

SECTION **BL**

BODY, LOCK & SECURITY SYSTEM

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PRECAUTIONS

PRECAUTIONS

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

AIS0027V

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 Battery Service

AIS004YS

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Precautions for Work

AIS0027X

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

Wiring Diagrams and Trouble Diagnosis

AIS0027Y

When you read wiring diagrams, refer to the following:

- [GI-15, "How to Read Wiring Diagrams"](#)
- [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#)

When you perform trouble diagnosis, refer to the following:

- [GI-11, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"](#)
- [GI-27, "How to Perform Efficient Diagnosis for an Electrical Incident"](#)
Check for any Service bulletins before servicing the vehicle.

PREPARATION

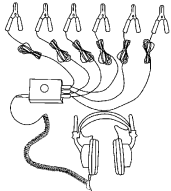
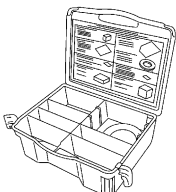
PREPARATION

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Special Service Tools

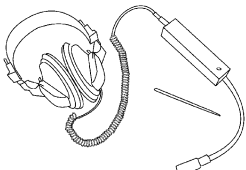
AIS005FW

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  <p style="text-align: right; margin-right: 20px;">SIIA0993E</p>	Locating the noise
(J-43980) NISSAN Squeak and Rattle Kit  <p style="text-align: right; margin-right: 20px;">SIIA0994E</p>	Repairing the cause of noise

Commercial Service Tools

AIS005FX

Tool name	Description
Engine ear  <p style="text-align: right; margin-right: 20px;">SIIA0995E</p>	Locating the noise

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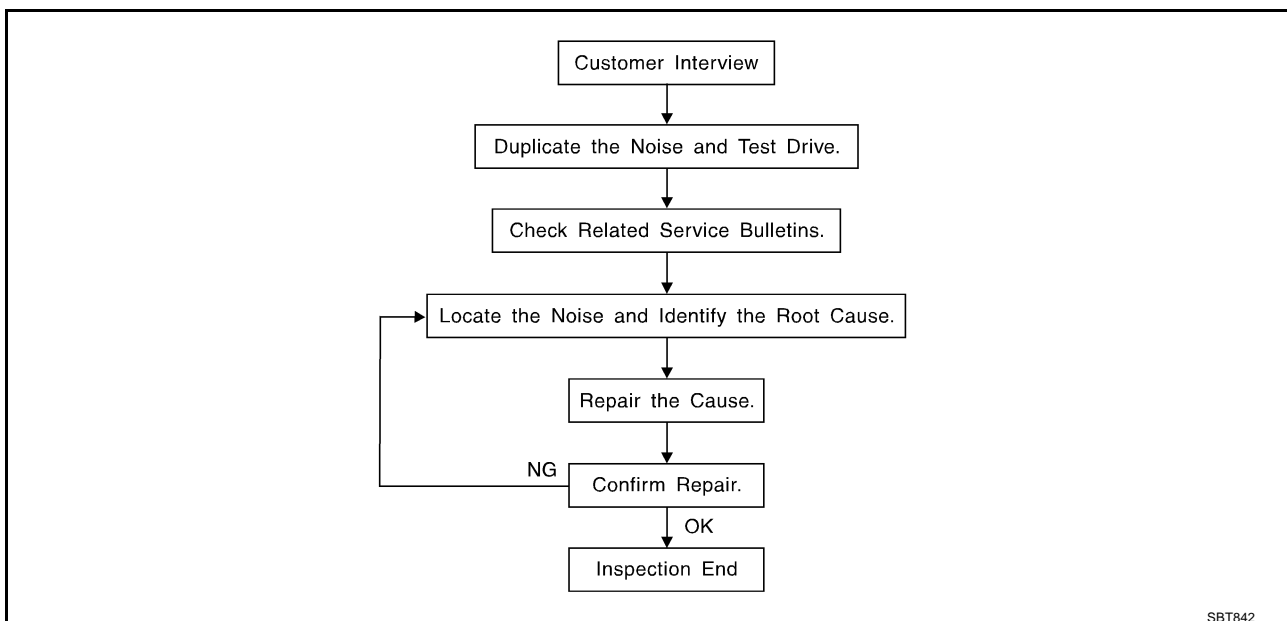
SQUEAK AND RATTLE TROUBLE DIAGNOSIS

SQUEAK AND RATTLE TROUBLE DIAGNOSIS

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Work Flow

AIS005FY



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 [BL-10, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

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

SQUEAK AND RATTLE TROUBLE DIAGNOSIS

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-8, "Generic Squeak and Rattle Troubleshooting"](#) .

REPAIR THE CAUSE

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

CAUTION:

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

Always check with the Parts Department for the latest parts information.

The following materials are contained in the Nissan Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005: 100 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60 × 85 mm (2.36 × 3.35 in)/76884-71L02: 15 × 25 mm(0.59 × 0.98 in)

INSULATOR (Foam blocks)

Insulates components from contact. Can be used to fill space behind a panel.

73982-9E000: 45 mm (1.77 in) thick, 50 × 50 mm (1.97 × 1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)

SQUEAK AND RATTLE TROUBLE DIAGNOSIS

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 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

AIS005FZ

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.

SQUEAK AND RATTLE TROUBLE DIAGNOSIS

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 headliner and squeaking

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

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.

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SQUEAK AND RATTLE TROUBLE DIAGNOSIS

Diagnostic Worksheet

AIS005G0



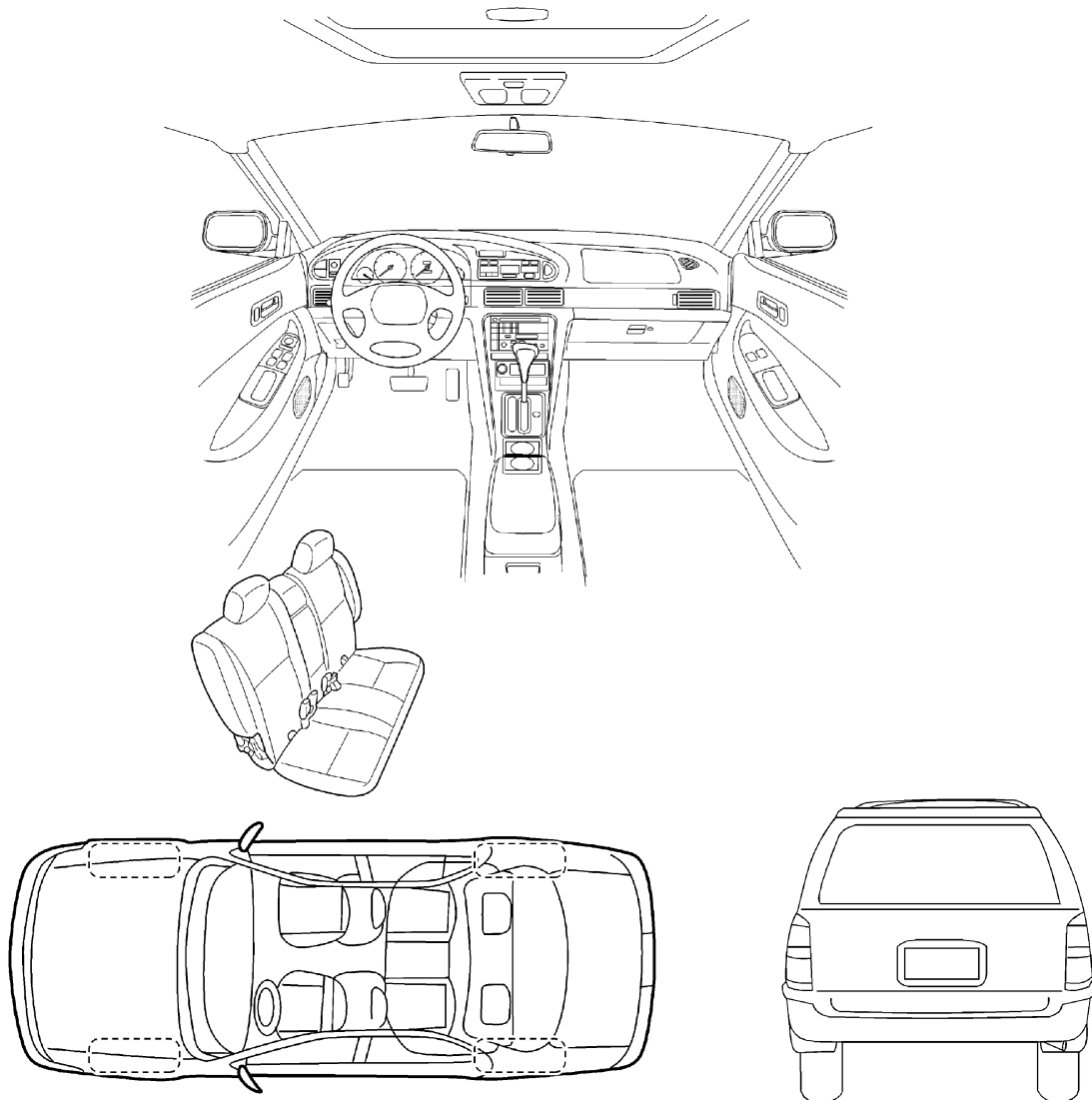
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

Dear Infiniti Customer:

We are concerned about your satisfaction with your Infiniti vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Infiniti 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 the back of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

SBT860

SQUEAK AND RATTLE TROUBLE DIAGNOSIS

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

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

- | | |
|--|---|
| <input type="checkbox"/> anytime | <input type="checkbox"/> after sitting out in the sun |
| <input type="checkbox"/> 1 st time in the morning | <input type="checkbox"/> when it is raining or wet |
| <input type="checkbox"/> only when it is cold outside | <input type="checkbox"/> dry or dusty conditions |
| <input type="checkbox"/> only when it is hot outside | <input type="checkbox"/> other: _____ |

III. WHEN DRIVING:

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

IV. WHAT TYPE OF NOISE?

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

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

	YES	NO	Initials of person performing
Vehicle test driven with customer	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise verified on test drive	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise source located and repaired	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Follow up test drive performed to confirm repair	<input type="checkbox"/>	<input type="checkbox"/>	_____

VIN: _____ Customer Name: _____

W.O. #: _____ Date: _____

This form must be attached to Work Order

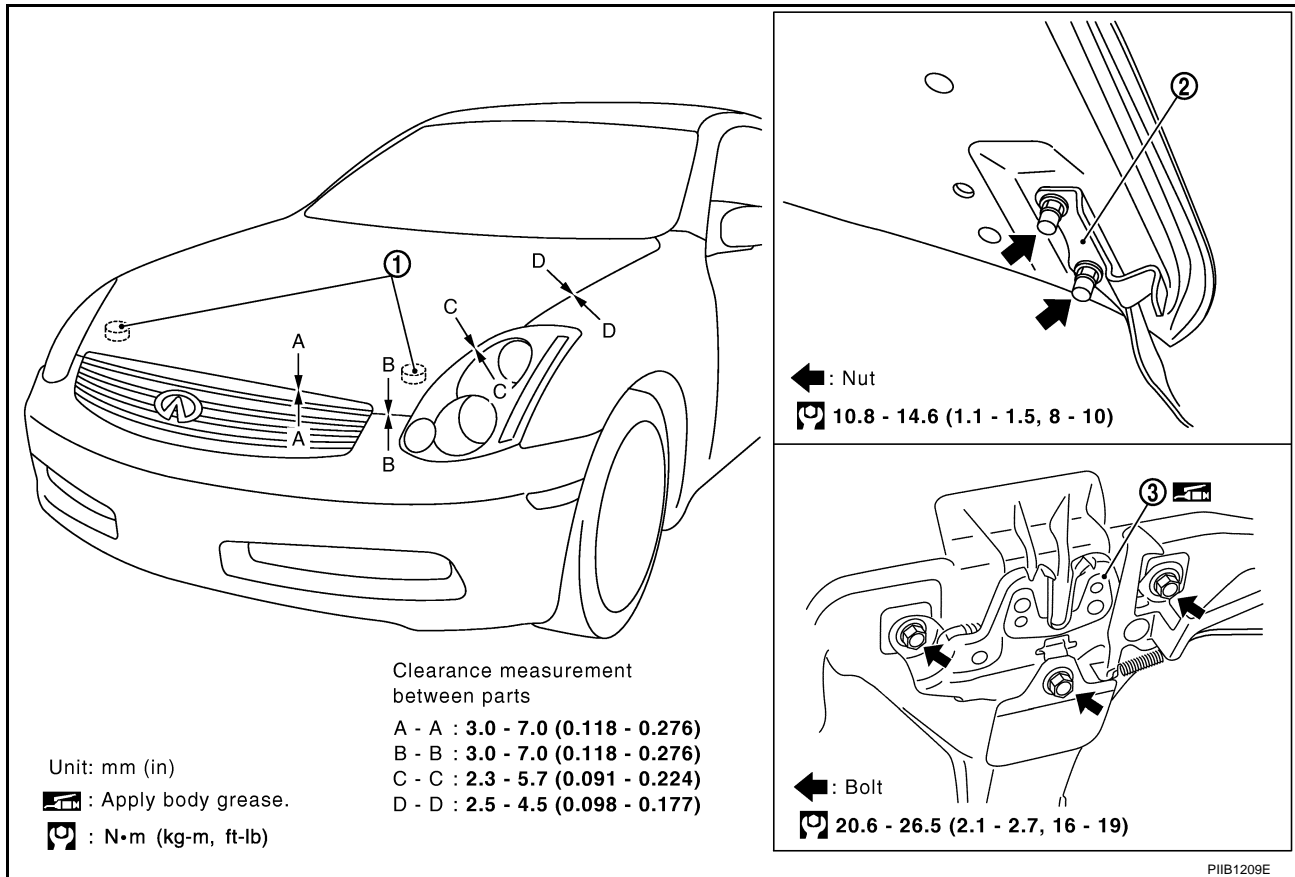
HOOD

HOOD

PFP:F5100

Fitting Adjustment

AIS005G1



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.

FRONT END HEIGHT ADJUSTMENT

1. Remove the hood lock and adjust the height by rotating the bumper rubber until the hood becomes 1 to 1.5 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.

CAUTION:

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

- | | |
|-----------------------------|------------------------------|
| Hood and front bumper (B-B) | : Less than 2.0 mm (0.08 in) |
| Hood and head lamp (C-C) | : Less than 2.0 mm (0.08 in) |
| Hood and fender (D-D) | : Less than 1.0 mm (0.04 in) |

HOOD

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:

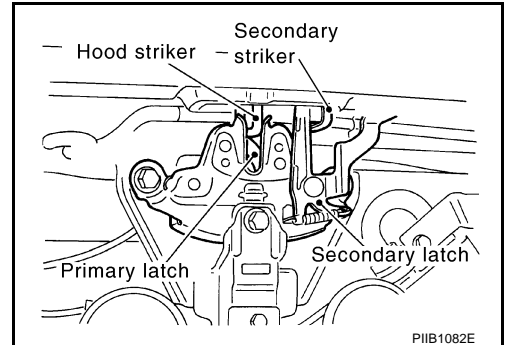
Do not drop hood from a height of 300 mm (11.81 in) or more.

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 (0.79in) 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.

CAUTION:

Adjust evenness between hood and each part to the following specification.

- | | |
|--------------------------|-------------------------------|
| Hood and head lamp (C-C) | : Less than 1.5 mm (0.059 in) |
| Hood and fender (D-D) | : Less than 1.0 mm (0.04 in) |



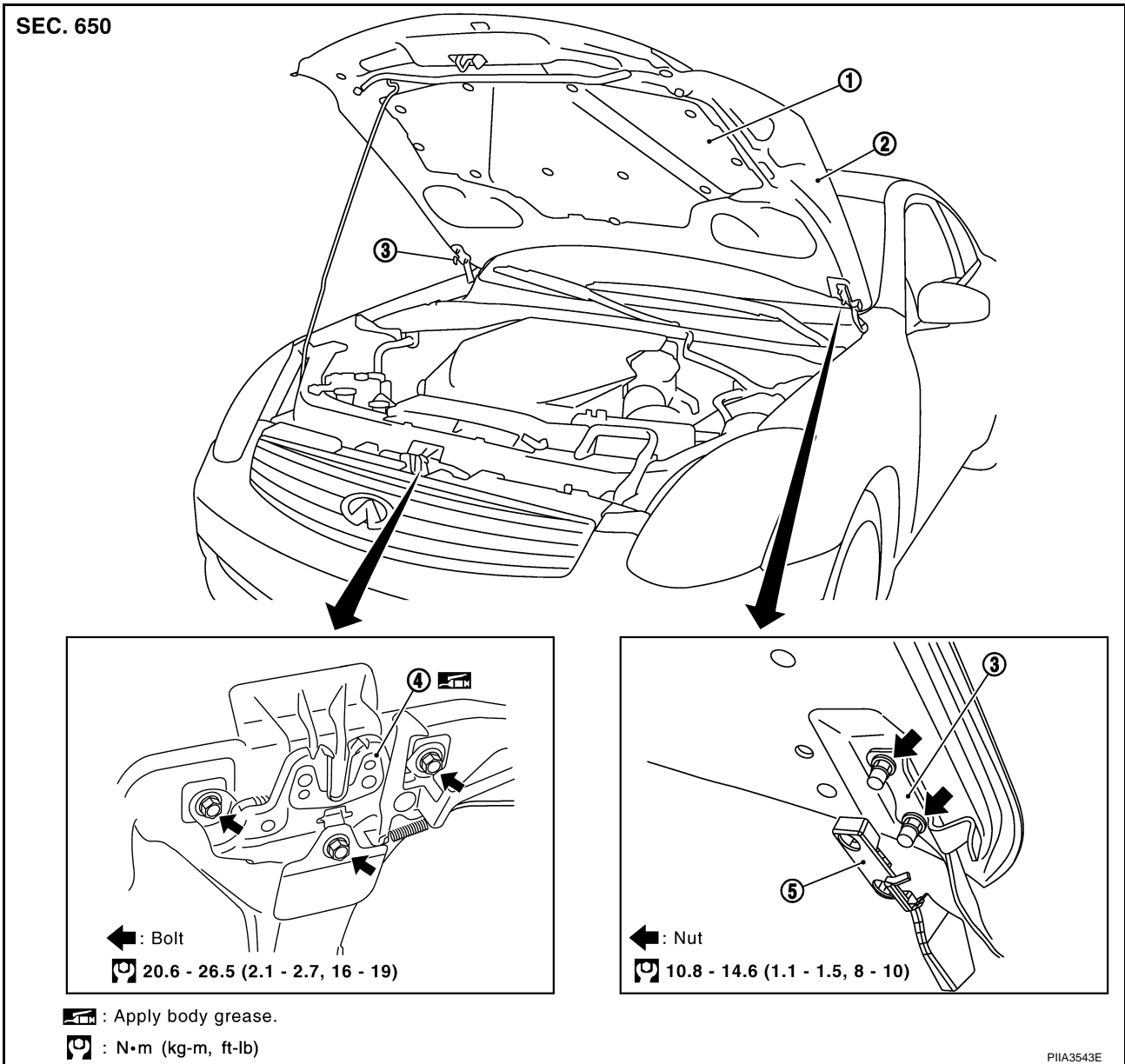
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HOOD

Removal and Installation of Hood Assembly

AIS005G2



REMOVAL

Remove the hood hinge cover and hinge mounting nuts on the hood to remove the hood assembly.

INSTALLATION

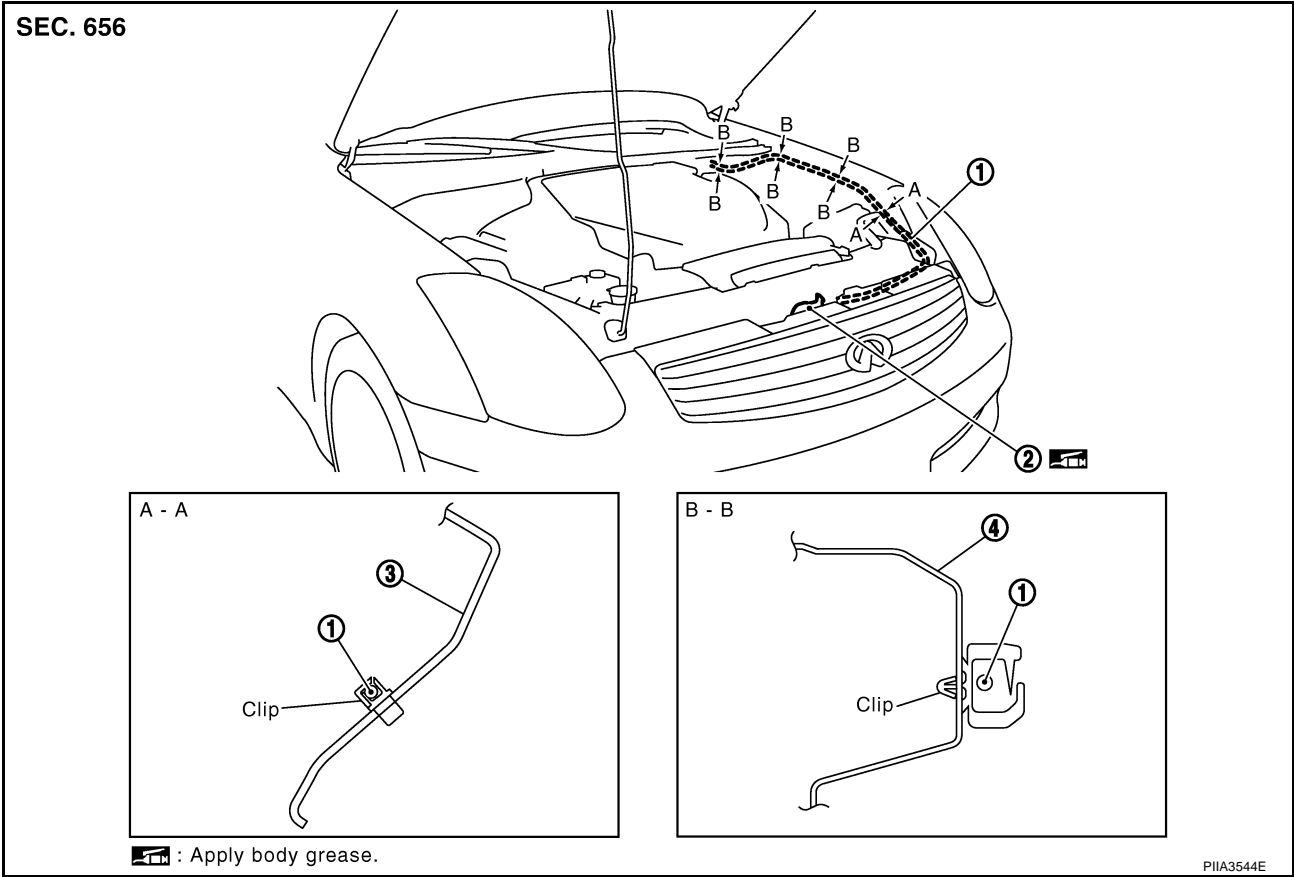
Install in the reverse order of removal.

HOOD

Removal and Installation of Hood Lock Control

AIS005G3

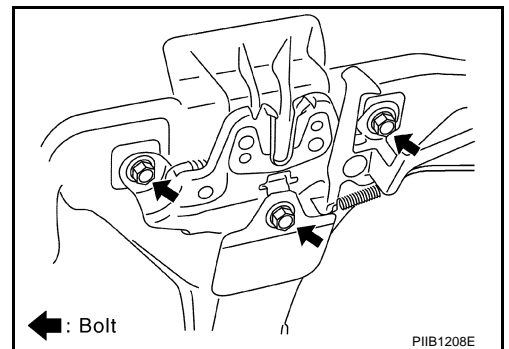
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1. Hood lock cable
2. Hood lock assembly
3. Radiator core support
4. Hood ledge reinforce

REMOVAL

1. Remove the front grill. Refer to [EI-19, "Removal and Installation"](#).
2. Remove the fender protector (front and rear). Refer to [EI-21, "FENDER PROTECTOR"](#).
3. Remove the hood lock assembly.



4. Remove the instrument lower driver panel. Refer to [IP-11, "Removal and Installation"](#).

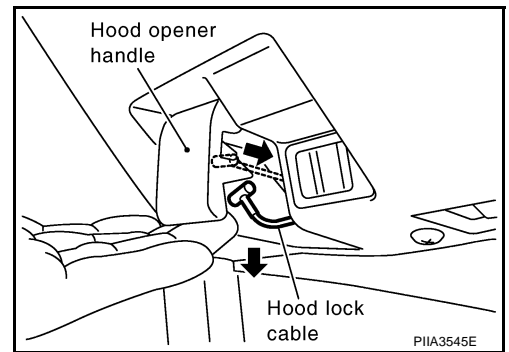
BL

HOOD

5. Disconnect the hood lock cable from the hood lock, and clip it from the radiator core upper support and hood ledge.
6. Remove the mounting screws, and remove the hood opener.
7. Remove the grommet on the panel, and pull the hood lock cable toward the passenger compartment.

CAUTION:

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



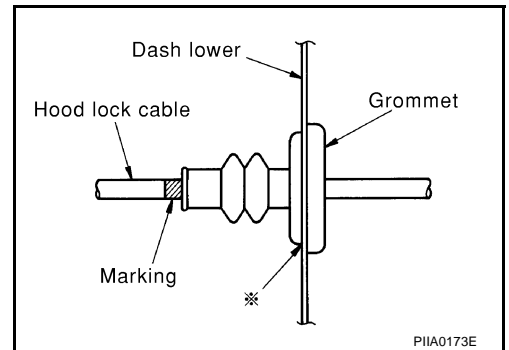
INSTALLATION

1. Pull the hood lock cable through the panel hole to the engine compartment.

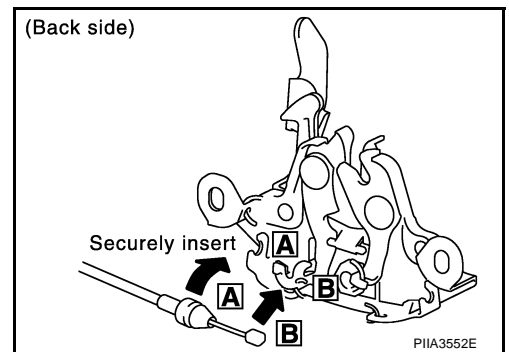
CAUTION:

Be careful not to bend the cable too much, keeping the radius 100 mm (3.94 in) or more.

2. Make sure that 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, Make sure the hood lock adjustment and hood opener operation.



Hood Lock Control Inspection

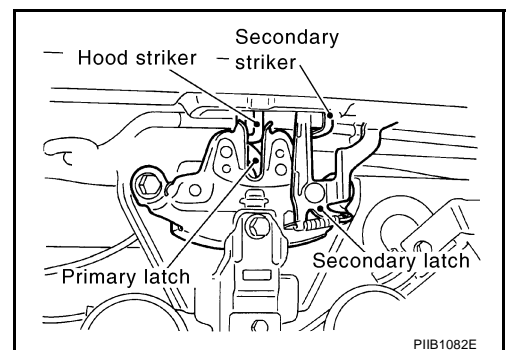
CAUTION:

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:

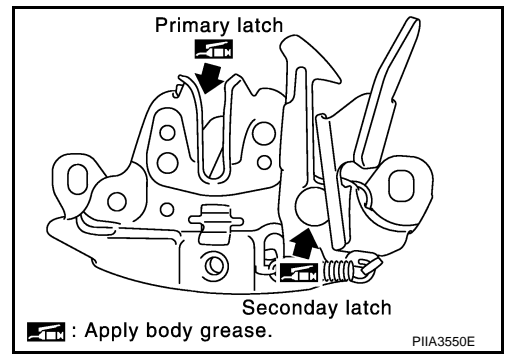
Do not drop hood from a height of 300 mm (11.81in) or more.



3. When pulling hood opener lever gently, make sure that front end of the hood rises by approximately 20 mm (0.79) and that hood striker and hood lock primary latch are disengaged. Also make sure that hood opener returns to the original position.

HOOD

4. Confirm hood lock is properly lubricated. If necessary, apply grease at the point shown in the figure.



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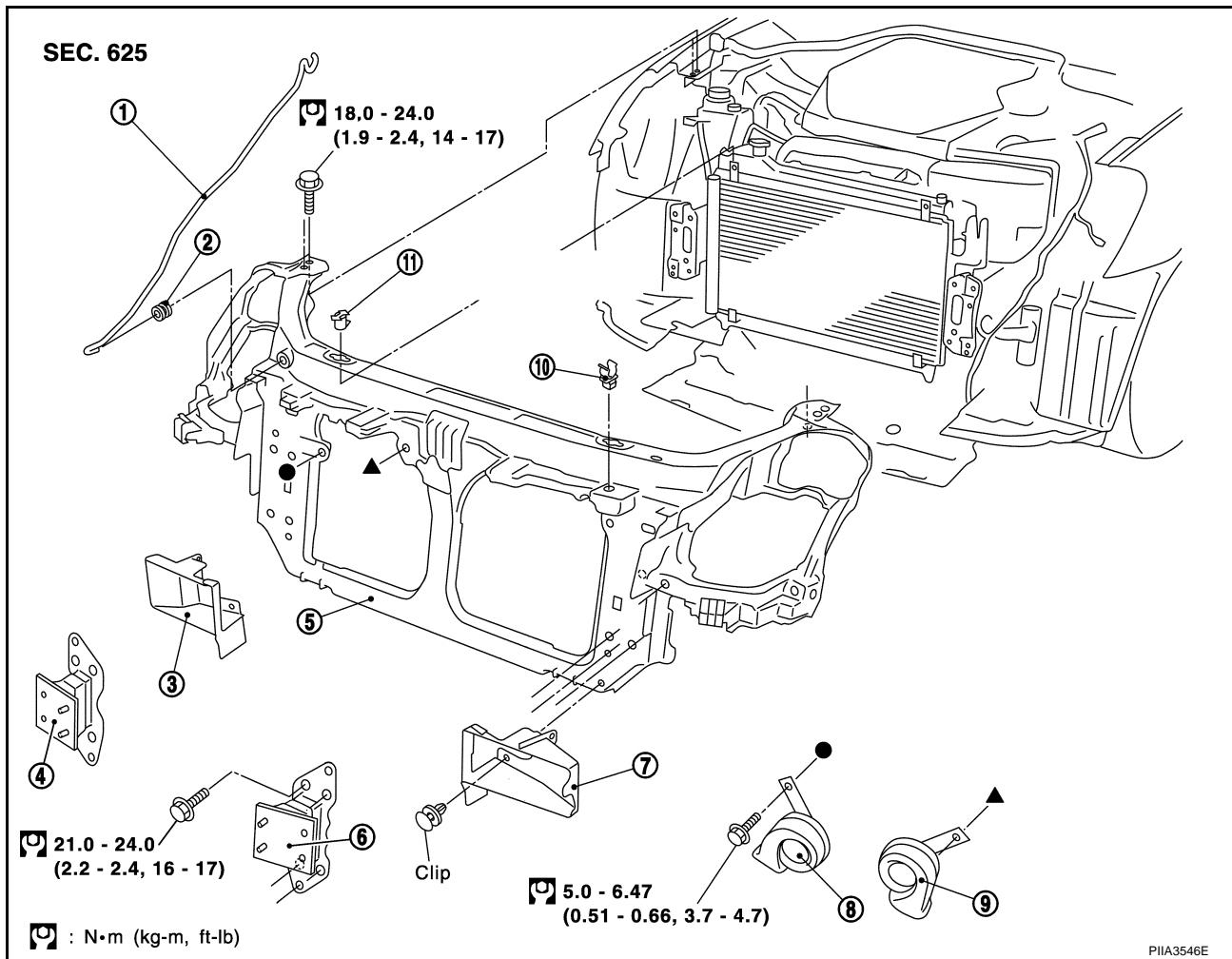
RADIATOR CORE SUPPORT

PFP:62500

AIS005G5

RADIATOR CORE SUPPORT

Removal and Installation



- | | | |
|-------------------------|-----------------------------------|-------------------------|
| 1. Hood stay | 2. Grommet | 3. Air intake duct (RH) |
| 4. Bumper bracket (RH) | 5. Radiator core support assembly | 6. Bumper bracket (LH) |
| 7. Air intake duct (LH) | 8. Horn (High) | 9. Horn (Low) |
| 10. Hood rod clamp | 11. Upper radiator bracket | |

REMOVAL

1. Remove hood assembly. Refer to [BL-14, "Removal and Installation of Hood Assembly"](#).
2. Remove front bumper, bumper reinforcement and bumper bracket. Refer to [EI-14, "Removal and Installation"](#).
3. Remove hood lock assembly, then remove hood lock cable.
4. Remove washer tank. Refer to [WW-34, "Removal and Installation of Washer Tank"](#).
5. Remove horn connectors.
6. Remove the crash zone sensor. Refer to [SRS-47, "Removal and Installation"](#).
7. Disconnect the ambient sensor connector and remove the ambient sensor. Refer to [ATC-118, "AMBIENT SENSOR"](#).
8. Remove mounting harness clip on radiator core support assembly, the harness is separate.
9. Remove resonator mounting screws. Refer to [EM-15, "AIR CLEANER AND AIR DUCT"](#).
10. Remove air duct (LH/RH), and remove washer tank inlet clip.
11. Remove the mounting bolts, and remove bumper bracket (LH/RH).

RADIATOR CORE SUPPORT

12. Remove upper radiator bracket, and radiator core support assembly mounting bolts. Remove mounting bolts with power tool

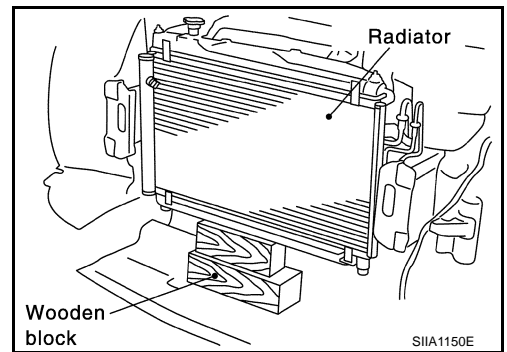
CAUTION:

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

13. Remove headlamp (LH/RH). Refer to [LT-35, "Removal and Installation"](#).
14. Remove radiator core support assembly.
15. After removing radiator core support assembly, the following parts are separate.
 - Remove the hood stay, grommet and hood rod clamp
 - Horn (High/Low)
 - Air intake duct (LH/RH)

INSTALLATION

Installation in the reverse order of removal.



