cylinder.	0
38	R	Ignition switch (ON)	Input	Ignition switch is in ON or START position.	Battery voltage
39	L	CAN-H	Input/output	—	—
40	Y	CAN-L	Input/output	—	—
42	GR	Power source	Input	—	Battery voltage
44	G/W	Driver side door lock actuator (unlock)	Input	Door lock/ unlock switch (Free → Unlock)	0 → Battery voltage → 0
50	V	All door lock actuator (lock)	Output	Door lock/ unlock switch (Free → Lock)	0 → Battery voltage → 0
51	G/Y	Passenger and rear doors lock actuator (unlock)	Output	Door lock/ unlock switch (Free → Unlock)	0 → Battery voltage → 0
52	B	Ground	—	—	0
55	W/B	Power source (Fusible link)	Input	—	Battery voltage
58	V/W	Back door switch	Input	Back door open (ON) → Close (OFF)	0 → Battery voltage
62	SB	Front door switch driver side	Input	Door open (ON) → Close (OFF)	0 → Battery voltage
63	R/W	Rear door switch LH	Input	Door open (ON) → Close (OFF)	0 → Battery voltage

Terminals and Reference Value for IPDM E/R

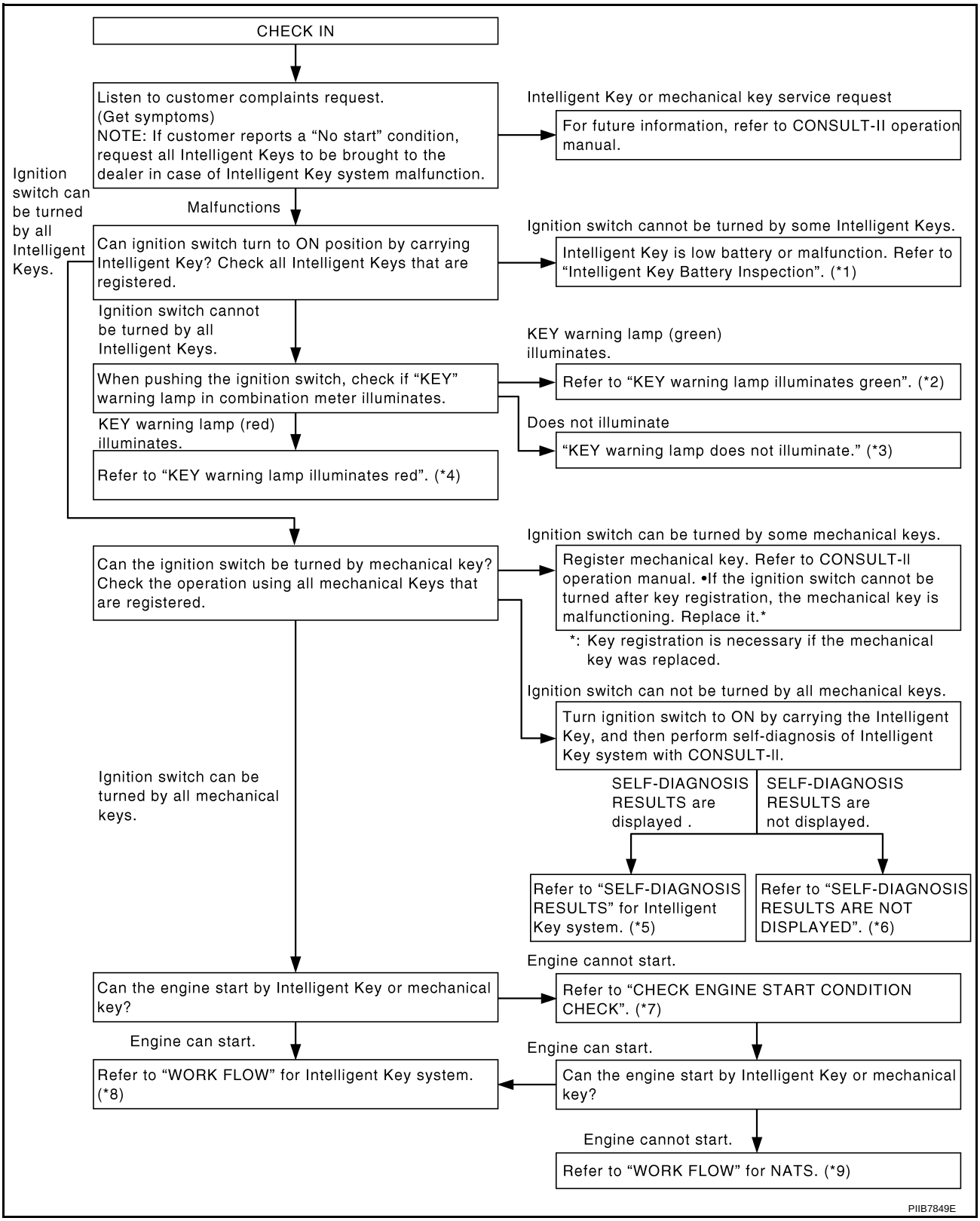
NIS0017L

Terminal	Wire Color	Item	Signal input/output	Condition	Voltage (V) Approx.	
38	B	Ground	—	—	0	
48	L	CAN-H	Input/output	—	—	
49	Y	CAN-L	Input/output	—	—	
51	G/O	Horn relay	Output	Press panic alarm bottom.	Horn sounds.	0
					Horn does not sound.	Battery voltage
60	B	Ground	—	—	0	

Trouble Diagnosis Procedure

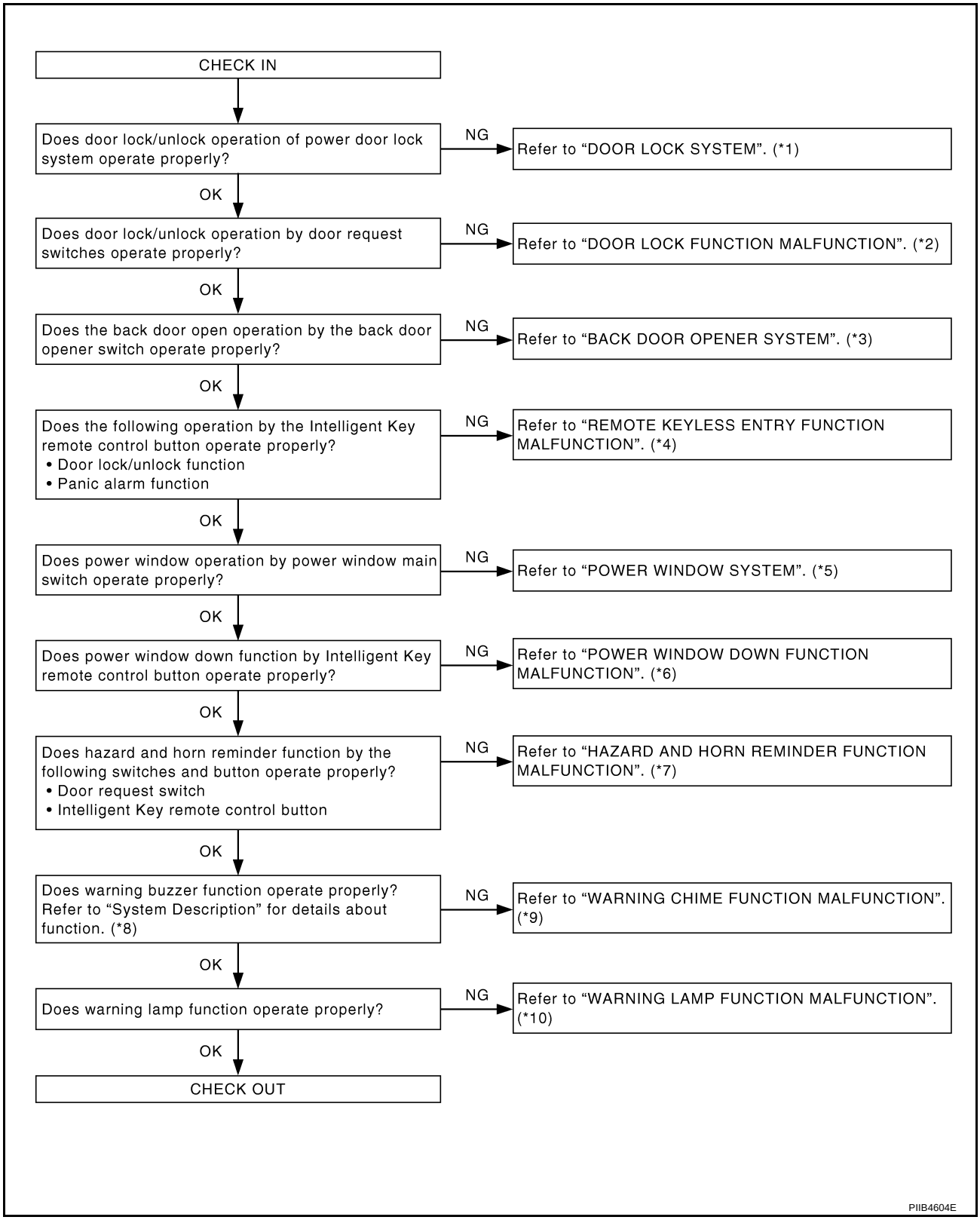
NIS0017M

PRELIMINALY CHECK



*1: BL-168 *2: BL-127 *3: BL-128
*4: BL-127 *5: BL-123 *6: BL-128
*7: BL-128 *8: BL-122 *9: BL-244

WORK FLOW



*1: BL-23 *2: BL-129 *3: BL-186
*4: BL-130 *5: GW-17 *6: BL-131
*7: BL-131 *8: BL-89 *9: BL-131
*10: BL-133

CONSULT-II Functions (INTELLIGENT KEY)

NIS0017N

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

Part to be diagnosed	Test item, Diagnosis mode	Description
Intelligent Key	WORK SUPPORT	Changes settings for each function.
	SELF-DIAG RESULTS	Intelligent Key unit performs CAN communication diagnosis.
	DATA MONITOR	Displays Intelligent Key unit input data in real time.
	CAN DIAGNOSTIC SUPPORT MONITOR	The results of transmit/receive diagnosis of CAN Communication can be read.
	ACTIVE TEST	Operation of electrical loads can be checked by sending driving signal to then.
	ECU PART NUMBER	Displays Intelligent Key unit part No.

CONSULT-II Start Procedure

NIS0017O

Refer to GI-37, "CONSULT-II Start Procedure" .

CONSULT-II Application Items

NIS0017P

SELF-DIAGNOSTIC RESULTS

Self-diag results	Description	Diagnosis procedure	Reference page
CAN COMM	Malfunction is detected in CAN communication.	Check CAN communication system.	BL-134
CAN COMM2	Intelligent Key unit internal malfunction	Check CAN communication system.	BL-134
STRG COMM	Malfunction is detected in communication of Intelligent Key unit and steering lock unit.	Check steering lock unit.	BL-156
I-KEY C/U	Intelligent Key unit internal malfunction	Replace Intelligent Key unit.	BL-167
IMMU	NATS malfunction	Check NATS.	BL-232

DATA MONITOR

Monitor item	Content
PUSH SW	Indicates [ON/OFF] condition of ignition knob switch.
KEY SW	Indicates [ON/OFF] condition of key switch.
DR REQ SW	Indicates [ON/OFF] condition of door request switch (driver side).
AS REQ SW	Indicates [ON/OFF] condition of door request switch (passenger side).
BD/TR REQ SW	Indicates [ON/OFF] condition of back door opener request switch.
IGN SW	Indicates [ON/OFF] condition of ignition switch in ON position.
ACC SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
DOOR STAT SW	Indicates [ON/OFF] condition of stop lamp switch.
STOP LAMP SW	Indicates [ON/OFF] condition of door unlock sensor.
P RANGE SW	Indicates [ON/OFF] condition of park position switch.
BD OPEN SW	Indicates [OPEN/CLOSE] condition of back door switch from BCM via CAN communication line.
DOOR LOCK SIG*	Indicates [ON/OFF] condition of door lock signal from Intelligent Key remote controller button.
DOOR UNLOCK SIG*	Indicates [ON/OFF] condition of door unlock signal from Intelligent Key remote controller button.
PANIC SIG*	Indicates [ON/OFF] condition of panic alarm signal from Intelligent Key remote controller button.
DOOR SW DR*	Indicates [OPEN/CLOSE] condition of front door switch driver side from BCM via CAN communication line.
DOOR SW AS*	Indicates [OPEN/CLOSE] condition of front door switch passenger side from BCM via CAN communication line.
DOOR SW RR*	Indicates [OPEN/CLOSE] condition of rear door switch LH from BCM via CAN communication line.
DOOR SW RL*	Indicates [OPEN/CLOSE] condition of rear door switch RH from BCM via CAN communication line.
DOOR BK SW*	Indicates [OPEN/CLOSE] condition of back door switch from BCM via CAN communication line.

Monitor item	Content
TRUNK SW*	This is displayed even when it is not equipped.
VEHICLE SPEED*	Indicates [km/h] condition of vehicle speed.

*: Select “SELECTION FROM MENU”.

WORK SUPPORT

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
TAKE OUT FROM WINDOW WARN	Take away warning chime (from window) mode can be changed to operate (ON) or not operate (OFF) with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
LOW BAT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
SELECTIVE UNLOCK FUNCTION	Selective unlock function mode can be changed to operate (ON) or not operate (OFF) with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
ANTI KEY LOCK IN FUNCTION	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key remote control button can be changed to operate (ON) or not operate (OFF) with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched. ● LOCK ONLY: Door lock operation only ● UNLOCK ONLY: Door unlock operation only ● LOCK/UNLOCK: Lock/Unlock operation ● OFF: Non-operation
ANSWER BACK WITH I-KEY LOCK	Horn reminder function (lock operation) mode by door request switch (driver side, passenger side and back door) can be selected from the following with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched. ● HORN CHIRP: Sound horn ● BUZZER: Sound buzzer ● OFF: Non-operation
ANSWER BACK WITH I-KEY UNLOCK	Horn reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
AUTO RELOCK TIMER	Auto door lock timer mode can select the following with this mode. ● 1 minute ● 5 minute ● OFF: Non-operation
PANIC ALARM DELAY	Panic alarm button's pressing time on Intelligent Key remote control button can be selected from the following with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched. ● 0.5 second ● 1.5 second ● OFF: Non-operation
P/W DOWN DELAY	Unlock button's pressing time on Intelligent Key remote control button can be selected from the following with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched. ● 3 seconds ● 5 seconds ● OFF: Non-operation
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and back door) mode can be changed to operate (ON) or not operate (OFF) with this mode. The operation mode will be changed when “CHANGE SETT” on CONSULT-II screen is touched.

ACTIVE TEST

Test item	Description
DOOR LOCK/UNLOCK	This test is able to check door lock/unlock operation. ● The all door lock actuators are unlocked when “ALL UNLK” on CONSULT-II screen is touched. ● The door lock actuator (driver side) is unlocked when “DR UNLK” on CONSULT-II screen is touched. ● The door lock actuator (passenger side) is unlocked when “AS UNLK” on CONSULT- II screen is touched. ● The door lock actuator (back door) is unlocked when “BK UNLK” on CONSULT- II screen is touched. ● The all door lock actuators are locked when “LOCK” on CONSULT-II screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer (engine room) operation. Intelligent Key warning buzzer (engine room) sounds when “ON” on CONSULT-II screen is touched.
INSIDE BUZZER	This test is able to check Intelligent Key warning buzzer (inside) operation. ● Take away warning chime sounds when “TAKE OUT” on CONSULT-II screen is touched. ● Ignition switch warning chime sounds when “KNOB” on CONSULT-II screen is touched. ● Ignition key warning chime sounds when “KEY” on CONSULT-II screen is touched.
INDICATOR	This test is able to check warning lamp operation. ● “KEY” Warning lamp (Green) illuminates when “BLUE ON” on CONSULT-II screen is touched. ● “KEY” Warning lamp (Red) illuminates when “RED ON” on CONSULT-II screen is touched. ● “P-SHIFT” Warning lamp illuminates when “KNOB ON” on CONSULT-II screen is touched. ● “KEY” Warning lamp (Green) flashes when “BLUE IND” on CONSULT-II screen is touched. ● “KEY” Warning lamp (RED) flashes when “BLUE IND” on CONSULT-II screen is touched. ● “P-SHIFT” Warning lamp flashes when “KNOB ON” on CONSULT-II screen is touched.

Trouble Diagnosis Symptom Chart

NIS0017Q

KEY WARNING LAMP ILLUMINATES GREEN

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure"
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/Service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/Service procedure	Reference page
Ignition switch does not turn on with Intelligent Key. [KEY warning lamp (green) illuminates.]	1. Check steering lock unit.	BL-156
	2. Replace Intelligent Key unit.	BL-167

KEY WARNING LAMP ILLUMINATES RED

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/Service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/Service procedure	Reference page
Ignition switch does not turn on with Intelligent Key. [KEY warning lamp (red) illuminates.]	1. Check inside key antenna.	BL-155
	2. Replace Intelligent Key unit.	BL-167

KEY WARNING LAMP DOES NOT ILLUMINATE

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/Service procedure” column in this order.
- Check if ignition switch turns using mechanical key. If it turns, check if “ENGINE START BY I-KEY” in “WORK SUPPORT” mode is ON.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/Service procedure	Reference page
Ignition switch does not turn on with Intelligent Key. [KEY warning lamp does not illuminate.]	1. Check Intelligent Key unit power supply and ground circuit.	BL-134
	2. Check ignition knob switch.	BL-137
	3. Check key switch.	BL-135
	4. Replace Intelligent Key unit.	BL-167

SELF-DIAGNOSIS RESULTS ARE NOT DISPLAYED

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/Service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- ID-registered mechanical key is used.
- Multiple mechanical keys are not set in a keyfob.
  (If mechanical keys are near the ignition switch, the operation may not work properly.)

Symptom	Diagnosis/Service procedure	Reference page
Ignition switch does not turn on with mechanical Key.	1. Check key switch.	BL-135
	2. Check NATS antenna amp.	BL-249

ENGINE START CONDITION CHECK

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure" .
- If the following “symptoms” are detected, check systems shown in the ”Diagnoses/Service procedure” column in this order.

Symptom	Diagnosis/Service procedure	Reference page
Engine can not start	1. Check park position switch.	BL-159
	2. Check stop lamp switch.	BL-158

DOOR LOCK/UNLOCK FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/Service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- LOCK/UNLOCK BY I-KEY is ON when setting on CONSULT-II.
- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/Service procedure	Reference page
Door lock/unlock do not operate by request switch.	1. Check door switch.	BL-139
	2. Check ignition knob switch.	BL-137
	3. Replace Intelligent Key unit.	BL-167
Door lock/unlock does not operate by request switch (driver side).	1. Check door request switch (driver side).	BL-142
	2. Check outside key antenna (driver side).	BL-148
	3. Replace Intelligent Key unit.	BL-167
Door lock/unlock does not operate by request switch (passenger side).	1. Check door request switch (passenger side).	BL-142
	2. Check outside key antenna (passenger side).	BL-151
	3. Replace Intelligent Key unit.	BL-167
Door lock/unlock does not operate by request switch (back door).	1. Check door request switch (back door).	BL-142
	2. Check outside key antenna (rear bumper).	BL-153
	3. Replace intelligent key unit.	BL-167
Selective unlock function does not operate by request switch (driver side). (Other door lock function operate properly)	1. Check “SELECTIVE UNLOCK FUNCTION” setting in “WORK SUPPORT”.	BL-125
	2. Check select unlock function with a remote controller or door key cylinder.	BL-59
	3. Replace BCM.	BCS-14
Selective unlock function does not operate by request switch (passenger side). (Other door lock function operate properly)	1. Check “SELECTIVE UNLOCK FUNCTION” setting in “WORK SUPPORT”.	BL-125
	2. Check select unlock relay.	BL-161
	3. Replace Intelligent Key unit.	BL-167
Selective unlock function dose not operate by request switch (back door).	1. Check “SELECTIVE UNLOCK FUNCTION” setting in “WORK SUPPORT”.	BL-125
	2. Replace Intelligent Key unit.	BL-167
Auto lock function does not operate properly.	1. Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	BL-125
	2. Check key switch.	BL-135
	3. Check ignition knob switch.	BL-137
	4. Check door switch.	BL-139
	5. Replace Intelligent Key unit.	BL-167

Symptom	Diagnosis/Service procedure	Reference page
Key reminder function does not operate properly.	1. Check “ANTI KEY LOCK IN FUNCTION” setting in “WORK SUPPORT”.	BL-125
	2. Check door switch.	BL-139
	3. Check inside key antenna.	BL-155
	4. Check unlock sensor.	BL-144
	5. Check Intelligent Key battery inspection.	BL-168
	6. Replace Intelligent Key unit.	BL-167

REMOTE KEYLESS ENTRY FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure" .
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/Service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/Service procedure	Reference page
Either one of the remote keyless entry functions do not operate.	Replace Intelligent Key unit.	BL-167
Selective unlock function does not operate by Intelligent Key remote control button.	1. Check “SELECT UNLOCK FUNCTION” setting in “WORK SUPPORT”.	BL-125
	2. Check Intelligent Key battery inspection.	BL-168
	3. Replace Intelligent Key unit.	BL-167
Auto lock function does not operate properly.	1. Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	BL-125
	2. Check key switch.	BL-135
	3. Check ignition knob switch.	BL-137
	4. Check door switch.	BL-139
	5. Replace Intelligent Key unit.	BL-167
Key reminder function does not operate properly.	1. Check “ANTI KEY LOCK IN FUNCTION” setting in “WORK SUPPORT”.	BL-125
	2. Check door switch.	BL-139
	3. Check inside key antenna.	BL-155
	4. Check unlock sensor.	BL-144
	5. Check Intelligent Key battery inspection.	BL-168
	6. Replace Intelligent Key unit.	BL-167
Panic alarm function does not operate properly.	1. Check “PANIC ALARM DELAY” setting in “WORK SUPPORT”.	BL-125
	2. Theft warning operation check.	BL-204
	3. Check Intelligent Key battery inspection.	BL-168
	4. Check key switch.	BL-135
	5. Check ignition knob switch.	BL-137
	6. Replace Intelligent Key unit.	BL-167

HAZARD AND HORN REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure"
- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/Service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/Service procedure	Reference page
Hazard reminder does not operate properly by request switch. (Horn reminder operate properly.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	BL-125
	2. Check hazard function with hazard switch	BL-166
	3. Replace Intelligent Key unit.	BL-167
Horn reminder does not operate properly by request switch. (Horn reminder operate properly.)	1. Check “ANSWER BACK WITH I-KEY LOCK” or “ANSWER BACK WITH I-KEY UNLOCK” setting in “WORK SUPPORT”.	BL-125
	2. Check Intelligent Key warning buzzer (Engine room).	BL-146
	3. Check horn function.	BL-166
	4. Check IPDM E/R operation.	BL-167
	5. Replace Intelligent Key unit.	BL-167
Hazard reminder does not operate properly by Intelligent Key remote control button. (Horn reminder operate properly.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	BL-125
	2. Check hazard function.	BL-166
	3. Replace Intelligent Key unit.	BL-167
Horn reminder does not operate properly by Intelligent Key remote control button (door lock/unlock button). (Horn reminder operate properly.)	1. Check “HORN WITH KEYLESS LOCK” setting in “WORK SUPPORT”.	BL-125
	2. Check Intelligent Key warning buzzer (Engine room).	BL-146
	3. Check horn function.	BL-166
	4. Check IPDM E/R operation.	BL-167
	5. Replace Intelligent Key unit.	BL-167

POWER WINDOW DOWN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure"
- If the following “symptoms” are detected, check systems shown in the “Diagnoses/Service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/Service procedure	Reference page
Power window down function does not operate properly.	1. Check “P/W DOWN DELAY” setting in “WORK SUPPORT”.	BL-125
	2. Check Intelligent Key battery inspection.	BL-168

WARNING CHIME FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure" .

- Make sure that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/Service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)
Each warning chime function is ON when setting on CONSULT-II.

Symptom	Diagnosis/Service procedure	Reference page
Ignition switch warning chime does not operate.	1. Check ignition knob switch.	BL-137
	2. Check door switch.	BL-139
	3. Check key switch.	BL-135
	4. Check Intelligent Key warning buzzer (inside).	BL-145
	5. Replace Intelligent Key unit.	BL-167
Ignition key warning chime does not operate properly. (When mechanical key used)	1. Check key switch (Intelligent Key unit input).	BL-135
	2. Check key switch (BCM input).	BL-136
	3. Check door switch.	BL-139
	4. Check combination meter.	DI-16
	5. Replace Intelligent Key unit.	BL-167
OFF position warning chime does not operate.	1. Check ignition knob switch.	BL-137
	2. Check key switch.	BL-135
	3. Check power supply and ground circuit.	BL-134
	4. Check Intelligent Key warning buzzer (inside).	BL-145
	5. Replace Intelligent Key unit.	BL-167
OFF position warning chime (after door closed) does not operate properly.	1. Check ignition knob switch.	BL-137
	2. Check Intelligent Key warning buzzer (engine room).	BL-146
	3. Replace Intelligent Key unit.	BL-167
Take away warning chime does not operate properly.	1. Check door switch.	BL-139
	2. Check power supply and ground circuit.	BL-134
	3. Check Intelligent Key battery inspection.	BL-168
	4. Check inside key antenna.	BL-155
	5. Check Intelligent Key warning buzzer (engine room).	BL-146
	6. Replace Intelligent Key unit.	BL-167
Take away warning chime (from window) does not operate properly.	1. Check “TAKE OUT FROM WINDOW WARN” setting in “WORK SUPPORT”.	BL-125
	2. Check inside key antenna.	BL-155
	3. Check power supply and ground circuit.	BL-134
	4. Check Intelligent Key battery inspection.	BL-168
	5. Check Intelligent Key warning buzzer (inside).	BL-145
	6. Replace Intelligent Key unit.	BL-167
Door lock operation warning chime does not operate properly.	1. Check door switch.	BL-139
	2. Check ignition knob switch.	BL-137
	3. Replace Intelligent Key unit.	BL-167
	4. Check door request switch (driver side).	BL-142
	5. Check outside key antenna (driver side).	BL-148
	6. Check inside key antenna.	BL-155
	7. Check Intelligent Key warning buzzer (engine room).	BL-146
	8. Replace Intelligent Key unit.	BL-167

WARNING LAMP FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to BL-121, "Trouble Diagnosis Procedure" .
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/Service procedure” column in this order.

Symptom	Diagnosis/Service procedure	Reference page
Intelligent Key low battery warning does not operate properly.	1. Check “LOW BAT OF KEY FOB WARN” setting in “WORK SUPPORT”.	BL-125
	2. Check Intelligent Key battery inspection.	BL-168
	3. Check KEY warning lamp (green).	BL-165
	4. Replace Intelligent Key unit.	BL-167
P position warning lamp does not illuminate properly.	1. Check park position switch.	BL-159
	2. Check “P-SHIFT” warning lamp (red).	BL-162
	3. Replace Intelligent Key unit.	BL-167
Take away warning lamp does not illuminate properly. (Take away warning chime is operated.)	1. Check KEY warning lamp (red).	BL-164
	2. Replace Intelligent Key unit.	BL-167
Ignition switch warning lamp does not illuminate properly. (Ignition switch warning chime is operated.)	1. Check KEY warning lamp (red).	BL-164
	2. Replace Intelligent Key unit.	BL-167

Check CAN Communication System

NIS0017R

1. CHECK SELF-DIAGNOSTIC RESULTS

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 performs CAN communication.

With CONSULT-II

- Connect CONSULT-II, and turn ignition switch ON.
- Touch “INTELLIGENT KEY” on “SELECT SYSTEM” screen.
- Touch “SELF-DIAG RESULTS” on “SELECT DIAG MODE” screen.
- Check display content in self-diagnostic results.

CONSULT-II display item	DTC code
NO DTC IS DETECTED	—
CAN COMM	U1000
CAN COMM2	U1010

OK or NG

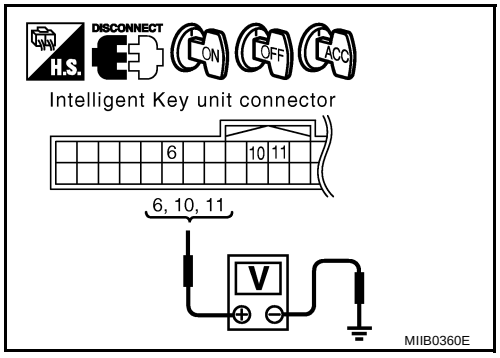
NO DTC IS DETECTED>> INSPECTION END
CAN COMM [U1000]>> After printing “SELF-DIAGNOSIS RESULTS”, go to “CAN SYSTEM”, Refer toLAN-49, "CAN System Specification Chart" .
CAN COMM2 [U1010]>> Replace Intelligent Key unit.

Check Power Supply and Ground Circuit

NIS0017S

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit harness connector.
3. Check voltage between Intelligent Key unit harness connector and ground.



Con-nector	Terminal (Wire color)		Ignition switch position		
	(+)	(–)	OFF	ACC	ON
M99	6 (G)	Ground	0V	0V	Battery voltage
	10 (P/B)		0V	Battery voltage	Battery voltage
	11 (G/Y)		Battery volt-age	Battery voltage	Battery voltage

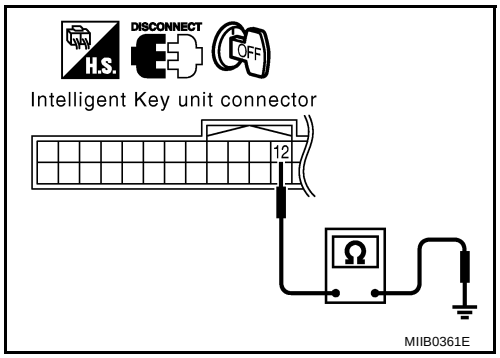
OK or NG

OK >> GO TO 2.
NG >> Repair or replace Intelligent Key power supply circuit.

2. CHECK GROUND CIRCUIT

Check continuity between Intelligent Key unit harness connector M75 terminal 12 (B) and ground.

12 (B) - Ground : Continuity should exist.



OK or NG

OK >> Power supply and ground circuits are OK.
NG >> Repair or replace the Intelligent Key unit ground circuit.

Check Key Switch (Intelligent Key Unit Input)

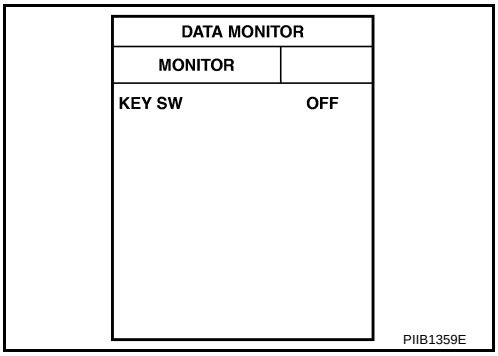
NIS0017T

1. CHECK KEY SWITCH

With CONSULT-II

Check key switch (“KEY SW”) in “DATA MONITOR” mode with CONSULT-II.

Monitor item	Condition
KEY SW	Insert mechanical key into ignition switch: ON
	Remove mechanical key into ignition switch: OFF



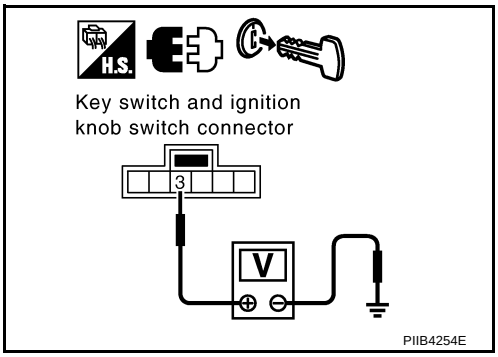
OK or NG

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

2. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Remove mechanical key from ignition switch.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch harness connector M118 terminal 3 and ground.

3 (G/Y) - Ground : Battery voltage



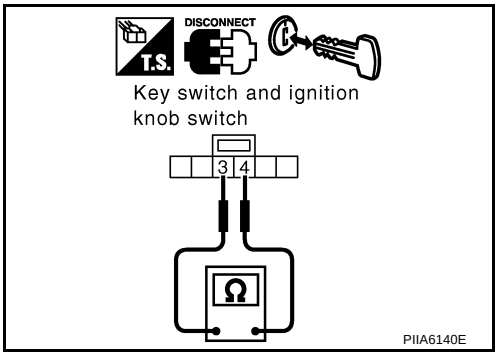
OK or NG

OK >> GO TO 3.
NG >> Repair or replace key switch and ignition knob switch power supply circuit.

3. CHECK KEY SWITCH OPERATION

Check continuity between key switch and ignition knob switch harness connector M118 terminal 3 and 4.

Connector	Terminal		Condition	Continuity
M118	3	4	Insert mechanical key into ignition switch.	Yes
			Remove mechanical key from ignition switch.	No



OK or NG

OK >> GO TO 4.
NG >> Replace key cylinder assembly (built-in key switch).

4. CHECK KEY SWITCH CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector M99 terminal 7 and key switch and ignition knob switch harness connector M118 terminal 4.

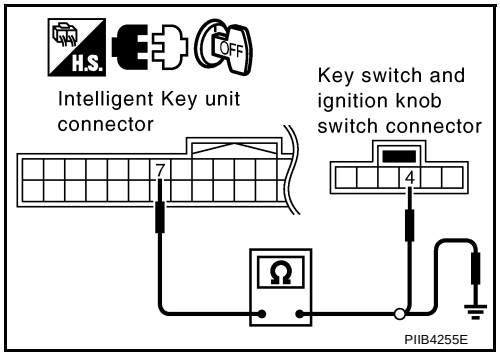
7 (B/R) - 4 (B/R) : Continuity should exist.

3. Check continuity between Intelligent Key unit harness connector M99 terminal 7 and ground.

7 (B/R) - Ground : Continuity should not exist.

OK or NG

OK >> Check the condition of harness and harness connector.
NG >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.



Check Key Switch (BCM Input)

NIS0017U

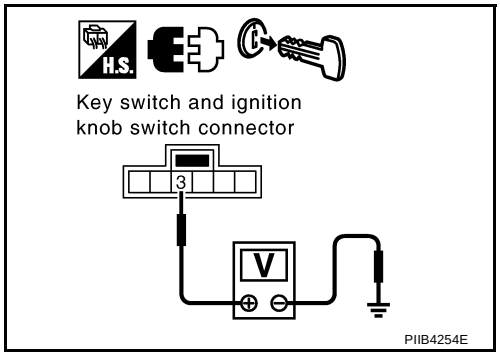
1. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch connector M118 terminal 3 and ground.

3 (G/Y) – Ground : Battery voltage.

OK or NG

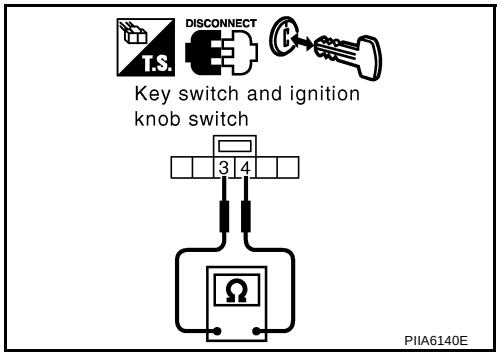
OK >> GO TO 2.
NG >> Check harness between key switch and ignition knob switch and fuse.



2. CHECK KEY SWITCH

Check continuity between key switch and ignition knob switch harness connector M118 terminals 3 and 4.

Connector	Terminal		Condition	Continuity
M118	3	4	Insert mechanical key into ignition switch.	Yes
			Remove mechanical key from ignition switch.	No



OK or NG

OK >> GO TO 3.
NG >> Replace key cylinder assembly (built-in key switch).

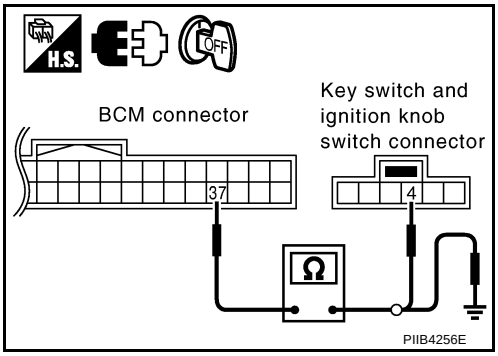
3. CHECK KEY SWITCH SIGNAL CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M34 terminal 37 and key switch and ignition knob switch harness connector M118 terminal 4.

37 (B/R) – 4 (B/R) : Continuity should exist.

3. Check continuity between BCM harness connector M34 terminal 37 and ground.

37 (B/R) – Ground : Continuity should not exist.



OK or NG

OK >> Key switch (BCM input) circuit is OK.
NG >> Repair or replace harness between key switch and ignition knob switch and BCM.

Check Ignition Knob Switch

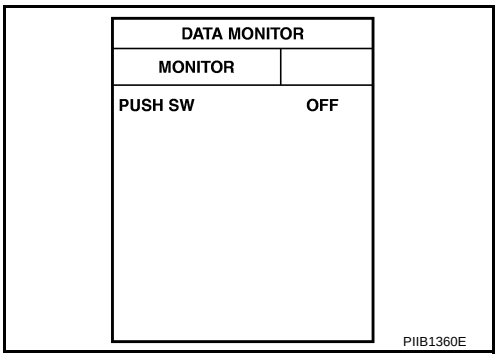
NIS0017V

1. CHECK IGNITION KNOB SWITCH

With CONSULT-II

Display “PUSH SW” on DATA MONITOR screen, and check if ON/OFF display is linked to ignition switch operation.

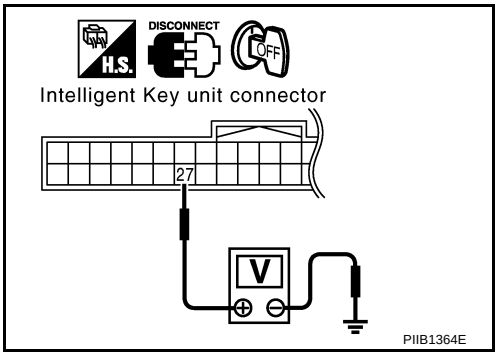
Monitor item	Condition
PUSH SW	Ignition switch is pushed: ON
	Ignition switch is withdrawn: OFF



Without CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector M99 terminal 27 and ground.

Connector	Terminal (Wire color) (+)	Terminal (Wire color) (–)	Condition	Voltage (V) (Approx.)
M99	27 (G/O)	Ground	Ignition switch is pushed	Battery voltage
			Ignition switch is withdrawn	0



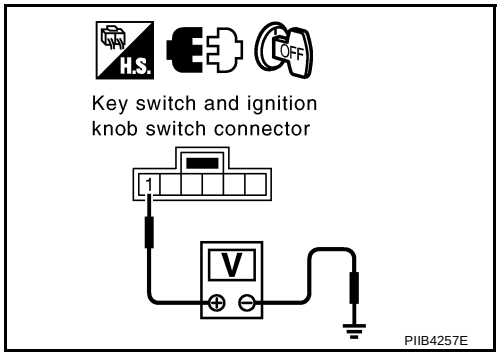
OK or NG

OK >> Ignition knob switch is OK.
NG >> GO TO 2.

2. CHECK IGNITION KNOB SWITCH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch harness connector M118 terminal 1 and ground.

1 (G/Y) - Ground : Battery voltage



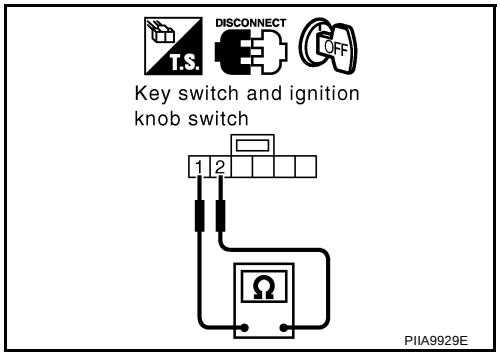
OK or NG

OK >> GO TO 3.
NG >> Repair or replace key switch and ignition knob switch power supply circuit.

3. CHECK IGNITION KNOB SWITCH OPERATION

Check continuity between ignition knob switch harness connector M118 terminal 1 and 2.

Connector	Terminal		Condition	Continuity
M118	1	2	Ignition switch is pushed	Yes
			Ignition switch is with-drawn.	No



OK or NG

OK >> GO TO 4.
NG >> Replace key switch and ignition knob switch.

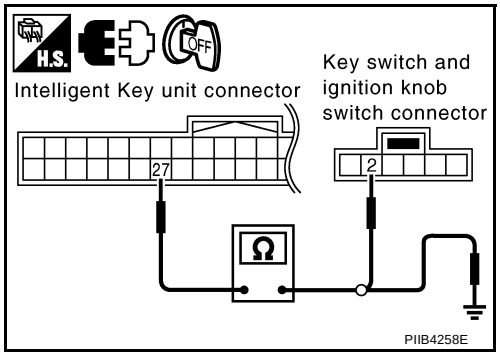
4. CHECK IGNITION KNOB SWITCH CIRCUIT

1. Check continuity between Intelligent Key unit harness connector M99 terminal 27 and key switch and ignition knob switch harness connector M118 terminal 2.

27 (G/O) - 2 (G/O) : Continuity should exist.

2. Check continuity between Intelligent Key unit harness connector M99 terminal 27 and ground.

27 (G/O) - Ground : Continuity should not exist.



OK or NG

OK >> Check the condition of harness and harness connector.
NG >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.

Check Door Switch

NIS0017W

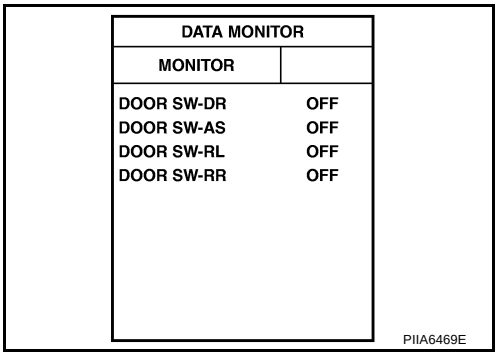
CHECK DOOR SWITCH (EXCEPT BACK DOOR SWITCH)

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR SW-DR”, “DOOR SW-AS”, “DOOR SW-RL” and “DOOR SW-RR”) in “DATA MONITOR” mode with CONSULT-II.

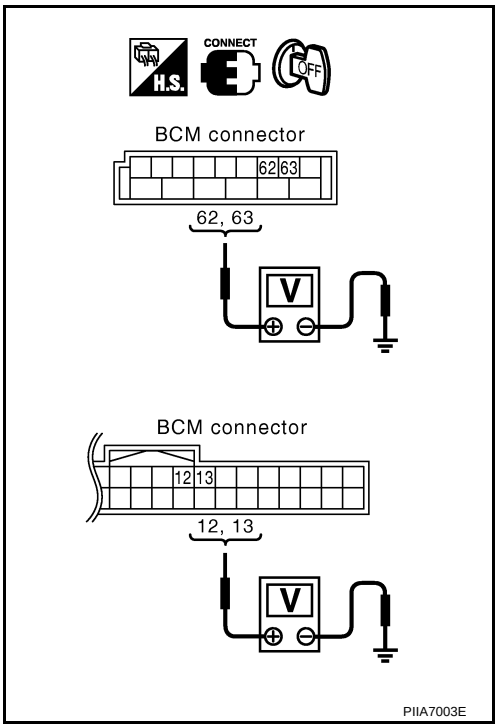
Monitor item	Condition
DOOR SW-DR	CLOSE → OPEN: OFF → ON
DOOR SW-AS	
DOOR SW-RL	
DOOR SW-RR	



Without CONSULT-II

1. Turn ignition switch OFF.
2. Check voltage between BCM harness connector and ground.

Item	Con-nector	Terminals (Wire color) (+)	Terminals (Wire color) (-)	Door condition	Voltage (V) (Approx.)
Driver side	M36	62 (SB)	Ground	CLOSE ↓ OPEN	Battery voltage ↓ 0
Rear LH		63(R/W)			
Passenger side	M34	12 (R/G)			
Rear RH		13 (R/W)			



OK or NG

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

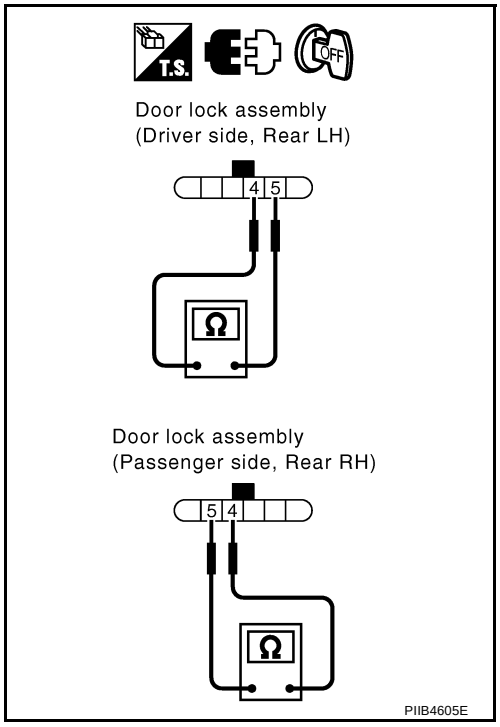
2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door lock assembly connector.
3. Check continuity between door switch terminals 4 and 5.

Terminal		Door condition	Continuity
4	5	Close	No
		Open	Yes

OK or NG

OK >> GO TO 3.
NG >> Replace malfunction door lock assembly.



3. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between door switch harness connector D10, D38, D56, D76 terminals 4 and BCM harness connector M34, M36 terminals 12, 13, 62, 63.

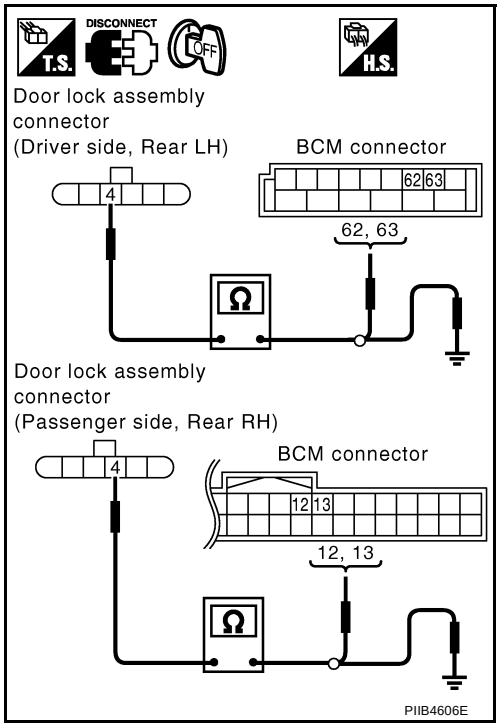
Driver door
4 (SB) –62 (SB) : Continuity should exist.
Passenger door
4 (R/G) – 12 (R/G) : Continuity should exist.
Rear door LH
4 (V) – 63 (V) : Continuity should exist.
Rear door RH
4 (R/W) – 13 (R/W) : Continuity should exist.

3. Check continuity between door switch harness connector D10, D38, D56, D76 terminal 4 and ground.

4 (SB, R/G, V or R/W) – Ground : Continuity should not exist.

OK or NG

OK >> Check door switch case ground condition.
NG >> Repair or replace harness.



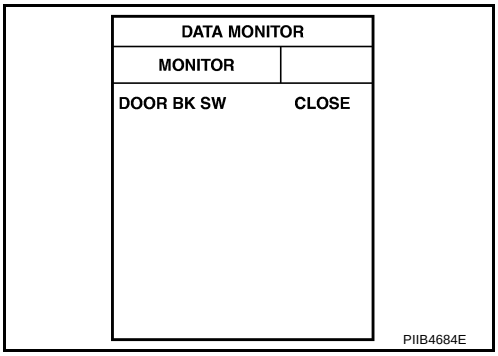
CHECK BACK DOOR SWITCH

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches (“DOOR BK SW”) in “DATA MONITOR” mode with CONSULT-II.

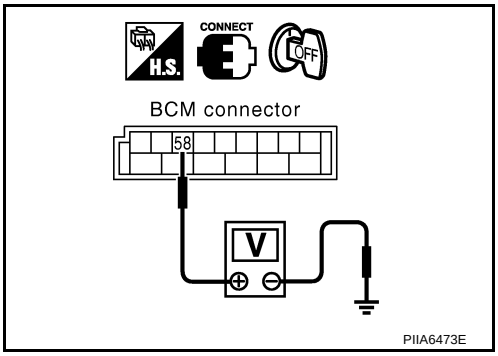
Monitor item	Condition
DOOR BK SW	Close → Open: CLOSE → OPEN



Without CONSULT-II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Back door condition	Voltage (V) (Approx.)
	(+)	(-)		
M36	58 (V/W)	Ground	Close ↓ Open	Battery voltage ↓ 0



OK or NG

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and back door lock assembly connector.
3. Check continuity between BCM connector M36 terminal 58 and back door lock assembly connector D111 terminal 3.

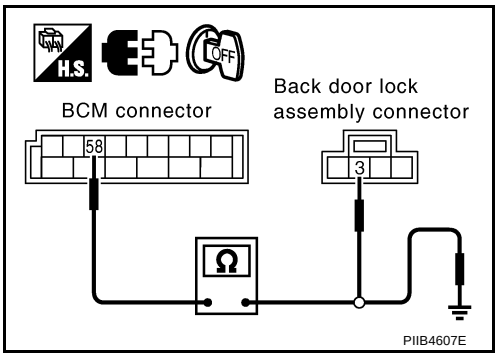
58 (V/W) – 3 (V/W) : Continuity should exist.

4. Check continuity between BCM connector M36 terminal 58 and ground.

58 (V/W) – Ground : Continuity should not exist.

OK or NG

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



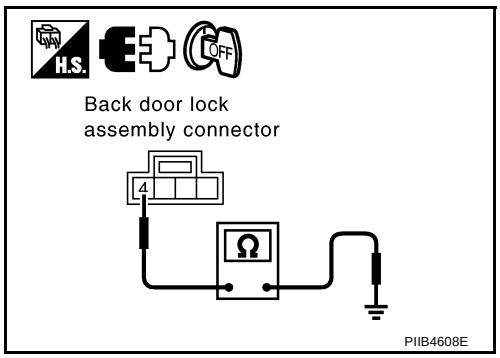
3. CHECK GROUND CIRCUIT

Check continuity between back door closure motor connector D111 terminal 4 and ground.

4 (B) – Ground : Continuity should exist.

OK or NG

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



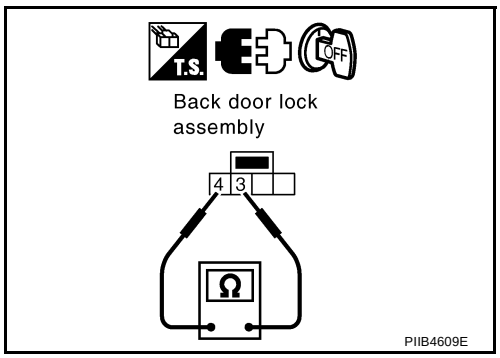
4. CHECK BACK DOOR SWITCH

Check continuity between back door lock assembly terminals 3 and 4.

Terminals		Back door condition	Continuity
3	4	Open	Yes
		Close	No

OK or NG

OK >> GO TO 5.
NG >> Replace back door lock assembly.



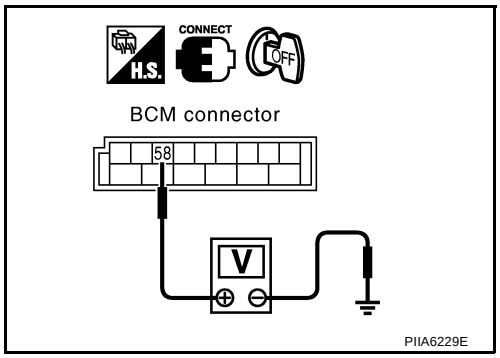
5. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector M36 terminal 58 and ground.

58 (V/W) – Ground : Battery voltage

OK or NG

OK >> Check condition of harness and connector.
NG >> Replace BCM.



Check Door Request Switch

NIS0017X

1. CHECK DOOR REQUEST SWITCH

With CONSULT-II

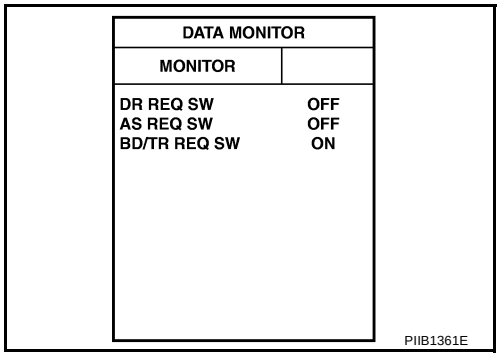
Display “DR REQ SW” (driver door), “AS REQ SW” (passenger door) and “BD/TR REQ SW” (back door) on DATA MONITOR screen, and check if ON-OFF display is linked to door request switch operation.

Press door request switch. : ON

Release door request switch. : OFF

OK or NG

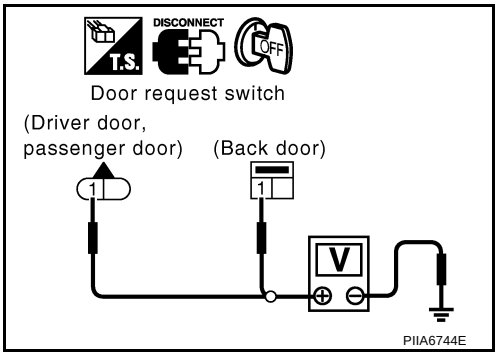
OK >> Door request switch is OK.
NG >> GO TO 2.



2. CHECK DOOR REQUEST SWITCH SIGNAL

1. Turn ignition knob LOCK position.
2. Disconnect door request switch connector.
3. Check voltage between door request switch connector D12 (driver door), D39 (passenger door), D108 (back door) terminal 1 and ground.

Driver	**1 (BW) - Ground**	**: Approx. 5V**
Passenger	**1 (P/L) - Ground**	**: Approx. 5V**
Back door	**1 (G/R) - Ground**	**: Approx. 5V**



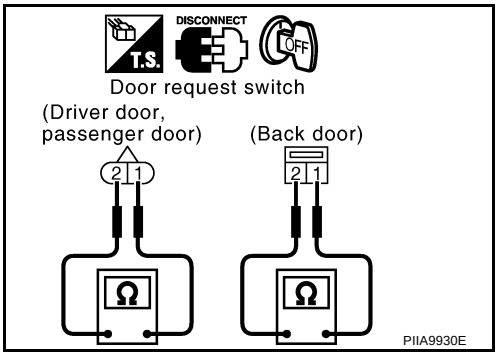
OK or NG

OK >> GO TO 3.
NG >> GO TO 5.

3. CHECK DOOR REQUEST SWITCH OPERATION

Check continuity between door request switch terminals 1 and 2.

Terminal		Condition	Continuity
1	2	Press door request switch	Yes
		Other than above	No



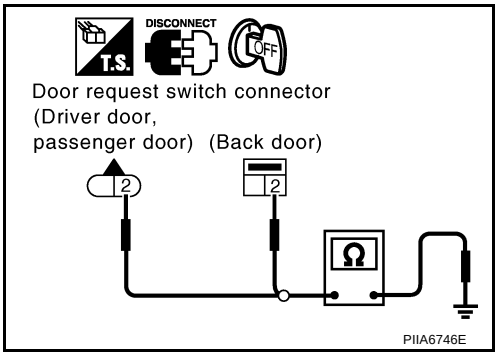
OK or NG

OK >> GO TO 4.
NG >> Replace door request switch.

4. CHECK DOOR REQUEST SWITCH GROUND CIRCUIT

Check continuity between door request switch connector D12 (driver side), D39 (passenger side), D108 (back door) terminal 2 (B) and ground.

2 (B) - Ground : Continuity should exist.



OK or NG

OK >> Check harness connection.
NG >> Repair or replace door request switch ground circuit.

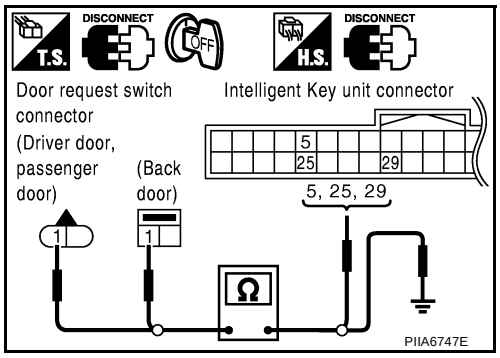
5. CHECK DOOR REQUEST SWITCH CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit connector M99 terminals 5 (driver door), 25 (passenger door), and 29 (back door) and door request switch connector D12 (driver door), D39 (passenger door), D108 (back door) terminal 1.

Driver 5 (B/W) - 1 (B/W) : Continuity should exist.
Passenger 25 (P/L) - 1 (P/L) : Continuity should exist.
Back door 29 (G/W) - 1 (G/R) : Continuity should exist.

3. Check continuity between door request switch connector D12 (driver door), D42 (passenger door), D113 (back door) terminal 1 and ground.

1 - Ground : Continuity should not exist.



OK or NG

OK >> Replace Intelligent Key unit.
NG >> Repair or replace harness between Intelligent Key unit and door request switch.

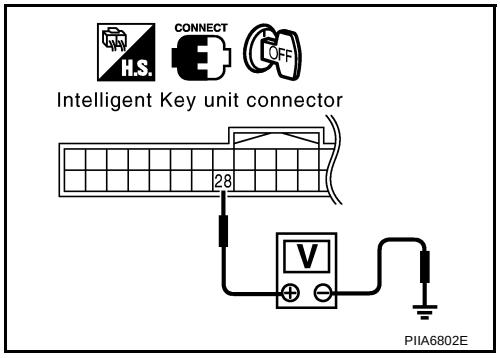
Check Unlock Sensor

NIS0017Y

1. CHECK UNLOCK SENSOR POWER SUPPLY

Check voltage between Intelligent Key unit connector and ground.

Connector	Terminals (Wire color) (+)	Terminals (Wire color) (-)	Condition	Voltage (V) (Approx.)
M99	28 (SB)	Ground	Driver side door lock is locked	5
			Driver side door lock is unlocked	0



OK or NG

OK >> Unlock sensor is OK.
NG >> GO TO 2.

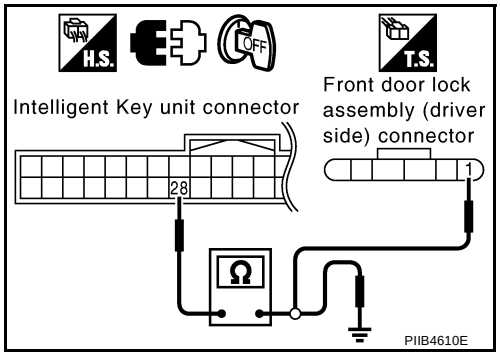
2. CHECK UNLOCK SENSOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit and front door lock assembly (driver side) connector.
3. Check continuity between Intelligent Key unit harness connector M99 terminal 28 and front door lock assembly (driver side) harness connector D10 terminal 1.

28 (SB) – 1 (G/Y) : Continuity should exist.

4. Check continuity between Intelligent Key unit harness connector M99 terminal 28 and ground.

28 (SB) – Ground : Continuity should not exist.



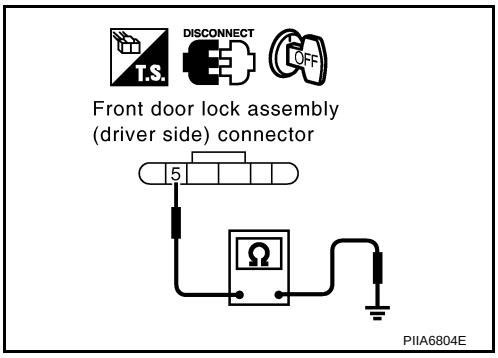
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and front door lock assembly (driver side).

3. CHECK UNLOCK SENSOR GROUND CIRCUIT

Check continuity between front door lock assembly (driver side) harness connector D10 terminal 5 and ground.

5 (B) – Ground : Continuity should exist.



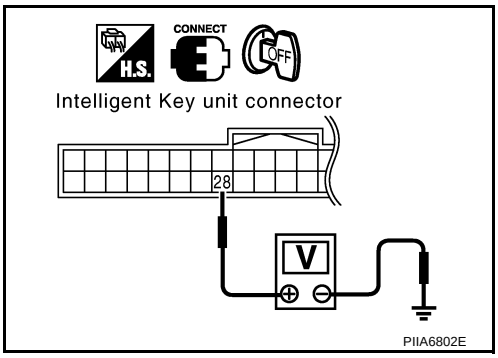
OK or NG

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

4. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

1. Connect Intelligent Key unit harness connector.
2. Check voltage between Intelligent Key unit harness connector M99 terminal 28 and ground.

28 (SB) – Ground : Approx. 5V



OK or NG

OK >> Replace front door lock assembly (driver side).
NG >> Replace Intelligent Key unit.

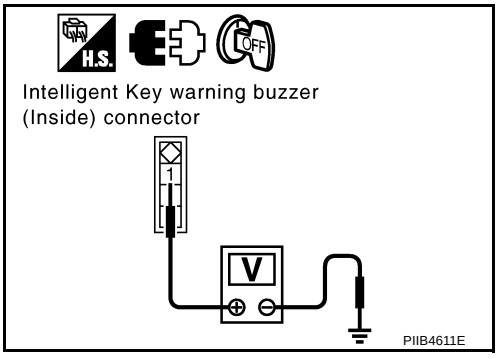
Check Intelligent Key Warning Buzzer (Inside)

NIS0017Z

1. CHECK INTELLIGENT KEY WARNING BUZZER (INSIDE) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key warning buzzer (inside) connector.
3. Check voltage between Intelligent Key warning buzzer (inside) harness connector M100 terminal 1 and ground.

1 (Y/R) - Ground : Battery voltage



OK or NG

OK >> GO TO 2.
NG >> Repair or replace Intelligent Key warning buzzer (inside) power supply circuit.

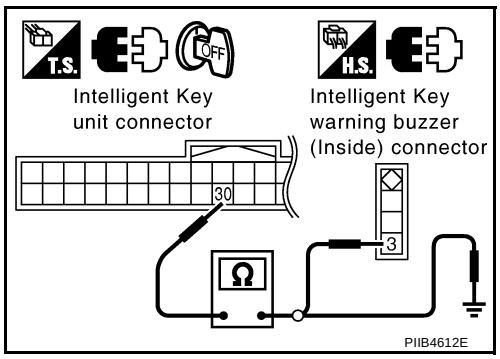
2. CHECK INTELLIGENT KEY WARNING BUZZER (INSIDE) CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector M99 terminal 30 and Intelligent Key warning buzzer (inside) harness connector M100 terminal 3.

30 (LG/B) - 3 (LG/B) : Continuity should exist.

3. Check continuity between Intelligent Key unit harness connector M99 terminal 30 and ground.

30 (LG/B) - Ground : Continuity should not exist.



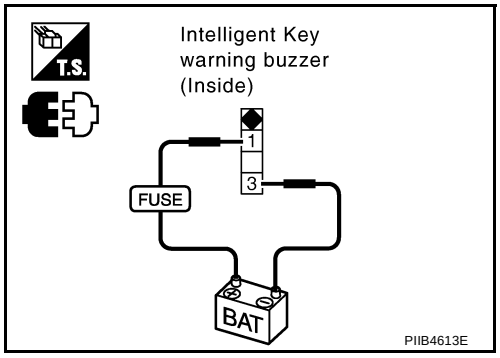
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key warning buzzer (inside) and Intelligent Key unit.

3. CHECK INTELLIGENT KEY WARNING BUZZER (INSIDE) OPERATION

Connect battery power supply to Intelligent Key warning buzzer (inside) harness connector M100 terminals 1 and 3, and check the operation.

1 (BAT+) - 3 (BAT-) : the buzzer sounds



OK or NG

OK >> Intelligent Key warning buzzer (inside) is OK.
NG >> Replace Intelligent Key warning buzzer (inside).

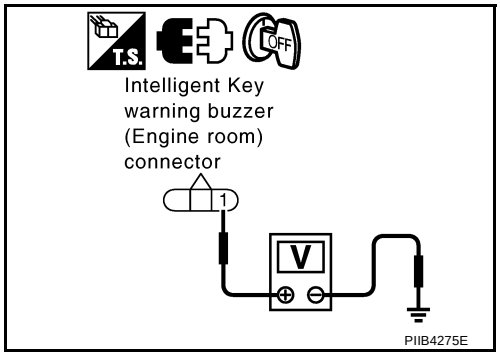
Check Intelligent Key Warning Buzzer (ENGINE ROOM)

NIS00180

1. CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key warning buzzer (engine room) connector.
3. Check voltage between Intelligent Key warning buzzer (engine room) harness connector E45 terminal 1 and ground.

1 (Y/R) - Ground : Battery voltage



OK or NG

OK >> GO TO 2.
NG >> Repair or replace Intelligent Key warning buzzer (engine room) power supply circuit.

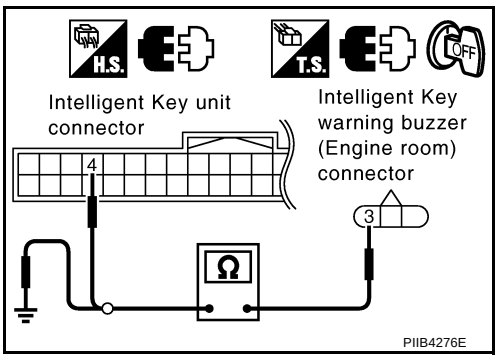
2. CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector M99 terminal 4 and Intelligent Key warning buzzer (engine room) harness connector E45 terminal 3.

4 (GR) - 3 (GR) : Continuity should exist.

3. Check continuity between Intelligent Key warning buzzer (engine room) harness connector E45 terminal 3 and ground.

3 (GR) - Ground : Continuity should not exist.



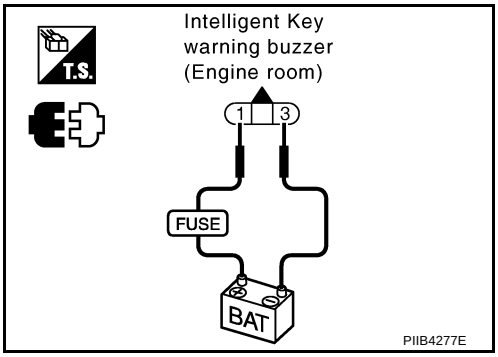
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key warning buzzer (engine room) and Intelligent Key unit.

3. CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) OPERATION

Connect battery power supply to Intelligent Key warning buzzer (engine room) harness connector E45 terminals 1 and 3, and check the operation.

1 (BAT+) - 3 (BAT-) : the buzzer sounds



OK or NG

OK >> Intelligent Key warning buzzer (engine room) is OK.
NG >> Replace Intelligent Key warning buzzer (engine room).

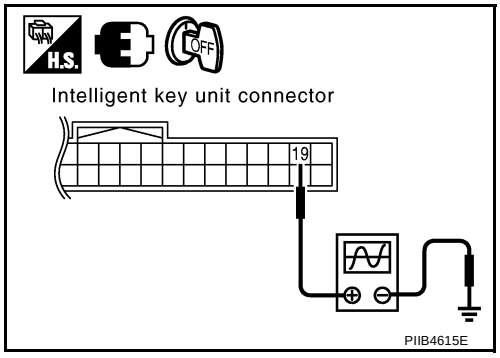
Check Outside Key Antenna

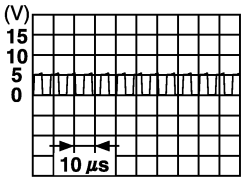
NIS00181

CHECK OUTSIDE KEY ANTENNA (DRIVER SIDE)

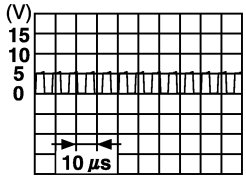
1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect outside key antenna (door mirror) connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.



Connector	Item	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Signal (Reference value)
M99	Driver side	19 (P)	Ground	Request switch is pushed	 SIIA1910J

4. Disconnect outside key antenna (rear door LH) connector.
5. Connect outside key antenna (door mirror) connector.
6. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Connector	Item	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Signal (Reference value)
M99	Driver side	19 (P)	Ground	Request switch is pushed	 SIIA1910J

OK or NG

OK >> Check condition of harness and connector.
NG >> GO TO 2.

2. CHECK OUTSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit connector and outside key antenna (door mirror) connector.
2. Check continuity between each outside key antenna harness connector and Intelligent Key unit connector.

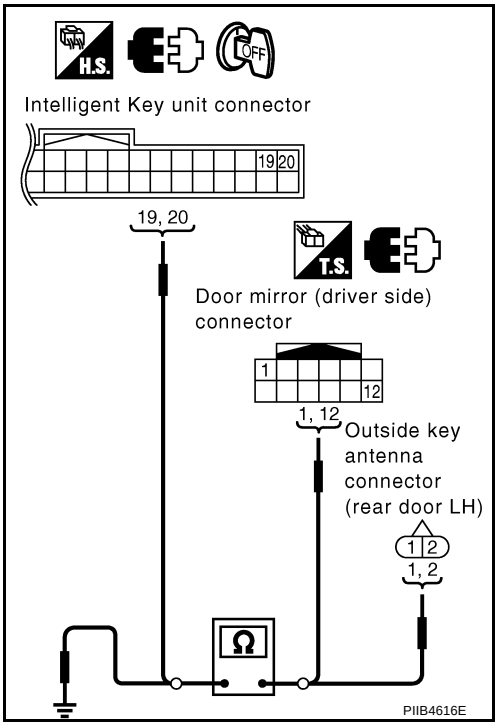
Item	Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	Continuity
Door mirror (driver side)	D2	1 (P)	M99	19 (P)	Yes
		12 (V)		20 (V)	
Rear door LH	D57	1 (P)		19 (P)	
		2 (V)		20 (V)	

3. Check continuity between each outside key antenna connector and ground.

Item	Connector	Terminal		Continuity
Door mirror (driver side)	D2	1 (P)	Ground	No
		12 (V)		
Rear door LH	D57	1 (P)		
		2 (V)		

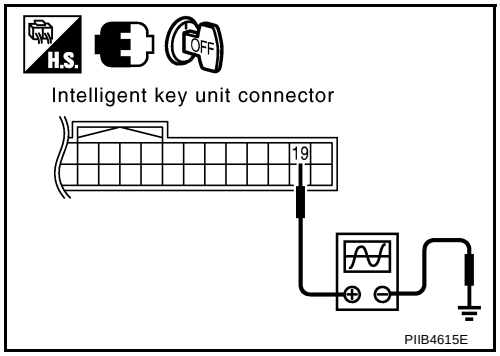
OK or NG

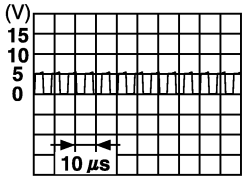
OK >> GO TO 3.
NG >> Replace harness between outside key antenna and Intelligent Key unit.