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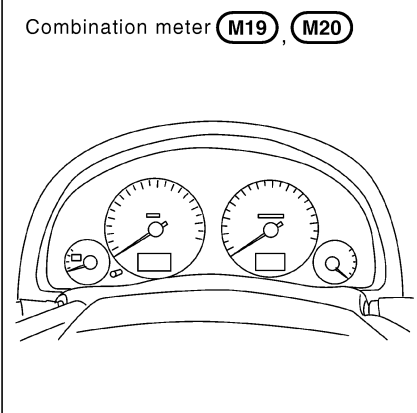
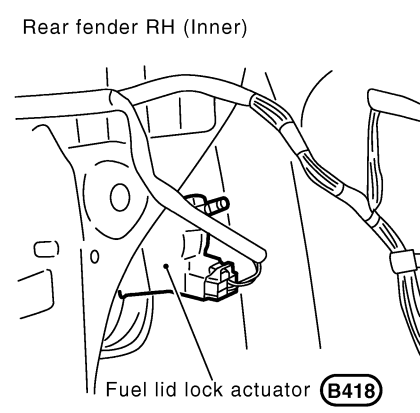
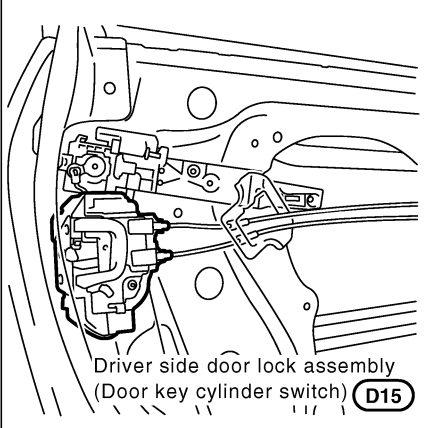
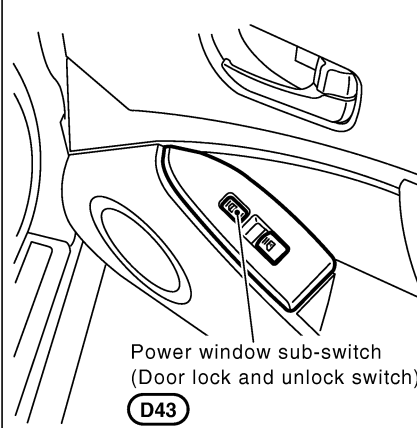
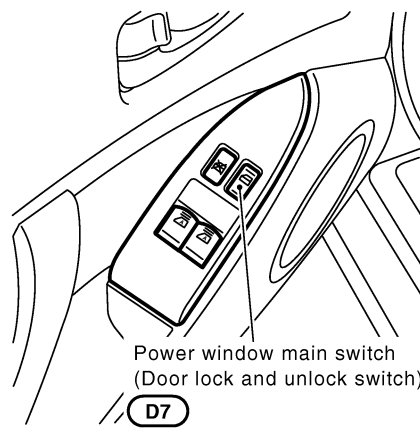
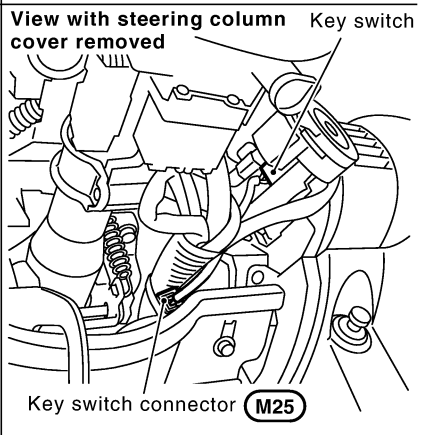
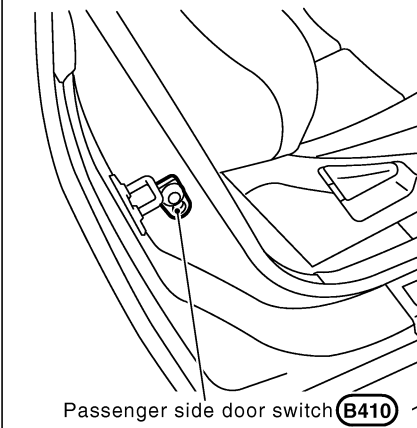
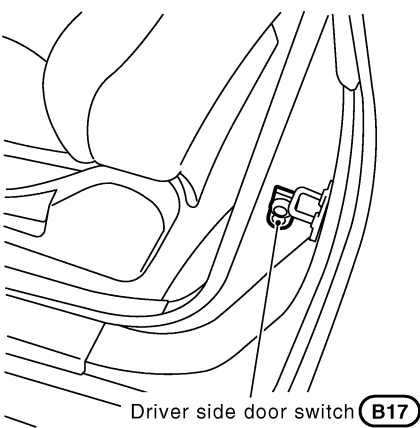
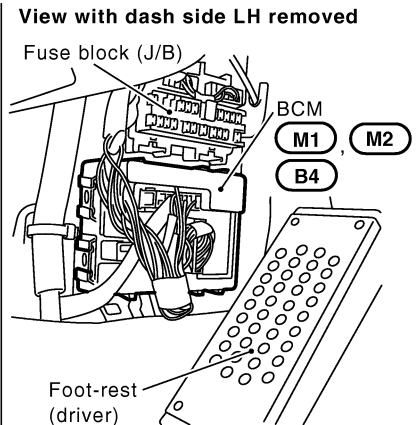
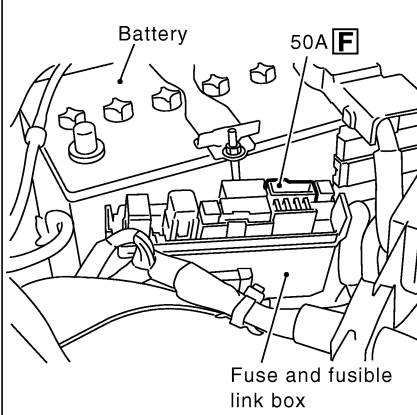
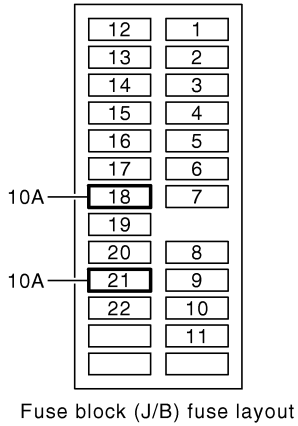
POWER DOOR LOCK SYSTEM

PFP:24814

AIS001YQ

POWER DOOR LOCK SYSTEM

Component Parts and Harness Connector Location



PIIA9628E

POWER DOOR LOCK SYSTEM

AIS001YR

System Description

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 2
- through 10A fuse [No. 21, located in the fuse block (J/B)].

Ground is supplied at all times

- to BCM terminal 52
- through grounds M30 and M66.

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

- to BCM terminal 37
- through key switch terminal 1.

When the driver side door switch is ON (door is OPEN), ground is supplied (without navigation system)

- to BCM terminal 62
- through driver side door switch terminal 1
- through driver side door switch case ground.

When the driver side door switch is ON (door is OPEN), ground is supplied (with navigation system)

- to combination meter terminal 7
- through driver side door switch terminal 1
- through driver side door switch case ground.

When the passenger side door switch is ON (door is OPEN), ground is supplied (without navigation system)

- to BCM terminal 12
- through passenger side door switch terminal 1
- through passenger side door switch case ground.

When the passenger side door switch is ON (door is OPEN), ground is supplied (with navigation system)

- to combination meter terminal 6
- through passenger side door switch terminal 1
- through passenger side door switch case ground.

When the door is locked or 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 15
- through grounds M30 and M66.

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 12.

When the door is locked or unlocked with power window sub-switch (door lock and unlock switch), ground is supplied

- to CPU of power window sub-switch
- through power window sub-switch (door lock and unlock switch) terminal 11
- through grounds M30 and M66.

Then power window sub-switch (door lock and unlock switch) operation signal is supplied

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

When the door is locked with door key cylinder switch, ground is supplied

- to power window main switch (door lock and unlock switch) terminal 6

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POWER DOOR LOCK SYSTEM

- through door key cylinder switch terminals 1 and 5
- through grounds M30 and M66.

Then door key cylinder switch operation signal is supplied

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

When the door is unlocked with door key cylinder switch, ground is supplied

- to power window main switch (door lock and unlock switch) terminal 7
- through door key cylinder switch terminals 5 and 6
- through grounds M30 and M66.

Then door key cylinder switch operation signal is supplied

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

POWER WINDOW SERIAL LINK

BCM is connected to power window main switch (door lock and unlock switch) and power window sub-switch (door lock and unlock switch) as serial link.

Power window main switch, power window sub-switch 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 power window sub-switch 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

- With the locking operation of door lock and unlock switch, driver side door lock actuator, passenger side door lock actuator and fuel lid lock actuator are locked.
- With the unlocking operation of door lock and unlock switch, driver side door lock actuator, passenger side door lock actuator and fuel lid lock actuator are unlocked.

Functions Available by Operating the Key Cylinder Switch

- With the locking operation of door key cylinder, driver side door lock actuator and fuel lid lock actuator are locked.
- When door key cylinder is unlocked, driver side door lock actuator and fuel lid lock actuator are unlocked.
- When door key cylinder is unlocked for the second time within 5 seconds after the first operation, passenger side door lock actuator is unlocked.

Unlock mode can be changed using "DOOR LOCK-UNLOCK SET" in "WORK SUPPORT".

Refer to [BL-31, "WORK SUPPORT"](#) .

Key Reminder Door System

When door lock and unlock switch is operated to lock doors with ignition key put in key cylinder and driver's or passenger's door open, driver and passenger door lock actuators are locked and then unlocked.

Key reminder door mode can be changed using "ANTI-LOCK OUT SET" in "WORK SUPPORT".

Refer to [BL-31, "WORK SUPPORT"](#) .

CAN Communication System Description

AIS002NL

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

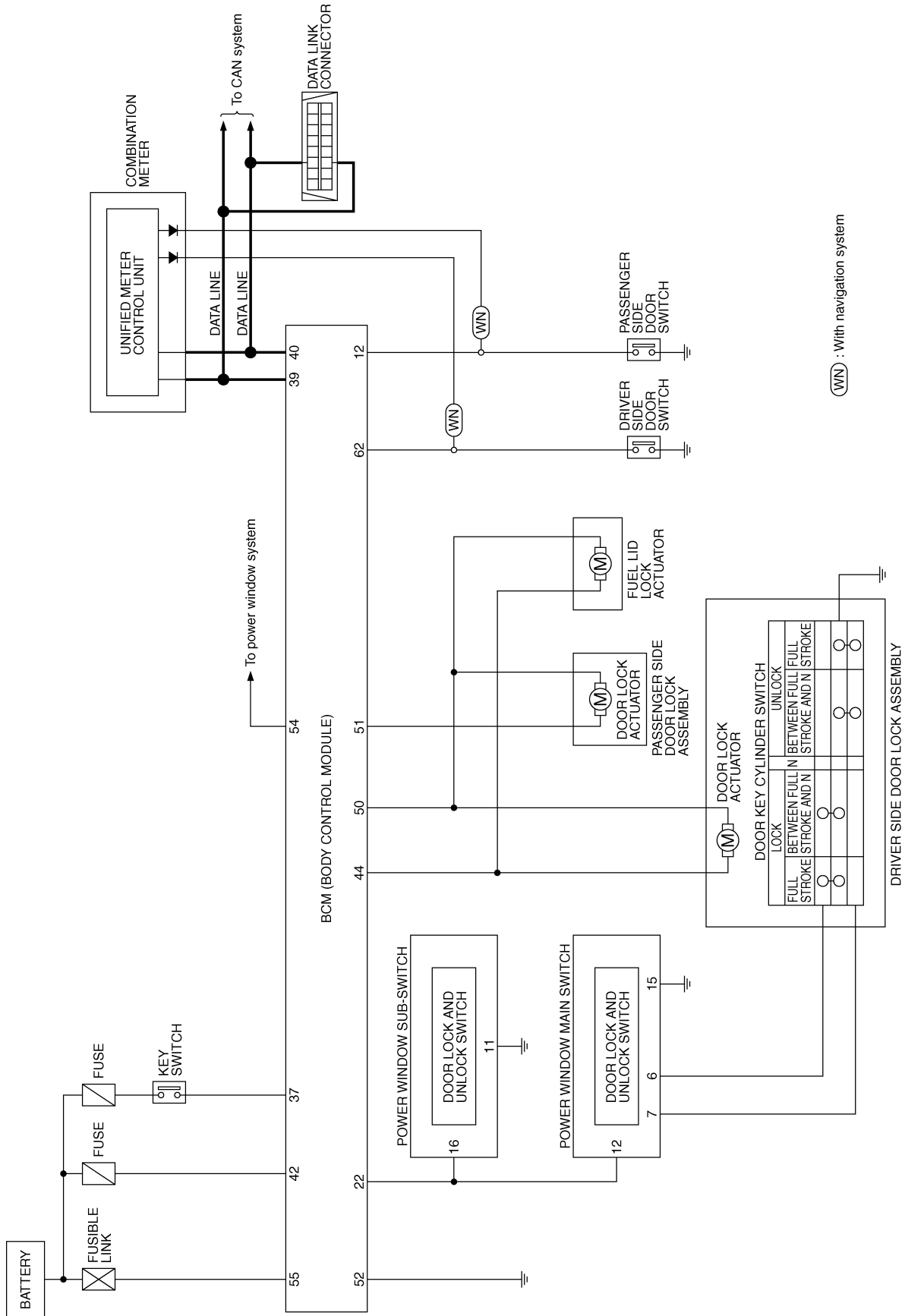
AIS004HF

Refer to [LAN-4, "CAN Communication Unit"](#) .

POWER DOOR LOCK SYSTEM

Schematic

AIS001YS



(WN) : With navigation system

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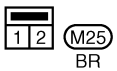
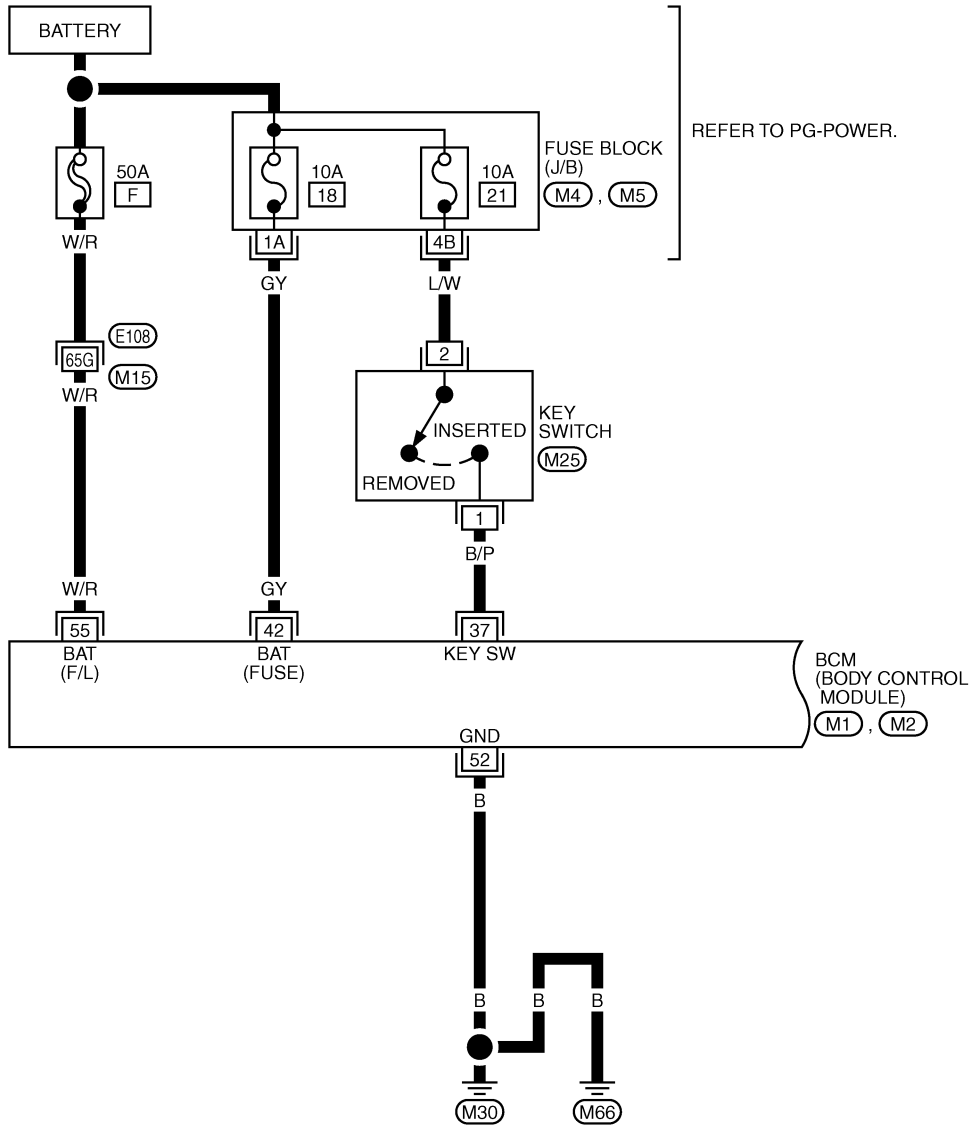
BL

POWER DOOR LOCK SYSTEM

Wiring Diagram —D/LOCK—
FIG. 1

AIS001YT

BL-D/LOCK-01



REFER TO THE FOLLOWING.

(E108) -SUPER MULTIPLE JUNCTION (SMJ)

(M4), (M5) -FUSE BLOCK-JUNCTION BOX (J/B)

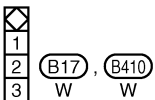
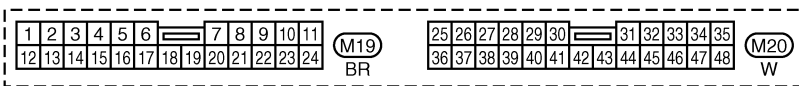
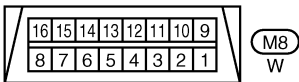
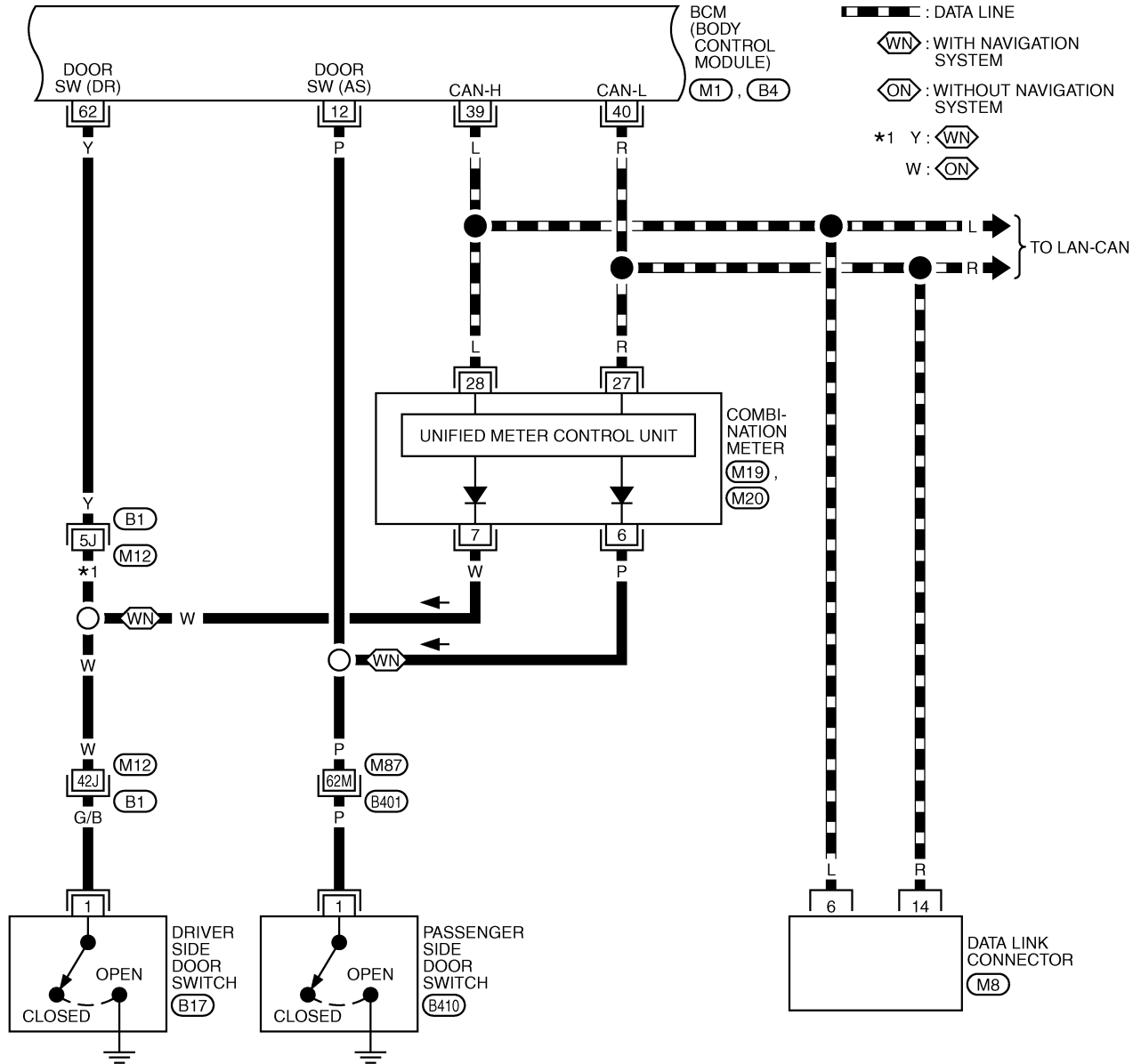
(M1), (M2) -ELECTRICAL UNITS

TIWM0449E

POWER DOOR LOCK SYSTEM

FIG. 2

BL-D/LOCK-02

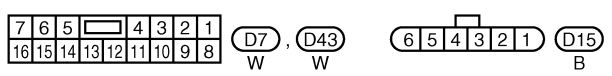
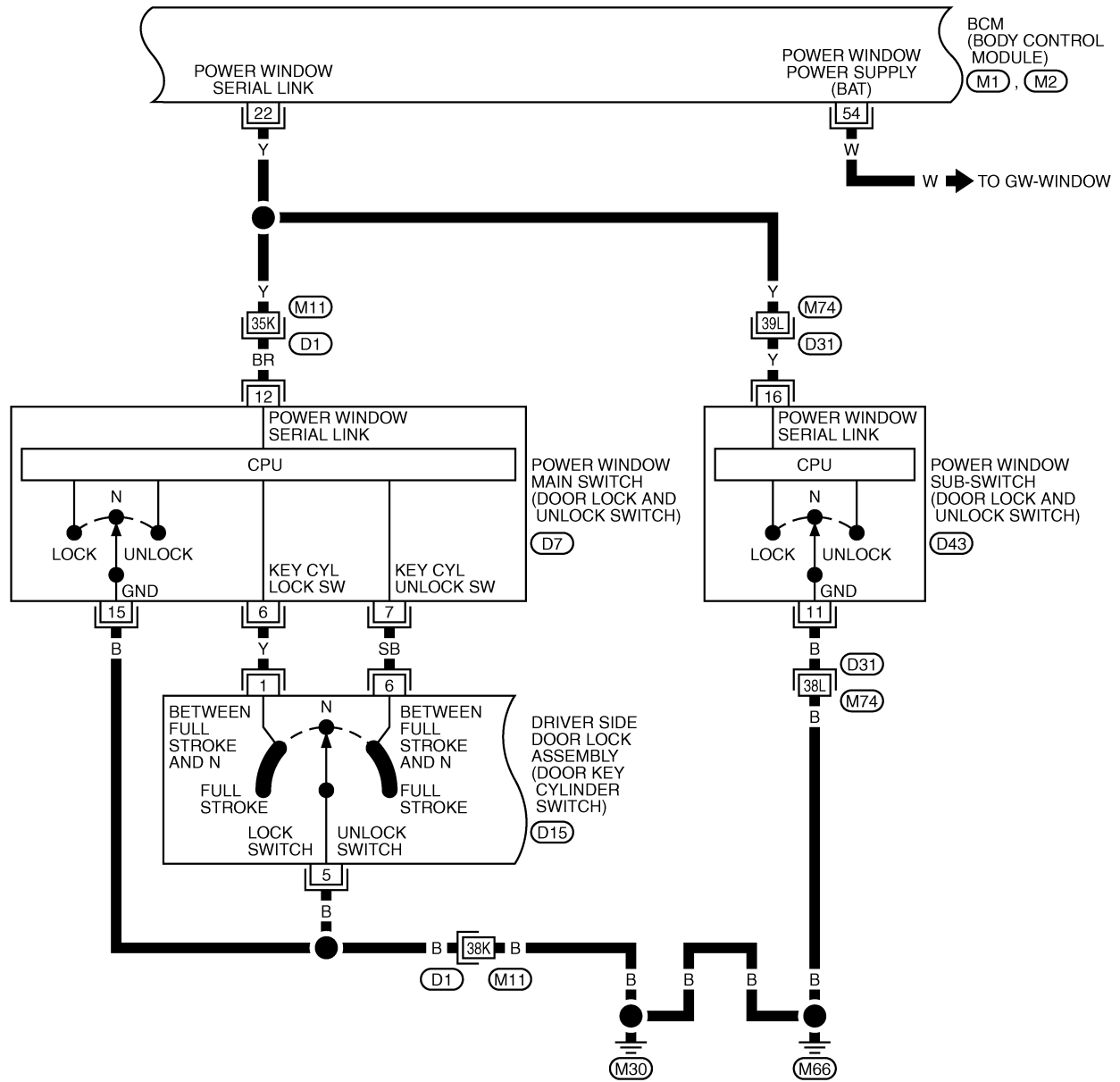


REFER TO THE FOLLOWING.
 (B1), (B401) -SUPER MULTIPLE JUNCTION (SMJ)
 (M1), (B4) -ELECTRICAL UNITS

POWER DOOR LOCK SYSTEM

FIG. 3

BL-D/LOCK-03

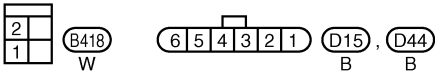
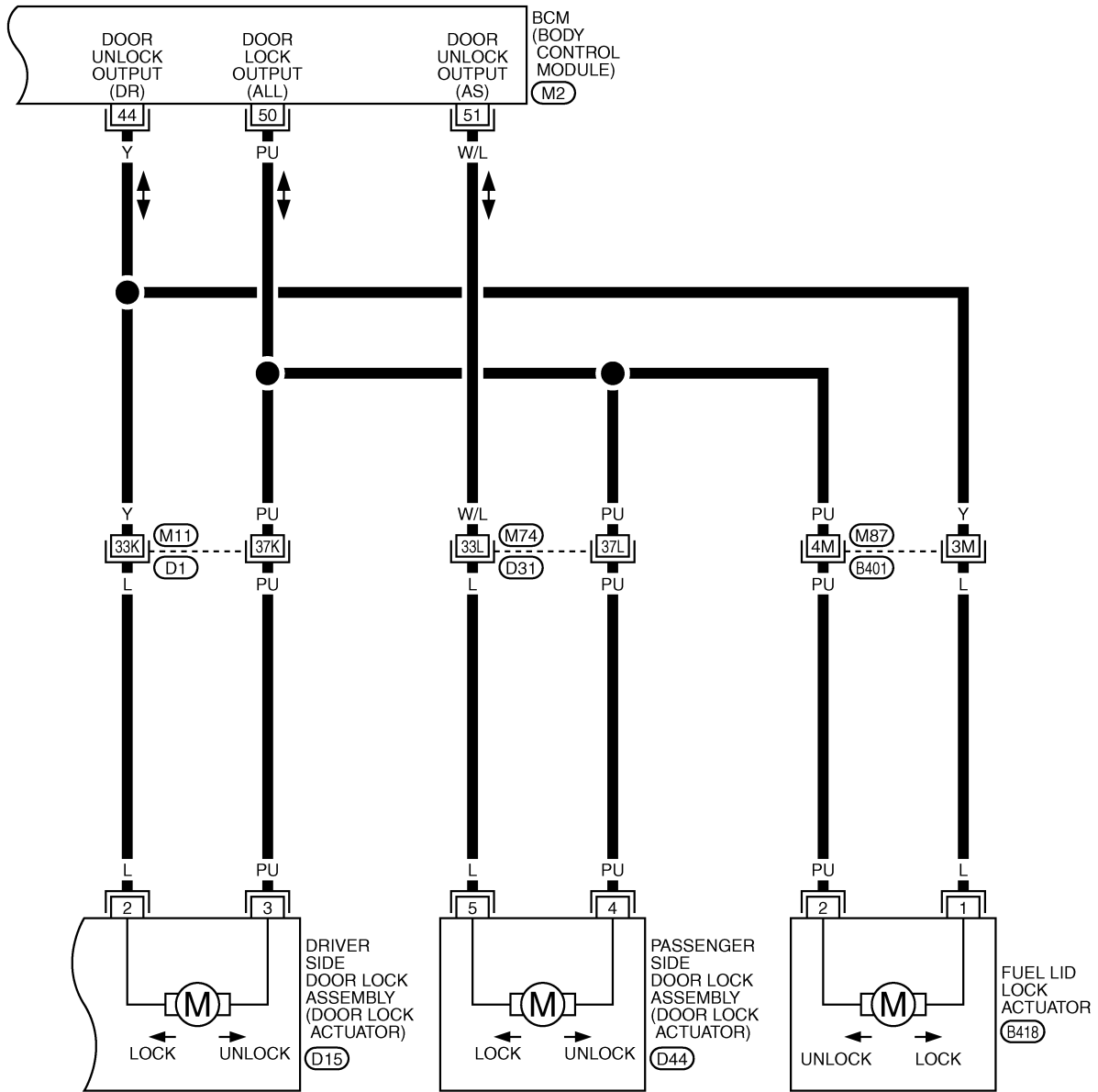


REFER TO THE FOLLOWING.
 (D1), (D31) -SUPER MULTIPLE JUNCTION (SMJ)
 (M1), (M2) -ELECTRICAL UNITS

POWER DOOR LOCK SYSTEM

FIG. 4

BL-D/LOCK-04



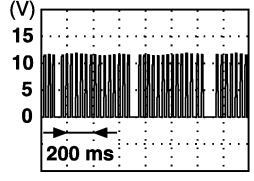
REFER TO THE FOLLOWING.
 B401, D1, D31 -SUPER
 MULTIPLE JUNCTION (SMJ)
 M2 -ELECTRICAL UNITS

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POWER DOOR LOCK SYSTEM

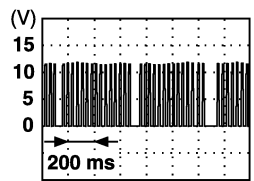
Terminals and Reference Value for BCM

AIS001YU

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
12	P	Passenger side door switch	ON (door open) → OFF (door closed)	0 → 5
22	Y	Power window serial link	Ignition switch ON or power window timer operates	 PIIA2344J
37	B/P	Key switch	ON (Key inserted in ignition key cylinder) → OFF (Key removed from IGN key cylinder)	Battery voltage → 0
39	L	CAN-H	—	—
40	R	CAN-L	—	—
42	GY	Power source (fuse)	—	Battery voltage
44	Y	Driver side door and fuel lid lock actuator (unlock)	Door lock / unlock switch (Free → Unlock)	0 → Battery voltage → 0
50	PU	All door and fuel lid lock actuator (lock)	Door lock / unlock switch (Free → Lock)	0 → Battery voltage → 0
51	W/L	Passenger side door lock actuator (unlock)	Door lock / unlock switch (Free → Unlock)	0 → Battery voltage → 0
52	B	Ground	—	0
54	W	Power window power supply	—	Battery voltage
55	W/R	Power source (Fusible link)	—	Battery voltage
62	Y	Driver side door switch	ON (door open) → OFF (door closed)	0 → 5

Terminal and Reference Value for Power Window Main Switch and Sub-switch

AIS001YV

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
6	Y	Key cylinder switch lock signal	Door key cylinder switch position (Neutral → Locked)	5 → 0
7	SB	Key cylinder switch unlock signal	Door key cylinder switch position (Neutral → Unlocked)	5 → 0
12 (16)	BR (Y)	Power window serial link	—	 PIIA2344J
15 (11)	B (B)	Ground	—	0

(): Power window sub-switch

POWER DOOR LOCK SYSTEM

Terminal and Reference Value for Combination Meter

AIIS00293

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
6*	P	Passenger side door switch	ON (door open) → OFF (door closed)	0 → 5
7*	W	Driver side door switch	ON (door open) → OFF (door closed)	0 → 5
27	R	CAN-L	—	—
28	L	CAN-H	—	—

*: with navigation system

Work Flow

AIIS001YW

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [BL-21, "System Description"](#) .
3. Does power window system operate normally?
YES: GO TO 4.
NO: Refer to [GW-17, "POWER WINDOW SYSTEM"](#) .
4. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [BL-32, "Trouble Diagnoses Symptom Chart"](#) .
5. Does power door lock system operate normally?
Yes: GO TO 6.
No: GO TO 4.
6. INSPECTION END.

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POWER DOOR LOCK SYSTEM

CONSULT-II Function

AIS001YY

Power door lock system check with data monitor and active test can be executed by combining data reception and command transmission via communication line from BCM.

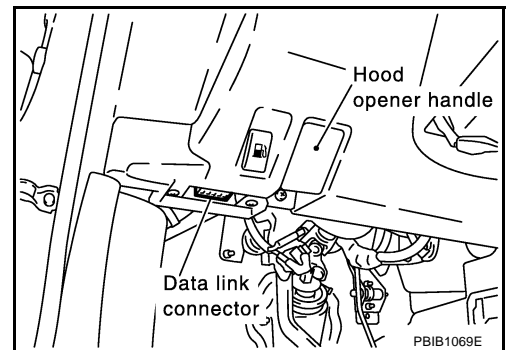
BCM diagnosis part	Inspection item, self-diagnosis mode	Content
Door lock	Work support	Changes the setting for each function.
	Data monitor	Displays BCM input data on real-time basis.
	Active test	Sends drive signals to door lock actuator to perform operation check.

CONSULT-II BASIC OPERATION PROCEDURE

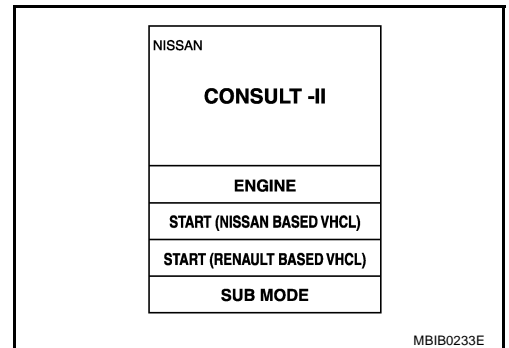
CAUTION:

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.

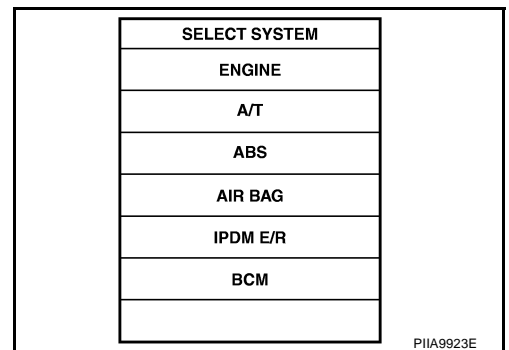
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" and "CONSULT-II CONVERTER" to data link connector.



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

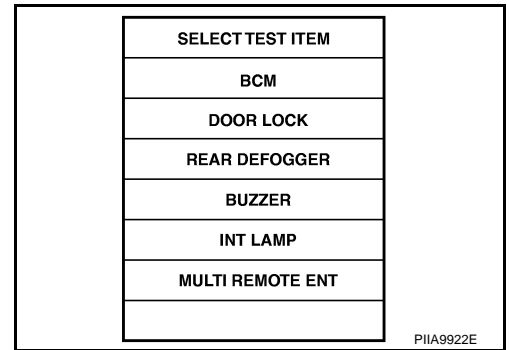


5. Touch "BCM".
If "BCM" is not indicated, refer to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).

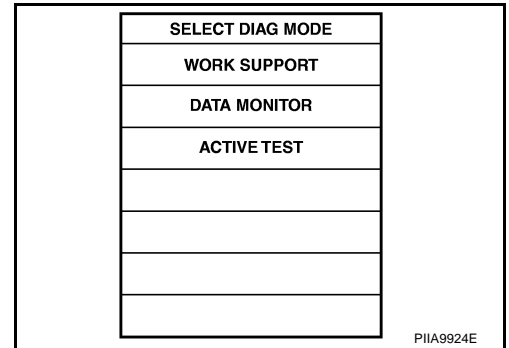


POWER DOOR LOCK SYSTEM

6. Touch "DOOR LOCK".



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



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.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from lock/unlock switch driver and passenger side.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch driver and passenger side.
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.
DOOR SW-RR	This is displayed even when it is not equipped.
DOOR SW-RL	This is displayed even when it is not equipped.
BACK DOOR SW	This is displayed even when it is not equipped.
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.

POWER DOOR LOCK SYSTEM

ACTIVE TEST

Test item	Content
DOOR LOCK	<p>This test is able to check all door lock actuators operation. There are four items, "ALL LOCK", "ALL UNLOCK", "DR UNLOCK", and "OTHER UNLOCK", on CONSULT-II screen.</p> <ul style="list-style-type: none"> ● When "ALL LOCK" is touched, all door lock actuators lock. ● When "ALL UNLOCK" is touched, all door lock actuators unlock. ● When "DR UNLOCK" is touched, driver door lock actuator unlock. ● When "OTHER UNLOCK" is touched, all door lock actuator (except driver side door lock actuator) unlock.

Trouble Diagnoses Symptom Chart

AIS001YZ

Always check the "Work Flow" before troubleshooting. Refer to [BL-29, "Work Flow"](#) .

Symptom	Diagnoses service procedure	Refer to page
Key reminder door system does not operate properly.	1. Check BCM power supply and ground circuit.	BL-32
	2. Check key switch.	BL-37
	3. Check door switch.	BL-33 *1 BL-35 *2
	4. Replace BCM.	BCS-15
Power door lock does not operate with door lock and unlock switch on power window main switch or power window sub-switch.	1. Check BCM power supply and ground circuit.	BL-32
	2. Check door lock and unlock switch.	BL-39
	3. Replace BCM.	BCS-15
Driver side door lock actuator does not operate.	1. Check driver side door lock actuator.	BL-42
	2. Replace BCM	BCS-15
Passenger side door lock actuator does not operate.	1. Check passenger side door lock actuator.	BL-43
	2. Replace BCM.	BCS-15
Power door lock does not operate with door key cylinder operation. (Power door lock operates properly with door lock and unlock switch.)	1. Check door key cylinder switch.	BL-44
	2. Replace power window main switch.	EI-30
Fuel lid lock actuator does not operate. (All door lock actuator operates properly.)	1. Check fuel lid lock actuator.	BL-45

*1 : With navigation system

*2 : Without navigation system

Check BCM Power Supply and Ground Circuit

AIS001YX

1. FUSE AND FUSIBLE LINK CHECK

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

NOTE:

Refer to [BL-20, "Component Parts and Harness Connector Location"](#) .

OK or NG

OK >> GO TO 2.

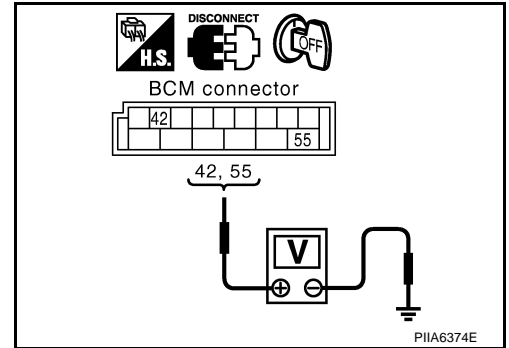
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse, refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

POWER DOOR LOCK SYSTEM

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connectors.
3. Check voltage between BCM connector M2 terminals 42, 55 and ground.