3. CHECK OUTSIDE KEY ANTENNA POWER SUPPLY

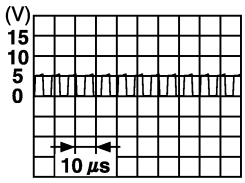
1. Replace outside key antenna (door mirror). (New antenna or other antenna)
2. Connect Intelligent Key unit connector and outside key antenna (door mirror) connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.



Connector	Item	Terminal (wire color)		Condition	Signal (Reference value)
		(+)	(-)		
M99	Driver side	19 (P)	Ground	Request switch is pushed	

SIIA1910J

4. Disconnect outside key antenna (door mirror) connector.
5. Replace outside key antenna (rear door LH). (New antenna or other antenna)
6. Connect outside key antenna (rear door LH) connector.
7. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Connector	Item	Terminal (wire color)		Condition	Signal (Reference value)
		(+)	(-)		
M99	Driver side	19 (P)	Ground	Request switch is pushed	

SIIA1910J

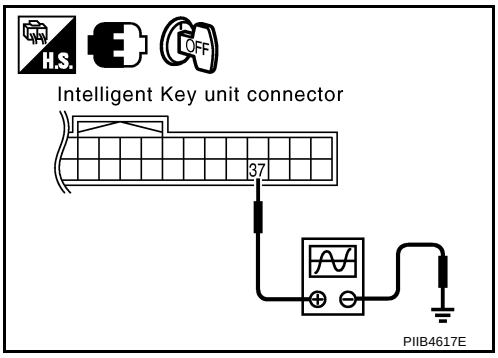
OK or NG

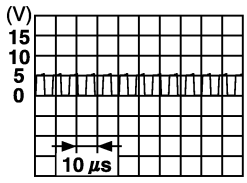
OK >> Check condition of harness and connector.
NG >> Replace malfunction outside key antenna.

CHECK OUTSIDE KEY ANTENNA (PASSENGER SIDE)

1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

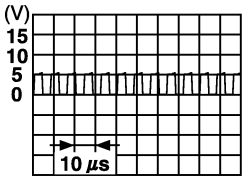
1. Turn ignition switch OFF.
2. Disconnect outside key antenna (door mirror) connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.



Connector	Item	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Signal (Reference value)
M99	Passenger side	37 (LG)	Ground	Request switch is pushed	

SIIA1910J

4. Disconnect outside key antenna (rear door RH) connector.
5. Connect outside key antenna (door mirror) connector.
6. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Connector	Item	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Signal (Reference value)
M99	Passenger side	37 (LG)	Ground	Request switch is pushed	

SIIA1910J

OK or NG

OK >> Check condition of harness and connector.
NG >> GO TO 2.

2. CHECK OUTSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit connector and outside key antenna (door mirror) connector.
2. Check continuity between each outside key antenna harness connector and Intelligent Key unit connector.

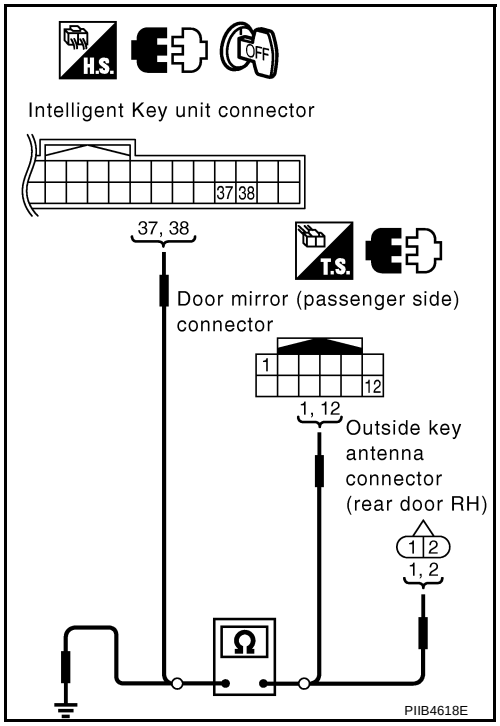
Item	Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	Continuity
Door mirror (passenger side)	D32	1 (LG)	M99	37 (LG)	Yes
		12 (B/Y)		38 (B/Y)	
Rear door RH	D77	1 (LG)		37 (LG)	
		2 (B/Y)		38 (B/Y)	

3. Check continuity between each outside key antenna connector and ground.

Item	Connector	Terminal		Continuity
Door mirror (passenger side)	D32	1 (LG)	Ground	No
		12 (B/Y)		
Rear door RH	D77	1 (LG)		
		2 (B/Y)		

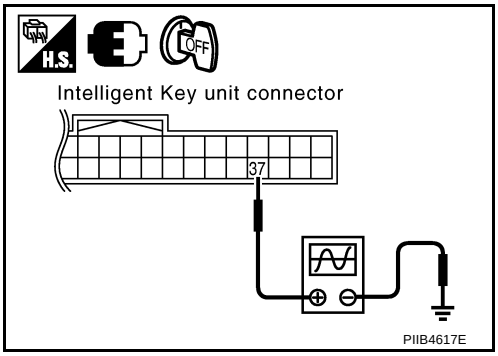
OK or NG

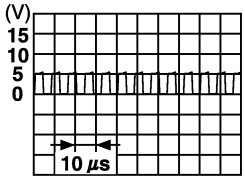
OK >> GO TO 3.
NG >> Replace harness between outside key antenna and Intelligent Key unit.



3. CHECK OUTSIDE KEY ANTENNA POWER SUPPLY

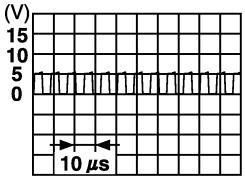
1. Replace outside key antenna (door mirror). (New antenna or other antenna)
2. Connect Intelligent Key unit connector and outside key antenna (door mirror) connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.



Connector	Item	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Signal (Reference value)
M99	Passenger side	37 (LG)	Ground	Request switch is pushed	

SIIA1910J

4. Disconnect outside key antenna (door mirror) connector.
5. Replace outside key antenna (rear door RH). (New antenna or other antenna)
6. Connect outside key antenna (rear door RH) connector.
7. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Connector	Item	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Signal (Reference value)
M99	Passenger side	37 (LG)	Ground	Request switch is pushed	

SIIA1910J

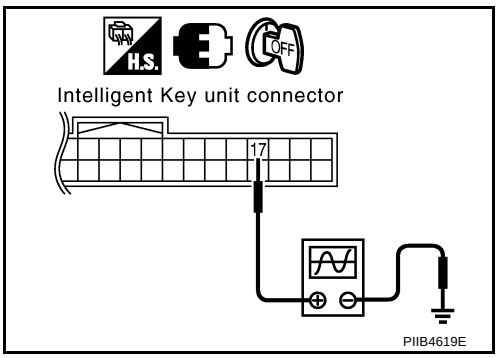
OK or NG

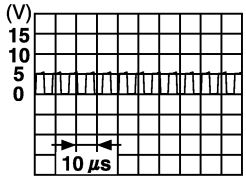
OK >> Check condition of harness and connector.
NG >> Replace malfunction outside key antenna.

CHECK OUTSIDE KEY ANTENNA (REAR BUMPER)

1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check signal between Intelligent Key unit connector and ground with oscilloscope.



Connector	Item	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Signal (Reference value)
M99	Rear bumper	17 (W/L)	Ground	Request switch is pushed	

SIIA1910J

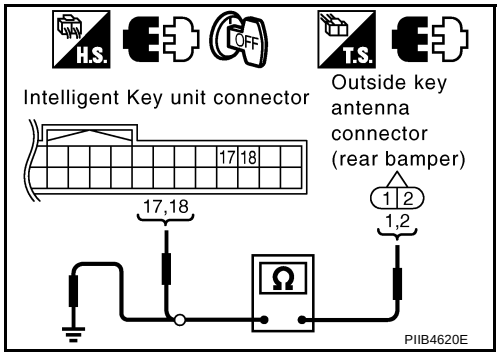
OK or NG

OK >> Check condition of harness and connector.
NG >> GO TO 2.

2. CHECK OUTSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit connector and outside key antenna (rear bumper) connector.
2. Check continuity between outside key antenna (rear bumper) connector and Intelligent Key unit connector.

Item	Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	Continuity
Rear bumper	B38	1 (W)	M99	17 (W)	Yes
		2 (B)		18 (B)	



3. Check continuity between outside key antenna harness connector and ground.

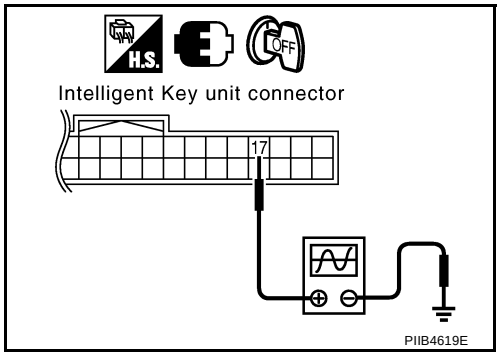
Item	Connector		Terminal	Continuity
Rear bumper	B38	1 (W)	Ground	No
		2 (B)		

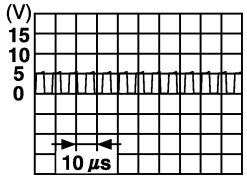
OK or NG

OK >> GO TO 3.
NG >> Replace harness between outside key antenna and Intelligent Key unit.

3. CHECK OUTSIDE KEY ANTENNA POWER SUPPLY

1. Replace outside key antenna (rear bumper). (New antenna or other antenna)
2. Connect Intelligent Key unit connector and outside key antenna connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.



Connector	Item	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Signal (Reference value)
M99	Rear bumper	17 (W)	Ground	Request switch is pushed	

SIIA1910J

OK or NG

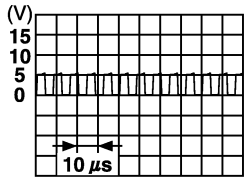
OK >> Replace outside key antenna (rear bumper).
NG >> Replace Intelligent Key unit.

Check Inside Key Antenna

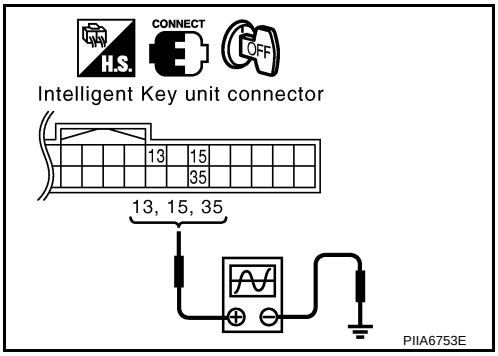
NIS00182

1. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL 1

1. Turn ignition switch OFF.
2. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Connector	Item	Terminal (Wire color) (+)	Terminal (Wire color) (–)	Condition	Signal (V) (Reference value)
M99	Luggage room	13 (Y)	Ground	Ignition switch is pushed.	
	Console	15 (L)			
	Dashboard	35 (O)			

SIIA1910J



PIIA6753E

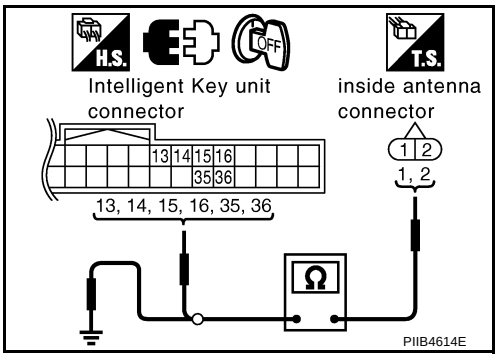
OK or NG

OK >> Inside key antenna is OK.
NG >> GO TO 2.

2. CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna connectors.
2. Check continuity between inside key antenna harness connector M102 (Console), M109 (dashboard), B122 (luggage room) terminals 1, 2 and Intelligent Key unit harness connector M99 terminals 13, 14, 15, 16, 35 and 36.

Item	Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	Continuity
Luggage room	B122	1 (W)	M99	13 (Y)	Yes
		2 (B)		14 (BR)	
Console	M102	1 (B/W)		15 (L)	
		2 (L)		16 (B/W)	
Dashboard	M109	1 (O)		35 (O)	
		2 (B/P)		36 (B/P)	



PIIB4614E

3. Check continuity between inside key antenna harness connector M102 (Console), M109 (dash board), B122 (luggage room) terminals 1, 2 and ground.

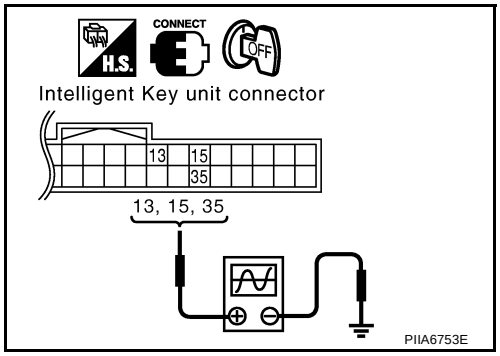
Item	Connector	Terminal (Wire color)		Continuity
Luggage room	B122	1 (W)	Ground	No
		2 (B)		
Console	M102	1 (B/W)		
		2 (L)		
Dashboard	M109	1 (O)		
		2 (B/P)		

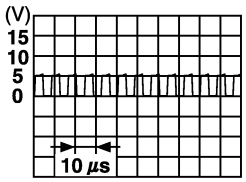
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between inside key antenna and Intelligent Key unit.

3. CHECK INSIDE KEY ANTENNA POWER SIGNAL 2

1. Replace inside key antenna. (New antenna or other antenna)
2. Connect Intelligent key unit connector.
3. Check signal between Intelligent Key unit connector and ground with oscilloscope.



Connector	Item	Terminal (Wire color) (+)	Terminal (Wire color) (–)	Condition	Signal (V) (Reference value)
M99	Luggage room	13 (Y)	Ground	Ignition switch is pushed.	
	Console	15 (L)			
	Dash-board	35 (O)			

SIIA1910J

OK or NG

OK >> Replace inside key antenna.
NG >> Replace Intelligent key unit.

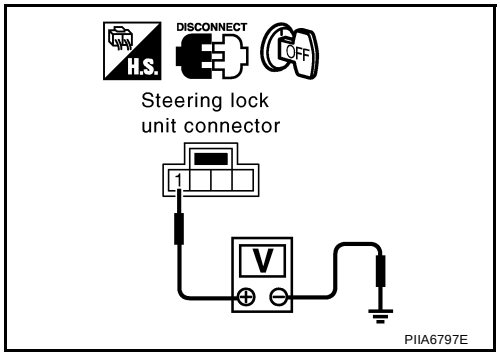
Check Steering Lock Unit

NIS00183

1. CHECK STEERING LOCK UNIT POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect steering lock unit connector.
3. Check voltage between steering lock unit harness connector M101 terminal 1 and ground.

1 (G/Y) - Ground : Battery voltage



OK or NG

OK >> GO TO 2.
NG >> Repair or replace steering lock unit power supply circuit.

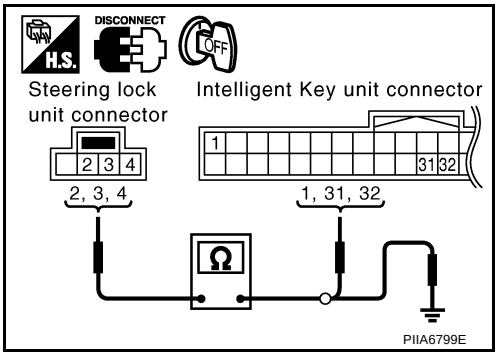
2. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector M99 terminals 1, 31, 32 and steering lock unit connector M101 terminals 2, 3, 4.

1 (L/Y) - 2 (L/Y) : Continuity should exist.
31 (G/R) - 4 (G/R) : Continuity should exist.
32 (L/O) - 3 (L/O) : Continuity should exist.

3. Check continuity between steering lock unit harness connector M99 terminals 2, 3, 4 and ground.

2 (L/Y) - Ground : Continuity should not exist.
3 (L/O) - Ground : Continuity should not exist.
4 (G/R) - Ground : Continuity should not exist.



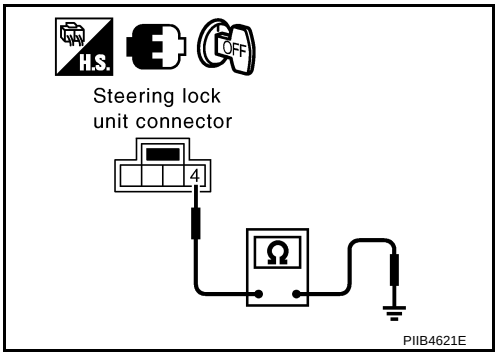
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between steering lock unit and Intelligent Key unit.

3. CHECK STEERING LOCK UNIT GROUND CIRCUIT

1. Connect intelligent key unit and steering lock unit connectors.
2. Check continuity between steering lock unit harness connector M101 terminal 4 and ground.

4 (G/R) - Ground : Continuity should exist.



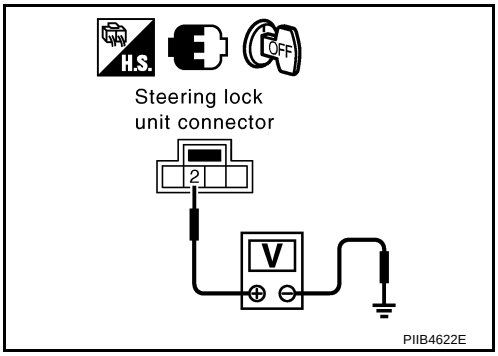
OK or NG

OK >> GO TO 4.
NG >> Replace intelligent key unit.

4. CHECK STEERING LOCK COMMUNICATION CIRCUIT

Check voltage between steering lock unit connector M101 terminal 2 and ground.

2 (L/Y) - Ground : Approx. 5V

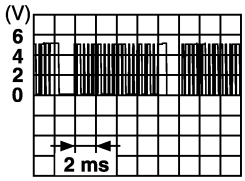


OK or NG

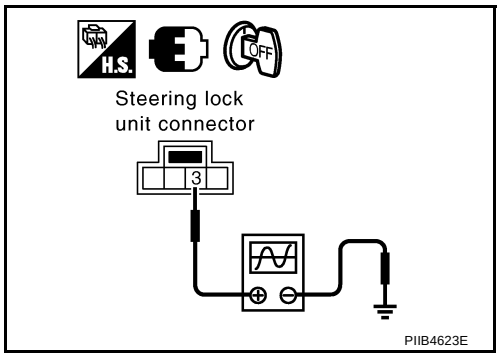
OK >> GO TO 5.
NG >> Replace intelligent key unit.

5. CHECK STEERING LOCK UNIT SIGNAL

Immediately after pushing ignition switch, use an oscilloscope to check signal between steering lock unit connector M101 terminal 3 and ground.

Connector	Terminal (Wire color) (+)	Terminal (Wire color) (–)	Condition	Signal (V) (Reference value)
M101	3 (L/O)	Ground	Ignition switch is pushed	

SIIA1911J



PIIB4623E

OK or NG

OK >> Replace steering lock unit.
NG >> Replace Intelligent Key unit.

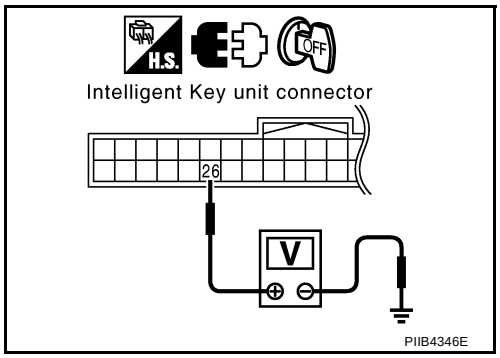
Check Stop Lamp Switch

NIS00184

1. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector M99 terminal 26 and ground.

Connector	Terminal (wire color) (+)	Terminal (wire color) (-)	Condition	Voltage (V) (Approx.)
M99	26 (R/G)	Ground	Brake pedal depressed	Battery voltage
			Brake pedal released	0



PIIB4346E

OK or NG

OK >> Stop lamp switch is OK.
NG >> GO TO 2.

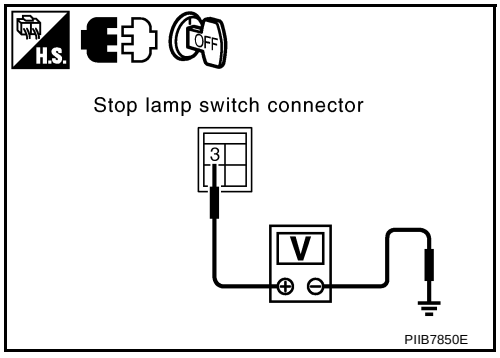
2. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

Check voltage between stop lamp switch harness connector E116 terminal 3 and ground.

3 (R/Y) - Ground : Battery voltage

OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between stop lamp switch power supply circuit and fuse.

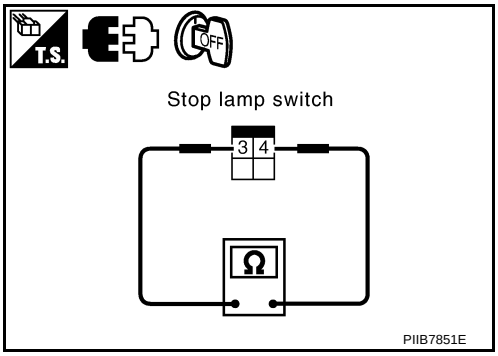


PIIB7850E

3. CHECK STOP LAMP SWITCH OPERATION

Check continuity between stop lamp switch connector E116 terminal 3 and 4.

Connector	Terminal		Condition	Continuity
E116	3	4	Brake pedal depressed	Yes
			Brake pedal not depressed	No



OK or NG

OK >> GO TO 4.
NG >> Replace stop lamp switch.

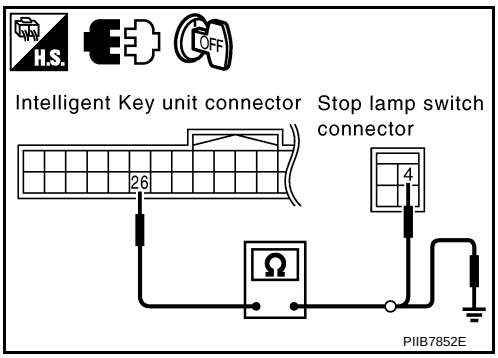
4. CHECK STOP LAMP SWITCH CIRCUIT

1. Check continuity between Intelligent Key unit harness connector M99 terminal 26 and stop lamp switch harness connector E116 terminal 4.

26 (R/G) - 4 (R/G) : Continuity should exist.

2. Check continuity between Intelligent Key unit harness connector M99 terminal 26 and ground.

26 (R/G) - Ground : Continuity should not exist.



OK or NG

OK >> Check condition of harness and connector.
NG >> Repair or replace harness.

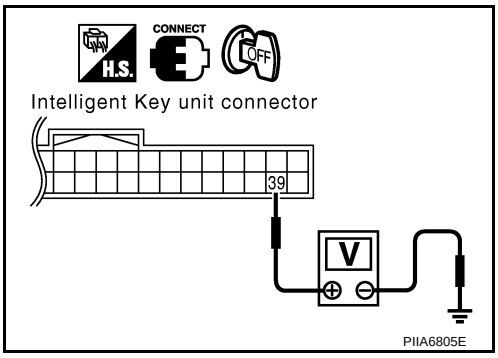
Check Park Position Switch

NIS00185

1. CHECK PARK POSITION SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit harness connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M99	39 (L/W)	Ground	Selector lever is in “P” position	0
			Other than above	Battery voltage



OK or NG

OK >> Park position switch circuit is OK.
NG >> GO TO 2.

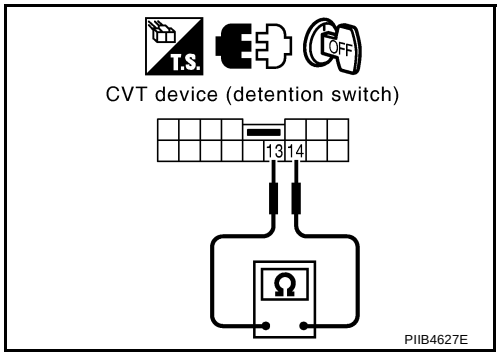
2. CHECK PARK POSITION SWITCH

1. Disconnect CVT device (detention switch) connector.
2. Check continuity between CVT device (detention switch) terminals 13 and 14.

Connector	Terminal		Condition	Continuity
M57	13	14	Selector lever is in “P” position	No
			Other than above	Yes

OK or NG

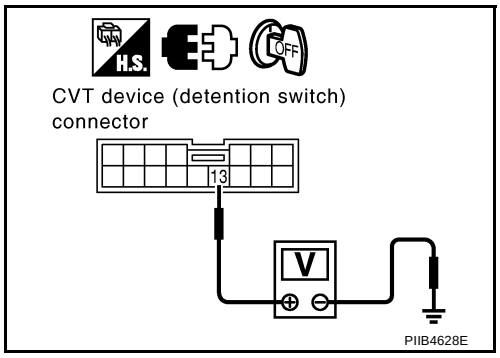
OK >> GO TO 3.
NG >> Check CVT shift lock system. Refer to CVT-203, "CVT SHIFT LOCK SYSTEM" .



3. CHECK PARK POSITION SWITCH POWER SUPPLY CIRCUIT

Check continuity between CVT device (detention switch) harness connector M57 terminal 13 and ground.

13 (R/Y) – Ground : Battery voltage



OK or NG

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

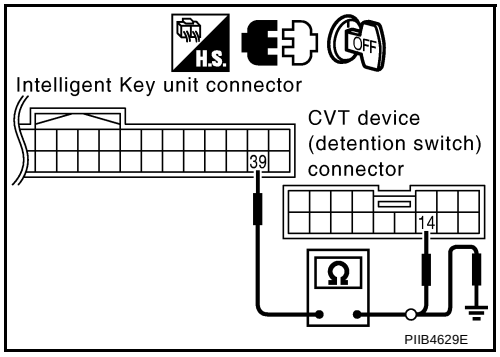
4. CHECK PARK POSITION SWITCH CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector M99 terminal 39 and CVT device (detention switch) harness connector M57 terminal 14.

39 (L/W) – 14 (L/W) : Continuity should exist.

3. Check continuity between Intelligent Key unit harness connector M75 terminals 39 and ground.

39 (L/W) – Ground : Continuity should not exist.



OK or NG

OK >> Replace Intelligent Key unit.
NG >> Repair or replace harness.

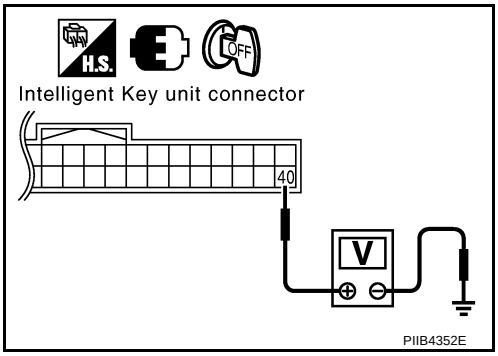
Check Select Unlock Relay

NIS00186

1. CHECK PASSENGER SIDE SELECT UNLOCK RELAY INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit harness connector and ground.

Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
M99	40 (L/R)	Ground	Press door request switch (passenger side) once	0
			Other than above	Battery voltage



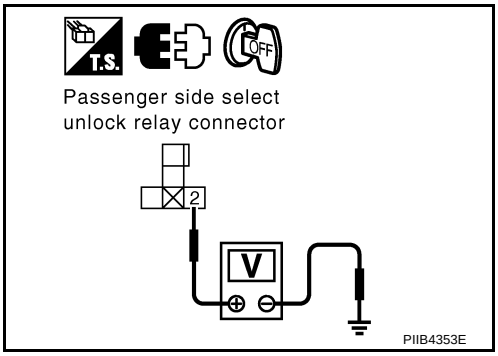
OK or NG

OK >> Passenger side select unlock relay circuit is OK.
NG >> GO TO 2.

2. CHECK PASSENGER SIDE SELECT UNLOCK RELAY POWER SUPPLY CIRCUIT

1. Disconnect passenger side select unlock relay.
2. Check voltage between passenger side select unlock harness connector M123 terminal 2 and ground.

2 (Y/R) – Ground : Battery voltage.



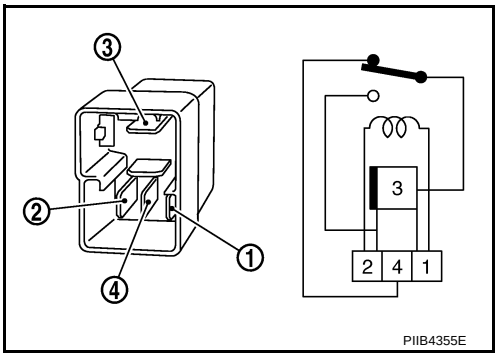
OK or NG

OK >> GO TO 3.
NG >> Repair or replace passenger side select unlock relay power circuit.

3. CHECK PASSENGER SIDE SELECT UNLOCK RELAY

Check continuity between passenger side select unlock relay terminals 3 and 4.

Connector	Terminals		Condition	Continuity
M123	3	4	12V direct current supply between terminals 1 and 2	Yes
			Other than above	No



OK or NG

OK >> GO TO 4
NG >> Replace passenger side select unlock relay.

4. CHECK PASSENGER SIDE SELECT UNLOCK RELAY CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector M99 terminal 40 and passenger side select unlock relay harness connector M123 terminal 1.

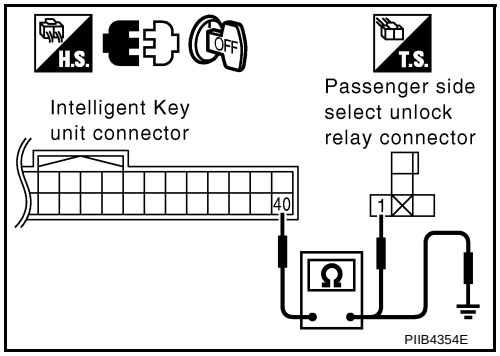
40 (L/R) – 1 (L/R) : Continuity should exist.

3. Check continuity between Intelligent Key unit harness connector M99 terminal 40 and ground.

40 (L/R) – Ground : Continuity should not exist.

OK or NG

OK >> Check condition of harness and connector.
NG >> Repair or replace harness between Intelligent Key unit and passenger side select unlock relay.



NIS00187

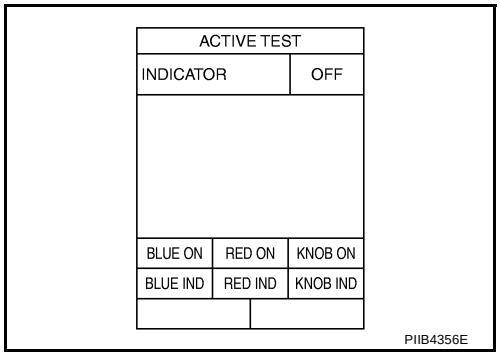
Check “P-SHIFT” Warning Lamp

1. CHECK WARNING LAMP OPERATION

With CONSULT-II

- Check “INDICATOR” in “ACTIVE TEST” mode with CONSULT-II.
- Select “KNOB ON”.

“P-SHIFT” warning lamp should illuminate.



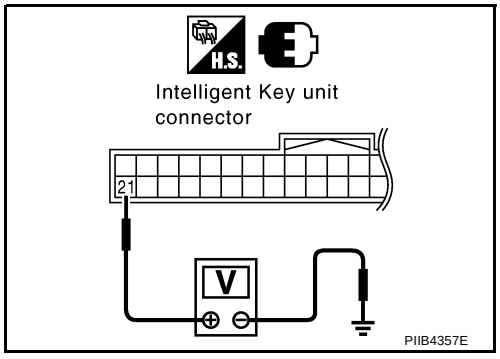
Without CONSULT-II

Check voltage between Intelligent Key unit harness connector M99 terminal 21 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M99	21 (BR/Y)	Ground	Within 2 seconds after ignition knob switch is turned ON	0
			Other than above	Battery voltage

OK or NG

OK >> INSPECTION END
NG >> GO TO 2.



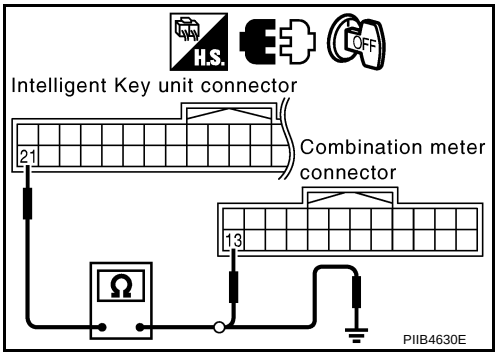
2. CHECK COMBINATION METER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector and combination meter connector.
3. Check continuity Intelligent Key unit harness connector M99 terminal 21 and combination meter harness connector M25 terminal 13.

21 (BR/Y) - 13 (BR/Y) : Continuity should exist.

4. Check continuity Intelligent Key unit harness connector M99 terminal 21 and ground.

21(BR/Y) - Ground : Continuity should not exist.



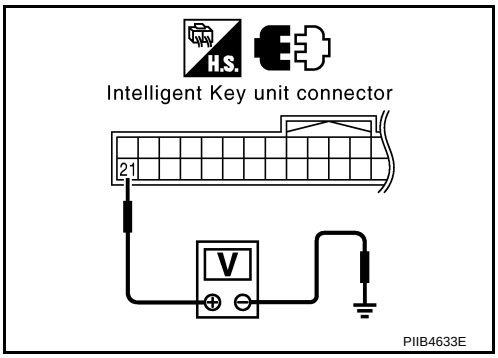
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and combination meter.

3. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Connect combination meter connector.
2. Check voltage between Intelligent Key unit harness connector M99 terminal 21 and ground.

21 (BR/Y) - Ground : Batter voltage



OK or NG

OK >> Check condition of harness and connector.
NG >> Check combination meter. Refer to DI-4, "COMBINATION METERS" .

Check “KEY” Warning Lamp (RED)

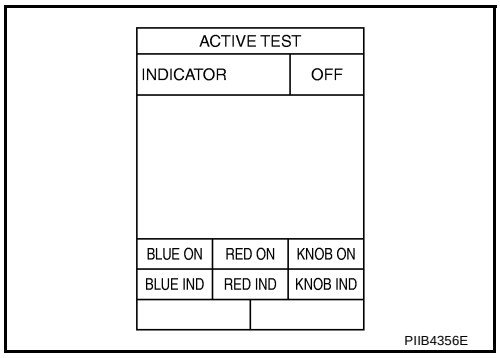
NIS00188

1. CHECK WARNING LAMP OPERATION

With CONSULT-II

- Check “INDICATOR” in “ACTIVE TEST” mode with CONSULT-II.
- Select “RED ON”.

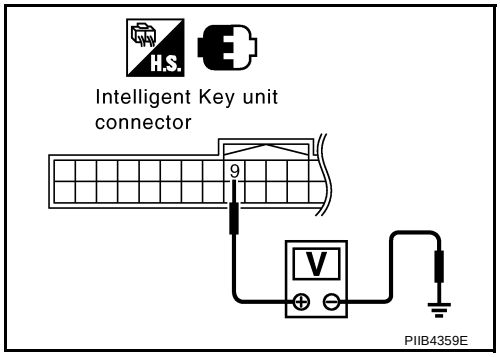
“KEY” warning lamp (red) should illuminate.



Without CONSULT-II

Check voltage between Intelligent Key unit harness connector M99 terminal 9 and ground.

Connector	Terminal (Wire cooler) (+)	Terminal (Wire cooler) (-)	Condition	Voltage (V) (Approx.)
M99	9 (G/B)	Ground	When Intelligent Key is outside vehicle, press ignition switch.	0
			Ignition switch OFF	Battery voltage



OK or NG

OK >> INSPECTION END
NG >> GO TO 2.

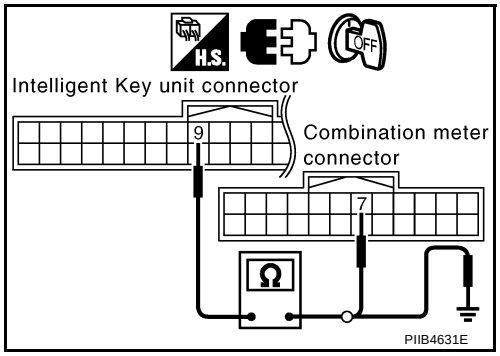
2. CHECK COMBINATION METER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector and combination meter connector.
3. Check continuity Intelligent Key unit harness connector M99 terminal 9 and combination meter harness connector M25 terminal 7.

   9 (G/B) - 7 (G/B) : Continuity should exist.

4. Check continuity Intelligent Key unit harness connector M99 terminal 9 and ground.

   9 (G/B) - Ground : Continuity should not exist.



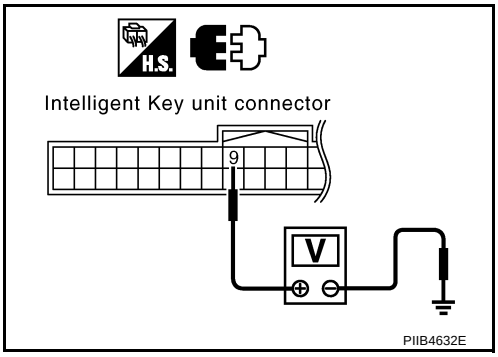
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and combination meter.

3. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Connect combination meter connector.
2. Check voltage between Intelligent Key unit harness connector M99 terminal 9 and ground.

9 (G/B) - Ground : Batter voltage



OK or NG

OK >> Check condition of harness and connector.
NG >> Check combination meter. Refer to DI-4, "COMBINATION METERS" .

Check “KEY” Warning Lamp (GREEN)

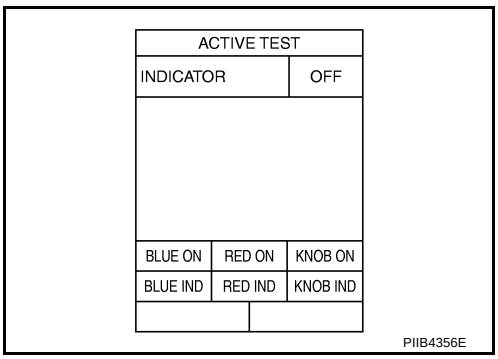
NIS00189

1. CHECK WARNING LAMP OPERATION

With CONSULT-II

- Check “INDICATOR” in “ACTIVE TEST” mode with CONSULT-II.
- Select “BLUE ON”.

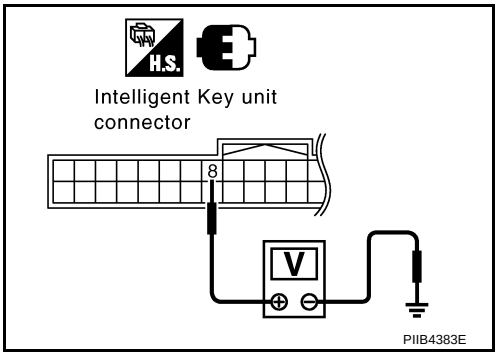
“KEY”warning lamp (green) should illuminate.



Without CONSULT-II

Check voltage between Intelligent Key unit harness connector M99 terminal 8 and ground.

Connector	Terminal (Wire cooler)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M99	8 (L/W)	Ground	When Intelligent Key is inside vehicle, press ignition switch.	0
			Ignition switch OFF	Battery voltage



OK or NG

OK >> INSPECTION END
NG >> GO TO 2.

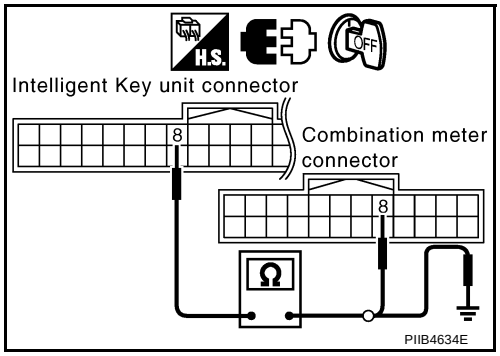
2. CHECK COMBINATION METER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector and combination meter connector.
3. Check continuity Intelligent Key unit harness connector M99 terminal 8 and combination meter harness connector M25 terminal 8.

8 (L/W) - 8 (L/W) : Continuity should exist.

4. Check continuity Intelligent Key unit harness connector M99 terminal 8 and ground.

8 (L/W) - Ground : Continuity should not exist.



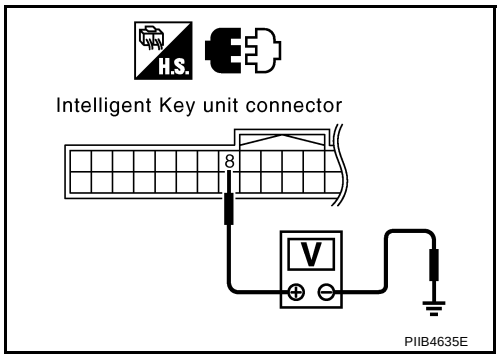
OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between Intelligent Key unit and combination meter.

3. CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

1. Connect combination meter connector.
2. Check voltage between Intelligent Key unit harness connector M99 terminal 8 and ground.

8 (L/W) - Ground : Batter voltage



OK or NG

OK >> Check condition of harness and connector.
NG >> Check combination meter. Refer to DI-4, "COMBINATION METERS" .

Check Hazard Function

NIS0018A

1. CHECK HAZARD WARNING LAMP

Does hazard warning lamp flash with hazard switch?

YES or NO

YES >> Hazard warning lamp circuit is OK.
NO >> Check hazard circuit. Refer to LT-117, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

Check Horn Function

NIS0018B

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 BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

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-58, "HORN" .

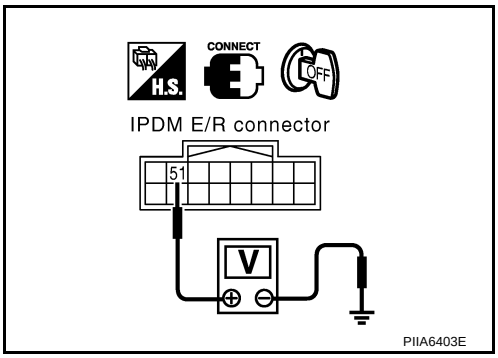
Check IPDM E/R Operation

NIS0018C

1. CHECK IPDM E/R INPUT SIGNAL

Check voltage between IPDM E/R harness connector E9 terminal 51 and ground.

51 (G/O) – Ground : Battery voltage



OK or NG

OK >> Replace IPDM E/R.
NG >> GO TO 2.

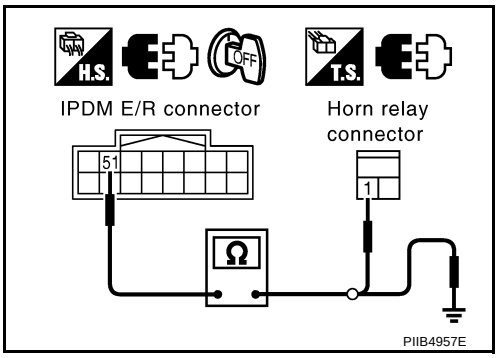
2. CHECK IPDM E/R CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay connector.
3. Check continuity between IPDM E/R harness connector E9 terminal 51 and horn relay harness connector E11 terminal 1.

51 (G/O) – 1 (G/O) : Continuity should exist.

4. Check continuity between IPDM E/R harness connector E9 terminal 51 and ground.

51 (G/O) – Ground : Continuity should not exist.



OK or NG

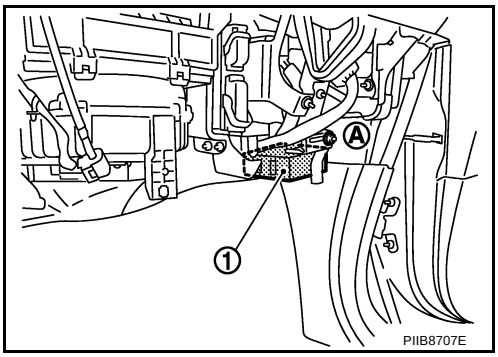
OK >> Check harness connection.
NG >> Repair or replace harness.

Removal and Installation of Intelligent Key Unit

NIS0018D

REMOVAL

1. Remove the instrument passenger lower panel assembly. Refer to IP-11, "Removal and Installation" .
2. Disconnect Intelligent Key unit connector, remove nut (A) and Intelligent Key unit (1).



INSTALLATION

Installation is the reverse order of removal.

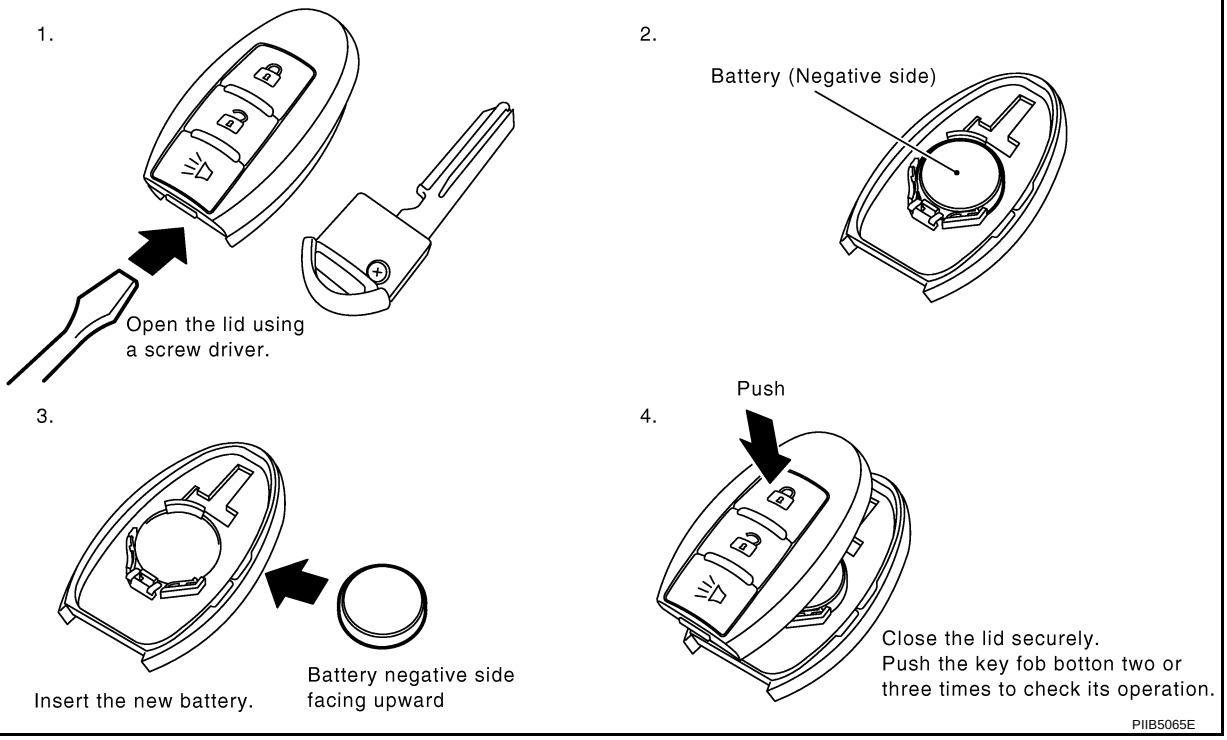
Intelligent Key Battery Replacement

NIS0018E

SEC.998

NOTE:

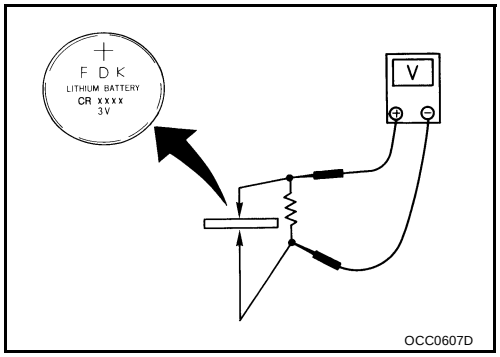
- Be careful not to touch the circuit board or battery terminal.
- The keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.



INTELLIGENT KEY BATTERY INSPECTION

Check by connecting a resistance (approximately 300Ω) so that the current value becomes about 10 mA.

Standard : Approx. 2.5 - 3.0V

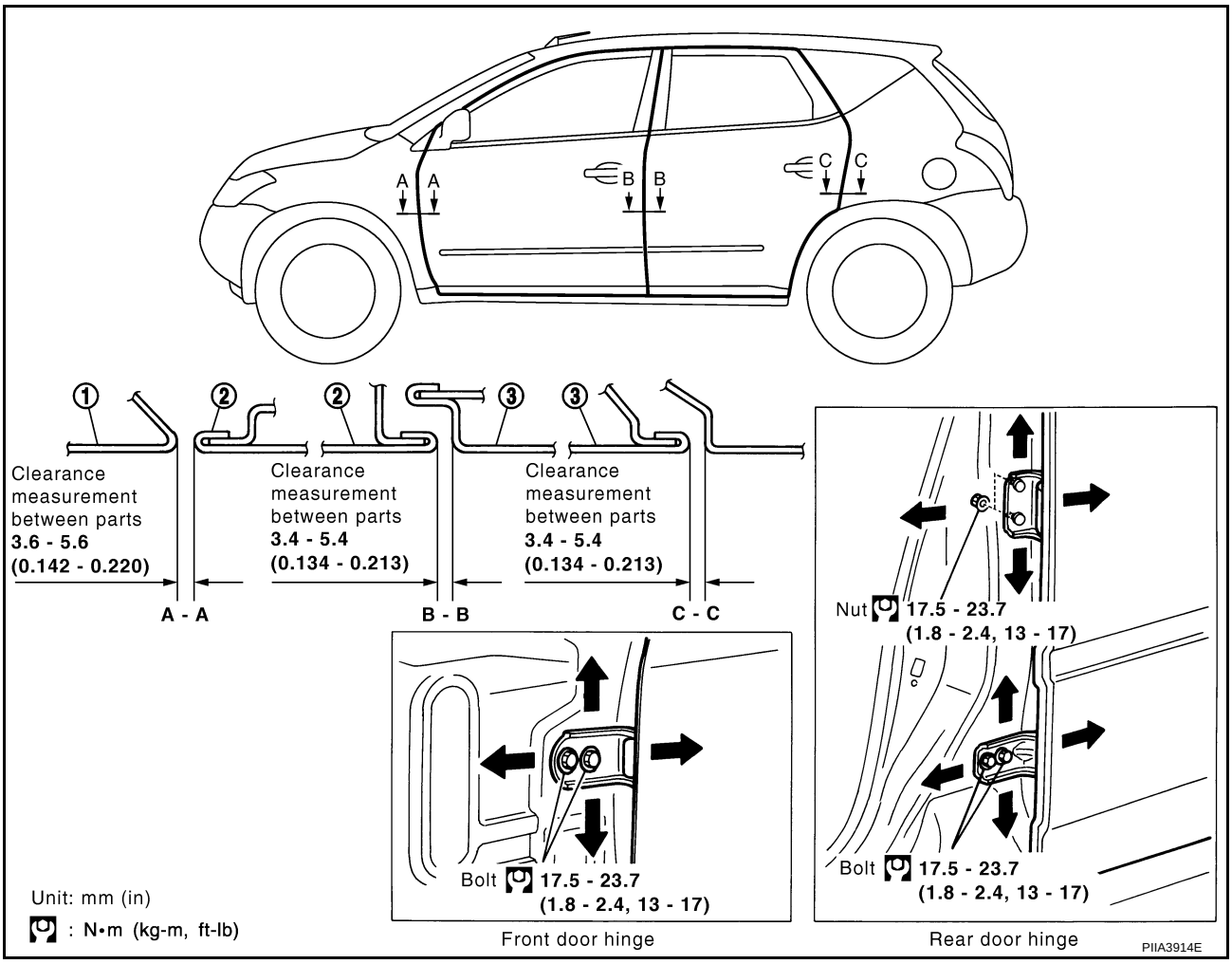


DOOR

PFP:80100

Fitting Adjustment

NIS0018F



1. Front fender
2. Front door outer
3. Rear door outer

FRONT DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Loosen the hinge mounting bolts. Raise the front door at rear end to adjust.

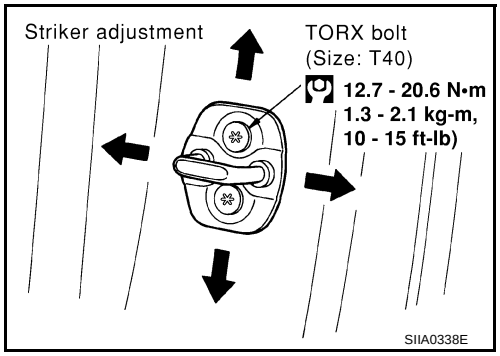
REAR DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Remove the center pillar upper garnish and center pillar lower garnish. Refer to EI-32, "BODY SIDE TRIM" .
2. Accessing from inside the vehicle, loosen the mounting nuts. Open the rear door, and raise the rear door at rear end to adjust.

STRIKER ADJUSTMENT

Adjust the striker so that it becomes parallel with the lock insertion direction.



Removal and Installation of Front Door

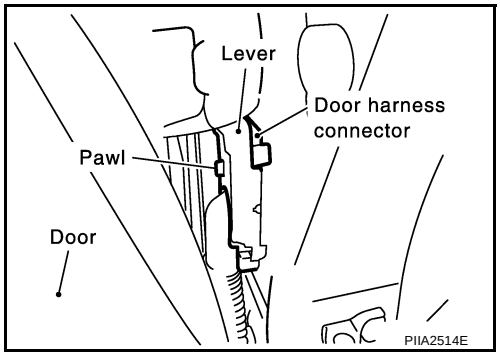
NIS0018G

CAUTION:

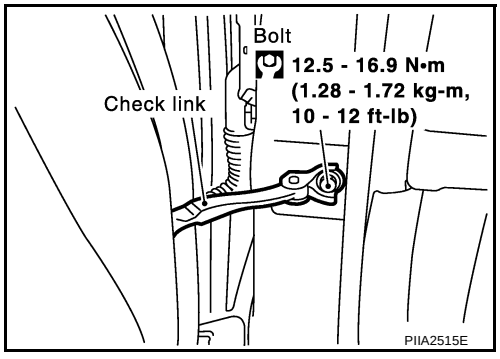
- **When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.**
- **Operate with two workers, because of its heavy weight.**
- **When removing and installing front door assembly, be sure to carry out the fitting adjustment Refer to BL-169, "Fitting Adjustment" .**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **After installing, check operation.**

REMOVAL

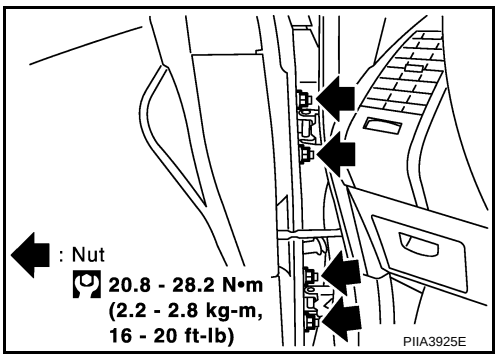
1. Pull the lever and remove the front door harness connector while removing tabs of door harness connector.



2. Remove the mounting bolts of the check link on the vehicle.



3. Remove the door-side hinge mounting nuts, and remove the door assembly.



INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Rear Door

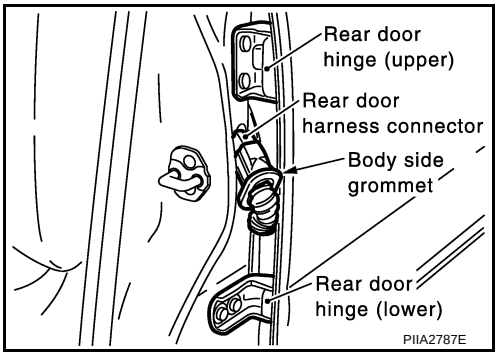
NIS0018H

CAUTION:

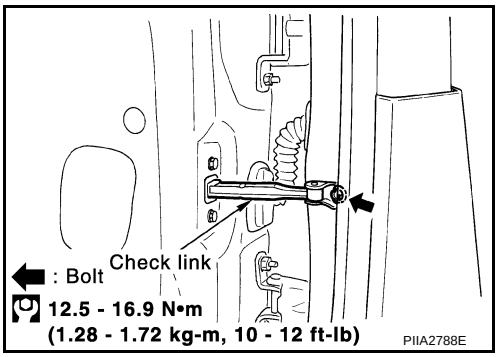
- **When removing and installing the rear door assembly, support the door with a jack and cloth to protect the door and body.**
- **Operate with two workers, because of its heavy weight.**
- **When removing and installing rear door assembly, be sure to carry out the fitting adjustment Refer to BL-169, "Fitting Adjustment" .**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **After installing, check operation.**

REMOVEL

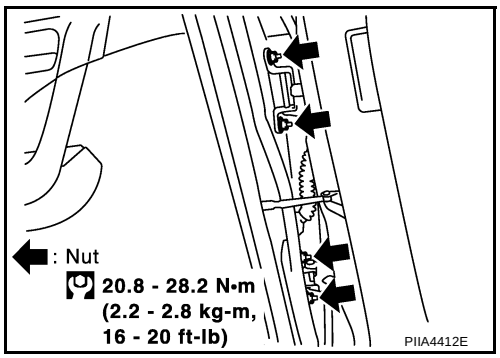
1. Pull out grommet, and detach rear door harness connector.



2. Remove the mounting bolts of the check link on the vehicle.



3. Remove the door-side hinge mounting nuts, and remove the door assembly.

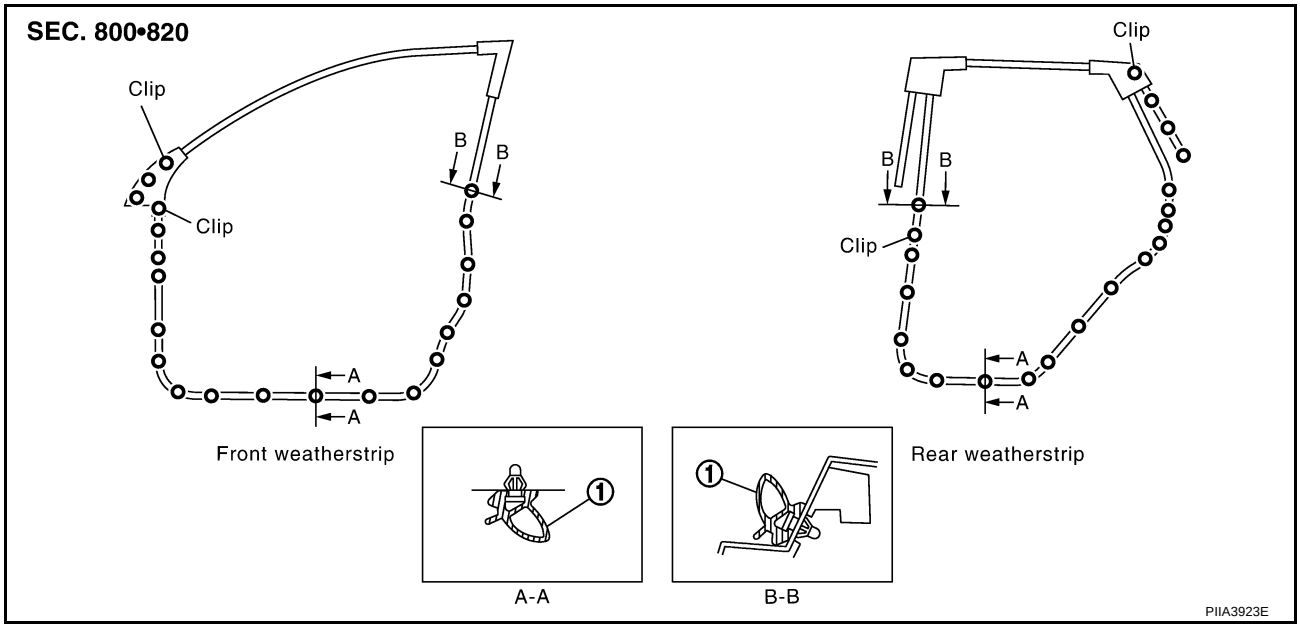


INSTALLATION

Install in the reverse order of assembly.

Door Weatherstrip

NIS0018I



1. Weatherstrip

REMOVAL

1. Remove the mounting bolts of the check link on the vehicle. Refer to BL-170, "Removal and Installation of Front Door" or BL-171, "Removal and Installation of Rear Door" .
2. Remove the weatherstrip clips and remove weatherstrip.

INSTALLATION

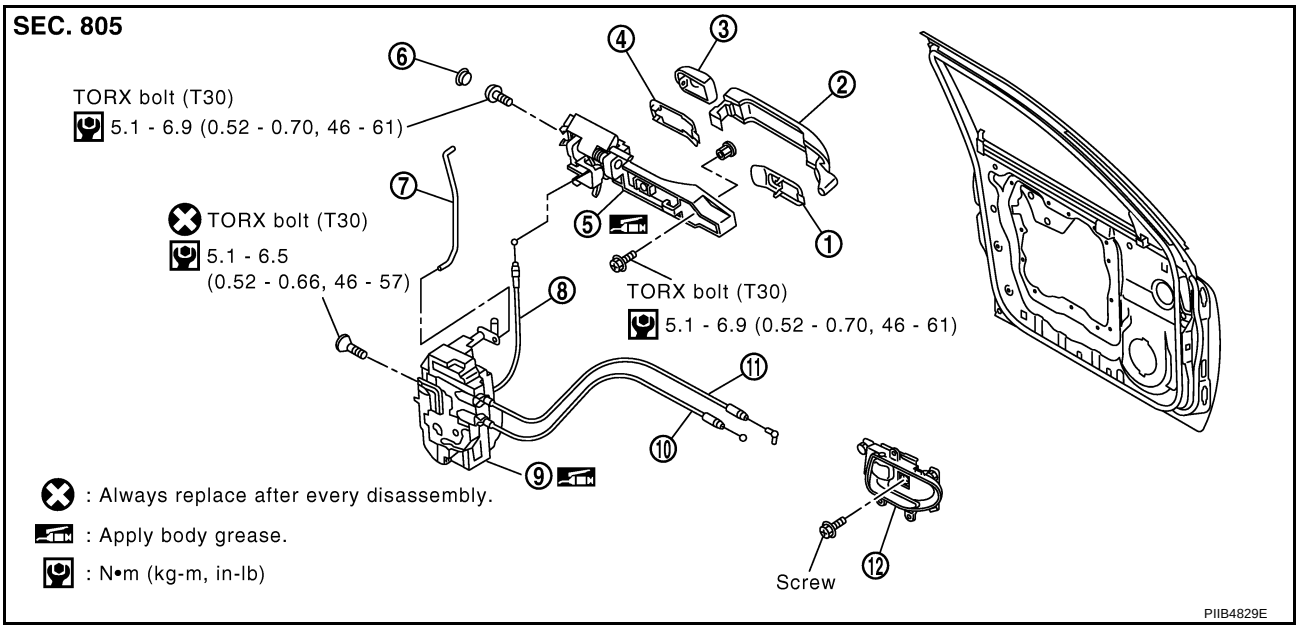
Install in the reverse order of assembly.

FRONT DOOR LOCK

PFP:80502

Component Structure

NIS0018J



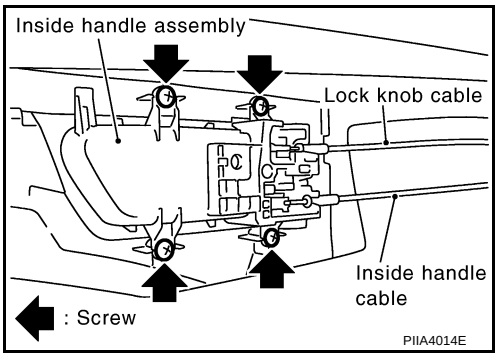
1. Front gasket	2. Outside handle	3. Door key cylinder assembly (Driver side) Outside handle escutcheon (Passenger side)
4. Rear gasket	5. Outside handle bracket	6. Grommet
7. Key cylinder rod (Driver side only)	8. Outside handle cable	9. Door lock assembly
10. Inside handle knob cable	11. Lock knob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

Removal and Installation

NIS0018K

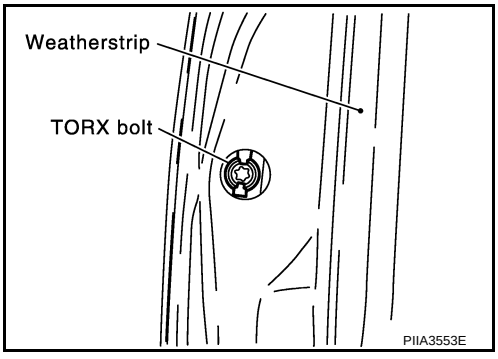
REMOVAL

1. Remove the front door finisher. Refer toEI-30, "DOOR FINISHER" .
2. Disconnect the inside handle knob cable and lock knob cable from the back side of the front door finisher.

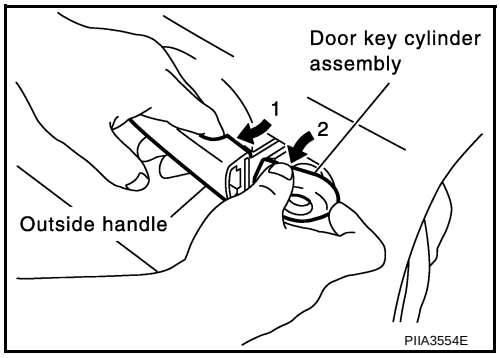


3. Remove the front door window and front door module assembly. Refer toGW-66, "FRONT DOOR GLASS AND REGULATOR" .
4. Remove door side grommet, and remove door key cylinder assembly (driver side) and outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.

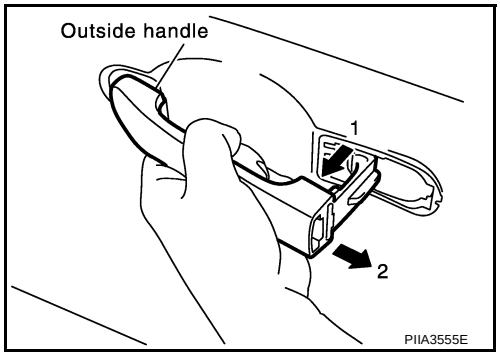
CAUTION:
Do not forcibly remove the TORX bolts (T30).



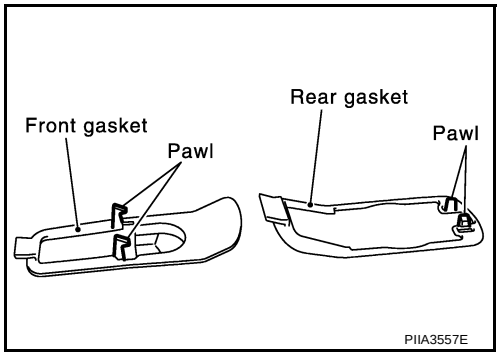
5. Reach to separate the key cylinder rod connection (on the handle).
6. Disconnect door key cylinder switch harness connector.
7. While pulling the outside handle, remove door key cylinder assembly.



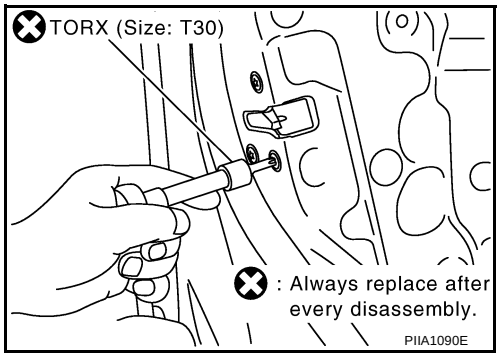
8. Disconnect front door request switch harness connector (wiht Intelligent Key system).
9. While pulling outside handle, slide toward rear of vehicle to remove outside handle.



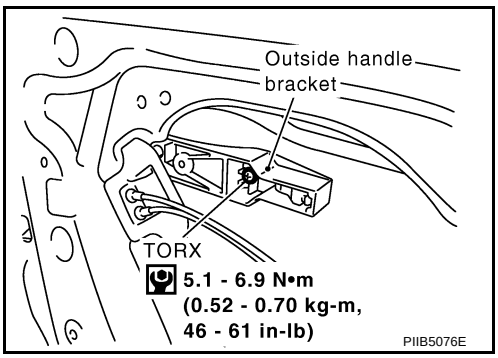
10. Remove the front gasket and rear gasket.



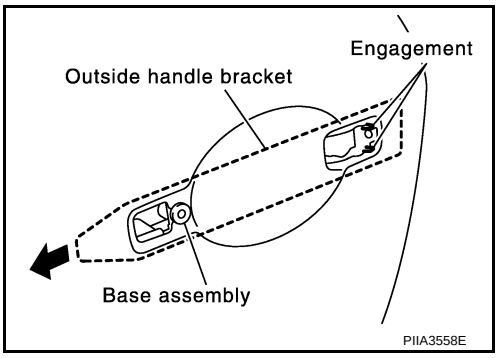
11. Remove the TORX bolts (T30), remove the door lock assembly.



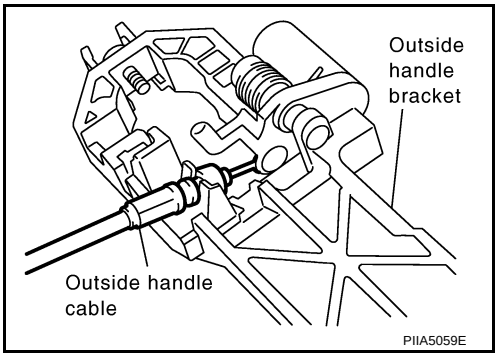
12. Remove the TORX bolt (T30) of the outside handle bracket.



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



14. Disconnect the door lock actuator connector and remove the door lock assembly.
15. Reach to separate the outside handle cable connection.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

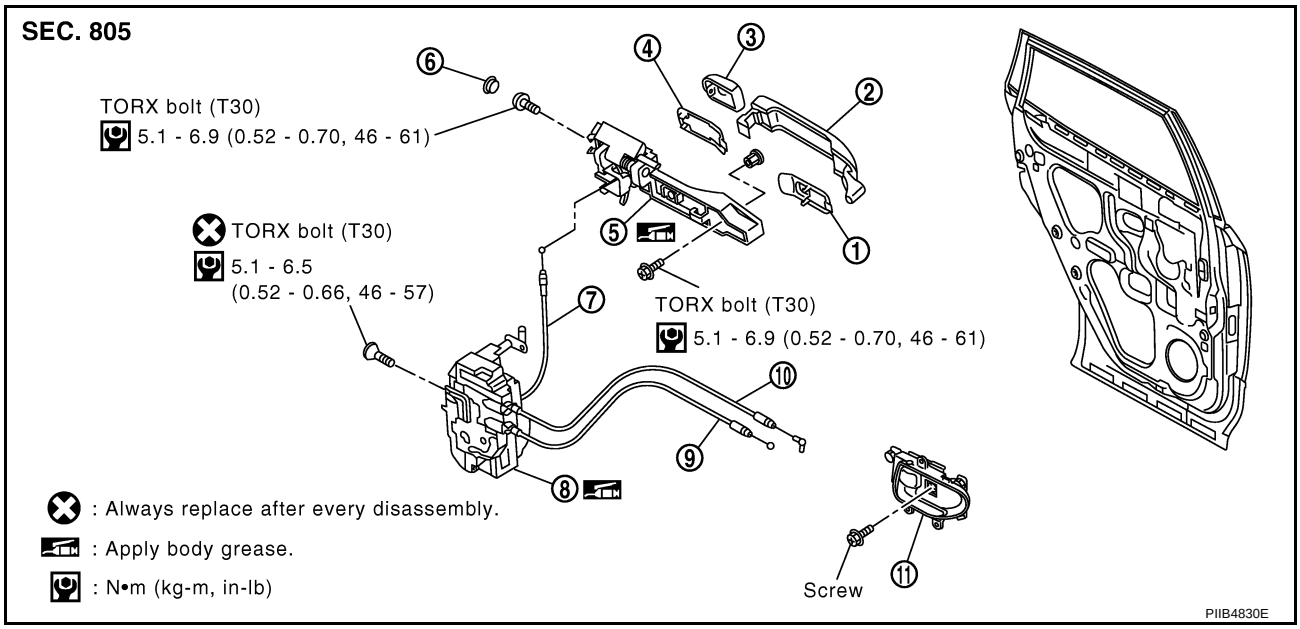
To install each rod, be sure to rotate the rod holder until a click is felt.

REAR DOOR LOCK

PFP:82502

Component Structure

NIS0018L



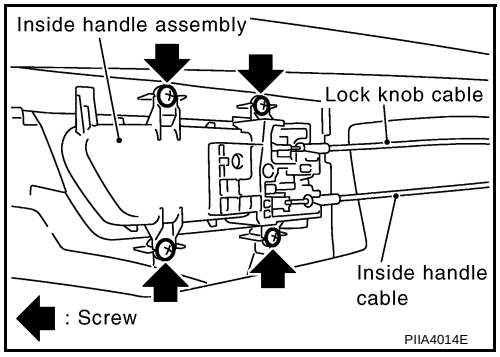
1. Front gasket
2. Outside handle
3. Outside handle escutcheon
4. Rear gasket
5. Outside handle bracket
6. Grommet
7. Outside handle cable
8. Door lock assembly
9. Inside handle knob cable
10. Lock knob cable
11. Inside handle

Removal and Installation

NIS0018M

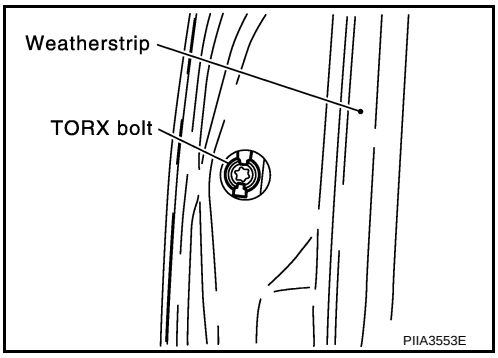
REMOVAL

1. Remove the rear door finisher. Refer toEI-30, "DOOR FINISHER" .
2. Disconnect the inside handle knob cable and lock knob cable from the back side of the rear door finisher.

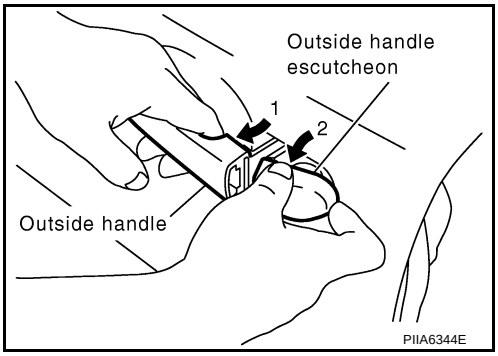


3. Remove the rear door sash. Refer toGW-69, "REAR DOOR GLASS AND REGULATOR" .
4. Remove the rear door window and rear door screen assembly. Refer toGW-69, "REAR DOOR GLASS AND REGULATOR" .
5. Remove door side grommet, and remove outside handle escutcheon bolt (TORX T30) from grommet hole.

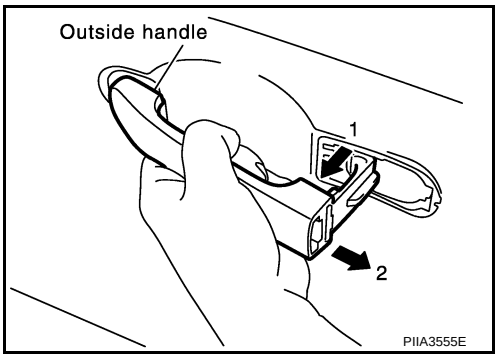
CAUTION:
Do not forcibly remove the TORX bolts (T30).



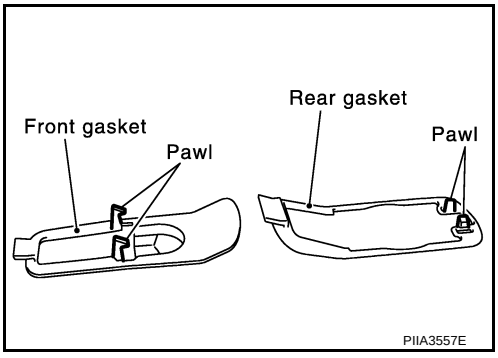
6. While pulling the outside handle, remove outside handle escutcheon.



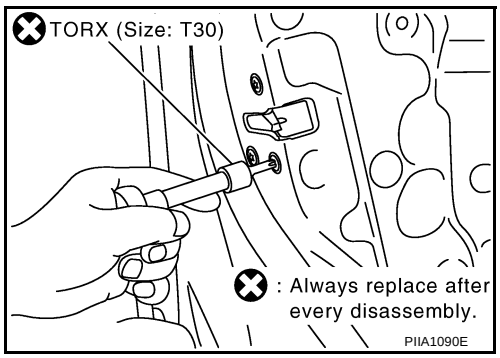
7. While pulling outside handle, slide toward rear of vehicle to remove outside handle.



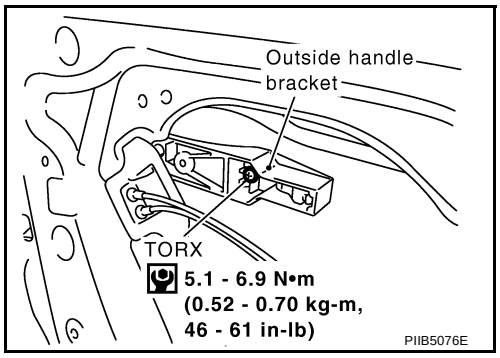
8. Remove the front gasket and rear gasket.



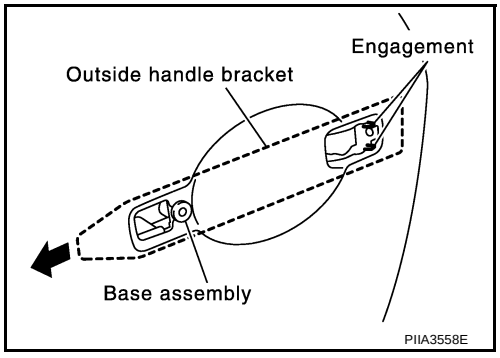
9. Remove the TORX bolts (T30), remove the door lock assembly.



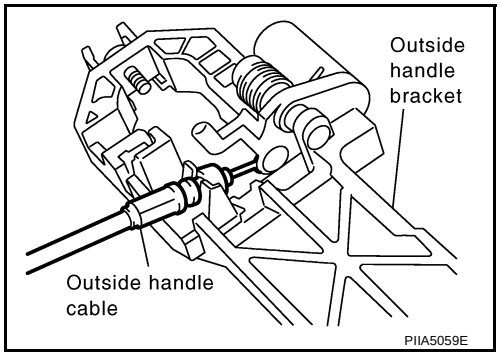
10. Remove the TORX bolt (T30), and remove the outside handle bracket.



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



12. Disconnect the door lock actuator connector and remove the door lock assembly.
13. Reach to separate outside handle cable connection.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

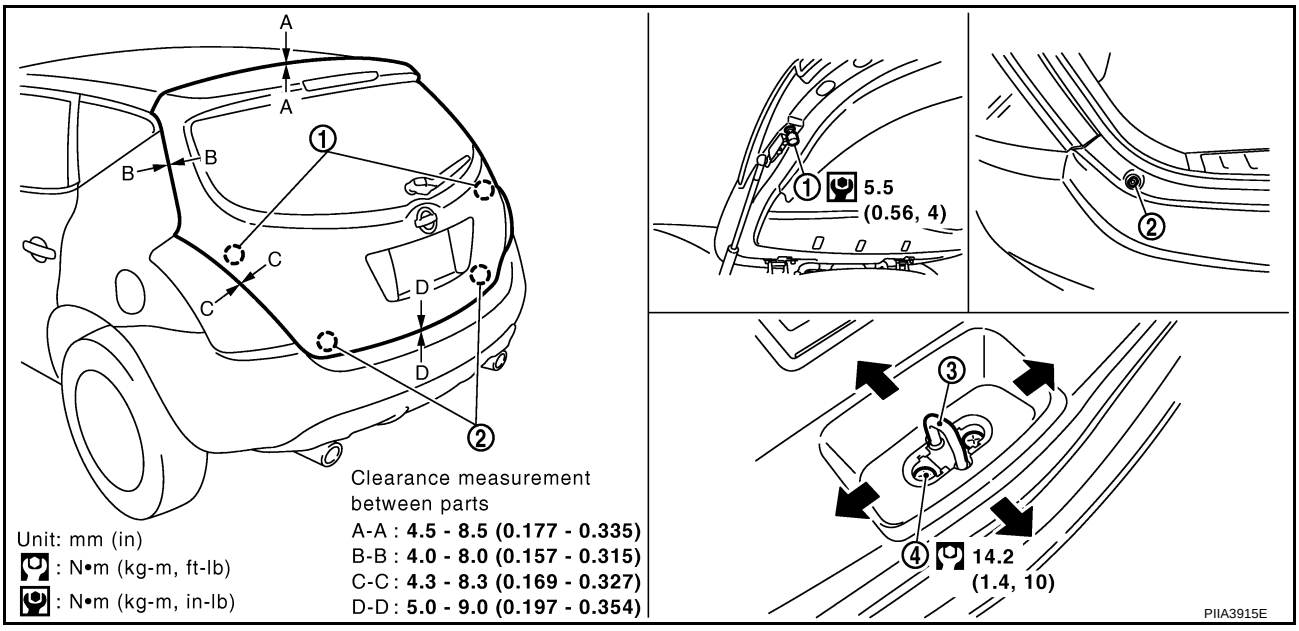
To install each rod, be sure to rotate the rod holder until a click is felt.

BACK DOOR

PFP:90100

Fitting Adjustment

NIS0018N



1. Bumper rubber (upper)
2. Bumper rubber (lower)
3. Back door striker
4. Screw

VERTICAL/LATERAL CLEARANCE ADJUSTMENT

1. Loosen the back door striker mounting screw, and close the back door lightly.
2. Adjust the surface height with the bumper rubber (upper/lower).

   NOTE:
   - Rotate the bumper rubber (upper) to adjust the height.
   - Rotate the TORX (T20) bolt of the bumper rubber (lower) to adjust the height.
3. After adjusting the surface hight, open the door and tighten the back door striker mounting screw and bumper rubber (upper) lock nuts to the specified torque.

Back Door Assembly

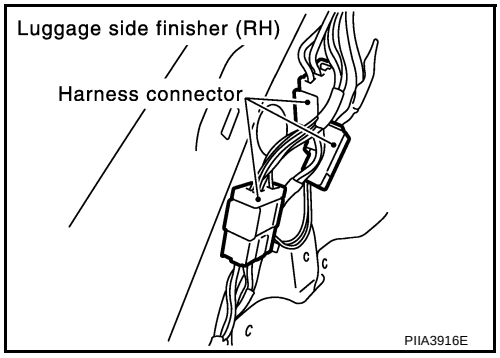
NIS0018O

REMOVAL

CAUTION:

Before servicing SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.

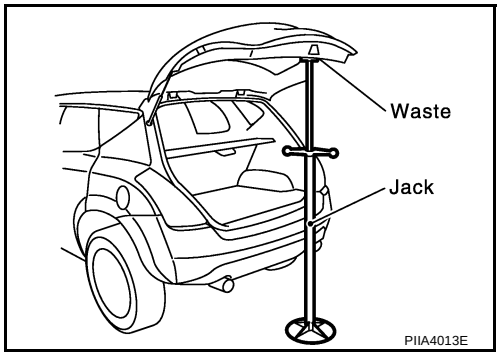
1. Remove the headlining. Refer to EI-35, "Removal and Installation" .
2. Disconnect the back door harness connector.



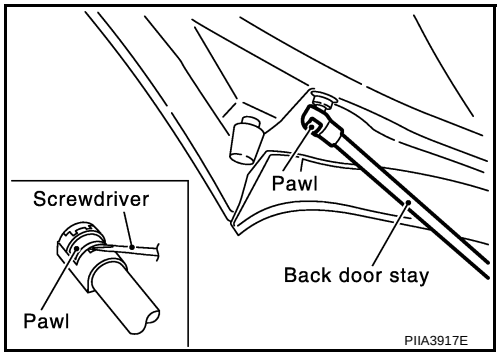
3. Remove the high mount stop lamp cover.
4. Washer hose is separated in the connection part.
5. Remove the viral tape which tight the back door harness and SRS curtain air bag harness.
6. Support the back door lock with a proper material to prevent it from falling.

   WARNING:

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



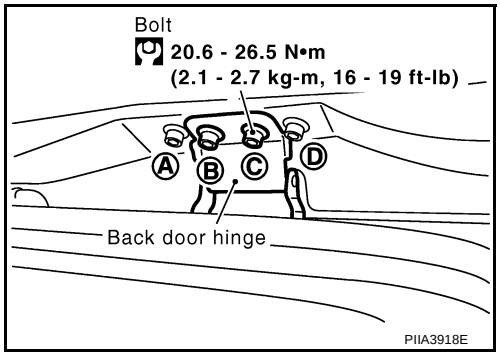
7. Remove back door stay on back door.



8. Remove hinge mounting bolts on the back door and remove back door assembly.

CAUTION:

Do not loosen hinge mounting bolt A and D.



INSTALLATION

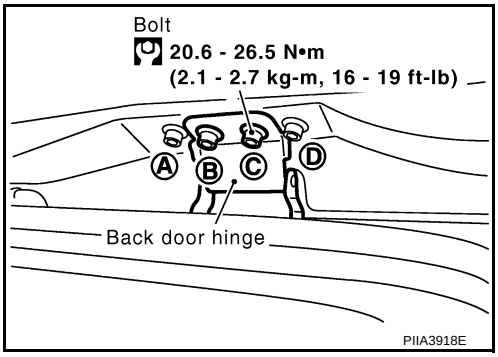
Install in the reverse order of removal.

CAUTION:

- **Operate with two workers, because of its heavy weight.**
- **After installing, check operation.**
- **After installing, perform fitting adjustment Refer to BL-179, "Fitting Adjustment" .**

INSPECTION

1. Check hinges for the following items.
   - Malfunction noise or door closing and opening effort
   - Component wear or damage
2. Apply Grease to the rotating part of the hinge.

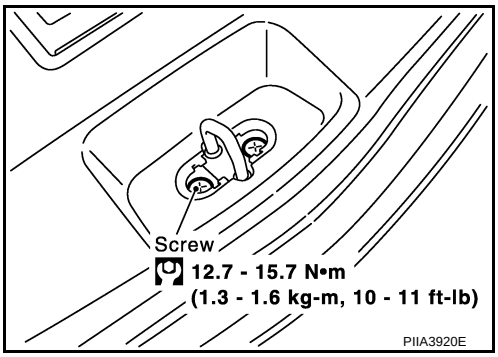


Removal and Installation of Back Door Striker

NIS0018P

REMOVAL

1. Remove luggage finisher lower. Refer to EI-37, "Removal and Installation" .
2. Remove mounting screws, and remove striker from the vehicle.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

After installing, perform fitting adjustment.

Removal and Installation of Back Door Stay

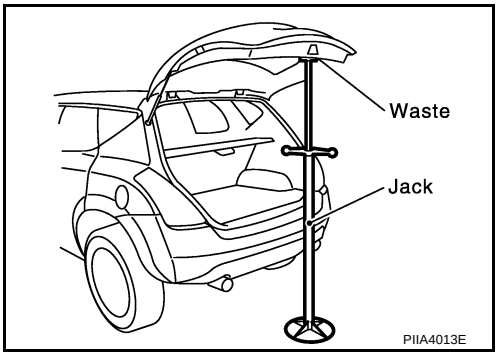
NIS0018Q

REMOVAL

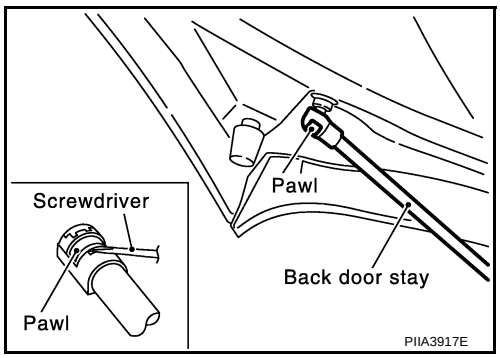
1. Support the back door lock with a proper material to prevent it from falling.

   WARNING:

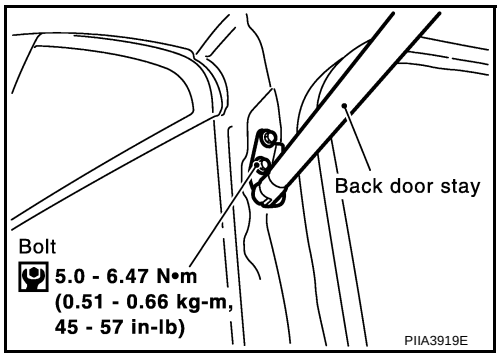
   Body injury may occur if no supporting rod is holding the back door open when removing the back door stay.



2. Remove back door stay on back door.



3. Remove back door stay assembly bracket adjusting nuts and remove back door stay assembly.



INSTALLATION

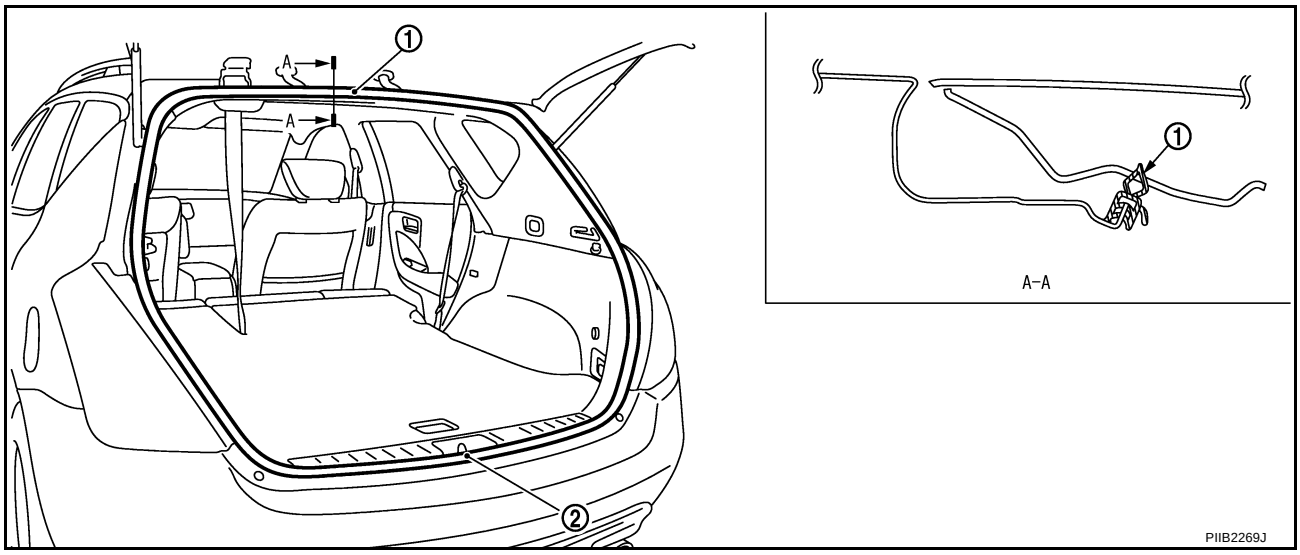
Install in the reverse order of removal.

CAUTION:

After installing, check operation.

Removal and Installation of Back Door Weatherstrip

NIS0018R



1. Weatherstrip mark
2. Weatherstrip

REMOVAL

Pull up and remove engagement with body from wetherstrip joint.

CAUTION:

After removal, do not pull strongly on the wetherstrip.

INSTALLATION

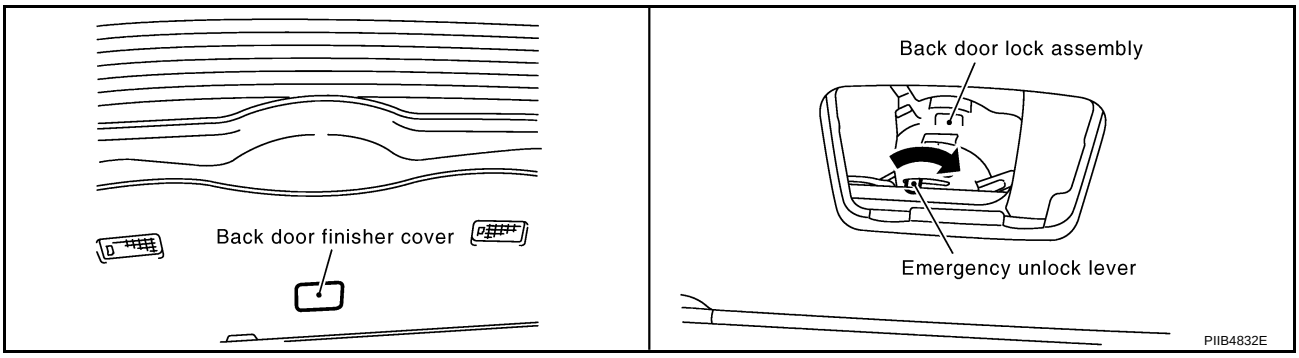
1. Working from the upper section, align weatherstrip mark with vehicle center position mark and install weatherstrip onto the vehicle.
2. For the lower section, align the weatherstrip seam with center of the striker.
3. After installation, pull the weatherstrip gently to ensure that there is no loose section.

NOTE:
Make sure the weatherstrip is fit tightly at each corner and back door rear plate.

Emergency Unlock Lever

NIS0018S

NOTE:
If the back door cannot be opened with the back door lock opener switch or remote controller to a discharged battery, follow the next steps.



1. Remove back door finisher cover.
2. Move the emergency unlock lever to open the back door.

BACK DOOR LOCK ASSEMBLY

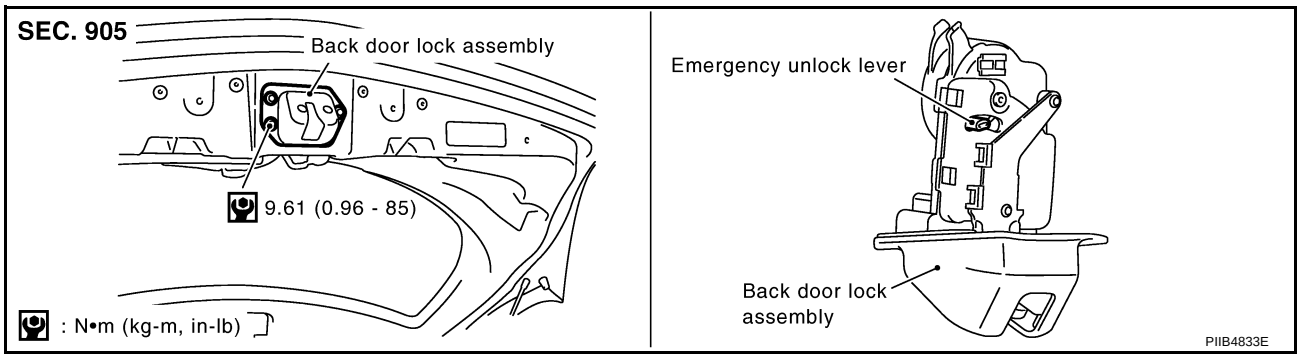
PFP:90504

Removal and Installation of Back Door Lock

NIS0018T

REMOVAL

1. Remove back door finisher. Refer to EI-39, "Removal and Installation" .
2. Disconnect back door lock assembly connector.
3. Remove the mounting bolts.



4. Remove the mounting bolts, remove back door lock assembly.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- **After installing, check operation.**
- **After installing, perform fitting adjustment. Refer to BL-179, "Fitting Adjustment" .**

INSPECTION

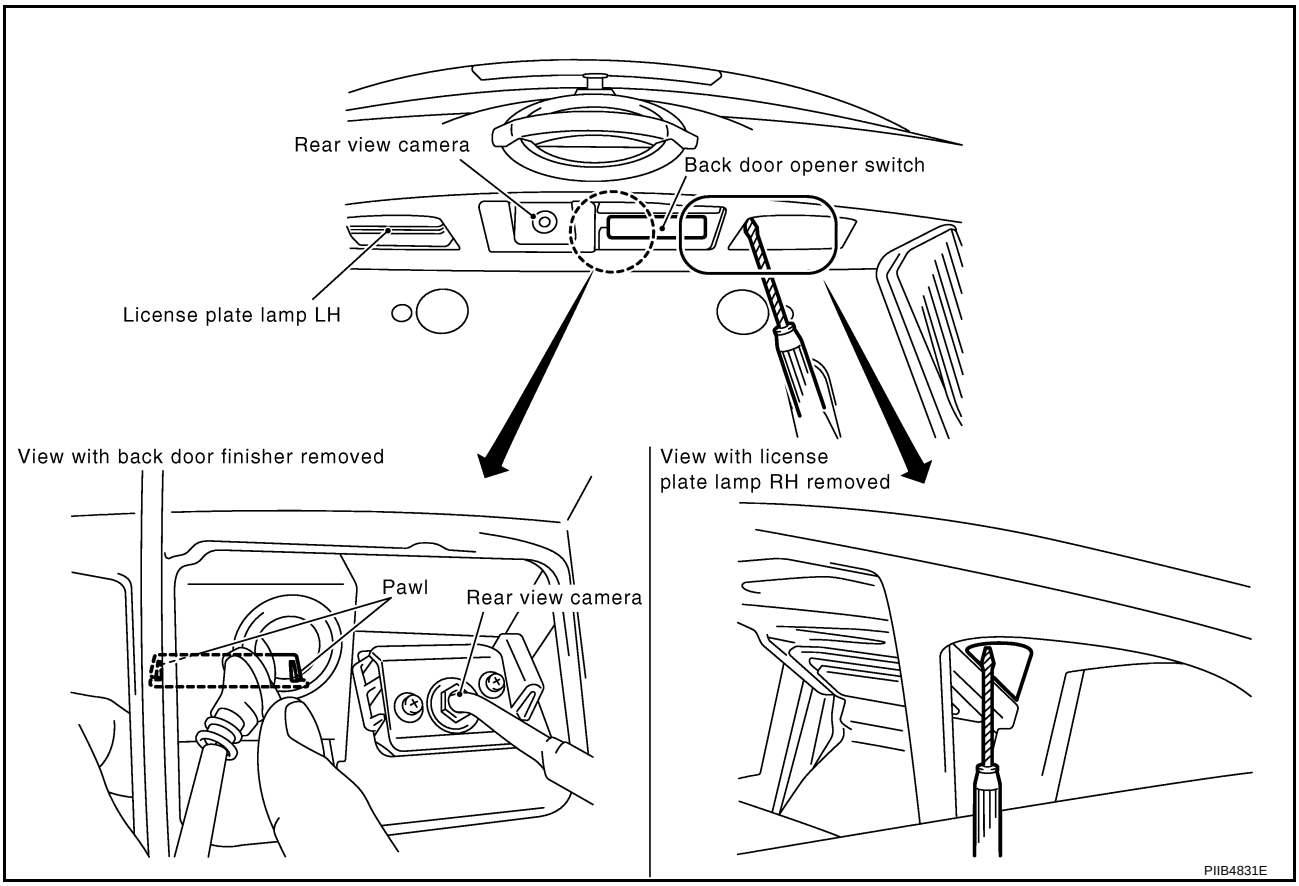
1. Check back door lock for the following items.
   - Malfunction noise or back door closing and opening effort
   - Component wear or damage
2. Apply body grease to the rotating part of the back door lock.

Removal and Installation of Back Door Opener Switch

NIS0018U

REMOVAL

1. Remove back door finisher. Refer to EI-39, "Removal and Installation" .
2. Remove license plate lamp assembly. Refer toLT-183, "LICENSE PLATE LAMP"
3. Disconnect back door opener switch harness connector.
4. Remove back door opener switch by pushing pawls with screwdriver.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

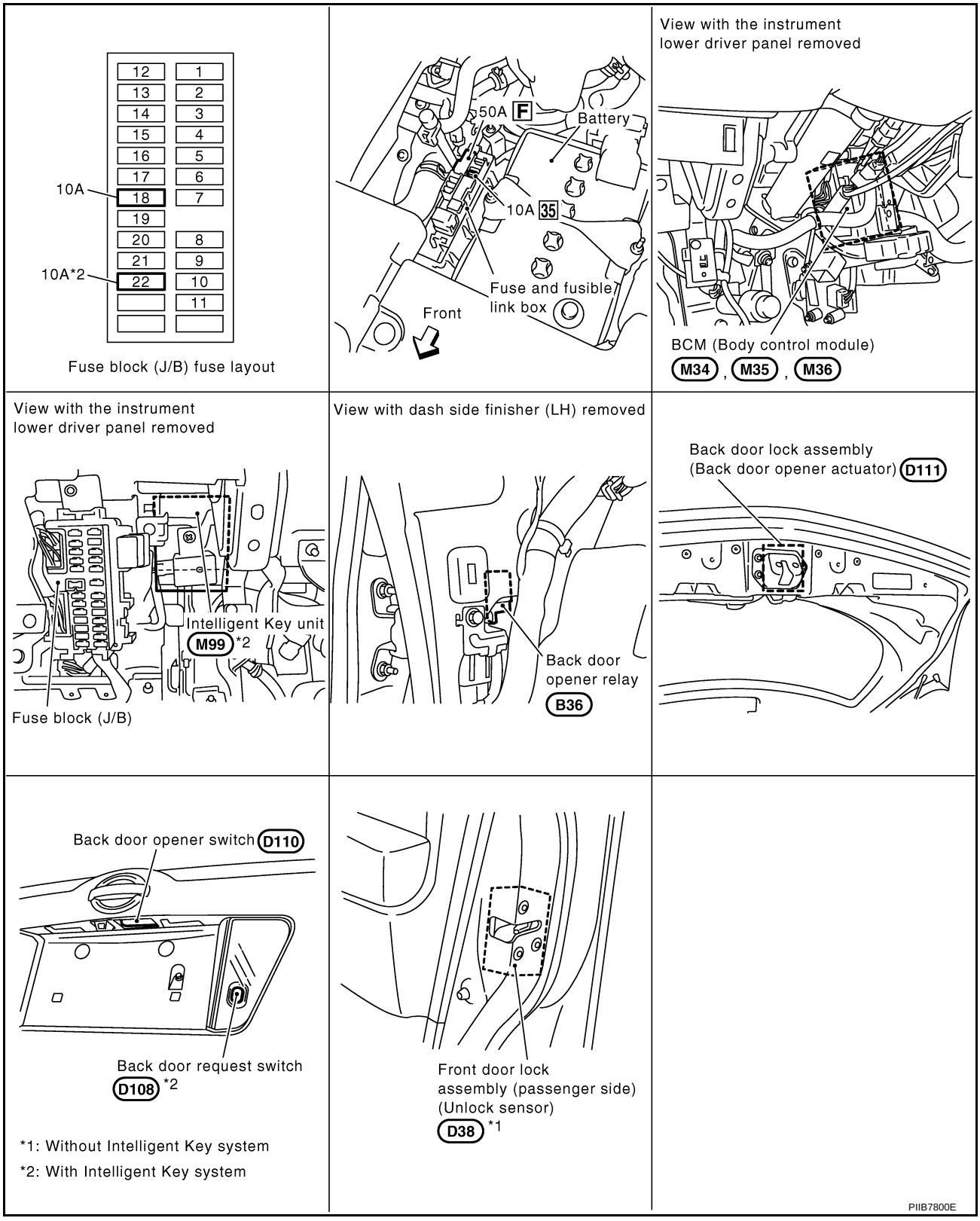
After installing, check operation.

BACK DOOR OPENER

PFP:90550

Component Parts and Harness Connector Location

NIS0018V



System Description / Without Intelligent Key

NIS0018W

Power is supplied at all times

- through 50A fusible link (letter **F,** located in the fuse and fusible link box)
- to BCM terminal 55,

- through 10A fuse [No.18, located in the fuse block (J/B)]
- to BCM terminal 42
- through 10A fuse [No.35, located in the fuse block (J/B)]
- to back door opener relay terminal 3.

Ground is supplied

- to BCM terminal 52
- through body grounds M14 and M78.

When back door opener switch is ON (pushed) with passenger side door unlocked
Ground is supplied

- to BCM terminal 30
- through front door lock assembly (passenger side) terminals 1and 6
- through back door opener switch terminals 1and 2
- through body grounds B7 and B20.

Power is supplied

- through BCM terminal 68
- to back door opener relay terminal 1

Ground is supplied

- to back door opener relay terminal 2
- through body grounds B7 and B20.

When back door opener relay is turned ON,
And power is supplied

- to back door opener relay terminal 5
- through back door lock assembly (back door opener actuator) terminals 1 and 2
- through body grounds B7 and B20.

Then back door lock assembly opens back door.

System Description / With Intelligent Key

NIS0018X

Power is supplied at all times

- through 50A fusible link (letter **F,** located in the fuse and fusible link box)
- to BCM terminal 55,
- through 10A fuse [No.18, located in the fuse block (J/B)]
- to BCM terminal 42
- through 10A fuse [No.35, located in the fuse block (J/B)]
- to back door opener relay terminal 3.
- through 10A fuse [No.22, located in the fuse block (J/B)]
- to Intelligent Key unit terminal 11.

Ground is supplied

- to BCM terminal 52
- through body grounds M14 and M78.
- to Intelligent Key unit terminal 12
- through body grounds M14 and M78.

When back door opener switch is ON (pushed) with passenger side door unlocked
Ground is supplied

- to Intelligent Key unit terminal 24
- through back door opener switch terminals 1and 2
- through body grounds B7 and B20.

Ground is supplied

- to back door opener relay terminal 2
- through Intelligent Key unit terminal 23.

When back door opener relay is turned ON,

And power is supplied

- to back door opener relay terminal 5
- through back door lock assembly (back door opener actuator) terminals 1 and 2
- through body grounds B7 and B20.

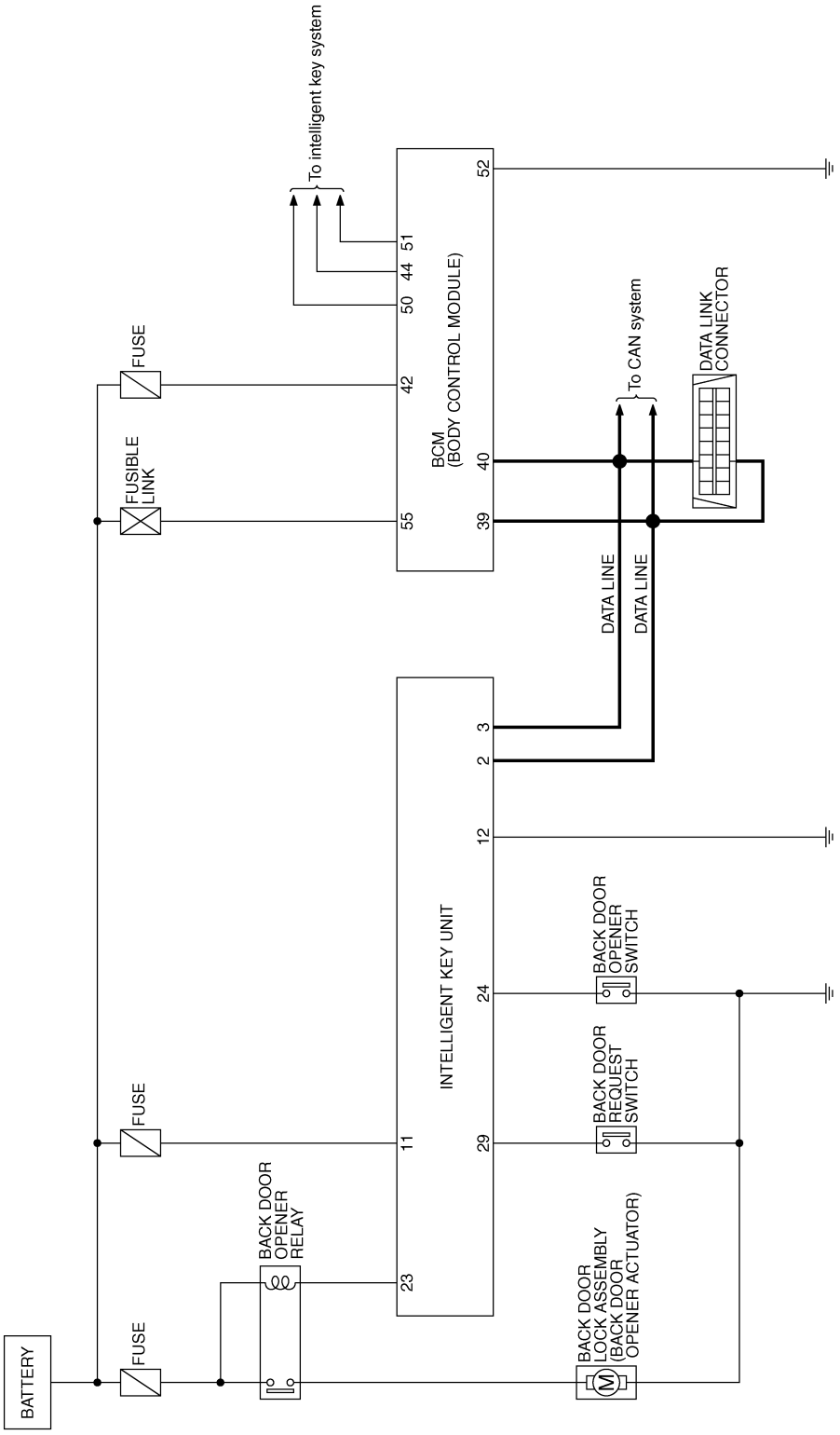
Then back door lock assembly (back door opener actuator) opens back door.

INTELLIGENT KEY OPERATION

Refer to BL-89, "System Description"

Schematic / With Intelligent Key

NIS0018Y

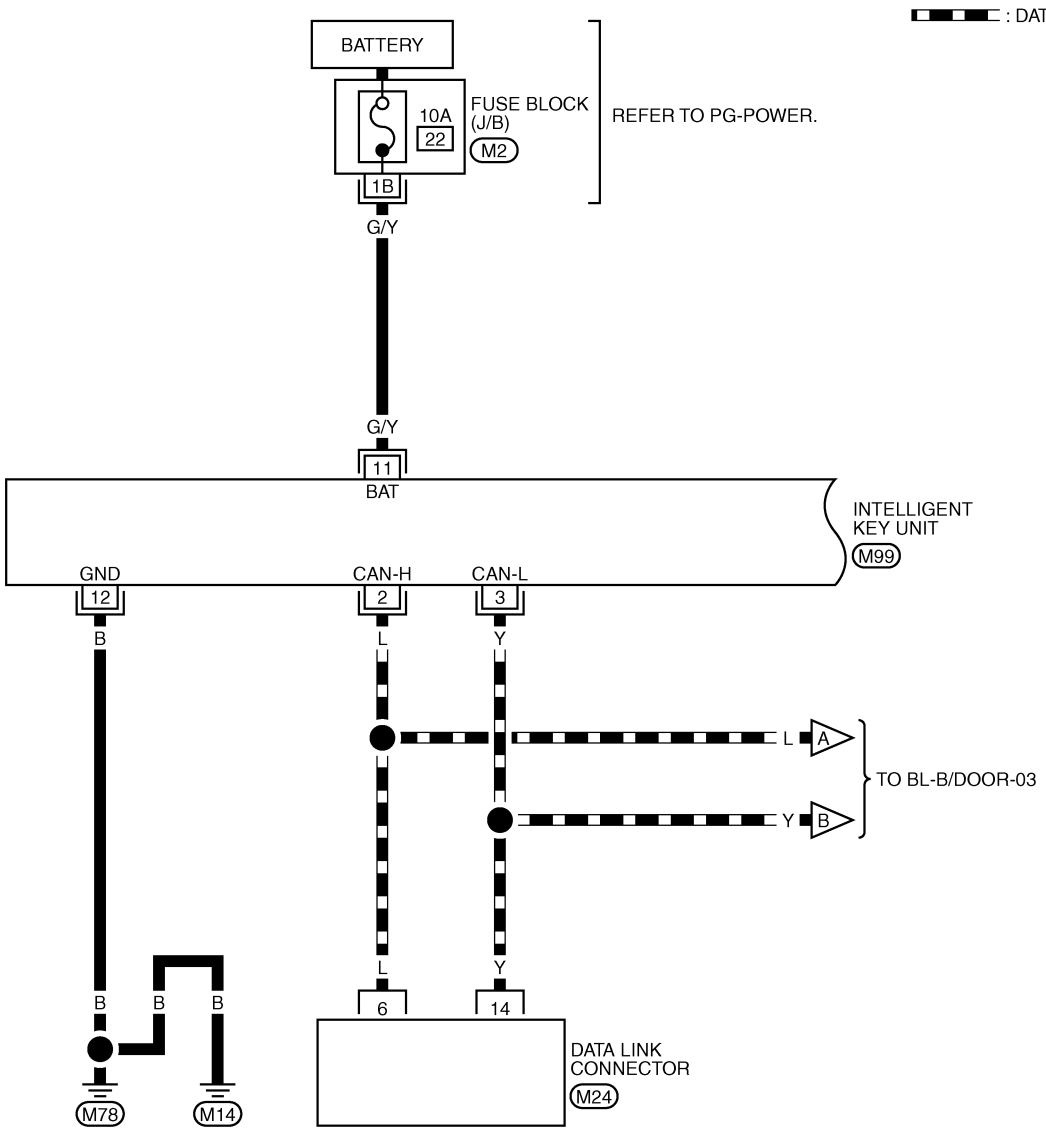


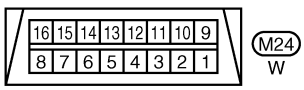
TIWB0292E

Wiring Diagram —B/DOOR— / With Intelligent Key

NIS0018Z

BL-B/DOOR-01





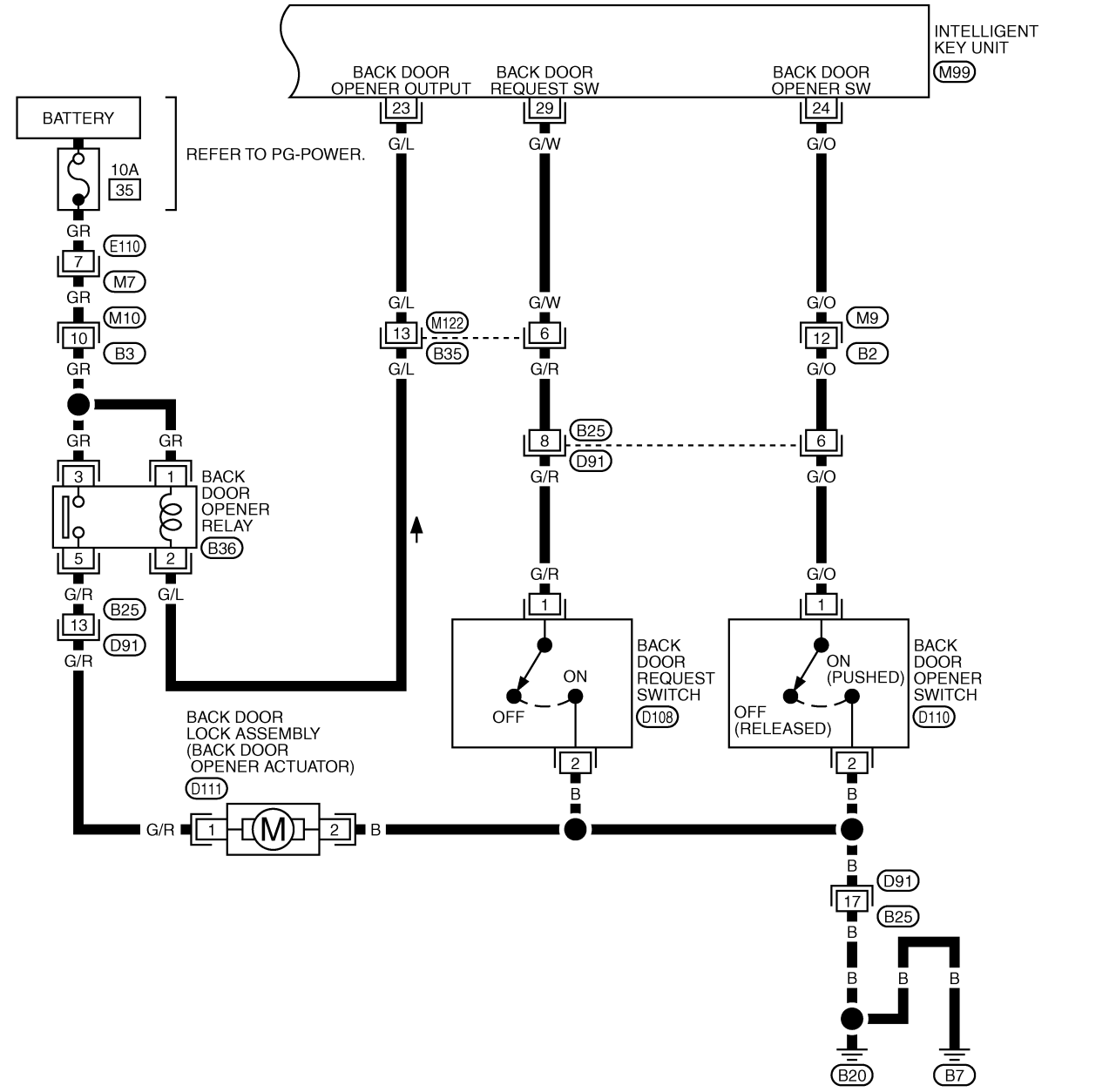
REFER TO THE FOLLOWING.

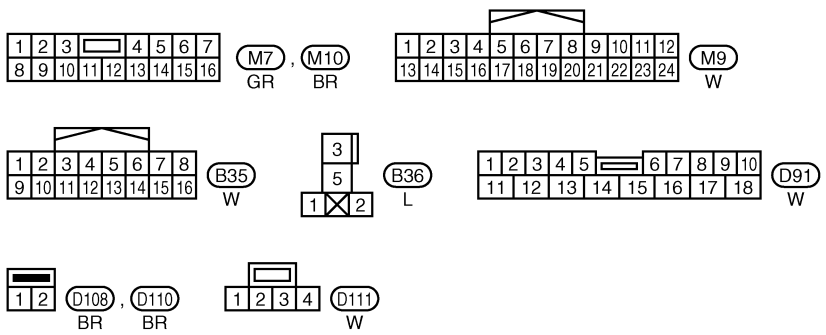
M2 -FUSE BLOCK-JUNCTION BOX (J/B)

M99 -ELECTRICAL UNITS

TIWB0162E

BL-B/DOOR-02

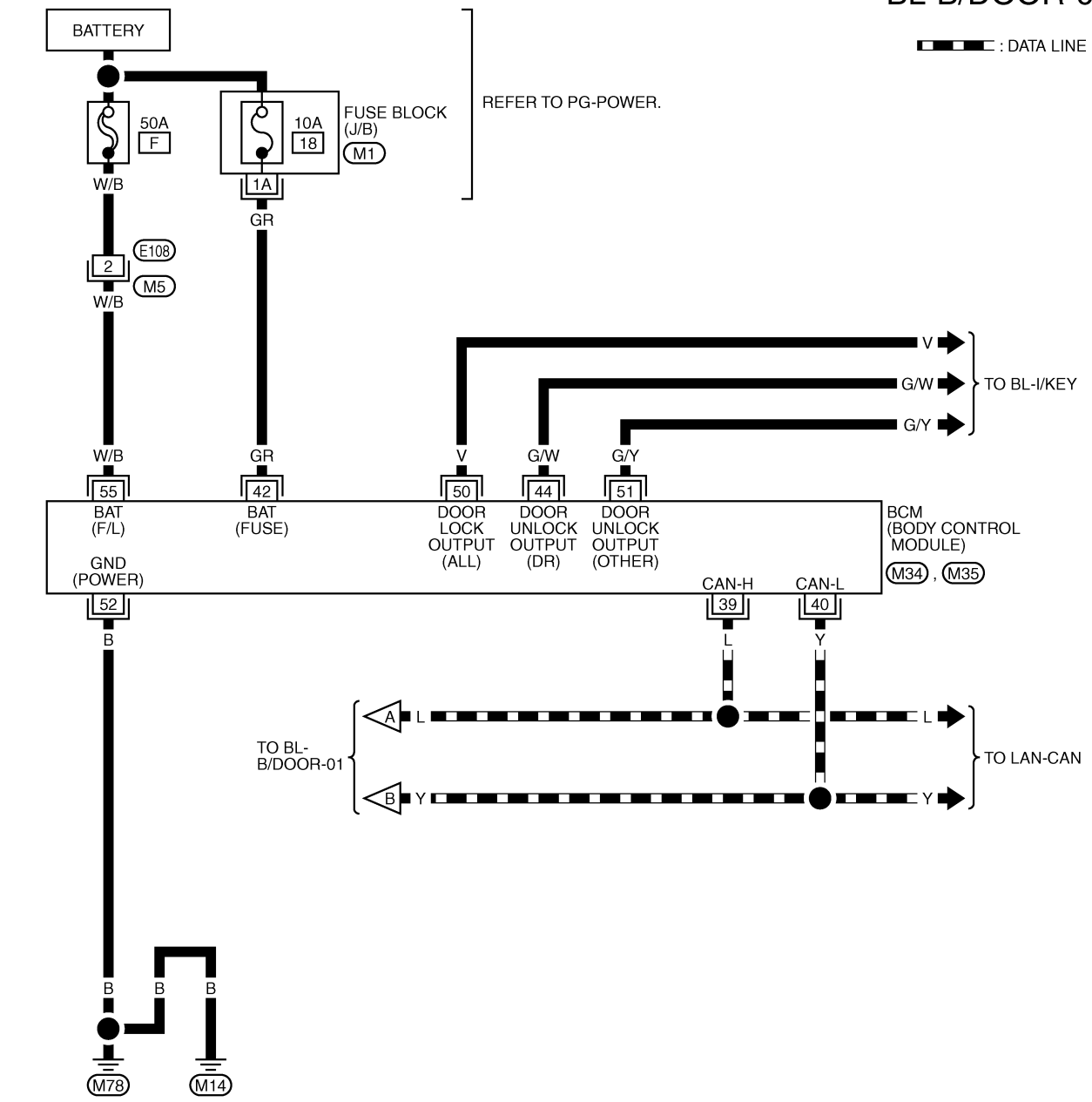


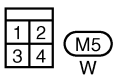


REFER TO THE FOLLOWING.
M99 -ELECTRICAL UNITS

TIWB0783E

BL-B/DOOR-03





REFER TO THE FOLLOWING.

M1 -FUSE BLOCK-JUNCTION BOX (J/B)

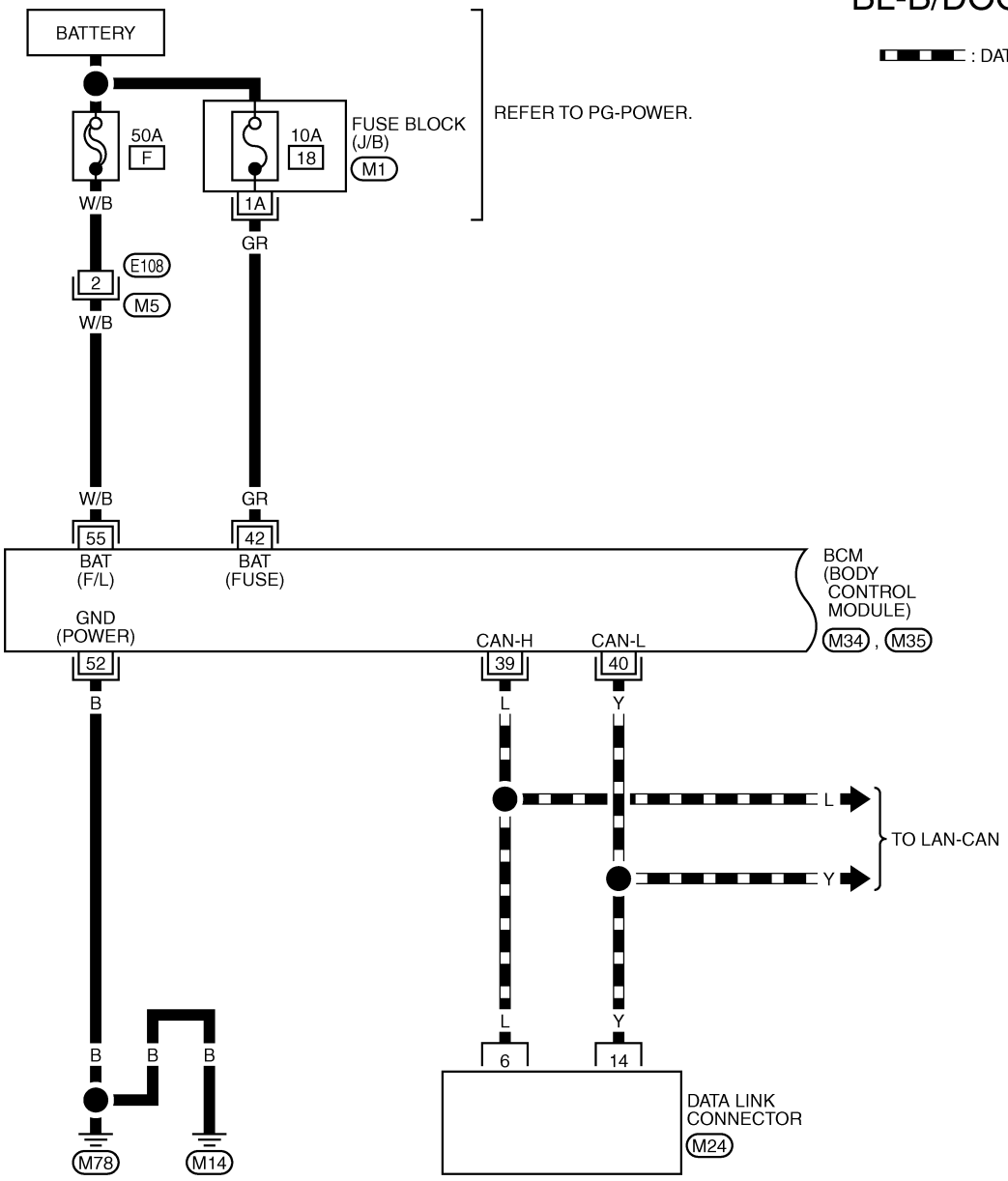
M34 , M35 -ELECTRICAL UNITS

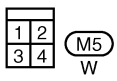
TIWB0784E

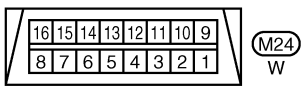
Wiring Diagram —B/DOOR— / Without Intelligent Key

NIS00190

BL-B/DOOR-04



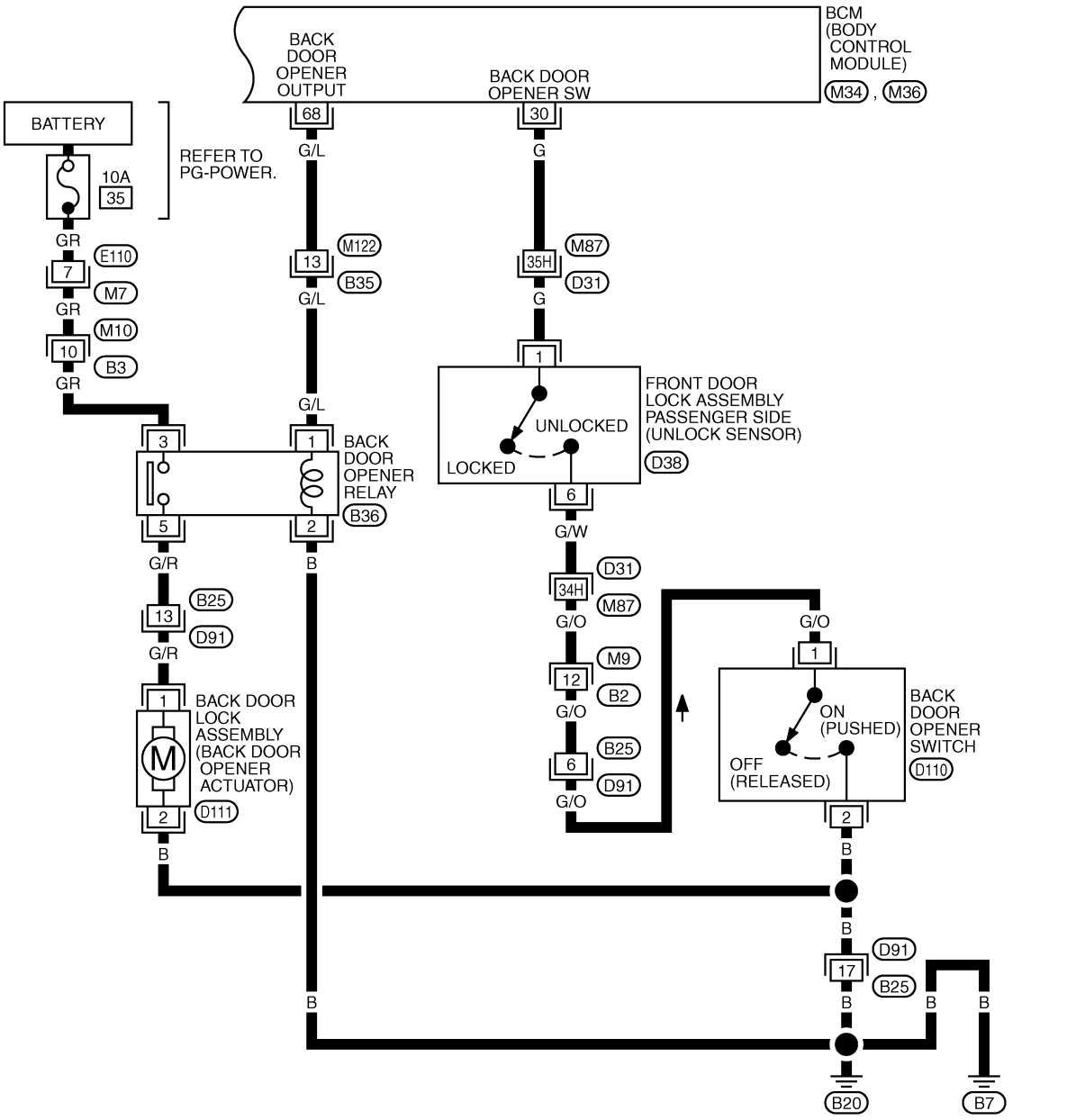


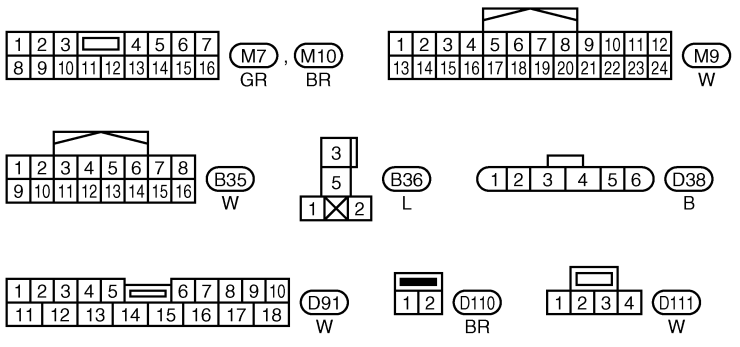


REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-JUNCTION BOX (J/B)
M34 , M35 -ELECTRICAL UNITS

TIWB0785E

BL-B/DOOR-05





REFER TO THE FOLLOWING.

D31 -SUPER MULTIPLE JUNCTION (SMJ)

M34 , M36 -ELECTRICAL UNITS

TIWB0786E

Terminals and Reference Value for BCM

NIS00191

Terminal	Wire Color	Item	Signal input/output	Condition		Voltage (V) (Approx.)
30	G	Back door opener switch	Input	Back door opener switch	: ON	0
					: OFF	5
39*1	L	CAN-H	Input/Output	—		—
40*1	Y	CAN-L	Input/Output	—		—
42	GR	Power source (Fuse)	Input	—		Battery voltage
44*1	G/W	Driver door lock actuator and fuel lid opener actuator (Unlock)	Output	Door lock and unlock switch (Free → Unlock)		0 → Battery voltage → 0
50*1	V	All door lock actuators (lock)	Output	Door lock and unlock switch (Free → Lock)		0 → Battery voltage → 0
51*1	G/Y	Passenger and rear doors lock actuator (unlock)	Output	Door lock and unlock switch (Free → Unlock)		0 → Battery voltage → 0
52	B	Ground	—	—		0
55	W/B	Power source (Fusible link)	Input	—		Battery voltage
68*2	G/L	Back door opener output signal	Output	Back door opener switch is ON		0 → Battery voltage → 0

*1 : With Intelligent Key

*2 : Without Intelligent Key

Terminals and Reference Value for INTELLIGENT KEY UNIT

NIS00192

Terminal No.	Wire color	Item	Signal input/output	Condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
2	L	CAN-H	Input/output	—	—	—
3	Y	CAN-L	Input/output	—	—	—
11	G/Y	Power source (Fuse)	Input	—	—	Battery voltage
12	B	Ground	—	—	—	0
23	G/L	Back door opener relay output	Input	—	Press back door opener switch.	0
					Other than above.	Battery voltage
24	G/O	Back door opener switch	Input	—	Press back door opener switch	0
					Other than above.	Battery voltage
29	G/W	Back door request switch	Input	—	Back door request switch operation: Press (ON)	0
					Other than the above (OFF)	5

Trouble Diagnosis

NIS00193

BACK DOOR DOSE NOT OPEN WITH BACK DOOR OPENER SWITCH / WITHOUT INTELLIGENT KEY SYSTEM

1. CHECK PASSENGER SIDE DOOR CONDITION

Check passenger side door condition.

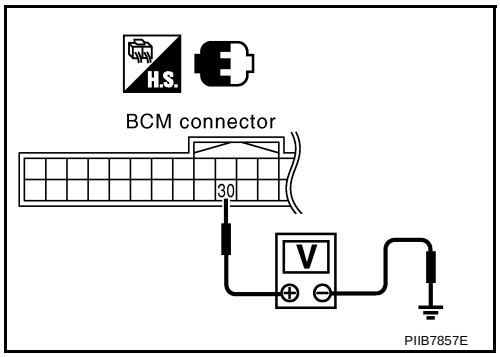
Is the passenger side door unlock?

Yes >> GO TO 2.
No >> Unlock does the passenger side door.

2. CHECK BACK DOOR OPEN INPUT SIGNAL

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition		Voltage [V] (Approx.)
	(+)	(–)			
M34	30 (G)	Ground	Back door opener switch	: ON	0
				: OFF	5



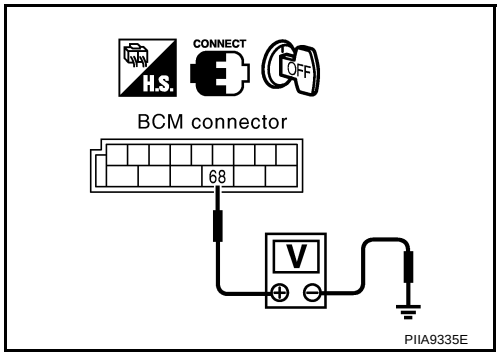
OK or NG

OK >> GO TO 3.
NG >> GO TO 7.

3. CHECK BACK DOOR OPEN OUTPUT SIGNAL

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition		Voltage [V] (Approx.)
	(+)	(–)			
M36	68 (G/L)	Ground	Back door opener switch	: ON	Battery voltage
				: OFF	0



OK or NG

OK >> GO TO 4.
NG >> Replace BCM.

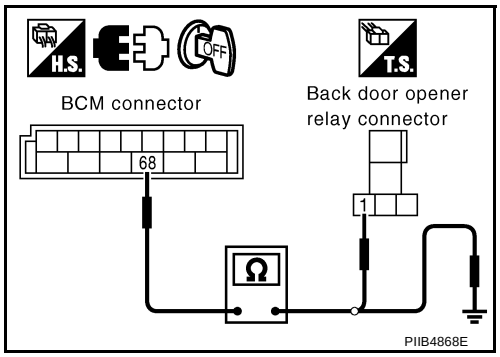
4. CHECK BACK DOOR OPENER RELAY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and back door opener relay connector.
3. Check continuity between BCM connector M36 terminal 68 and back door opener relay connector B36 terminal 1.

68 (G/L) - 1 (G/L) : Continuity should exist.

4. Check continuity between BCM connector M36 terminal 68 and ground.

68 (G/L) - Ground : Continuity should not exist.



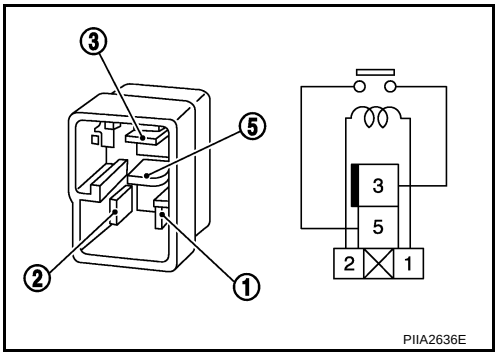
OK or NG

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

5. CHECK BACK DOOR OPENER RELAY

Check continuity between back door opener relay terminal 3 and 5.

Terminals		Condition	Continuity
3	5	12V direct current supply between 1 and 2	Yes
		Other than above	No



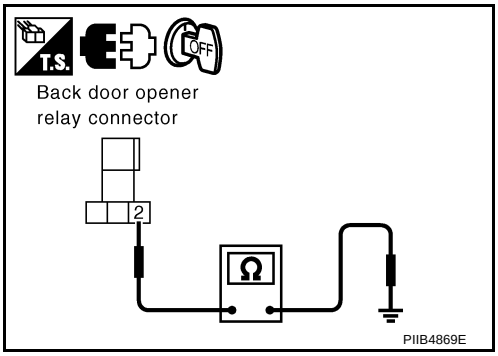
OK or NG

OK >> GO TO 6.
NG >> Replace back door opener relay.

6. CHECK BACK DOOR OPENER RELAY GROUND CIRCUIT

Check continuity between back door opener relay connector E36 terminals 2 and ground.

2 (B) - Ground : Continuity should exist.



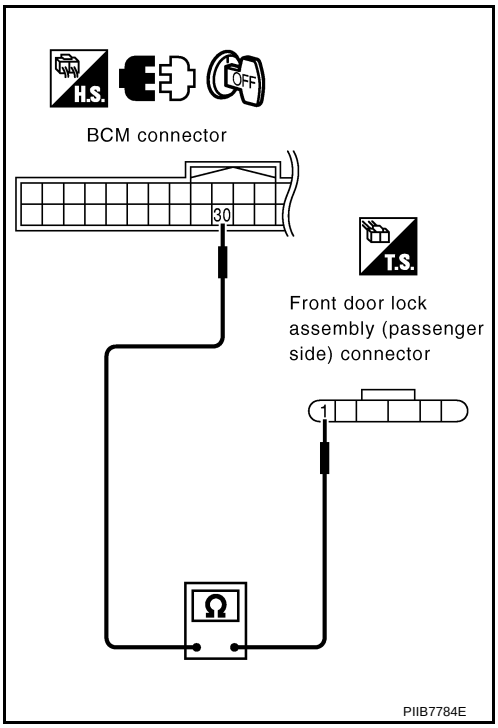
OK or NG

OK >> GO TO 12.
NG >> Repair or replace harness.

7. CHECK FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and front door lock assembly (passenger side) connector.
3. Check continuity between BCM connector M34 terminal 30 and front door lock assembly (passenger side) connector D37 terminals 1.