42 (GY) – Ground : Battery voltage
55 (W/R) – Ground : Battery voltage



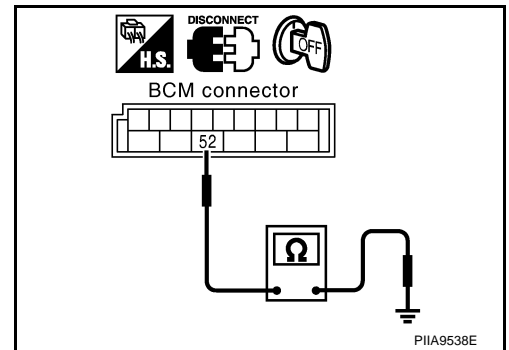
OK or NG

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M2 terminals 52 and ground.

52 (B) – Ground : Continuity should exist.



OK or NG

- OK >> Power supply and ground circuit are OK.
 NG >> Repair or replace BCM ground circuit.

Check Door Switch (With Navigation System)

AIS002NS

First perform the “SELF-DIAG RESULTS” in “BCM” with CONSULT-II, then perform the each trouble diagnosis of malfunction system indicated “SELF-DIAG RESULTS” of “BCM”, Refer to [BCS-12, "CONSULT-II"](#).

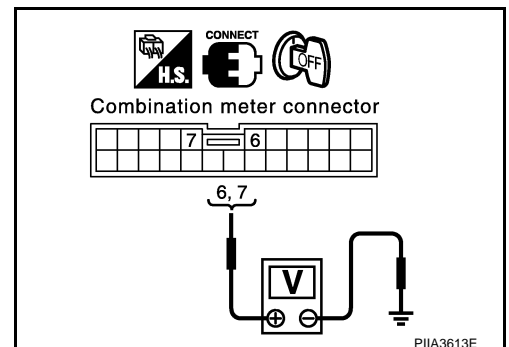
1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between combination meter connector M19 terminals 7, 6 and ground.

Item	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
	(+)	(-)		
Driver side door switch	7 (W)	Ground	CLOSE ↓ OPEN	5 ↓ 0
Passenger side door switch	6 (P)			

OK or NG

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



POWER DOOR LOCK SYSTEM

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and combination meter connector.
3. Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and combination meter connector M19 terminals 7, 6.

Driver side door

1 (G/B) – 7 (W) : Continuity should exist.

Passenger side door

1 (P) – 6 (P) : Continuity should exist.

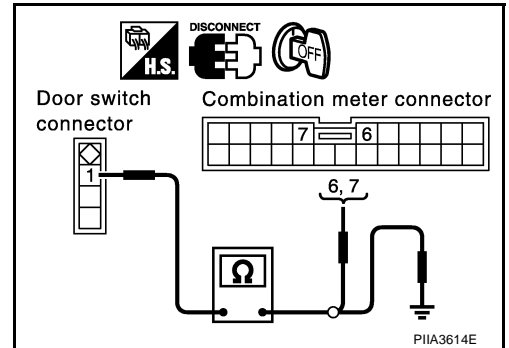
4. Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and ground.

1 (G/B or P) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

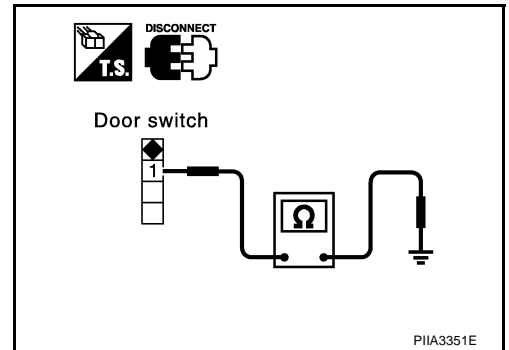
Check continuity between door switch B17 (driver side) or B410 (passenger side) terminal 1 and ground part of door switch.

Terminal	Door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

OK >> GO TO 4.

NG >> Replace door switch.



4. CHECK COMBINATION METER OUTPUT SIGNAL

1. Connect combination meter connector.
2. Check voltage between combination meter connector M19 terminals 6, 7 and ground.

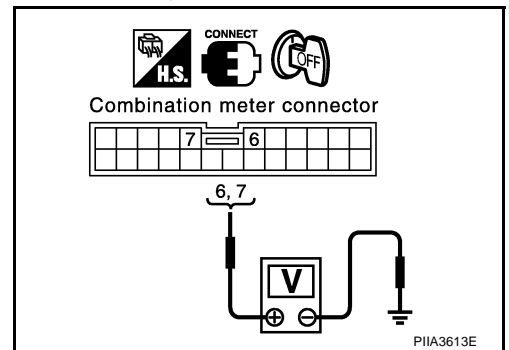
6 (P) – Ground : Approx. 5

7 (W) – Ground : Approx. 5

OK or NG

OK >> Check harness connection.

NG >> Replace combination meter.



POWER DOOR LOCK SYSTEM

Check Door Switch (Without Navigation System)

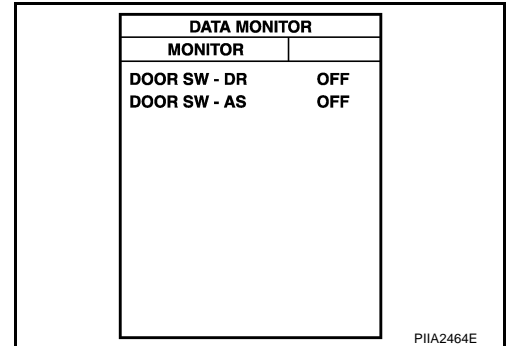
AIS002NT

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

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

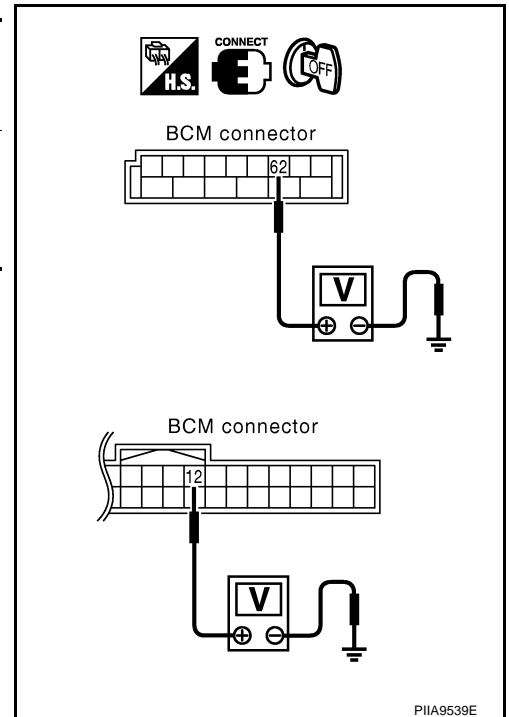
Monitor item	Condition
DOOR SW-DR	CLOSE → OPEN : OFF → ON
DOOR SW-AS	



Without CONSULT-II

Check voltage between BCM connectors B4 (driver side), M1 (passenger side) terminals 62, 12 and ground.

Item	Connectors	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
		(+)	(-)		
Driver side door switch	B4	62 (Y)	Ground	CLOSE	5
Passenger side door switch	M1	12 (P)		OPEN	0



OK or NG

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

POWER DOOR LOCK SYSTEM

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM connector.
3. Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and BCM connector B4, M1 terminals 62, 12.

Driver side door

1 (G/B) – 62 (Y) : Continuity should exist.

Passenger side door

1 (P) – 12 (P) : Continuity should exist.

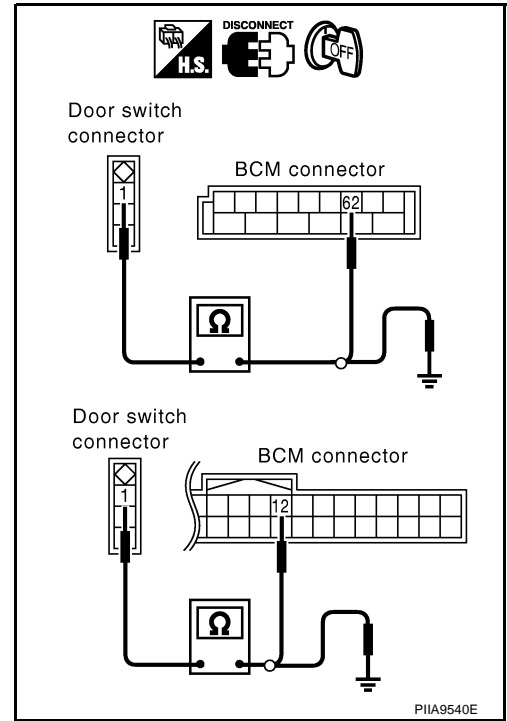
4. Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and ground.

1 (G/B or P) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

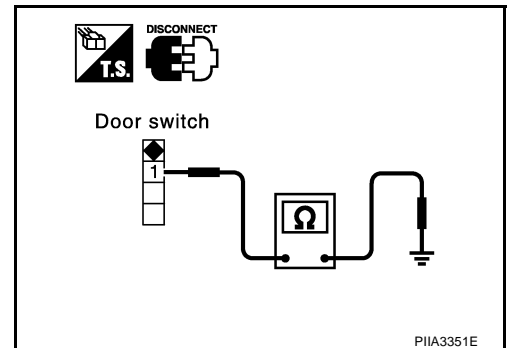
Check continuity between door switch B17 (driver side) or B410 (passenger side) terminal 1 and ground part of door switch.

Terminal	Door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

OK >> GO TO 4.

NG >> Replace door switch.



POWER DOOR LOCK SYSTEM

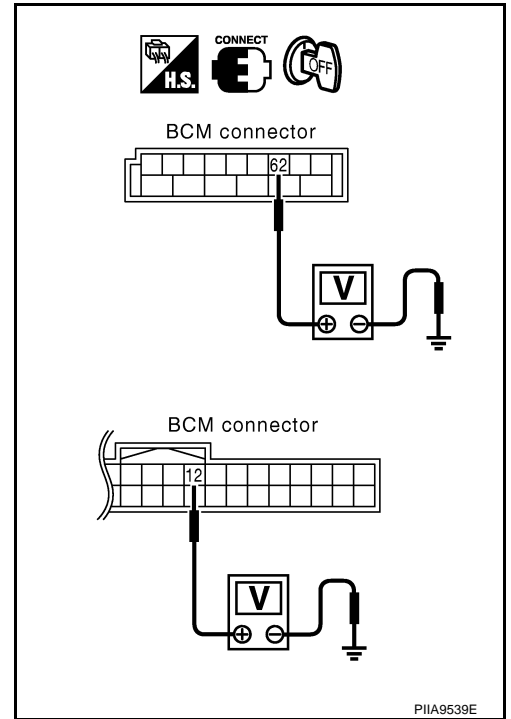
4. CHECK DOOR SWITCH INPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connectors B4 (driver side), M1 (passenger side) terminals 62, 12 and ground.

62 (Y) – Ground : Approx. 5V
12 (P) – Ground : Approx. 5V

OK or NG

- OK >> Check harness connection.
 NG >> Replace BCM.



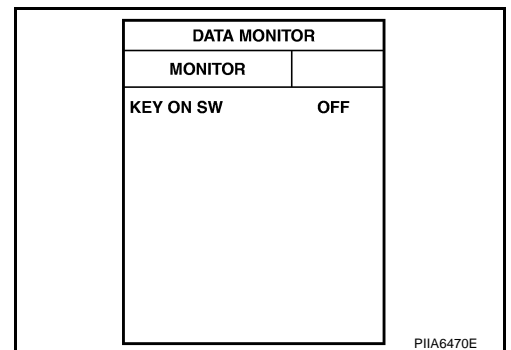
Check Key Switch

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

Check ignition key cylinder “KEY ON SW” in “DATE 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



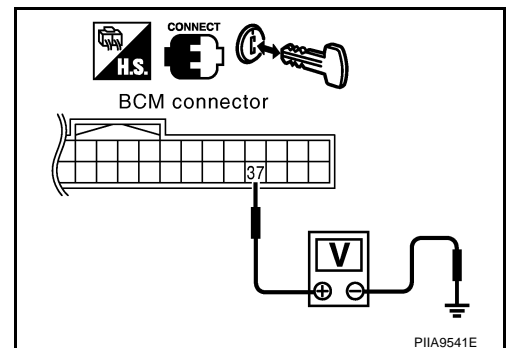
Without CONSULT-II

Check voltage between BCM connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
	(+)	(-)		
M1	37 (B/P)	Ground	Key is inserted	Battery voltage
			Key is removed	0

OK or NG

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



POWER DOOR LOCK SYSTEM

2. CHECK KEY SWITCH

1. Disconnect key switch connector.
2. Check continuity between key switch terminals 1 and 2.

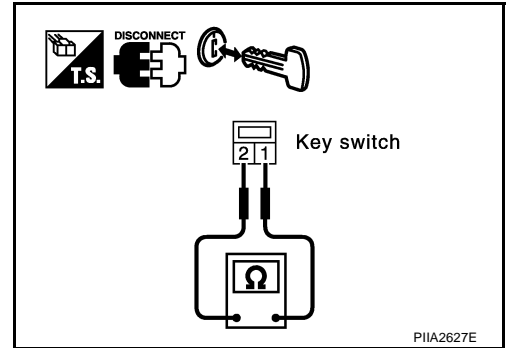
Connector	Terminals		Condition	Continuity
M25	1	2	Key is inserted	Yes
			Key is removed	No

OK or NG

OK >> Check the following.

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

NG >> Replace key switch.



POWER DOOR LOCK SYSTEM

AIS001ZZ

Check Door Lock and Unlock Switch

1. CHECK POWER WINDOW OPERATION

Does power window system operate normally?

YES or NO?

YES >> GO TO 2.

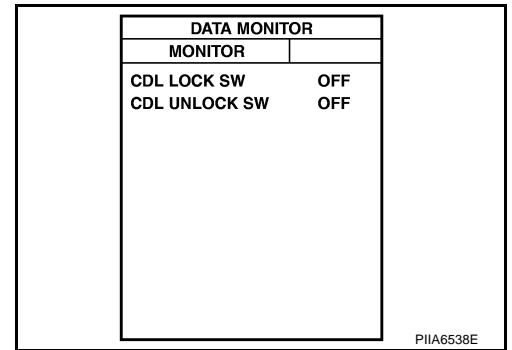
NO >> Refer to [GW-17, "POWER WINDOW SYSTEM"](#) .

2. CHECK DOOR LOCK AND UNLOCK SWITCH OUTPUT SIGNAL

① With CONSULT-II

Check door lock and unlock switch ("CDL LOCK SW" , "CDL UNLOCK SW ") in DATA MONITOR mode with CONSULT-II.

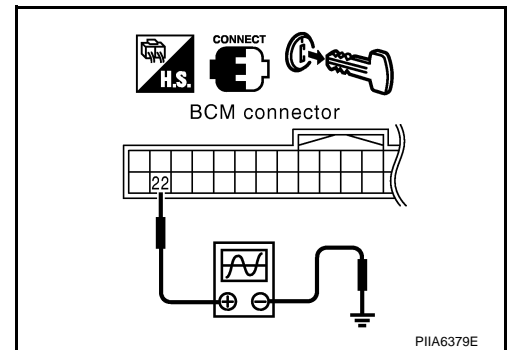
- When door lock and unlock switch is turned to LOCK
CDL LOCK SW : ON
- When door lock and unlock switch is turned to UNLOCK
CDL UNLOCK SW : ON



⊗ Without CONSULT-II

- Remove key from ignition key cylinder, and the all door are closed.
- Check the signal between BCM connector and ground with oscilloscope when door lock and unlock switch (driver side and passenger side) is turned "LOCK" or "UNLOCK".
- Make sure signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (driver side and passenger side) is turned "LOCK" or "UNLOCK".

Connector	Terminal (Wire color)		Signal (Reference value)
	(+)	(-)	
M1	22 (Y)	Ground	<p>PIIA1297E</p>



OK or NG

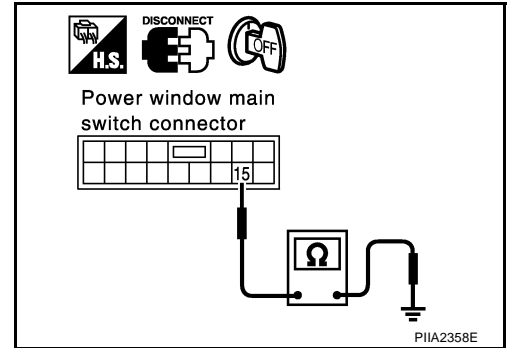
- OK >> Door lock and unlock switch circuit is OK.
 NG >> GO TO 3.

POWER DOOR LOCK SYSTEM

3. CHECK DOOR LOCK AND UNLOCK SWITCH GROUND HARNESS

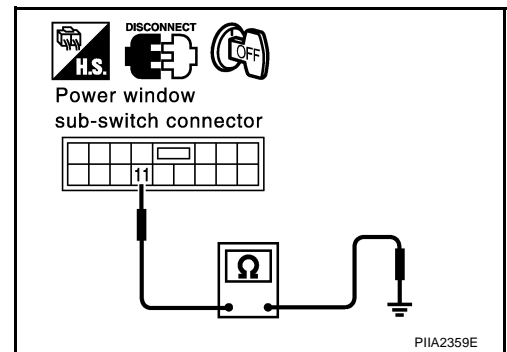
1. Turn ignition switch OFF.
2. Disconnect power window main switch (door lock and unlock switch) and power window sub-switch (door lock and unlock switch) connector.
3. Check continuity between power window main switch (door lock and unlock switch) connector D7 terminal 15 and ground.

15 (B) – Ground : Continuity should exist.



4. Check continuity between power window sub-switch (door lock and unlock switch) connector D43 terminal 11 and ground.

11 (B) – Ground : Continuity should exist.



OK or NG

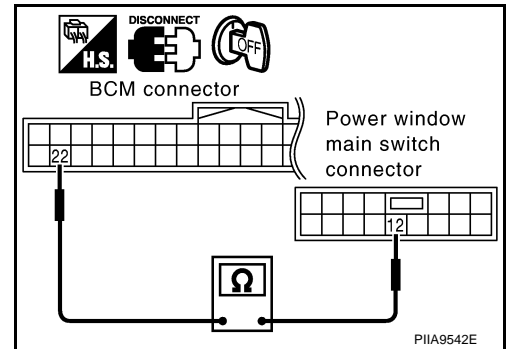
- OK >> GO TO 4.
NG >> Repair or replace harness.

POWER DOOR LOCK SYSTEM

4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

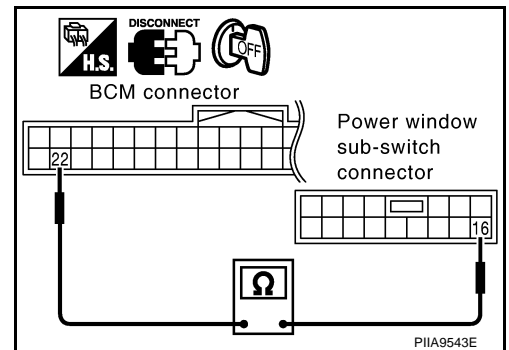
1. Disconnect BCM connector.
2. Check continuity between BCM connector M1 terminal 22 and power window main switch (door lock and unlock switch) connector D7 terminal 12.

22 (Y) – 12 (BR) : Continuity should exist.



3. Check continuity between BCM connector M1 terminal 22 and power window sub-switch (door lock and unlock switch) connector D43 terminal 16.

22 (Y) – 16 (Y) : Continuity should exist.



OK or NG

- OK >> Replace power window main switch or sub-switch (door lock and unlock switch).
- NG >> Repair or replace harness.

POWER DOOR LOCK SYSTEM

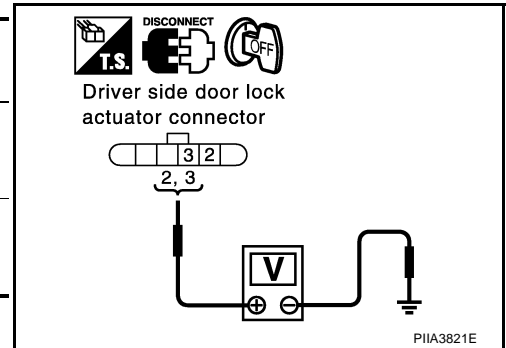
AIS001Z3

Check Driver Side Door Lock Actuator

1. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Disconnect driver side door lock actuator connector.
3. Check voltage between driver side door lock actuator connector D15 terminal 2, 3 and ground.

Connector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)	
	(+)	(-)			
D15	2 (L)	Ground	Driver door lock/unlock switch is turned to UNLOCK.	0 →	Battery voltage → 0
	3 (PU)		Driver door lock/unlock switch is turned to LOCK.	0 →	Battery voltage → 0



OK or NG

- OK >> Replace driver side door lock actuator.
 NG >> GO TO 2.

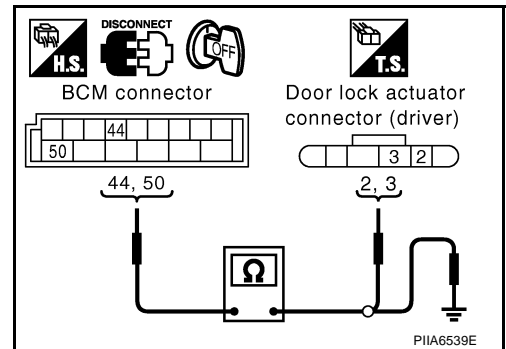
2. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM connector.
2. Check continuity between BCM connector M2 terminals 44, 50 and driver side door lock actuator connector D15 terminals 2, 3 and ground.

- 44 (Y) – 2 (L) : Continuity should exist.**
50 (PU) – 3 (PU) : Continuity should exist.

3. Check continuity between BCM connector M2 terminals 44, 50 and ground.

- 44 (Y) – Ground : Continuity should not exist.**
50 (PU) – Ground : Continuity should not exist.



OK or NG

- OK >> Replace BCM.
 NG >> Repair or replace harness.

POWER DOOR LOCK SYSTEM

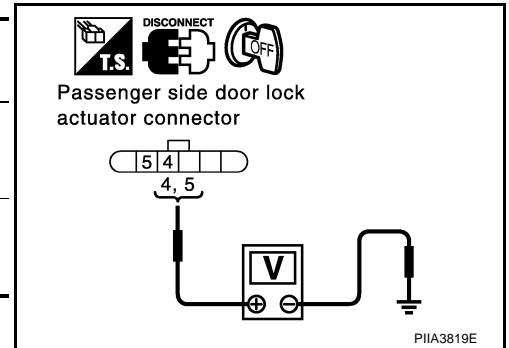
AIS001Z4

Check Passenger Side Door Lock Actuator

1. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Disconnect passenger side door lock actuator connector.
3. Check voltage between passenger side door lock actuator connector D44 terminal 4, 5 and ground.

Connector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)	
	(+)	(-)			
D44	4 (PU)	Ground	Driver door lock/unlock switch is turned to LOCK.	0 →	Battery voltage → 0
	5 (L)		Driver door lock/unlock switch is turned to UNLOCK.	0 →	Battery voltage → 0



OK or NG

- OK >> Replace passenger side door lock actuator.
 NG >> GO TO 2.

2. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and passenger side door lock actuator connector.
2. Check continuity between BCM connector M2 terminals 50, 51 and passenger side door lock actuator connector D44 terminals 4, 5 and ground.

BCM – Passenger side door lock actuator

50 (PU) – 4 (PU) : Continuity should exist.

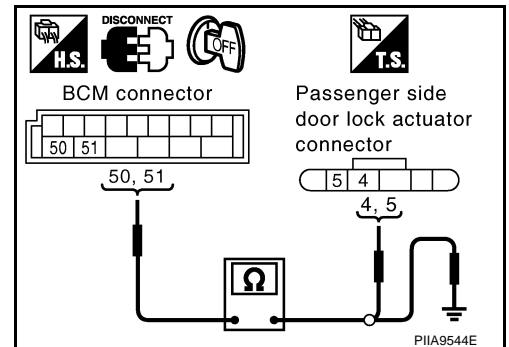
51 (W/L) – 5 (L) : Continuity should exist.

3. Check continuity between BCM connector M2 terminals 50, 51 and ground.

BCM – Ground

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

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



OK or NG

- OK >> Replace BCM.
 NG >> Repair or replace harness.

POWER DOOR LOCK SYSTEM

AIS001Z5

Check Door Key Cylinder Switch

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

With CONSULT-II

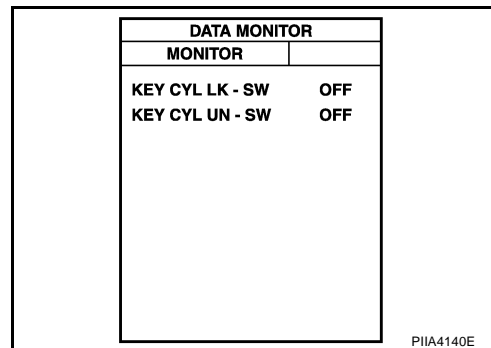
Check door key cylinder switch ("KEY CYL LK-SW" and "KEY CYL UN-SW") in "DATA MONITOR" mode with CONSULT-II.

Door key cylinder switch is turned to lock

KEY CYL LK-SW :ON

Door key cylinder switch is turned to unlock

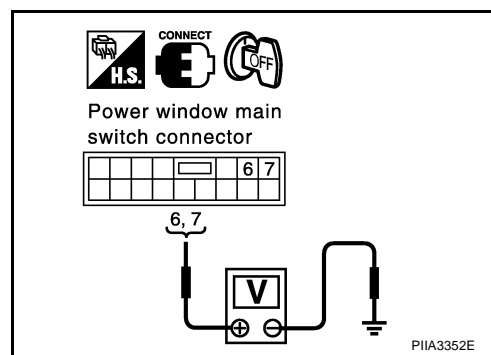
KEY CYL UN-SW :ON



Without CONSULT-II

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

Connector	Terminals (Wire color)		Key position	Voltage [V] (Approx.)
	(+)	(-)		
D7	6 (Y)	Ground	Neutral/Unlock	5
			Lock	0
	7 (SB)		Neutral/Lock	5
			Unlock	0



OK or NG

OK >> Replace power window main switch.

NG >> GO TO 2.

2. CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect power window main switch (door lock and unlock switch) and door key cylinder switch connector.
- Check continuity between power window main switch (door lock and unlock switch) connector D7 terminal 6, 7 and door key cylinder switch connector D15 terminals 1, 6.

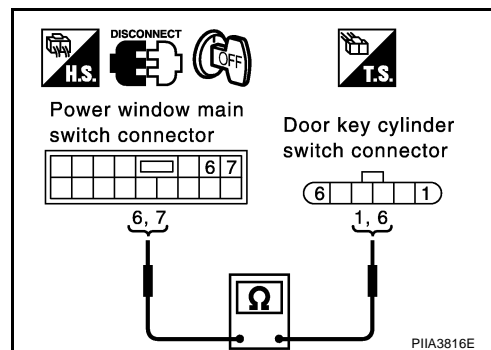
6 (Y) – 1 (Y) :Continuity should exist.

7 (SB) – 6 (SB) :Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



POWER DOOR LOCK SYSTEM

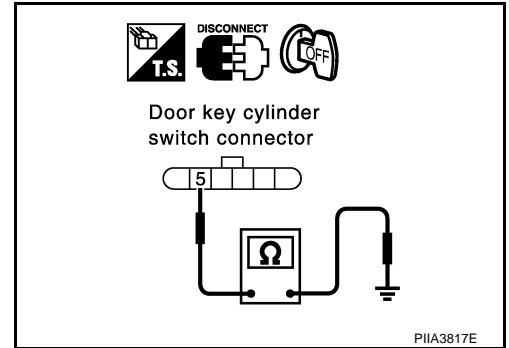
3. CHECK DOOR KEY CYLINDER SWITCH GROUND CHECK

Check continuity between door key cylinder switch connector D15 terminal 5 and ground.

5 (B) – Ground : Continuity should exist.

OK or NG

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



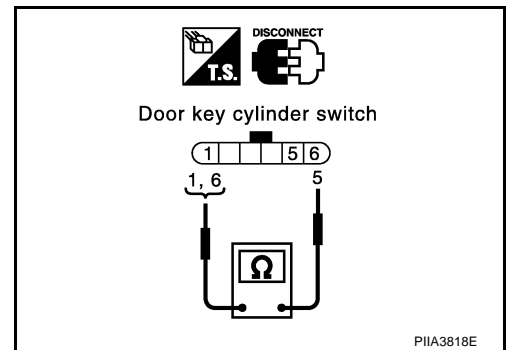
4. CHECK DOOR KEY CYLINDER SWITCH

Check continuity between door key cylinder switch terminal 1, 6 and 5.

Terminals	Key position	Continuity
1	Neutral/Unlock	No
	Lock	Yes
6	Neutral/Lock	No
	Unlock	Yes

OK or NG

- OK >> Replace power window main switch.
- NG >> Replace door key cylinder switch.



Check Fuel Lid Lock Actuator

1. CHECK FUEL LID LOCK ACTUATOR HARNESS

1. Disconnect BCM and fuel lid lock actuator connector.
2. Check continuity between BCM connector M2 terminals 44, 50 and fuel lid lock actuator connector B418 terminals 1, 2.

44 (Y) – 1 (L) :Continuity should exist.

50 (PU) – 2 (PU) :Continuity should exist.

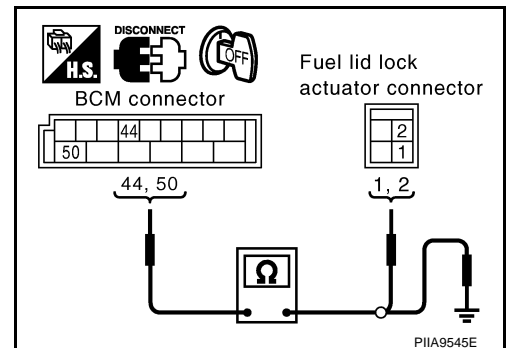
3. Check continuity between BCM connector M2 terminals 44, 50 and ground.

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

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

OK or NG

- OK >> Replace fuel lid actuator.
- NG >> Repair or replace harness.



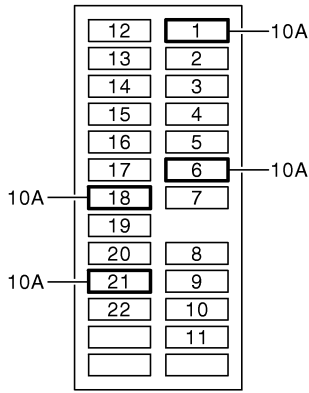
REMOTE KEYLESS ENTRY SYSTEM

PF28596

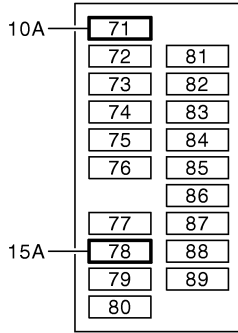
AIS001Y4

REMOTE KEYLESS ENTRY SYSTEM

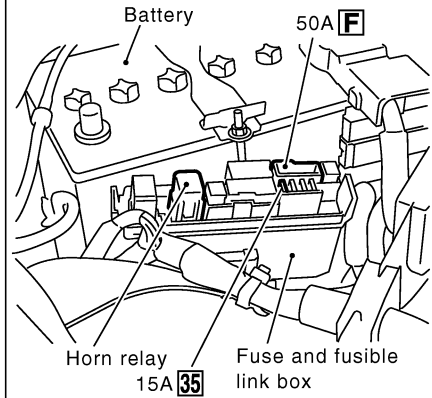
Component Parts and Harness Connector Location



Fuse block (J/B) fuse layout

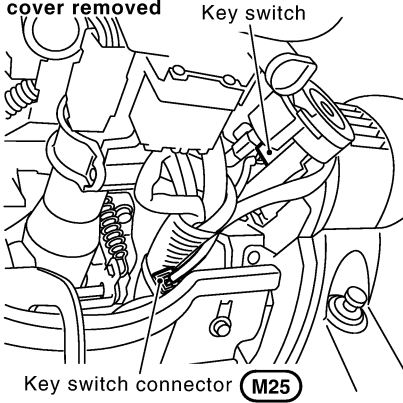


IPDM E/R fuse layout

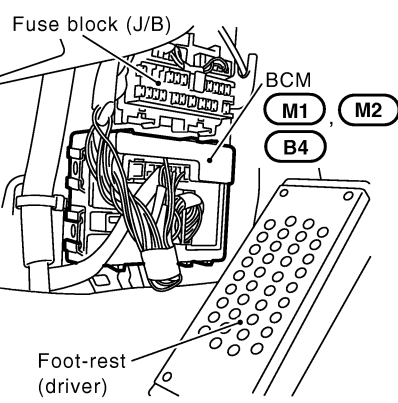


Battery
Horn relay
Fuse and fusible link box

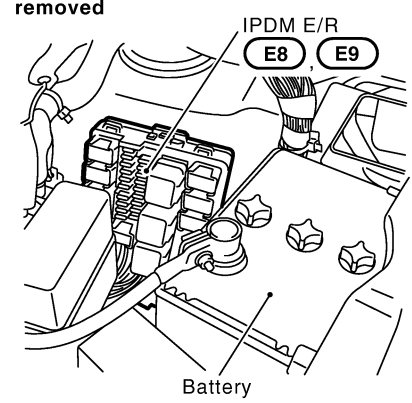
View with steering column cover removed



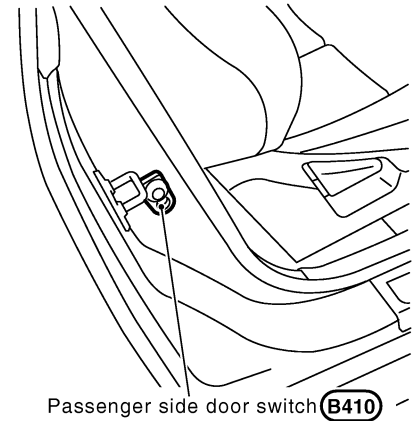
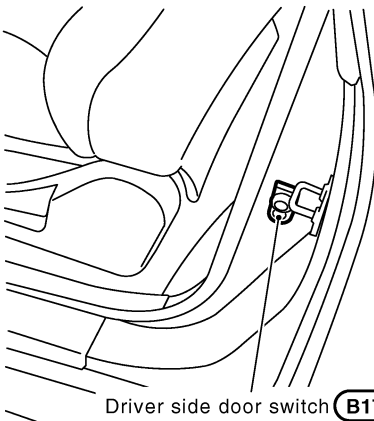
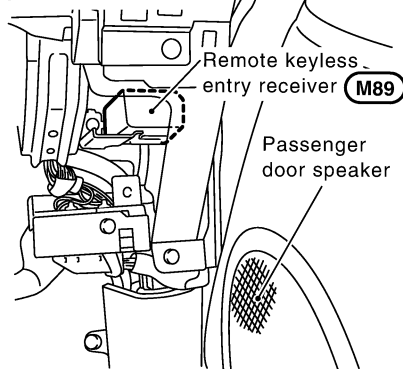
View with dash side LH removed



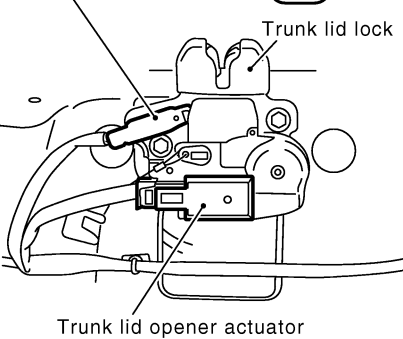
View with cowl top cover (right) removed



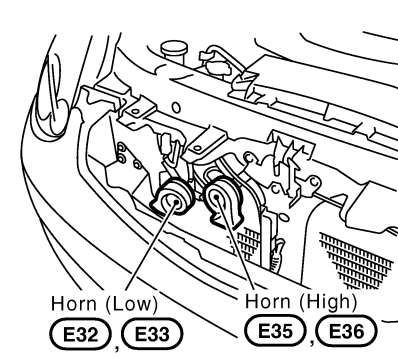
View with instrument lower passenger panel removed



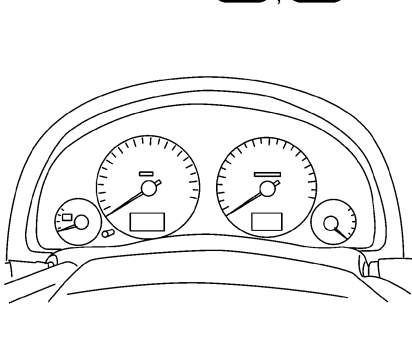
Trunk room lamp switch (B420)



View with front grille removed



Combination meter (M19, M20)



PIIA9629E

REMOTE KEYLESS ENTRY SYSTEM

AIS001Y5

System Description

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 2
- through 10A fuse [No.21, located in the fuse block (J/B)].

Ground is supplied at all times

- to BCM terminal 52
- through grounds M30 and M66.

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

- to BCM terminal 37
- through key switch terminal 1.

When the 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 the 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)].

When the driver side door switch is ON (door is OPEN), ground is supplied (Without navigation system)

- to BCM terminal 62
- through driver side door switch terminal 1
- through driver door switch case ground.

When the driver side door switch is ON (door is OPEN), ground is supplied (with navigation system)

- to combination meter terminal 7
- through driver side door switch terminal 1
- through driver door switch case ground.

When the passenger side door switch is ON (door is OPEN), ground is supplied (without navigation system)

- to BCM terminal 12
- through passenger side door switch terminal 1
- through passenger side door switch case ground.

When the passenger side door switch is ON (door is OPEN), ground is supplied (with navigation system)

- to combination meter terminal 6
- through passenger side door switch terminal 1
- through passenger side door switch case ground.