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



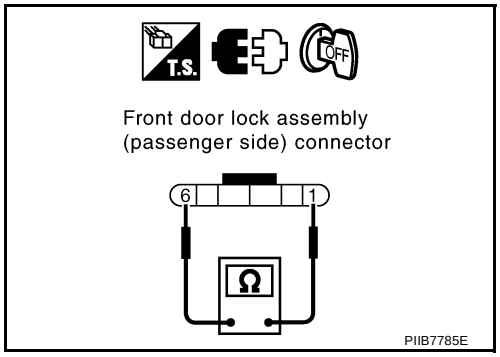
OK or NG

OK >> GO TO 8.
NG >> Repair or replace harness.

8. CHECK FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE)

Check continuity between front door lock assembly (passenger side) terminal 1 and 6.

Terminals		Condition		Continuity
1	6	Passenger side door lock	: Lock	Yes
			: Unlock	No



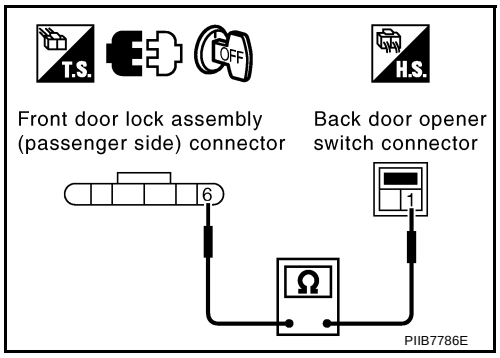
OK or NG

OK >> GO TO 9.
NG >> Replace front door lock assembly (passenger side).

9. CHECK BACK DOOR OPENER SWITCH CIRCUIT

1. Disconnect back door opener switch connector.
2. Check continuity between front door lock assembly (passenger side) connector D38 terminal 6 and back door opener switch connector D110 terminal 1.

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



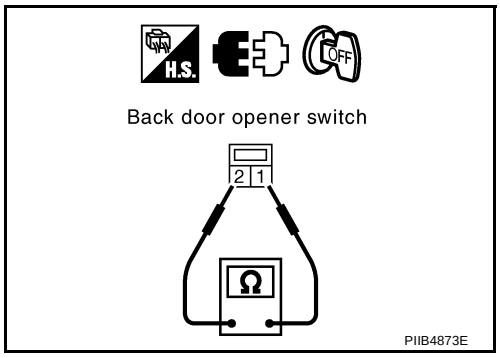
OK or NG

OK >> GO TO 10.
NG >> Repair harness or connector.

10. CHECK BACK DOOR OPENER SWITCH

Check continuity between back door opener switch terminal 1 and 2.

Terminals		Condition		Continuity
1	2	Back door opener switch	: ON	Yes
			: OFF	No



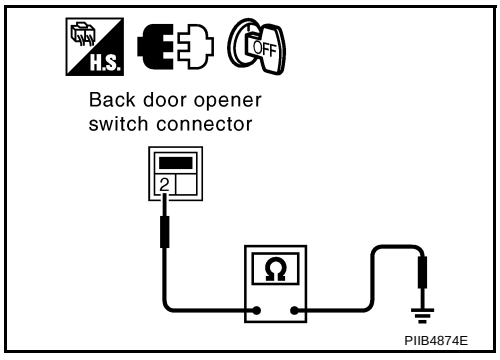
OK or NG

OK >> GO TO 11.
NG >> Replace back door opener switch.

11. CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

Check continuity between back door opener switch connector D110 terminals 2 and ground.

2 (B) - Ground : Continuity should exist.



OK or NG

OK >> Check the condition of harness and connector.
NG >> Repair or replace harness.

12. CHECK FUSE

Check 10A fuse [No.35 located in the fuse block (J/B)]

NOTE:
Refer to BL-186, "Component Parts and Harness Connector Location" .

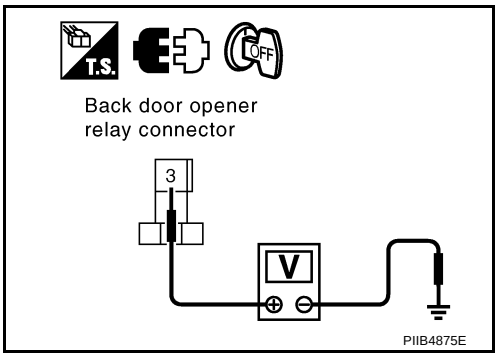
OK or NG

OK >> GO TO 13.
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

13. CHECK BACK DOOR OPENER RELAY POWER SUPPLY

1. Remove back door opener relay.
2. Check voltage between back door opener relay connector B36 terminal 3 and ground.

3 (GR) - Ground : Battery voltage



OK or NG

OK >> GO TO 14.
NG >> Repair or replace back door opener relay power supply circuit.

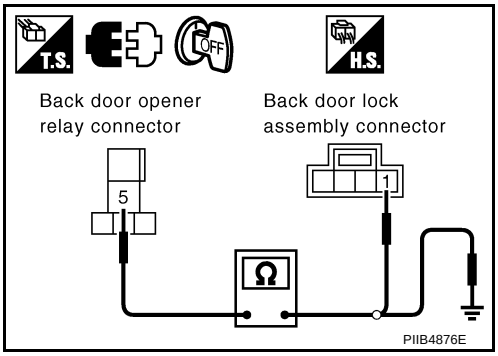
14. CHECK BACK DOOR OPENER ACTUATOR CIRCUIT

1. Disconnect back door lock assembly connector.
2. Check continuity between back door relay connector B36 terminal 5 and back door lock assembly connector D111 terminal 1.

5 (G/R) - 1 (G/R) : Continuity should exist.

3. Check continuity between back door relay connector B36 terminal 5 and ground.

5 (G/R) - Ground : Continuity should not exist.



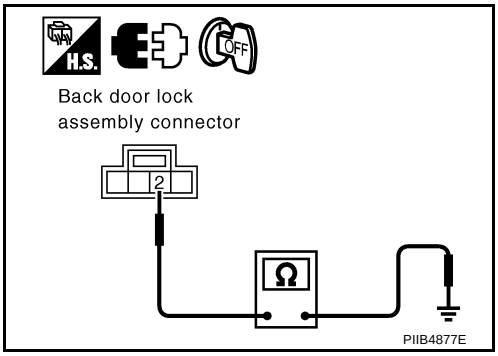
OK or NG

OK >> GO TO 15.
NG >> Repair or replace harness.

15. CHECK BACK DOOR OPENER ACTUATOR GROUND CIRCUIT

Check continuity between back door lock assembly connector D111 terminals 2 and ground.

2 (B) - Ground : Continuity should exist.



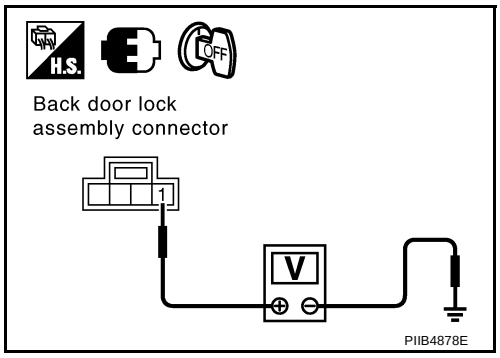
OK or NG

OK >> GO TO 16.
NG >> Repair or replace harness.

16. CHECK BACK LOCK OPERATE SIGNAL

1. Connect back door lock actuator connector and back door opener relay.
2. Check voltage between back door lock assembly connector and ground.

Connector	Terminal (Wire color)		Condition		Voltage [V] (Approx.)
	(+)	(–)			
D111	1 (G/R)	Ground	Back door opener switch	: ON	0 → Battery voltage → 0
				: OFF	5



OK or NG

OK >> Replace back door lock assembly.
NG >> Check the condition of the harness and the connector.

BACK DOOR DOSE NOT OPEN WITH BACK DOOR OPENER SWITCH / WITH INTELLIGENT KEY SYSTEM

1. CHECK BACK DOOR CONDITION

Check back door condition.

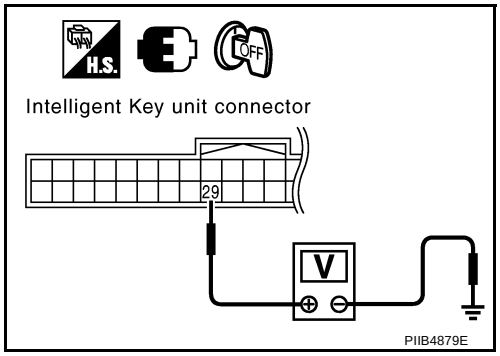
Is the back door unlock?

Yes >> GO TO 2.
No >> Unlock does the back door.

2. CHECK BACK DOOR OPEN INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit connector and ground.

Connector	Terminal (Wire color)		Condition		Voltage [V] (Approx.)
	(+)	(–)			
M99	29 (G/W)	Ground	Back door opener switch	: ON	0
				: OFF	5



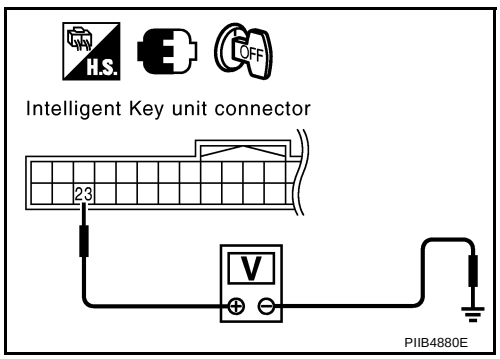
OK or NG

OK >> GO TO 3.
NG >> GO TO 6.

3. CHECK BACK DOOR OPEN OUTPUT SIGNAL

Check voltage between Intelligent Key connector and ground.

Connector	Terminal (Wire color)		Condition		Voltage [V] (Approx.)
	(+)	(–)			
M99	23 (G/L)	Ground	Back door opener switch	: ON	Battery voltage
				: OFF	0



OK or NG

OK >> GO TO 4.
NG >> Replace Intelligent Key.

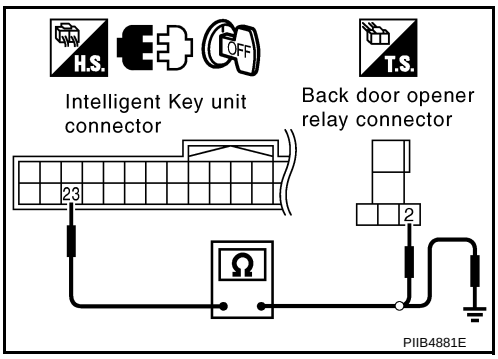
4. CHECK BACK DOOR OPENER RELAY CIRCUIT

1. Disconnect Intelligent Key unit and back door opener relay connector.
2. Check continuity between Intelligent Key unit connector M99 terminal 23 and back door opener relay connector B36 terminal 2.

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

3. Check continuity between Intelligent Key unit connector M99 terminal 23 and ground.

23 (G/L) - Ground : Continuity should not exist.



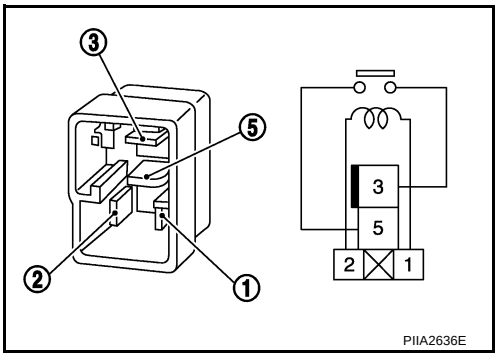
OK or NG

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

5. CHECK BACK DOOR OPENER RELAY

Check continuity between back door opener relay terminal 3 and 5.

Terminals		Condition	Continuity
3	5	12V direct current supply between 1 and 2	Yes
		Other than above	No



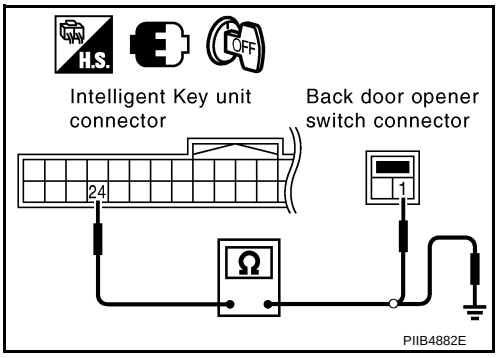
OK or NG

OK >> GO TO 9.
NG >> Replace back door opener relay.

6. CHECK BACK DOOR OPENER SWITCH CIRCUIT

1. Disconnect Intelligent Key unit and back door opener switch connector.
2. Check continuity between Intelligent Key unit connector M99 terminal 24 and back door opener switch connector D110 terminal 1.

24 (G/O) - 1 (G/O) : Continuity should exist.



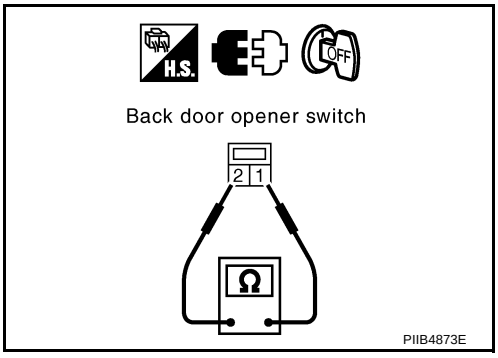
OK or NG

OK >> GO TO 7.
NG >> Repair harness or connector.

7. CHECK BACK DOOR OPENER SWITCH

Check continuity between back door opener switch terminal 1 and 2.

Terminals		Condition		Continuity
1	2	Back door opener switch	: ON	Yes
			: OFF	No



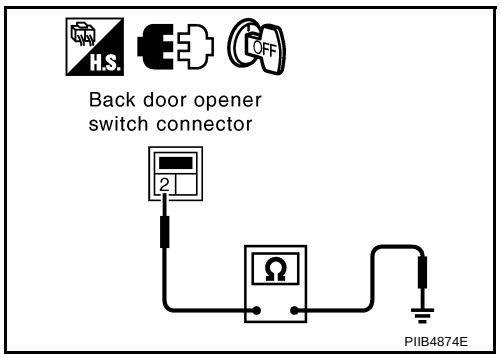
OK or NG

OK >> GO TO 8.
NG >> Replace back door opener switch.

8. CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

Check continuity between back door opener switch connector D110 terminals 2 and ground.

2 (B) - Ground : Continuity should exist.



OK or NG

OK >> Check the condition of harness and connector.
NG >> Repair or replace harness.

9. CHECK FUSE

Check 10A fuse [No.35 located in the fuse block (J/B)]

NOTE:
Refer to BL-186, "Component Parts and Harness Connector Location" .

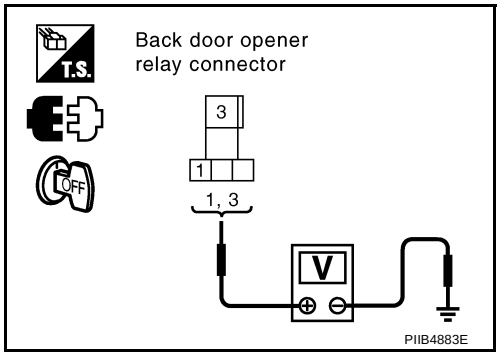
OK or NG

OK >> GO TO 10.
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

10. CHECK BACK DOOR OPENER RELAY POWER SUPPLY

1. Remove back door opener relay.
2. Check voltage between back door opener relay connector B36 terminal 1, 3 and ground.

1 (GR) - Ground : Battery voltage
3 (GR) - Ground : Battery voltage



OK or NG

OK >> GO TO 11.
NG >> Repair or replace back door opener relay power supply circuit.

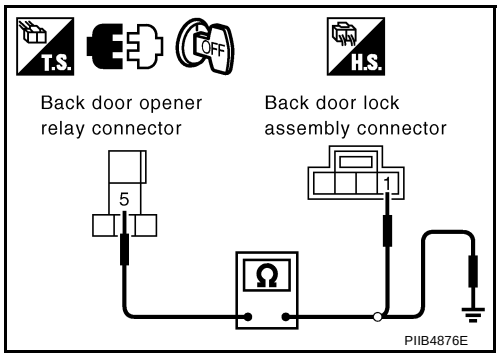
11. CHECK BACK DOOR OPENER ACTUATOR CIRCUIT

1. Disconnect back door lock assembly connector.
2. Check continuity between back door relay connector B36 terminal 5 and back door lock assembly connector D111 terminal 1.

5 (G/R) - 1 (G/R) : Continuity should exist.

3. Check continuity between back door relay connector B36 terminal 5 and ground.

5 (G/R) - Ground : Continuity should not exist.



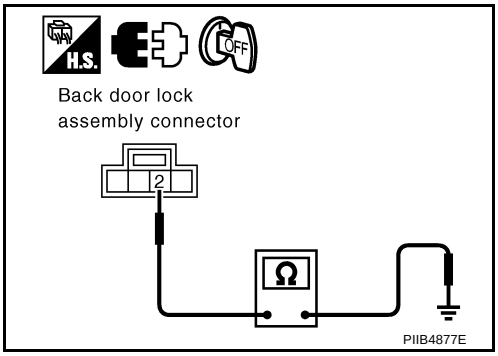
OK or NG

OK >> GO TO 12.
NG >> Repair or replace harness.

12. CHECK BACK DOOR OPENER ACTUATOR GROUND CIRCUIT

Check continuity between back door lock assembly connector D111 terminals 2 and ground.

2 (B) - Ground : Continuity should exist.



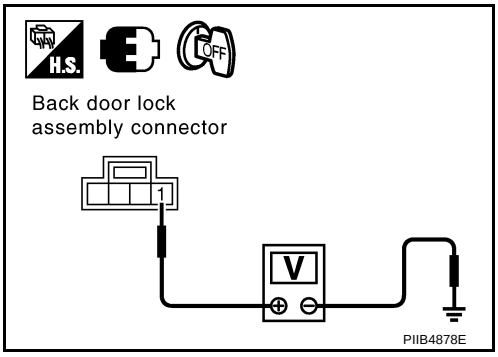
OK or NG

OK >> GO TO 13.
NG >> Repair or replace harness.

13. CHECK BACK LOCK OPERATE SIGNAL

1. Connect back door lock actuator connector and back door opener relay.
2. Check voltage between back door lock assembly connector and ground.

Connector	Terminal (Wire color)		Condition		Voltage [V] (Approx.)
	(+)	(–)			
D111	1 (G/R)	Ground	Back door opener switch	: ON	0 → Battery voltage → 0
				: OFF	5



OK or NG

OK >> Replace back door lock assembly.
NG >> Check the condition of the harness and the connector.

BACK DOOR DOSE NOT OPEN WITH BACK DOOR REQUEST SWITCH

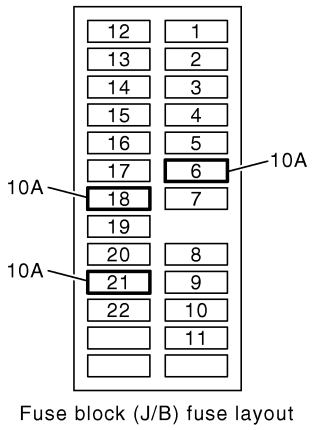
Refer to BL-121, "Trouble Diagnosis Procedure"

VEHICLE SECURITY (THEFT WARNING) SYSTEM

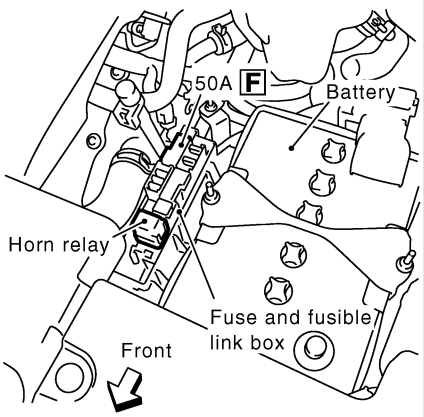
PFP:28491

Component Parts and Harness Connector Location

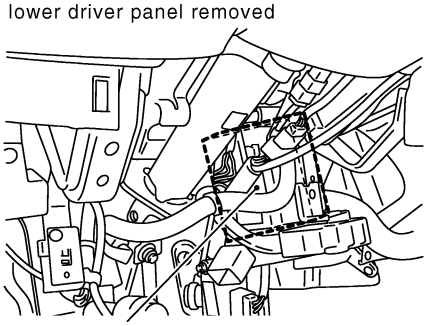
NIS00194



Fuse block (J/B) fuse layout

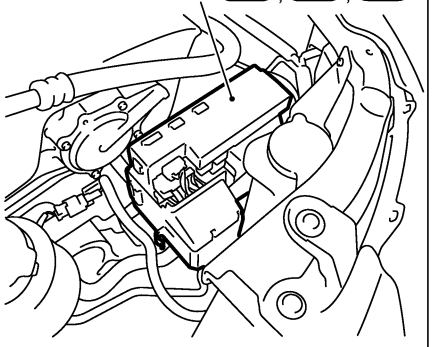


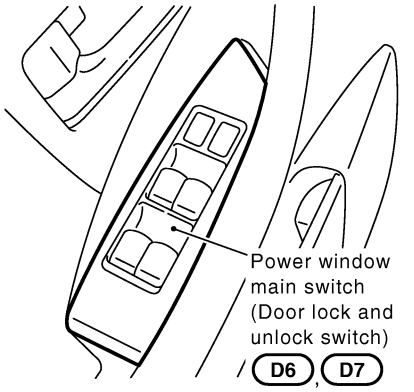
View with the instrument lower driver panel removed



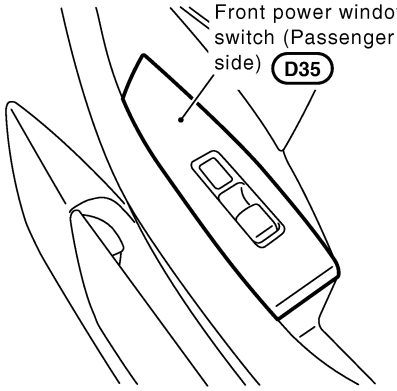
BCM (Body control module) M34, M35, M36

IPDM E/R E7, E8, E9

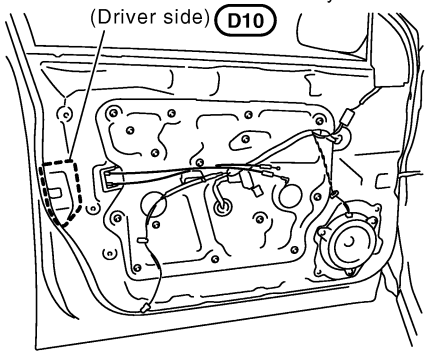




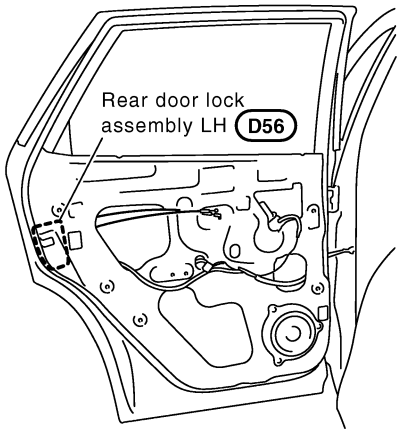
Front power window switch (Passenger side) D35



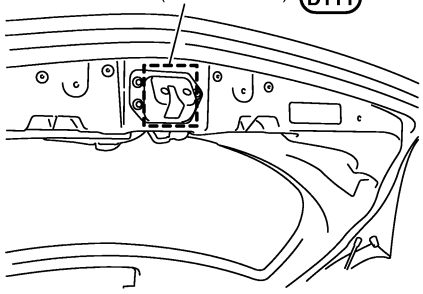
Front door lock assembly (Driver side) D10

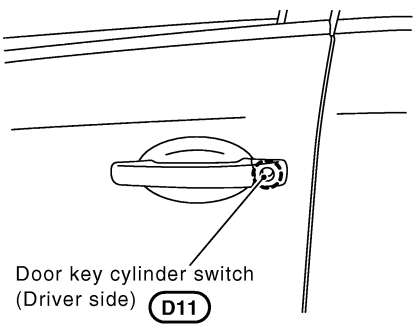


Rear door lock assembly LH D56

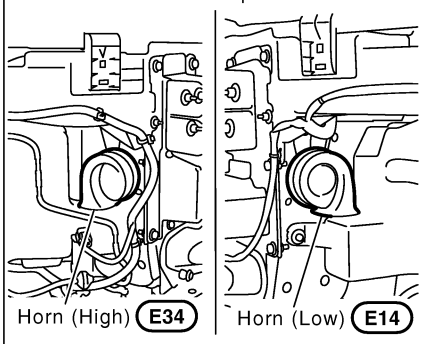


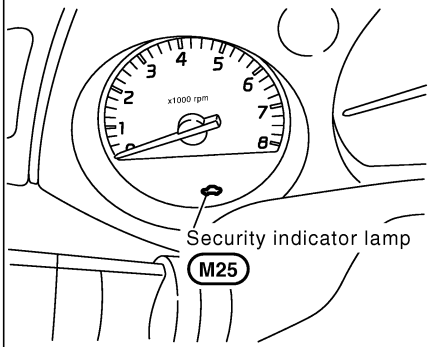
Back door lock assembly (Door switch) D111



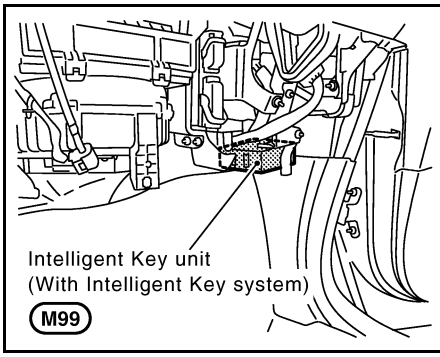


View with the front bumper fascia removed





PIIB4527E



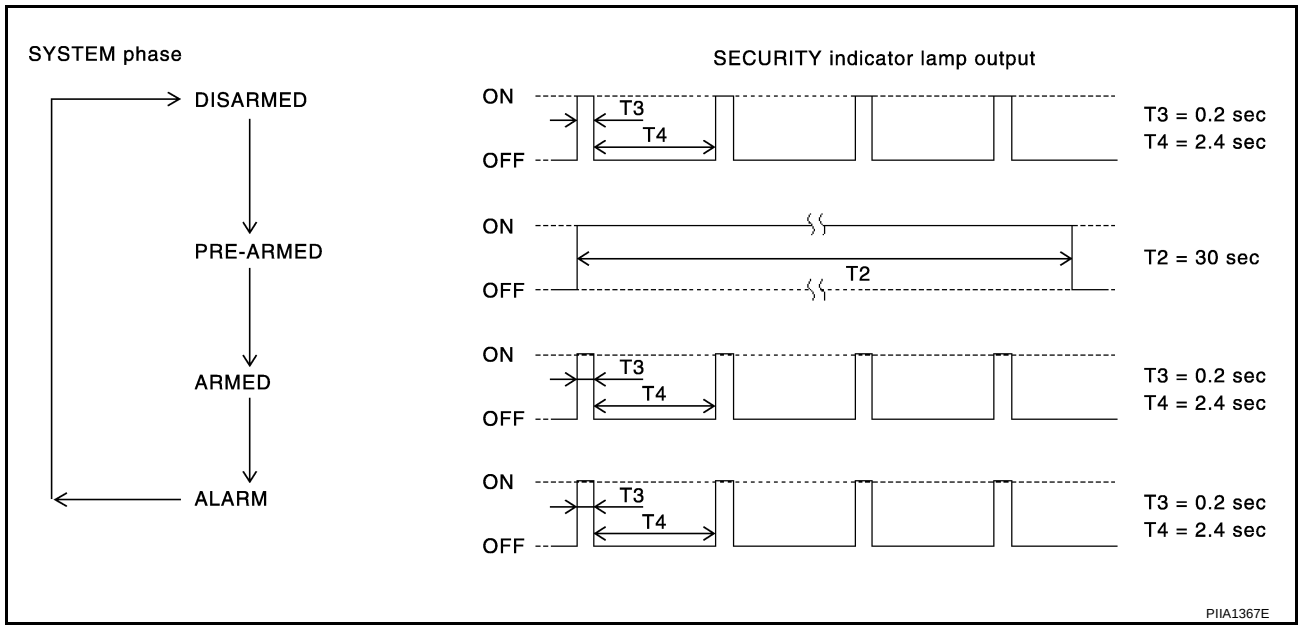
PIIB8712E

System Description

NIS00195

DESCRIPTION

Operation Flow



Setting the Vehicle Security System

Initial condition

- Ignition switch is in OFF position.

Disarmed phase

- When doors or back door is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.
- When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.

Pre-armed phase and armed phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the “pre-armed” phase. (The security indicator lamp illuminates.)

1. BCM receives LOCK signal from front door key cylinder switch or key fob after, back door and all doors are closed.
2. Back door and all doors are closed after front doors are locked by key or door lock and unlock switch. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the “armed” phase.

Canceling the Set Vehicle Security System

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

1. Unlock the doors with the key or the key fob.
2. Turn ignition switch “ON” or “ACC” position.

Canceling the Alarm Operation of the Vehicle Security System

When unlocking the door with the key or key fob the alarm operation is canceled.

Activating the Alarm Operation of the Vehicle Security System

Make sure the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.)
When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

1. Back door or any door is opened during armed phase.
2. Disconnecting and connecting the battery connector before canceling armed phase.

POWER SUPPLY AND GROUND

Power is supplied at all times

- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to combination meter (security indicator lamp) terminal 21.

Power is supplied at all times

- through 50A fusible link (letter **F** , located in the fuse and fusible link box)
- to BCM terminal 55.
- through 10A fuse [No. 18, located in the fuse block (J/B)]
- to BCM terminal 42

When ignition switch is ACC or ON position, power is supplied

- through 10A fuse [No. 6, located in the fuse block (J/B)]
- to BCM terminal 11.

Ground is supplied

- to BCM terminal 52
- through body grounds E13, E26 and M28.

INITIAL CONDITION TO ACTIVATE THE SYSTEM

The operation of the vehicle security system is controlled by the doors and back door.
To activate the vehicle security system, BCM must receive signals indicating the doors and back door are closed and the doors are locked by key fob.
When a door is open, BCM terminals 12, 13, 62 or 63 receives a ground signal from each door switch.
When front door LH is unlocked by power window main switch (door lock and unlock switch), BCM terminal 22 receives a signal from terminal 14 of power window main switch.
When front door RH is unlocked by power window switch (passenger side) (door lock and unlock switch), BCM terminal 22 receives a signal from terminal 16 of front power window switch (passenger side).
When front key cylinder switch is in UNLOCK position, ground is supplied

- to power window main switch terminal 6
- through front key cylinder terminals 6 and 5 (without Intelligent Key)
- through door key cylinder switch terminals 3 and 2 (with Intelligent Key)
- through body grounds M14 and M78.

Then power window main switch send unlock signal to BCM.
When the back door is open, BCM terminal 58 receives a ground signal

- through back door lock assembly terminal 3 and 4
- through body grounds B7 and B20.

VEHICLE SECURITY SYSTEM ALARM OPERATION

The vehicle security system is triggered by

- opening a door
- opening the back door
- detection of battery disconnect and connect.

The vehicle security system will be triggered once the system is in armed phase,
When BCM receives a ground signal at terminals 12, 13, 62 and 63 receives a signal from each door switch, 58 (back door switch).
Power is supplied at all times

- to horn relay terminal 2
- through 15A fuse (No. 32, located in the fuse and fusible link box).

When the vehicle security system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.
When headlamp high relay (with built-in IPDM E/R) and horn relay are energized and then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).
The headlamps flash and the horn sounds intermittently.
The alarm automatically turns off after 50 seconds, but will reactivate if the vehicle is tampered with again.

VEHICLE SECURITY SYSTEM DEACTIVATION

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

- from terminal 14 of the power window main switch (door lock and unlock switch).

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

PANIC ALARM OPERATION

Remote control entry system may or may not operate vehicle security system (horn and headlamps) as required.
When the remote control entry system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.
When headlamp relay (with built-in IPDM E/R) and horn relay are energized and then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).
The headlamp flashes and the horn sounds intermittently.
The alarm automatically turns off after 30 seconds or when BCM receives any signal from key fob.

CAN Communication System Description

NIS00196

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

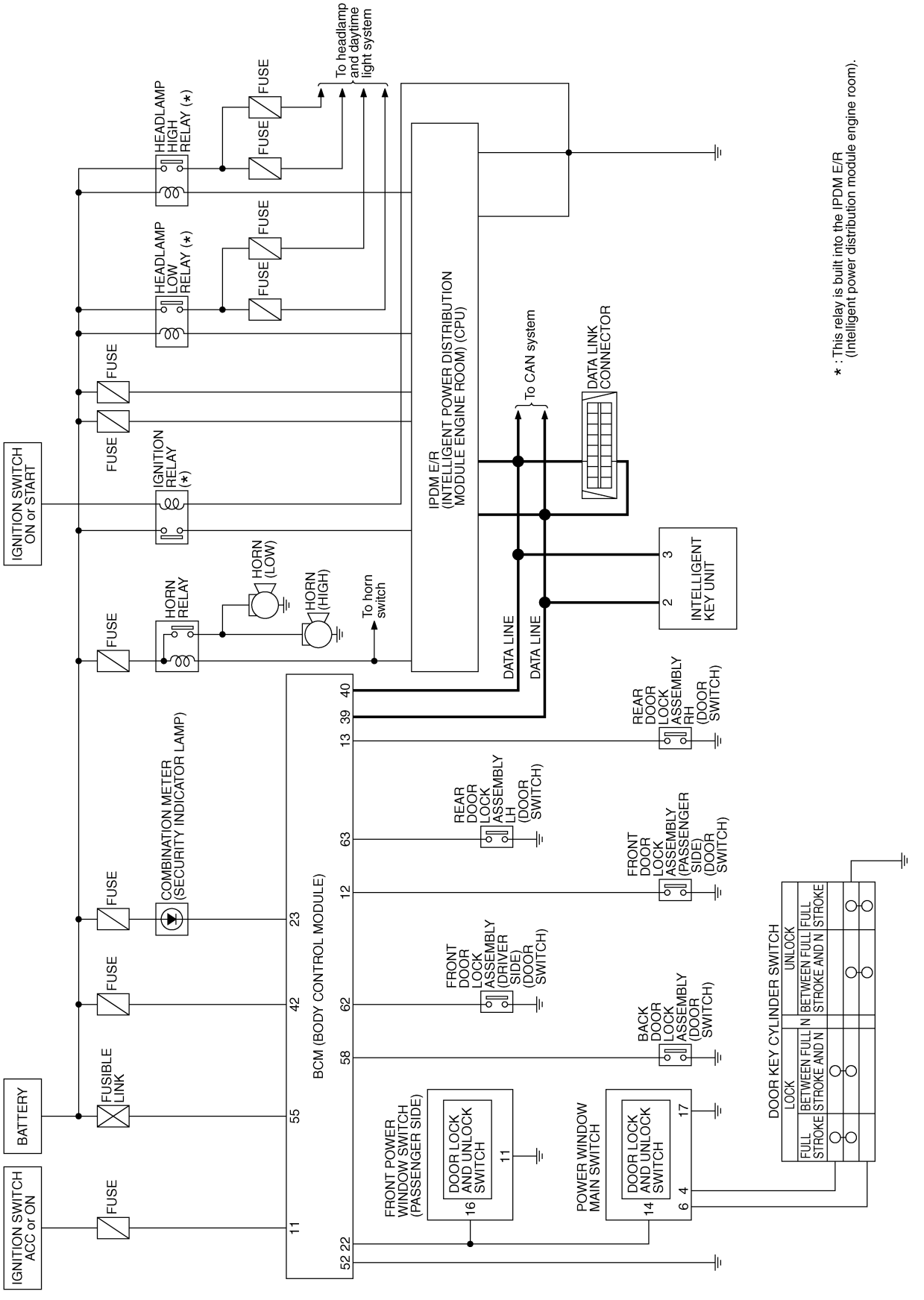
CAN Communication Unit

NIS00197

Refer to LAN-49, "CAN System Specification Chart" .

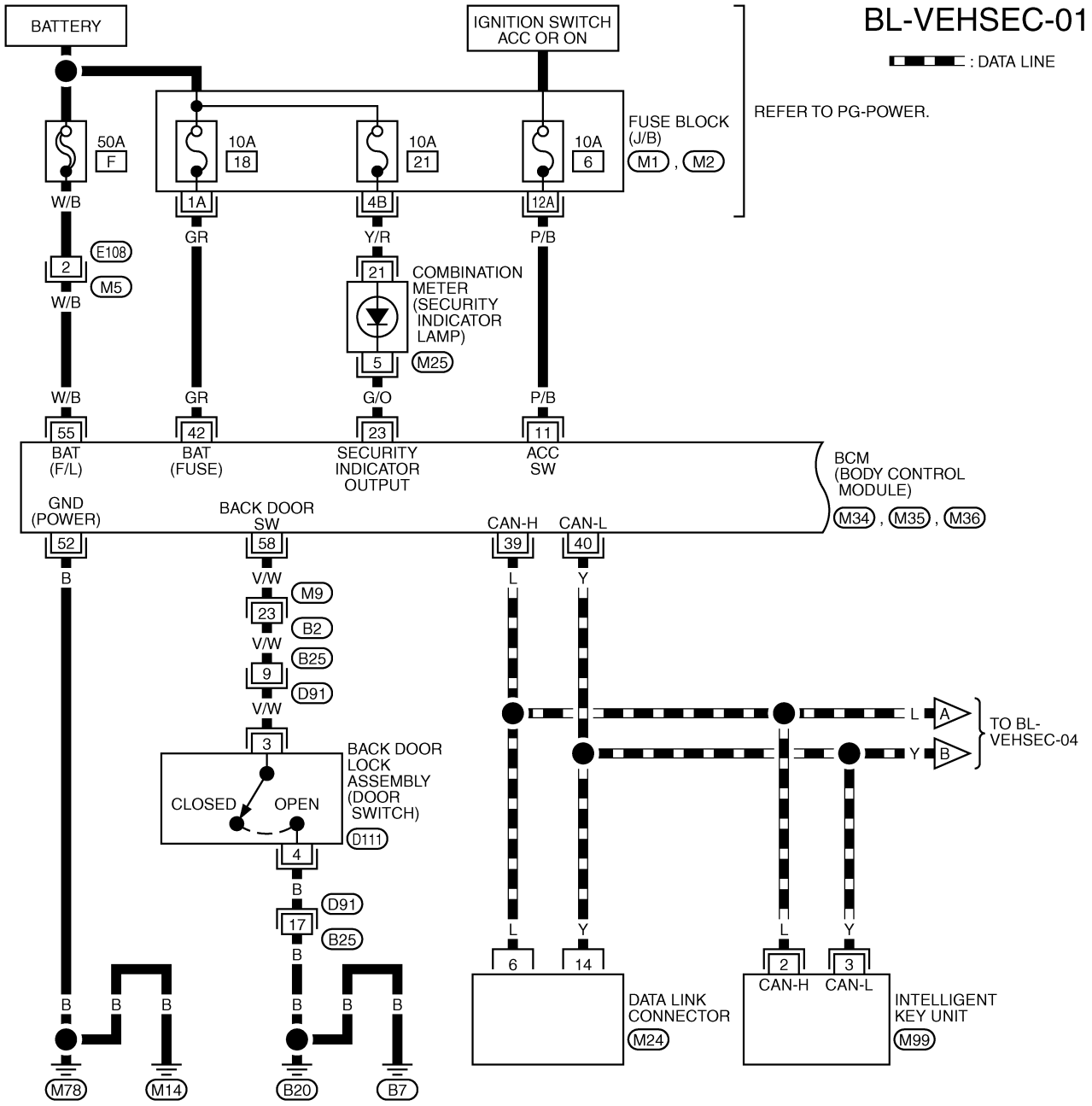
Schematic / With Intelligent Key

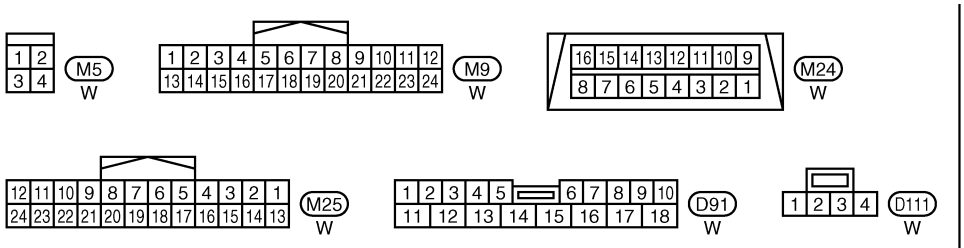
NIS00198



Wiring Diagram — VEHSEC — / With Intelligent Key

NIS00199

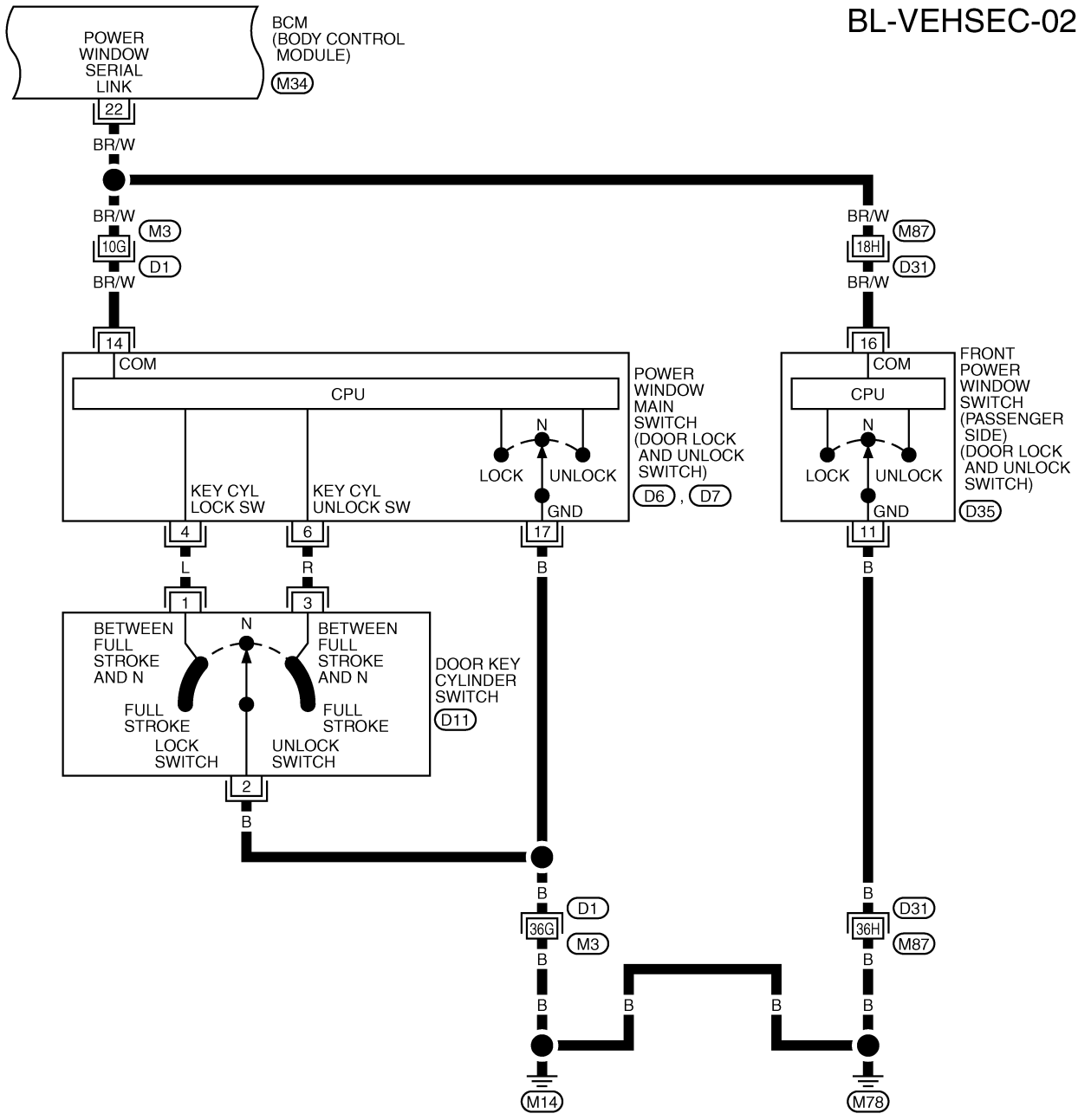


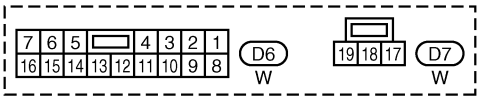


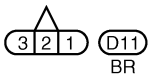
REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)
M34, M35, M36, M99 -ELECTRICAL UNITS

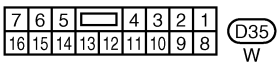
TIWB0787E

BL-VEHSEC-02









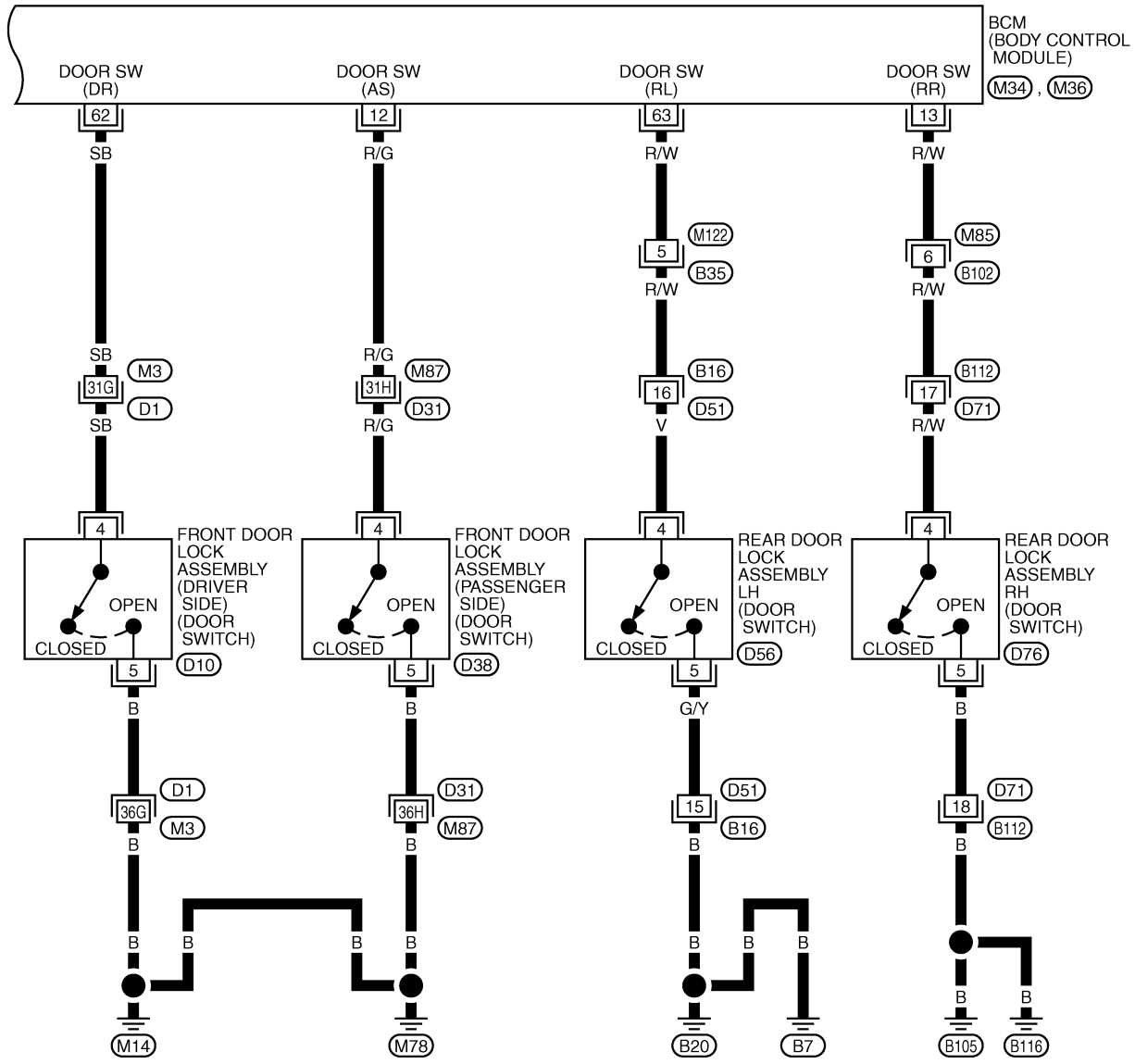
REFER TO THE FOLLOWING.

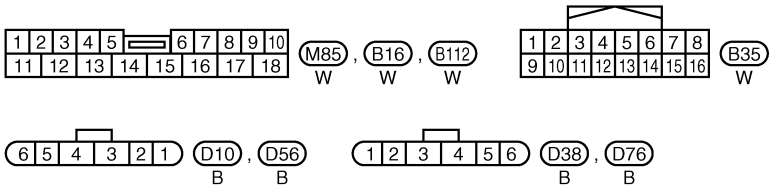
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

M34 -ELECTRICAL UNITS

TIWB0788E

BL-VEHSEC-03





REFER TO THE FOLLOWING.

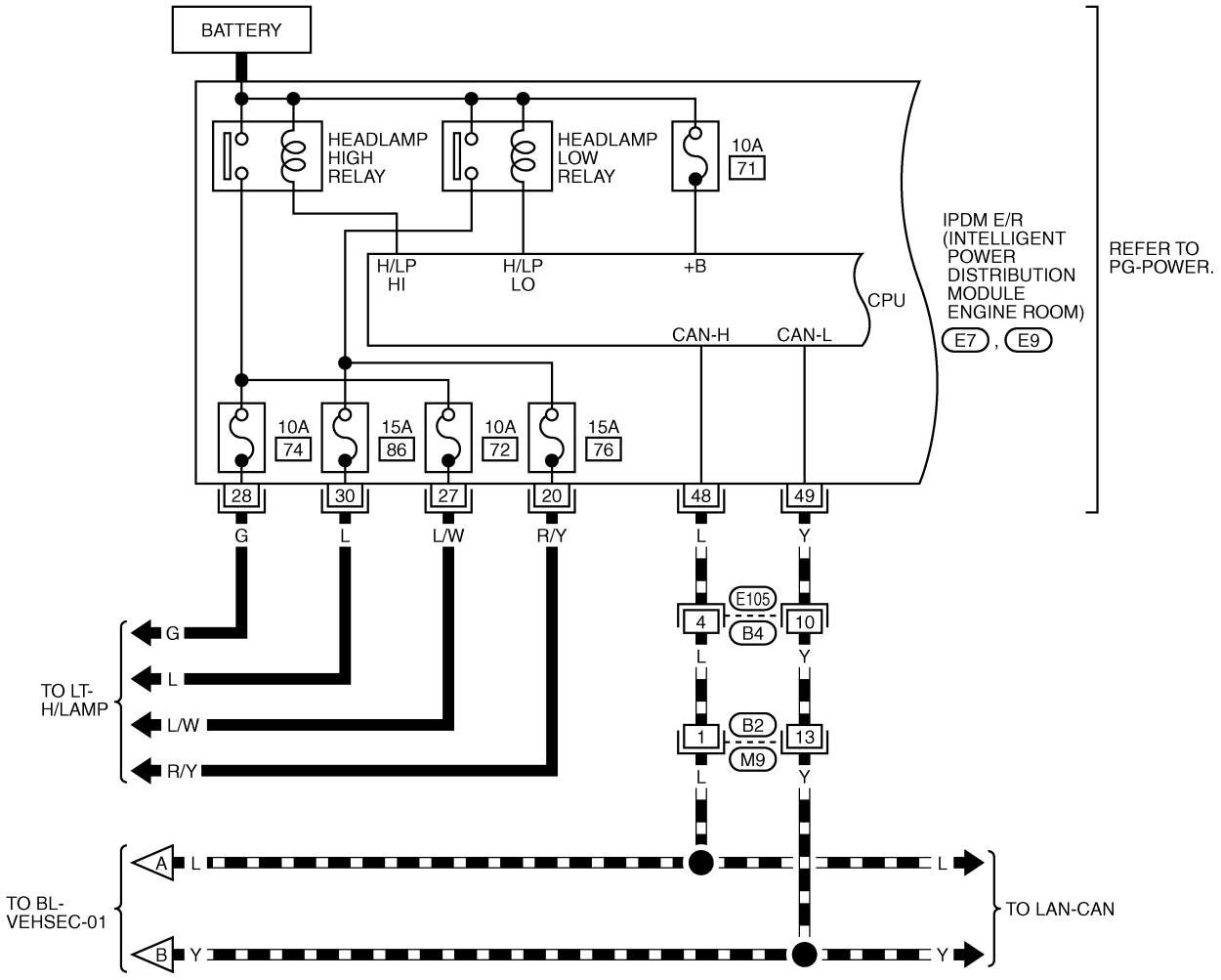
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

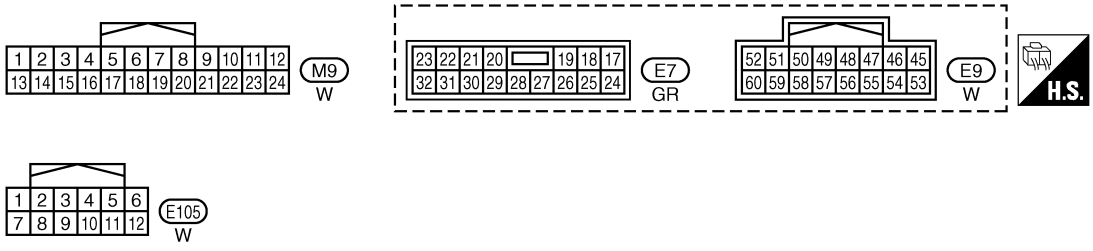
M34 , M36 -ELECTRICAL UNITS

TIWB0169E

BL-VEHSEC-04

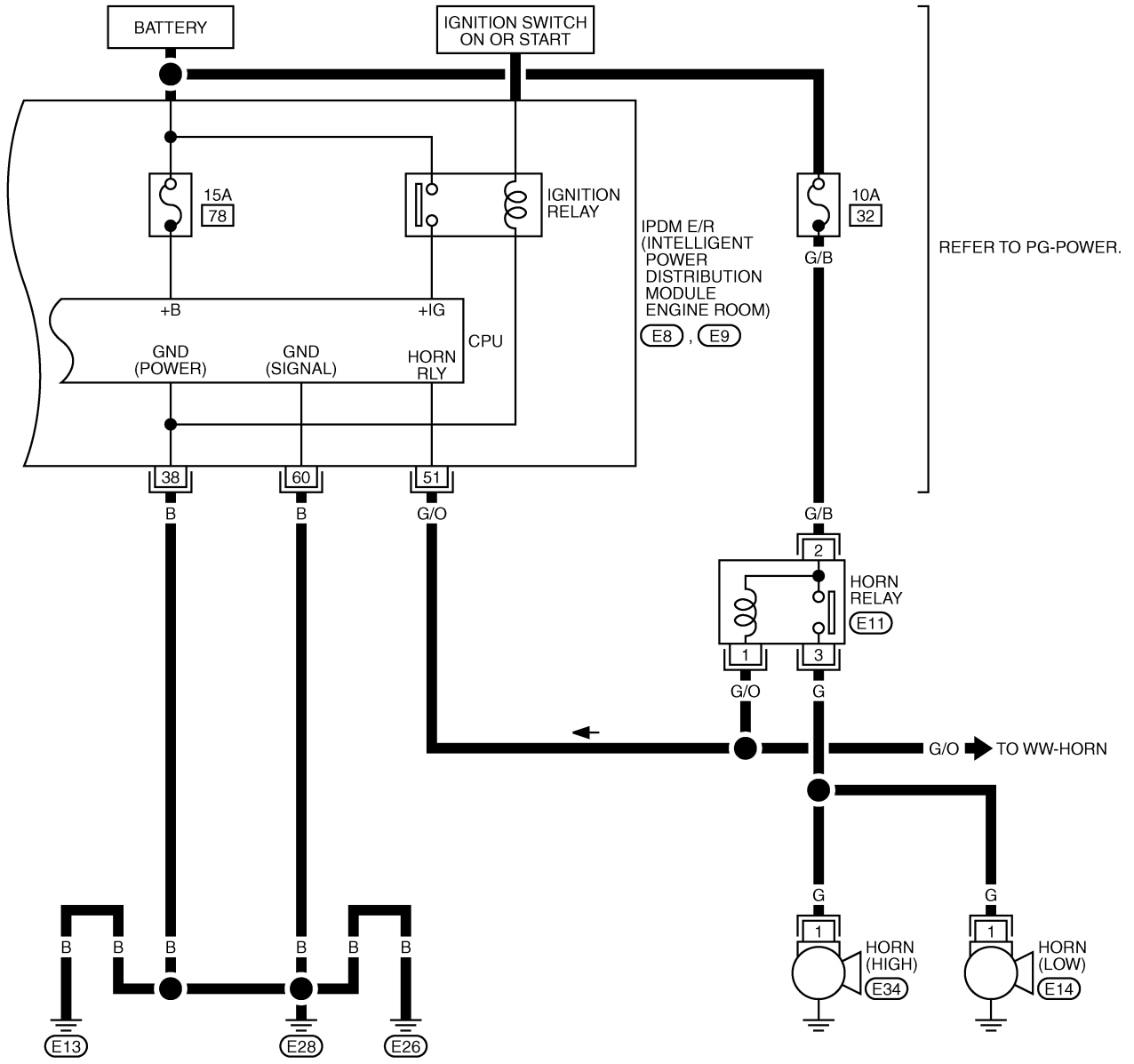
: DATA LINE

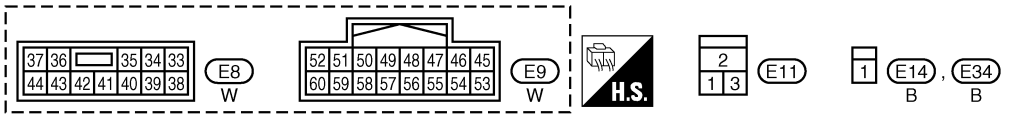




TIWB0170E

BL-VEHSEC-05

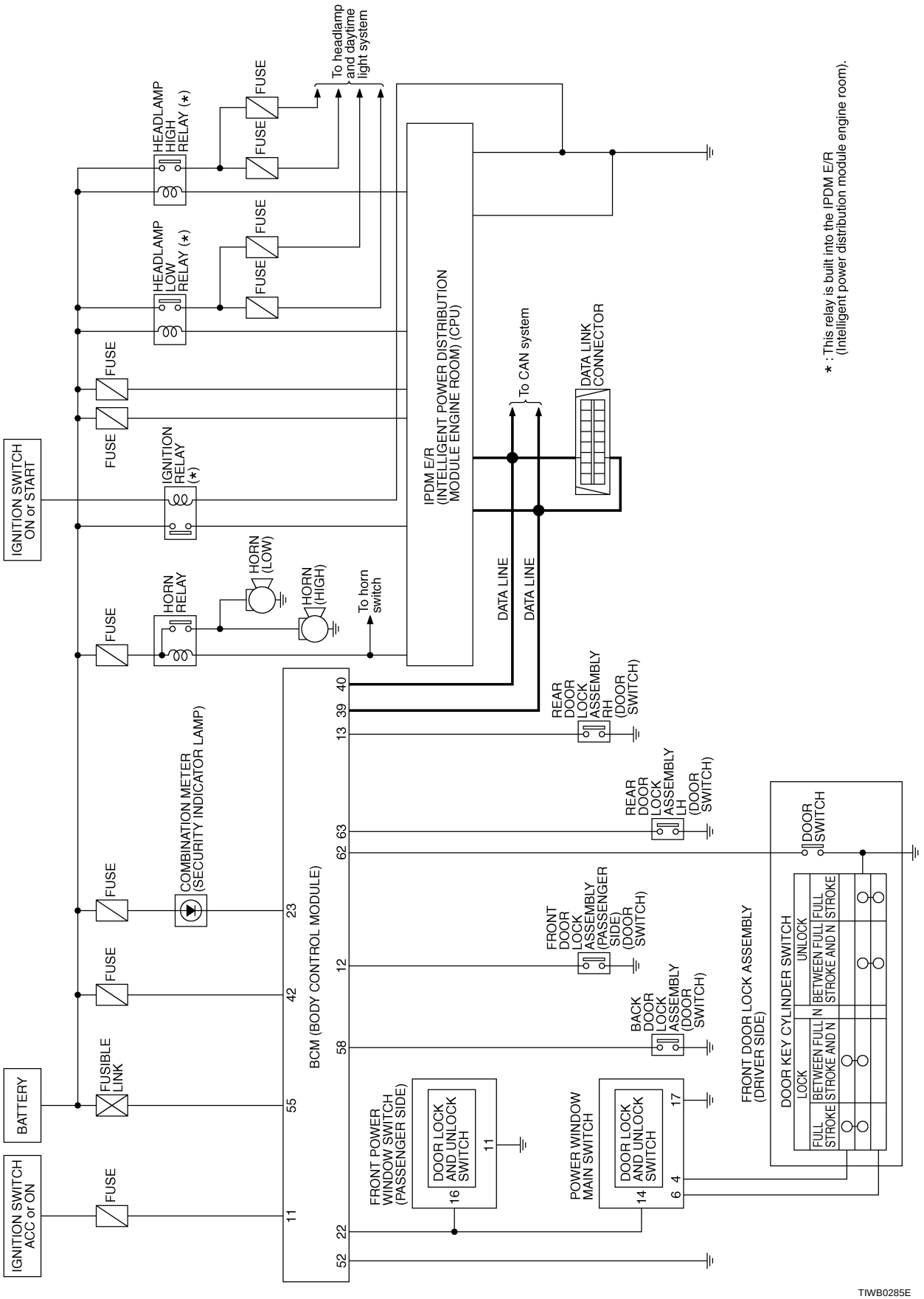




TIWB0789E

Schematic / Without Intelligent Key

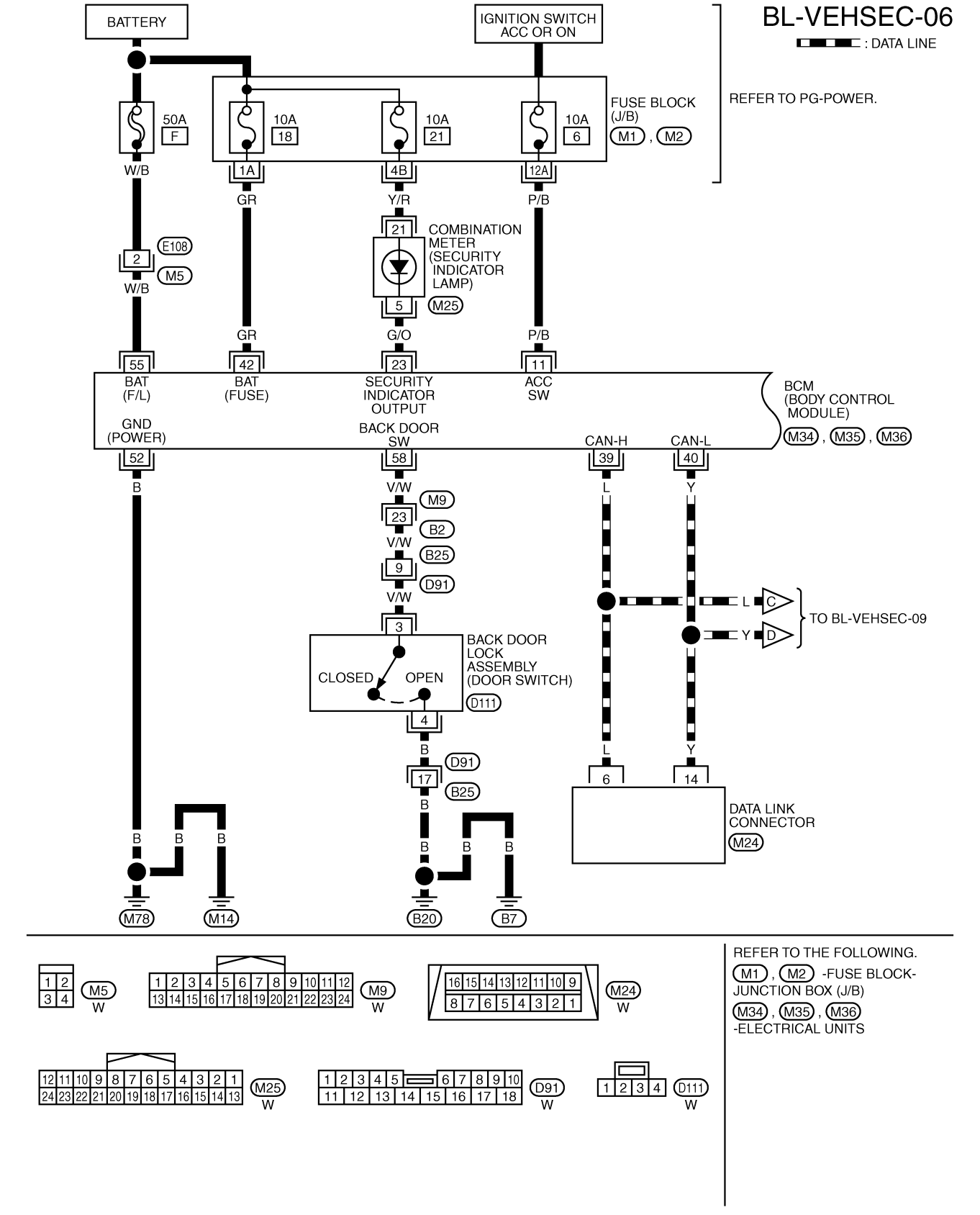
NIS0019A



TIWB0285E

Wiring Diagram — VEHSEC — / Without Intelligent Key

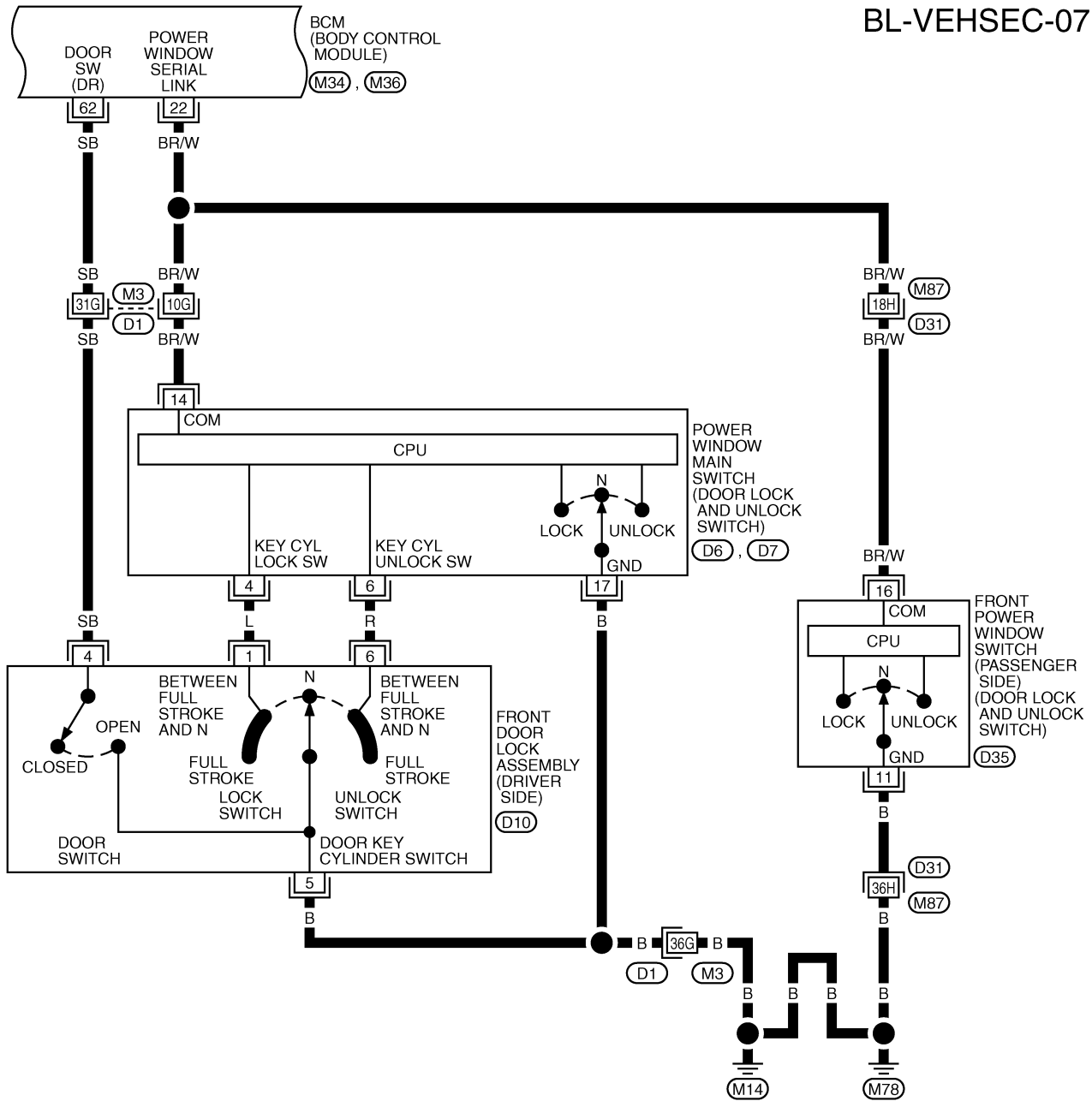
NIS0019B

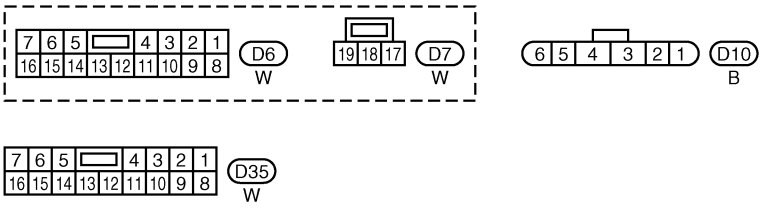


REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)
M34, M35, M36 -ELECTRICAL UNITS

TIWB0790E

BL-VEHSEC-07

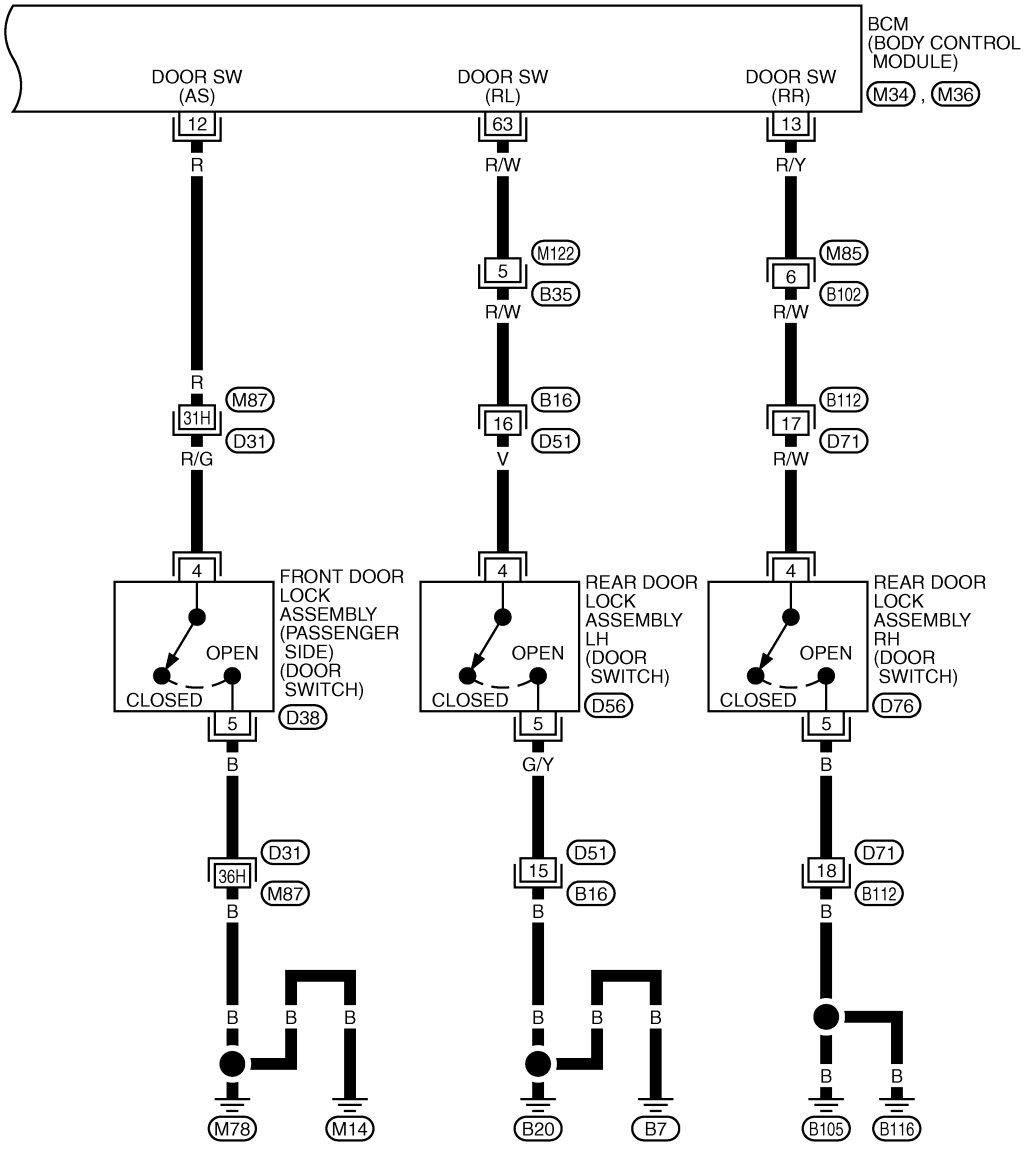


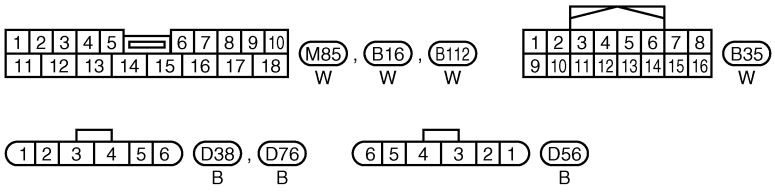


REFER TO THE FOLLOWING.
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)
M34 , M36 -ELECTRICAL UNITS

TIWB0287E

BL-VEHSEC-08





REFER TO THE FOLLOWING.