When the trunk room lamp switch is ON (trunk is OPEN), ground is supplied

- to BCM terminal 57
- through the trunk room lamp switch terminals 1 and 2
- through body grounds B402, B413.

Keyfob signal is inputted to remote keyless entry receiver (the antenna of the system is built in remote keyless entry receiver).

Remote keyless entry receiver sends keyfob signal

- to BCM terminal 20
- from remote keyless entry receiver terminal 2.

The remote keyless entry system controls operation of the

- power door lock
- hazard and horn reminder

A

B

C

D

E

F

G

H

BL

J

K

L

M

REMOTE KEYLESS ENTRY SYSTEM

- auto door lock
- map lamp and ignition keyhole illumination
- panic alarm
- trunk lid opener
- keyless power window down (open)

OPERATION PROCEDURE

BCM can not receive signals (except keyless power window down signal) from keyfob when key switch is ON.

Power Door Lock Operation

BCM receives a LOCK signal from keyfob. BCM locks all doors with input of LOCK signal from keyfob. When an UNLOCK signal is sent from keyfob once, driver's door is unlocked. Then, if an UNLOCK signal is sent from keyfob again within 5 seconds, passenger door is unlocked.

Hazard and Horn Reminder

When the doors are locked or unlocked by keyfob, power is supplied to hazard warning lamp flashes as follows

- LOCK operation: C mode (flash twice) or S mode (flash twice)
- UNLOCK operation: C mode (flash once) or S mode (does not flash)

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

Operating function of hazard and horn reminder

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

Hazard and horn reminder does not operate if any of door switches is ON (any of doors is OPEN)

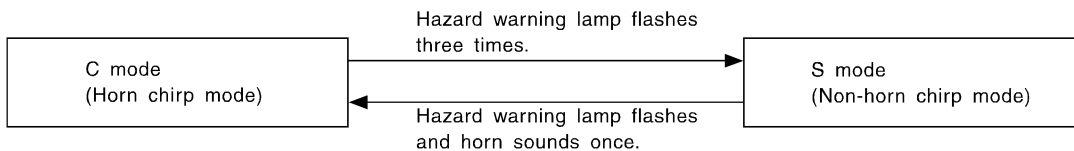
How to change hazard and horn reminder mode

Ⓟ With CONSULT-II

Hazard and horn reminder can be changed using "MULTI ANSWER BACK SET" in "WORK SUPPORT". Refer to [BL-58, "Work Support"](#).

⊗ Without CONSULT-II

When LOCK and UNLOCK signals are sent from the keyfob for more than 2 seconds at the same time, the hazard and horn reminder mode is changed as follows:



SEL153WA

REMOTE KEYLESS ENTRY SYSTEM

Auto Door Lock Operation

Auto door 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 keyfob:

- when door switch is turned ON.
- when the key switch is turned ON.
- when the lock signal is sent from keyfob.

Auto door lock mode can be changed using "AUTO LOCK SET" in "WORK SUPPORT".

Refer to [BL-58, "Work Support"](#).

Map Lamp and Keyhole Illumination Operation

When the following conditions come:

- position of map lamp switch is DOOR;
- door switches are OFF (all doors are closed);

Remote keyless entry system turns on interior lamp for 30 seconds with input of UNLOCK signal from keyfob.

For detailed description, refer to [LT-164, "INTERIOR ROOM LAMP"](#).

Panic Alarm Operation

When key switch is OFF (when ignition key is not inserted in key cylinder), BCM turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from keyfob.

The alarm automatically turns off after 25 seconds or when BCM receives any signal from keyfob.

Panic alarm operation mode can be changed using "PANIC ALARM SET" in "WORK SUPPORT".

Refer to [BL-58, "Work Support"](#).

For detailed description, refer to [BL-93, "VEHICLE SECURITY \(THEFT WARNING\) SYSTEM"](#).

Trunk Lid Opener Operation

When a TRUNK LID OPEN signal is sent with key switch OFF (key removed from ignition key cylinder) from keyfob, power is supplied to BCM terminal 68.

When power and ground are supplied, trunk lid opener actuator opens trunk lid.

Trunk lid opener operation mode can be changed using "TRUNK OPEN SET" in "WORK SUPPORT".

Refer to [BL-58, "Work Support"](#).

Keyless Power Window Down (Open) Operation

When keyfob unlock switch is turned ON with ignition switch OFF, and keyfob 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 keyfob unlock switch is pressed.

Keyless power window down operation mode can be changed using "PW DOWN SET" in "WORK SUPPORT".

Refer to [BL-58, "Work Support"](#).

CAN Communication System Description

AIS002MY

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

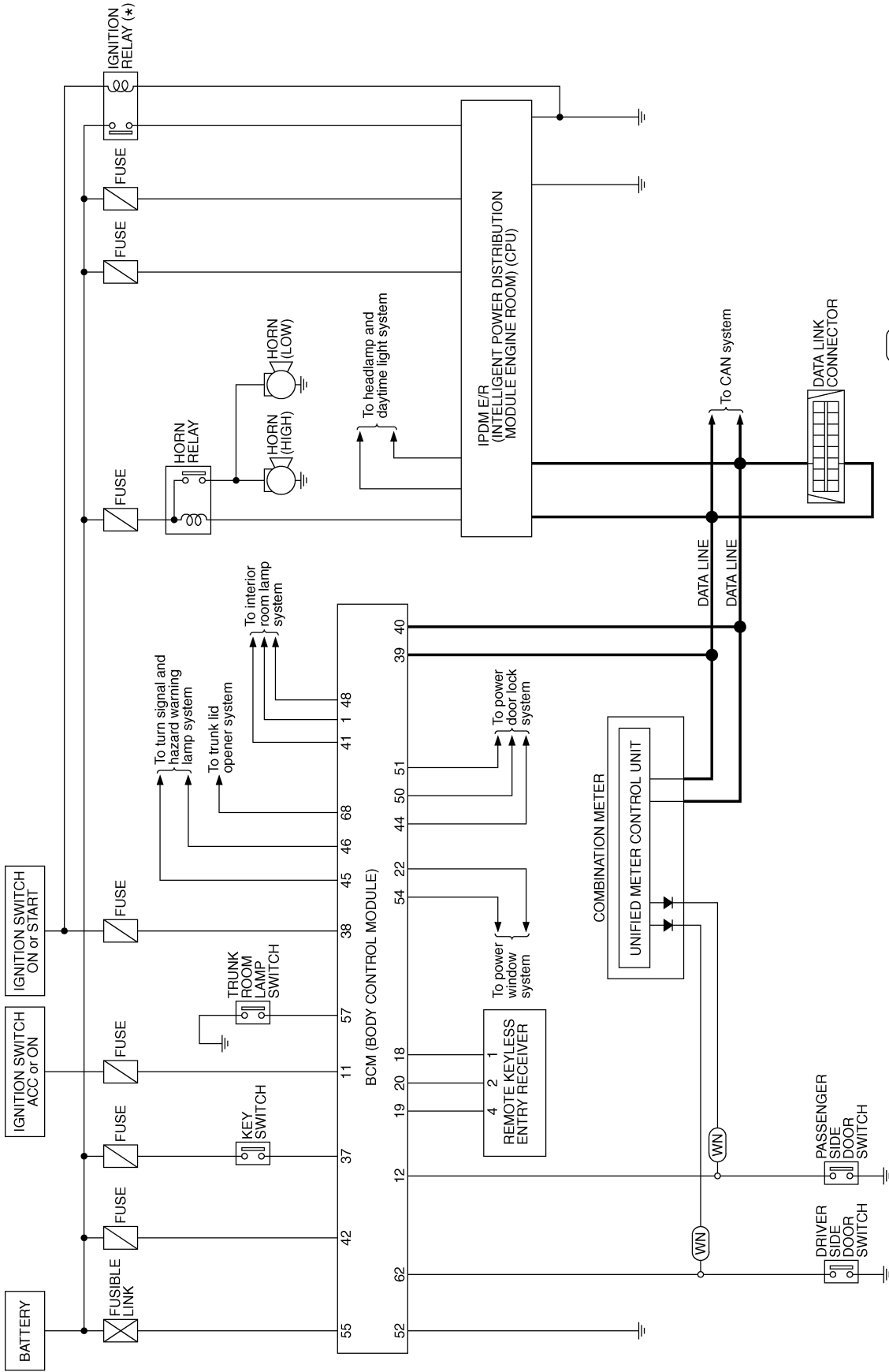
AIS002MZ

Refer to [LAN-4, "CAN Communication Unit"](#).

REMOTE KEYLESS ENTRY SYSTEM

Schematic

AIS001Y7



(WN) : With navigation system

* : This relay is built into the IPDM E/R (Intelligent power distribution module engine room).

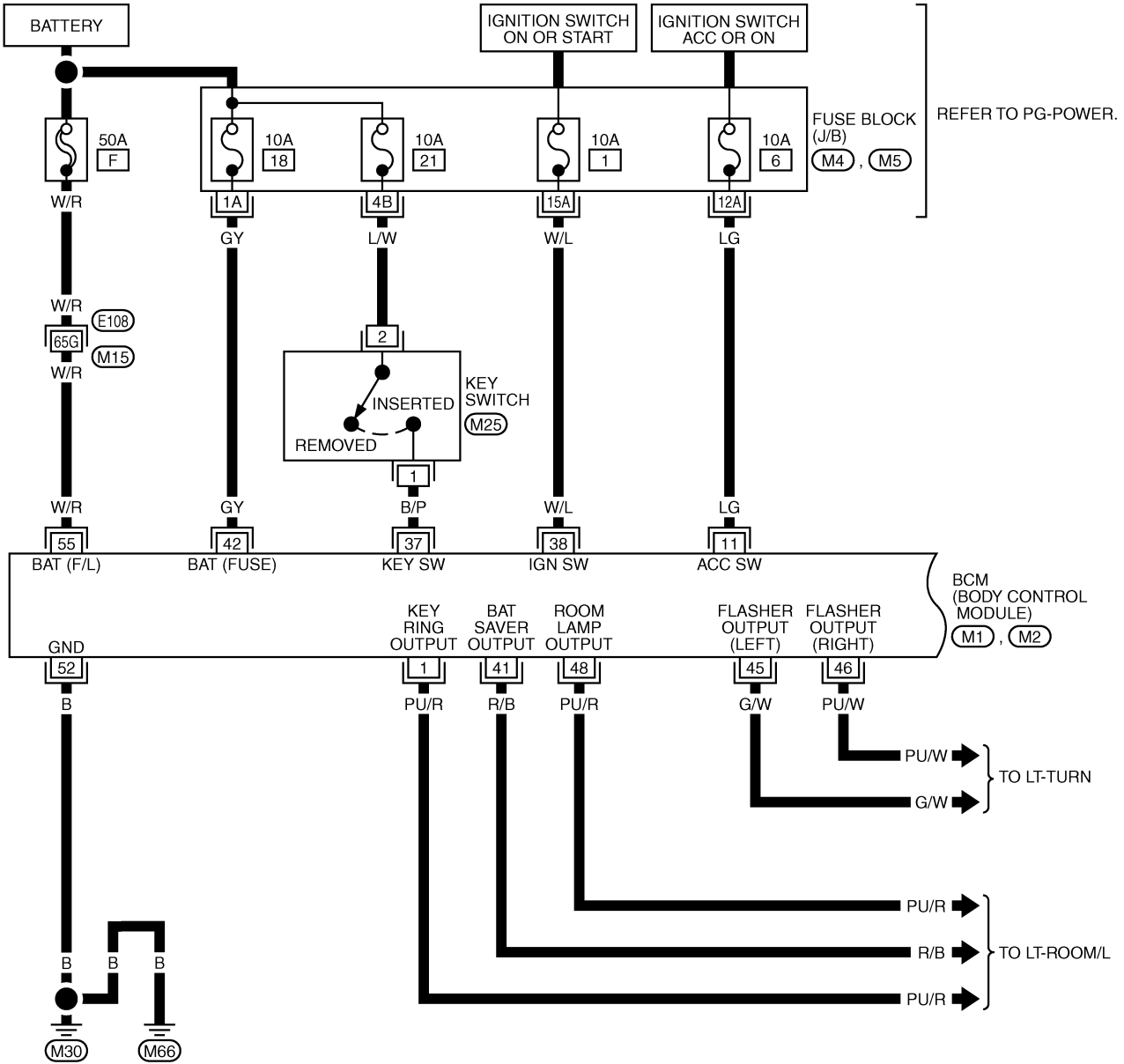
TIWM0453E

REMOTE KEYLESS ENTRY SYSTEM

Wiring Diagram — KEYLES—
FIG. 1

AIS001Y8

BL-KEYLES-01



REFER TO THE FOLLOWING.

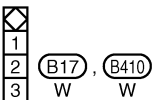
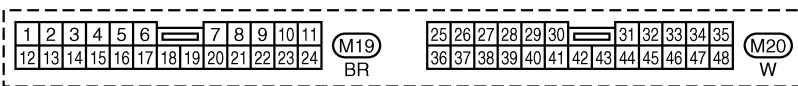
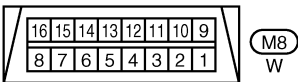
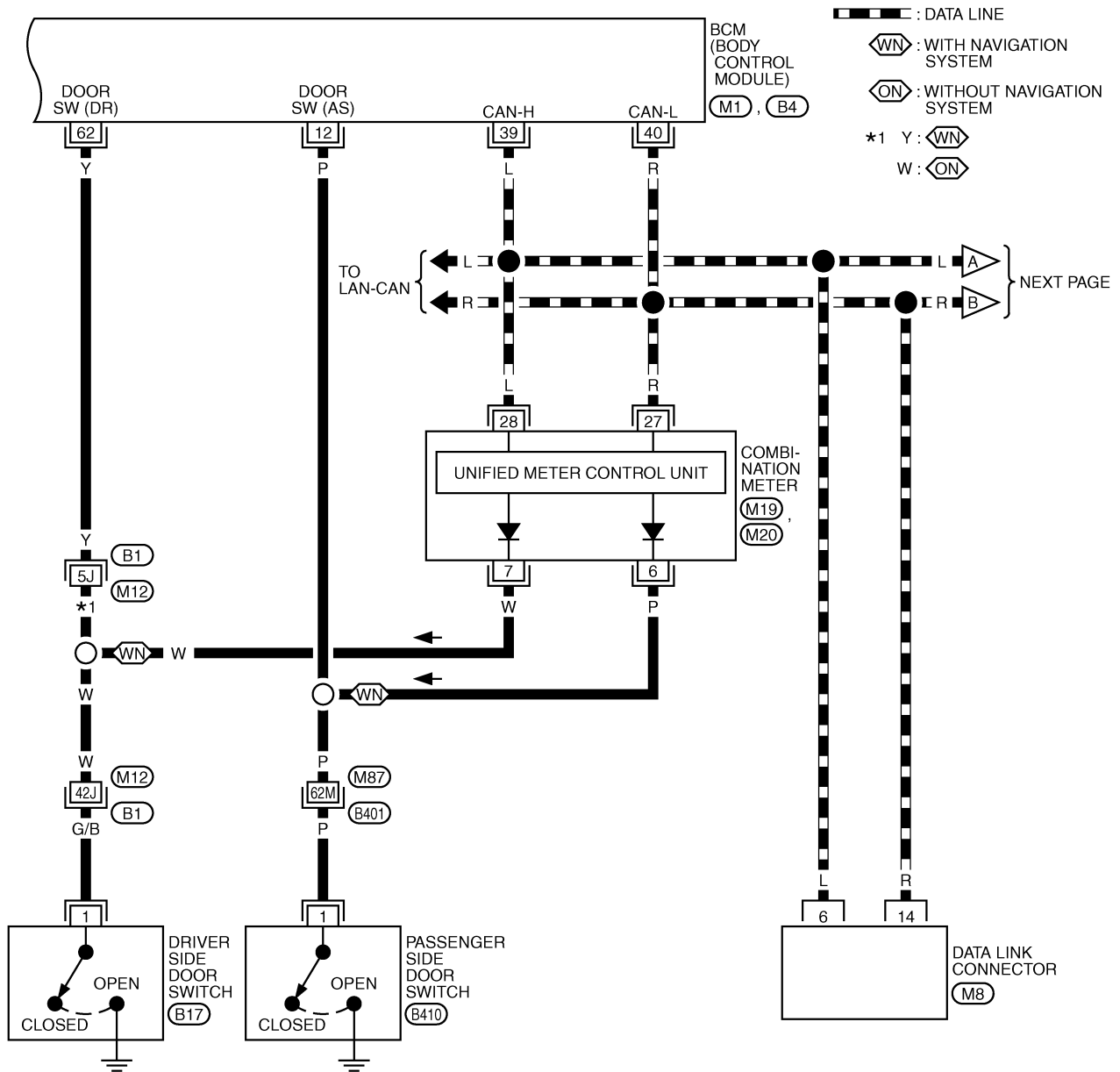
- E108 -SUPER MULTIPLE JUNCTION (SMJ)
- M4, M5 -FUSE BLOCK-JUNCTION BOX (J/B)
- M1, M2 -ELECTRICAL UNITS

TIWM0454E

REMOTE KEYLESS ENTRY SYSTEM

FIG. 3

BL-KEYLES-03

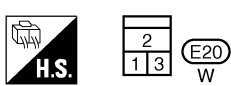
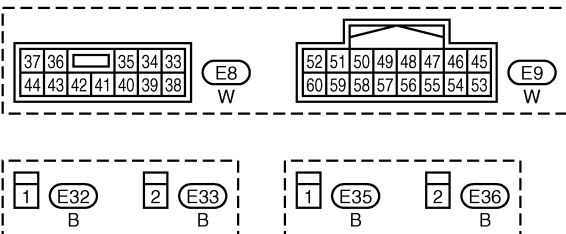
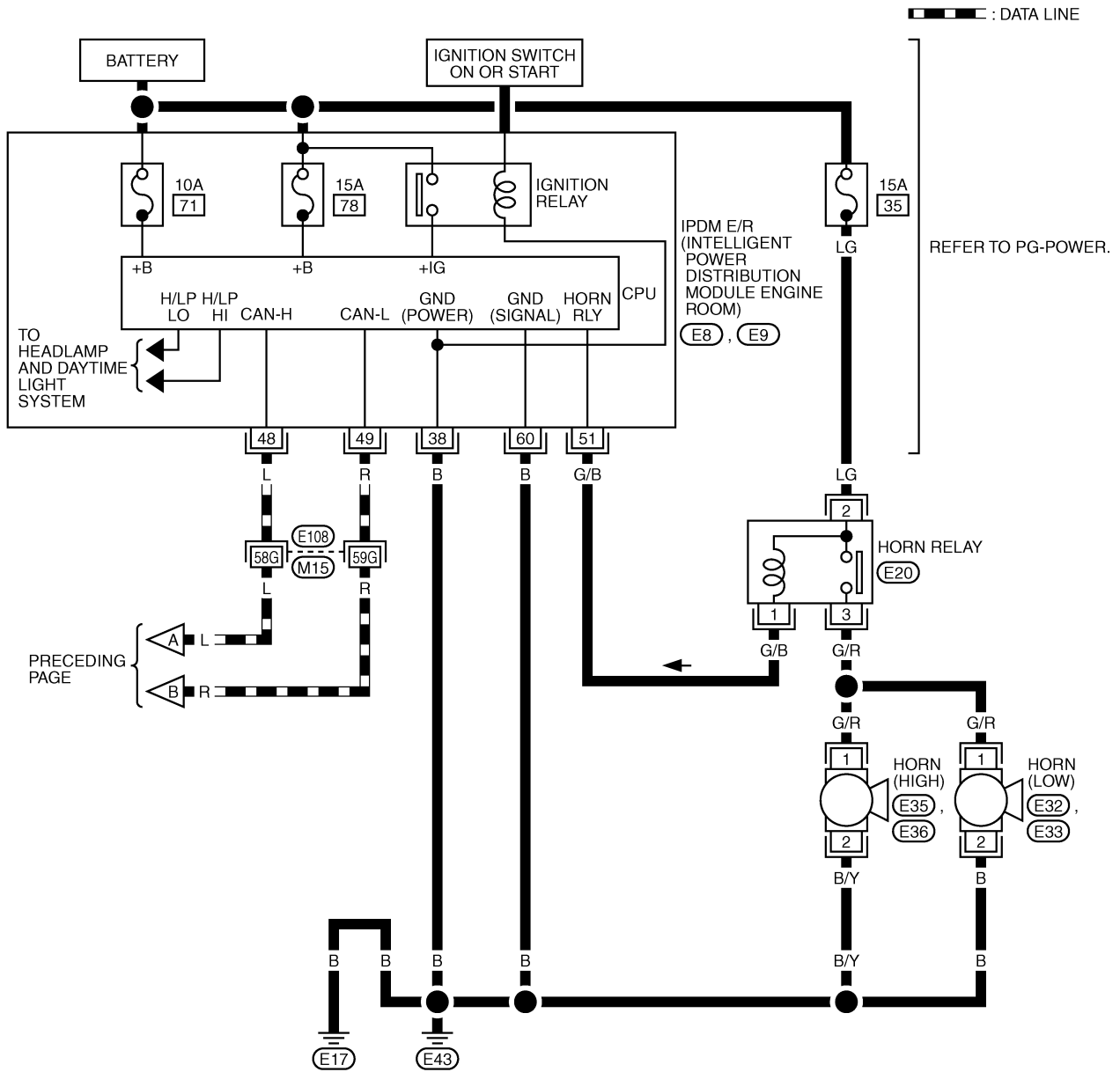


REFER TO THE FOLLOWING.
 (B1), (B401) -SUPER MULTIPLE JUNCTION (SMJ)
 (M1), (B4) -ELECTRICAL UNITS

REMOTE KEYLESS ENTRY SYSTEM

FIG. 4

BL-KEYLES-04

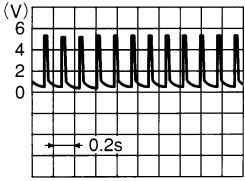
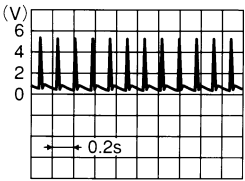
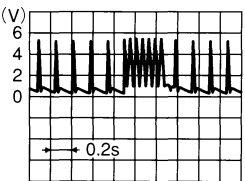
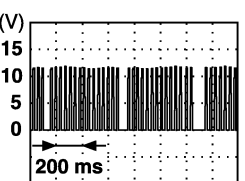
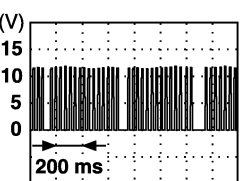


REFER TO THE FOLLOWING.
 (E108) -SUPER MULTIPLE JUNCTION (SMJ)

REMOTE KEYLESS ENTRY SYSTEM

Terminals and Reference Value for BCM

AIS001Y9

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
1	PU/R	Key ring illumination output signal	Key ring illumination is lighting.	Battery voltage
			Key ring illumination is being turned off.	0
11	LG	Ignition switch (ACC)	Ignition switch (ACC or ON position)	Battery voltage
12	P	Passenger side door switch	ON (door open) → OFF (door closed)	0 → 5
18	B	Remote keyless entry receiver (Ground)	—	0
19	Y	Remote keyless entry receiver (Power supply)	—	
			Stand-by	
20	L	Remote keyless entry receiver (Signal)	When remote keyless entry receiver receives signal from keyfob.	
			Ignition switch ON or power window timer operates	
22	Y	Power window switch (Serial link)	Ignition switch ON or power window timer operates	
37	B/P	Key switch	ON (Key inserted in ignition key cylinder) → OFF (Key removed from IGN key cylinder)	Battery voltage → 0
38	W/L	Ignition switch (ON)	Ignition switch (ON or START position)	Battery voltage
39	L	CAN – H	—	—
40	R	CAN – L	—	—
41	R/B	Battery saver output signal	30 minutes after ignition switch is turned to OFF	0
			Ignition switch is in ON position	Battery voltage
42	GY	Power source (Fuse)	—	Battery voltage
44	Y	Driver side door lock actuator (Unlock)	Door lock / unlock switch (Free → Unlock)	0 → Battery voltage
45	G/W	Left turn signal lamp	When door lock or unlock is operated using keyfob ^{*1} (OFF → ON)	0 → Battery voltage

REMOTE KEYLESS ENTRY SYSTEM

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
46	PU/W	Right turn signal lamp	When door lock or unlock is operated using keyfob* ¹ (OFF → ON)	0 → Battery voltage
48	PU/R	Room lamp output signal	Room lamp is lighting.* ²	0
			Room lamp is being turned off.* ²	Battery voltage
50	PU	Door lock actuators (Lock)	Door lock / unlock switch (Free → Lock)	0 → Battery voltage
51	W/L	Passenger side door lock actuator (Unlock)	Door lock / unlock switch (Free → Unlock)	0 → Battery voltage
52	B	Ground	—	0
54	W	Power window battery power supply	—	Battery voltage
55	W/R	Power source (Fusible link)	—	Battery voltage
57	R	Trunk room lamp switch	ON (trunk open) → OFF (trunk closed)	0 → Battery voltage
62	Y	Driver side door switch	ON (door open) → OFF (door closed)	0 → 5
68	G/W	Trunk lid opener actuator	Closed (OFF) → Opened (ON)	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

AIS001YA

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
38	B	Ground	—	0
48	L	CAN – H	—	—
49	R	CAN – L	—	—
51	G/B	Horn relay	When door lock is operated using keyfob* (OFF → ON)	Battery voltage → 0
60	B	Ground	—	0

*: In the state that horn reminder operates.

Terminals and Reference Value for Combination Meter

AIS002KJ

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE [V] (Approx.)
6*	P	Passenger side door switch	ON (door open) → OFF (door closed)	0 → 5
7*	W	Driver side door switch	ON (door open) → OFF (door closed)	0 → 5
27	R	CAN – L	—	—
28	L	CAN – H	—	—

*: with navigation system

REMOTE KEYLESS ENTRY SYSTEM

AIS0065R

CONSULT-II Function

The following functions are executed by combining data received and command transmitted via the communication line from the BCM.

BCM diagnosis position	Inspection items and diagnosis mode	Description	
BCM C/U*1	Self-diagnosis results	Carries out the self-diagnosis.	
	Data monitor	CAN diagnosis support monitor	Displays CAN communication system diagnosis, disabled transmission status, and communication status of each unit communicated with BCM.
		Selection from menu	Displays the input data to BCM on real-time basis.
IPDM E/R*2	Self-diagnosis results	Carries out the self-diagnosis.	
	Data monitor	Displays the input data to IPDM E/R on real-time basis.	
	Active test	Gives a drive to a load to check the operation.	
MULTI REMOTE ENT	Data monitor	Displays the input remote keyless entry system data to BCM on real-time basis.	
	Active test	Gives a drive to a load to check the operation.	
	Work support	Changes the setting for each function.	

*1 : Refer to [BCS-12, "CONSULT-II"](#) .

*2 : Refer to [PG-19, "CONSULT-II"](#) .

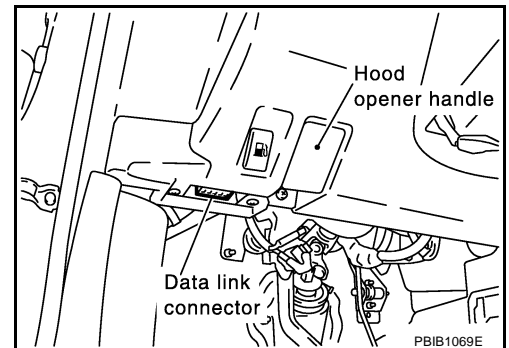
CONSULT-II INSPECTION PROCEDURE FOR "MULTI REMOTE ENT"

CAUTION:

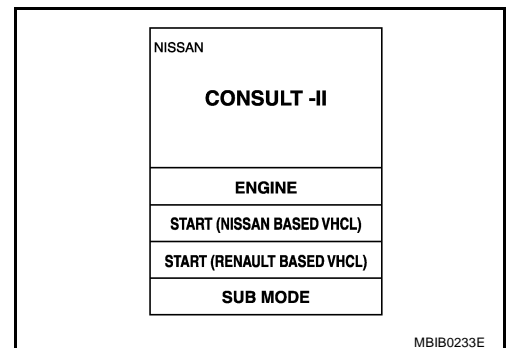
If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

"MULTI REMOTE ENT"

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

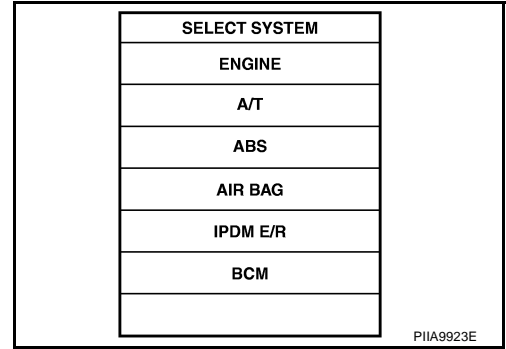


3. Turn ignition switch "ON".
4. Touch "START(NISSAN BASED VHCL)".

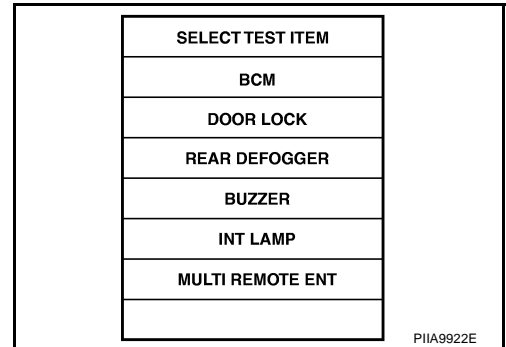


REMOTE KEYLESS ENTRY SYSTEM

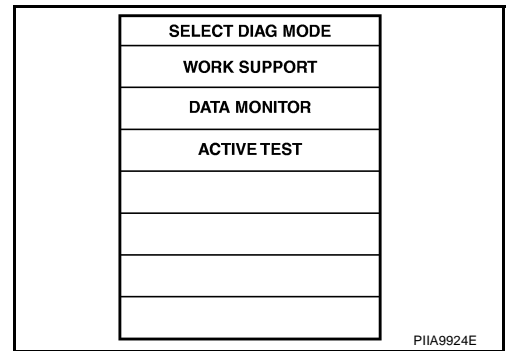
5. Touch "BCM".
If "BCM" is not indicated, go to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



6. Touch "MULTI REMOTE ENT".



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



Work Support

Test Item	Description
REMO CONT ID REGIST	Keyfob ID code can be registered.
REMO CONT ID ERASER	Keyfob ID code can be erased.
REMO CONT ID CONFIR	It can be checked whether keyfob ID code is registered or not in this mode.
HORN CHIRP SET*	Horn reminder mode can be changed in this mode. The horn reminder mode will be changed when "CHANGE SETT" on CONSULT-II screen is touched.
HAZARD LAMP SET*	Hazard reminder mode can be changed in this mode. The hazard reminder mode will be changed when "CHANGE SETT" on CONSULT-II screen is touched.
MULTI ANSWER BACK SET	Hazard and horn reminder mode can be changed in this mode. The 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 "CHANE SETT" on CONSULT-II screen is touched.
PW DOWN SET	Keyless power window down (open) operation mode can be changed in this mode. The operation mode will be changed when "CHANGE SETT" on CONSULT-II screen is touched.

*: Perform this mode always in the state of C mode. Refer to [BL-48, "Hazard and Horn Reminder"](#).

REMOTE KEYLESS ENTRY SYSTEM

HORN CHIRP SET*

Horn chirp function	ON	OFF
---------------------	----	-----

*: Perform this mode always in the state of C mode. Refer to [BL-48, "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-48, "Hazard and Horn Reminder"](#) .

MULTI ANSWER BACK SET

	MODE 1 (C mode)		MODE 2 (S mode)	
Keyfob 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
Keyfob operation	0.5 seconds	Nothing	1.5 seconds

TRUNK OPEN SET

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

PW DOWN SET

	MODE 1	MODE 2	MODE 3
Keyfob 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 keyfob.
KEYLWSS UNLOCK	Indicates [ON/OFF] condition of unlock signal from keyfob.
KEYLESS PANIC	Indicates [ON/OFF] condition of panic signal from keyfob.
KEYLESS TRUNK	Indicates [ON/OFF] condition of trunk open signal from keyfob.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch driver side.
DOOR SW-AS	Indicates [ON/OFF] condition of door switch passenger side.
DOOR SW-RR	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of 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 keyfob.

REMOTE KEYLESS ENTRY SYSTEM

Monitored Item	Description
RKE KEEP UNLK	Indicates [ON/OFF] condition of unlock continuousness signal from keyfob.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock 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 all door lock actuators operation. There are four items, "ALL LOCK", "ALL UNLOCK", "DR UNLOCK", and "OTHER UNLOCK", on CONSULT-II screen. <ul style="list-style-type: none"> ● When "ALL LOCK" is touched, all door lock actuators lock. ● When "ALL UNLOCK" is touched, all door lock actuators unlock. ● When "DR UNLOCK" is touched, driver door lock actuator unlock. ● When "OTHER UNLOCK" is touched, all door lock actuator (except driver side door lock actuator) unlock.
TRUNK/BACK DOOR	This is displayed even when it is not equipped.

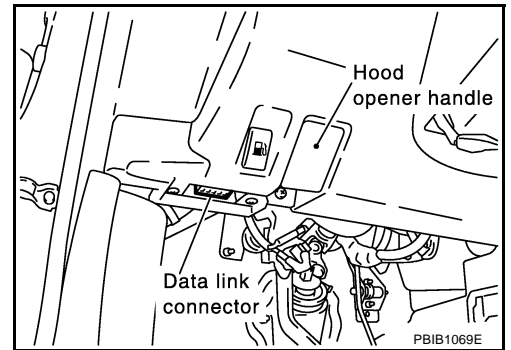
CONSULT-II INSPECTION PROCEDURE FOR "IPDM E/R"

CAUTION:

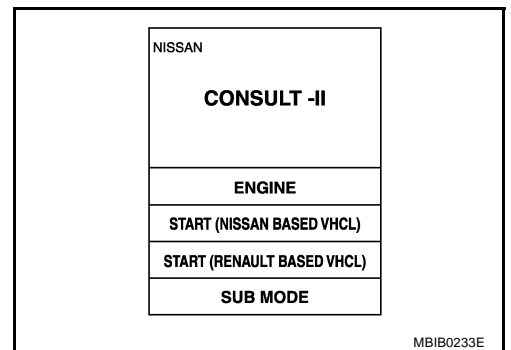
If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

"IPDM E/R"

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

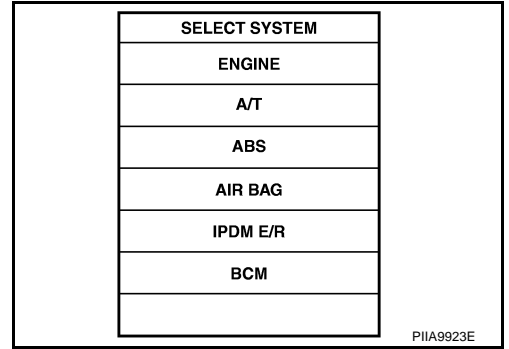


3. Turn ignition switch "ON".
4. Touch "START(NISSAN BASED VHCL)".

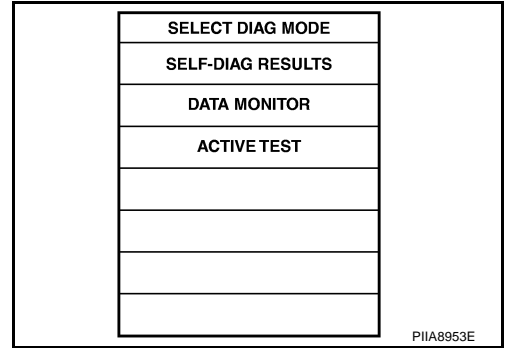


REMOTE KEYLESS ENTRY SYSTEM

5. Touch "IPDM E/R".
If "IPDM E/R" is not indicated, go to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#) .



6. Select diagnosis mode.
"SELF-DIAG RESULTS", "DATA MONITOR" and "ACTIVE TEST" are available.



Data Monitor

Monitored Item	Description
HORN CHIRP	Indicates [ON/OFF] condition of horn function by IPDM E/R.

Active Test

Test Item	Description
HORN	This test is able to check horn operation. Horn activates when "ON" on CONSULT-II screen is touched.

Work Flow

AIS001YE

1. Check the trouble symptom and customer's requests.
2. Understand outline of system. Refer to [BL-47, "System Description"](#) .
3. Confirm that power door lock system operates normally.
Refer to [BL-20, "POWER DOOR LOCK SYSTEM"](#) .
4. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts.
Refer to [BL-62, "Trouble Diagnosis Chart by Symptom"](#) .
5. Inspection end.

REMOTE KEYLESS ENTRY SYSTEM

AIS001YF

Trouble Diagnosis Chart by Symptom

NOTE:

- Always check the "Work Flow" before troubleshooting. Refer to [BL-61, "Work Flow"](#)
- Always check keyfob battery before replacing keyfob.