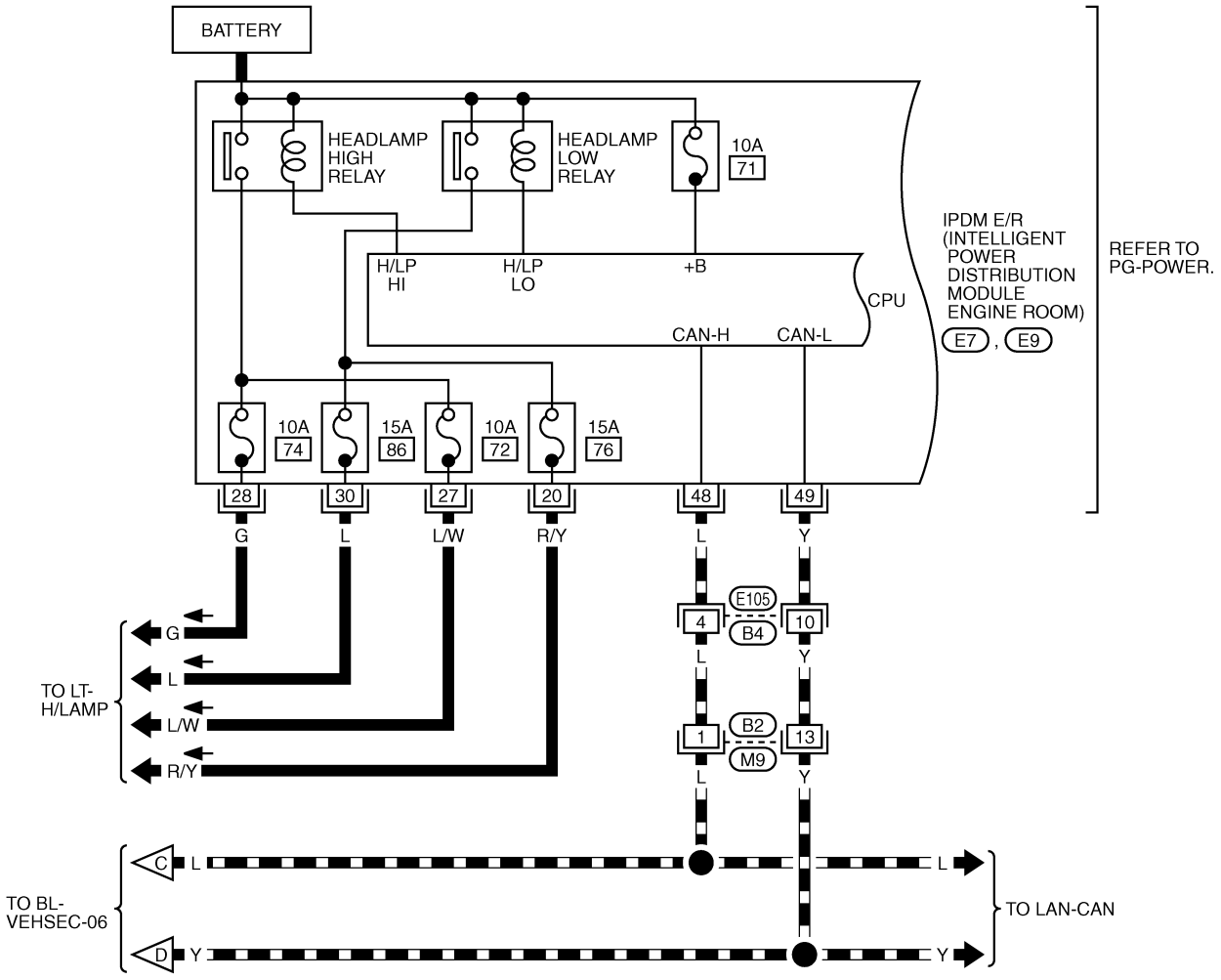
D31 -SUPER MULTIPLE JUNCTION (SMJ)

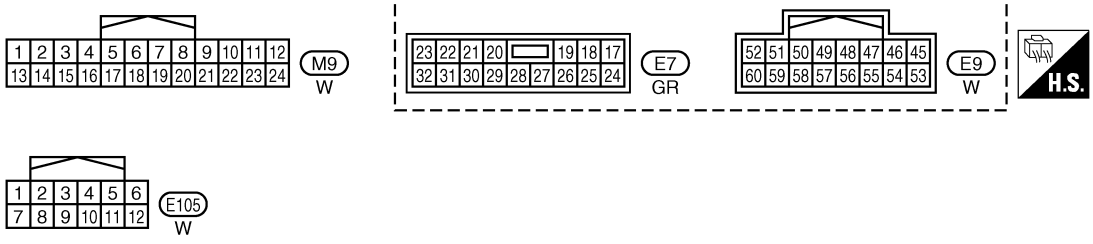
M34 , M36 -ELECTRICAL UNITS

TIWB0288E

BL-VEHSEC-09

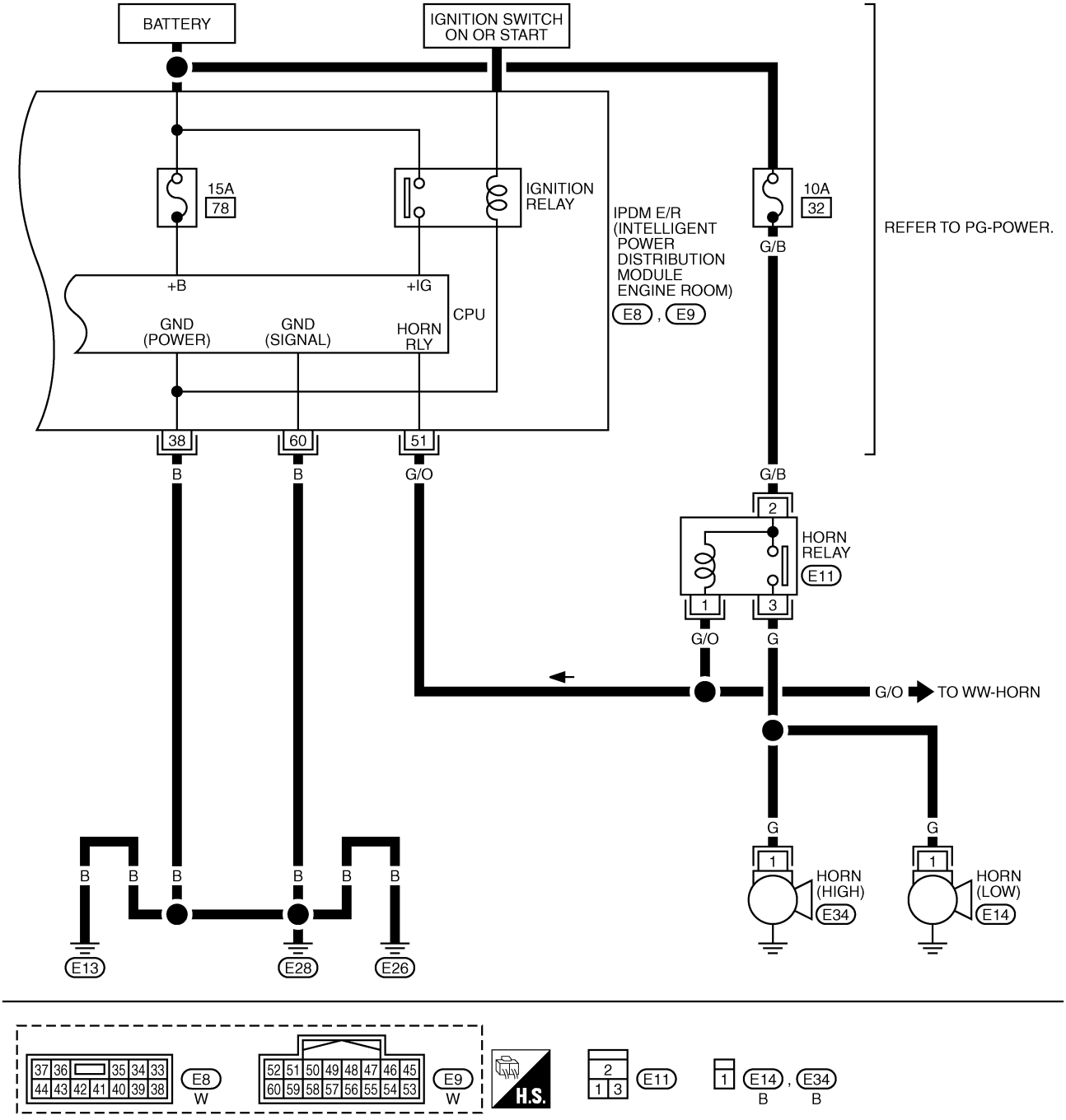
: DATA LINE





TIWB0289E

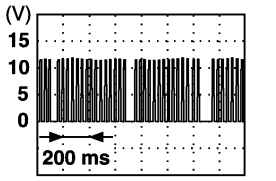
BL-VEHSEC-10



TIWB0791E

Terminals and Reference Value for BCM

NIS0019C

TER-MINAL	WIRE COLOR	ITEM	Signal input/ output	CONDITION	VOLTAGE [V] (Approx.)
11	P/B	Ignition switch (ACC)	Input	Ignition switch (ACC position)	Battery voltage
12	R R/G*	Door switch (Passenger side)	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
13	R/Y R/W*	Rear door switch RH	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
22	BR/W	Power window switch (Serial link)	—	Ignition switch (ON or power window timer operating)	 PIIA2344J
23	G/O	Combination meter (security indicator lamp)	Output	Goes off → Illuminates	Battery voltage → 0
39	L	CAN-H	Input/ output	—	—
40	Y	CAN-L	Input/ output	—	—
42	GR	Power source	Input	—	Battery voltage
52	B	Ground	—	—	0
55	W/B	Power source (Fusible link)	Input	—	Battery voltage
58	V/W	Back door switch	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
62	SB	Door switch (Driver side)	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage
63	R/W	Rear door switch LH	Input	ON (Door is opened) → OFF (Door is closed)	0 → Battery voltage

* : with Intelligent Key

Terminals and Reference Value for IPDM E/R

NIS0019D

TERMI-NAL	WIRE COLOR	ITEM	Signal input/out-put	CONDITION	VOLTAGE [V] (Approx.)
38	B	Ground	—	—	0
48	L	CAN-H	Input/out-put	—	—
49	Y	CAN-L	Input/out-put	—	—
51	G/O	Horn relay	Output	ON → OFF	0 → Battery voltage
60	B	Ground	—	—	0

CONSULT-II Function

NIS0019E

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

BCM diagnosis position	Inspection items and diagnosis mode	Description
THEFT ALM	DATA MONITOR	Displays the input data to BCM in real time.
	ACTIVE TEST	Gives a drive signal to a load to check the operation.
	WORK SUPPORT	Changes setting of each function.

CONSULT-II START PROCEDURE

Refer to GI-37, "CONSULT-II Start Procedure" .

CONSULT-II APPLICATION ITEM

Work Support

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

Data Monitor

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from key fob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from key fob.
KEYLESS TRUNK	Indicates [ON/OFF] condition of trunk opener signal from key fob.
TRUNK OPNR SW	This is displayed even when it is not equipped.
TRUNK CYL SW	This is displayed even when it is not equipped.
TRUNK OPN MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.
HOOD SW	Indicates [ON/OFF] condition of hood switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
BACK DOOR SW	This is displayed even when it is not equipped.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from front door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.

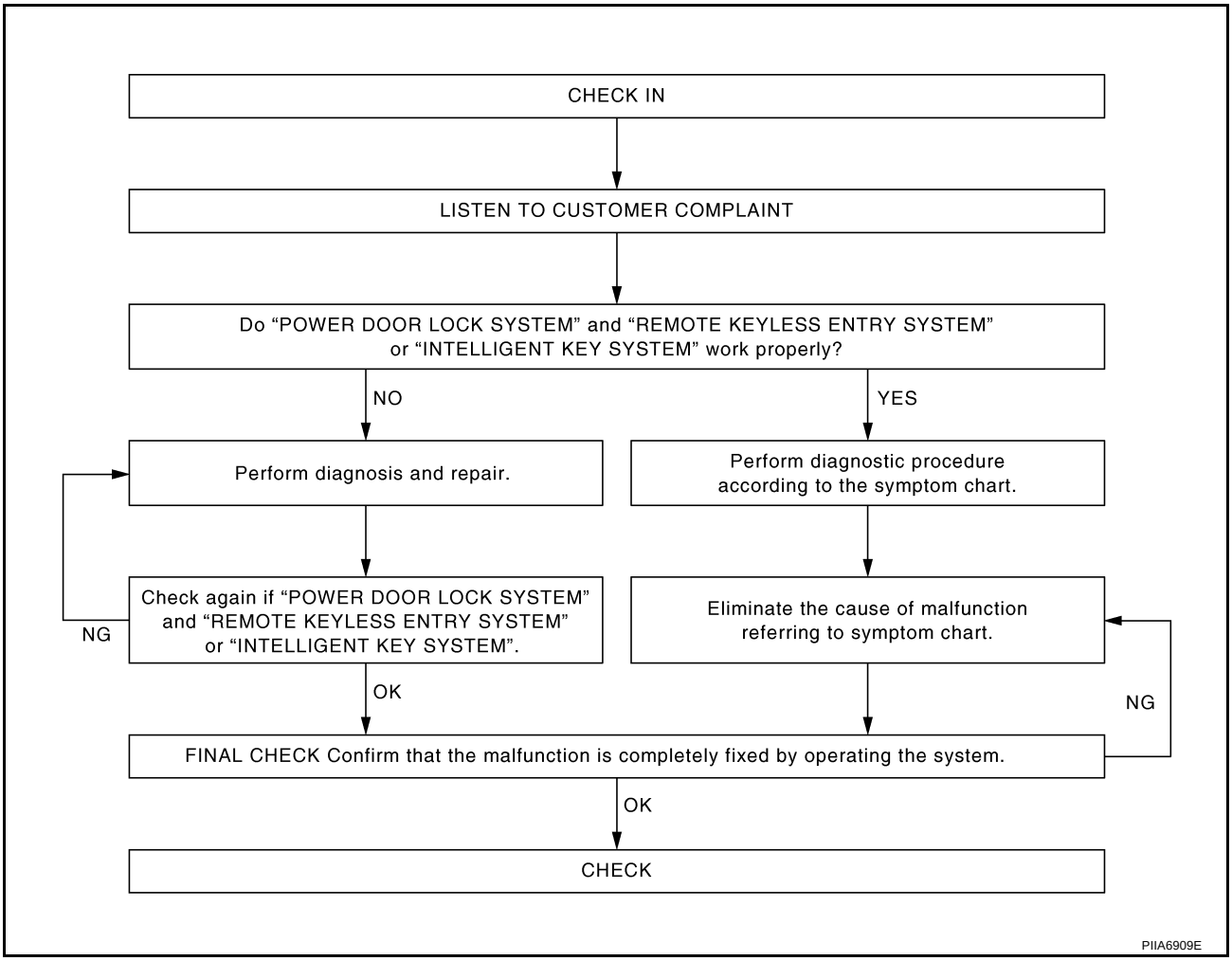
Active Test

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

Trouble Diagnosis

NIS0019F

WORK FLOW

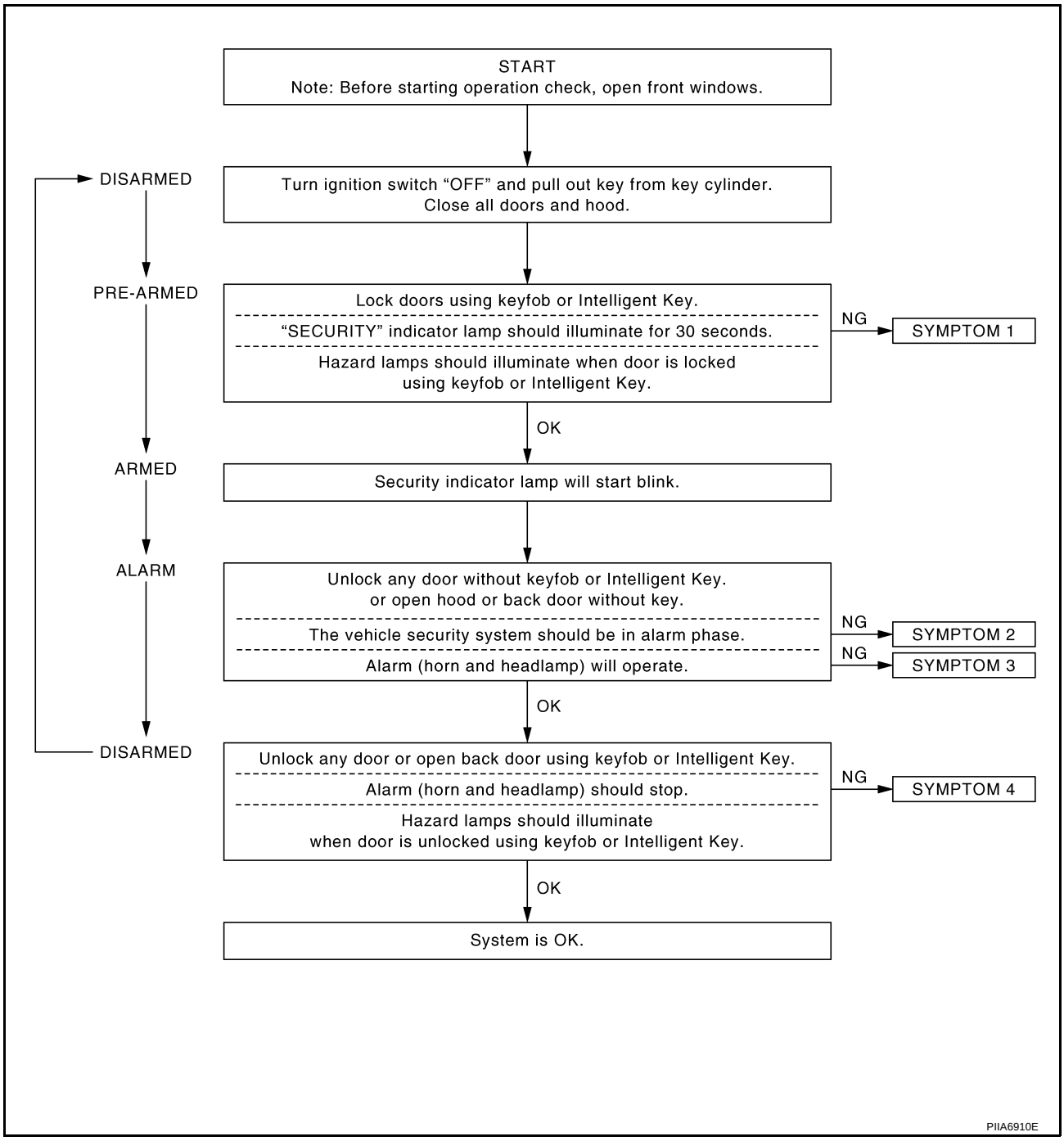


- “POWER DOOR LOCK SYSTEM” Diagnosis; refer to BL-41, "Work Flow" .
- “REMOTE CONTROL SYSTEM” Diagnosis; refer to BL-69, "Work Flow" .
- “INTELLIGENT KEY SYSTEM” Diagnosis; refer to BL-122, "WORK FLOW" .

Preliminary Check

NIS0019G

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



After performing preliminary check, go to symptom chart. Refer to BL-225, "Symptom Chart" .

Symptom Chart

NIS0019H

PROCEDURE / SYMPTOM			Diagnostic procedure	Reference page
1	Vehicle security system cannot be set by ····	Door switch	Diagnostic Procedure 1 (Check door and back door switch)	BL-226
		Lock/unlock switch	Diagnostic Procedure 6 (Check door lock/unlock switch)	BL-231
		Door outside key	Diagnostic Procedure 3 (Check door key cylinder switch)	BL-231
		Key fob	Check remote keyless entry.	BL-69
		Intelligent Key	Check Intelligent Key.	BL-127
		—	If the above systems are “OK”, replace BCM.	BCS-14
	Security indicator does not turn “ON”.		Diagnostic Procedure 2 (Check security indicator lamp)	BL-230
			If the above systems are “OK”, replace BCM.	BCS-14
2	*1 Vehicle security system does not alarm when ….	Any door is opened.	Diagnostic Procedure 1 (Check door and back door switch)	BL-226
			If the above systems are “OK”, replace BCM.	BCS-14
3	Vehicle security alarm does not activate.	Horn alarm	Diagnostic Procedure 4 (Check vehicle security horn alarm)	BL-231
			Check horn function.	WW-58
			If the above systems are “OK”, replace BCM.	BCS-14
		Headlamp alarm	Diagnostic Procedure 5 (Check headlamp alarm)	BL-231
			If the above systems are “OK”, replace BCM.	BCS-14
4	Vehicle security system cannot be canceled by ····	Door outside key	Diagnostic Procedure 3 (Check door key cylinder switch)	BL-231
			If the above systems are “OK”, check power window main switch.	GW-38
		Key fob	Check remote keyless entry function.	BL-69
			If the above systems are “OK”, replace BCM.	BCS-14
		Intelligent Key	Check Intelligent Key entry function.	BL-89
			If the above systems are “OK”, replace BCM.	BCS-14

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

Diagnostic Procedure 1

NIS0019I

1 – 1 DOOR SWITCH CHECK

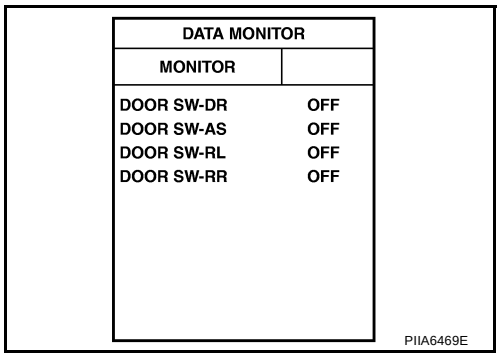
First perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, when perform the each trouble diagnosis. Refer to BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL" and "DOOR SW-RR") in "DATA MONITOR" mode with CONSULT-II.

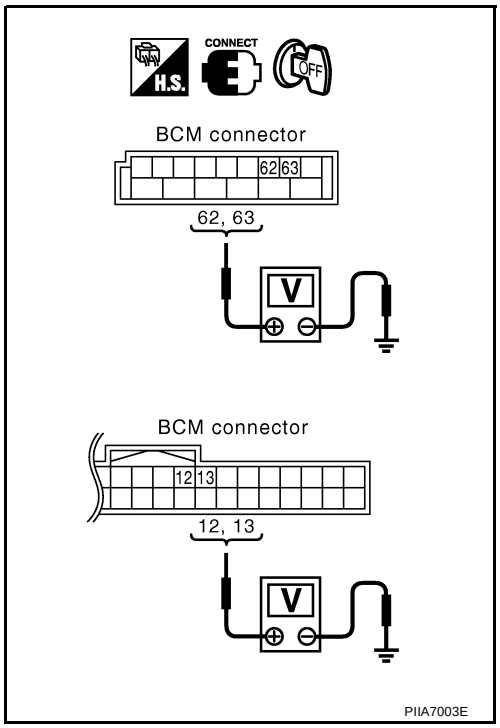
Monitor item	Condition	
DOOR SW-DR	Door is closed ↓ Door is opened	OFF ↓ ON
DOOR SW-AS		
DOOR SW-RL		
DOOR SW-RR		



Without CONSULT-II

Check voltage between and ground.

Door switch	Con-nector	Terminals (wire color) (+)	Terminals (wire color) (–)	Condition	Voltage [V] (Approx.)
Driver side	M36	62 (SB)	Ground	Door close ↓ Door open	Battery voltage ↓ 0
Rear LH		63 (R/W)			
Passenger side	M34	12 (R or R/G)			
Rear RH		13 (R/Y or R/W)			



OK or NG

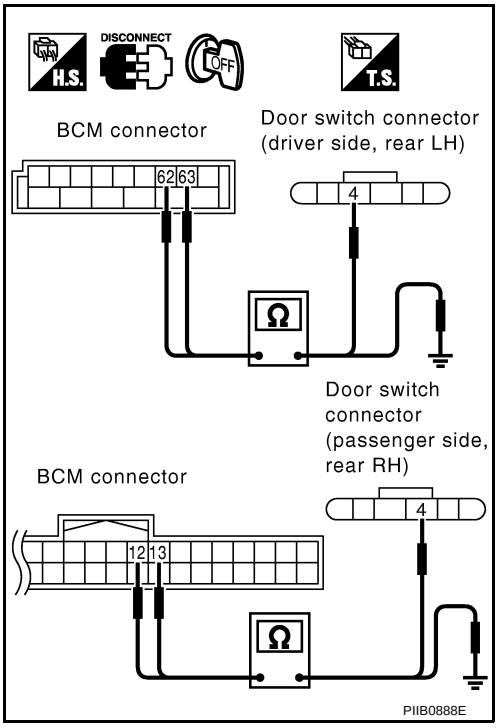
OK >> Door switch circuit is OK, and go to BL-228, "1 – 2 BACK DOOR SWITCH CHECK" .

NG >> GO TO 2.

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch and unified BCM connectors.
3. Check continuity between BCM and door switch.

Door switch	Connector	Terminal (wire color)	Connector	Terminal (wire color)	Continuity
Driver side	M36	62 (SB)	D10	4 (SB)	Yes
Rear LH		63 (R/W)	D56	4 (V)	
Passenger side	M34	12 (R or R/G)	D38	4 (R/G)	
Rear RH		13 (R/Y or R/W)	D76	4 (R/W)	



4. Check continuity between BCM.

Door switch	Connector	Terminal (wire color)		Continuity
Driver side	M36	62 (SB)	Ground	No
Rear LH		63 (R/W)		
Passenger side	M34	12 (R or R/G)		
Rear RH		13 (R/Y or R/W)		

OK or NG

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

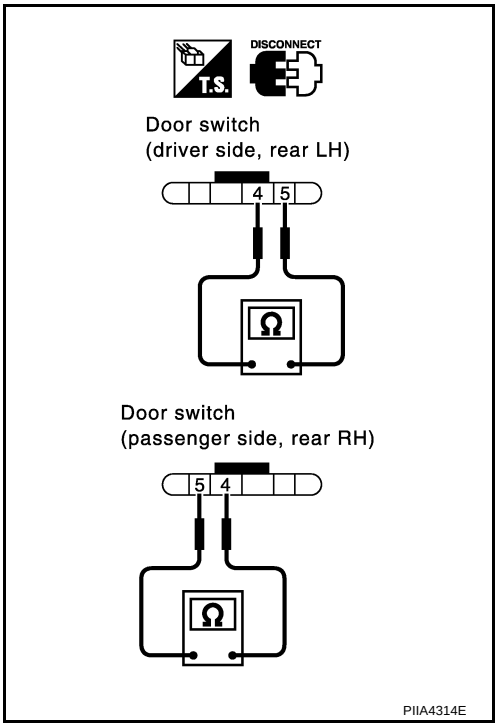
3. CHECK DOOR SWITCH

Check continuity between door switch connectors D10, D38, D56, D76 terminals 4 and 5.

Terminal		Door switch condition	Continuity
4	5	Open position	Yes
		Closed position	No

OK or NG

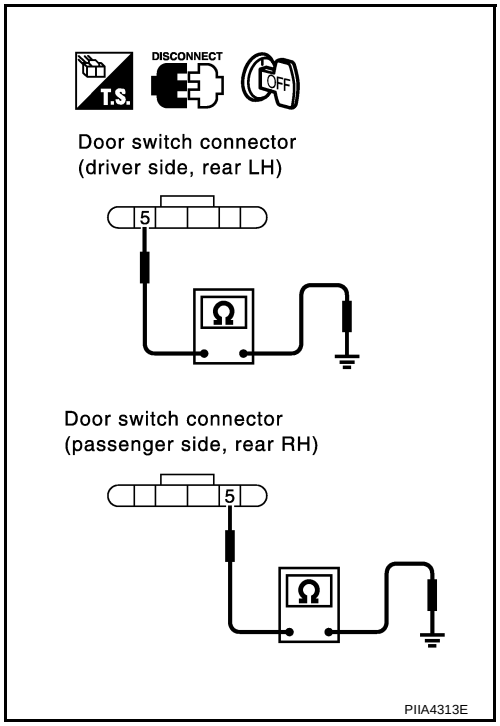
OK >> GO TO 4.
NG >> Replace door switch.



4. CHECK DOOR SWITCH GROUND HARNESS

Check continuity between door switch connectors D10, D38, D56, D76 terminal 5 and ground.

Door switch	Connector	Terminal		Continuity
Driver side	D10	5 (B)	Ground	Yes
Passenger side	D38			
Rear RH	D76			
Rear LH	D56	5 (G/Y)		



OK or NG

OK >> Door switch circuit is OK.
NG >> Repair or replace harness.

1 – 2 BACK DOOR SWITCH CHECK

1. CHECK BACK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

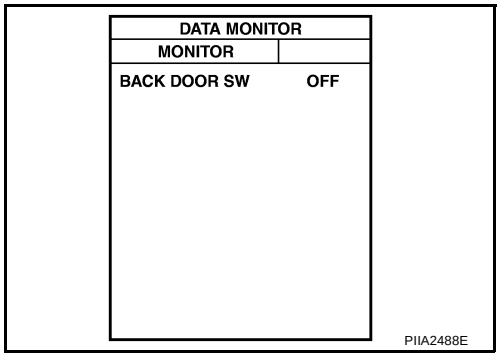
Check back door switch (“BACK DOOR SW”) in “DATA MONITOR” mode with CONSULT-II.

- When back door is open

  BACK DOOR SW : ON

- When back door is closed

  BACK DOOR SW : OFF

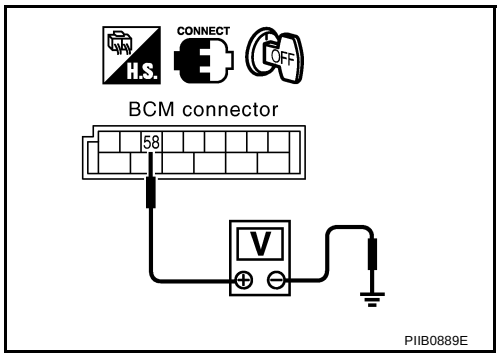


Without CONSULT-II

Check voltage between BCM connector and ground.

Item	Connector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
		(+)	(–)		
Back door switch	M34	58 (V/W)	Ground	OPEN	0
				CLOSE	Battery voltage*

*. When interior lamp battery saver control is OFF: Approx. 5V.



OK or NG

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

2. CHECK BACK DOOR SWITCH HARNESS

1. Turn ignition switch OFF.
2. Disconnect BCM and back door lock assembly connectors.
3. Check continuity between BCM connector M36 terminal 58 and back door lock assembly connector D111 terminal 3.

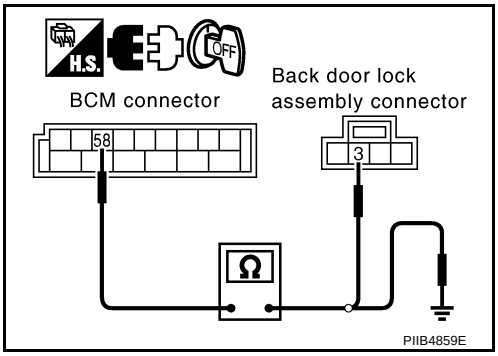
58 (V/W) – 3 (V/W) : Continuity should exist.

4. Check continuity between BCM connector M36 terminal 58 and ground.

58 (V/W) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.
NG >> Check the diode. If the diode is OK, repair or replace harness.



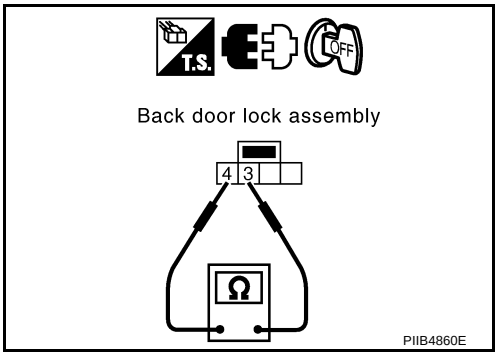
3. CHECK BACK DOOR SWITCH

Check continuity between back door lock assembly terminals 3 and 4.

Terminal		Back door condition	Continuity
3	4	Open position	Yes
		Closed position	No

OK or NG

OK >> GO TO 4.
NG >> Replace back door lock assembly.



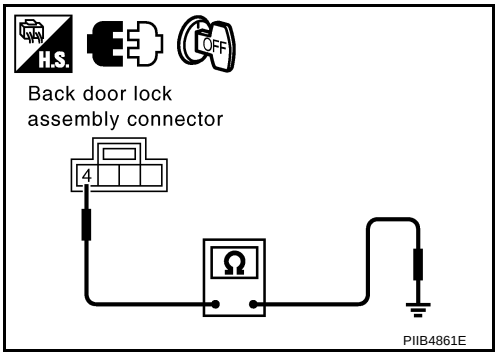
4. CHECK BACK DOOR SWITCH GROUND HARNESS

Check continuity between back door switch connector D111 terminal 4 and ground.

4 (B) - Ground : Continuity should exist.

OK or NG

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



Diagnostic Procedure 2

NIS0019J

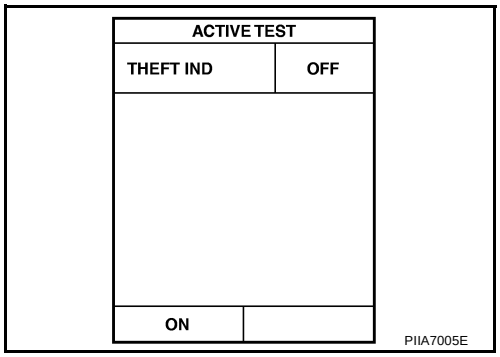
SECURITY INDICATOR LAMP CHECK

1. SECURITY INDICATOR LAMP ACTIVE TEST

With CONSULT-II

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

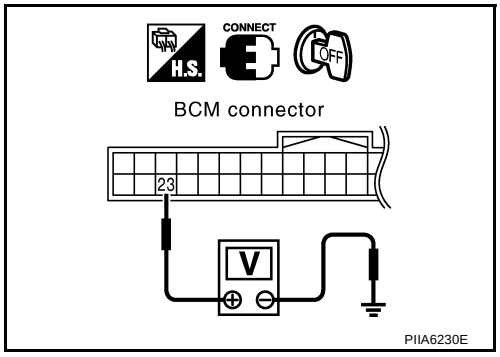
Perform operation shown on display indicator lamp should illuminate.



Without CONSULT-II

Check voltage between BCM harness connector M34 terminal 23 and ground.

23 (G/O) – Ground : Battery voltage



OK or NG

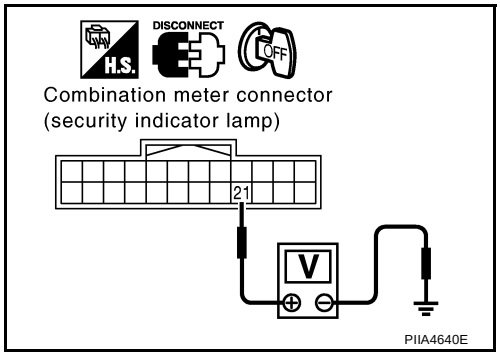
OK >> Security indicator lamp is OK.

NG >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT FOR SECURITY INDICATOR LAMP

1. Disconnect combination meter (security indicator lamp) connector.
2. Check voltage between combination meter (security indicator lamp) connector M25 terminal 21 and ground.

21 (Y/R) – Ground : Battery voltage



OK or NG

OK >> Check the following.

- Harness for open or short between combination meter (security indicator lamp) and BCM.
- Indicator lamp condition

NG >> Check the following.

- 10A fuse [No. 21, located in fuse block (J/B)]
- Harness for open or short between security indicator lamp and fuse

Diagnostic Procedure 3

NIS0019K

FRONT DOOR KEY CYLINDER SWITCH CHECK

1. CHECK FRONT DOOR KEY CYLINDER SWITCH DRIVER SIDE OPERATION

Do doors lock/unlock when using the key?

OK or NG

OK >> Front door key cylinder switch operation is OK.
NG >> Check door key cylinder switch circuit. Refer to BL-53, "Check Door Key Cylinder Switch / Without Intelligent Key System" or BL-54, "Check Door Key Cylinder Switch / With Intelligent Key System" .

Diagnostic Procedure 4

NIS0019L

VEHICLE SECURITY HORN ALARM CHECK

First perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, when perform the each trouble diagnosis. Refer to BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

1. CHECK HORN OPERATION

Check if horn sounds with horn switch.

Does horn operate?

Yes >> Check harness for open or short between IPDM E/R and horn relay.
No >> Check horn circuit. Refer to WW-58, "HORN" .

Diagnostic Procedure 5

NIS0019M

VEHICLE SECURITY HEADLAMP ALARM CHECK

1. CHECK HEADLAMP OPERATION

Does headlamp come on when turning lighting switch "ON"?

YES or NO

YES >> Headlamp alarm circuit is OK.
NO >> Check headlamp system. Refer to LT-6, "HEADLAMP - XENON TYPE -" or LT-37, "HEADLAMP -CONVENTIONAL TYPE-" .

Diagnostic Procedure 6

NIS0019N

DOOR LOCK AND UNLOCK SWITCH CHECK

1. CHECK DOOR LOCK AND UNLOCK SWITCH INPUT SIGNAL

Do doors lock/unlock when using power window main switch (door lock and unlock switch) or power window switch (passenger side) (door lock and unlock switch)?

YES or NO?

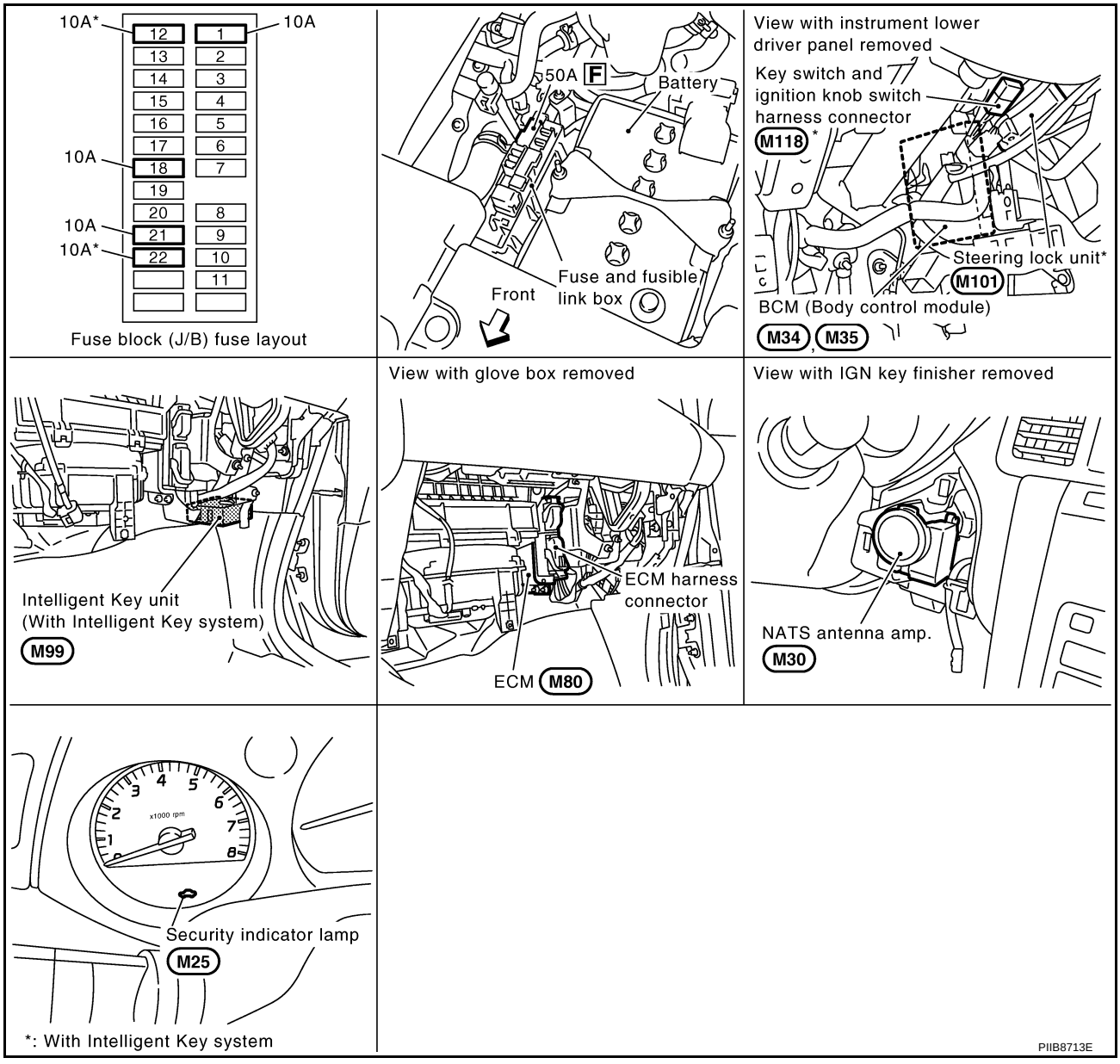
YES >> Door lock and unlock switch is OK.
NO >> Refer to BL-49, "Check Door Lock and Unlock Switch" .

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

PFP:25386

Component Parts and Harness Connector Location

NIS0019O



NOTE:
If customer reports a “NO START” condition, request ALL KEYS to be brought to an NISSAN dealer in case of a NVIS (NATS) malfunction.

System Description

NIS0019P

NVIS (Nissan Vehicle Immobilizer System-NATS) has the following immobilizer functions:

DESCRIPTION

- Engine immobilizer shows high anti-theft performance to prevent engine start by other than the owner (registered key: ignition key, mechanical key and Intelligent Key).
- Only a key with key ID registered in BCM and ECM can start engine, and shows high anti-theft performance to prevent key from being copied or stolen.
- In the vehicle without Intelligent Key system, security indicator always flashes with other than ignition switch ON or START position.
- In the vehicle with Intelligent Key system, security indicator always flashes with mechanical key removed condition (key switch OFF) and ignition knob released condition on LOCK position (ignition knob switch OFF).

- Therefore, NVIS (NATS) warns outsiders that the vehicle is equipped with the anti-theft system.
- If system detects malfunction, it turns on security indicator in ignition switch ON position.
- If the owner requires, ignition key ID or mechanical key ID can be registered for up to 5 keys.
- During trouble diagnosis or when the following parts have been replaced, and if ignition key or mechanical key is added, registration* is required.
  *: All keys kept by the owner of the vehicle should be registered with ignition key or mechanical key.
  - ECM
  - BCM
  - Ignition key (models without Intelligent Key system)
  - Mechanical key (models with Intelligent Key system)
- NVIS (NATS) trouble diagnoses, system initialization and additional registration of other NVIS (NATS) ignition key or mechanical 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 or mechanical key or mechanical key IDs can be carried out.
  Regarding the procedures of NVIS (NATS) initialization and ignition key or mechanical key ID registration, refer to CONSULT-II operation manual, NATS-IVIS/NVIS.

SECURITY INDICATOR

- Warns that the vehicle has NVIS (NATS).
- In the vehicle without Intelligent Key system, security indicator always flashes with other than ignition switch ON or START position. In the vehicle with Intelligent Key system, security indicator always flashes with mechanical key removed condition (key switch OFF) and ignition knob released condition on LOCK position (ignition knob switch OFF).

  NOTE:
  Because security indicator is highly efficient, the battery is barely affected.

Condition of Security Indicator

WITHOUT INTELLIGENT KEY SYSTEM

Security indicator condition	Ignition key	Operation or condition of ignition key			
		Ignition switch: ON position	Ignition switch: ACC position	Ignition switch: OFF position (Key is inserted.)	Ignition switch: OFF position (Remove key.)
	Register key	OFF	Flashing	Flashing	Flashing
	Ignition key not registered	ON	Flashing	Flashing	Flashing

WITH INTELLIGENT KEY SYSTEM

- In ignition knob operation with Intelligent Key, it always turns on with pushing ignition knob, and always flashes with ignition knob released (ignition knob switch OFF) condition on ignition knob “LOCK” position.
- In ignition knob operation with mechanical key, it turns off on the condition that mechanical key is inserted in key cylinder, and always flashes with ignition knob released (ignition knob switch OFF) condition on mechanical key removed condition.

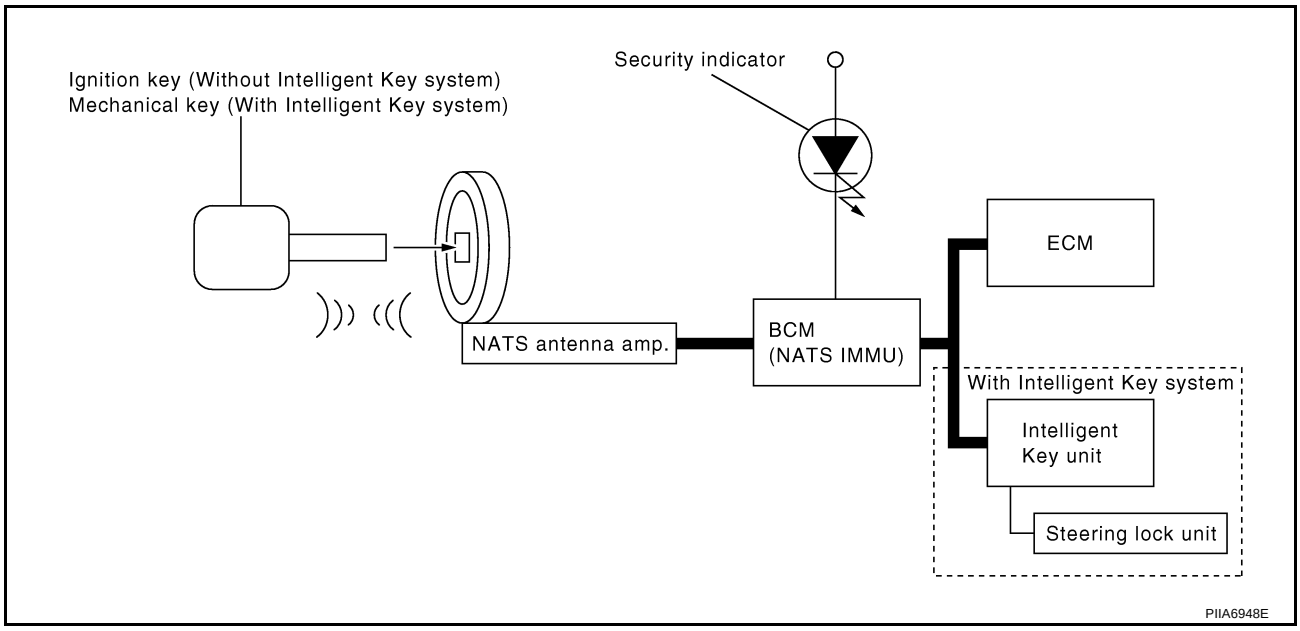
System Composition

NIS0019Q

The immobilizer function of the NVIS (NATS) consists of the following:

- NATS ignition key (without Intelligent Key system)
- Mechanical key (with Intelligent Key system)
- NATS antenna amp. located in the ignition key cylinder
- Body control module (BCM)
- Engine control module (ECM)
- Security indicator
- Steering lock unit (with Intelligent Key system)
- Intelligent Key unit (with Intelligent Key system)

NOTE:
The communication between ECM, BCM and/or Intelligent Key unit uses the CAN communication system.



ECM Re-communicating Function

NIS0019R

Performing following procedure can automatically perform re-communication of ECM and BCM or Intelligent Key unit, but only when the ECM has been replaced with a new one (*1).
*1: New one means a virgin ECM which has never been energized on-board.
(In this step, initialization procedure by CONSULT-II is not necessary)

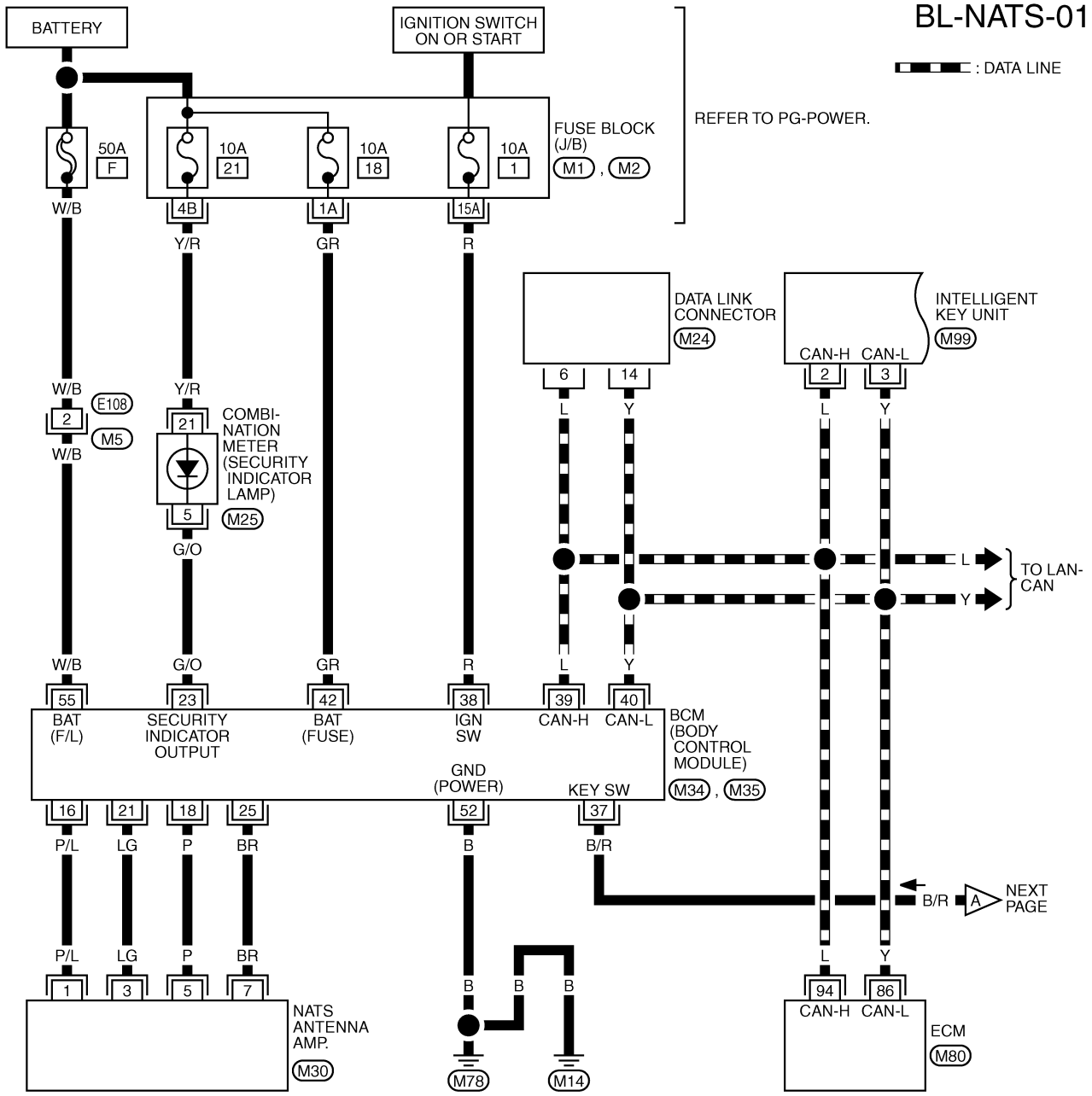
NOTE:

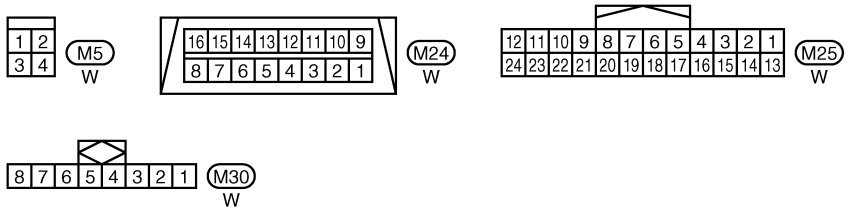
- **When registering new Key IDs or replacing the ECM other than brand new, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.**
- **If multiple keys are attached to the key holder, separate them before work.**
- **Distinguish keys with unregistered key ID from those with registered ID.**

1. Install ECM.
2. Using a registered key (*2), turn ignition switch to “ON”.
   *2: To perform this step, use the key (except for card plate 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 —/With Intelligent Key System

NIS0019S

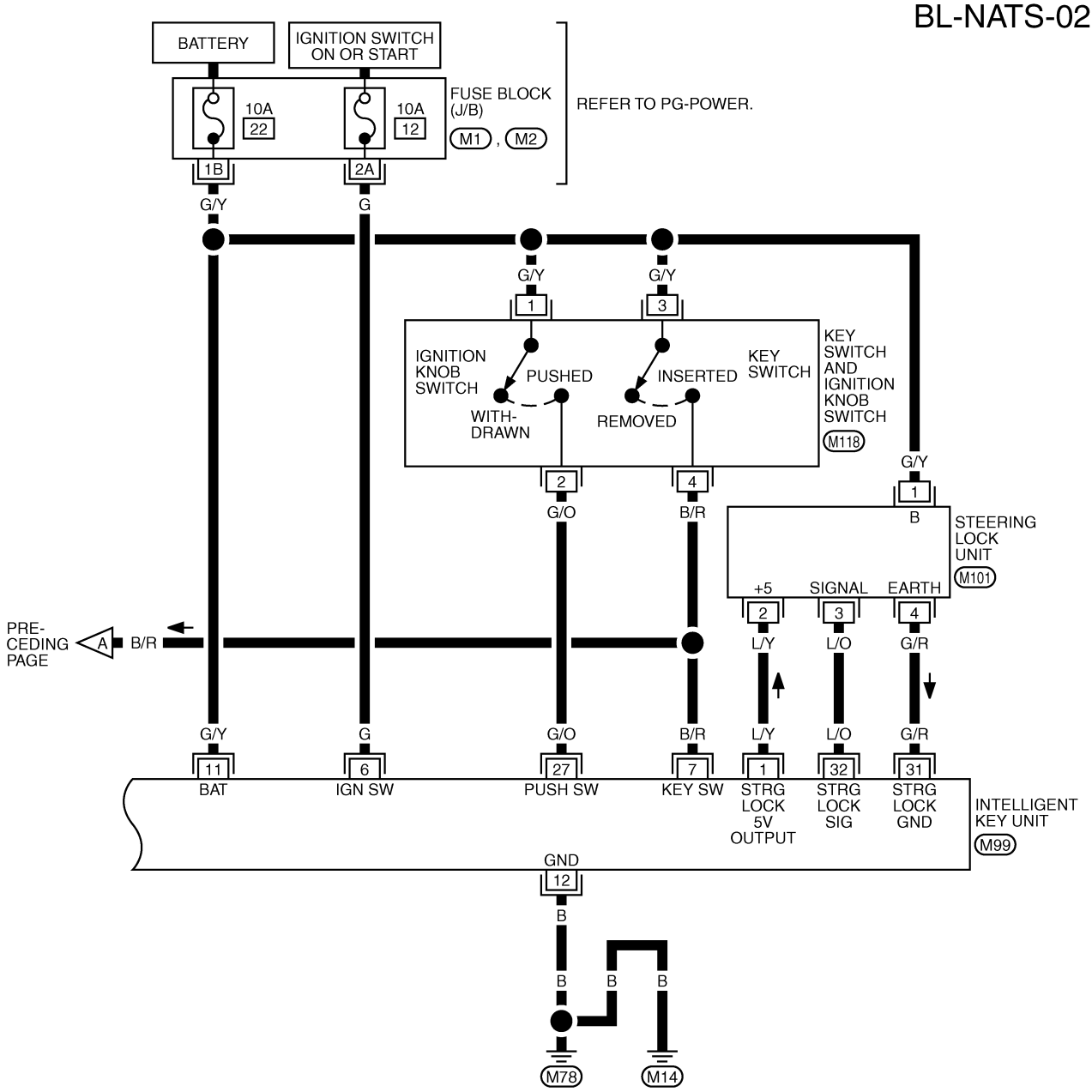


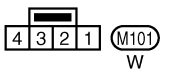


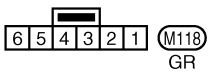
REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)
M34, M35, M80, M99 -ELECTRICAL UNITS

TIWB0792E

BL-NATS-02





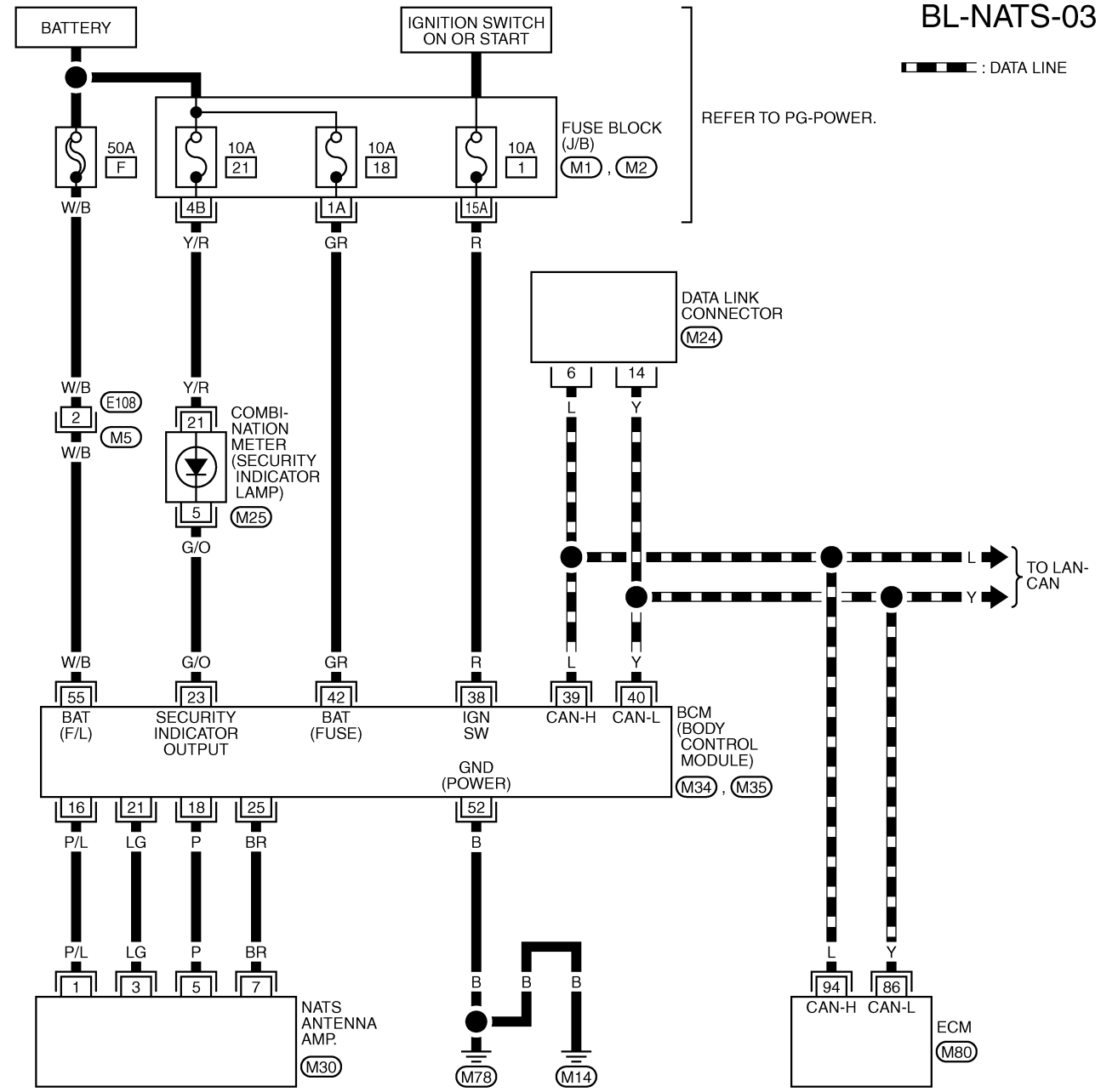


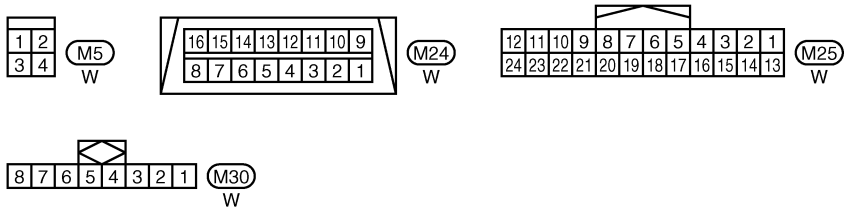
REFER TO THE FOLLOWING.
M1, M2 -FUSE BLOCK-JUNCTION BOX (J/B)
M99 -ELECTRICAL UNITS

TIWB0338E

Wiring Diagram — NATS —/Without Intelligent Key System

NIS0019T



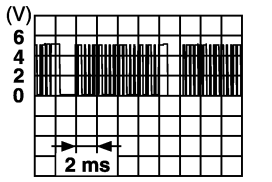


REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)
M34 , M35 , M80 -ELECTRICAL UNITS

TIWB0793E

Terminals and Reference Value for Steering Lock Unit/With Intelligent Key System

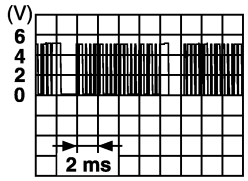
NIS0019U

Terminal	Wire color	Signal Designation	Signal input/ output	Measuring condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
1	G/Y	Power source (Fuse)	Input	—	—	Battery voltage
2	L/Y	Steering lock unit power supply	Output	LOCK	—	5
3	L/O	Steering lock unit communication signal	Input/ Output	LOCK	Press ignition knob with Intelligent Key inside vehicle.	 SIIA1911J
					Other than the above	5
4	G/R	Steering lock unit ground	—	—	—	0

Terminals and Reference Value for Intelligent Key Unit/With Intelligent Key System

NIS0019V

Terminal	Wire color	Signal designation	Signal input/ output	Measuring condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
1	L/Y	Steering lock unit power supply	Output	LOCK	—	5
2	L	CAN-H	Input/ Output	—	—	—
3	Y	CAN-L	Input/ Output	—	—	—
6	G	Ignition power supply (ON)	Input	ON	Ignition knob ON or START position	Battery voltage
7	B/R	Key switch	Input	LOCK	Insert mechanical key into ignition key cylinder.	Battery voltage
					Remove mechanical key from ignition key cylinder.	0
11	G/Y	Power source (Fuse)	Input	—	—	Battery voltage
12	B	Ground	—	—	—	0
27	G/O	Ignition knob switch	Input	—	Press ignition knob.	Battery voltage
					Return ignition knob to LOCK position.	0
31	G/R	Steering lock unit ground	—	—	—	0

Terminal	Wire color	Signal designation	Signal input/ output	Measuring condition		Voltage (V) (Approx.)
				Ignition knob position	Operation or conditions	
32	L/O	Steering lock unit communication signal	Input/ output	LOCK	Press ignition knob with Intelligent Key inside vehicle.	 SIIA1911J
					Other than the above	5

Terminals and Reference Value for BCM

NIS0019W

TERMINAL	WIRE COLOR	ITEM	Signal input/ output	CONDITION	VOLTAGE [V] (Approx.)
16	P/L	NATS antenna amp.	Output	Ignition switch: OFF → ON	0 → 5 (for 3 seconds)
18	P	NATS antenna amp.	Output	—	0
21	LG	NATS antenna amp.	Output	Ignition switch (OFF → ON)	Just after turning ignition switch “ON”: Pointer of tester should move.
23	G/O	Security indicator lamp	Output	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0
25	BR	NATS antenna amp.	Output	Ignition switch (OFF → ON)	Just after turning ignition switch “ON”: Pointer of tester should move.
37*	B/R	Key switch	Input	Insert mechanical key into ignition key cylinder.	Battery voltage
				Remove mechanical key from ignition key cylinder.	0
38	R	Ignition switch (ON)	Input	Ignition switch is in ON position	Battery voltage
39	L	CAN-H	Input/ Output	—	—
40	Y	CAN-L	Input/ Output	—	—
42	GR	Power source (Fuse)	Input	—	Battery voltage
52	B	Ground	—	—	0
55	W/B	Power source (Fusible link)	Input	—	Battery voltage

*: With Intelligent Key system

CONSULT-II Function

NIS0019X

CONSULT-II INSPECTION PROCEDURE

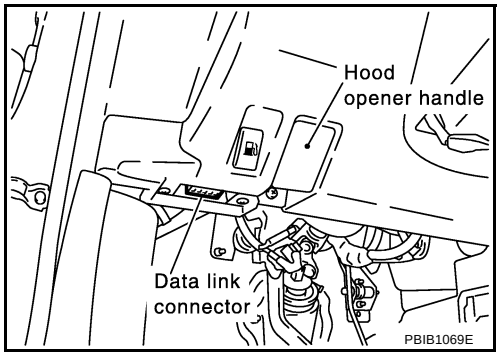
CAUTION:

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

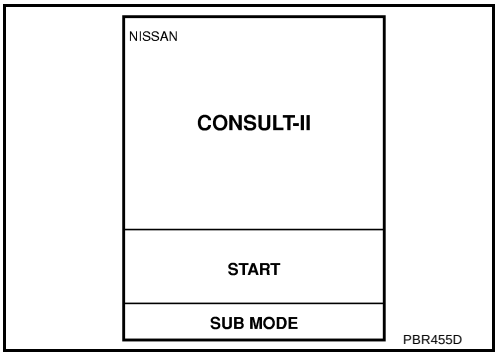
1. Turn ignition switch OFF.
2. Insert NVIS (NATS) program card into CONSULT-II.

   Program card : NATS (AEN04A-1)

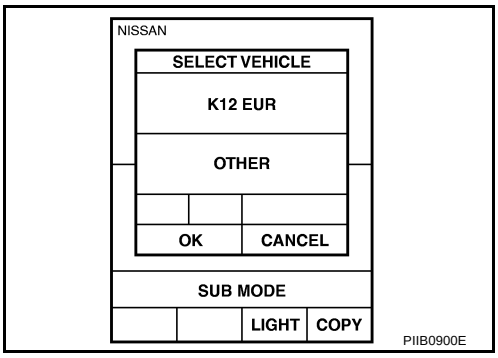
3. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.



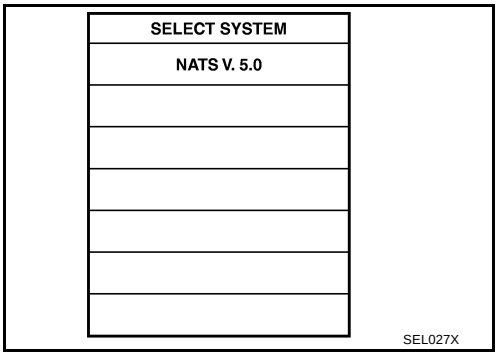
4. Turn ignition switch ON.
5. Touch “START”.



6. Touch “OTHRE”.

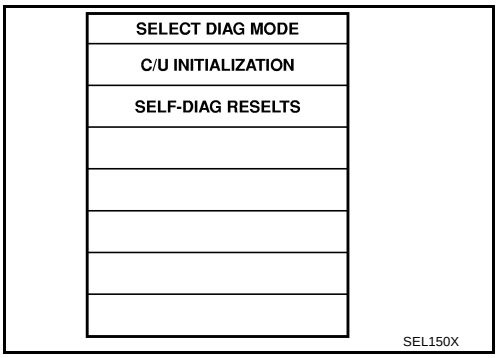


7. Select “NATS V.5.0”.
If “NATS V5.0” is not indicated, go to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



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

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



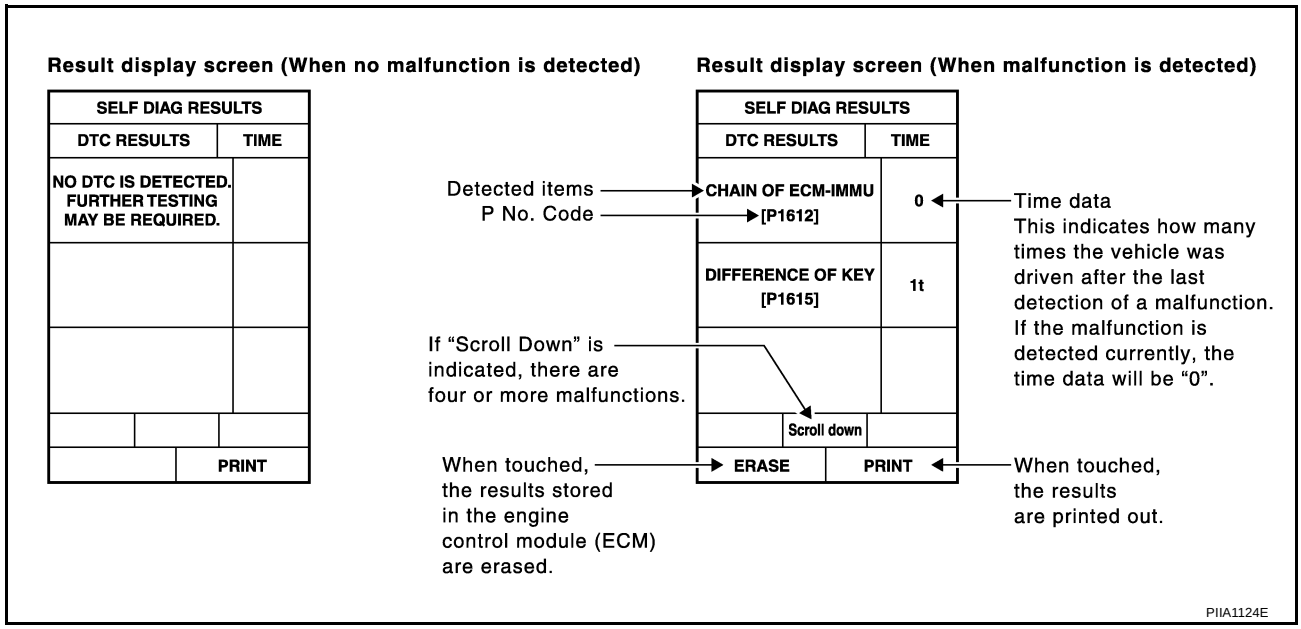
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following components, C/U initialization and re-registration of all NATS ignition keys are necessary. [(NATS ignition key/ BCM/ ECM]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart. Refer to BL-242, "NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART" .

NOTE:

- When any initialization is performed, all ID 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



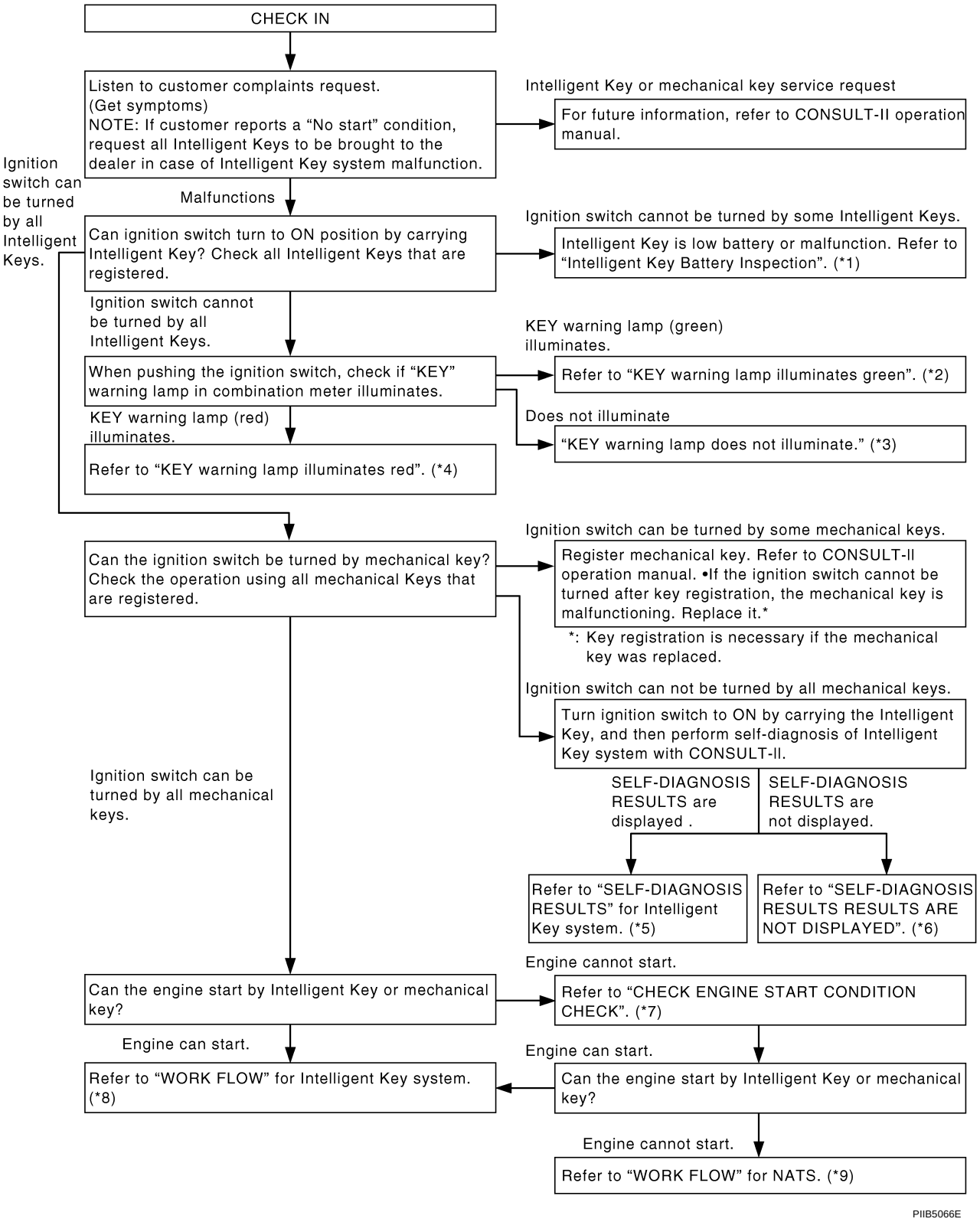
NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART

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.	BL-247
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.	BL-249
CHAIN OF IMMU-KEY [P1614]	NATS MAL-FUNCTION P1614	BCM cannot receive the key ID signal.	BL-250
ID DISCORD, IMM-ECM [P1611]	NATS MAL-FUNCTION P1611	The result of ID verification between BCM and ECM is NG. System initialization is required.	BL-252
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.	BL-254
DON'T ERASE BEFORE CHECK-ING ENG DIAG	—	All engine trouble codes except NVIS (NATS) trouble code has been detected in ECM.	BL-245

Trouble Diagnosis Procedure/With Intelligent Key System

NIS0019Y

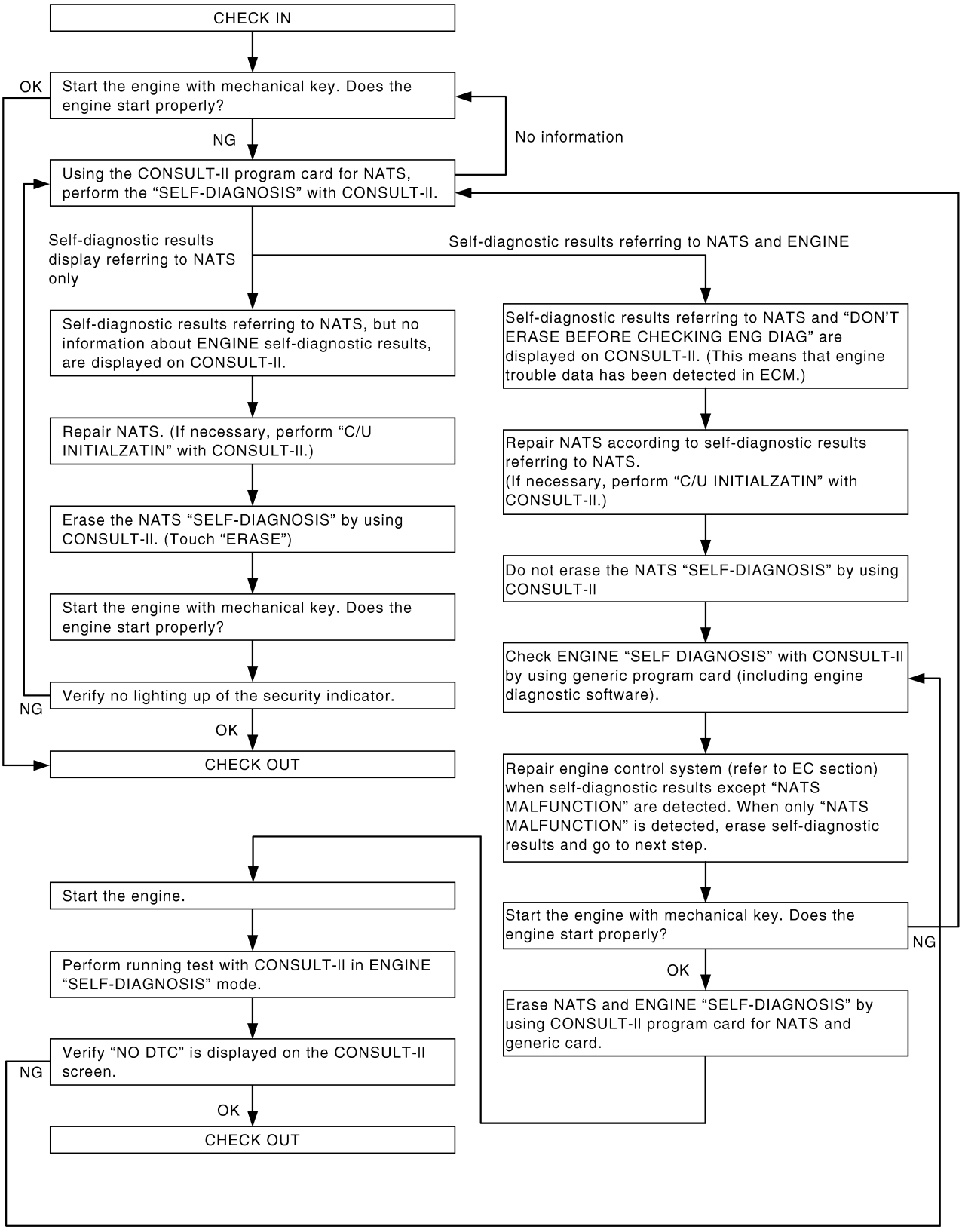
PRELIMINALY CHECK



PIIB5066E

*1: BL-168 *2: BL-127 *3: BL-128
*4: BL-127 *5: BL-123 *6: BL-128
*7: BL-128 *8: BL-122 *9: BL-244

WORK FLOW

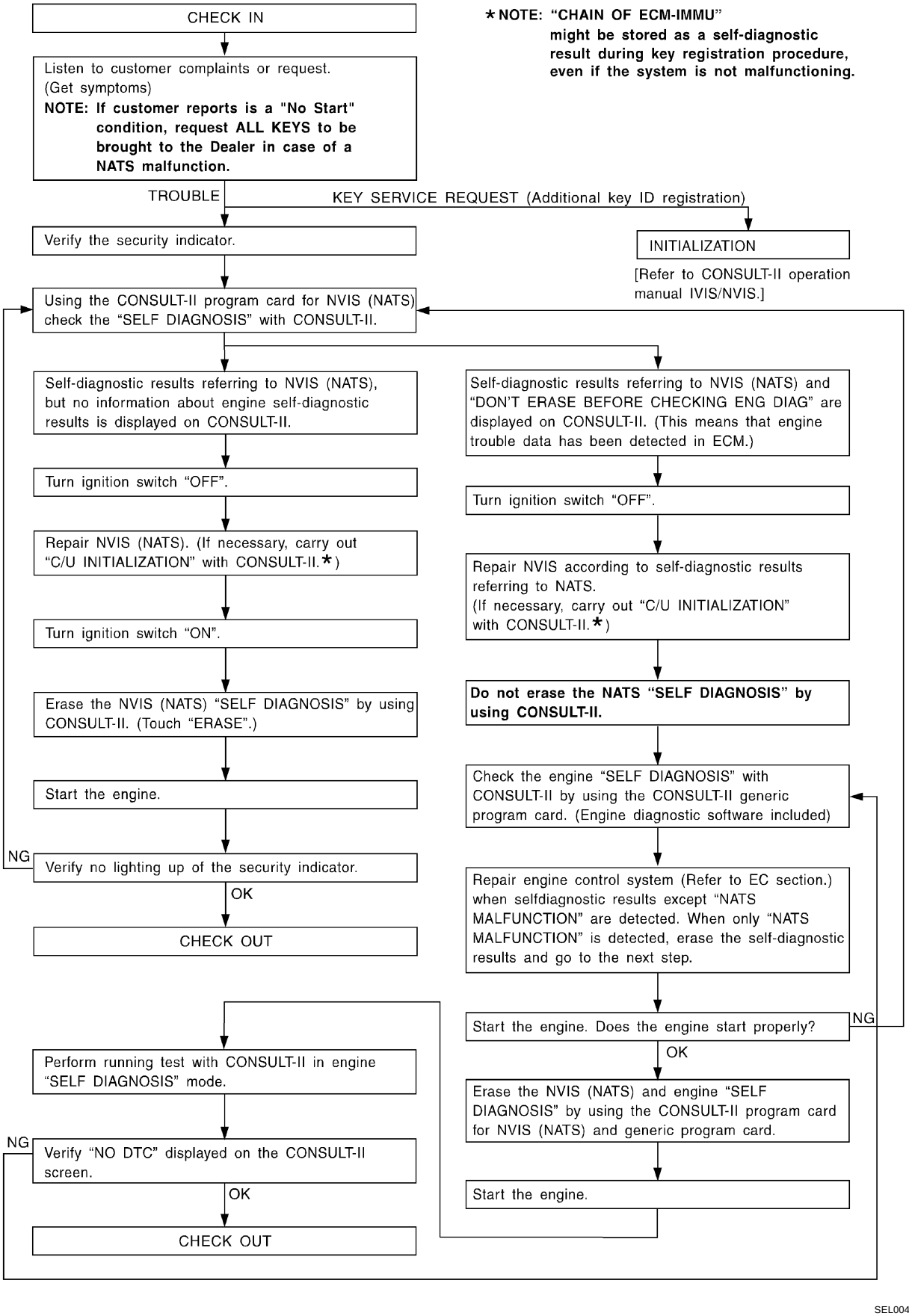


PIIB5064E

Trouble Diagnosis Procedure/Without Intelligent Key System

NIS0019Z

WORK FLOW



SEL004XA

Trouble Diagnoses Symptom Chart

NIS001A0

SELF-DIAGNOSIS RELATED ITEM

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)
● Security indicator lighting up* ● Engine cannot be started	CHAIN OF ECM-IMMU [P1612]	PROCEDURE 1 (BL-247)	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
			Open circuit in ignition line of BCM circuit
			Open circuit in ground line of BCM circuit
			Open or short circuit between BCM and ECM communication line
			ECM
			BCM
	DIFFERENCE OF KEY [P1615]	PROCEDURE 2 (BL-249)	Unregistered key
			BCM
	CHAIN OF IMMU-KEY [P1614]	PROCEDURE 3 (BL-250)	Malfunction of key ID chip
			Communication line between ANT/AMP and BCM: Open circuit or short circuit of battery voltage line or ground line
			Open circuit in power source line of ANT/AMP circuit
			Open circuit in ground line of ANT/AMP circuit
			NATS antenna amp.
			BCM
	ID DISCORD, IMM-ECM [P1611]	PROCEDURE 4 (BL-252)	System initialization has not yet been completed.
			ECM
	LOCK MODE [P1610]	PROCEDURE 6 (BL-254)	LOCK MODE 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.
Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-245)	Engine trouble data and NVIS (NATS) trouble data have been detected in ECM

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

Security Indicator Inspection

NIS001A1

NON SELF-DIAGNOSIS RELATED ITEM

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)
Security indicator does not light up*.	PROCEDURE 5 (BL-253)	Combination meter (security indictor lamp)
		Open circuit between Fuse and BCM
		BCM

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

Diagnostic Procedure 1

NIS001A2

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 BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .

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 shown in figure?

Yes >> GO TO 2.
No >> GO TO BL-246, "SELF-DIAGNOSIS RELATED ITEM" .

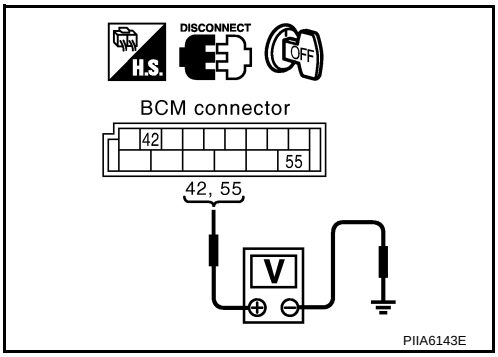
SELF DIAGNOSIS	
DTC RESULTS	TIME
CHAIN OF ECM-IMMU [P1612]	0

PIIA1260E

2. CHECK POWER SUPPLY CIRCUIT FOR BCM

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM and ground with CONSULT-II or tester.

Connector	Terminals (Wire color)		Voltage [V] (Approx.)
	(+)	(-)	
M2	42 (GY)	Ground	Battery voltage
	55 (W/R)		



OK or NG

OK >> GO TO 3.
NG >> Check the following

- 50A fusible link (letter **F** , located in fuse and fusible link box)
- 10A fuse [No.18, located in fuse block (J/B)]
- Harness for open or short between fusible link and BCM
- Harness for open or short between fuse and BCM
  Ref. Part No. C1

3. CHECK IGNITION SWITCH ON SIGNAL

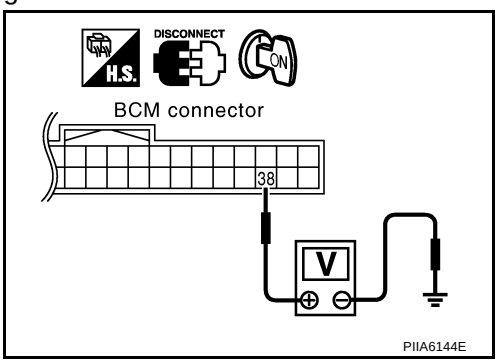
1. Turn ignition switch ON.
2. Check voltage between BCM connector M34 terminal 38 (R) and ground with CONSULT-II or tester.

38 (R) – Ground : Battery voltage

OK or NG

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

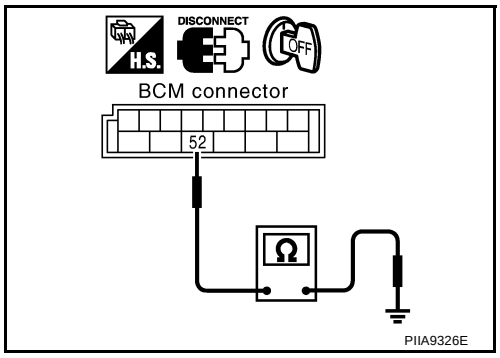
- 10A fuse [No. 1, located in the fuse block (J/B)]
- Harness for open or short between fuse and BCM



4. CHECK GROUND CIRCUIT FOR BCM

1. Turn ignition OFF.
2. Check continuity between BCM connector terminal 52 (B) and ground.

52 (B) – Ground : Continuity should exist.



OK or NG

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

5. REPLACE BCM

1. Replace BCM.
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.
- Replace BCM.
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

No >> ECM is malfunctioning.
- Replace ECM.
- Perform initialization or re-communicating function.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.
- For re-communicating function, refer to BL-234, "ECM Re-communicating Function" .

Diagnostic Procedure 2

NIS001A3

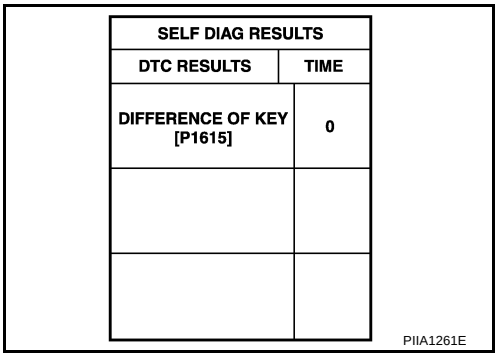
Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as shown in figure?

Yes >> GO TO 2.
No >> GO TO BL-246, "SELF-DIAGNOSIS RELATED ITEM" .



2. PERFORM INITIALIZATION WITH CONSULT-II

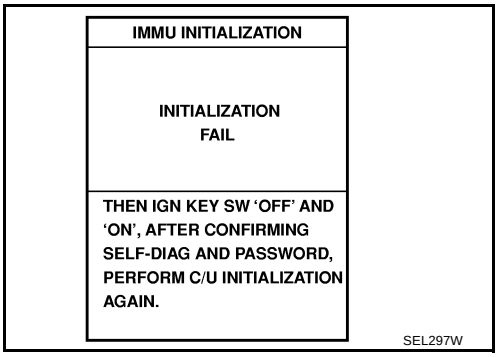
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization and registration of NATS ignition key IDs, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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.
No >> BCM is malfunctioning.

- Replace BCM.
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.



Diagnostic Procedure 3

NIS001A4

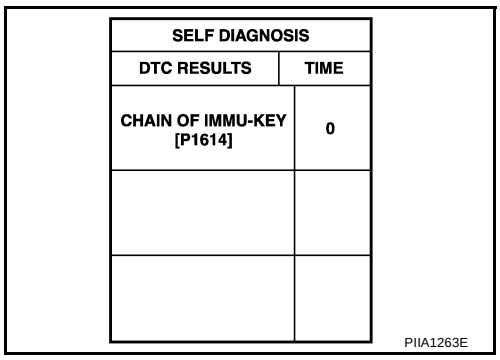
Self-diagnostic results:
“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as shown in figure?

Yes >> GO TO 2.
No >> GO TO BL-246, "SELF-DIAGNOSIS RELATED ITEM" .



2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to BL-255, "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.
- 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.

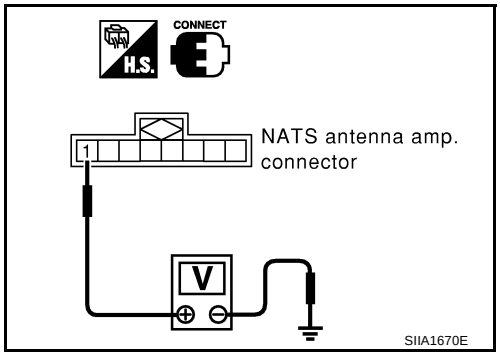
1. Turn ignition switch “ON”.
2. Check voltage between NATS antenna amp. connector M30 terminal 1 (P/L) and ground with CONSULT-II or tester.

Just after turning ignition switch “ON”
Voltage: Approx. 5V (For 3 seconds)

OK or NG

OK >> GO TO 5.
NG >>
- Check harness for open or short between NATS antenna amp. and BCM.

NOTE:
If harness is OK, replace BCM, perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.



5. CHECK NATS ANTENNA AMP. SIGNAL LINE- 1

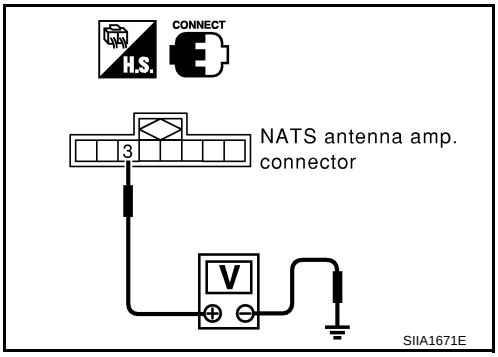
Check voltage between NATS antenna amp. connector M30 terminal 3 (LG) and ground with analogue tester.

Before turning ignition switch "ON"

Voltage: 0V

Just after turning ignition switch "ON"

: Pointer of tester should move.



OK or NG

OK >> GO TO 6.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM.

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

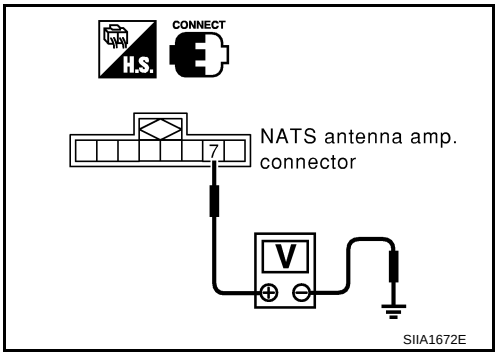
Check voltage between NATS antenna amp. connector M30 terminal 7 (BR) and ground with analogue tester.

Before turning ignition switch "ON"

Voltage: 0V

Just after turning ignition switch "ON"

: Pointer of tester should move.



OK or NG

OK >> GO TO 7.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM.

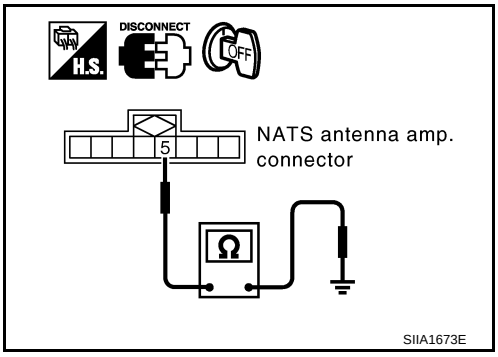
NOTE:

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 M30 terminal 5 (P) and ground.

5 (P) – Ground : Continuity should exist.



OK or NG

OK >> NATS antenna amp. is malfunctioning.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM.

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 4

NIS001A5

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

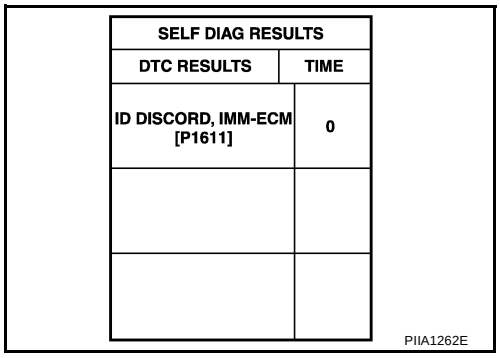
1. CONFIRM SELF-DIAGNOSTIC RESULTS

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

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

Is CONSULT-II screen displayed as shown in figure?

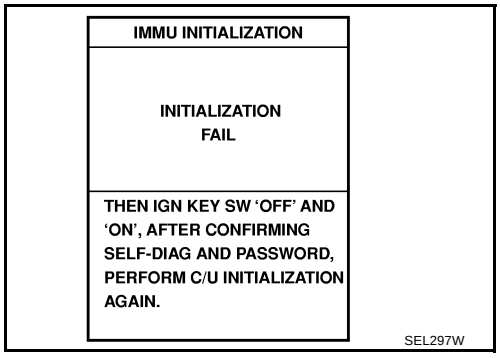
Yes >> GO TO 2.
No >> GO TO BL-246, "SELF-DIAGNOSIS RELATED ITEM" .



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.)

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

Diagnostic Procedure 5

NIS001A6

“SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

1. CHECK FUSE

Check 10A fuse [No. 21, located in the fuse block (J/B)]

OK or NG

OK >> GO TO 2.
NG >> Replace fuse.

2. CHECK SECURITY INDICATOR LAMP

1. Install 10A fuse.
2. Start engine and turn ignition switch OFF.
3. Make sure the security indicator lamp lights up.

Security indicator lamp should light up.

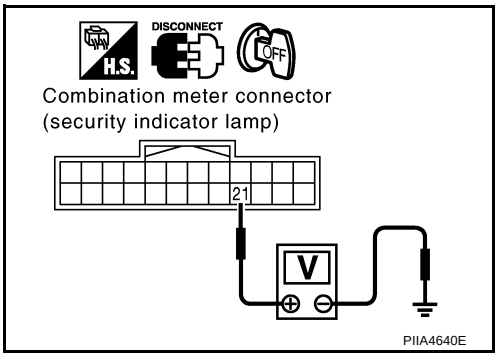
OK or NG

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

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

1. Disconnect combination meter (security indicator lamp) connector.
2. Check voltage between combination meter (security indicator lamp) connector M25 terminal 21 (Y/R) and ground.

21 (Y/R) – Ground : Battery voltage



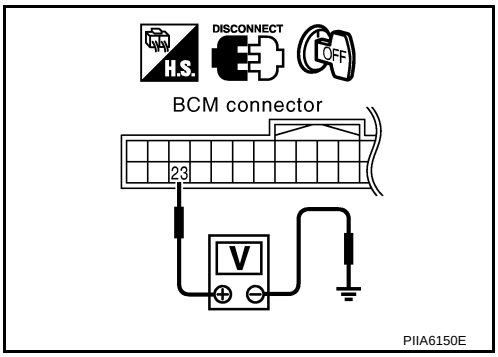
OK or NG

OK >> GO TO 4.
NG >> Check harness for open or short between fuse and combination meter (security indicator lamp).

4. CHECK BCM FUNCTION

1. Connect combination meter (security indicator lamp) connector.
2. Disconnect BCM connector M34.
3. Check voltage between BCM connector M34 terminal 23 (G/O) and ground.

23 (G/O) – Ground : Battery voltage



OK or NG

OK >> BCM is malfunctioning.
- Replace BCM.
- 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 combination meter (security indicator lamp) and BCM.
- Indicator lamp condition

Diagnostic Procedure 6

NIS001A7

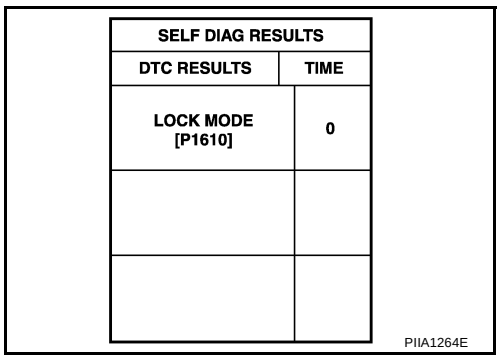
Self-diagnostic results:
“LOCK MODE” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

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

Is CONSULT-II screen displayed as shown in figure?

Yes >> GO TO 2.
No >> GO TO BL-246, "SELF-DIAGNOSIS RELATED ITEM" .



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.

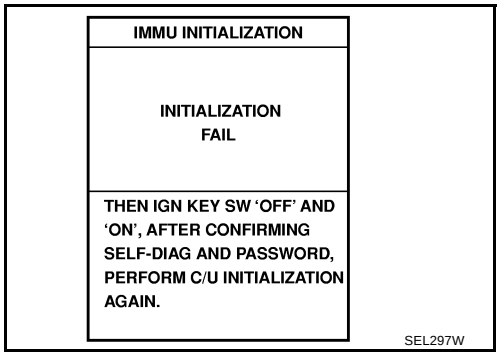
3. PERFORM INITIALIZATION WITH CONSULT-II

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

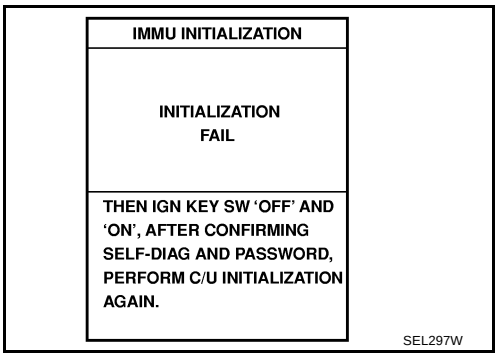
1. Replace BCM.
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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.)
No >> ECM is malfunctioning.

- Replace ECM.
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

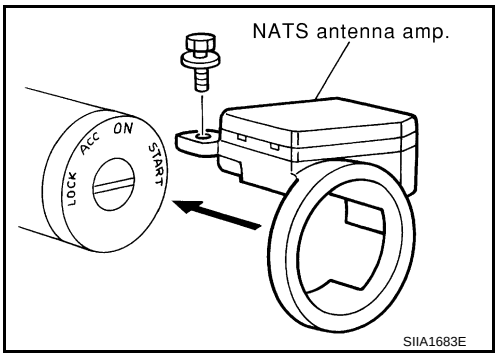


How to Replace NATS Antenna Amp.

NIS001A8

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.**



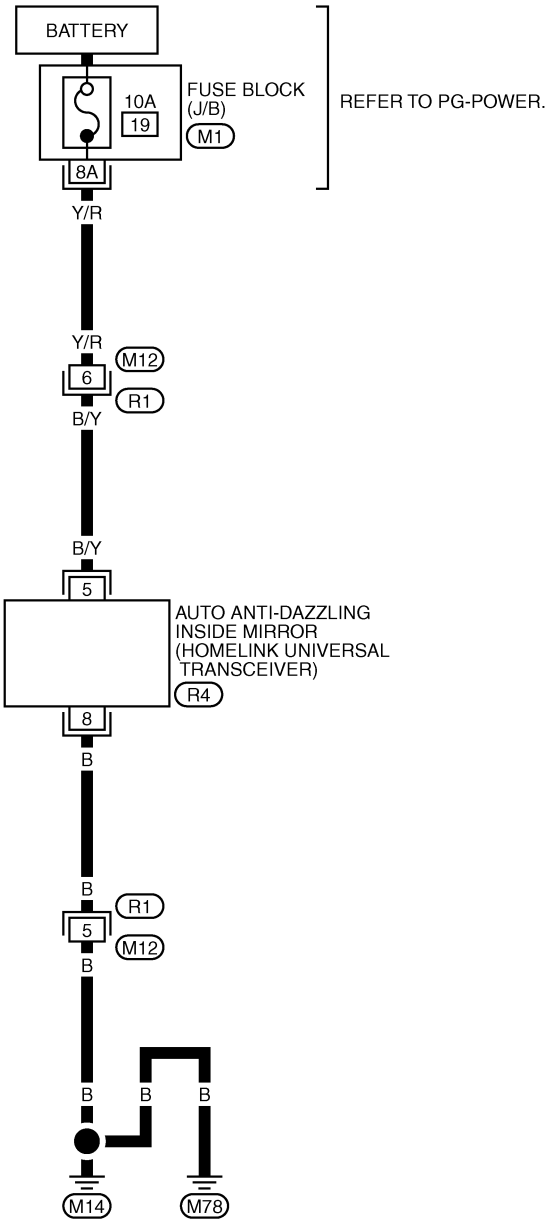
INTEGRATED HOMELINK TRANSMITTER

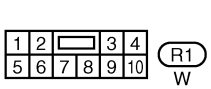
PFP:96401

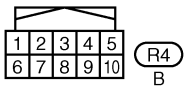
Wiring Diagram —TRNSCV—

NIS001A9

BL-TRNSCV-01







REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-JUNCTION BOX (J/B)

TIWB0794E

Trouble Diagnoses

NIS001AA

DIAGNOSTIC PROCEDURE

SYMPTOM: Transmitter Does Not Activate Receiver

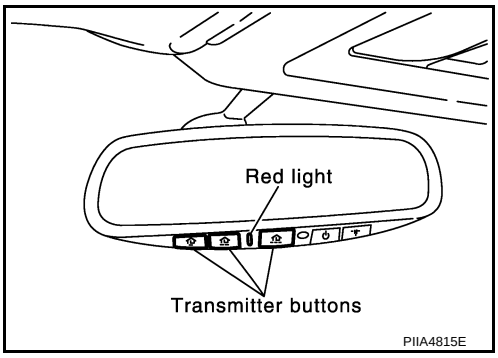
Before conducting the procedure given below, make sure that system receiver (garage door opener, etc.) operates with original, hand-held transmitter. If NG, receiver or hand-held transmitter is malfunctioning, not vehicle related.

1. CHECK ILLUMINATION

1. Turn ignition switch “OFF”.
2. Does red light (LED) of transmitter illuminate when any transmitter button is pressed?

YES or NO

YES >> GO TO 2.
NO >> GO TO 3.



2. CHECK TRANSMITTER

Check auto anti-dazzling inside mirror (homelink universal transceiver) with Tool*.
*:For details, refer to Technical Service Bulletin.

OK or NG

OK >> Receiver or hand-held transmitter malfunction, not vehicle related.
NG >> Replace inside mirror assembly.

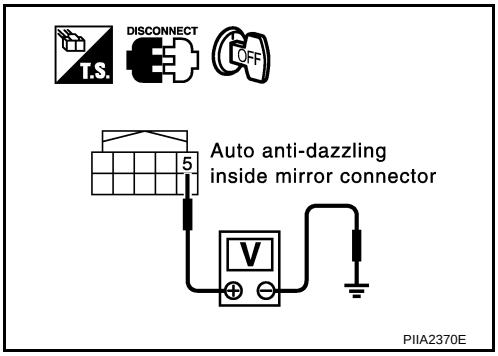
3. CHECK POWER SUPPLY

1. Disconnect auto anti-dazzling inside mirror (homelink universal transceiver) connector.
2. Turn ignition switch “OFF”.
3. Check voltage between auto anti-dazzling inside mirror (homelink universal transceiver) connector R4 terminal 5 (Y) and ground.

5 (Y) – Ground : Battery voltage

OK or NG

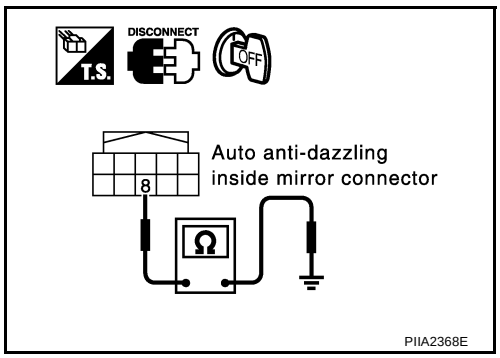
OK >> GO TO 4.
NG >>
- Check 10A fuse. [No. 19 located in the fuse block (J/B)]
- Repair or replace harness between fuse and anti-dazzling inside mirror (homelink universal transceiver).



4. CHECK GROUND CIRCUIT

Check continuity between anti-dazzling inside mirror (homelink universal transceiver) connector R4 terminal 8 (B) and ground.

8 (B) – Ground :Continuity should exist.



OK or NG

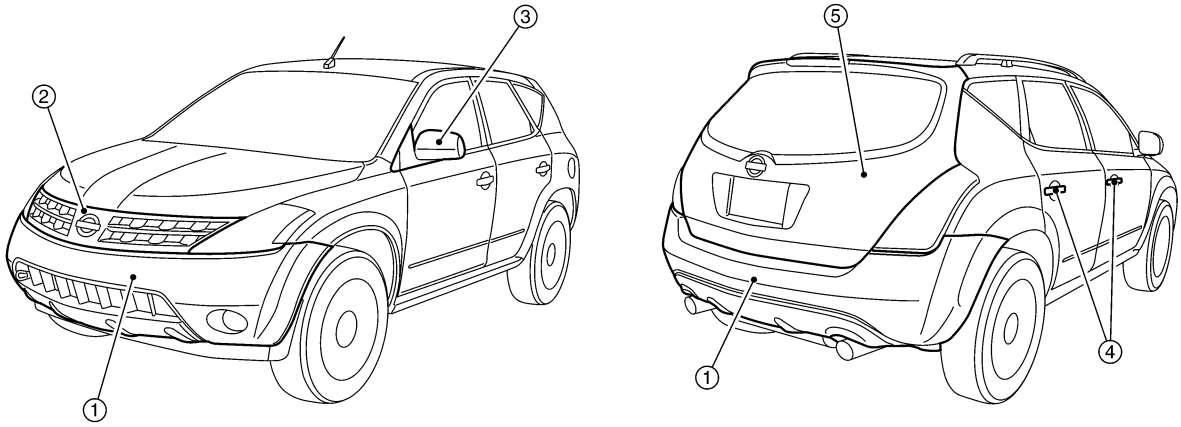
OK >> Replace inside mirror assembly.
NG >> Harness for open or short between anti-dazzling inside mirror (homelink universal transceiver) ground.

BODY REPAIR

PFP:60100

Body Exterior Paint Color

NIS001AB



SIIA2069E

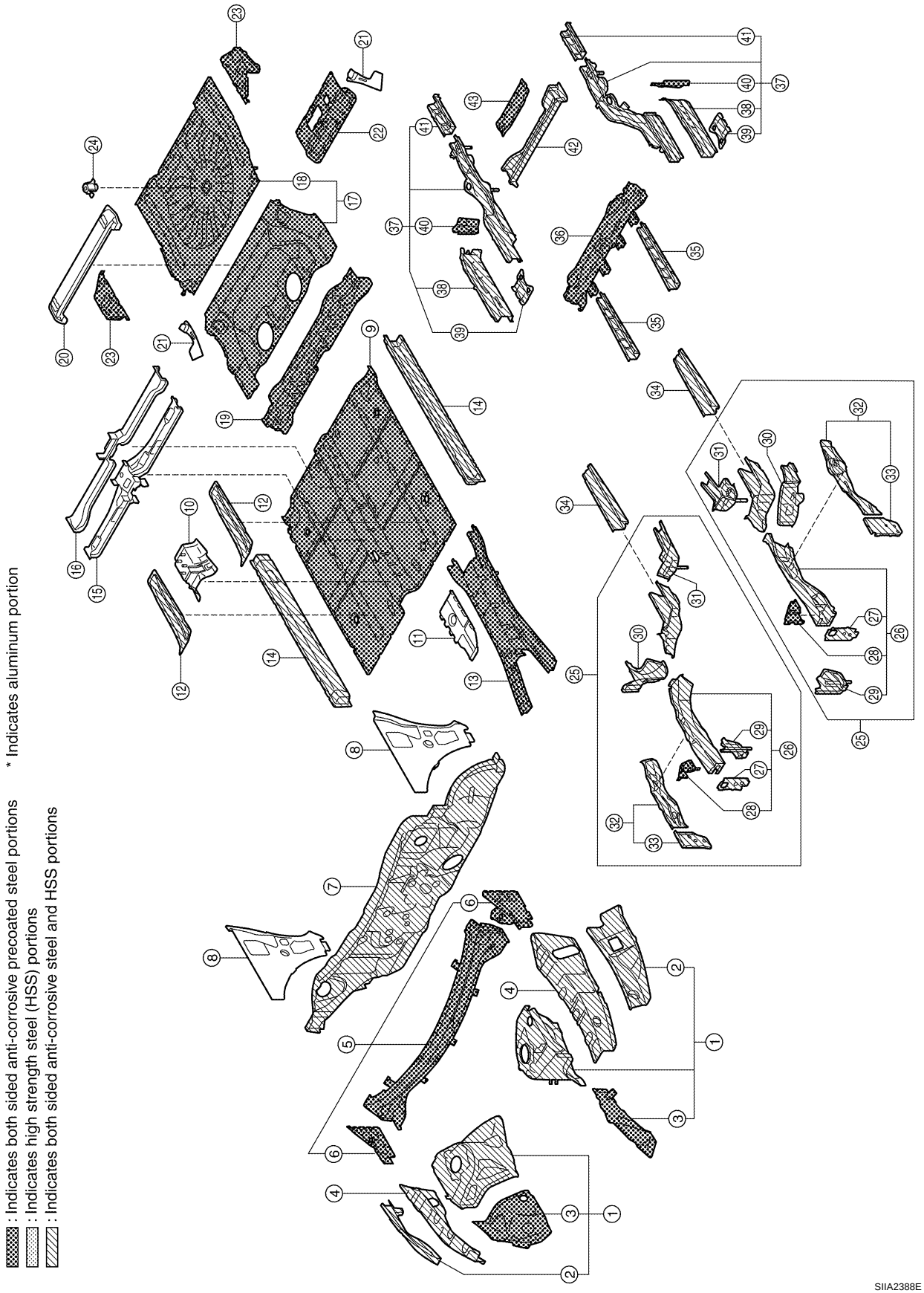
Component			Color code	BAX5	BAY2	BBW9	BEY0	BK21	BK23	BKH3	BQX1
			Description	Red	Red	Dark Blue	Light Gold	Gray	Silver	Black	White
			Paint type	2P	PM	2P	RPM	FPM	M	2S	3P
			Hard clear coat	×	×	×	-	-	-	×	-
1	Bumper fascia	Upper	Body color	BAX5	BAY2	BBW9	BEY0	BK21	BK23	BKH3	BQX1
		Lower	Gray Metallic (M)	BKR2	BKR2	BKR2	BKR2	BKR2	BKR2	BKR2	BKR2
2	Front grille		Chromium-plate + Color clear coat	Cr2p	Cr2p	Cr2p	Cr2p	Cr2p	Cr2p	Cr2p	Cr2p
3	Door outside mirror	Housing	Body color	BAX5	BAY2	BBW9	BEY0	BK21	BK23	BKH3	BQX1
		Base	Black	BKH3	BKH3	BKH3	BKH3	BKH3	BKH3	BKH3	BKH3
4	Door outside handle		Chromium-plate	Cr2p	Cr2p	Cr2p	Cr2p	Cr2p	Cr2p	Cr2p	Cr2p
			Body color	BAX5	BAY2	BBW9	BEY0	BK21	BK23	BKH3	BQX1
5	Back door		Body color	BAX5	BAY2	BBW9	BEY0	BK21	BK23	BKH3	BQX1

2S:Solid + Clear, M:Metallic, P:Pearl, 2P:2-Coat pearl, 3P:3-Coat pearl, PM:Pearl metallic, FPM:Iron oxide pearl, RPM:Multi flex color

Body Component Parts

NIS001AC

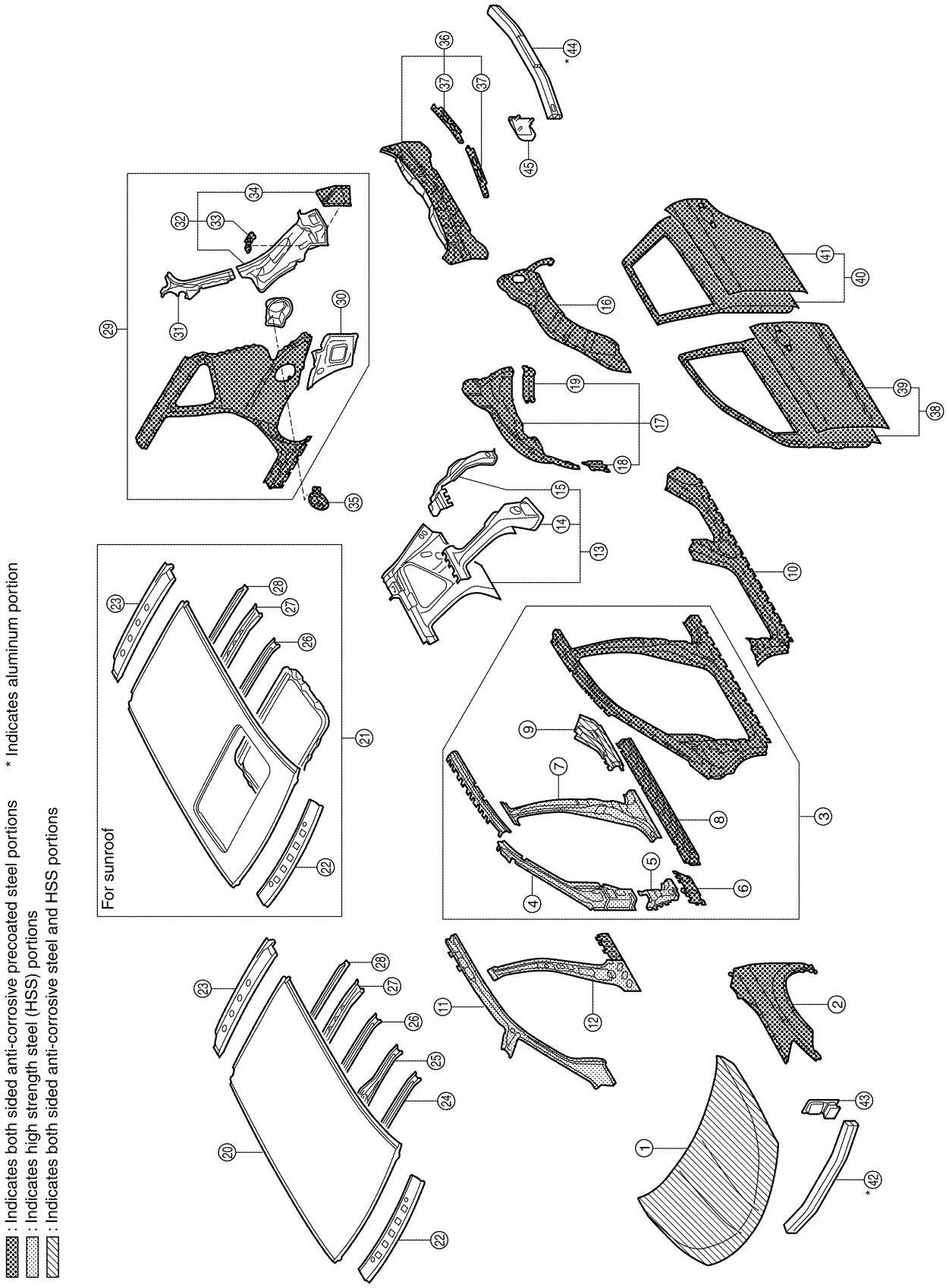
UNDERBODY COMPONENT PARTS



SIIA2388E

1. Hoodledge assembly
2. Upper hoodledge
3. Lower front hoodledge
4. Hoodledge reinforcement
5. Air box assembly
6. Side cowl top
7. Lower dash
8. Side dash
9. Front floor
10. Center front floor reinforcement
11. Front floor reinforcement (RH&LH)
12. Front side member stiffener
13. Center floor member assembly
14. Inner sill
15. 2ND crossmember assembly
16. 3RD crossmember assembly
17. Rear floor
18. Rear floor rear
19. Rear floor front extension
20. Rear seat back support assembly
21. Outer rear seat belt anchor reinforcement
22. 2ND seat mounting bracket
23. Rear floor side
24. Spare tire clamp bracket
25. Front side member assembly
26. Front side member
27. Front side member connector
28. Bumper stay reinforcement assembly
29. Front suspension mounting bracket
30. Front side member outrigger assembly
31. Lower dash crossmember
32. Front side member closing plate assembly
33. Front side member front closing plate
34. Front side member center extension
35. Front side member rear extension
36. Rear seat crossmember
37. Rear side member assembly
38. Inner sill extension
39. Jack up point bracket
40. Sill closing plate
41. Rear side member extension
42. Center rear crossmember assembly
43. Spare wheel crossmember

BODY COMPONENT PARTS



SIIA2389E

1. Hood
2. Front fender (RH&LH)
24. Rear roof rail assembly
25. Roof bow No.1

3. Side body assembly (RH&LH)
4. Upper pillar hinge brace assembly (RH&LH)
5. Lower front pillar hinge brace (RH&LH)
6. Lower front pillar reinforcement (RH&LH)
7. Center pillar reinforcement (RH&LH)
8. Outer sill reinforcement assembly (RH&LH)
9. Rear outer sill reinforcement (RH&LH)
10. Outer sill (RH&LH)
11. Inner side roof rail (RH&LH)
12. Inner center pillar (RH&LH)
13. Inner rear pillar assembly (RH&LH)
14. Inner rear pillar reinforcement (RH&LH)
15. Back pillar reinforcement (RH&LH)
16. Outer rear wheelhouse (RH&LH)
17. Inner rear wheelhouse assembly (RH&LH)
18. Inner rear wheelhouse front extension (RH&LH)
19. Inner rear wheelhouse rear extension (RH&LH)
20. Roof
21. Roof assembly (for sunroof)
22. Front roof rail assembly
23. Roof bow No.2
26. Roof bow No.3
27. Roof bow No.4
28. Roof bow No.5
29. Rear fender assembly (RH&LH)
30. Rear fender extension (RH&LH)
31. Back pillar assembly (RH&LH)
32. Rear combination lamp base assembly (RH&LH)
33. Rear bumper fascia rear bracket (RH&LH)
34. Rear combination lamp base extension (RH&LH)
35. Fuel filler lid (LH)
36. Rear panel assembly
37. Rear bumper fascia bracket
38. Front door assembly (RH&LH)
39. Outer front door panel (RH&LH)
40. Rear door assembly (RH&LH)
41. Outer rear door panel (RH&LH)
42. Front bumper reinforcement
43. Front bumper stay (RH&LH)
44. Rear bumper reinforcement
45. Rear bumper stay (RH&LH)

Corrosion Protection

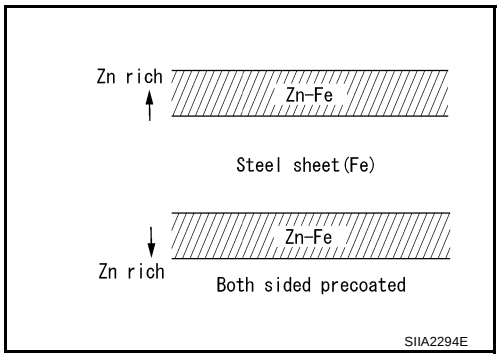
NIS001AD

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 electrodeposition primer.



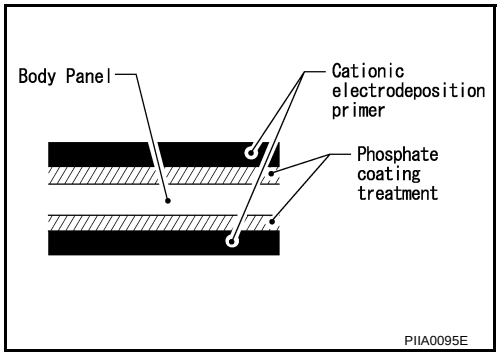
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

Phosphate Coating Treatment and Cationic Electrodeposition Primer

A phosphate coating treatment and a cationic electrodeposition primer, which provide excellent corrosion protection, are employed on all body components.

CAUTION:

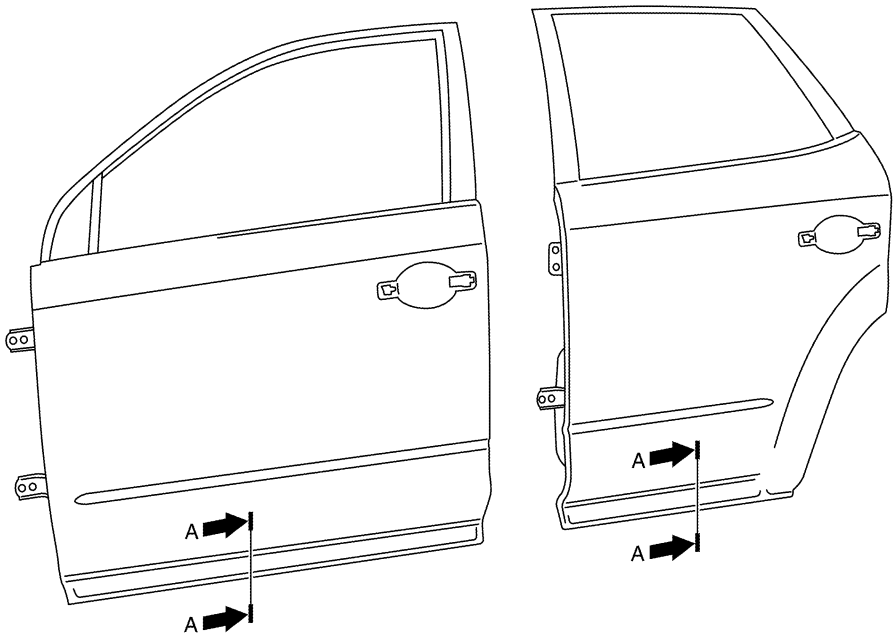
Confine paint removal during welding operations to an absolute minimum.



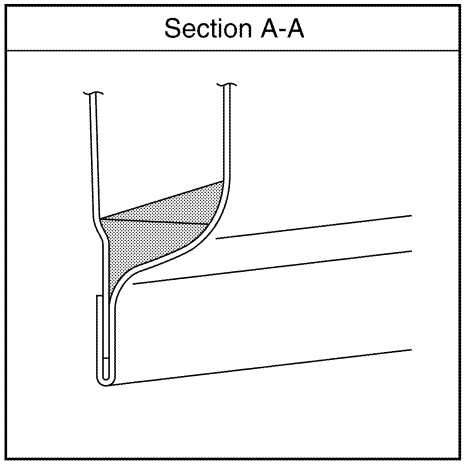
Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

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 anti-corrosive wax coated portions.



SIIA2160E

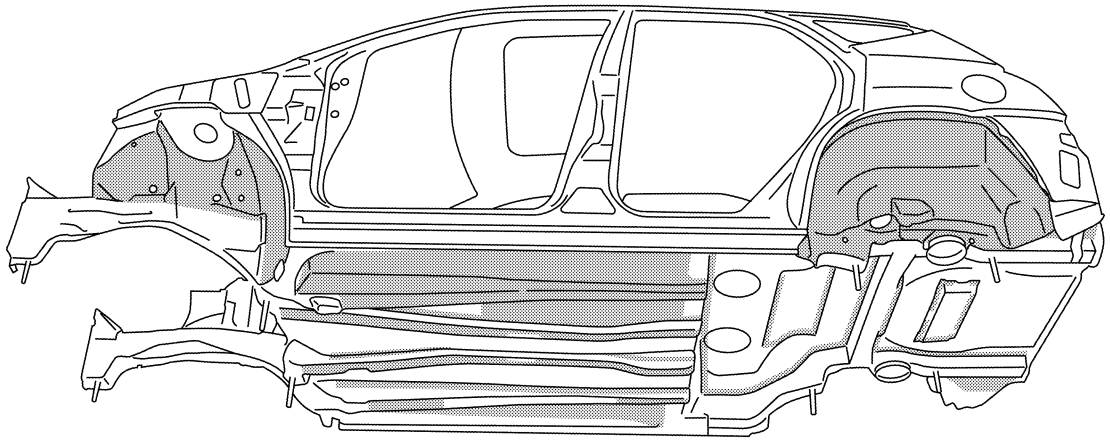
UNDERCOATING

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.
5. After putting seal on the vehicle, put undercoating on it.

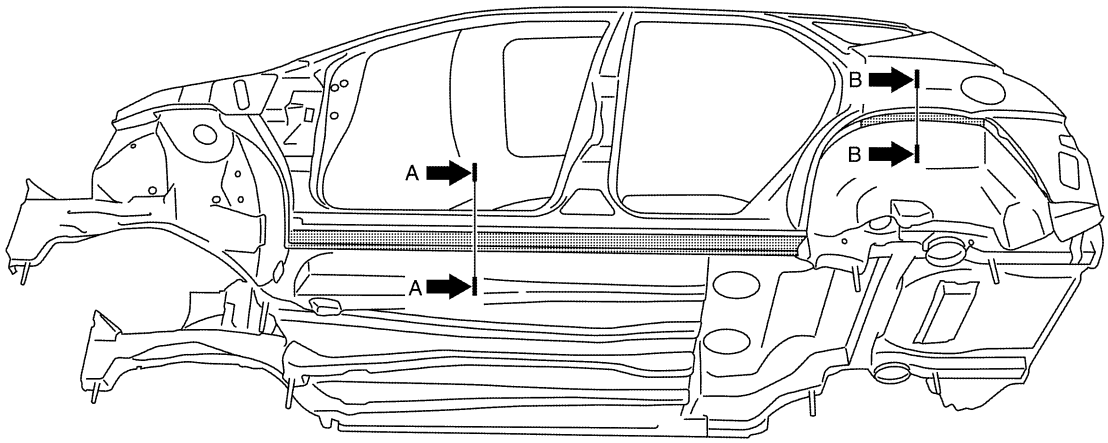
: Indicates undercoated portions.



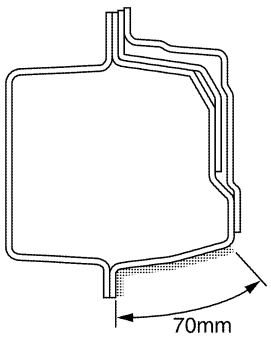
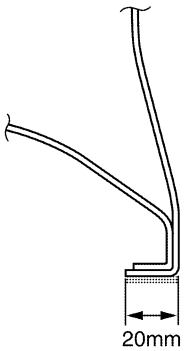
SIIA2161E

STONE GUARD COAT

To prevent damage caused by stones, the lower outer body panel (fender, door, etc.) have an additional layer of Stone Guard Coating over the ED primer coating. When replacing or repairing these panels, apply Stone Guard coating to the same portions as before. Use a coating which is rust preventive, durable, shock-resistant and has a long shelf life.



: Indicates stone guard coated portions.

Section A-A	Section B-B
	

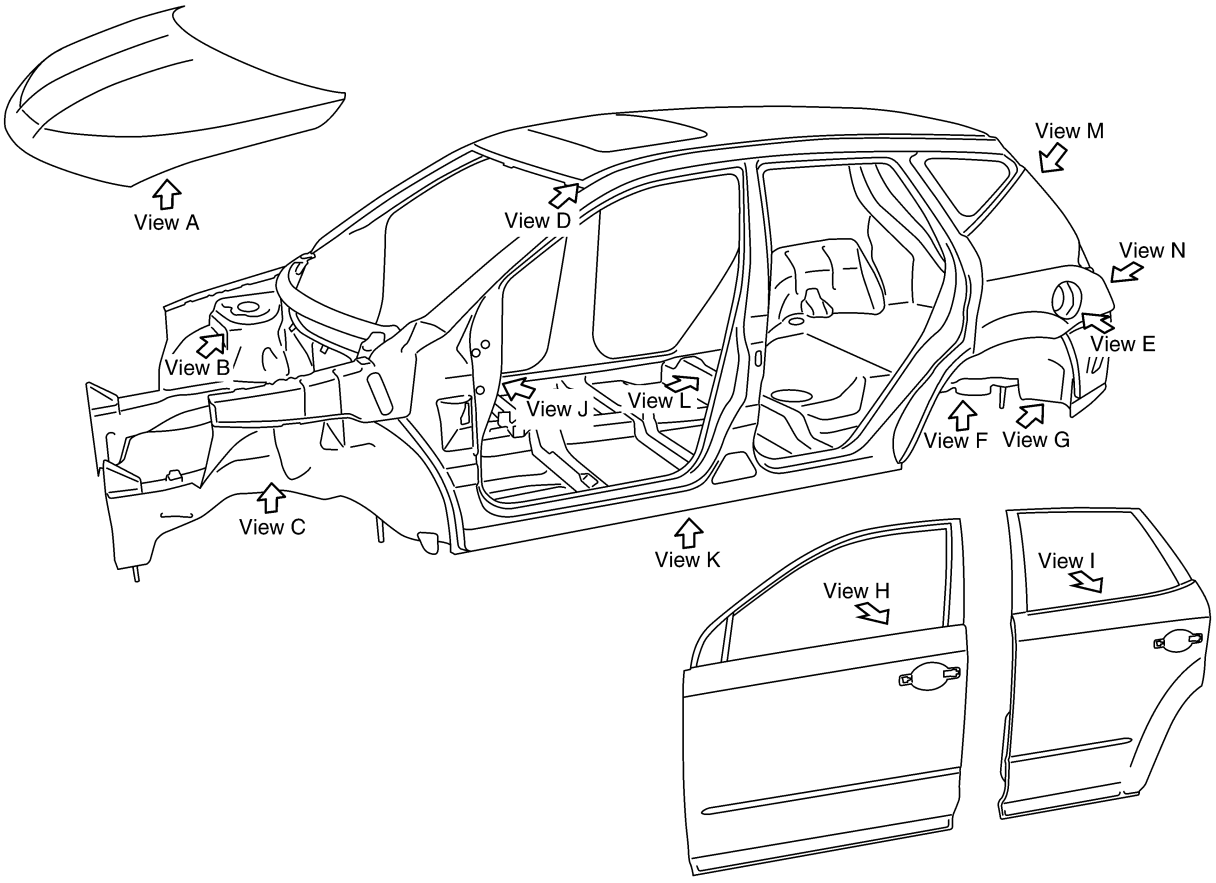
SIIA2162E

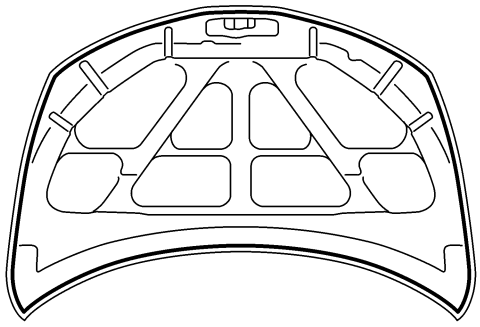
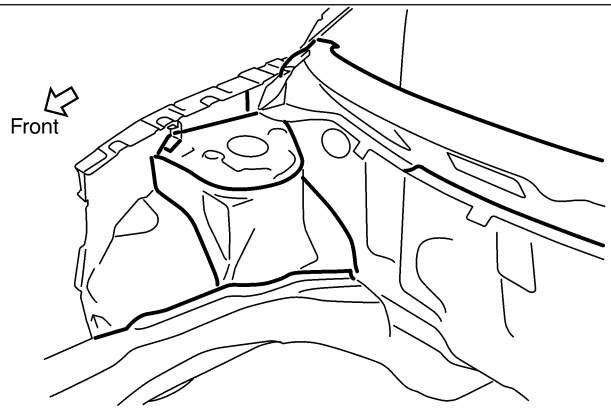
Body Sealing

NIS001AE

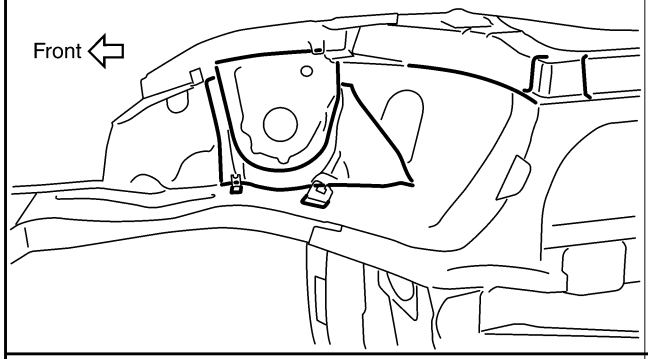
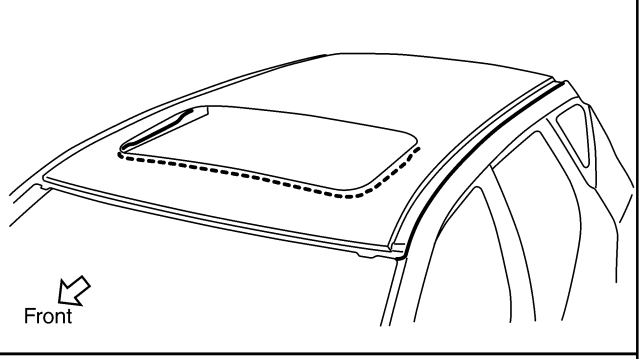
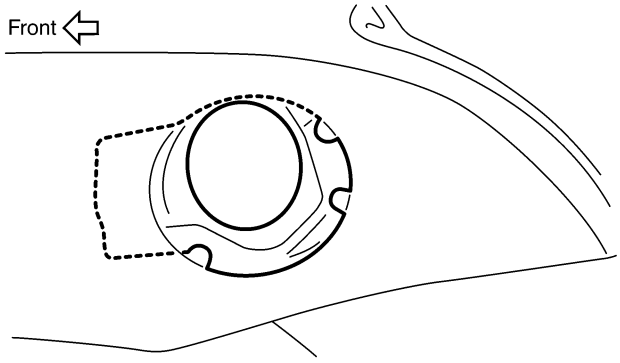
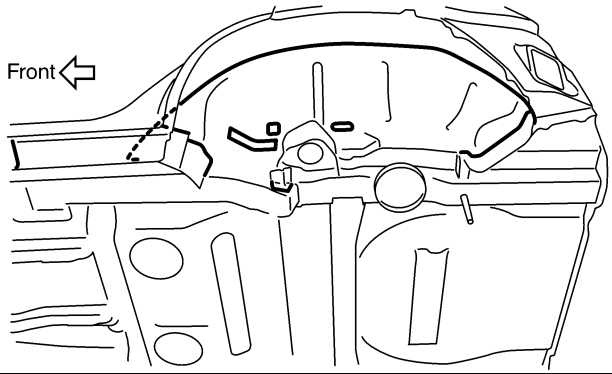
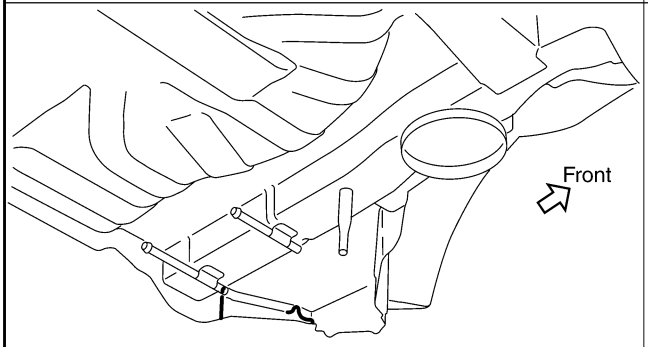
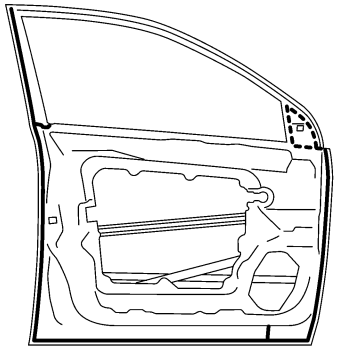
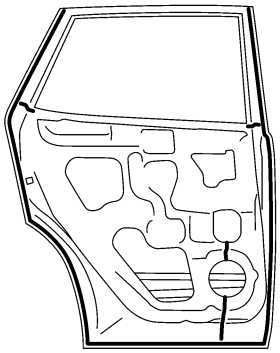
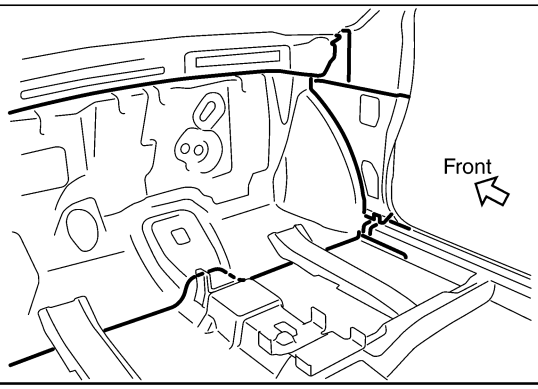
DESCRIPTION

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.