Symptom	Diagnoses/service procedure	Reference page
All function of remote keyless entry system do not operate.	1. Check keyfob battery and function.	BL-63
	2. Replace keyfob. Refer to ID Code Entry Procedure. NOTE: If the result of keyfob function check with CONSULT-II is OK, keyfob is not malfunctioning.	BL-75
	3. Replace BCM.	BCS-15
The new ID of keyfob cannot be entered without CONSULT-II.	1. Check Keyfob battery and function.	BL-63
	2. Check key switch.	BL-69
	3. Check door switch.	BL-65 *1 BL-67 *2
	4. Check ACC power supply.	BL-64
	5. Replace keyfob. Refer to ID Code Entry Procedure. NOTE: If the result of keyfob function check with CONSULT-II is OK, keyfob is not malfunctioning.	BL-75
	6. Replace BCM.	BCS-15
Door lock or unlock does not function with keyfob. (Power door lock system is "OK".)	1. Check keyfob battery and function.	BL-63
	2. Replace keyfob. Refer to ID Code Entry Procedure. NOTE: If the result of keyfob function check with CONSULT-II is OK, keyfob is not malfunctioning.	BL-75
	3. Replace BCM.	BCS-15
Trunk does not open when trunk opener button is continuously pressed with keyfob.	1. Check trunk open operation mode.* *: Trunk open operation can be changed. First check the trunk open operation setting.	BL-58
	2. Check keyfob battery and function.	BL-63
	3. Check trunk lid function.	BL-73
	4. Check key switch.	BL-69
	5. Replace keyfob. Refer to ID Code Entry Procedure. NOTE: If the result of keyfob function check with CONSULT-II is OK, keyfob is not malfunctioning.	BL-75
	6. Replace BCM.	BCS-15
Hazard and horn reminder does not activate properly when pressing lock or unlock button of keyfob.	1. Check hazard and horn reminder mode.* *: Hazard and horn reminder can be changed. First check the hazard and horn reminder setting.	BL-58
	2. Check door switch.	BL-65 *1 BL-67 *2
	3. Replace BCM.	BCS-15
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob. (Horn reminder is "OK".)	1. Check hazard reminder mode.* *: Hazard reminder can be changed. First check the hazard reminder setting.	BL-58
	2. Check hazard function.	BL-73
	3. Replace BCM.	BCS-15

REMOTE KEYLESS ENTRY SYSTEM

Symptom	Diagnoses/service procedure	Reference page
Horn reminder does not activate properly when pressing lock button of keyfob. (Hazard reminder is "OK".)	1. Check horn reminder mode.* *: Horn reminder can be changed. First check the horn chirp setting.	BL-58
	2. Check horn function.	BL-73
	3. Check IPDM E/R operation.	BL-70
	4. Replace BCM.	BCS-15
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Check panic alarm mode.* *: Panic alarm can be changed. First check the Panic alarm setting.	BL-58
	2. Check keyfob battery and function.	BL-63
	3. Check headlamp function.	BL-73
	4. Check horn function.	BL-73
	5. Check IPDM E/R operation.	BL-70
	6. Check key switch.	BL-69
	7. Replace keyfob. Refer to ID Code Entry Procedure. NOTE: If the result of keyfob function check with CONSULT-II is OK, keyfob is not malfunctioning.	BL-75
	8. Replace BCM.	BCS-15
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 can be changed. First check the auto door lock operation setting.	BL-58
	2. Replace BCM.	BCS-15
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 can be changed. First check the power window down setting.	BL-58
	2. Check power window function.	GW-17
	3. Replace BCM.	BCS-15
Map lamp and ignition keyhole illumination operation does not activate properly.	1. Check map lamp and ignition keyhole illumination function.	BL-74
	2. Check door switch.	BL-65 ^{*1} BL-67 ^{*2}
	3. Replace BCM.	BCS-15

*1: With navigation system

*2: Without navigation system

Check Keyfob Battery and Function

AIS001YG

1. CHECK KEYFOB BATTERY

1. Remove keyfob battery. Refer to [BL-78, "Keyfob Battery Replacement"](#).
2. Measure voltage between battery positive and negative terminals.

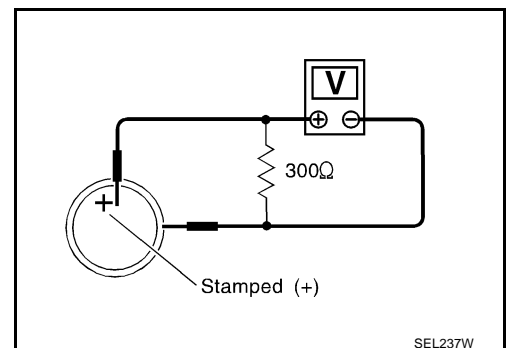
Voltage : 2.5V – 3.0V

NOTE:

Keyfob does not function if battery is not set correctly.

OK or NG

- OK >> GO TO 2
NG >> Replace battery.



REMOTE KEYLESS ENTRY SYSTEM

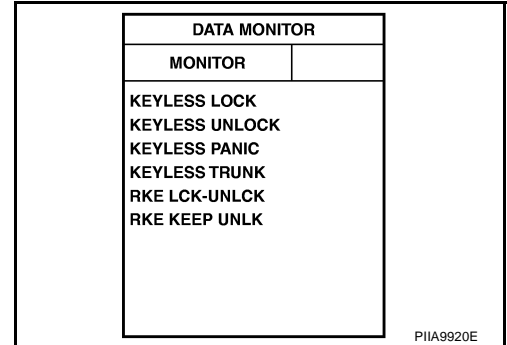
2. CHECK KEYFOB FUNCTION

With CONSULT-II

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

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

Condition	Monitor item
Pushing LOCK	KEYLESS LOCK : ON
Pushing UNLOCK	KEYLESS UNLOCK : ON
Keep pushing UNLOCK	RKE KEEP UNLK : ON* *: RKEKEEP UNLK turns to ON three seconds after UNLOCK button keeps pushing.
Pushing TRUNK	KEYLESS TRUNK : ON
Pushing PANIC	KEYLESS PANIC : ON
Pushing LOCK and UNLOCK at the same time	RKE LCK-UNLCK : ON



OK or NG

- OK >> Keyfob is OK.
- NG >> Replace keyfob.

Check ACC Power Supply

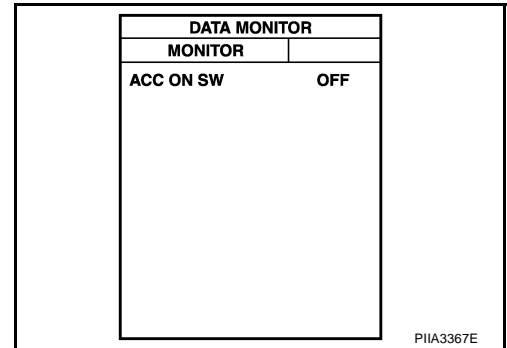
1. CHECK ACC SWITCH

AIS001YH

With CONSULT-II

Check ACC switch ("ACC ON SW") in "DATA MONITOR" mode with CONSULT-II.

Monitor item	Condition
ACC ON SW	Ignition switch position is ACC or ON : ON
	Ignition switch position is OFF : OFF



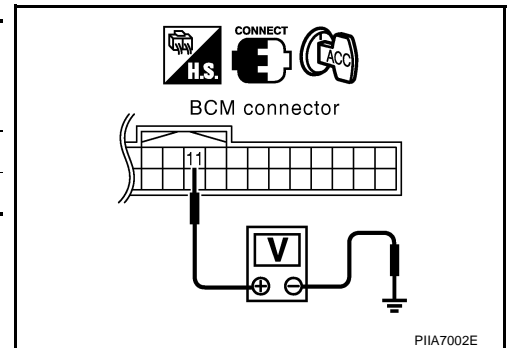
Without CONSULT-II

Check voltage between BCM connector and ground.

Item	Connector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
		(+)	(-)		
BCM	M1	11 (LG)	Ground	ACC or ON	Battery voltage
				OFF	0

OK or NG

- OK >> ACC power supply 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.



REMOTE KEYLESS ENTRY SYSTEM

AIS00203

Check Door Switch (With Navigation System)

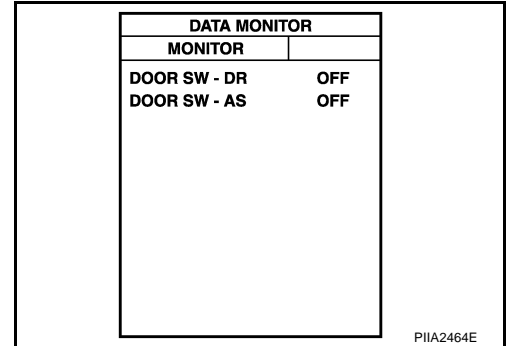
First perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, then perform the each trouble diagnosis of malfunction system indicated "SELF-DIAG RESULTS" of "BCM", Refer to [BCS-12. "CONSULT-II"](#).

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-II.

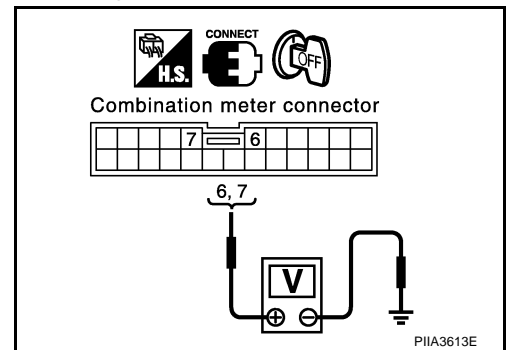
Monitor item	Condition
DOOR SW-DR	CLOSE → OPEN : OFF → ON
DOOR SW-AS	



Without CONSULT-II

Check voltage between combination meter connector M19 terminals 7, 6 and ground.

Item	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
	(+)	(-)		
Driver side door switch	7 (W)	Ground	CLOSE	5
Passenger side door switch	6 (P)		OPEN	0



OK or NG

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

2. CHECK DOOR SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect door switch and combination meter connector.
- Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and combination meter connector M19 terminals 7, 6.

Driver side door

1 (G/B) – 7 (W) : Continuity should exist.

Passenger side door

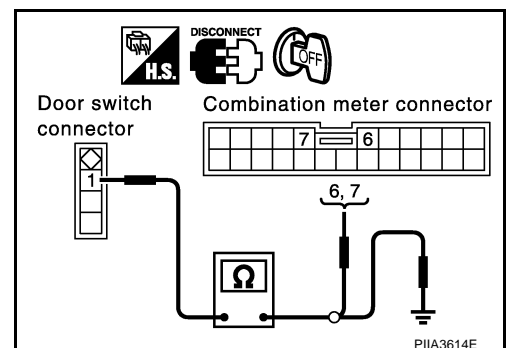
1 (P) – 6 (P) : Continuity should exist.

- Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and ground.

1 (G/B or P) – Ground : Continuity should not exist.

OK or NG

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



REMOTE KEYLESS ENTRY SYSTEM

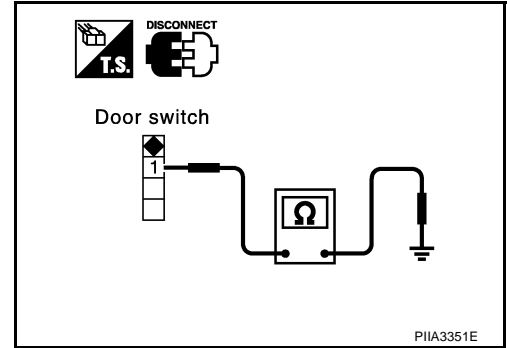
3. CHECK DOOR SWITCH

Check continuity between door switch B17 (driver side) or B410 (passenger side) terminal 1 and ground part of door switch.

Terminal	Door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

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



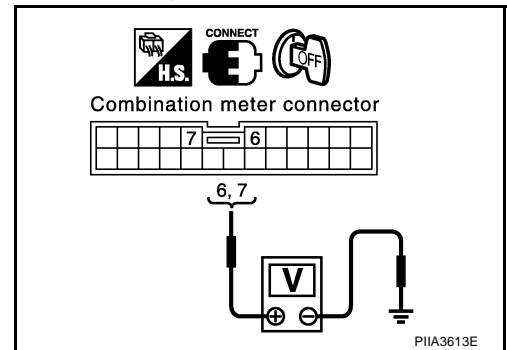
4. CHECK COMBINATION METER OUTPUT SIGNAL

1. Connect combination meter connector.
2. Check voltage between combination meter connector M19 terminals 6, 7 and ground.

6 (P) – Ground : Approx. 5
7 (W) – Ground : Approx. 5

OK or NG

- OK >> Check harness connection.
- NG >> Replace combination meter.



REMOTE KEYLESS ENTRY SYSTEM

Check Door Switch (Without Navigation System)

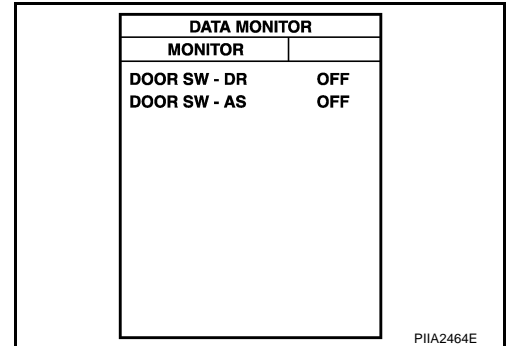
AIS00204

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-II.

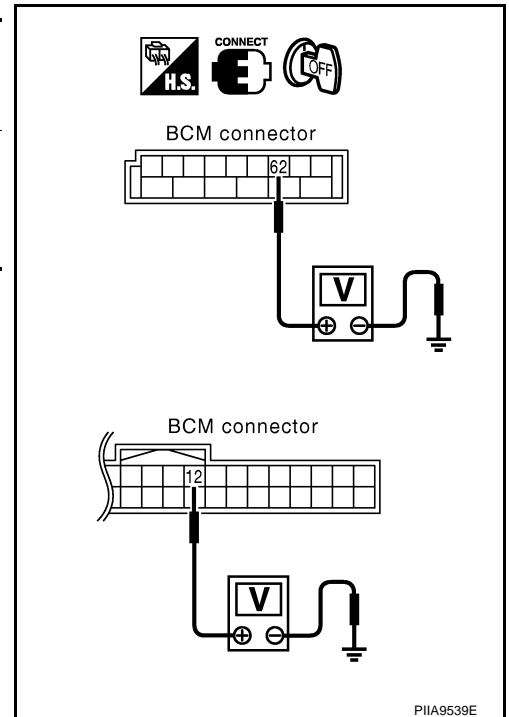
Monitor item	Condition
DOOR SW-DR	CLOSE → OPEN : OFF → ON
DOOR SW-AS	



Without CONSULT-II

Check voltage between BCM connectors B4 (driver side), M1 (passenger side) terminals 62, 12 and ground.

Item	Connectors	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
		(+)	(-)		
Driver side door switch	B4	62 (Y)	Ground	CLOSE	5
Passenger side door switch	M1	12 (P)		OPEN	0



OK or NG

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

REMOTE KEYLESS ENTRY SYSTEM

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM connector.
3. Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and BCM connector B4, M1 terminals 62, 12.

Driver side door

1 (G/B) – 62 (Y) : Continuity should exist.

Passenger side door

1 (P) – 12 (P) : Continuity should exist.

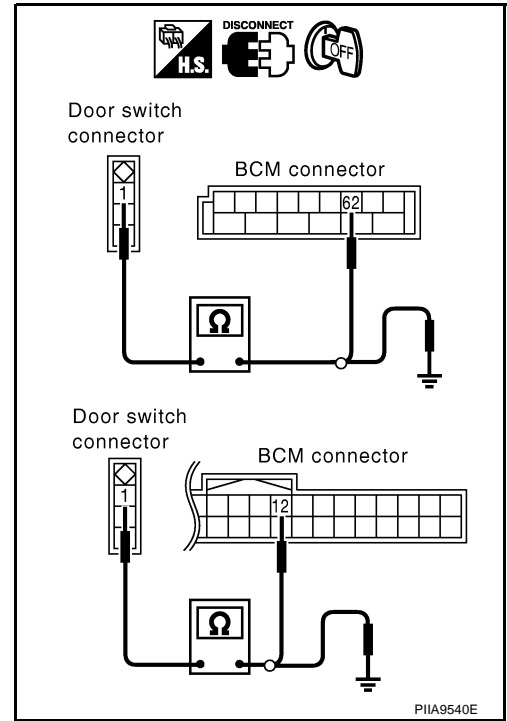
4. Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and ground.

1 (G/B or P) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

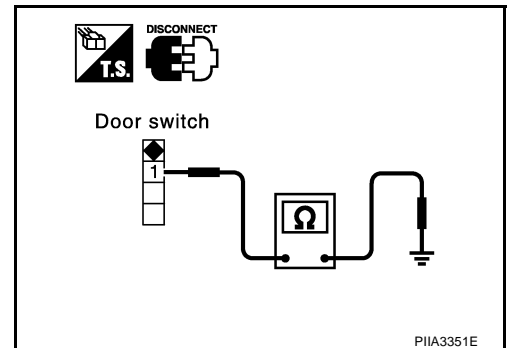
Check continuity between door switch B17 (driver side) or B410 (passenger side) terminal 1 and ground part of door switch.

Terminal	Door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

OK >> GO TO 4.

NG >> Replace door switch.



REMOTE KEYLESS ENTRY SYSTEM

4. CHECK DOOR SWITCH INPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connectors B4 (driver side), M1 (passenger side) terminals 62, 12 and ground.

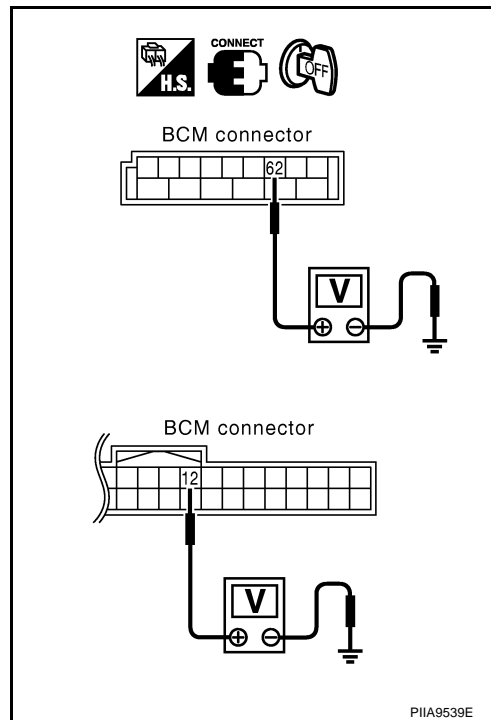
62 (Y) – Ground : Approx. 5V

12 (P) – Ground : Approx. 5V

OK or NG

OK >> Check harness connection.

NG >> Replace BCM.



Check Key Switch

1. CHECK KEY SWITCH INPUT SIGNAL

Ⓜ With CONSULT-II

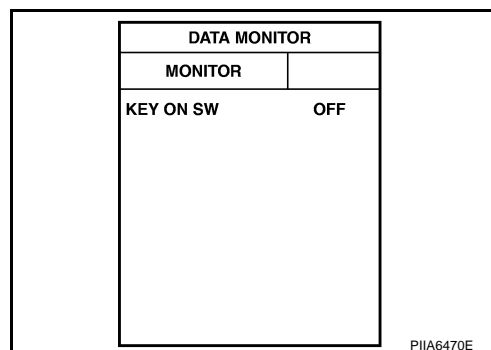
Check ignition key cylinder “KEY ON SW” in “DATE MONITOR” mode with CONSULT-II

- 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

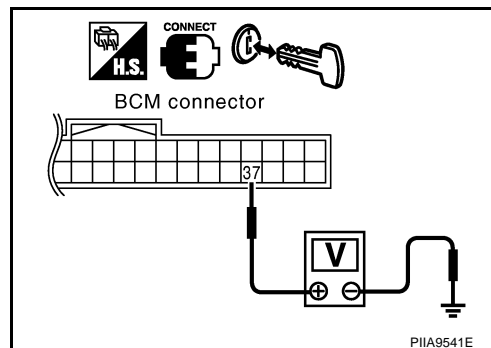
Check voltage between BCM connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage [V] (Approx.)
	(+)	(-)		
M1	37 (B/P)	Ground	Key is inserted	Battery voltage
			Key is removed	0

OK or NG

OK >> Key switch circuit is OK.

NG >> GO TO 2.



REMOTE KEYLESS ENTRY SYSTEM

2. CHECK KEY SWITCH

1. Disconnect key switch connector.
2. Check continuity between key switch terminals 1 and 2.

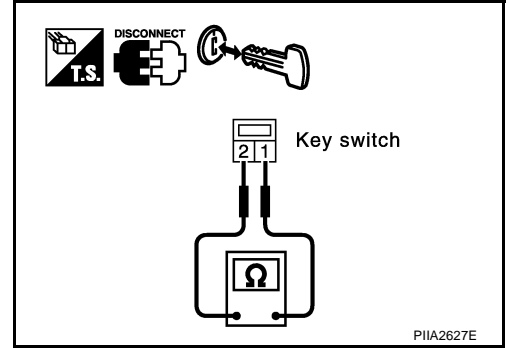
Connector	Terminals		Condition	Continuity
M25	1	2	Key is inserted	Yes
			Key is removed	No

OK or NG

OK >> Check the following.

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

NG >> Replace key switch.



IPDM E/R Operation Check

1. CHECK IPDM E/R OPERATION

With CONSULT-II

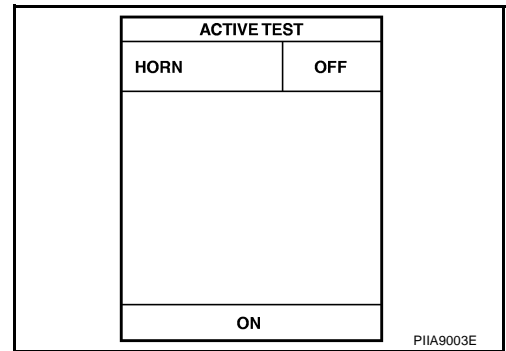
Check IPDM E/R "HORN" in "ACTIVE TEST" mode with CONSULT-II.

When "ACTIVE TEST" is performed, does horn chirp?

YES or NO

YES >> IPDM E/R is OK.

NO >> GO TO 2.



2. CHECK IPDM E/R INPUT VOLTAGE

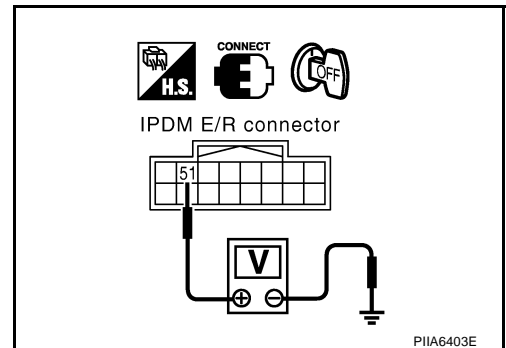
Check voltage between IPDM E/R connector E9 terminal 51 and ground.

51 (G/B) – Ground : Battery voltage

OK or NG

OK >> Replace IPDM E/R.

NG >> GO TO 3.



REMOTE KEYLESS ENTRY SYSTEM

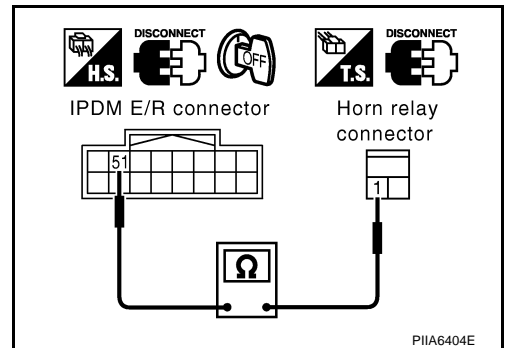
3. CHECK IPDM E/R HARNESS

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay connector.
3. Check continuity between IPDM E/R connector E9 terminal 51 and horn relay connector E20 terminal 1.

51 (G/B) - 1(G/B) : Continuity should exist.

OK or NG

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



PIIA6404E

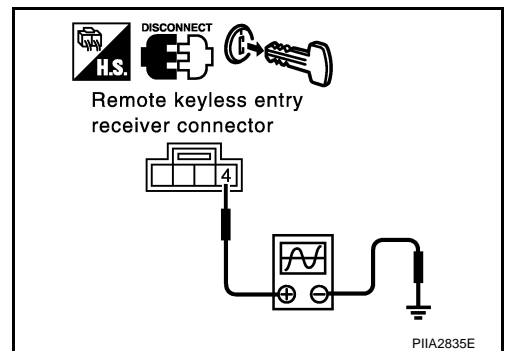
AIS004HW

Remote Keyless Receiver Check

1. CHECK MULTI-REMOTE CONTROL RECEIVER INPUT VOLTAGE

1. Remove key from ignition key cylinder.
2. Check signal between remote keyless receiver connector and ground with oscilloscope.

Connector	Terminal (Wire color)		Signal (Reference value)
	(+)	(-)	
M89	4 (Y)	Ground	<p>OCC3881D</p>



PIIA2835E

OK or NG

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

2. CHECK REMOTE KEYLESS RECEIVER HARNESS

1. Turn ignition switch OFF.
2. Disconnect remote keyless receiver and BCM connector.
3. Check continuity between remote keyless receiver connector M89 terminal 4 and BCM connector M1 terminal 19.

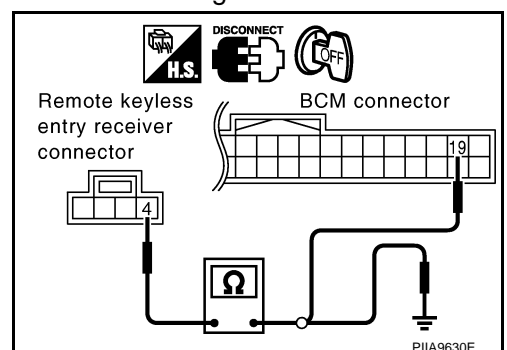
4 (Y) - 19 (Y) : Continuity should exist.

4. Check continuity between remote keyless receiver connector M89 terminal 4 and ground.

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

OK or NG

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



PIIA9630E

REMOTE KEYLESS ENTRY SYSTEM

3. CHECK REMOTE KEYLESS RECEIVER

1. Turn ignition switch OFF.
2. Disconnect remote keyless receiver and BCM connector.
3. Check continuity between remote keyless receiver connector M89 terminal 1 and BCM connector M1 terminal 18.

1 (B) - 18 (B) : Continuity should exist.

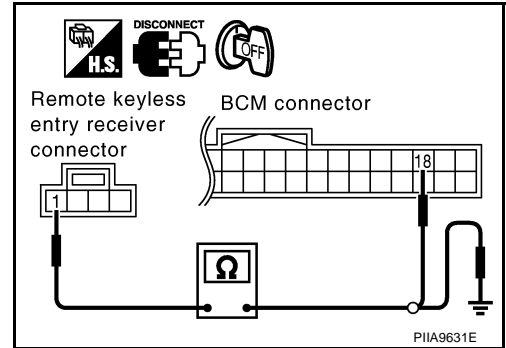
4. Check continuity between remote keyless receiver connector M89 terminal 1 and ground.

1 (B) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

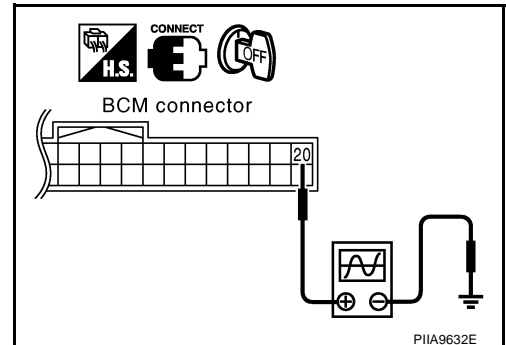
NG >> Repair or replace the harness.



4. CHECK REMOTE KEYLESS RECEIVER OUTPUT SIGNAL

1. Connect remote keyless receiver connector.
2. Check signal BCM connector and ground with oscilloscope.

Connector	Terminal (Wire color)		Signal (Reference value)
	(+)	(-)	
M1	20 (L)	Ground	<p>OCC3879D</p>



OK or NG

OK >> Replace BCM.

NG >> GO TO 5.

REMOTE KEYLESS ENTRY SYSTEM

5. CHECK REMOTE KEYLESS RECEIVER HARNESS

1. Disconnect remote keyless receiver and BCM connector.
2. Check continuity between remote keyless receiver connector M89 terminal 2 and BCM connector M3 terminal 20.

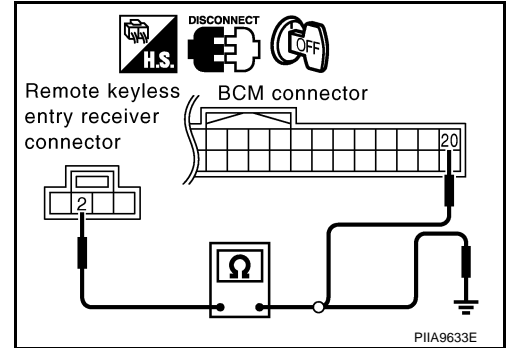
2 (L) - 20 (L) : Continuity should exist.

3. Check continuity between remote keyless receiver connector M89 terminal 2 and ground.

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

OK or NG

- OK >> Replace remote keyless receiver.
NG >> Repair or replace the harness.



AIS0029B

Check Trunk Lid Function

1. CHECK TRUNK LID OPENER FUNCTION

Does trunk lid release with trunk lid opener switch?

NOTE:

First check trunk lid opener cancel switch position.

YES or NO

- YES >> Trunk lid opener actuator circuit is OK.
NO >> Check trunk lid opener actuator and the circuit. Refer to [BL-91, "TRUNK LID OPENER"](#).

Check Hazard Function

1. CHECK HAZARD WARNING LAMP FUNCTION

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-107, "TURN SIGNAL AND HAZARD WARNING LAMPS"](#).

Check Horn Function

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-12, "CONSULT-II"](#).

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-40, "HORN"](#).

Check Headlamp Function

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-12, "CONSULT-II"](#).

REMOTE KEYLESS ENTRY SYSTEM

1. CHECK HEADLAMP FUNCTION

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-7, "HEADLAMP \(FOR USA\)"](#) or [LT-38, "HEADLAMP \(FOR CANADA\) - DAYTIME LIGHT SYSTEM -"](#) .

Check Map Lamp and Ignition Keyhole Illumination Function

AIS001YN

1. CHECK MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

When interior lamp switch is in "DOOR" position, open the door (driver side or passenger side).

Map lamp and ignition keyhole illumination should illuminate.

OK or NG

OK >> Map lamp and ignition keyhole illumination circuit is OK.

NG >> Check illumination circuit. Refer to [LT-164, "INTERIOR ROOM LAMP"](#) .

REMOTE KEYLESS ENTRY SYSTEM

AIS001YO

ID Code Entry Procedure KEYFOB ID SETUP WITH CONSULT-II

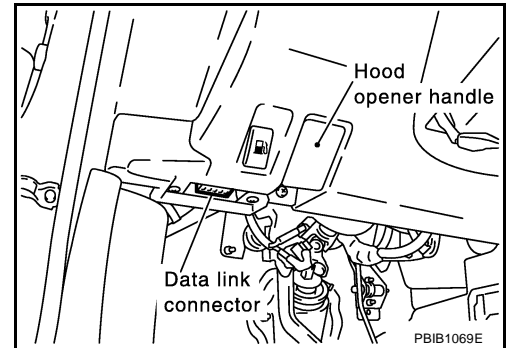
CAUTION:

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.

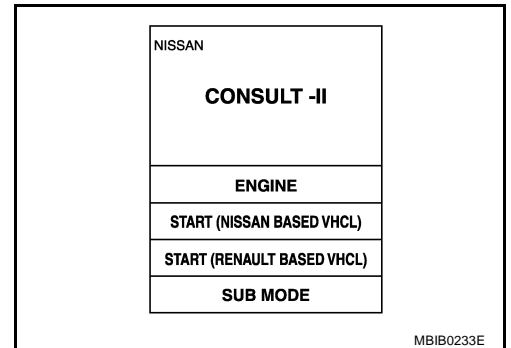
NOTE:

- If a keyfob is lost, the ID code of the lost keyfob must be erased to prevent unauthorized use. When the ID code of a lost keyfob is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new key fobs must be re-registered.
- When registering an additional keyfob, the existing ID codes in memory may or may not be erased. If five ID codes are stored in memory, when an additional code is registered, only the oldest code is erased. If less than five ID codes are stored in memory, when an additional ID code is registered, the new ID code is added and no ID codes are erased.
- 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.

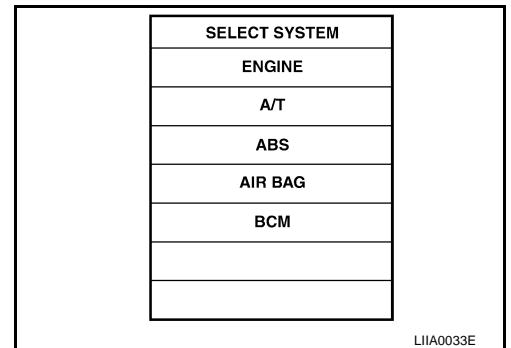
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" and "CONSULT-II CONVERTER" to the data link connector.



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



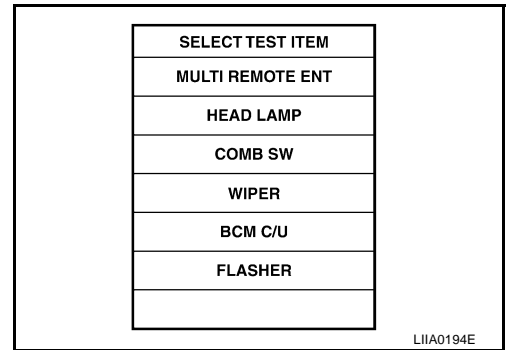
5. Touch "BCM".
If "BCM" is not indicated, go to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



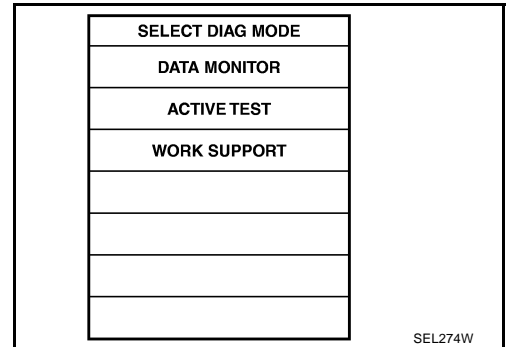
A
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M

REMOTE KEYLESS ENTRY SYSTEM

6. Touch "MULTI REMOTE ENT".



7. Touch "WORK SUPPORT".



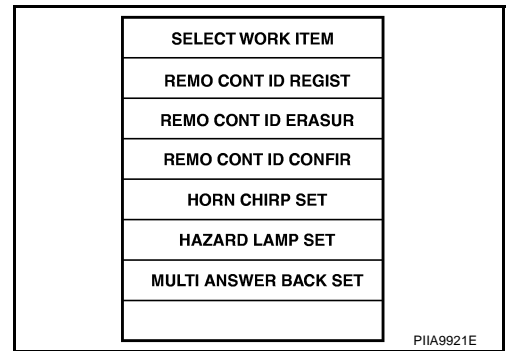
8. The items shown on the figure can be set up.

- "REMO CONT ID REGIST "
Use this mode to register a keyfob ID code.

NOTE:

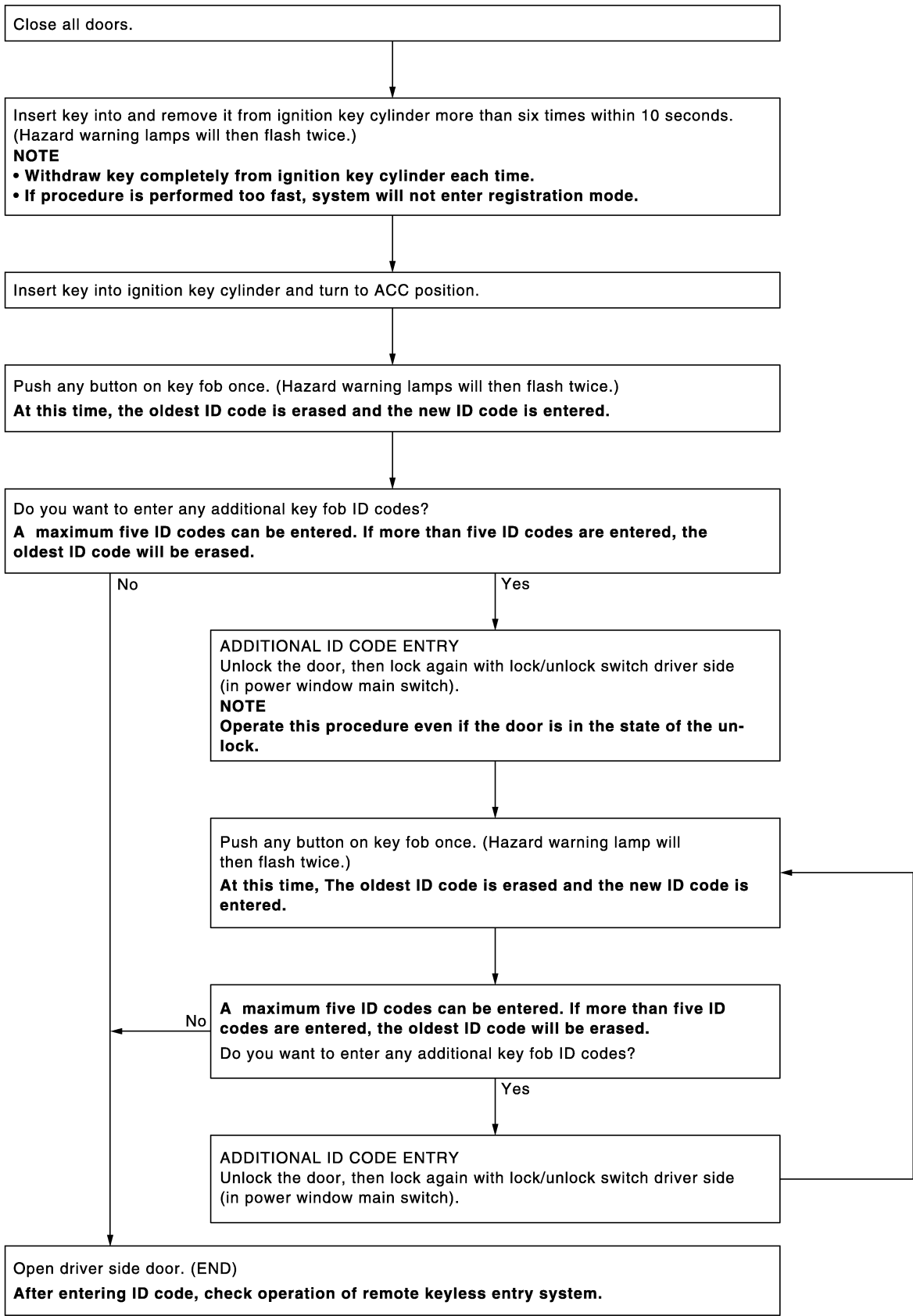
Register the ID code when keyfob or BCM is replaced, or when additional keyfob is required.

- "REMO CONT ID ERASER "
Use this mode to erase a keyfob ID code.
- "REMO CONT ID CONFIR "
Use this mode to confirm if a keyfob ID code is registered or not.



REMOTE KEYLESS ENTRY SYSTEM

KEYFOB ID SETUP WITHOUT CONSULT-II



A
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M

BL

REMOTE KEYLESS ENTRY SYSTEM

NOTE:

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

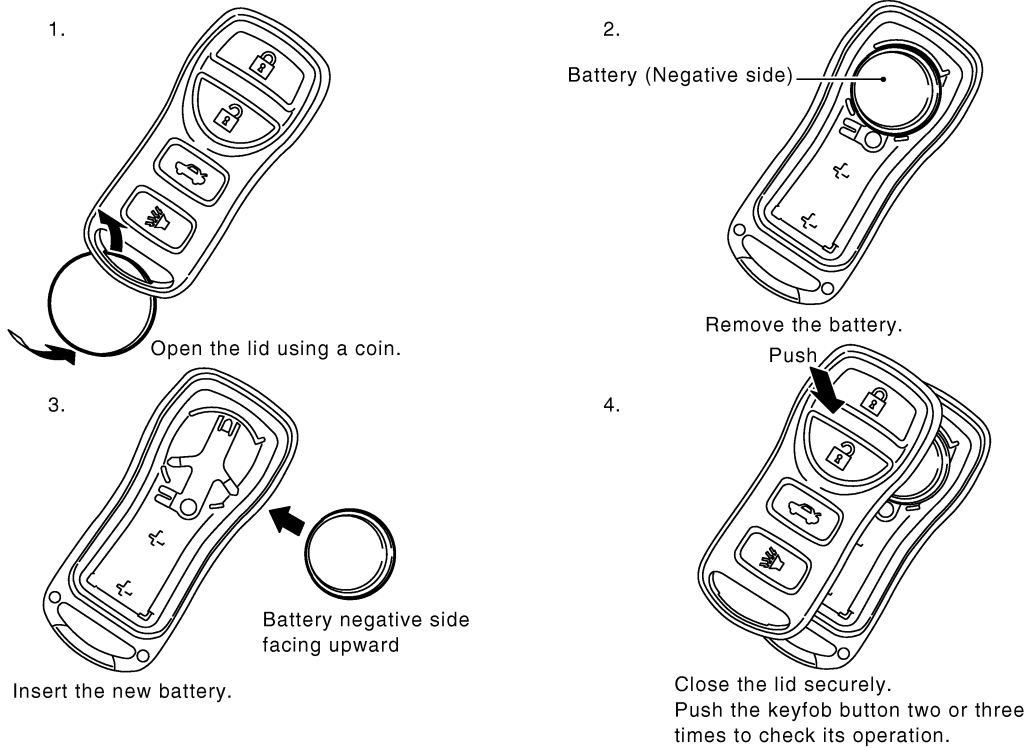
Keyfob Battery Replacement

AIS001YP

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.



PIIB0761E

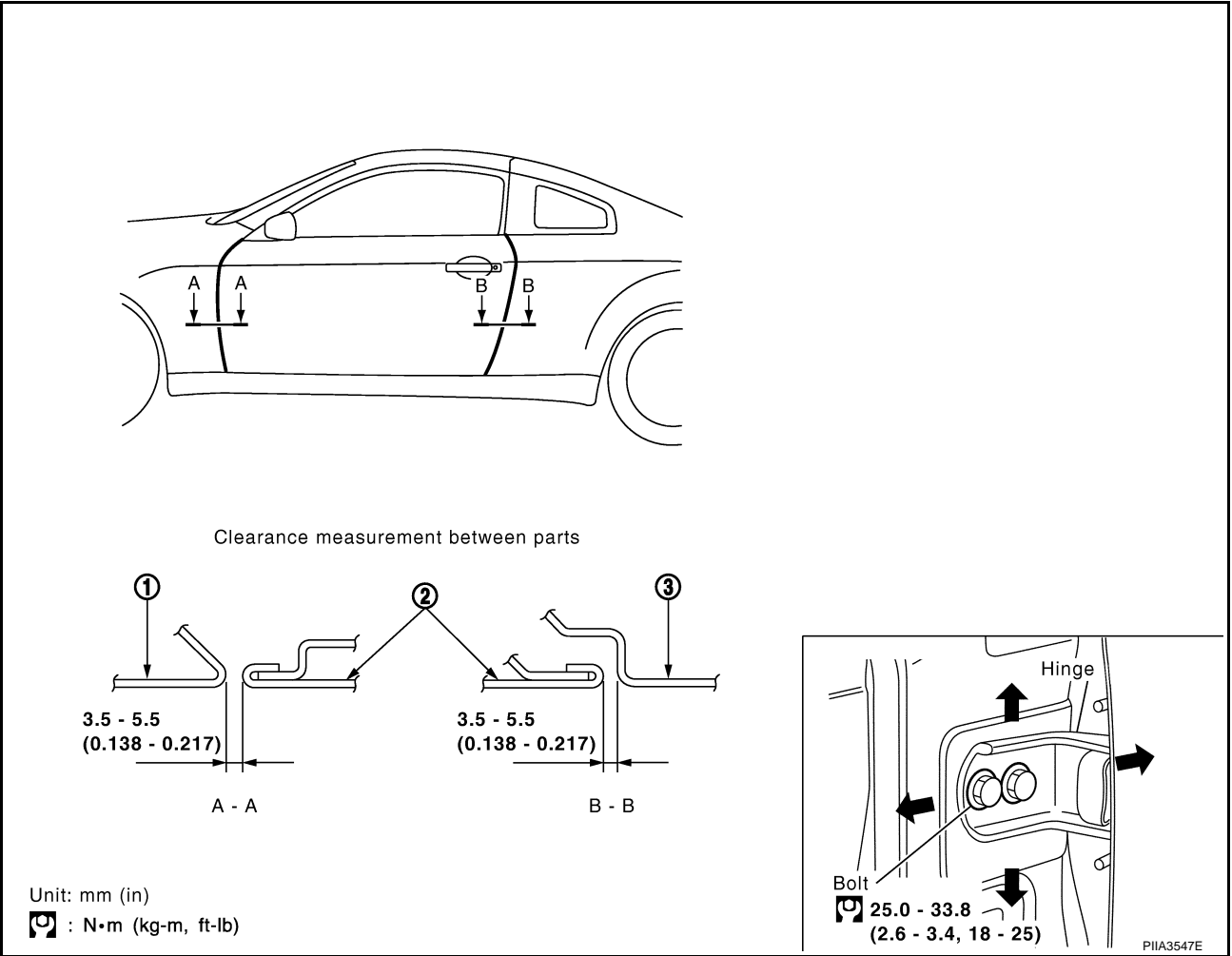
DOOR

DOOR

PFP:80100

Fitting Adjustment

AIS00179



1. Front fender

2. Door outer

3. Rear fender

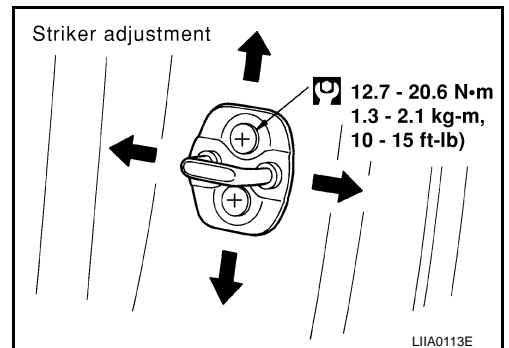
DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

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

STRIKER ADJUSTMENT

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



DOOR

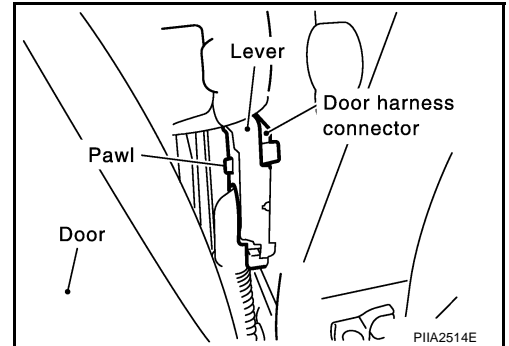
AISS0017A

Removal and Installation

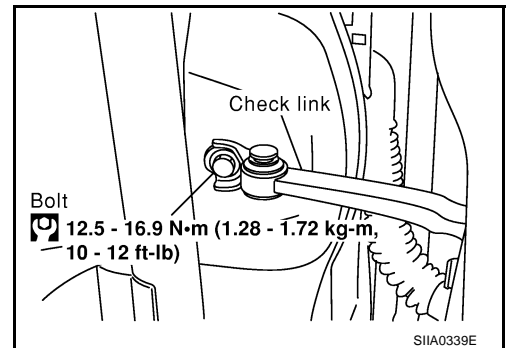
REMOVAL

CAUTION:

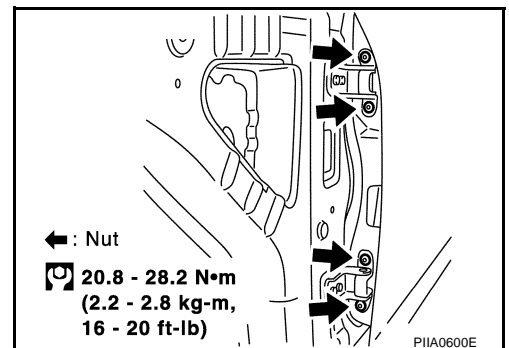
- When removing and installing the door assembly, support the door with a jack and cloth to protect the door and body.
 - When removing and installing door assembly, be sure to carry out the fitting adjustment.
 - Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.
 - After installing, check operation.
 - Operate with two workers, because of its heavy weight.
1. Remove the door finisher. Refer to [EI-30, "Removal and Installation"](#) .
 2. Remove the door window and module assembly. Refer to [GW-54, "Removal and Installation"](#) .
 3. Pull the lever and remove the door harness connector while removing tabs of door harness connector.



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



5. Remove the door-side hinge mounting nuts, then remove the door assembly.



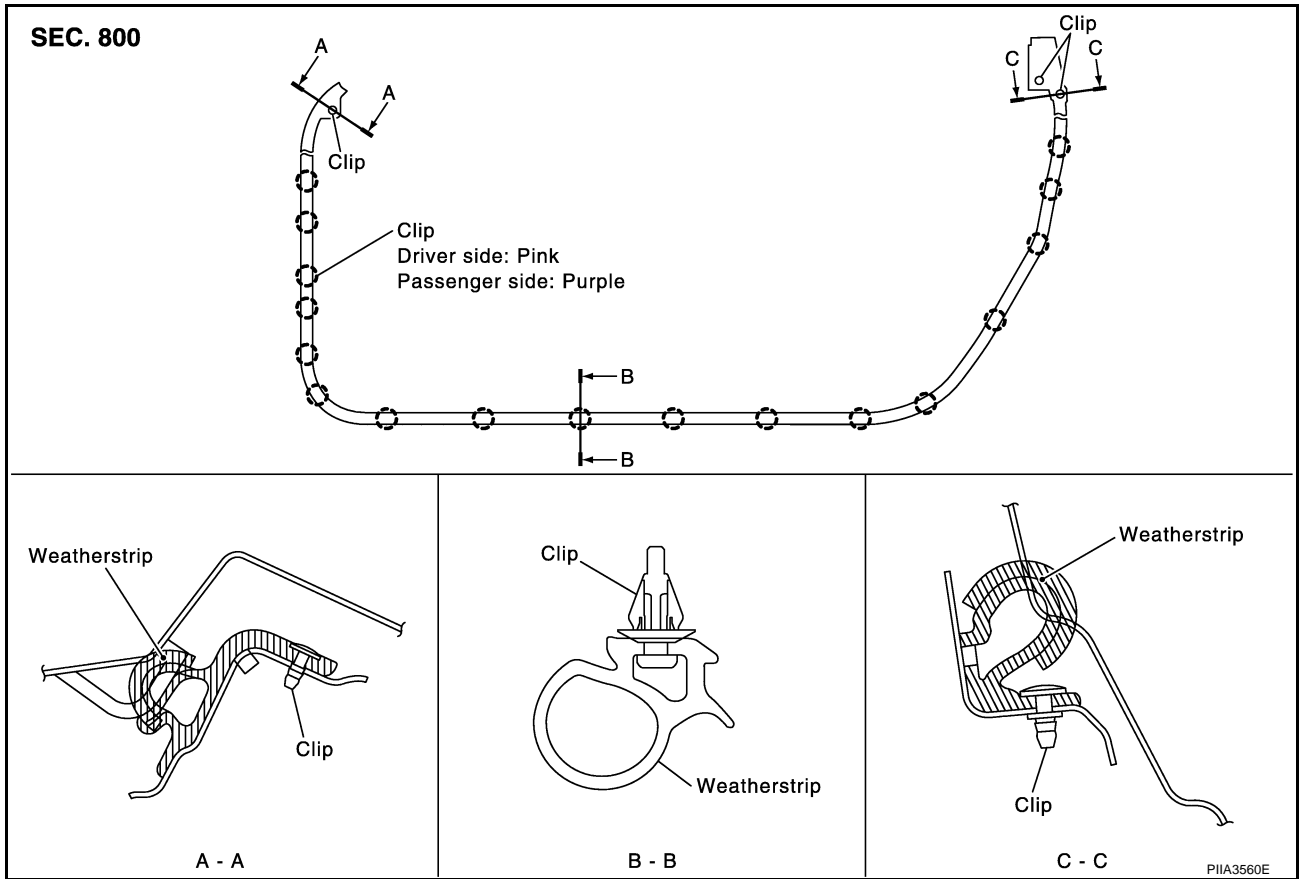
INSTALLATION

Install in the reverse order of removal.

DOOR

Door Weatherstrip

AI50017B



REMOVAL

Remove the weatherstrip clips and remove weatherstrip.

INSTALLATION

Install in the reverse order of removal.

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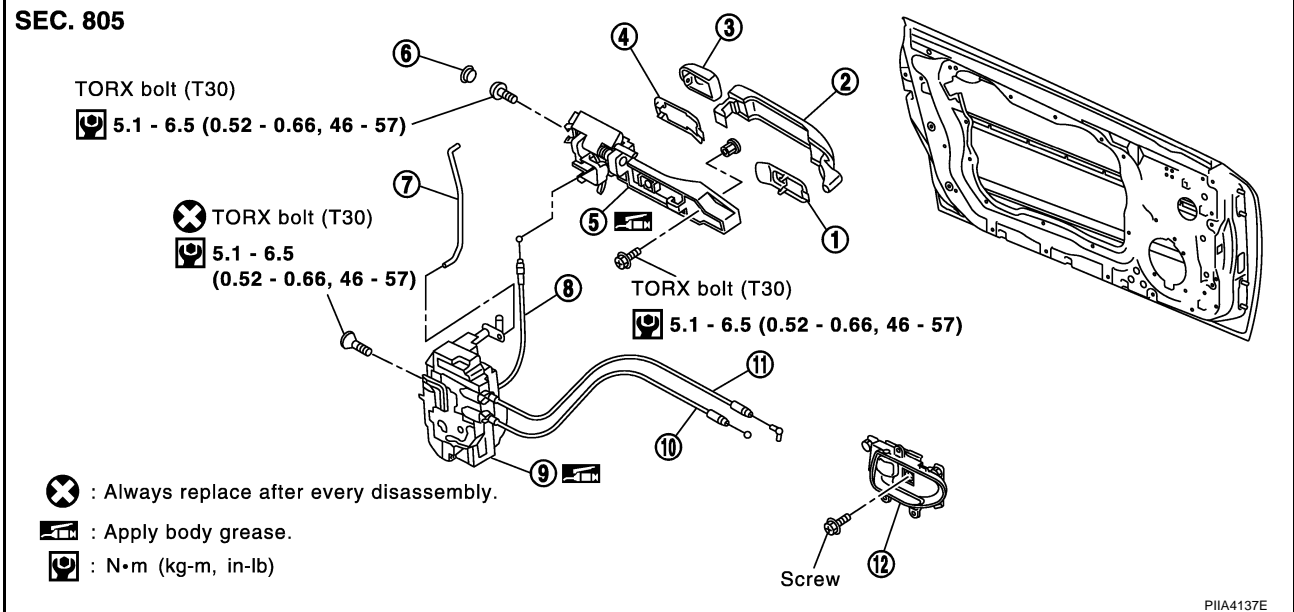
DOOR LOCK

PF:80502

DOOR LOCK

Component Structure

AIS0017C



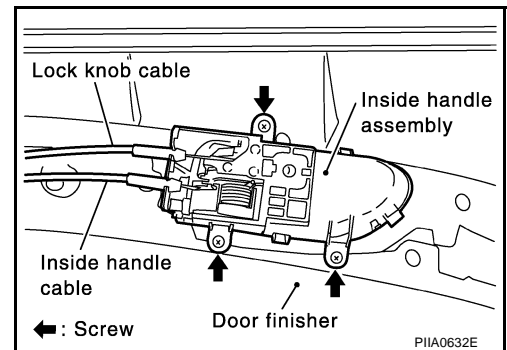
- | | | |
|--|---------------------------|--|
| 1. Front gasket | 2. Outside handle | 3. Door key cylinder (Driver side)
Outside handle escutcheon (passenger side) |
| 4. Rear gasket | 5. Outside handle bracket | 6. grommet |
| 7. Key cylinder rod (Driver side only) | 8. Outside handle cable | 9. Door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

Removal and Installation

AIS0017E

REMOVAL

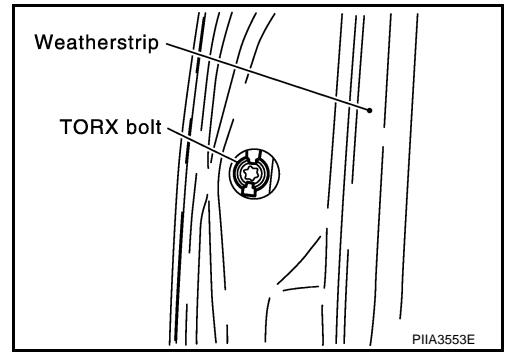
1. Remove the front door finisher. Refer to [EI-30, "Removal and Installation"](#).
2. Remove the front door window and front door module assembly. Refer to [GW-54, "Removal and Installation"](#).
3. Disconnect the inside handle cable and lock knob cable from the back side of the front door finisher.



4. Remove door side grommet, and remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.

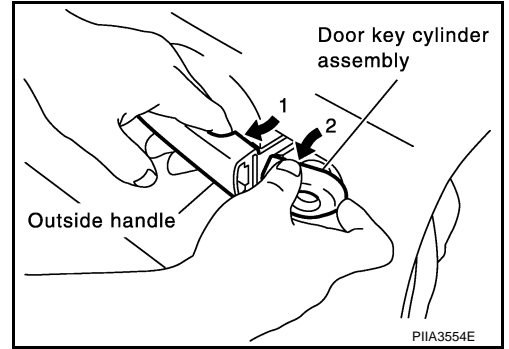
DOOR LOCK

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



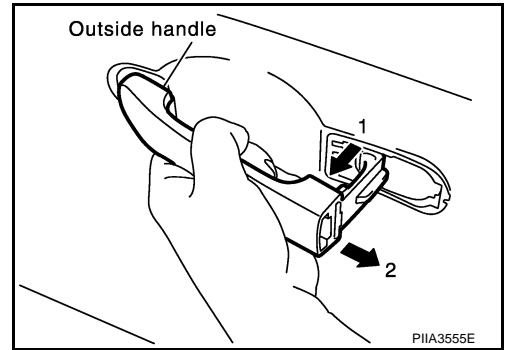
A
B
C
D

5. Reach to separate the key cylinder rod connection (on the handle). If no door key cylinder is found, GO TO 6.
6. While pulling the outside handle, remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side).



E
F
G
H

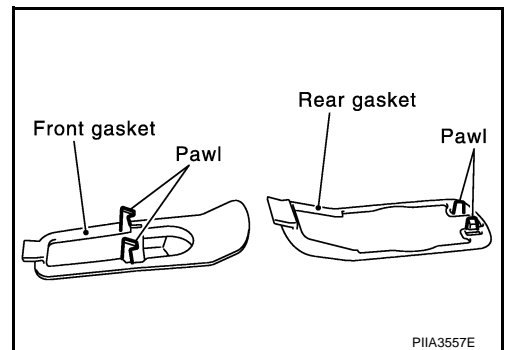
7. While pulling outside handle, slide toward rear of vehicle to remove outside handle.



BL

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L

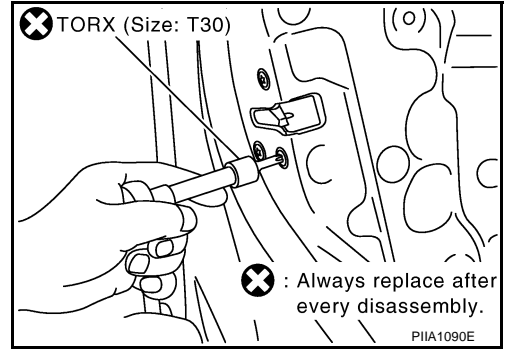
8. Remove the front gasket and rear gasket.



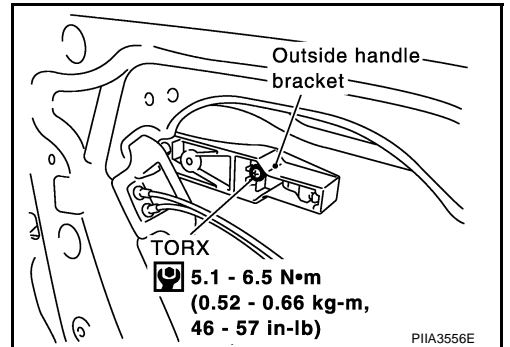
M

DOOR LOCK

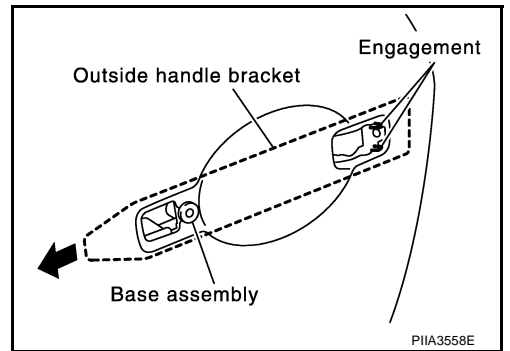
9. Remove the TORX bolts (T30), remove the door lock assembly.



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

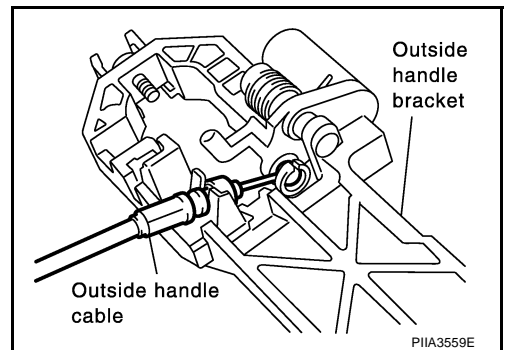


11. While pulling outside handle bracket, slide toward rear of vehicle to remove outside handle bracket and door lock assembly.



12. Disconnect the door lock actuator connector.

13. Reach to separate the key cylinder rod and outside handle cable connection.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

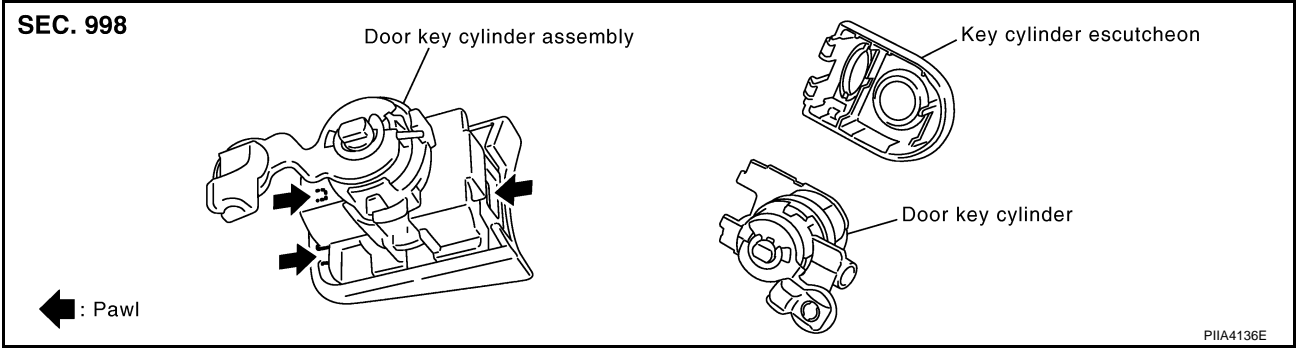
To install each rod, be sure to rotate the rod holder until a click is felt.

DOOR LOCK

Disassembly and Assembly DOOR KEY CYLINDER ASSEMBLY

AIS0029F

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Removal

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

Installation

Install in the reverse order of removal.

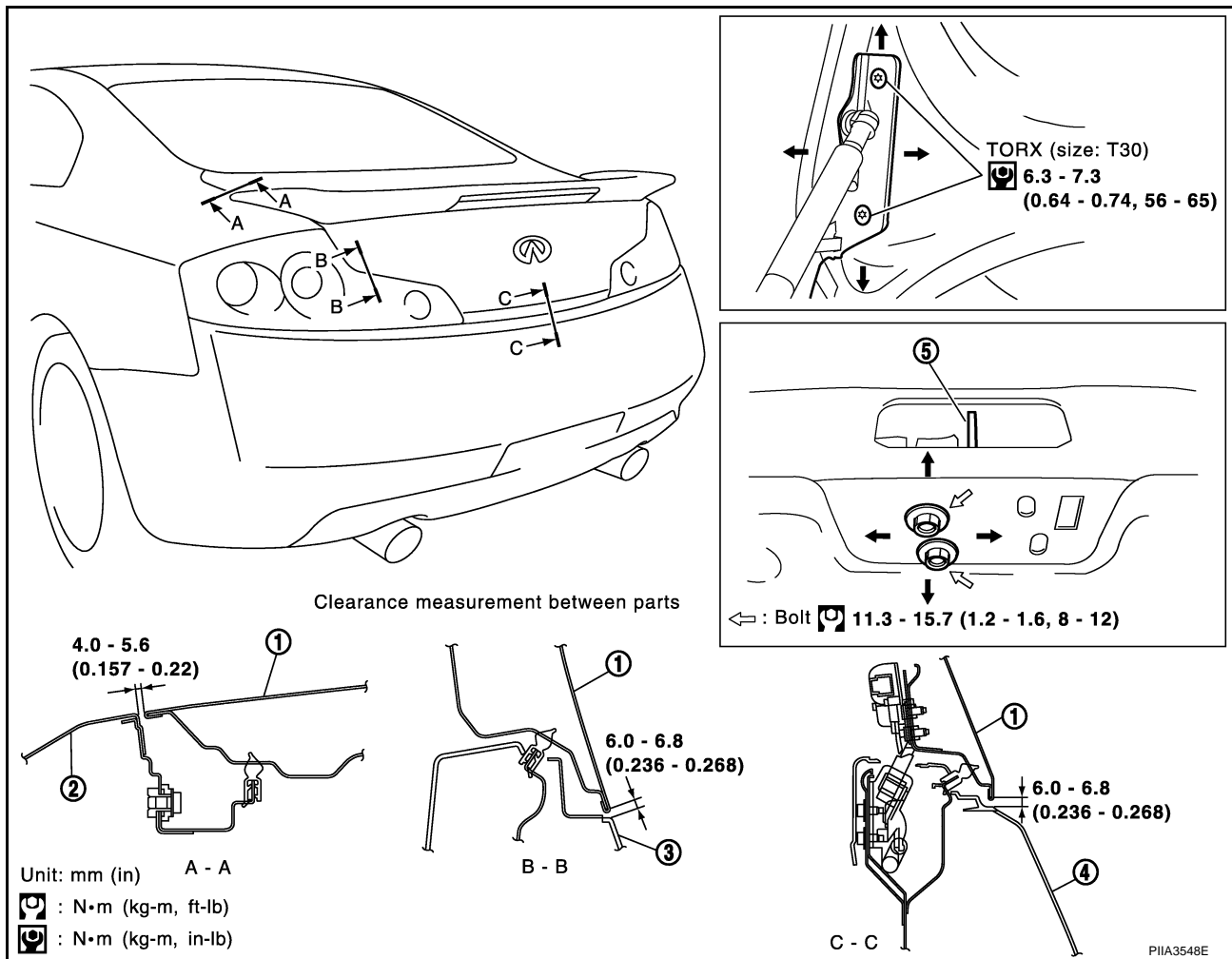
TRUNK LID

PFP:H4300

AIS0017K

TRUNK LID

Fitting Adjustment



- | | | |
|----------------------|----------------------|--------------------------|
| 1. Trunk lid | 2. Rear fender | 3. Rear combination lamp |
| 4. Rear bumper facie | 5. Trunk lid striker | |

LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

1. With the striker released, loosen the trunk lid hinge mounting bolts to close the trunk lid.
2. Make the lateral clearance and the clearance to the rear window glass equal, and open the trunk lid to tighten the mounting bolts to the specified torque.

SURFACE HEIGHT ADJUSTMENT

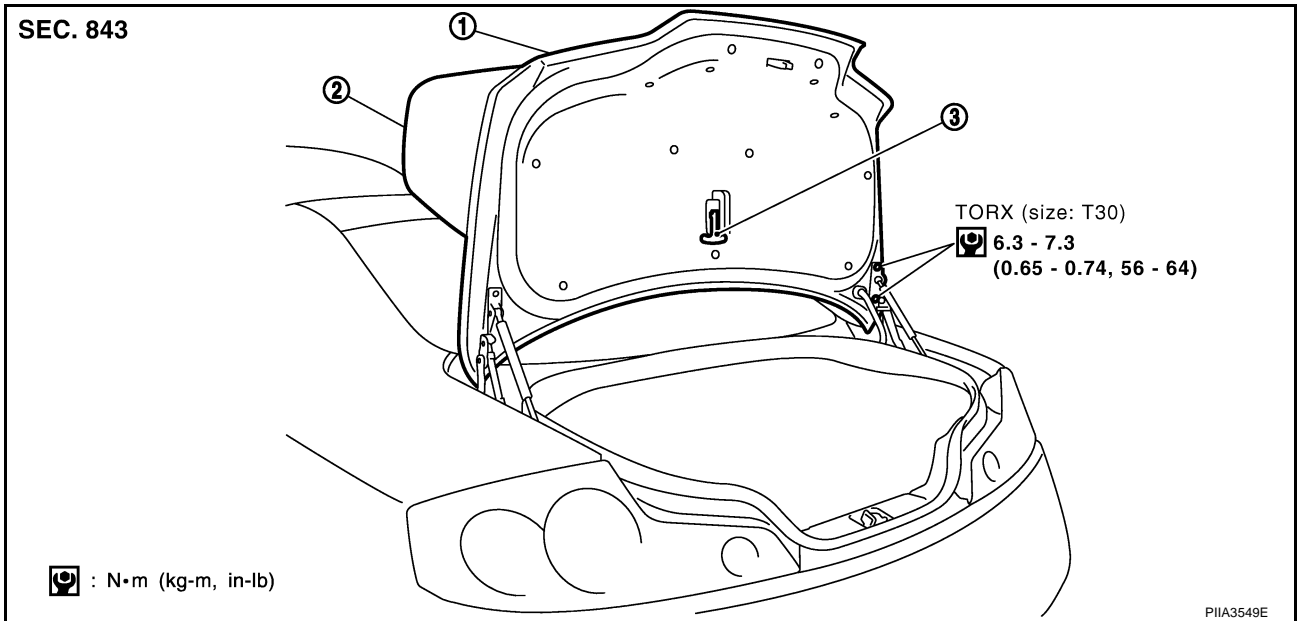
1. Loosen the striker mounting bolts. Raise the striker to the top position, and temporarily tighten the upper mounting bolt at the position.
2. Loosen the bumper rubber collar, and the damper is drawn out.
3. Close the trunk lid lightly and adjust the surface height, then open the trunk lid to finally tighten the striker mounting bolts to the specified torque or bumper rubber collar is tighten by the hand.

TRUNK LID

Removal and Installation of Trunk Lid Assembly

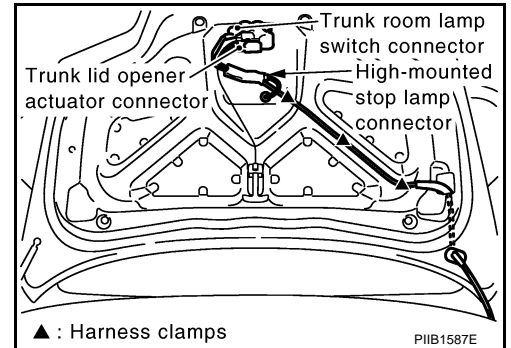
AIS0017L

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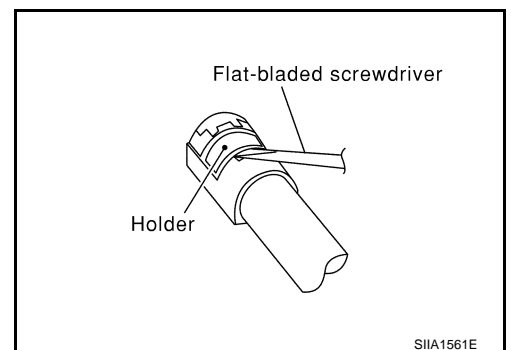


REMOVAL

1. Disconnect the connectors in the trunk lid, and remove the harness clamps to pull the harness out of the trunk lid.



2. Insert flat-bladed screwdriver into the gap and remove holder.
3. Remove trunk lid stay.
4. Remove the mounting bolts, and remove the trunk lid assembly.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Operate with two workers, because of its heavy weight.
- After installing, apply touch-up paint (the body color) onto the head of the hinge mounting bolts.
- After installing, check the trunk lid adjustment. Refer to [BL-86. "Fitting Adjustment"](#).

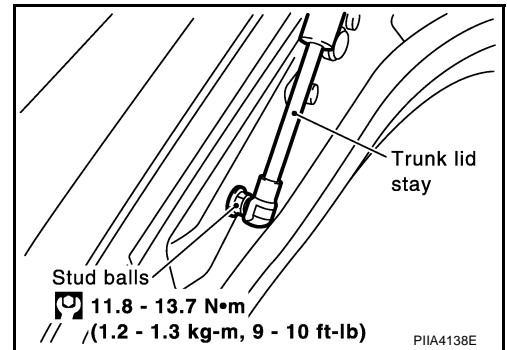
TRUNK LID

Removal and Installation of Trunk Lid Stay

AIS0027B

REMOVAL

1. Insert flat-bladed screwdriver into the gap and remove holder.
2. Remove trunk lid stay on the trunk lid.
3. Remove the stud bolts, and trunk lid stay.



INSTALLATION

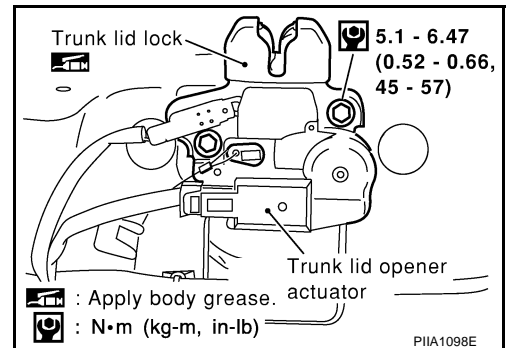
1. Install in the reverse order of removal.
2. After installing, check the operation.

Removal and Installation of Trunk Lid Lock

AIS0017M

REMOVAL

1. Remove the trunk lid finisher. Refer to [EI-39, "Removal and Installation for Trunk Room Trim"](#).
2. Disconnect the emergency handle and trunk lid opener cable from the clip.
3. After removing the harness connector, remove the mounting bolts, and remove the trunk lid lock.