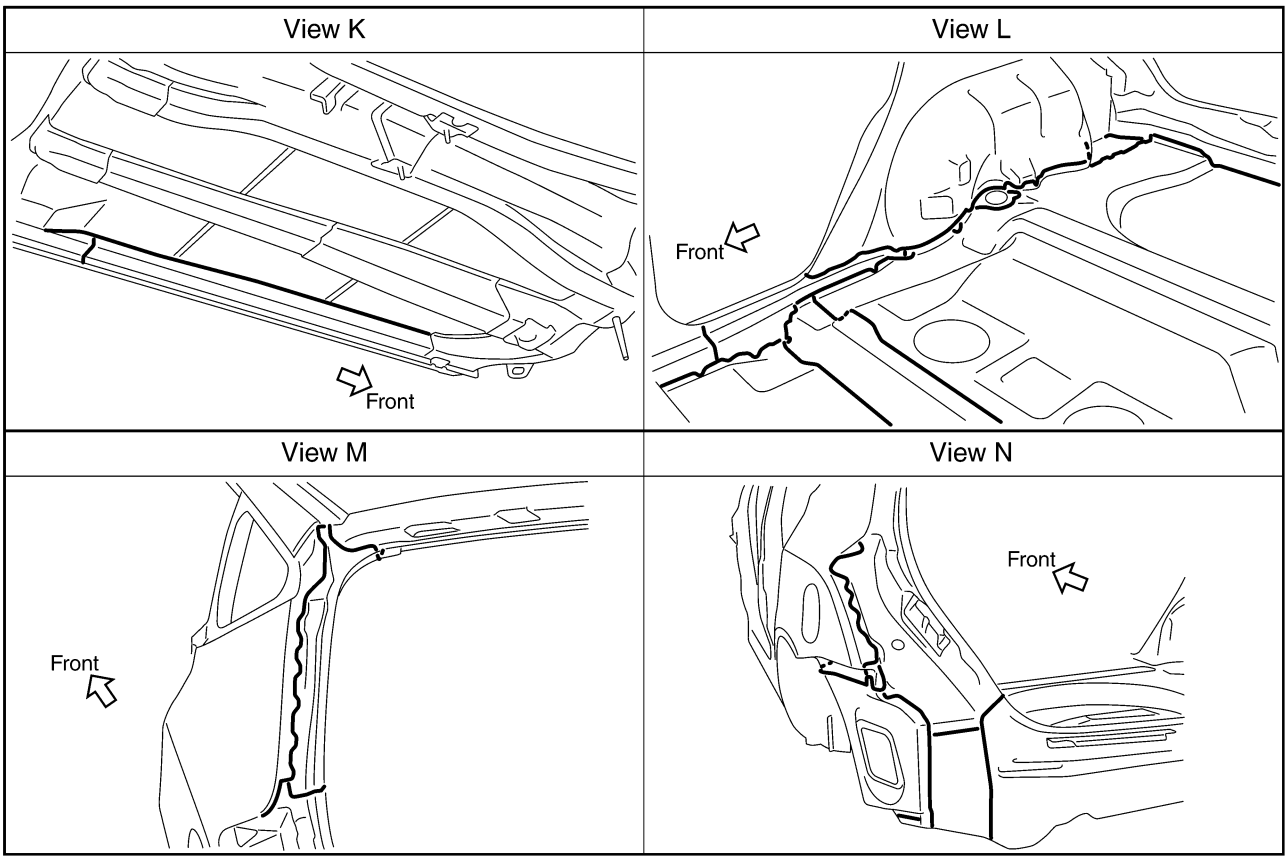


View A	View B
	

SIIA2163E

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

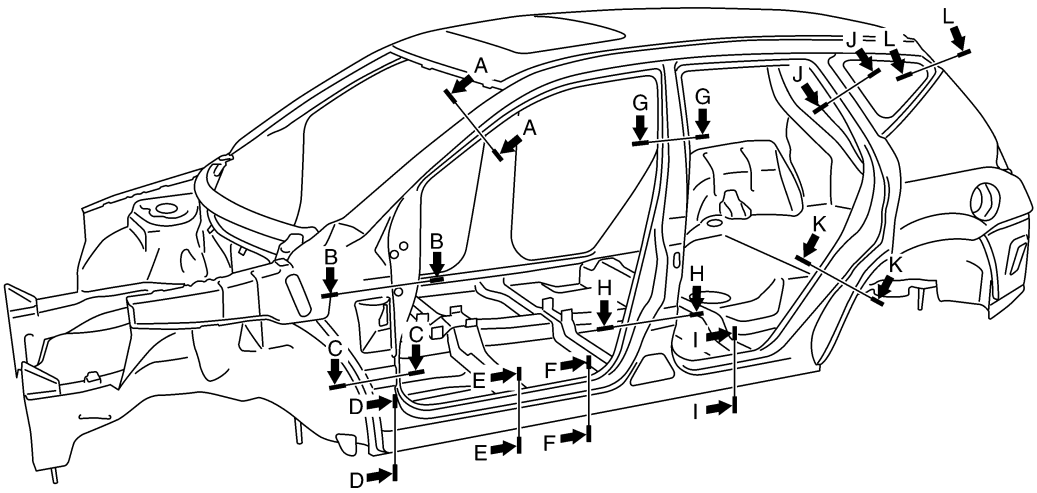
SIIA2164E

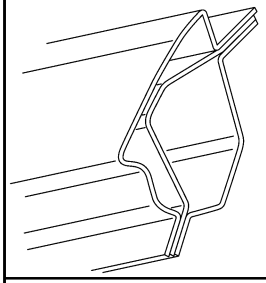
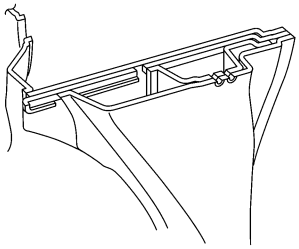
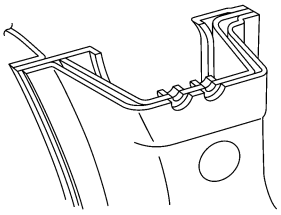
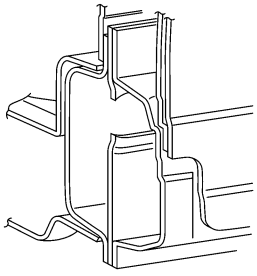
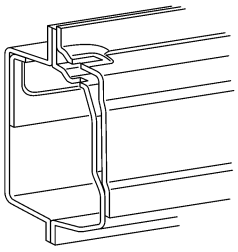
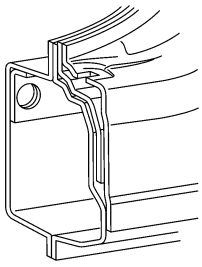
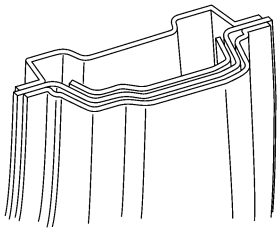
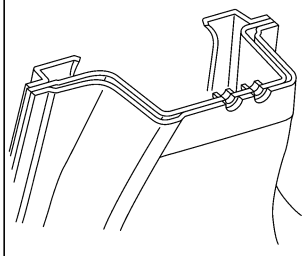
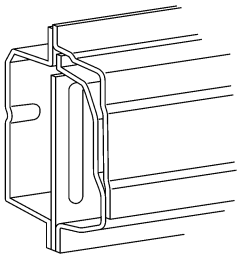
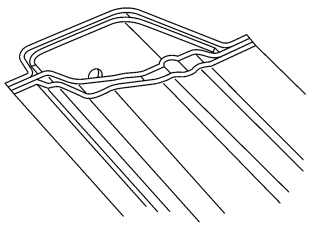
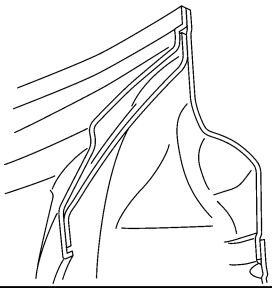
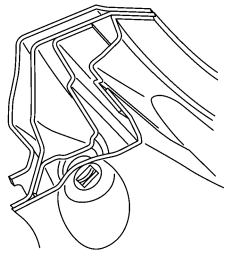


SIIA2165E

Body Construction
BODY CONSTRUCTION

NIS001AF



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**
			

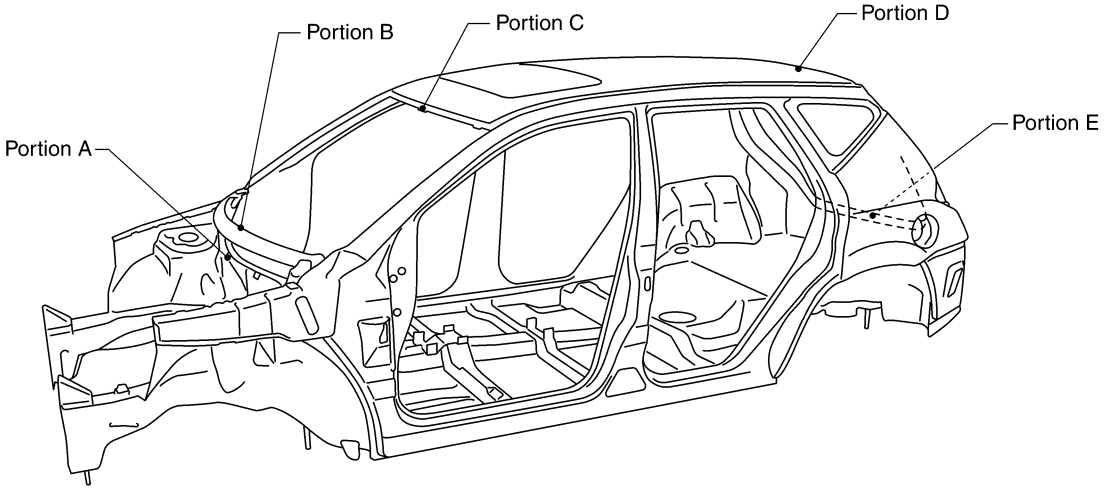
SIIA2166E

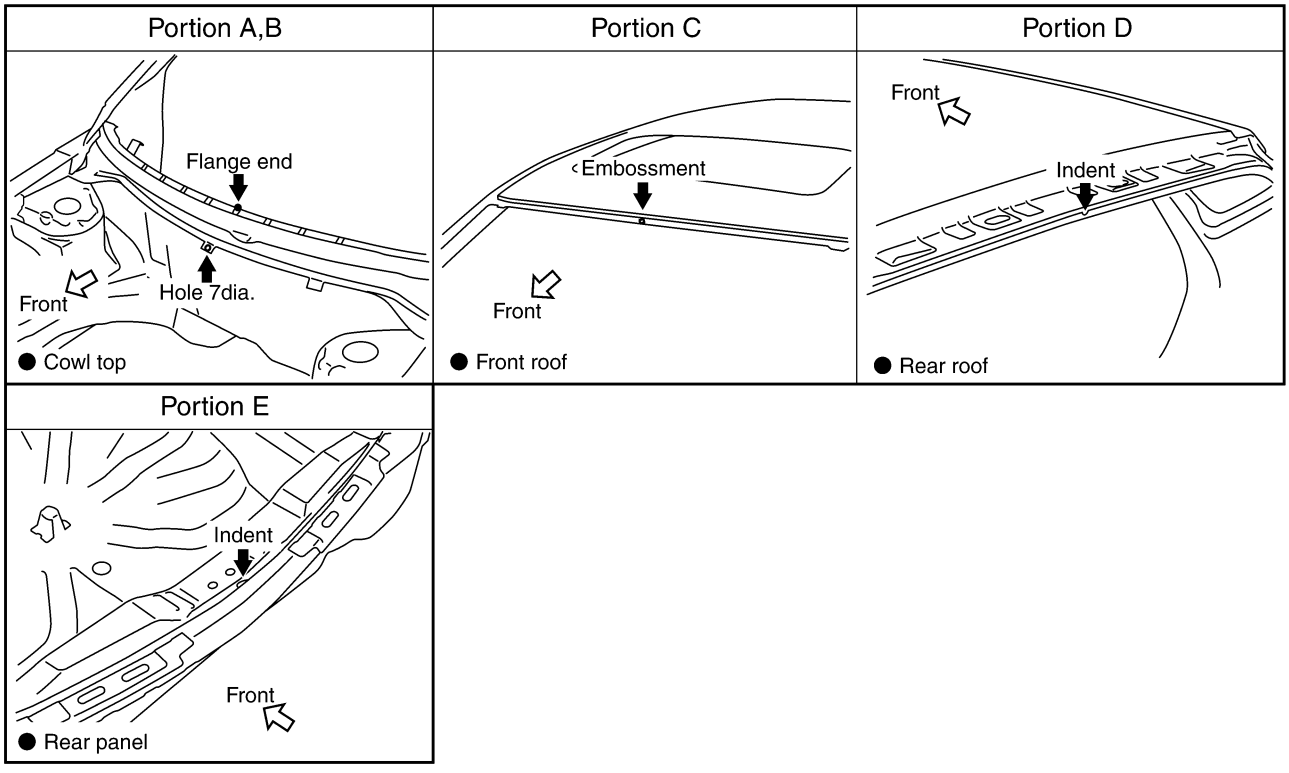
Body Alignment

NIS001AG

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.

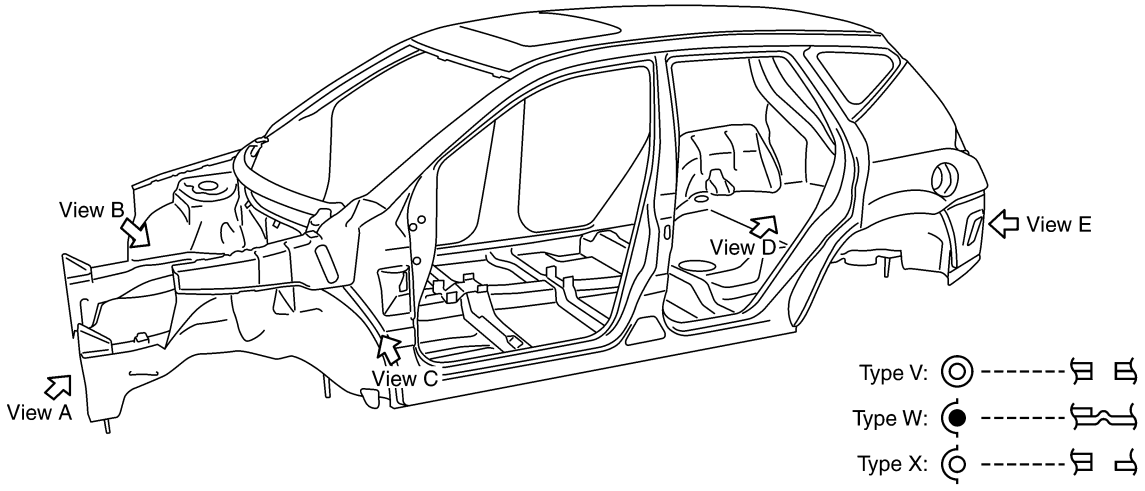


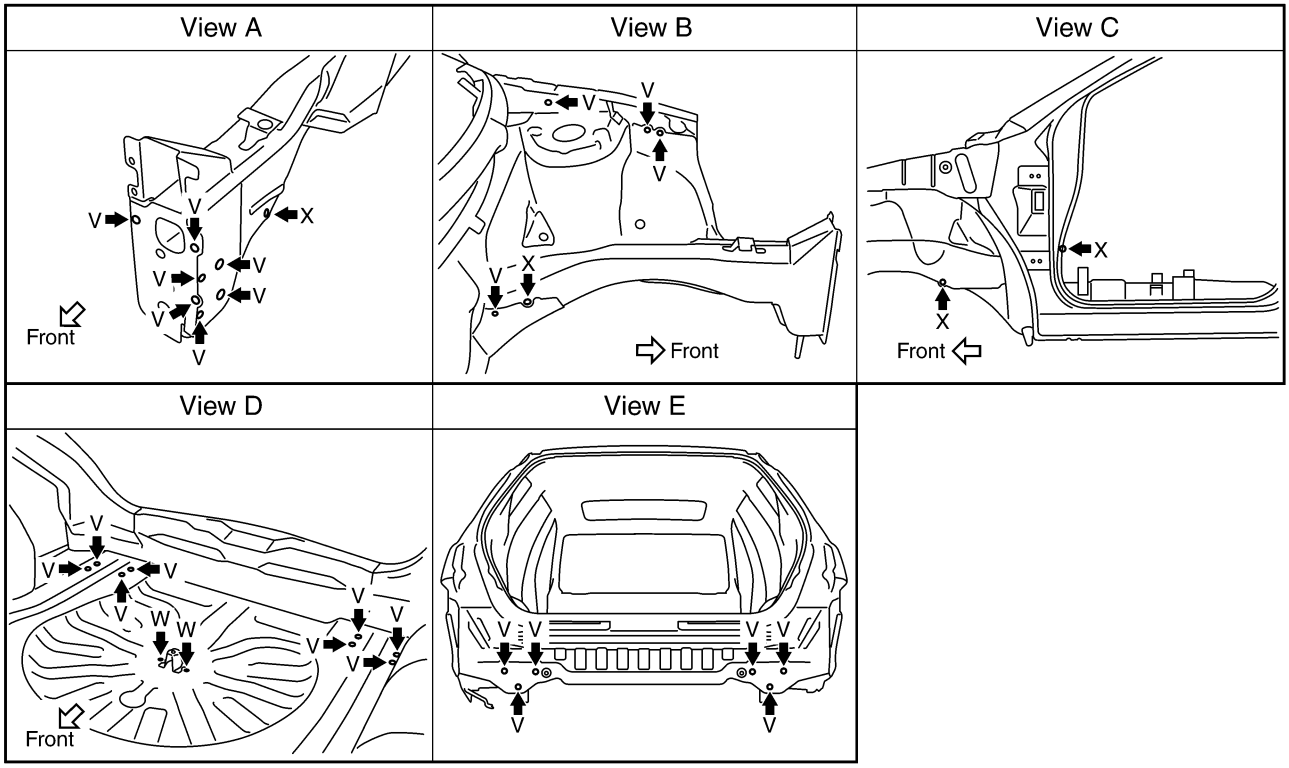


SIIA2167E

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.

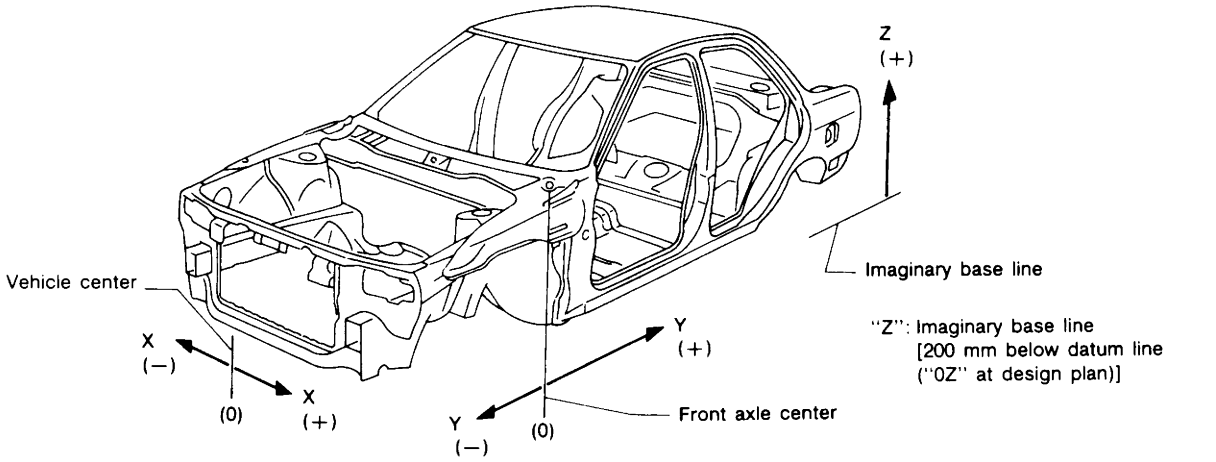




SIIA2168E

DESCRIPTION

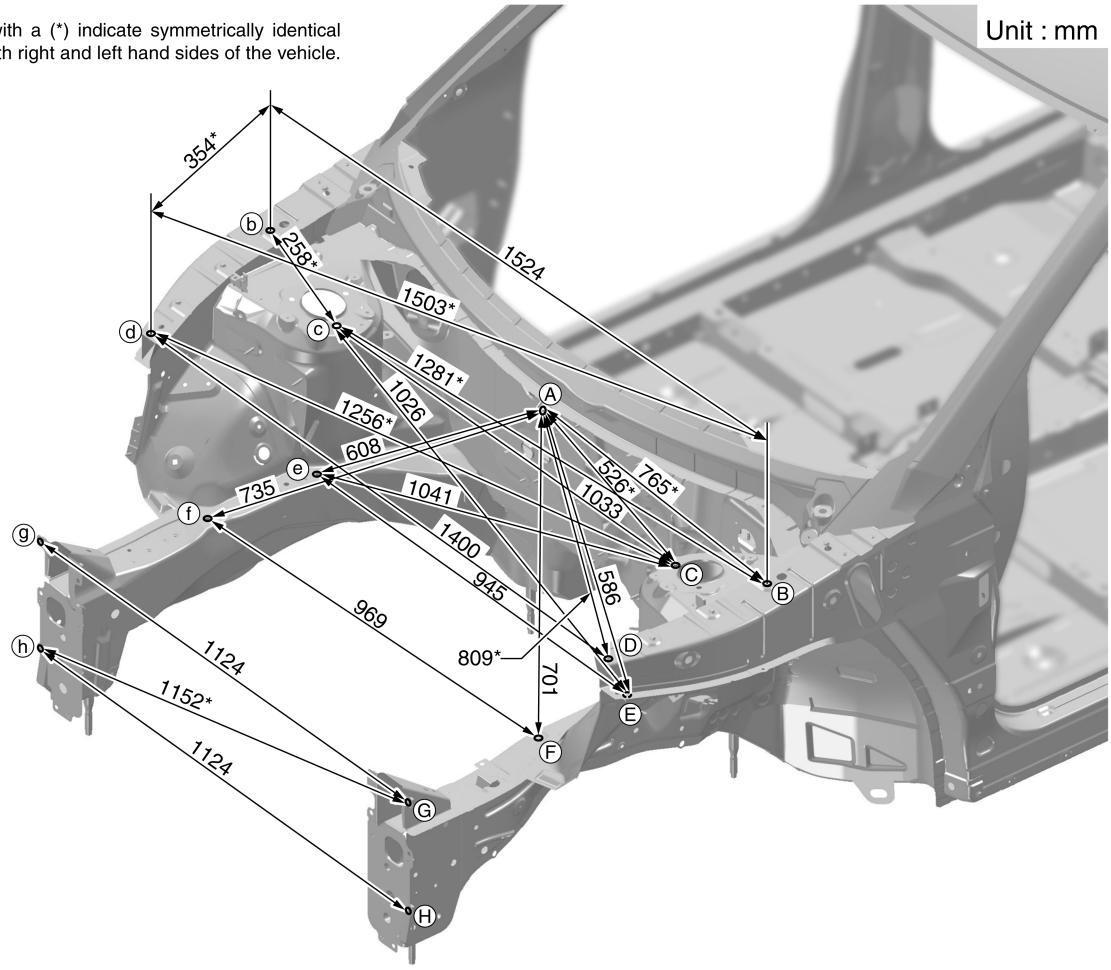
- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements 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

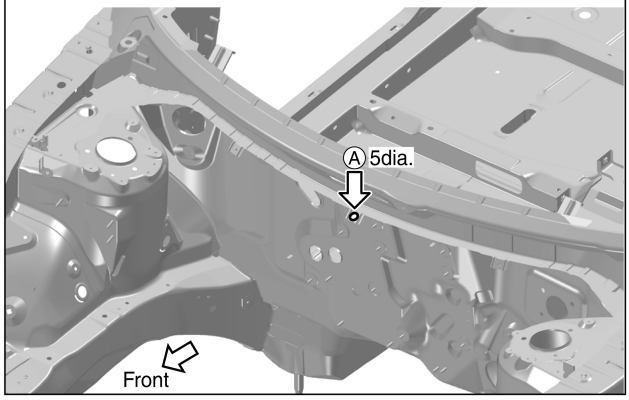
Figures marked with a (*) indicate symmetrically identical dimensions on both right and left hand sides of the vehicle.



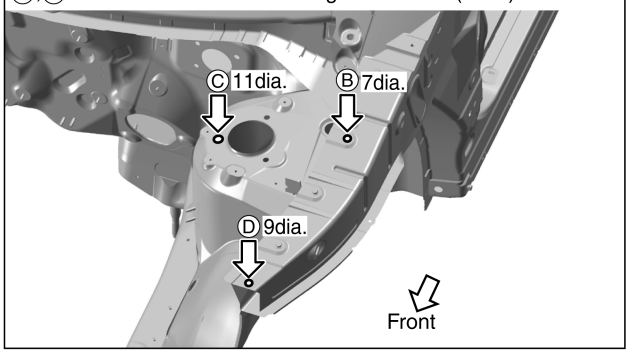
SIIA2169E

Measurement Points

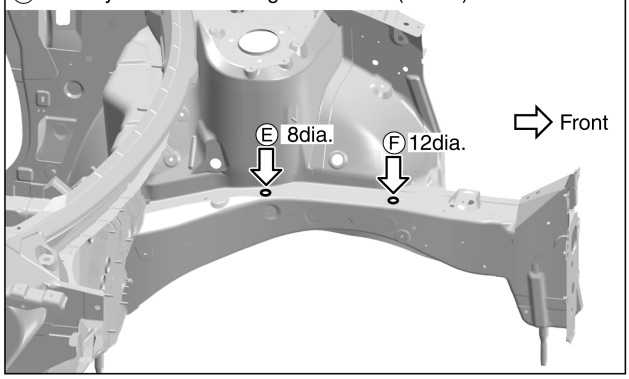
Ⓐ : Cowl top extension installing hole center (5dia.)



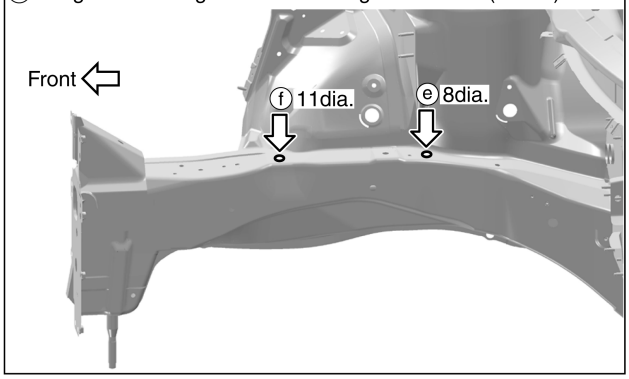
Ⓑ,ⓑ : Front fender installing hole center (7dia.)
Ⓒ,ⓒ : Front suspension installing hole center (11dia.)
Ⓓ,ⓓ : Front end module installing hole center (9dia.)



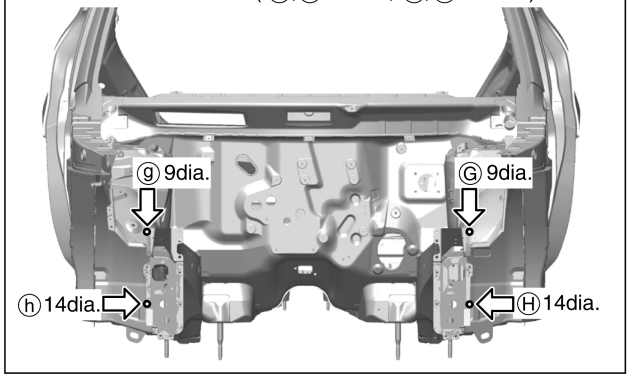
Ⓔ: Harness clamp installing hole center (8dia.)
Ⓕ: Battery bracket installing hole center (12dia.)



ⓔ : Harness clamp installing hole center (8dia.)
ⓕ : Engine mounting bracket installing hole center (11dia.)



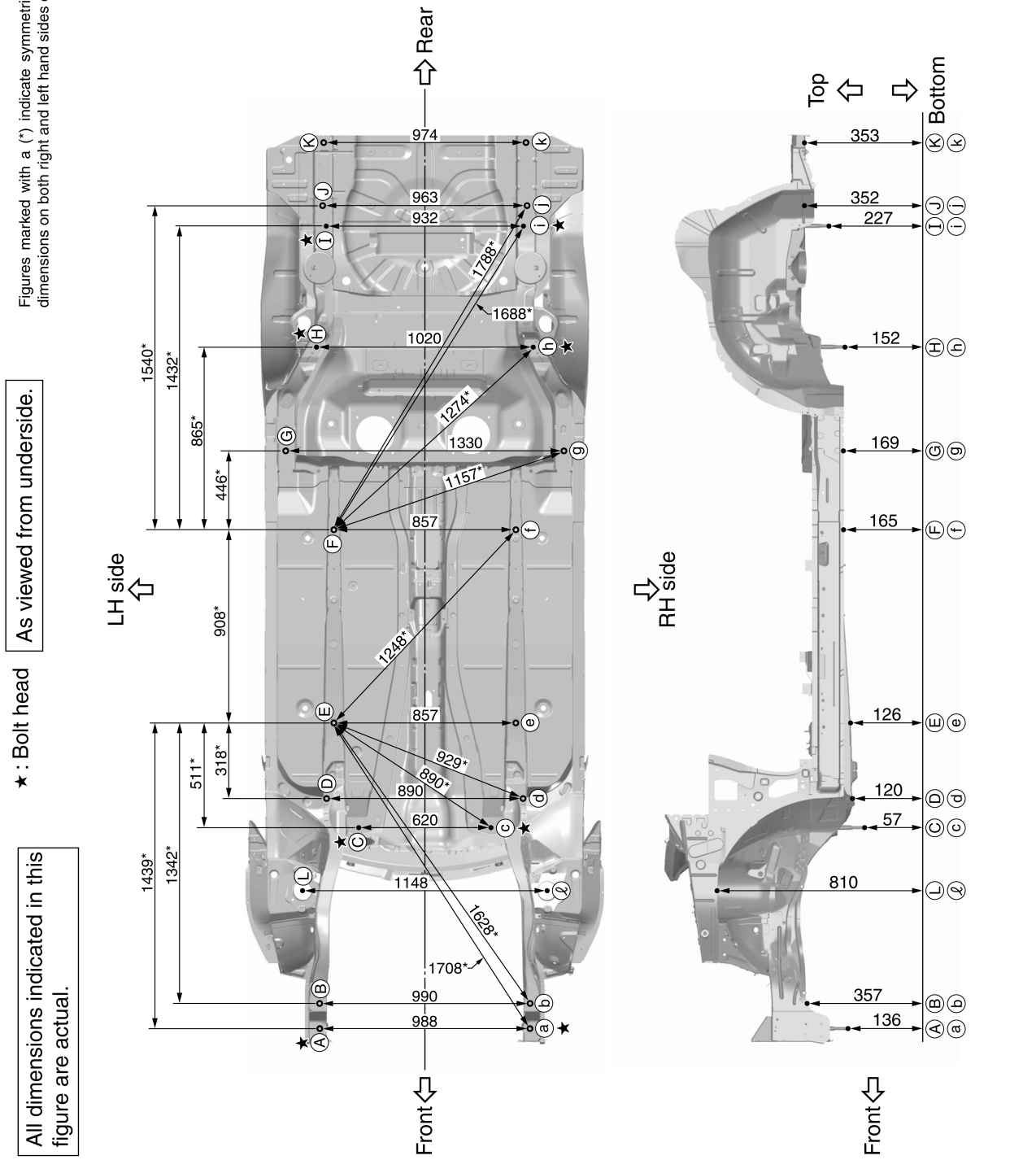
Ⓖ,ⓖ,Ⓗ,ⓗ : Front bumper stay and front end module installing hole center (Ⓖ,ⓖ : 9dia. , Ⓗ,ⓗ : 14dia.)



SIIA2170E

UNDERBODY
Measurement

Unit : mm

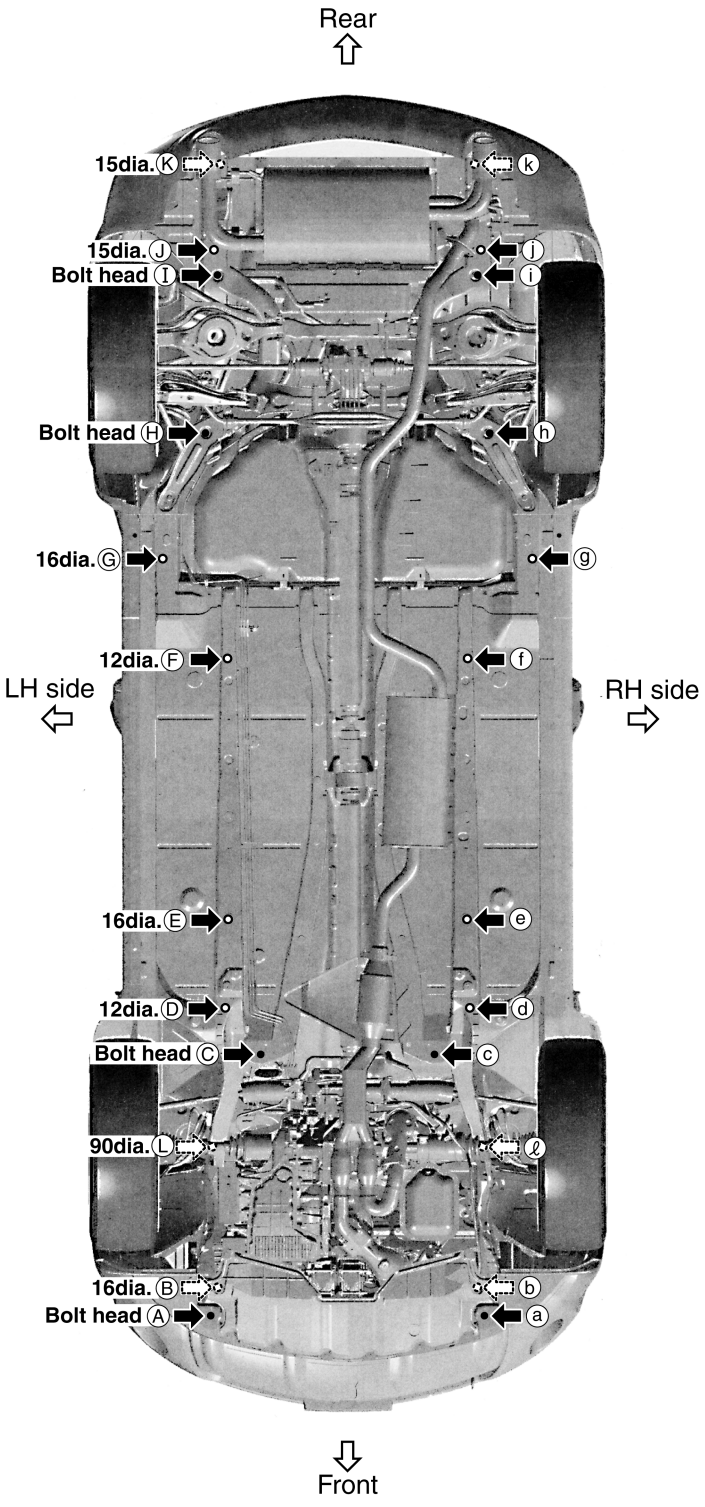


SIIA2171E

Measurement Points

Unit : mm

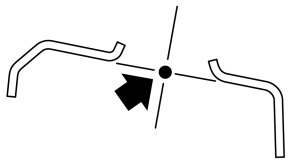
As viewed from underside.



Coordinates:

Ⓐ,ⓐ	Ⓖ,ⓖ
X:494	**X:665**
Y:-618	**Y:2105**
Z:136	**Z:169**
Ⓑ,ⓑ	Ⓗ,ⓗ
X:495	**X:510**
Y:-500	**Y:2588**
Z:357	**Z:152**
Ⓒ,ⓒ	Ⓘ,ⓘ
X:310	**X:466**
Y:328	**Y:3157**
Z:57	**Z:227**
Ⓓ,ⓓ	Ⓙ,ⓙ
X:445	**X:482**
Y:503	**Y:3255**
Z:120	**Z:352**
Ⓔ,ⓔ	Ⓚ,ⓚ
X:429	**X:487**
Y:820	**Y:3553**
Z:126	**Z:353**
Ⓕ,ⓕ	
X:429	
Y:1727	
Z:165	

Front and rear strut tower centers
Coordinates:
Ⓛ,ⓛ
X:574
Y:32
Z:810



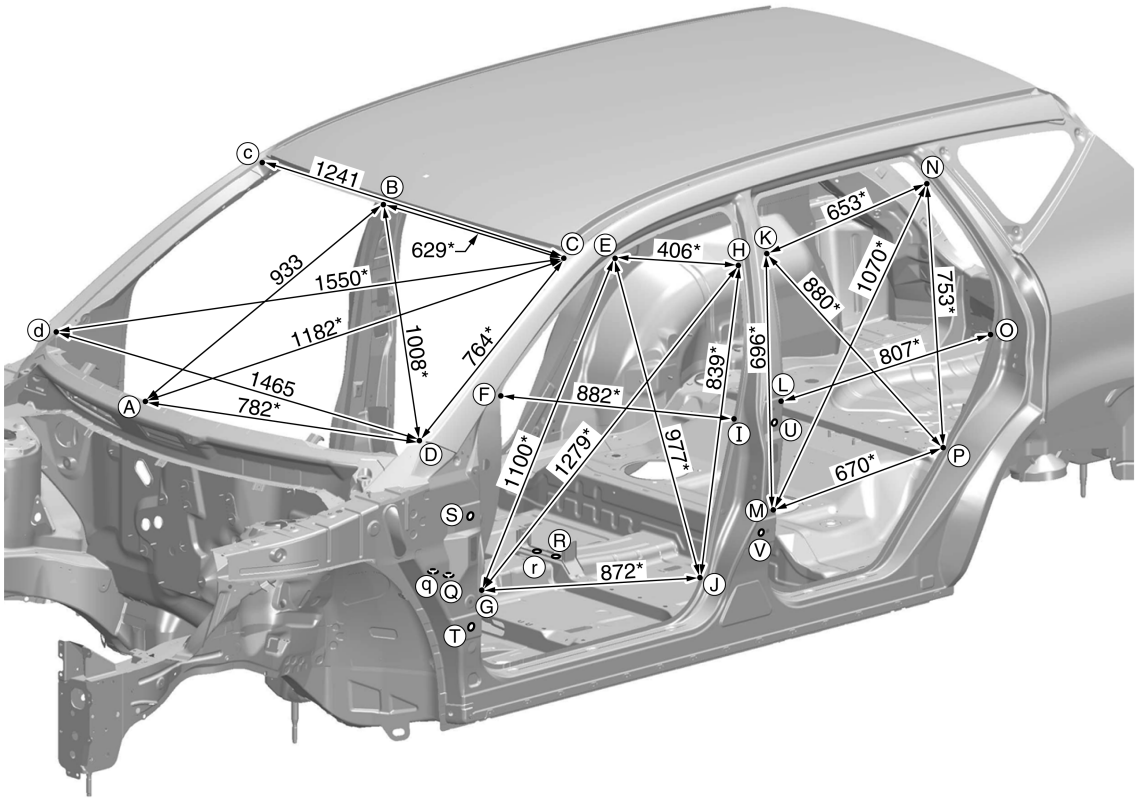
Front: Ⓛ,ⓛ **90dia.**

SIIA2172E

PASSENGER COMPARTMENT
Measurement

Unit : mm

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

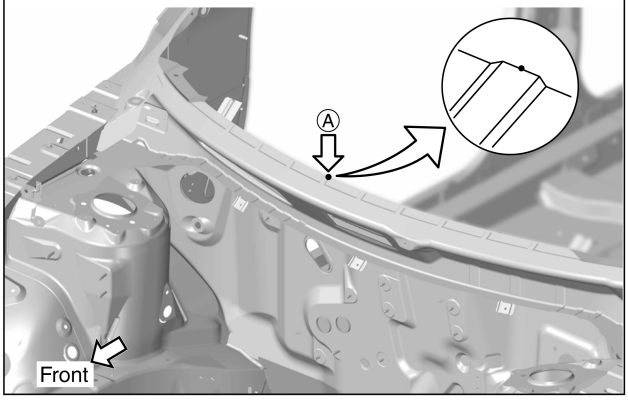


Point	Dimension	Point	Dimension	Point	Dimension
Ⓔ～ⓔ	1,277	Ⓚ～ⓝ	1,509*	Ⓠ～Ⓘ	1,006*
Ⓔ～ⓖ	1,772*	Ⓚ～ⓟ	1,717*	Ⓠ～Ⓙ	806*
Ⓔ～ⓗ	1,407*	Ⓛ～ⓛ	1,564	Ⓡ～Ⓚ	1,184*
Ⓔ～ⓙ	1,699*	Ⓜ～ⓜ	1,523	Ⓡ～Ⓛ	971*
Ⓕ～ⓕ	1,502	Ⓜ～ⓝ	1,768*	Ⓡ～Ⓜ	779*
Ⓖ～ⓖ	1,512	Ⓜ～ⓟ	1,667*	Ⓡ～Ⓝ	1,479*
Ⓖ～ⓗ	1,946*	Ⓝ～ⓝ	1,300	Ⓡ～Ⓞ	1,354*
Ⓖ～ⓙ	1,746*	Ⓝ～ⓟ	1,598*	Ⓡ～Ⓟ	1,118*
Ⓗ～ⓗ	1,423	Ⓞ～ⓞ	1,547	Ⓢ～Ⓤ	1,134*
Ⓗ～ⓙ	1,690*	Ⓟ～ⓟ	1,529	Ⓢ～Ⓥ	1,118*
Ⓘ～ⓘ	1,561	Ⓠ～Ⓔ	1,214*	Ⓣ～Ⓤ	1,189*
Ⓙ～ⓙ	1,514	Ⓠ～Ⓕ	1,105*	Ⓣ～Ⓥ	1,086*
Ⓚ～ⓚ	1,422	Ⓠ～Ⓖ	898*		
Ⓚ～ⓜ	1,628*	Ⓠ～Ⓗ	1,253*		

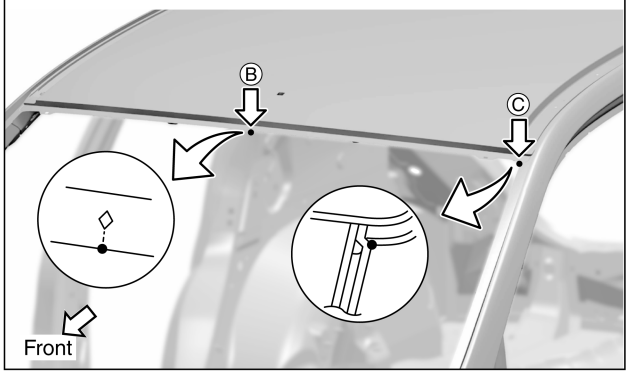
SIIA2173E

Measurement Points

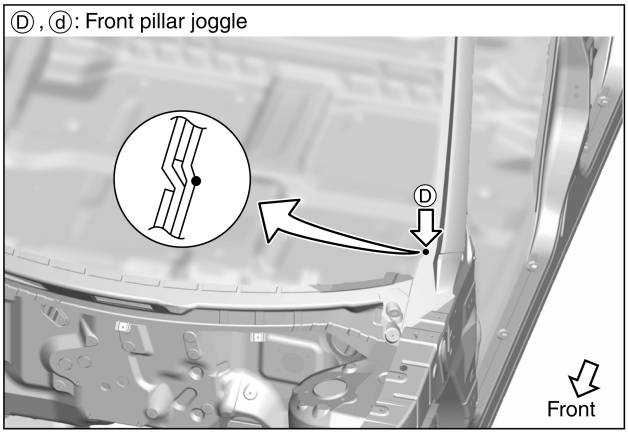
Ⓐ : Center cowl top flange end of center positioning mark



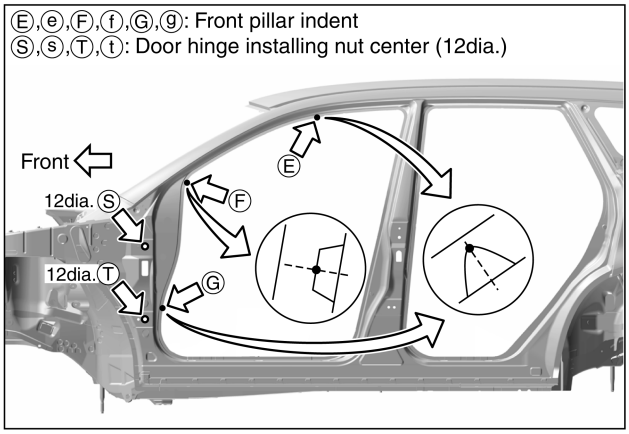
Ⓑ : Front roof flange end of center positioning mark
Ⓒ , ⓒ : Front pillar joggle



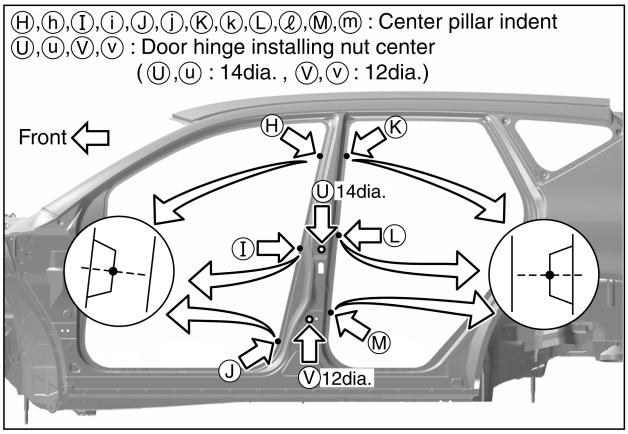
Ⓓ , ⓓ : Front pillar joggle



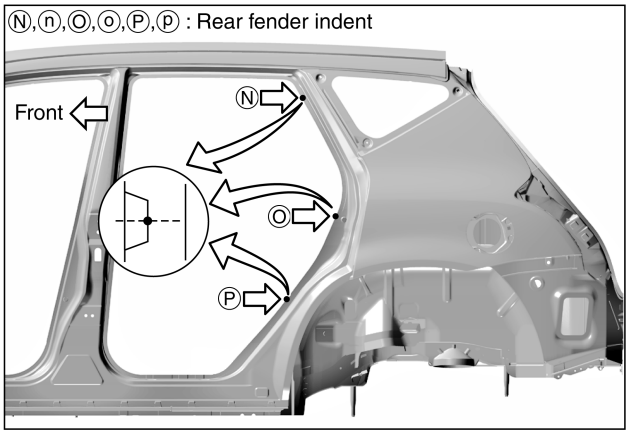
Ⓔ,ⓔ,Ⓕ,ⓕ,Ⓖ,ⓖ: Front pillar indent
Ⓢ,ⓢ,Ⓣ,ⓣ: Door hinge installing nut center (12dia.)



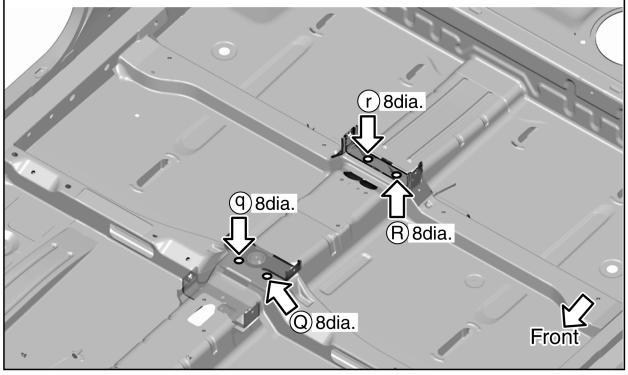
Ⓗ,ⓗ,Ⓘ,ⓘ,Ⓙ,ⓙ,Ⓚ,ⓚ,Ⓛ,ⓛ,Ⓜ,ⓜ : Center pillar indent
Ⓤ,ⓤ,Ⓥ,ⓥ : Door hinge installing nut center
(Ⓤ,ⓤ : 14dia. , Ⓥ,ⓥ : 12dia.)



Ⓝ,ⓝ,Ⓞ,ⓞ,Ⓟ,ⓟ : Rear fender indent



Ⓠ,ⓠ : 2ND crossmember extension hole center (8dia.)
Ⓡ,ⓡ : Rear console bracket hole center (8dia.)

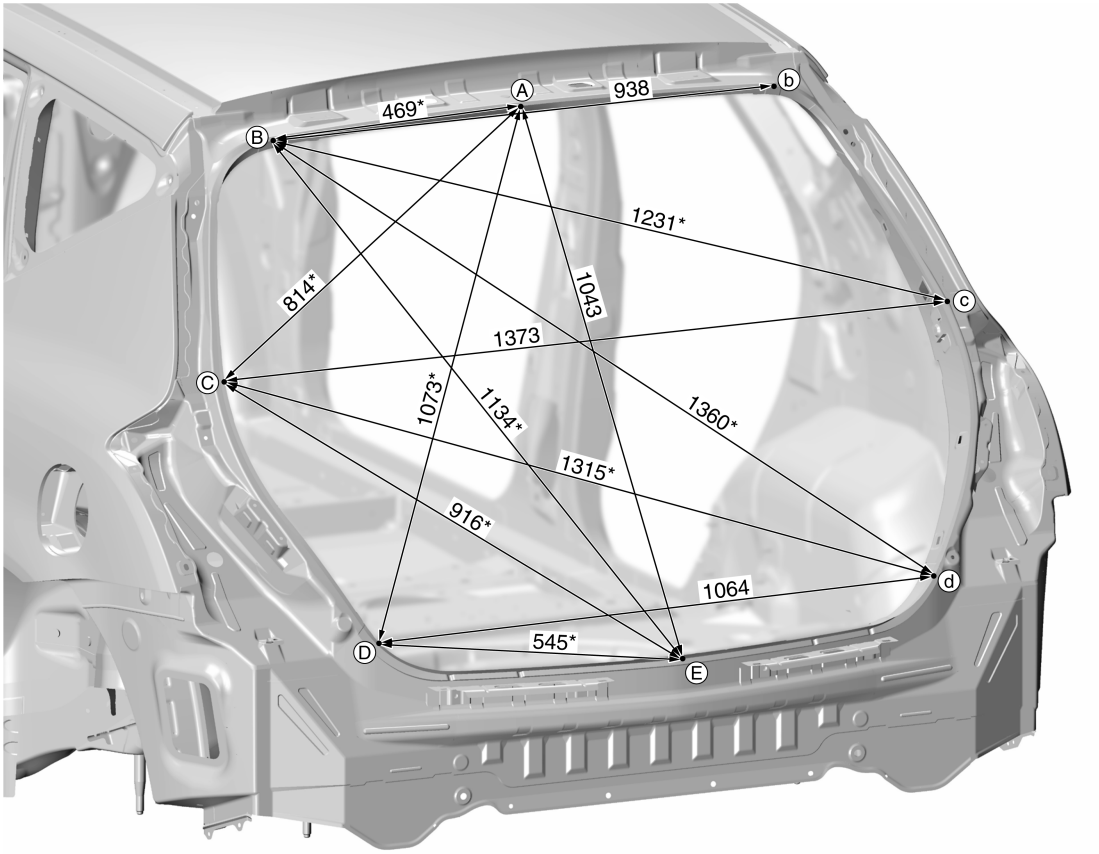


SIIA2174E

REAR BODY
Measurement

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

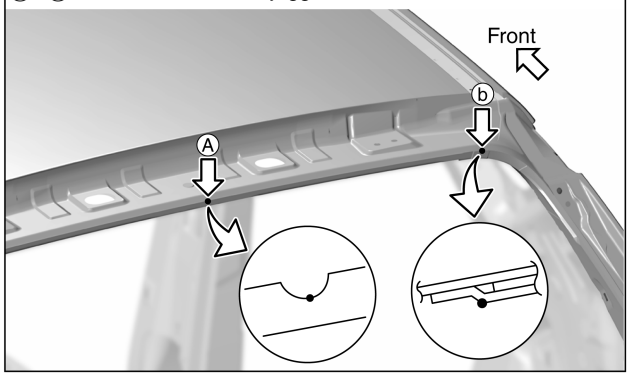
Unit : mm



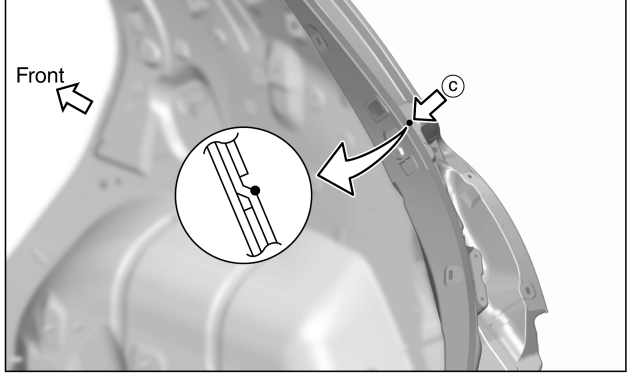
SIIA2175E

Measurement Points

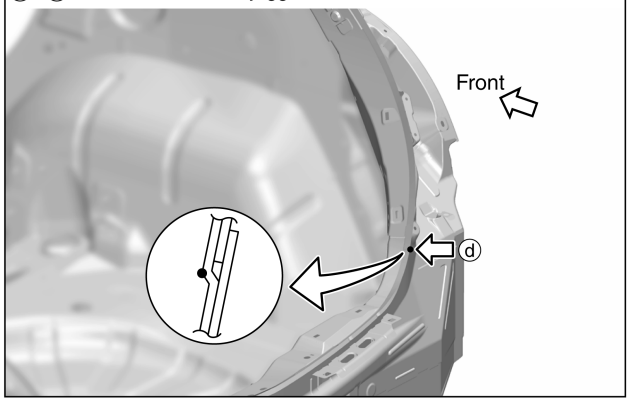
Ⓐ : Rear roof indent of center positioning mark
Ⓑ , ⓑ : Rear roof rail brace joggle



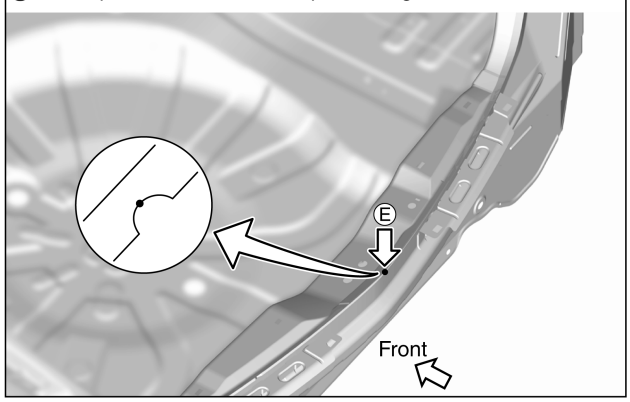
Ⓒ , ⓒ : Rear combination lamp base joggle



Ⓓ , ⓓ : Rear fender brace joggle



Ⓔ : Rear panel indent of center positioning mark



SIIA2176E

Handling Precautions for Plastics

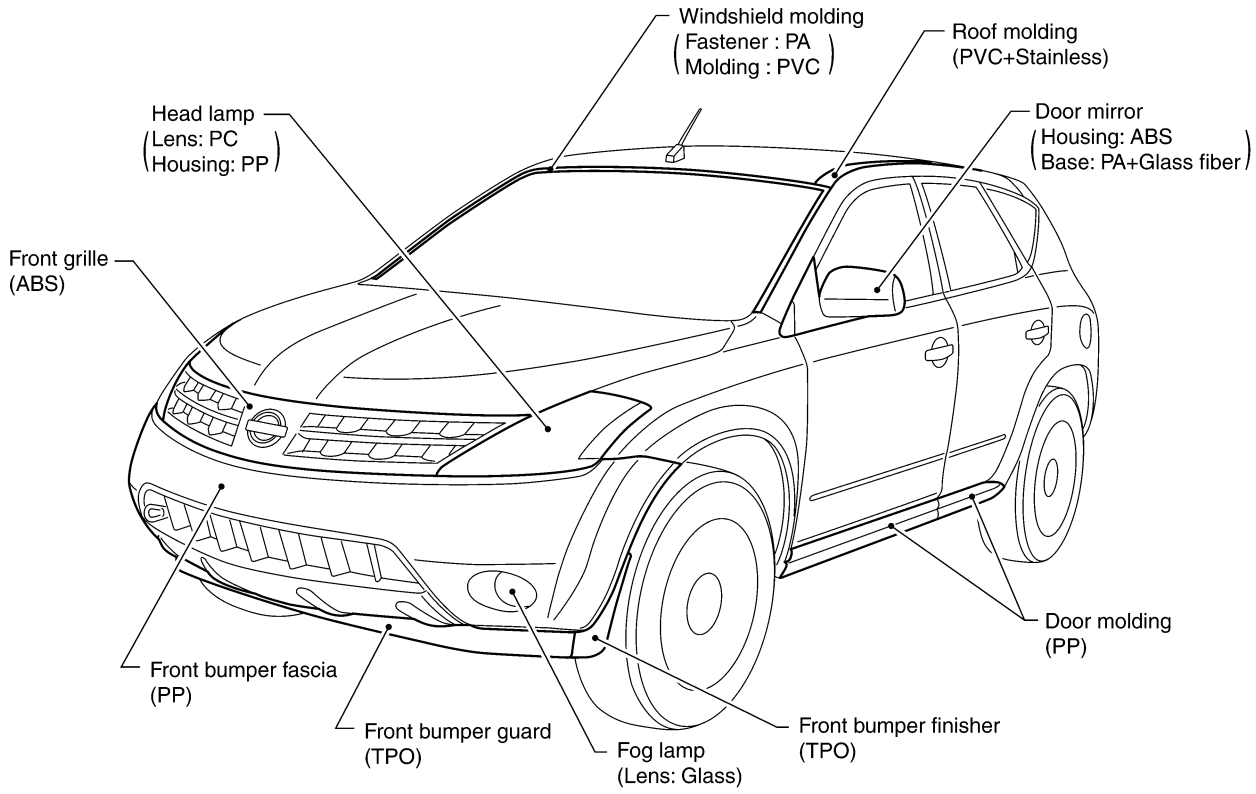
NIS001AH

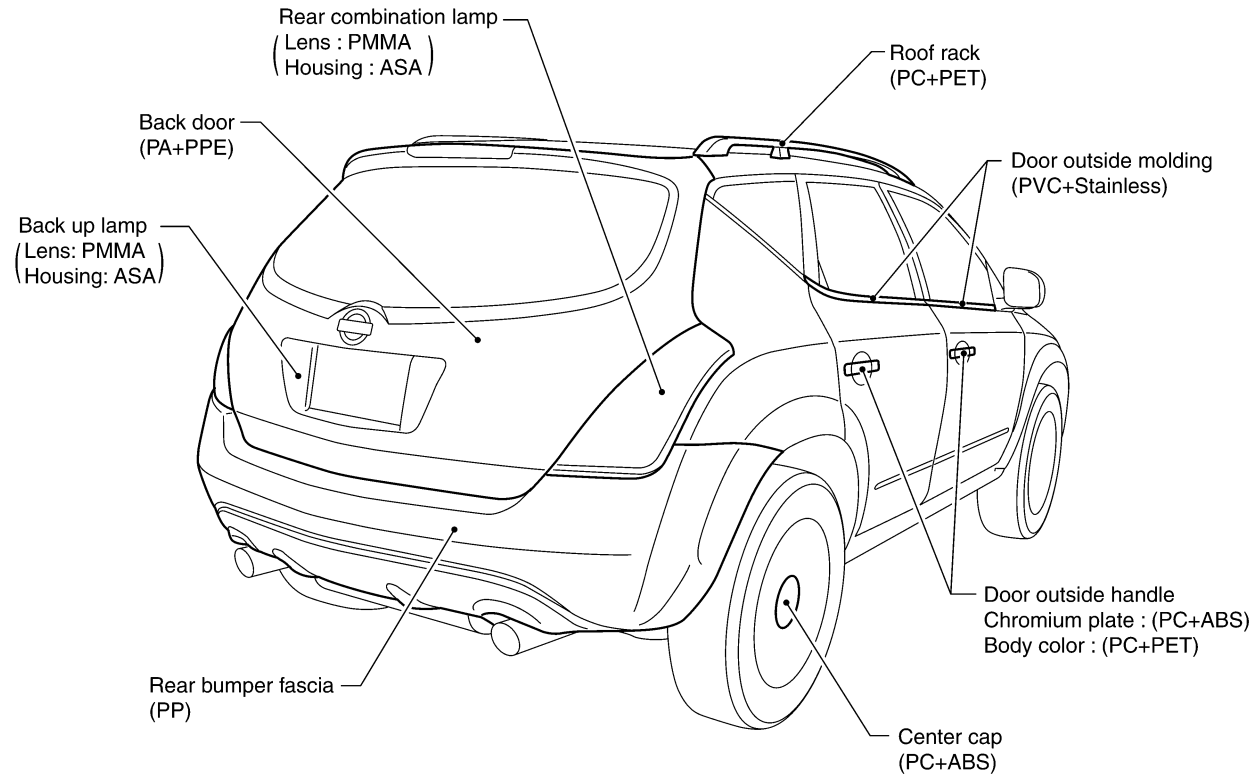
HANDLING PRECAUTIONS FOR PLASTICS

Abbre-viation	Material name	Heat resisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Poly Vinyl Chloride	80(176)	Same as above.	Poison gas is emitted when burned.
EPM/ EPDM	Ethylene Propylene (Diene) copolymer	80(176)	Same as above.	Flammable
TPO	Thermoplastic Olefine	80(176)	Same as above.	Flammable
PP	Polypropylene	90(194)	Same as above.	Flammable, avoid battery acid.
UP	Unsaturated Polyester	90(194)	Same as above.	Flammable
PS	Polystyrene	80(176)	Avoid solvents.	Flammable
ABS	Acrylonitrile Butadiene Styrene	80(176)	Avoid gasoline and solvents.	
PMMA	Poly Methyl Methacrylate	85(185)	Same as above.	
EVAC	Ethylene Vinyl Acetate	90(194)	Same as above.	
ASA	Acrylonitrile Styrene Acrylate	100(222)	Same as above.	Flammable
PPE	Poly Phenylene Ether	110(230)	Same as above.	
PC	Polycarbonate	120(248)	Same as above.	
PAR	Polyarylate	180(356)	Same as above.	
PUR	Polyurethane	90(194)	Same as above.	
POM	Poly Oxymethylene	120(248)	Same as above.	Avoid battery acid.
PBT+ PC	Poly Butylene Terephthalate + Polycarbonate	120(248)	Same as above.	Flammable
PA	Polyamide	140(284)	Same as above.	Avoid immersing in water.
PBT	Poly Butylene Terephthalate	140(284)	Same as above.	
PET	Polyester	180(356)	Same as above.	
PEI	Polyetherimide	200(392)	Same as above.	

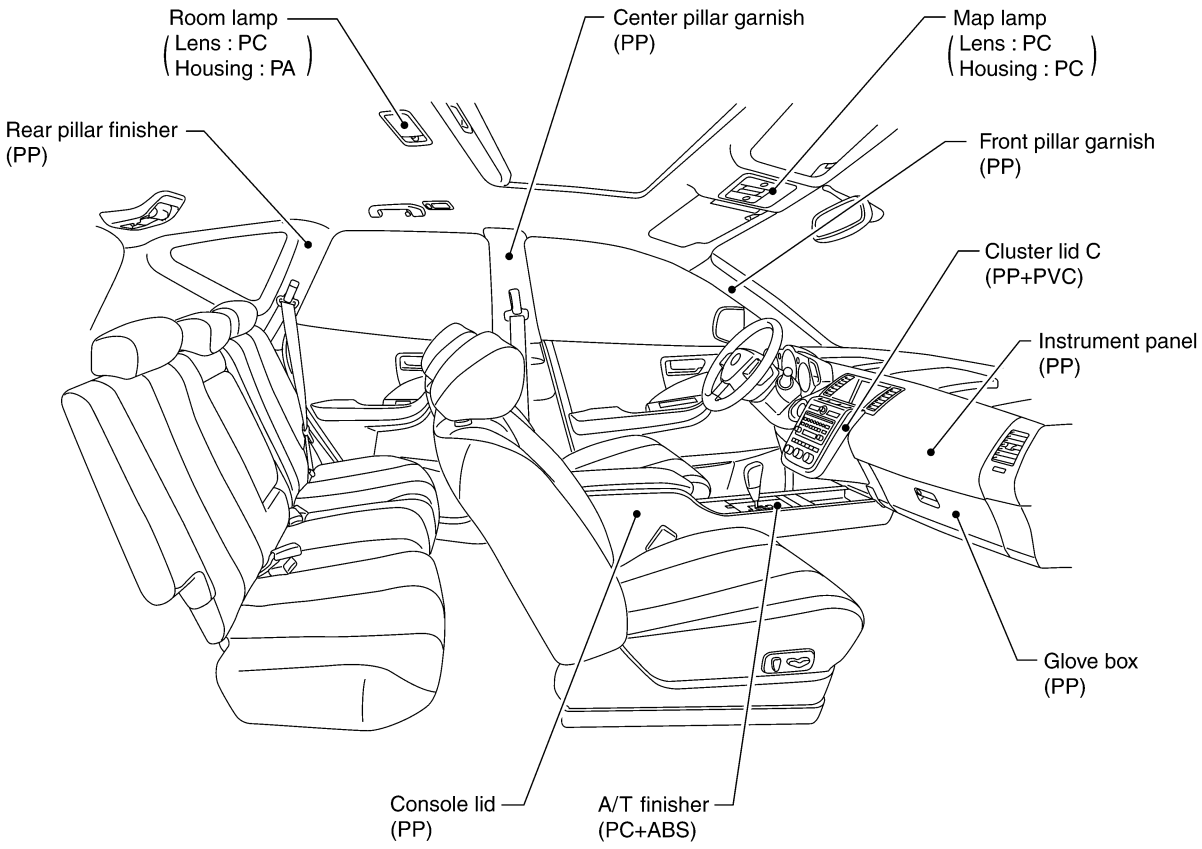
1. When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.
2. Plastic parts should be repaired and painted using methods suiting the materials' characteristics.

LOCATION OF PLASTIC PARTS





SIIA2177E


Room lamp
Lens : PC
Housing : PA
Center pillar garnish
(PP)
Map lamp
Lens : PC
Housing : PC
Rear pillar finisher
(PP)
Front pillar garnish
(PP)
Cluster lid C
(PP+PVC)
Instrument panel
(PP)
Glove box
(PP)
Console lid
(PP)
A/T finisher
(PC+ABS)

SIIA2178E

Precautions in Repairing High Strength Steel

NIS001AI

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

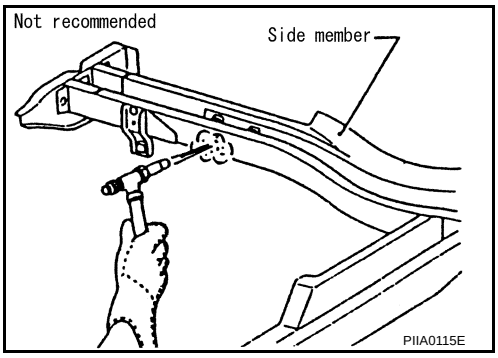
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm^2 (38kg/mm^2 ,54klb/sq in)	SP130	● Front & rear side member assembly ● Hoodledge assembly ● Lower dash ● Hood ● Other reinforcements

SP130 is the most commonly used HSS.
SP150 HSS is used only on parts that require much more strength.

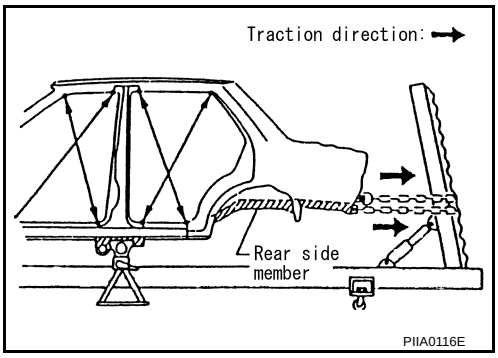
Read the Following Precautions When Repairing HSS:

1. Additional points to consider

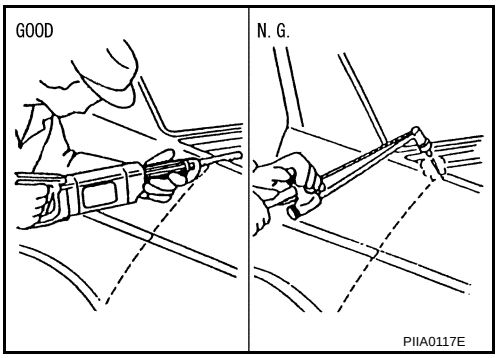
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).
  Verify heating temperature with a thermometer.
  (Crayon-type and other similar type thermometer are appropriate.)