INSTALLATION

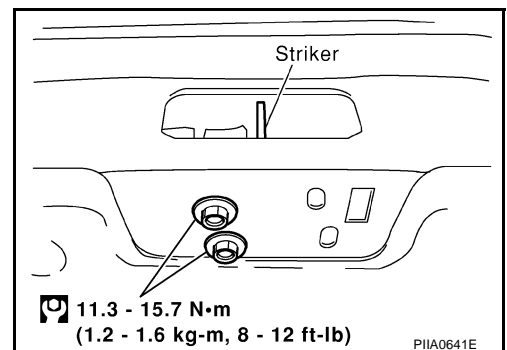
1. Install in the reverse order of removal.
2. After installing, close the trunk lid height. Perform the lock and surface height adjustment. Refer to [BL-86, "Fitting Adjustment"](#).
3. After installing, check the operation.

Removal and Installation of Trunk Lid Striker

AIS0027C

REMOVAL

1. Remove the trunk rear plate and trunk rear finisher. Refer to [EI-39, "Removal and Installation for Trunk Room Trim"](#).
2. Remove the mounting bolts, and remove the striker from the trunk lock support.



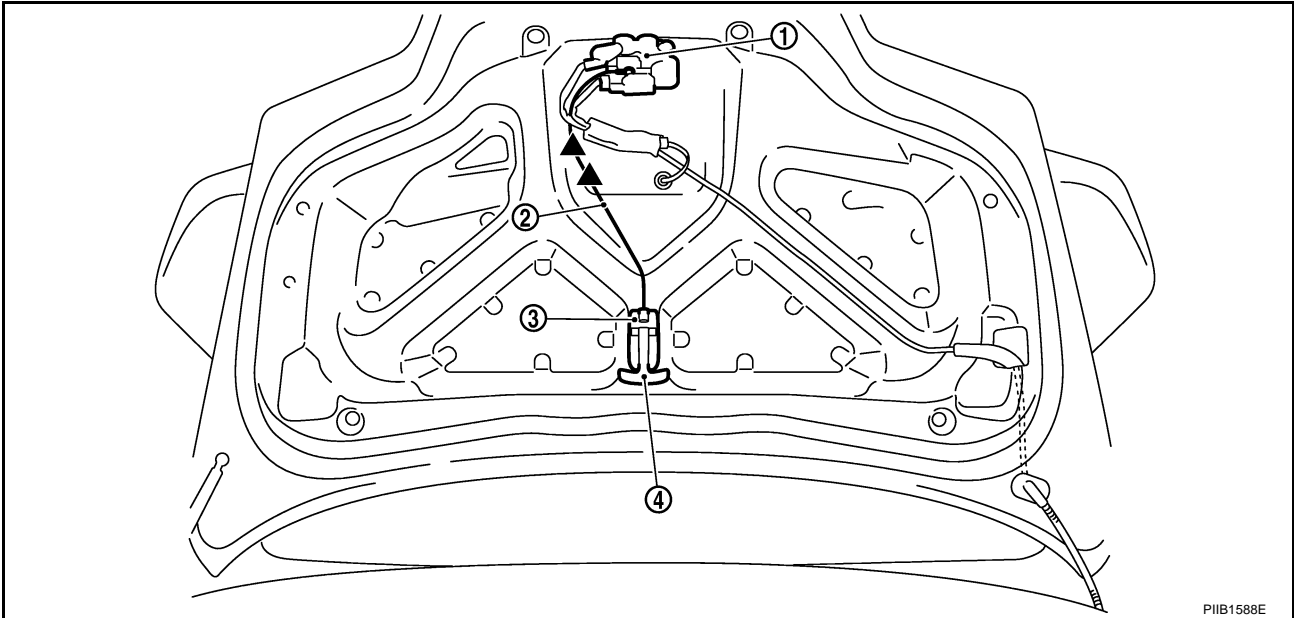
INSTALLATION

1. Install in the reverse order of removal.
2. After installing, close the trunk lid height. Perform the lock and surface height adjustment. Refer to [BL-86, "Fitting Adjustment"](#).
3. After installing, check the operation.

TRUNK LID

Removal and Installation of Trunk lid Emergency Opener Cable

AIS005X6



1. Trunk lid lock assembly
2. Trunk lid emergency opener cable
3. Trunk lid emergency opener lever holder
4. Trunk lid emergency opener lever

REMOVAL

1. Remove trunk lid finisher. Refer to [EI-39, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#).
2. Disconnect each clamp of trunk lid emergency opener cable.
3. Disconnect the trunk lid emergency opener cable and from the trunk lid lock assembly.
4. Disconnect the trunk lid emergency opener cable from the trunk lid emergency opener lever holder.
5. Remove trunk lid emergency opener cable.

INSTALLATION

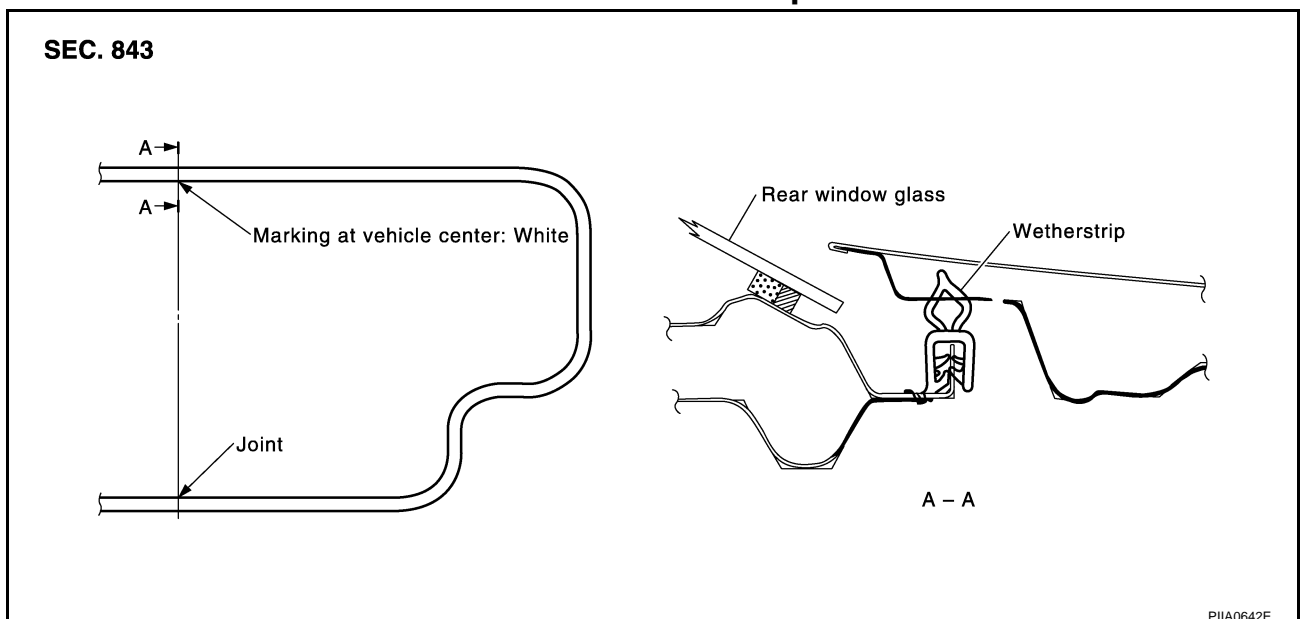
Install in the reverse order of removal.

CAUTION:

After installing, check the operation.

Removal and Installation of Trunk Lid Weatherstrip

AIS004UE



TRUNK LID

REMOVAL

Pull up and remove engagement with body from weatherstrip joint.

CAUTION:

After removal, do not pull strongly on the weatherstrip.

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.

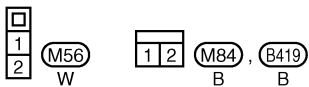
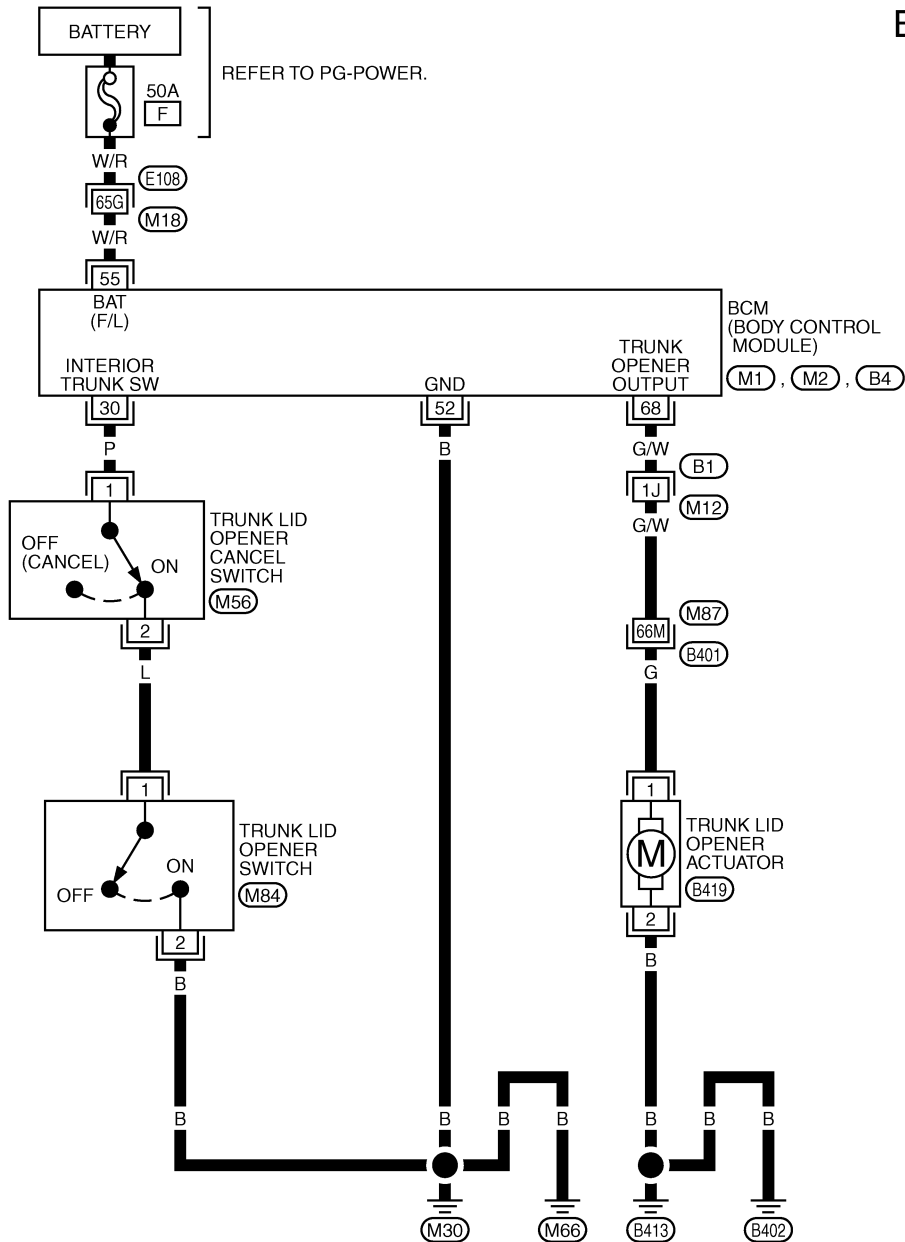
TRUNK LID OPENER

TRUNK LID OPENER Wiring Diagram -TLID-

PFP:84640

AIS00170

BL-TLID-01



REFER TO THE FOLLOWING.

E108, B1, B401

-SUPER MULTIPLE JUNCTION (SMJ)

M1, M2, B4

-ELECTRICAL UNITS

TRUNK LID OPENER

Terminals and Reference Value for BCM

AIS0017P

TER-MINAL	WIRE COLOR	ITEM	CONDITION		VOLTAGE(V) (Approx.)
30	P	Trunk lid opener switch	Trunk lid opener cancel switch is ON position	Trunk lid opener switch is ON	0
				Trunk lid opener switch is OFF	Battery voltage
			Trunk lid opener cancel switch is OFF position		Battery voltage
52	B	Ground	—		0
55	W/R	Power source (Fusible link)	—		Battery voltage
68	G/W	Trunk lid opener release output signal	When trunk lid opener release output signal is outputted.		0 → Battery voltage

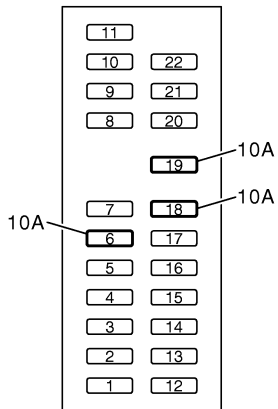
VEHICLE SECURITY (THEFT WARNING) SYSTEM

VEHICLE SECURITY (THEFT WARNING) SYSTEM

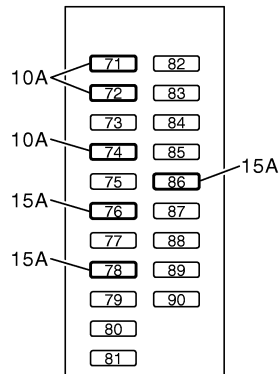
PF28491

Component Parts and Harness Connector Location

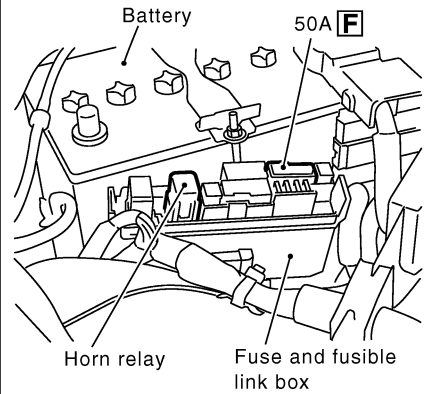
AIS0027E



Fuse block (J/B) fuse layout

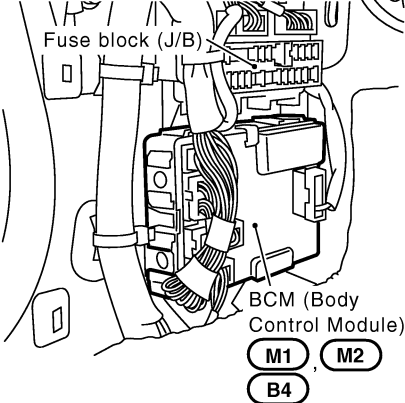


IPDM E/R fuse layout



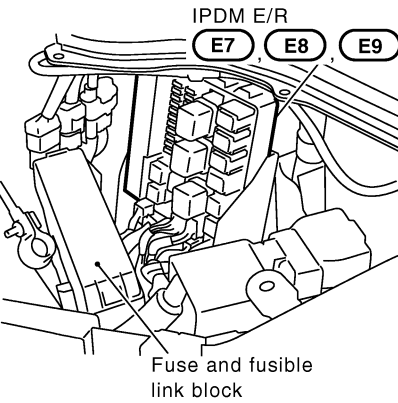
Battery
50A F
Horn relay
Fuse and fusible link box

View with dash side LH removed

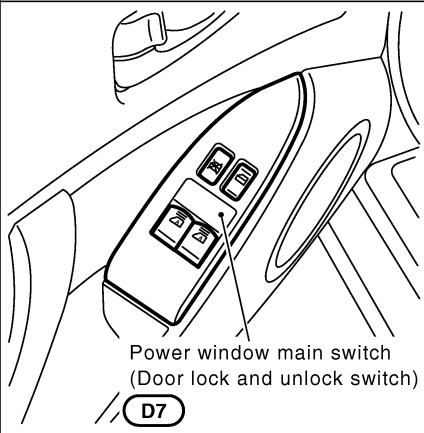


BCM (Body Control Module)
M1 M2
B4

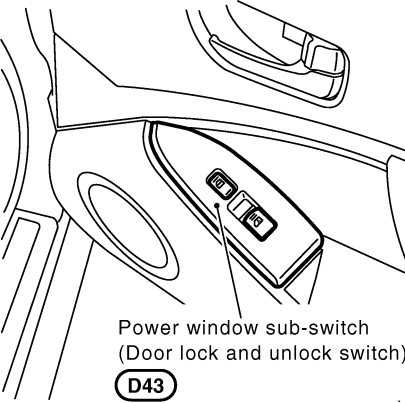
View with battery removed



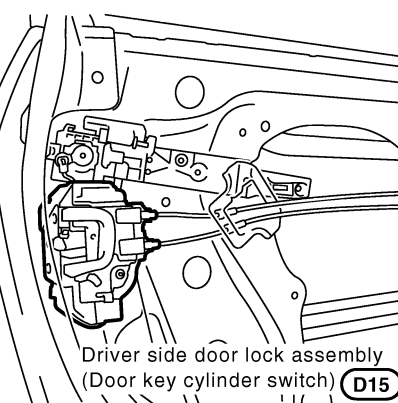
IPDM E/R
E7 E8 E9
Fuse and fusible link block



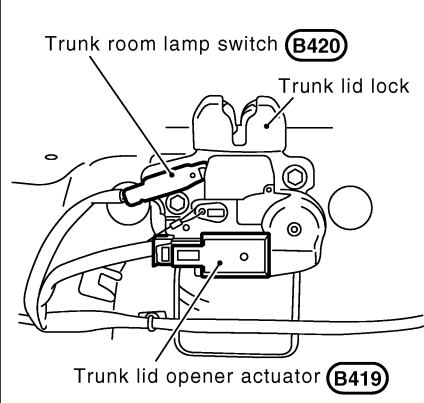
Power window main switch (Door lock and unlock switch)
D7



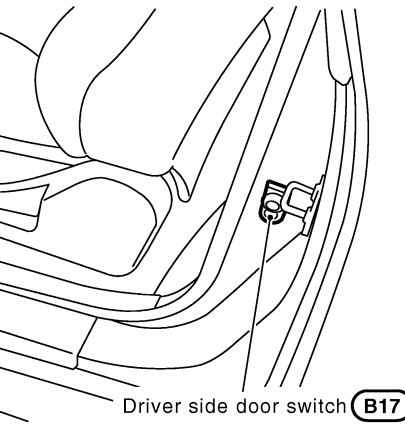
Power window sub-switch (Door lock and unlock switch)
D43



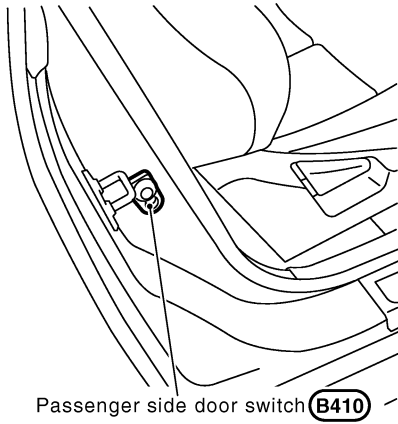
Driver side door lock assembly (Door key cylinder switch)
D15



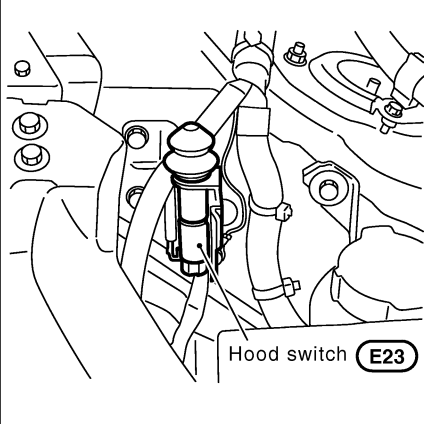
Trunk room lamp switch B420
Trunk lid lock
Trunk lid opener actuator B419



Driver side door switch B17



Passenger side door switch B410

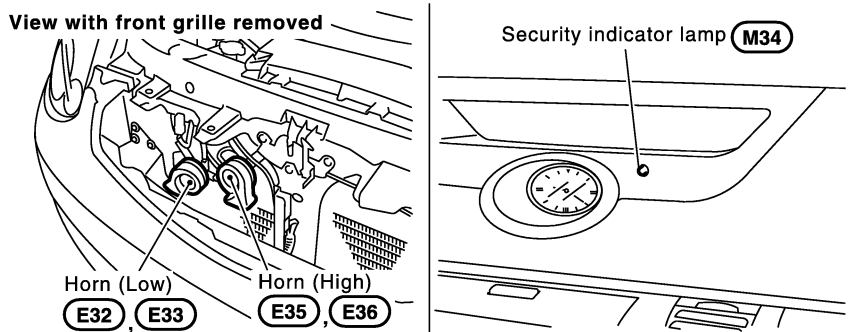


Hood switch E23

PIIA9846E

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VEHICLE SECURITY (THEFT WARNING) SYSTEM



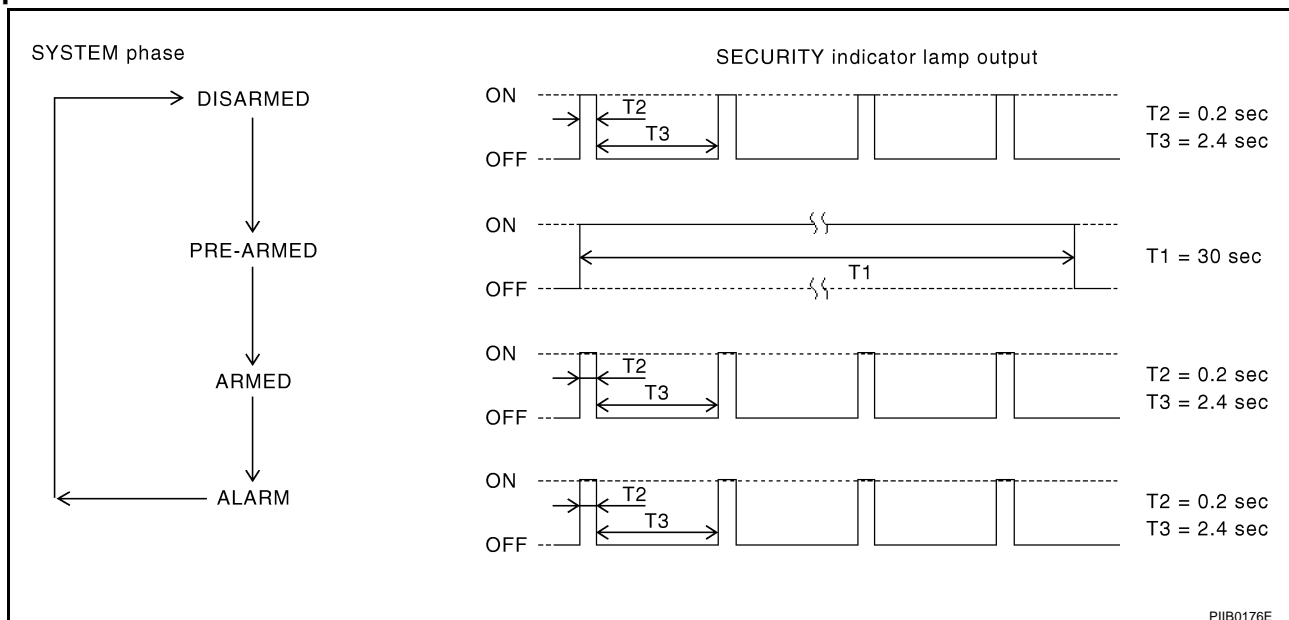
PIIA3638E

AIS0027F

System Description

DESCRIPTION

Operation Flow



PIIB0176E

Setting the Vehicle Security System

Initial condition

- Ignition switch is in OFF position.

Disarmed phase

- When hood, doors or trunk lid 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 door key cylinder switch or key fob after hood, trunk lid and all doors are closed.
2. Hood and all doors are closed after 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. Open the trunk lid with the key fob.
3. Turn ignition switch to “ON” or “ACC” position.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

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. Hood or any door is opened during armed phase.
2. Disconnecting and connecting the battery connector before canceling armed phase.

Canceling the Alarm Operation of the Vehicle Security System

When one of the following operations is performed, the alarm operation is canceled.

- Unlock the door with the key or key fob.
- Open the trunk lid with the key fob.

POWER SUPPLY

Power is supplied at all times

- through 10A fuse [No.19, located in the fuse block (J/B)]
- to security indicator lamp terminal 1.

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.

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

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

INITIAL CONDITION TO ACTIVATE THE SYSTEM

The operation of the vehicle security system is controlled by the doors and hood.

To activate the vehicle security system, BCM must receive signals indicating the doors and hood are closed and the doors are locked by key or key fob.

When a door is open, BCM terminal 12 or 62 receives a ground signal from each door switch.

(Applied from without navigation system and with navigation system auxiliary circuit.)

When a door is open, combination meter terminal 6 or 7 receives a ground signal from each door switch.

The combination meter then sends a signal to the BCM through the CAN SYSTEM.

(Applied from with navigation system formalities circuit.)

When driver side door is unlocked by power window main switch (door lock and unlock switch), BCM terminal 22 receives a signal from terminal 12 of power window main switch.

When passenger side door is unlocked by power window sub-switch (door lock and unlock switch), BCM terminal 22 receives a signal from terminal 16 of power window sub-switch.

When the hood is open, IPDM E/R receives a ground signal

- to IPDM E/R terminal 56
- through hood switch terminal 1
- through body grounds E17 and E43.

The IPDM E/R then sends a signal to the BCM through the CAN SYSTEM.

When the trunk lid is open, BCM terminal 57 receives a ground signal

- from terminal 1 of the trunk room lamp switch
- through body grounds B402 and B413.

VEHICLE SECURITY SYSTEM ALARM OPERATION

The vehicle security system is triggered by

- opening a driver and passenger side door
- opening the trunk lid
- opening the hood
- detection of battery disconnect and connect.

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

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VEHICLE SECURITY (THEFT WARNING) SYSTEM

When BCM receives a ground signal at terminals 12, 62 (door switch), 57 (trunk room lamp switch) or IPDM E/R receives a ground signal at terminal 56 (hood switch).

Power is supplied at all times

- to horn relay terminal 2
- through 15A fuse (No. 35, located in fuse and fusible link box).

When the vehicle security system is triggered, ground is supplied intermittently from IPDM E/R terminals 38 and 60.

When both headlamp relay (built-in IPDM E/R) and horn relay are energized and then power is supplied to headlamps (high beam and low beam) 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 must be unlocked or trunk lid must be opened with the key or key fob.

When the key is used to unlock a door, BCM terminal 22 receives signal

- from terminal 12 of the power window main switch.

When the BCM receives either above signal or unlock signal from key fob, the vehicle security system is deactivated. (Disarmed phase)

PANIC ALARM OPERATION

Remote keyless entry system may or may not operate vehicle security system (horn and headlamps) as required.

When the remote keyless entry system is triggered, ground is supplied intermittently from IPDM E/R terminals 38 and 60.

When both headlamp relay (built-in IPDM E/R) and horn relay are energized and then power is supplied to headlamps (high beam and low beam) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 25 seconds or when BCM receives any signal from key fob.

CAN Communication System Description

AIS0027G

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

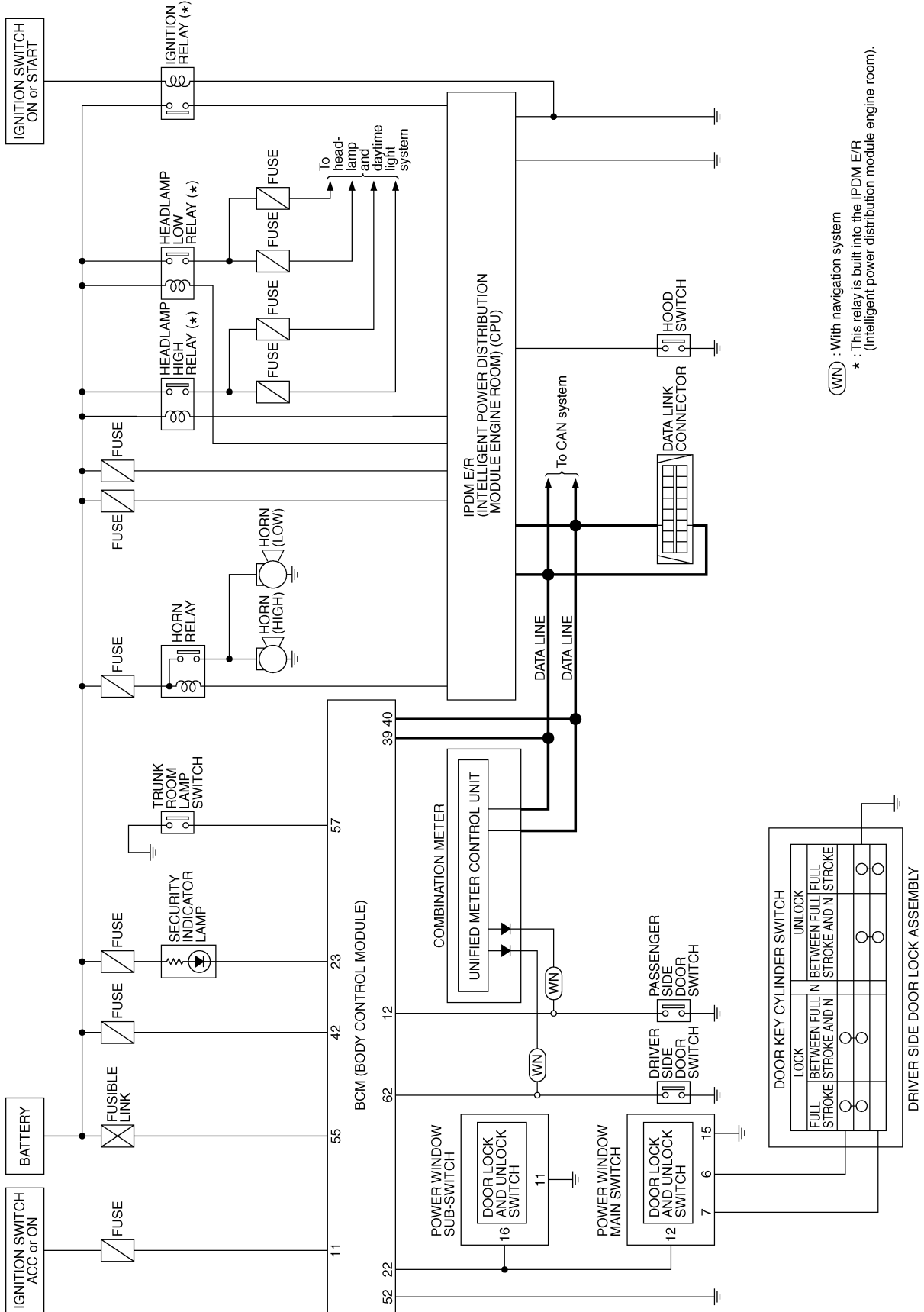
AIS004RJ

Refer to [LAN-4, "CAN Communication Unit"](#) .

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Schematic

AIS0027H



(WN) : With navigation system
 * : This relay is built into the IPDM E/R (Intelligent power distribution module engine room).

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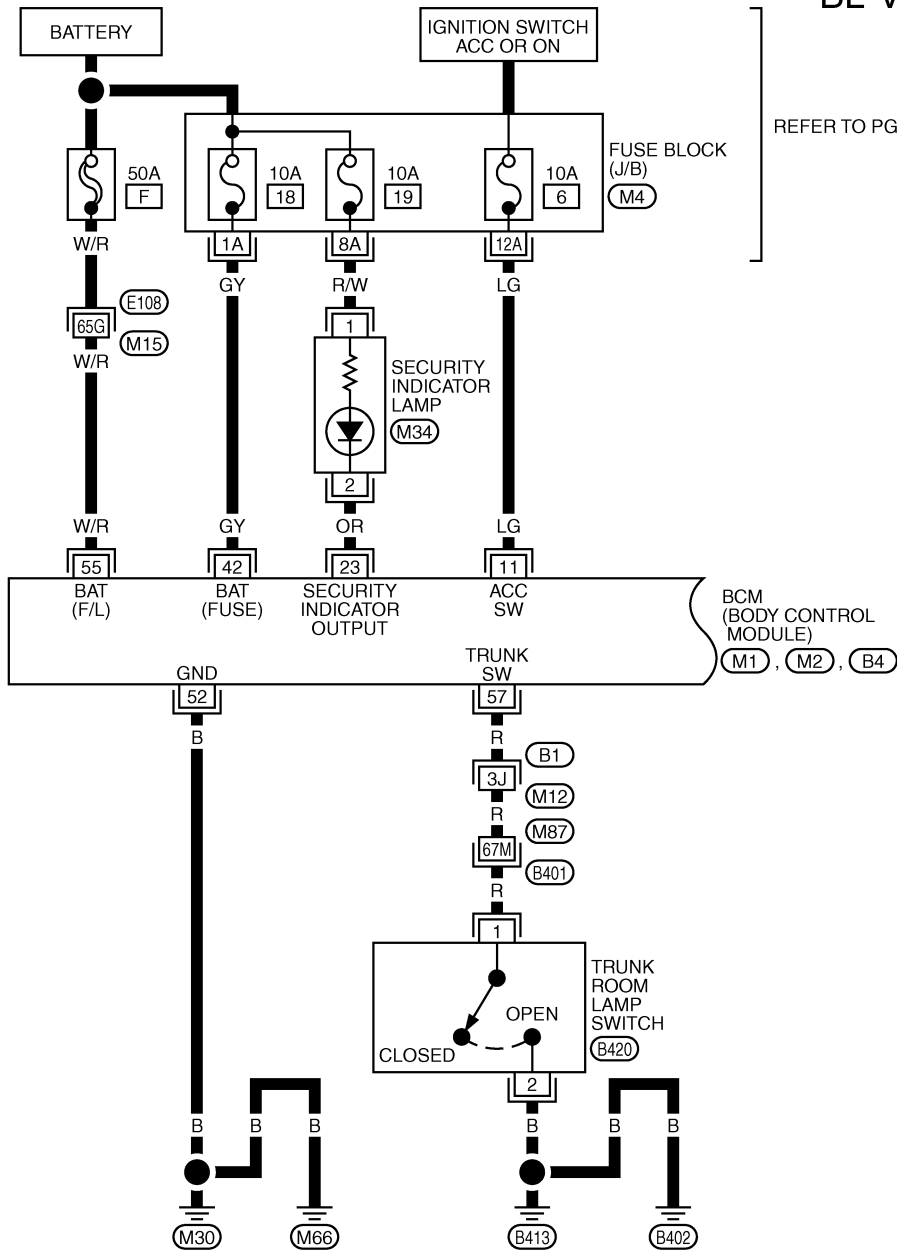
BL

VEHICLE SECURITY (THEFT WARNING) SYSTEM

AI500271

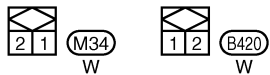
Wiring Diagram —VEHSEC—
FIG. 1

BL-VEHSEC-01



REFER TO PG-POWER.

BCM
(BODY CONTROL
MODULE)
(M1), (M2), (B4)



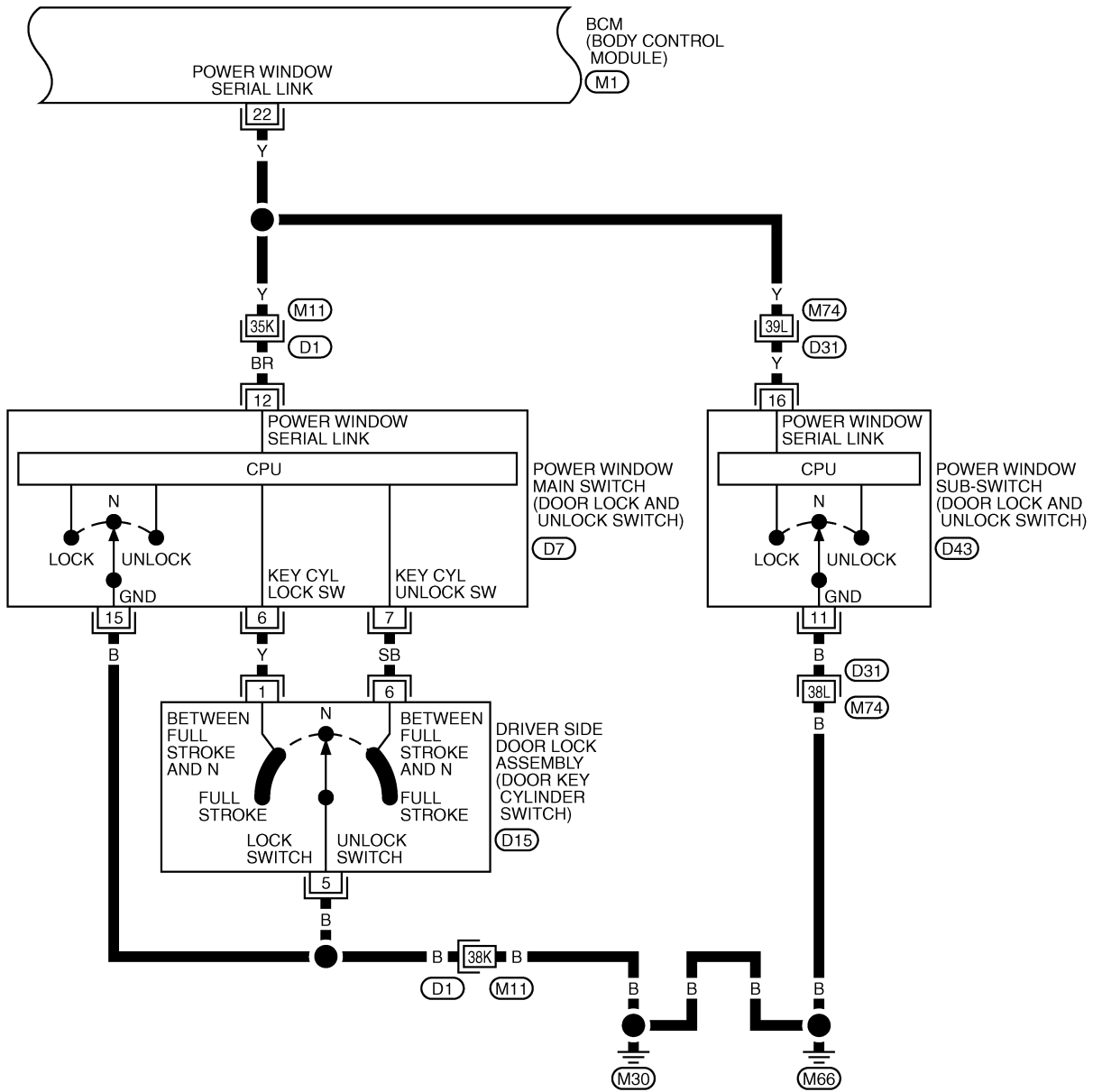
REFER TO THE FOLLOWING.
(E108), (B1), (B401) -SUPER
MULTIPLE JUNCTION (SMJ)
(M4) -FUSE BLOCK-JUNCTION
BOX (J/B)
(M1), (M2), (B4)
-ELECTRICAL UNITS

TIWM0460E

VEHICLE SECURITY (THEFT WARNING) SYSTEM

FIG. 2

BL-VEHSEC-02



7	6	5	4	3	2	1
16	15	14	13	12	11	10
9	8					

(D7), (D43)
W W

6	5	4	3	2	1

(D15)
B

REFER TO THE FOLLOWING.