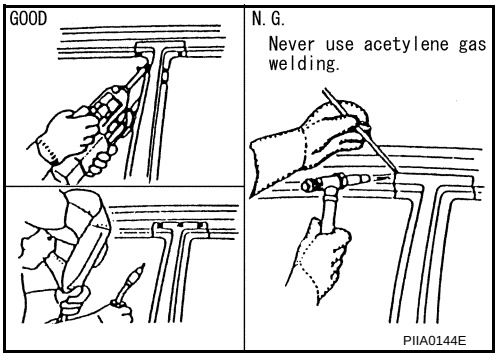
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



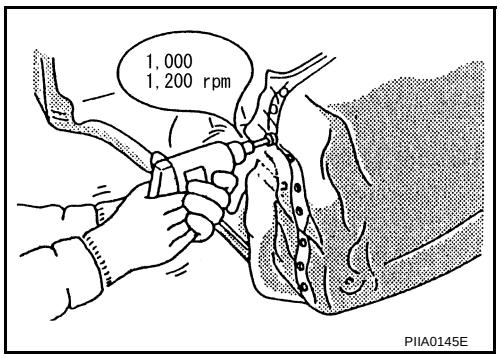
- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



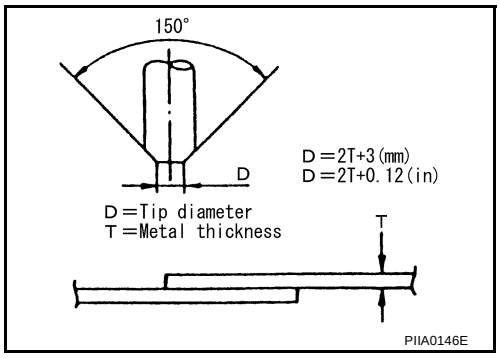
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



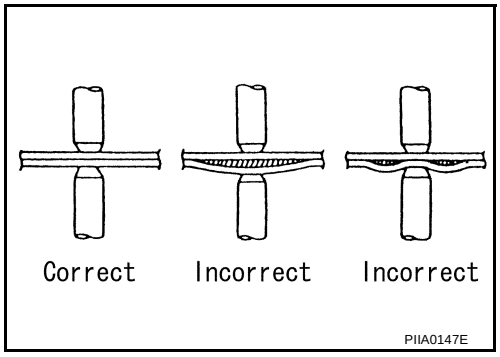
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



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.



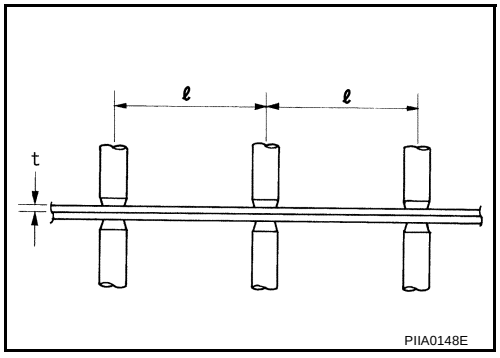
   - The panel surfaces must fit flush to each other, leaving no gaps.



   - 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

NIS001AJ

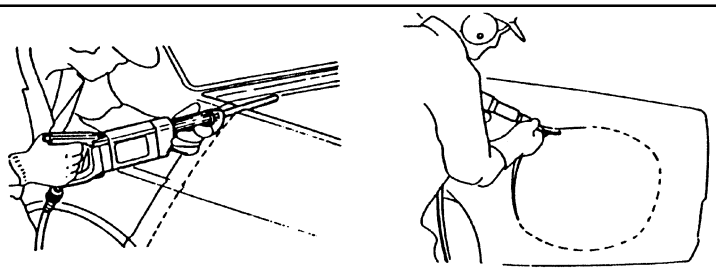
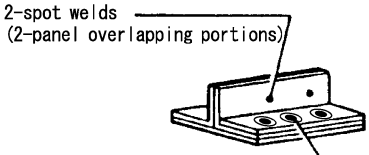
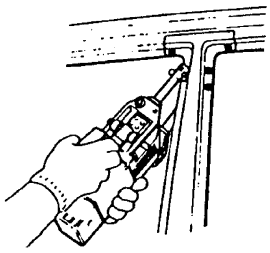
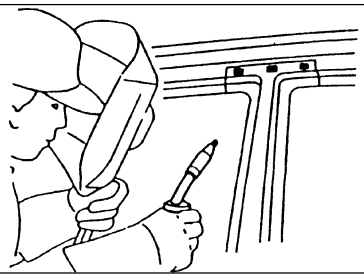
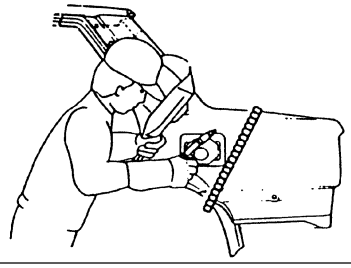
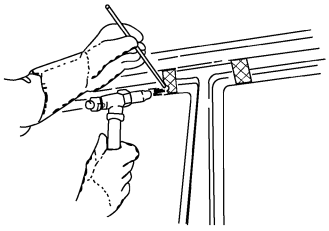
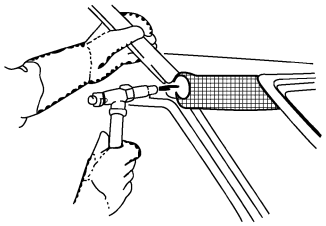
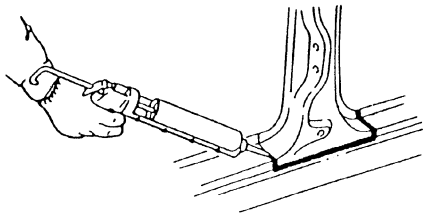
DESCRIPTION

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 warning, that are not including in this manual. Technicians should refer to both manuals to ensure proper repairs.

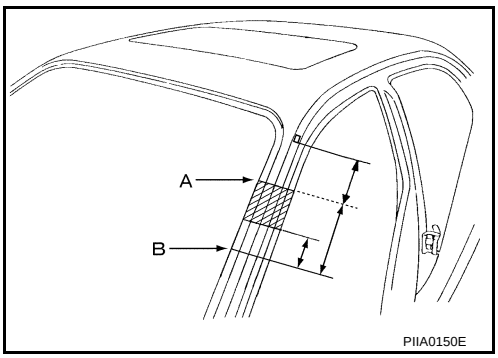
Please note that these information are prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

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

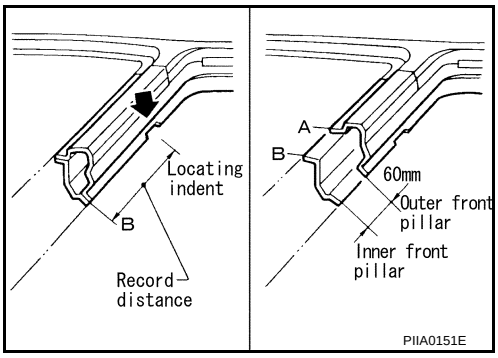
Saw cut or air chisel cut	
Spot weld 2-spot welds	 
Spot weld 3-spot welds	
MIG plug weld	 
MIG seam weld/ Point weld	
Brazing	
Soldering	
Sealing	

PIIA0149E

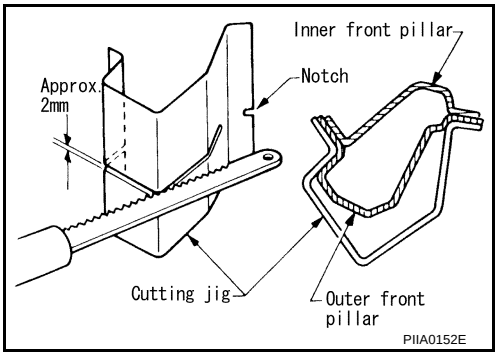
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- Determine cutting position and record distance from the locating indent. Use this distance when cutting the service part. Cut outer front pillar over 60 mm above inner front pillar cut position.

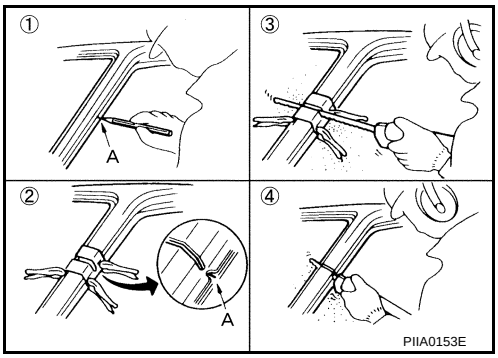


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



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

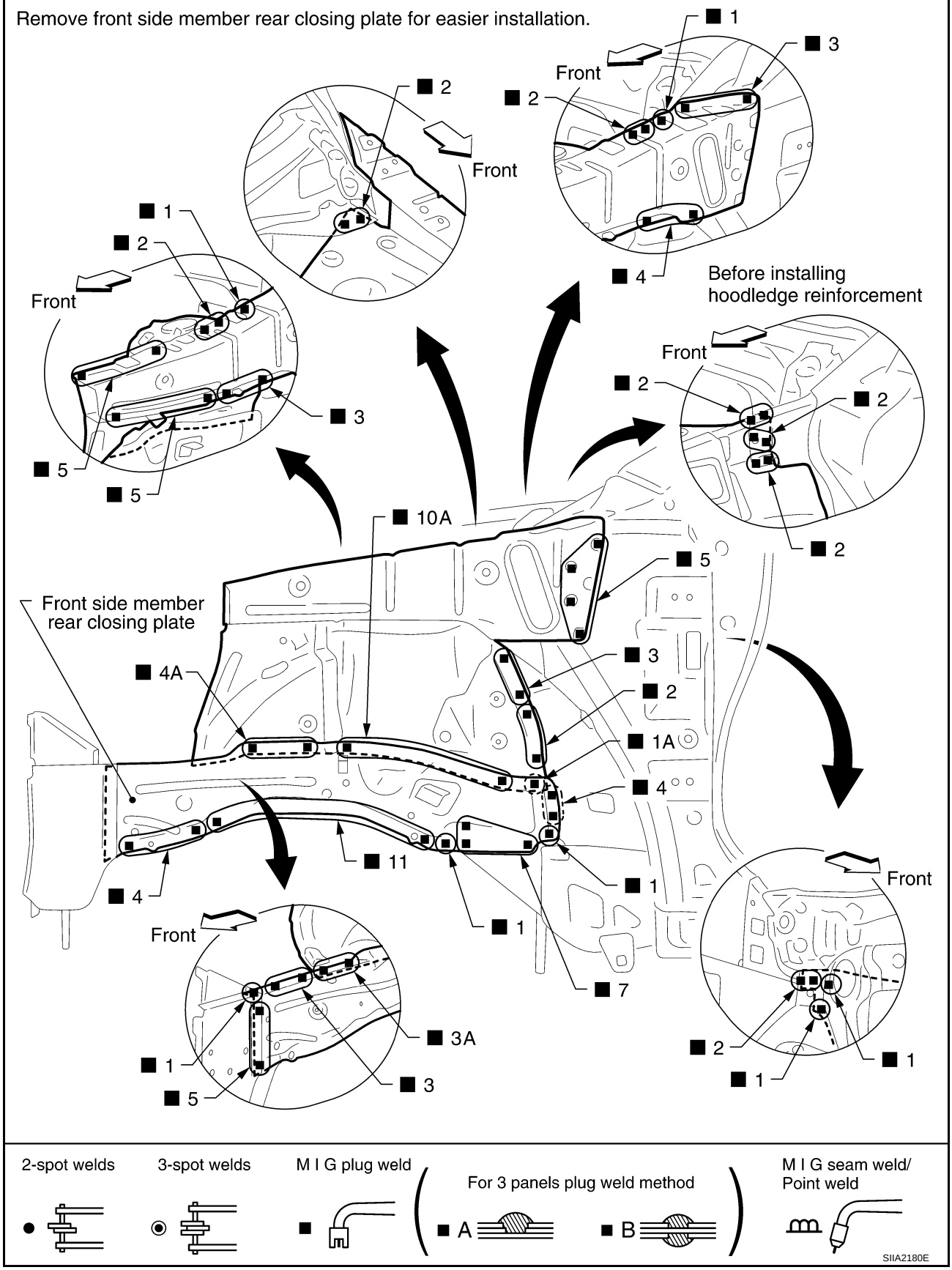
1. Mark cutting lines.
   A: Cut position of outer pillar
   B: Cut position of inner pillar
2. Align cutting line with notch on jig. Clamp jig to pillar.
3. Cut outer pillar along groove of jig. (At position A)
4. Remove jig and cut remaining portions.
5. Cut inner pillar at position B in same manner.



HOODLEDGE

Service Joint

Remove front side member rear closing plate for easier installation.

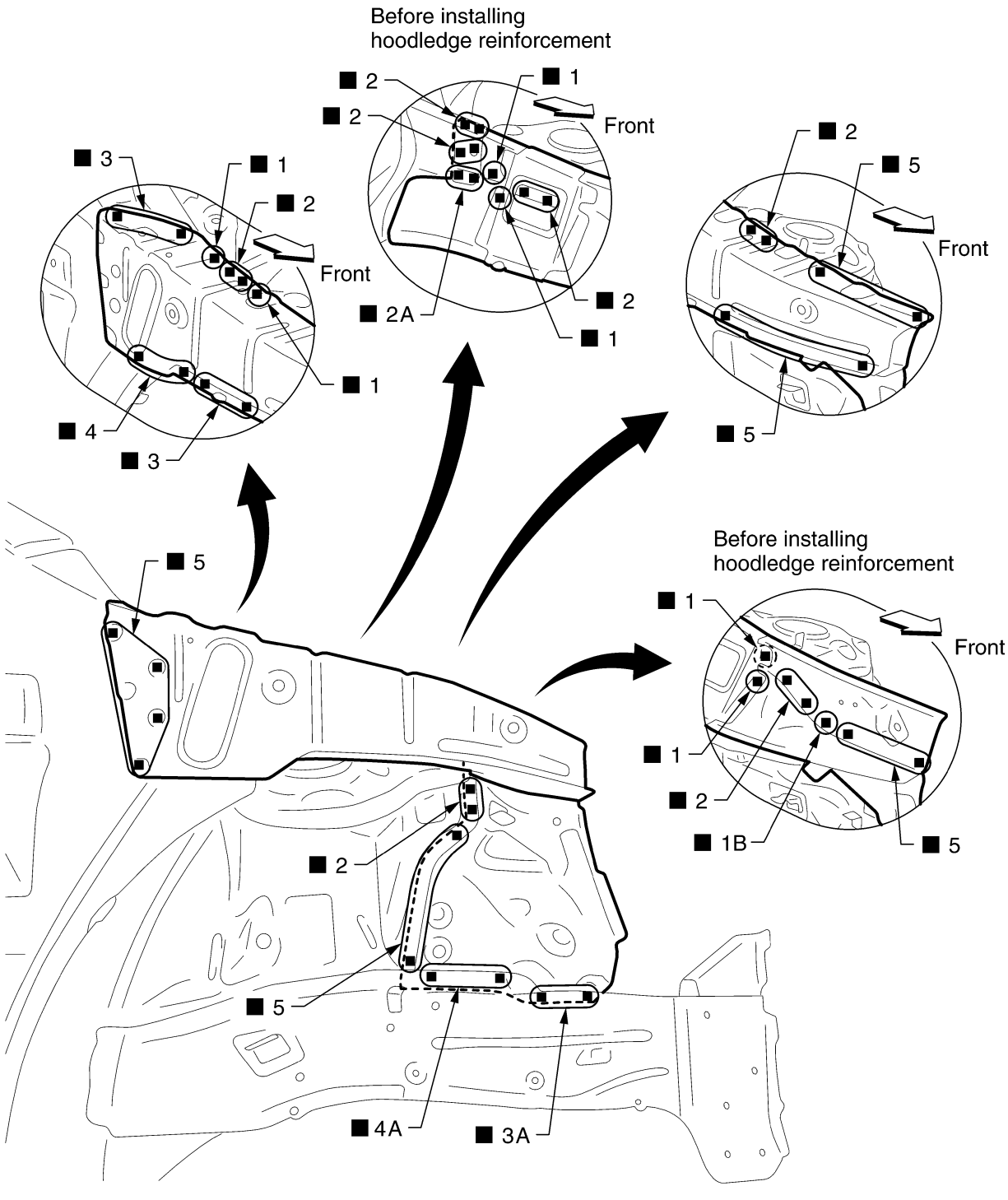


Change parts

- Hoodledge assembly (LH)
- Hoodledge reinforcement (LH)

HOODLEDGE (PARTIAL REPLACEMENT)

Service Joint
(This figure shows right side hoodledge)



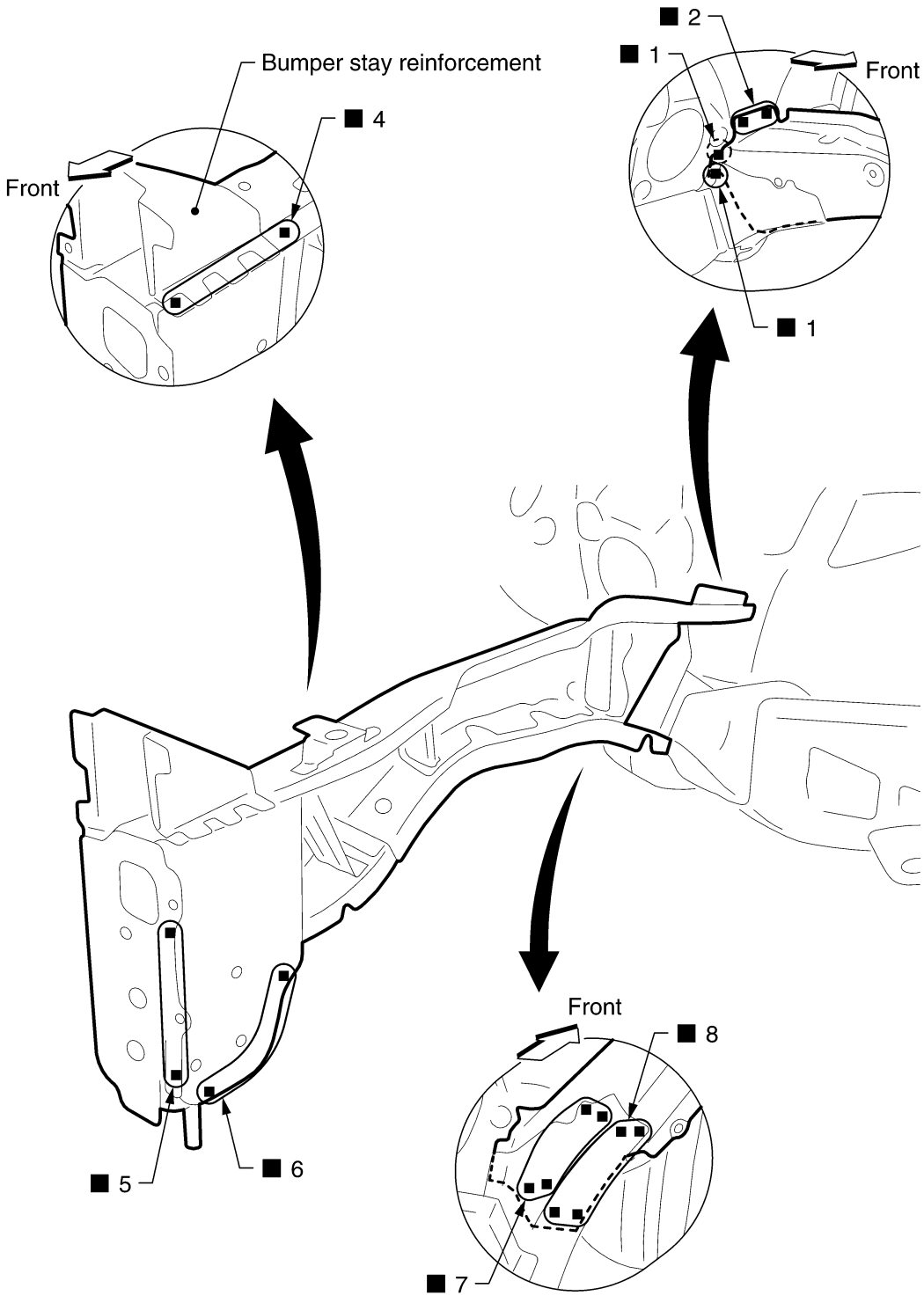
Change parts

- Upper hoodledge (RH)
- Lower front hoodledge (RH)
- Hoodledge reinforcement (RH)

FRONT SIDE MEMBER

- Work after hoodledge has been removed.

Service Joint



Unit:mm

2-spot welds ● | 3-spot welds ◉ | M I G plug weld ■ | For 3 panels plug weld method (■ A | ■ B) | M I G seam weld/ Point weld

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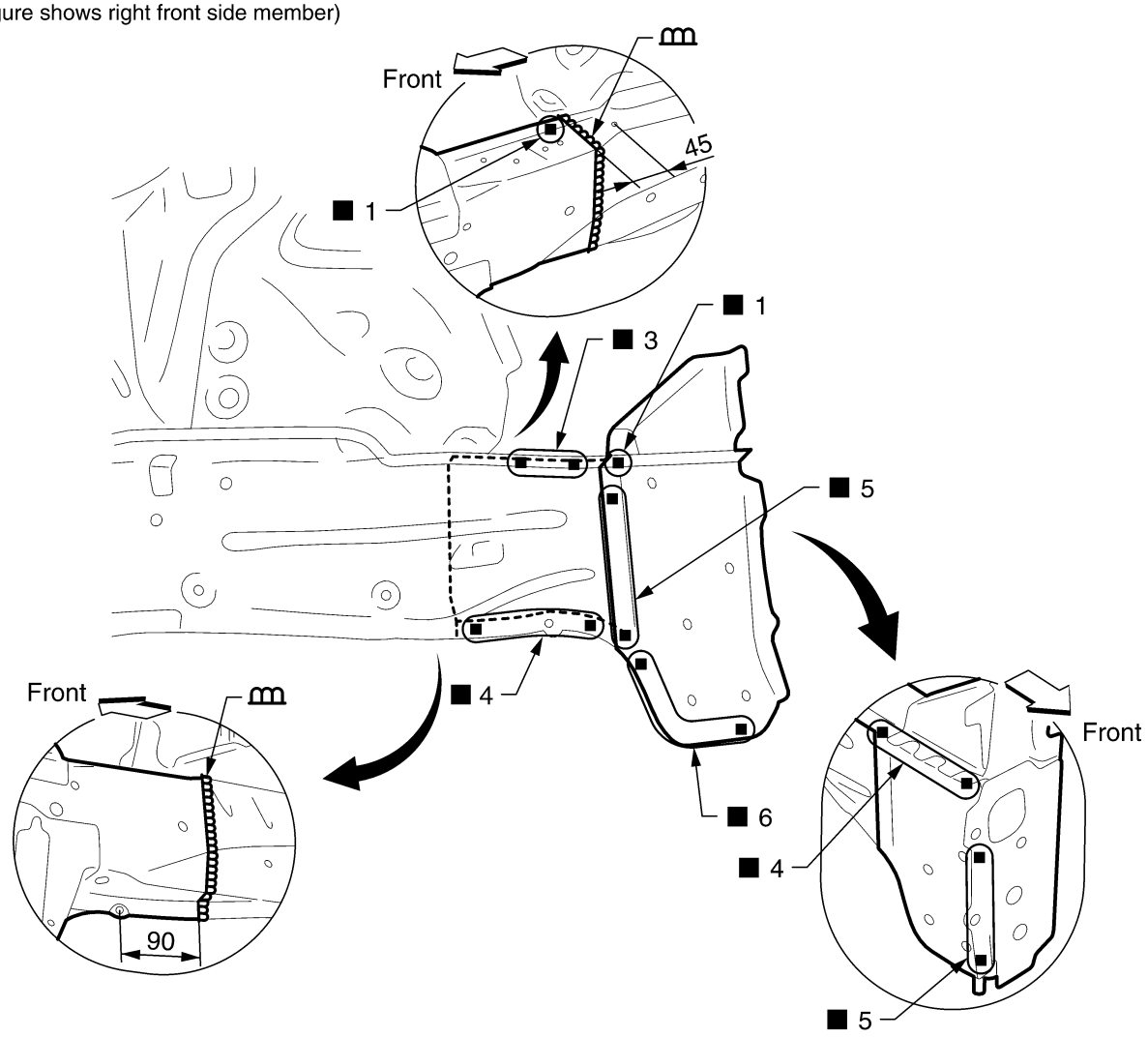
Change parts

- Front side member (LH)
- Front side member closing plate assembly (LH)

FRONT SIDE MEMBER (PARTIAL REPLACEMENT)

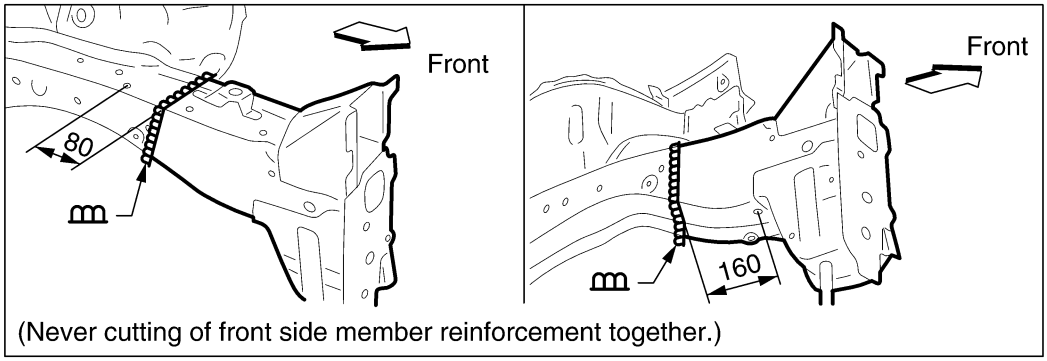
Service Joint

(This figure shows right front side member)

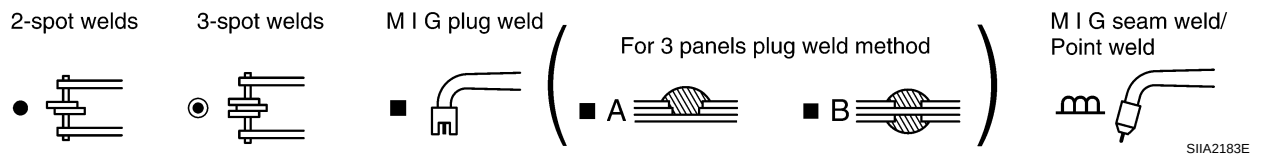


・Left front side member cut portion.

・Repairing of front side member on left side is for only front side member.



Unit:mm

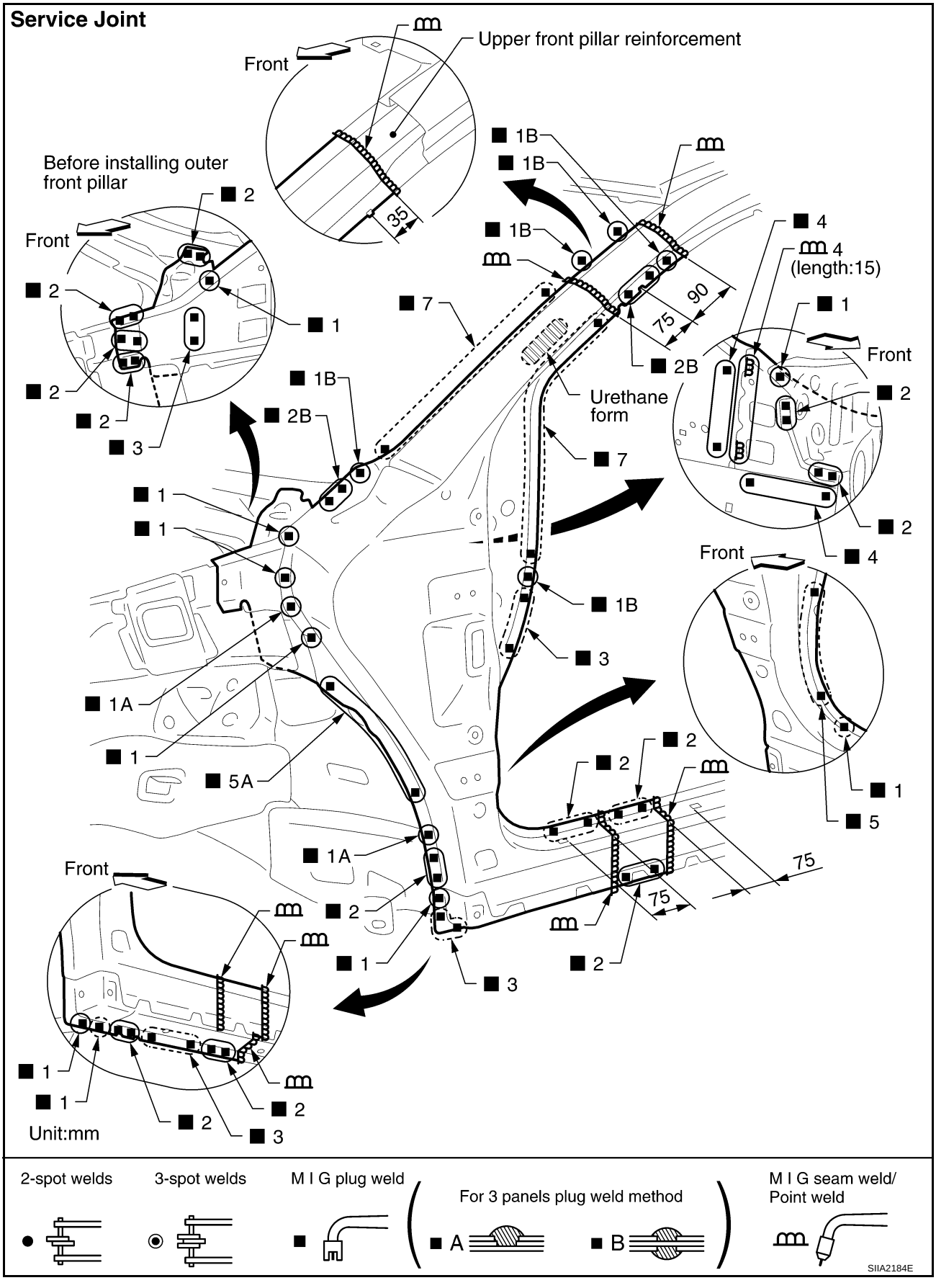


Change parts

- Front side member (RH)
- Front side member front closing plate (RH)

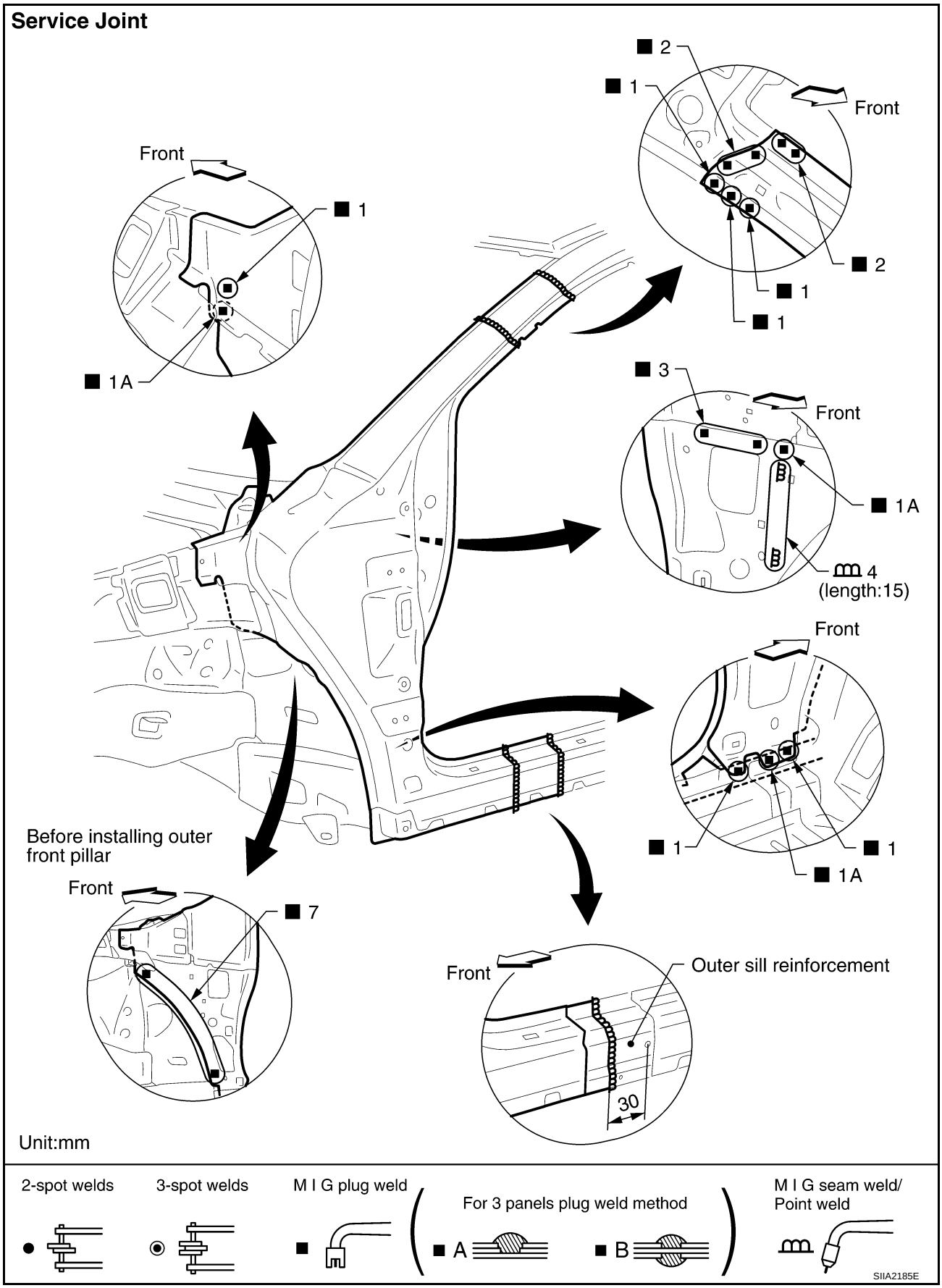
FRONT PILLAR

- Work after hoodledge reinforcement has been removed.



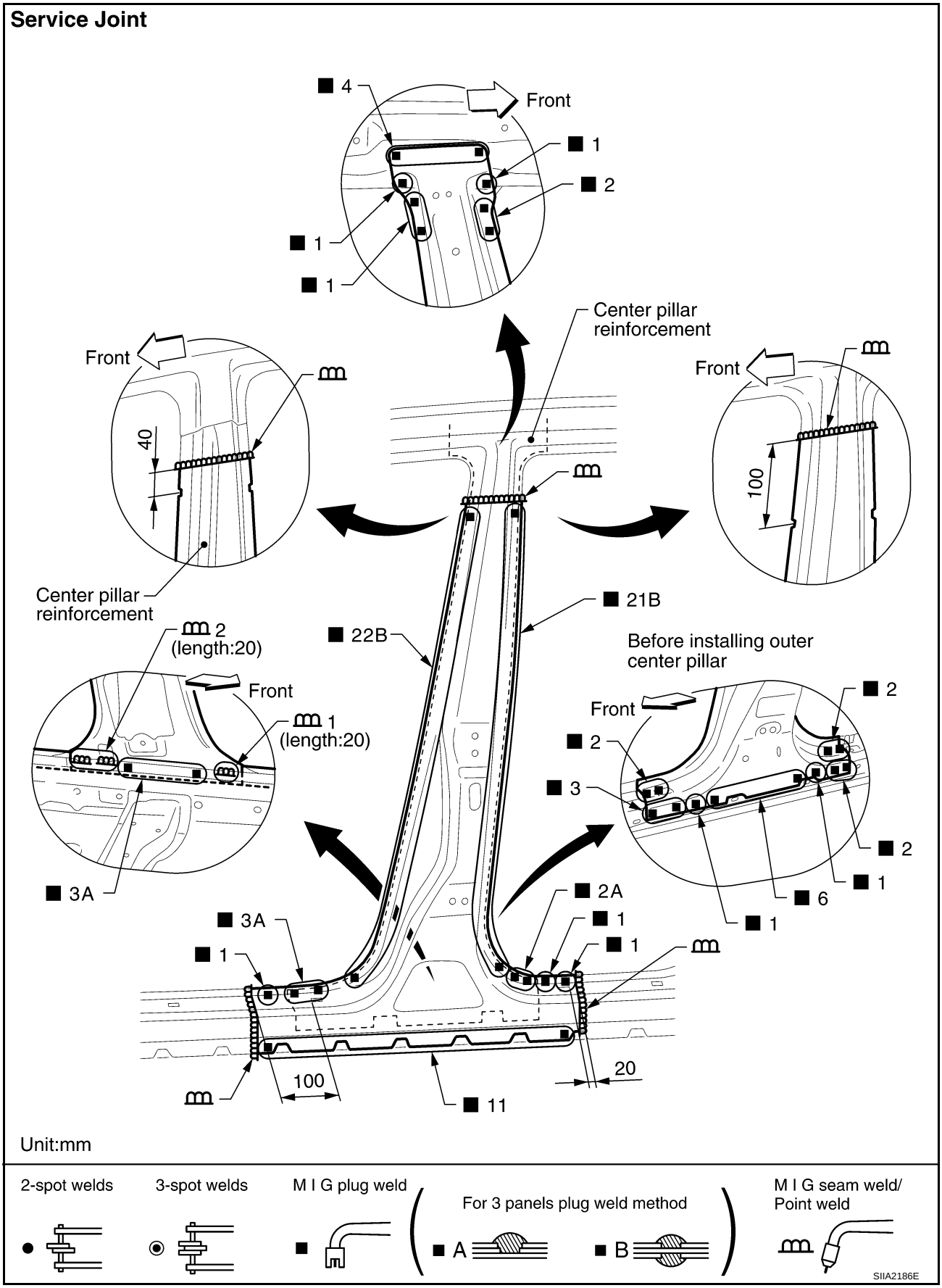
Change parts

- Side body assembly (LH)
- Inner side roof rail (LH)
- Side dash (LH)



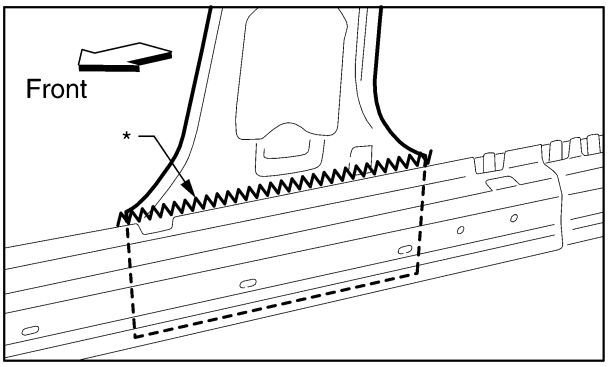
CENTER PILLAR

Service Joint



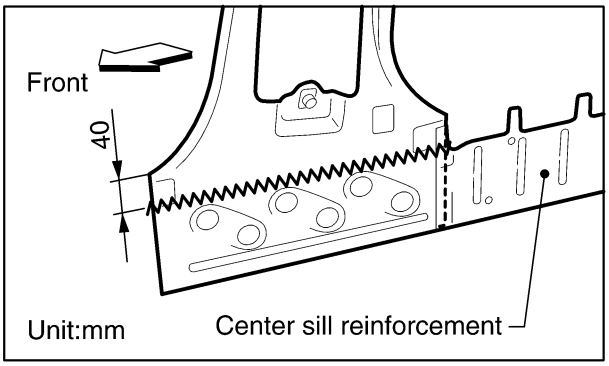
Change parts

- Side body assembly (LH)
- Inner center pillar (LH)



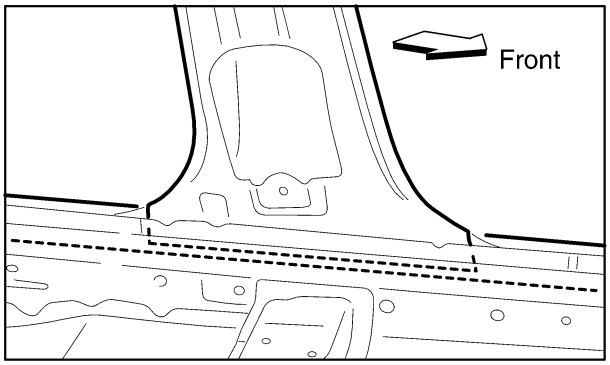
REMOVAL NOTES

- Cut off inner center pillar along with outer sill reinforcement frange end (Position "*" as shown in the left figure.)



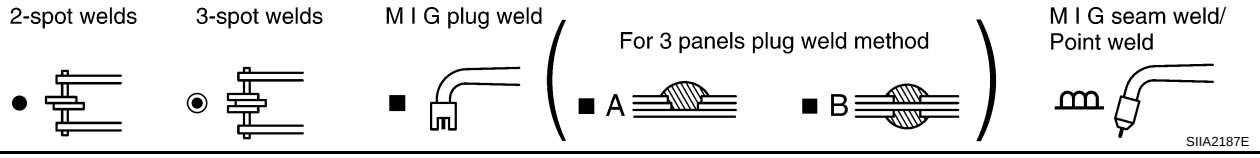
INSTALLATION NOTES

- Remove center sill reinforcement from inner center pillar service part, then cut off inner center pillar service part as shown in the left figure.



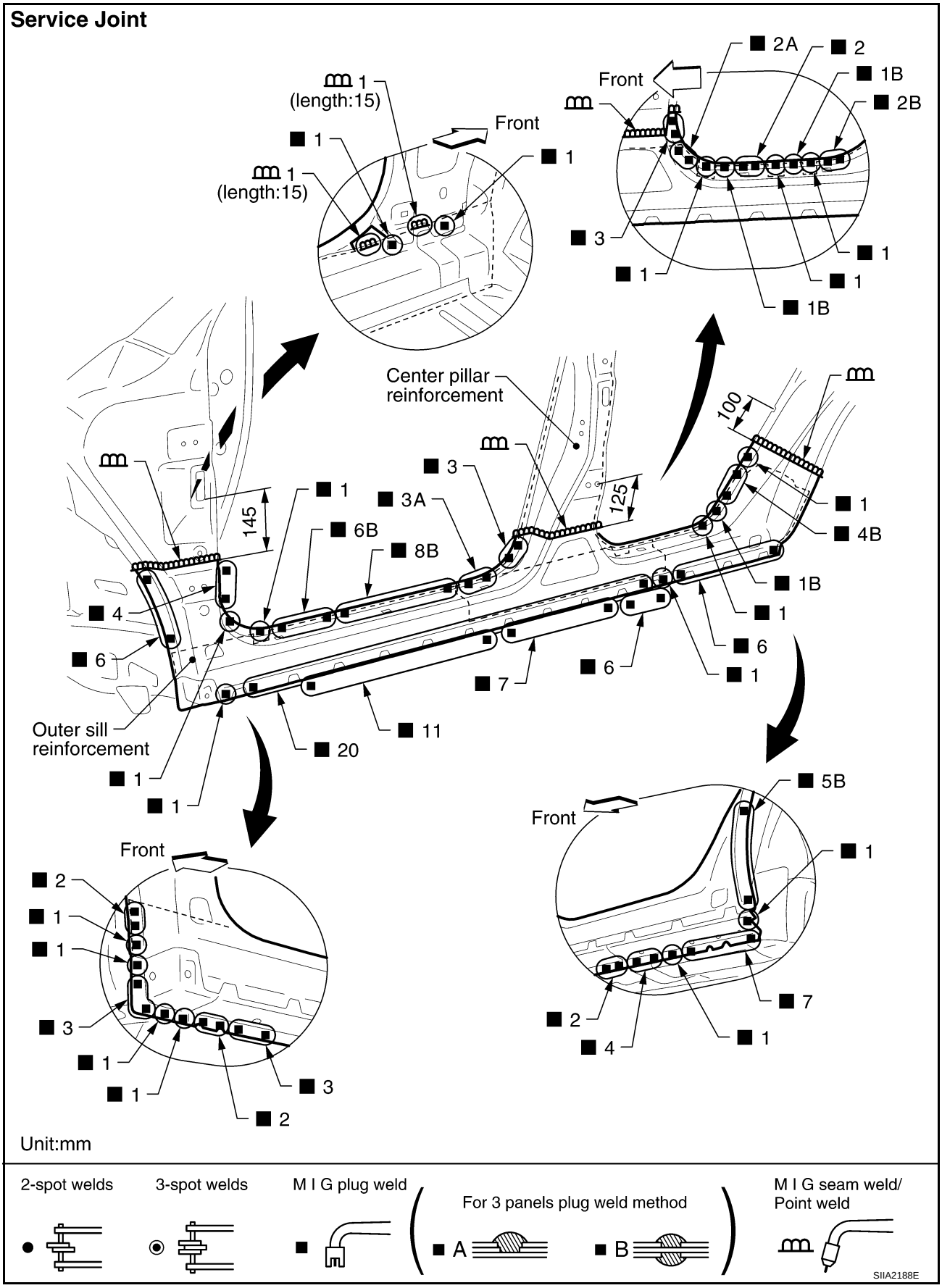
- Install inner center pillar service part by putting between inner sill and outer sill reinforcement, then do M.I.G seam welding and M.I.G plug welding.

Unit:mm



OUTER SILL

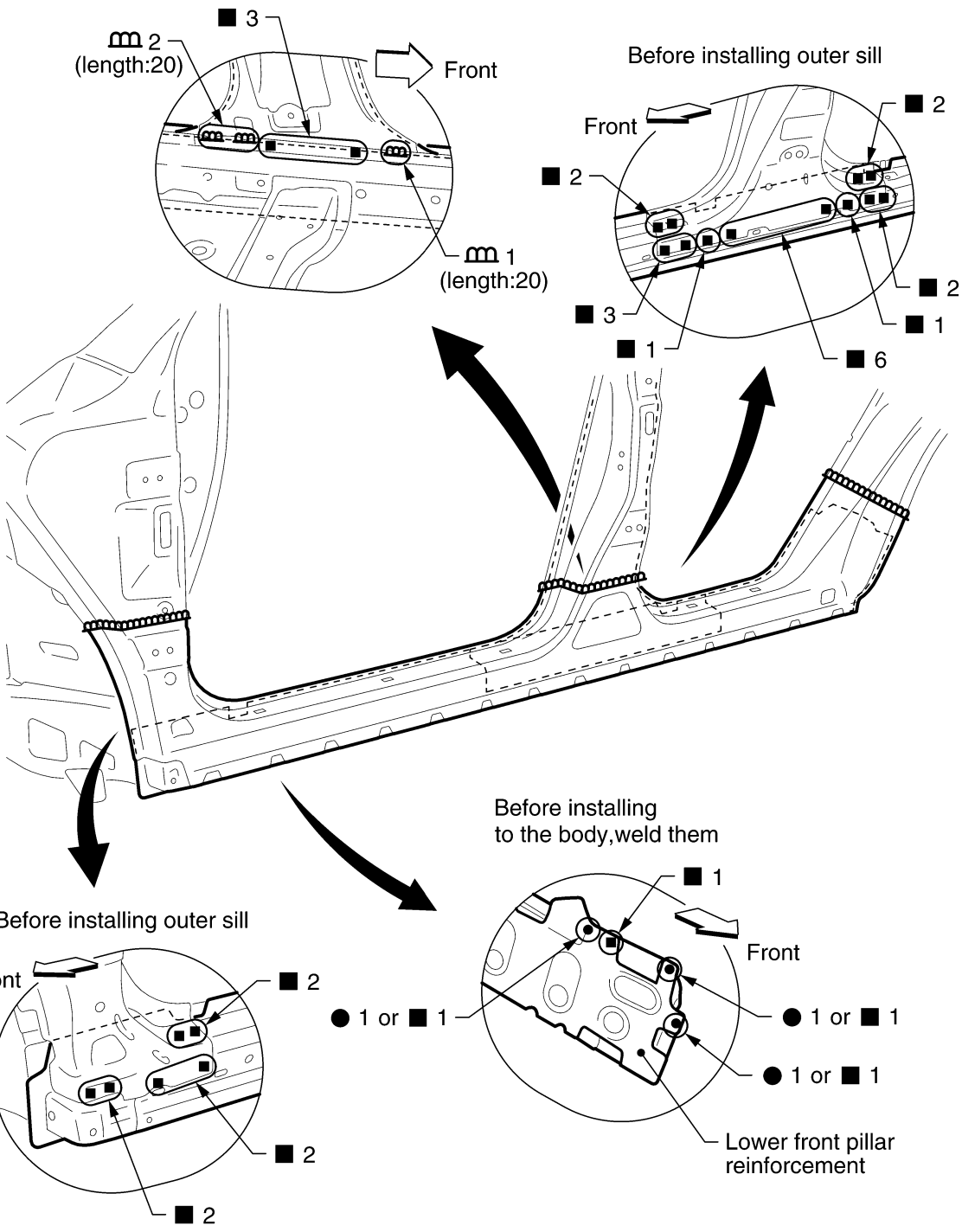
Service Joint



Change parts

- Outer sill (LH)
- Outer sill reinforcement assembly (LH)
- Lower front pillar reinforcement (LH)
- Rear outer sill reinforcement (LH)

Service Joint



Unit:mm

2-spot welds ● | 3-spot welds ◉ | M I G plug weld ■ | For 3 panels plug weld method (■ A ■ B) | M I G seam weld/ Point weld

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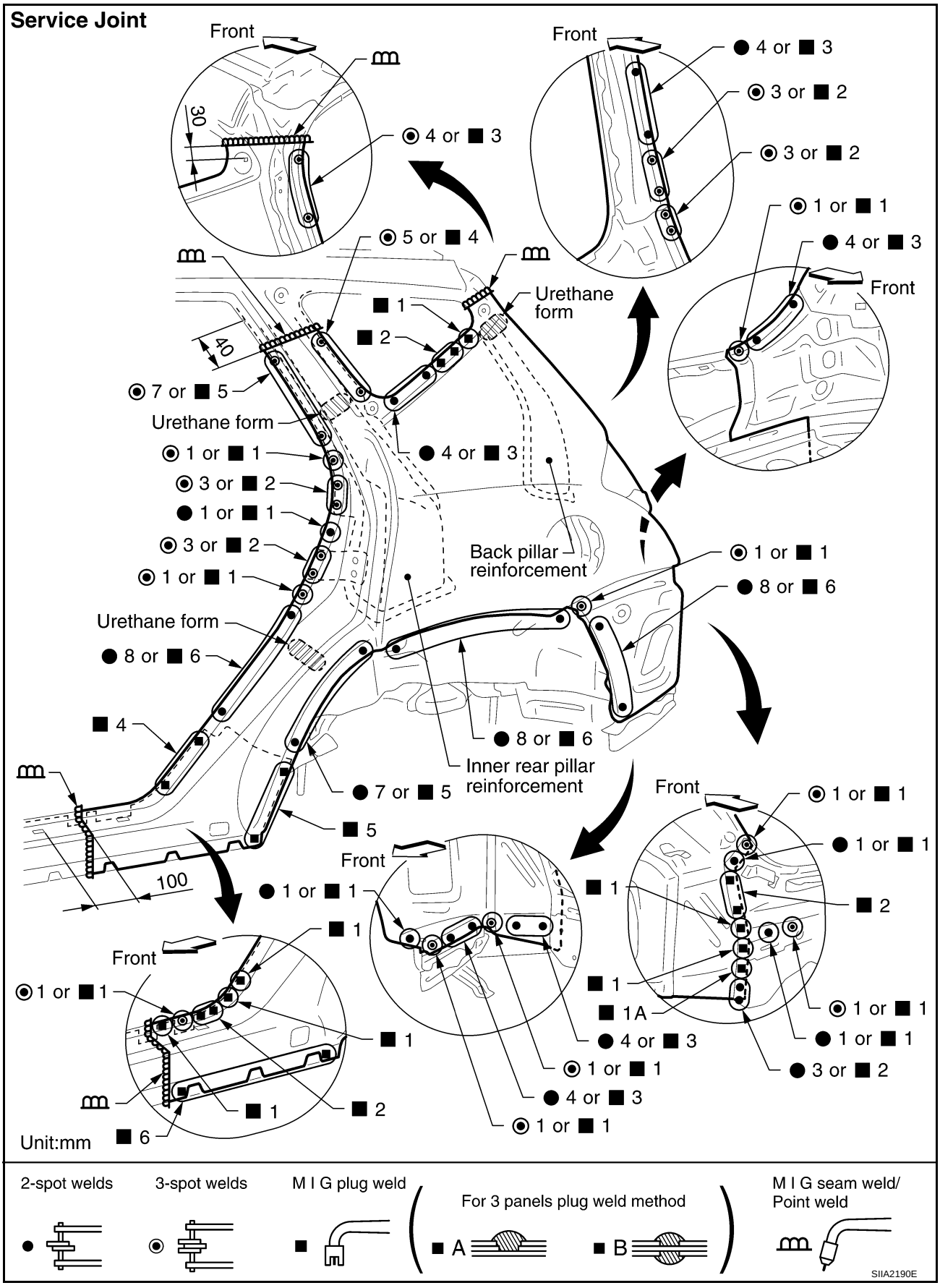
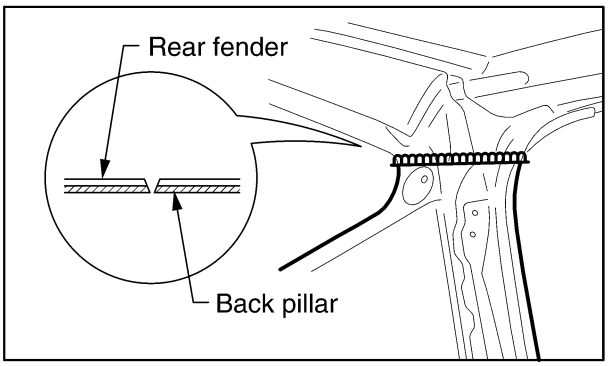
REAR FENDER



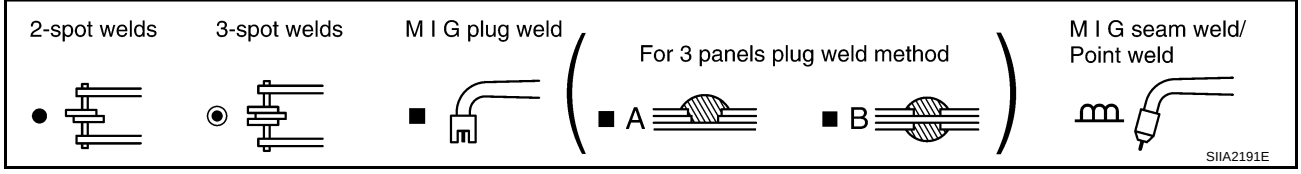
Change parts

- Rear fender assembly (LH)



INSTALLATION NOTES

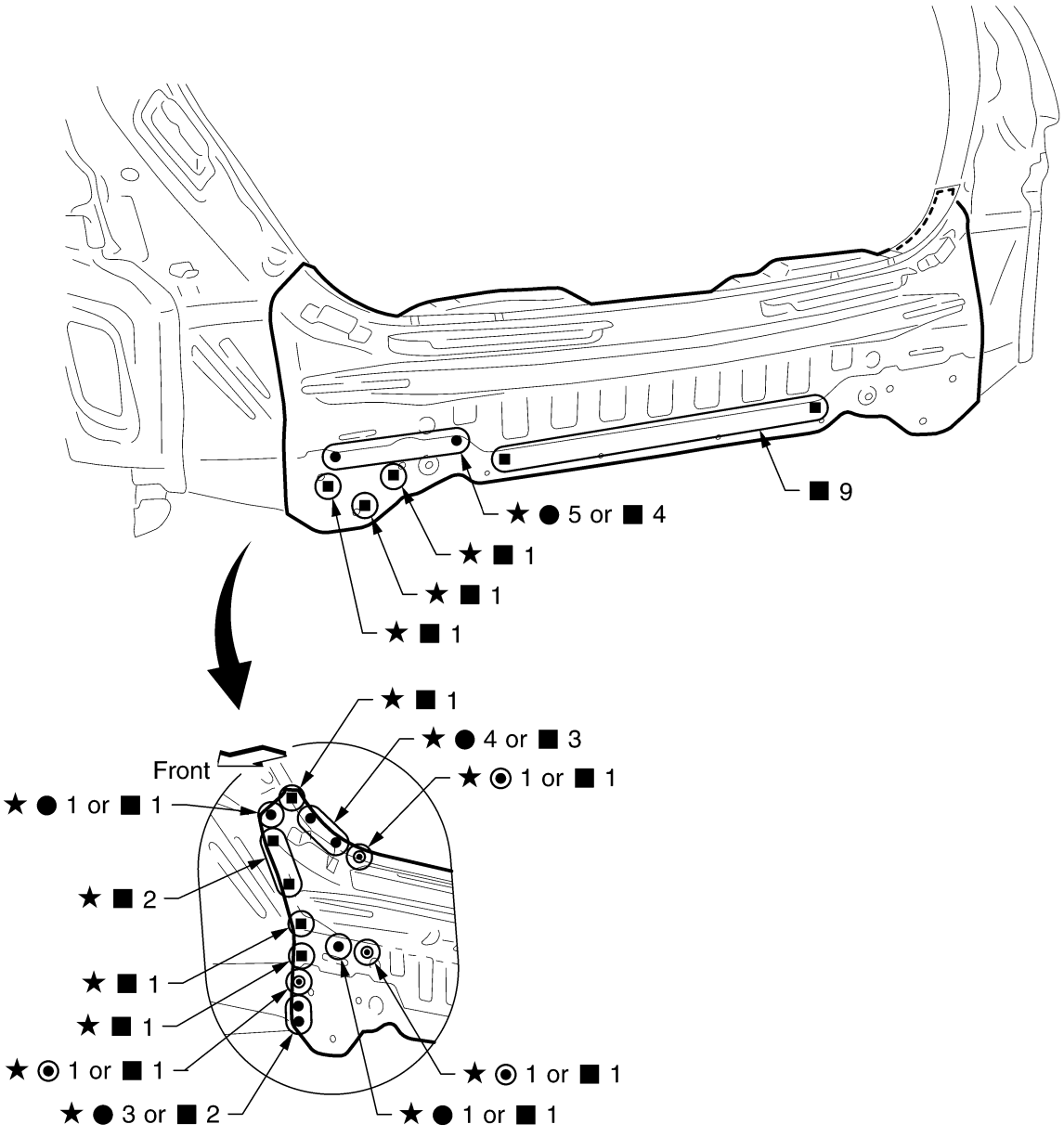
- As shown in the left figure, make "V"shape with rear fender and back piller by using an air grinder or air belt sander.
- Weld surface on rear fender assembly service parts by M.I.G seam welding.



REAR PANEL

Service Joint

★ indicates that there is an equivalent welding portion with the same dimensions on the opposite side.



Change parts

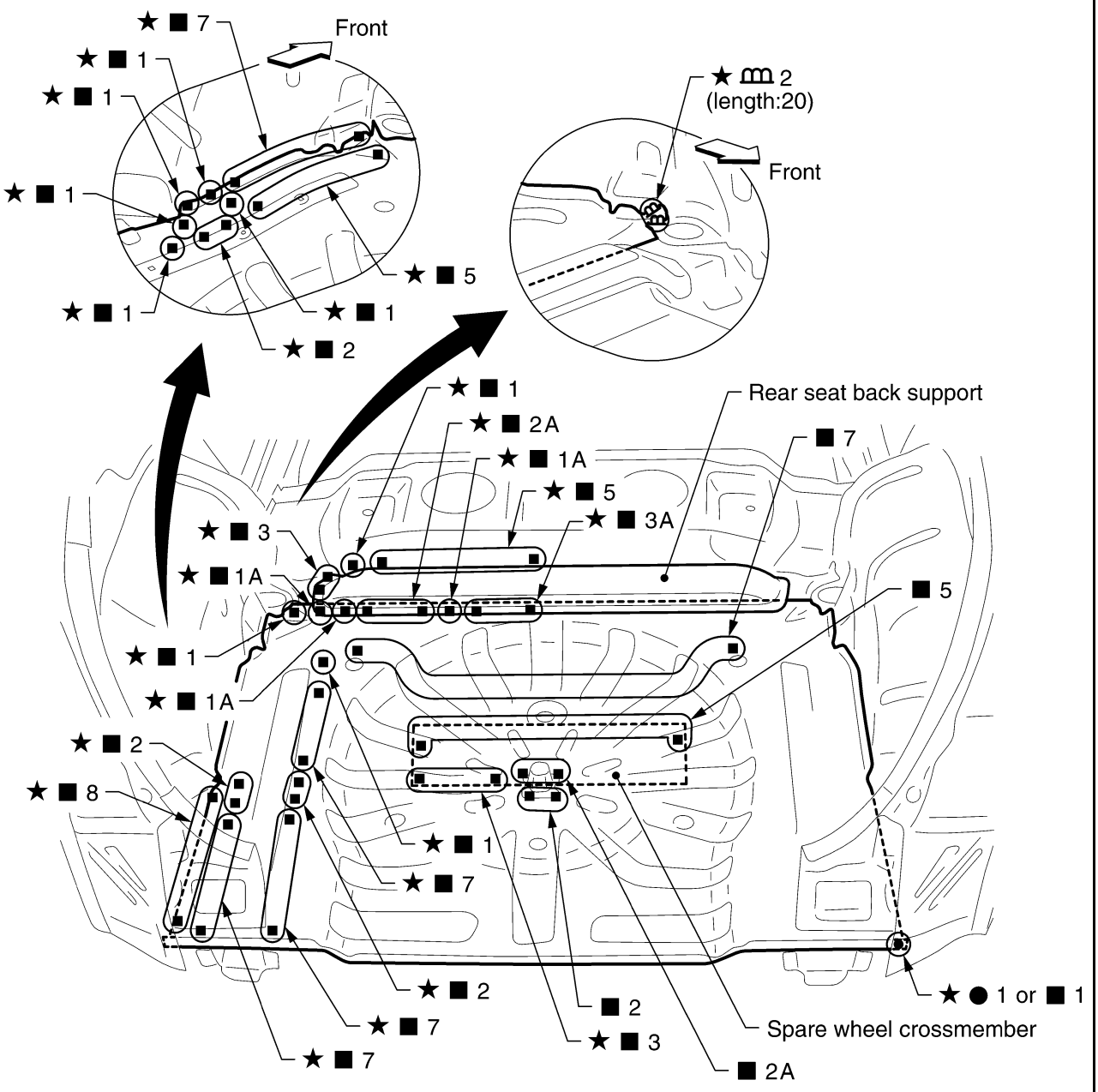
- Rear panel assembly

REAR FLOOR REAR

- Work after rear panel has been removed.

Service Joint

★ indicates that there is an equivalent welding portion with the same dimensions on the opposite side.



Unit:mm

2-spot welds ● | 3-spot welds ◉ | M I G plug weld ■ | For 3 panels plug weld method: ■ A, ■ B | M I G seam weld/ Point weld

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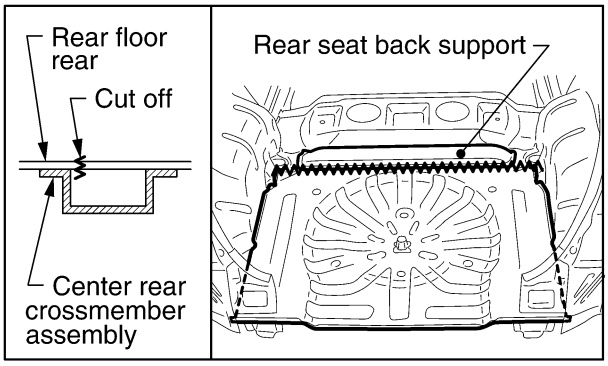
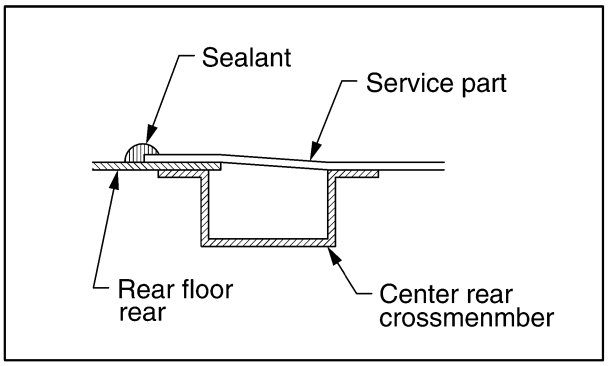
Change parts

- Rear floor rear
- Spare tire clamp bracket



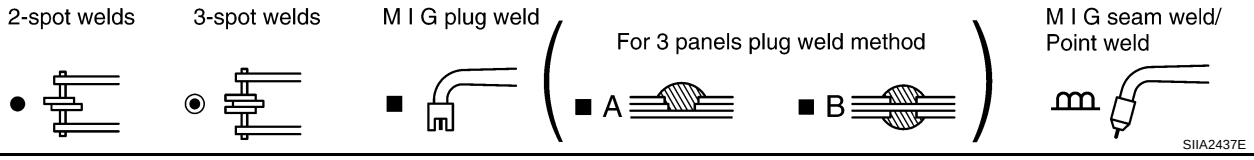
REMOVAL NOTES

- Remove rear seat back support assembly for easier installation.
- Cut off rear floor rear along with center rear crossmember assembly flange.



INSTALLATION NOTES

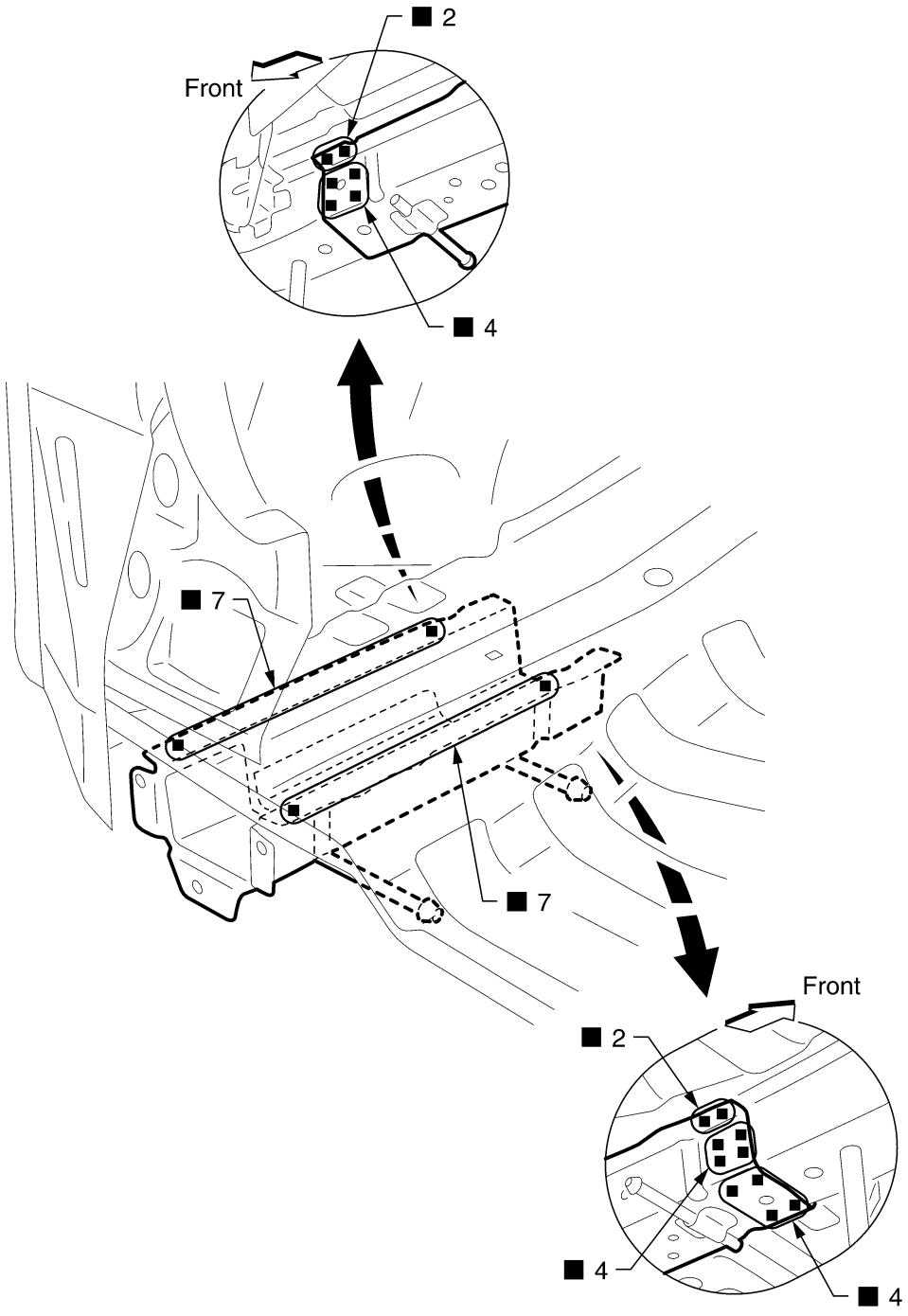
- Position rear floor rear service part as over lapped old part, then weld them.
- Apply sealant and anti-corrosive wax to the inside of center rear crossmember shown in the left figure.
- Then, re-weld rear seat back support assembly



REAR SIDE MEMBER EXTENSION

- Work after rear panel has been removed.

Service Joint



Unit:mm

2-spot welds ● | 3-spot welds ◉ | M I G plug weld ■ | For 3 panels plug weld method (■ A | ■ B) | M I G seam weld/ Point weld

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Change parts

- Rear side member extension (LH)