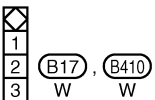
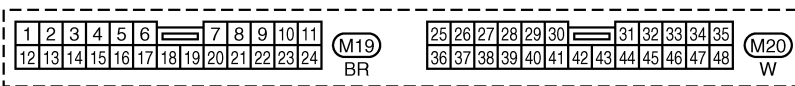
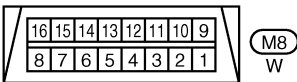
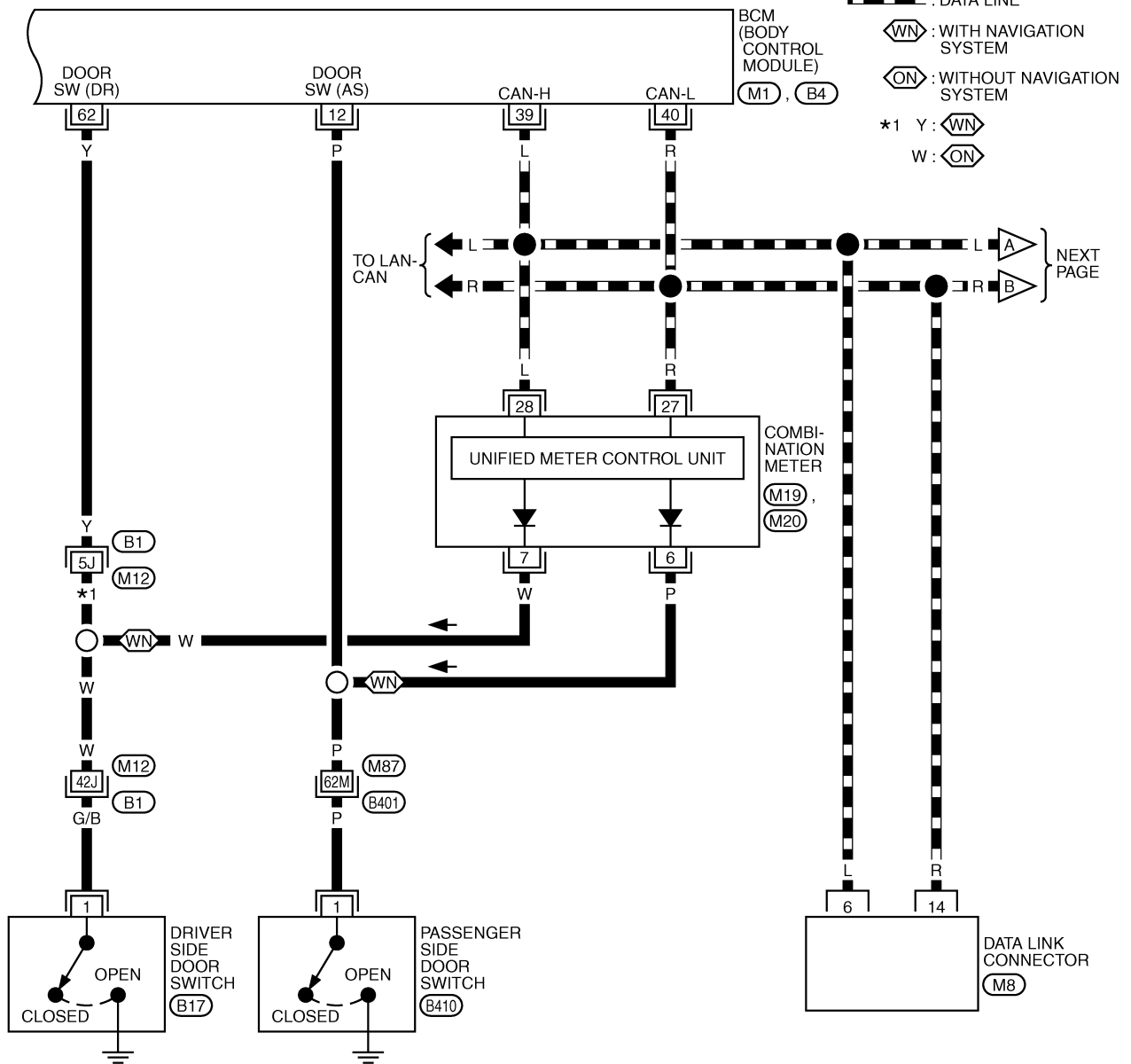
(D1), (D31) -SUPER MULTIPLE JUNCTION (SMJ)

(M1) -ELECTRICAL UNITS

VEHICLE SECURITY (THEFT WARNING) SYSTEM

FIG. 3

BL-VEHSEC-03



REFER TO THE FOLLOWING.

(B1), (B401) -SUPER MULTIPLE JUNCTION (SMJ)

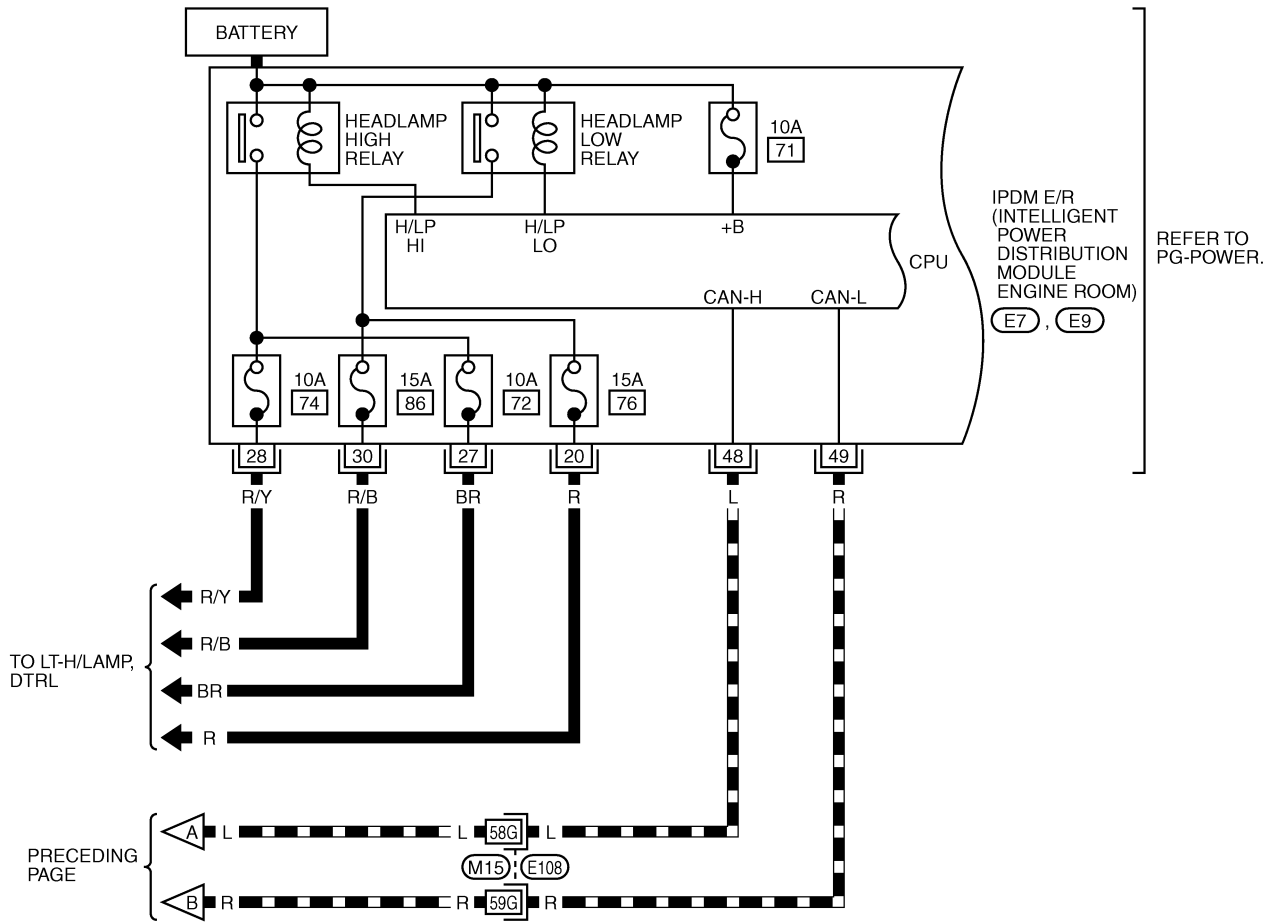
(M1), (B4) -ELECTRICAL UNITS

VEHICLE SECURITY (THEFT WARNING) SYSTEM

FIG. 4

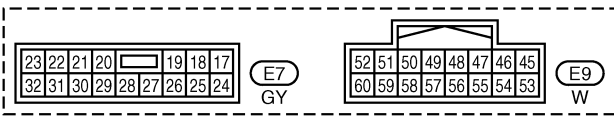
BL-VEHSEC-04

▬ : DATA LINE



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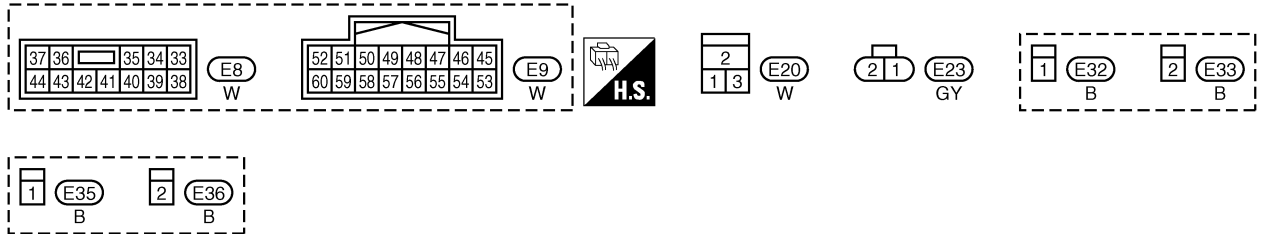
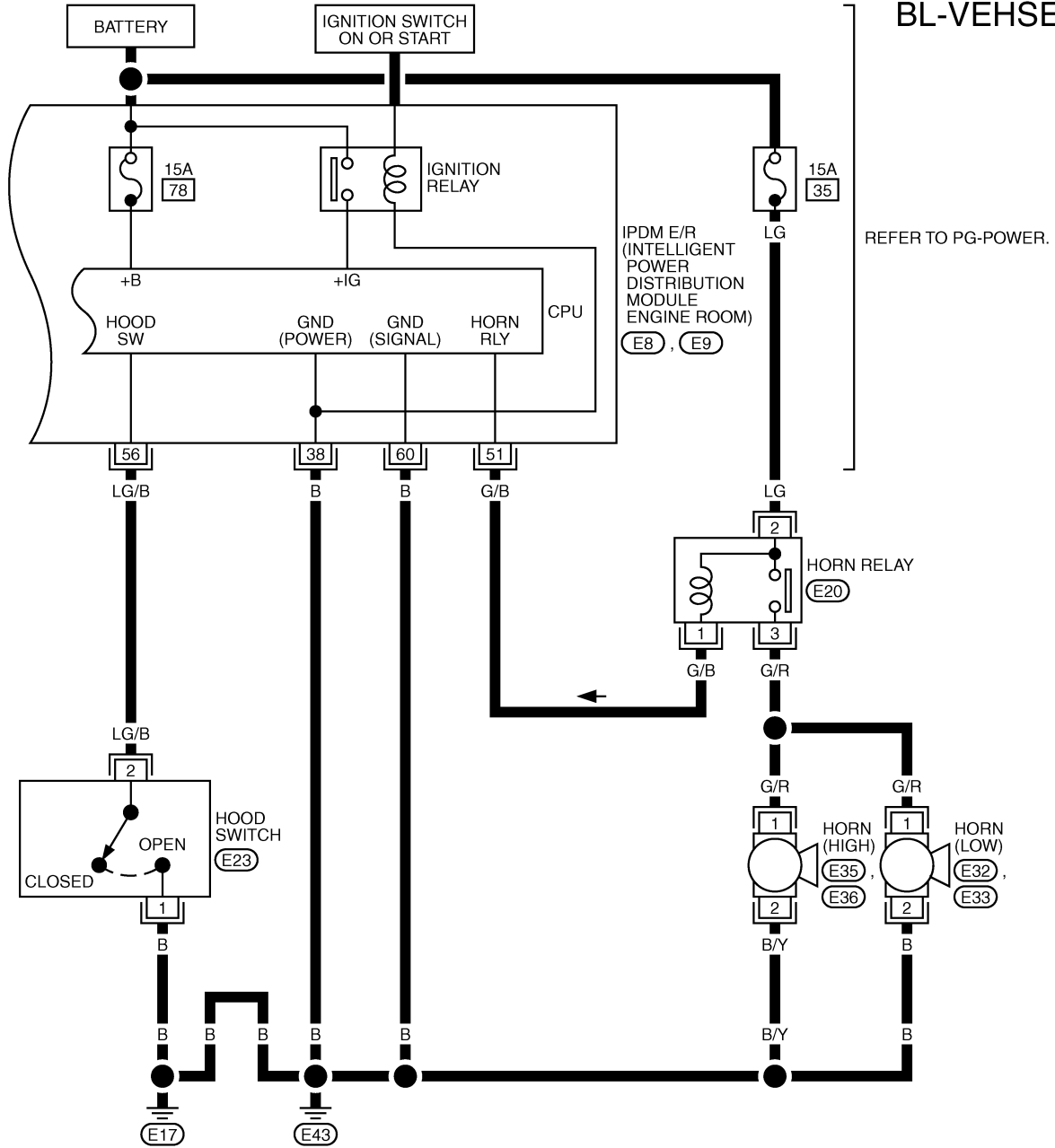


REFER TO THE FOLLOWING.
E108 -SUPER MULTIPLE JUNCTION (SMJ)

VEHICLE SECURITY (THEFT WARNING) SYSTEM

FIG. 5

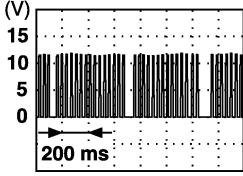
BL-VEHSEC-05



VEHICLE SECURITY (THEFT WARNING) SYSTEM

Terminals and Reference Value for BCM

AIS0027J

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
11	LG	ACC power supply (ACC or ON)	Ignition switch (ACC position)	Battery voltage
12	P	Passenger side door switch	ON (Open) → OFF (Closed)	0 → 5
22	Y	Power window switch (Serial link)	Driver side door and passenger side door are closed. (Each door switch is OFF)	 PIIA2344J
23	OR	Security indicator lamp	Goes off → Illuminates (Every 2.4 seconds)	Battery voltage → 0
39	L	CAN-H	—	—
40	R	CAN-L	—	—
42	GY	Power source (fuse)	—	Battery voltage
52	B	Ground	—	0
55	W/R	Power source (Fusible link)	—	Battery voltage
57	R	trunk room lamp switch	ON (Open) → OFF (Closed)	0V → Battery voltage*
62	Y	Driver side door switch	ON (Open) → OFF (Closed)	0 → 5

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

Terminals and Reference Value for IPDM E/R

AIS0027K

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
38	B	Ground	—	0
48	L	CAN-H	—	—
49	R	CAN-L	—	—
51	G/B	Horn relay	ON → OFF	0 → Battery voltage
56	LG/B	Hood switch	ON (Open) → OFF (closed)	0 → Battery voltage
60	B	Ground	—	0

Terminal and Reference Value for Combination Meter

AIS002MK

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
6*	P	Passenger side door switch	ON (door open) → OFF (door closed)	0 → 5
7*	W	Driver side door switch	ON (door open) → OFF (door closed)	0 → 5
27	R	CAN-L	—	—
28	L	CAN-H	—	—

*: with navigation system

VEHICLE SECURITY (THEFT WARNING) SYSTEM

AIS0027L

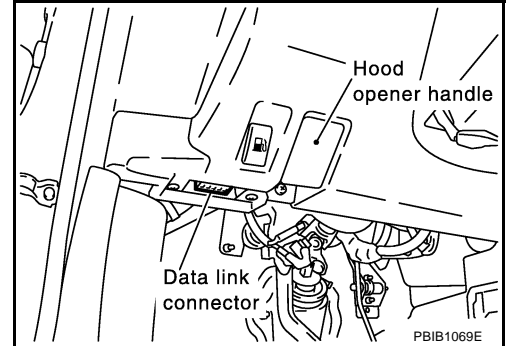
CONSULT-II Function

CONSULT-II BASIC OPERATION PROCEDURE

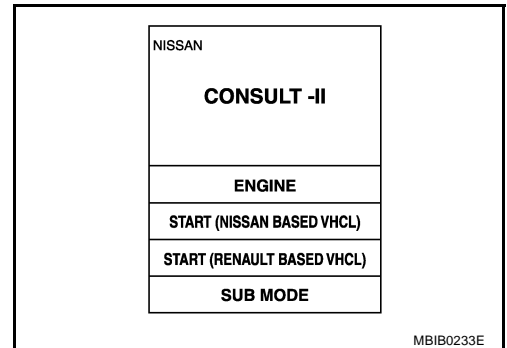
CAUTION:

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

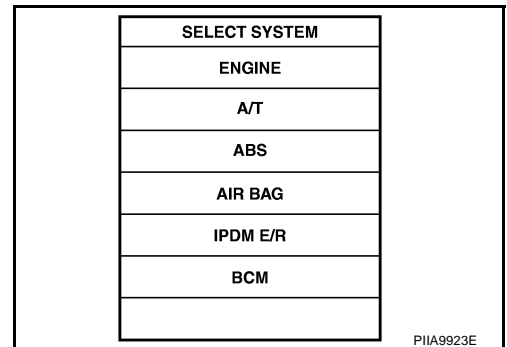
1. Turn ignition switch "OFF".
2. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.



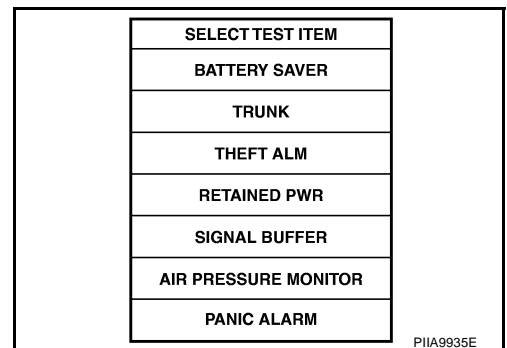
3. Turn ignition switch "ON".
4. Touch "START(NISSAN BASED VHCL)".



5. Touch "BCM".
If "BCM" is not indicated, go to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).

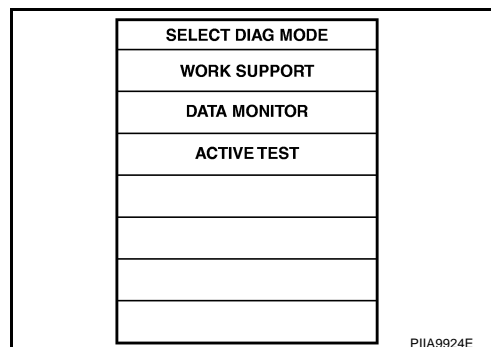


6. Touch "THEFT ALM".



VEHICLE SECURITY (THEFT WARNING) SYSTEM

7. Select diagnosis mode.
 “WORK SUPPORT”, “DATE MONITOR” and “ACTIVE TEST”



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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.

E
F

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 CYL LK SW	Indicates [ON/OFF] condition of lock signal from key cylinder switch.
KEY CYL UN SW	Indicates [ON/OFF] condition of unlock signal from key cylinder switch.
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.
BACK DOOR SW	This is displayed even when it is not equipped.
TRUNK OPNR SW	This is displayed even when it is not equipped.
TRUNK OPN MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.
TRUNK KEY SW	This is displayed even when it is not equipped.
DOOR SW-RR	This is displayed even when it is not equipped.
HOOD SW	Indicates [ON/OFF] condition of hood switch.
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from driver and passenger side door lock/unlock switch.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from driver and passenger side door lock/unlock switch.
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from key fob.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from key fob.
TRUNK BTN/SIG	Indicates [ON/OFF] condition of trunk lid open signal from key fob.

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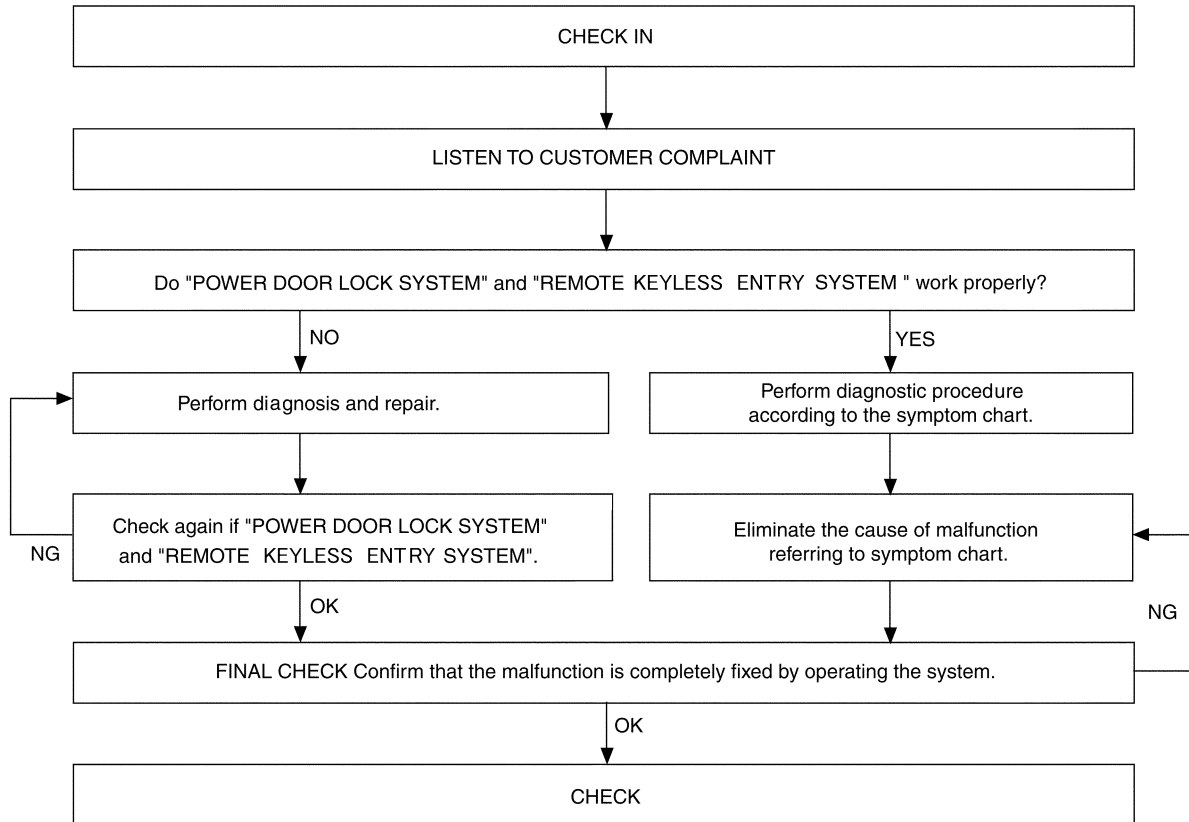
Active Test

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.
HEAD LAMP	This test is able to check vehicle security lamp (headlamp alarm) operation. The headlamps will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.
HORN	This test is able to check vehicle security horn (horn alarm) operation. The horns will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnosis WORK FLOW

AIS0027M



LIA0123E

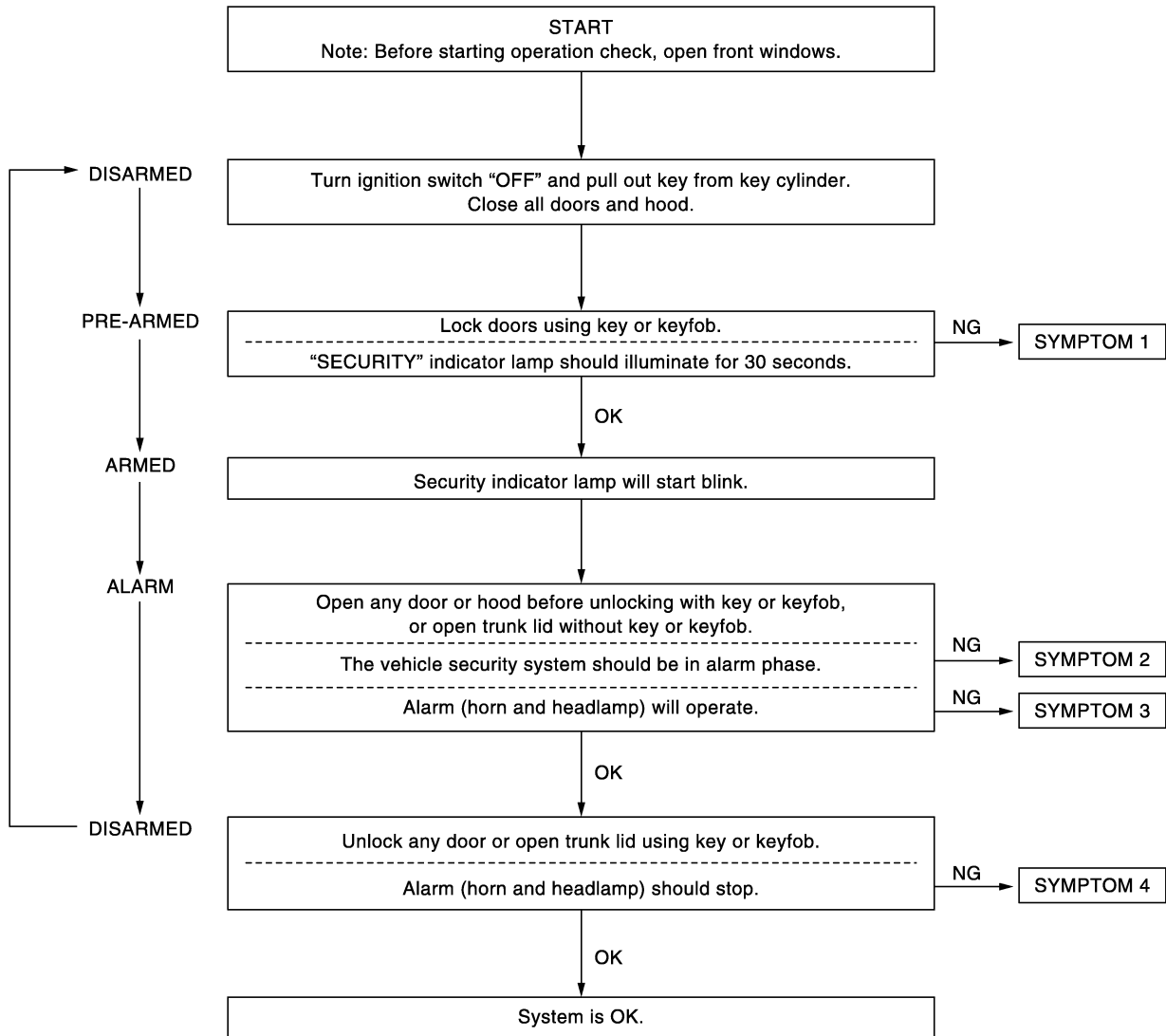
- "POWER DOOR LOCK SYSTEM" Diagnosis; refer to [BL-29, "Work Flow"](#) .
- "REMOTE KEYLESS ENTRY" Diagnosis; refer to [BL-61, "Work Flow"](#) .

VEHICLE SECURITY (THEFT WARNING) SYSTEM

AIS0027N

Preliminary Check

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



PIIA4894E

After performing preliminary check, go to symptom chart. Refer to [BL-107. "Symptom Chart"](#) .

Symptom Chart

AIS0027O

PROCEDURE		Diagnostic procedure	Reference page	
SYMPTOM				
1	Vehicle security system cannot be set by	All item	Diagnostic Procedure 1 (Door, hood and trunk room lamp switch check)	BL-109
		Lock/unlock switch	Diagnostic Procedure 6 (Door lock/unlock switch check)	BL-118
		Door outside key	Diagnostic Procedure 3 (Door key cylinder switch check)	BL-116
		Key fob	Check remote keyless entry system function.	BL-61
	—	If the above systems are "OK", replace BCM.	BCS-15	
Security indicator does not turn "ON".		Diagnostic Procedure 2 (Security indicator lamp check)	BL-116	
		If the above systems are "OK", replace BCM.	BCS-15	

VEHICLE SECURITY (THEFT WARNING) SYSTEM

PROCEDURE		Diagnostic procedure	Reference page	
SYMPTOM				
2	*1 Vehicle security system does not alarm when	Any door is opened.	Diagnostic Procedure 1 (Door, hood and trunk room lamp switch check)	BL-109
			If the above systems are "OK", replace BCM.	BCS-15
3	Vehicle security alarm does not activate.	Horn alarm	Diagnostic Procedure 4 (Vehicle security horn alarm check)	BL-117
			If the above systems are "OK", replace BCM.	BCS-15
		Headlamp alarm	Diagnostic Procedure 5 (Vehicle security headlamp alarm check)	BL-117
			If the above systems are "OK", replace BCM.	BCS-15
4	Vehicle security system cannot be canceled by	Door outside key	Diagnostic Procedure 3 (Door key cylinder switch check)	BL-116
		Key fob	Check remote keyless entry system function.	BL-61
			If the above systems are "OK", replace BCM.	BCS-15

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

VEHICLE SECURITY (THEFT WARNING) SYSTEM

AIS0027P

Diagnostic Procedure 1

1 – 1 DOOR SWITCH CHECK/WITH NAVIGATION SYSTEM

NOTE:

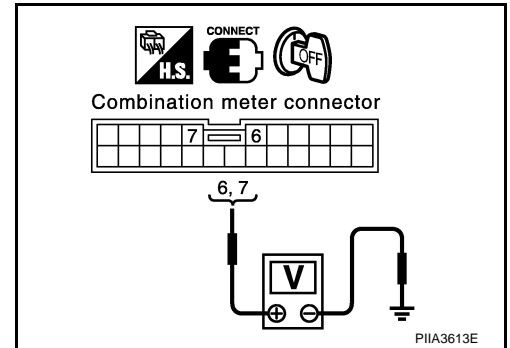
When door switch check without navigation system, go to [BL-111, "1 – 2 DOOR SWITCH CHECK/WITHOUT NAVIGATION SYSTEM"](#)

First perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, then perform the each trouble diagnosis of malfunction system indicated "SELF-DIAG RESULTS" of "BCM", Refer to [BCS-14, "CAN Communication Inspection Using CONSULT-II \(Self-Diagnosis\)"](#) .

1. CHECK DOOR SWITCH INPUT SIGNAL

Check voltage between combination meter connector M19 terminals 7, 6 and ground.

Item	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
Driver side door switch	7 (W)	Ground	CLOSE ↓	5 ↓
Passenger side door switch	6 (P)		OPEN	0



OK or NG

- OK >> Door switch circuit is OK, and go to [BL-113, "1 – 3 HOOD SWITCH CHECK"](#)
- NG >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect door switch and combination meter connector.
- Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and combination meter connector M19 terminals 7, 6.

Driver side door

1 (G/B) – 7 (W) : Continuity should exist.

Passenger side door

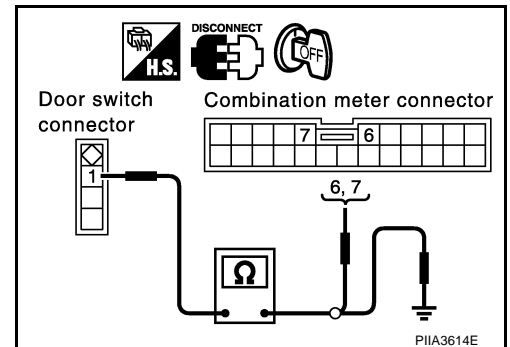
1 (P) – 6 (P) : Continuity should exist.

- Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and ground.

1 (G/B or P) – Ground : Continuity should not exist.

OK or NG

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



VEHICLE SECURITY (THEFT WARNING) SYSTEM

3. CHECK DOOR SWITCH

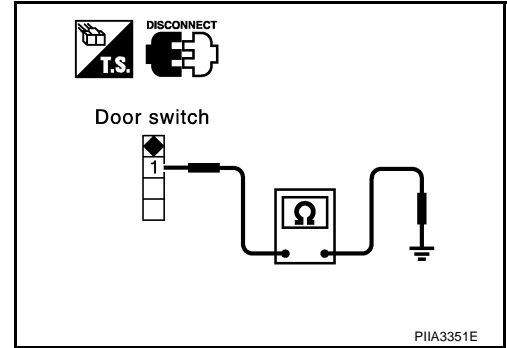
Check continuity between door switch B17 (driver side) or B410 (passenger side) terminal 1 and ground part of door switch.

Terminal	Door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

OK >> GO TO 4.

NG >> Replace door switch.



4. CHECK COMBINATION METER OUTPUT SIGNAL

1. Connect combination meter connector.
2. Check voltage between combination meter connector M19 terminals 6, 7 and ground.

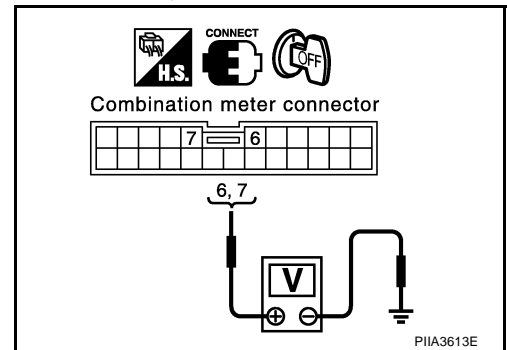
6 (P) – Ground : Approx. 5V

7 (W) – Ground : Approx. 5V

OK or NG

OK >> Check harness connection.

NG >> Replace combination meter.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

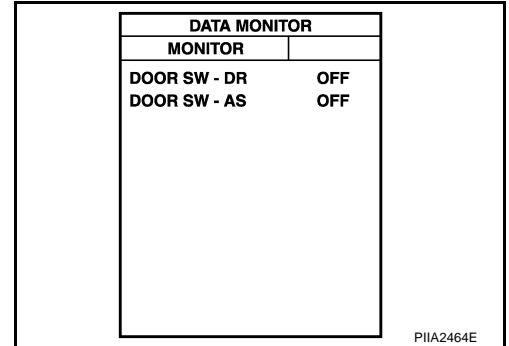
1 – 2 DOOR SWITCH CHECK/WITHOUT NAVIGATION SYSTEM

1. CHECK DOOR SWITCH INPUT SIGNAL

ⓑ With CONSULT-II

Check door switches ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-II.

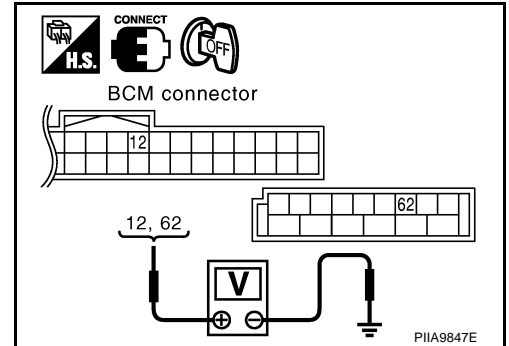
Monitor item	Condition	
DOOR SW-DR	OPEN	: ON
	CLOSE	: OFF
DOOR SW-AS	OPEN	: ON
	CLOSE	: OFF



ⓧ Without CONSULT-II

Check voltage between BCM connector M1 and B4 terminals 12, 62 and ground.

Item	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
Driver side door switch	62 (Y)	Ground	CLOSE	5
Passenger side door switch	12 (P)		OPEN	0



OK or NG

- OK >> Door switch circuit is OK, and go to [BL-113, "1 – 3 HOOD SWITCH CHECK"](#)
- NG >> GO TO 2.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM connector.
3. Check continuity between door switch connector B17 (driver side), B410 (passenger side) terminals 1 and BCM connector M1 and B4 terminals 12, 62.

Driver side door

1 (G/B) – 62 (Y) : Continuity should exist.

Passenger side door

1 (P) – 12 (P) : Continuity should exist.

4. Check continuity between BCM connector M1, B4 terminals 12, 62 and ground.

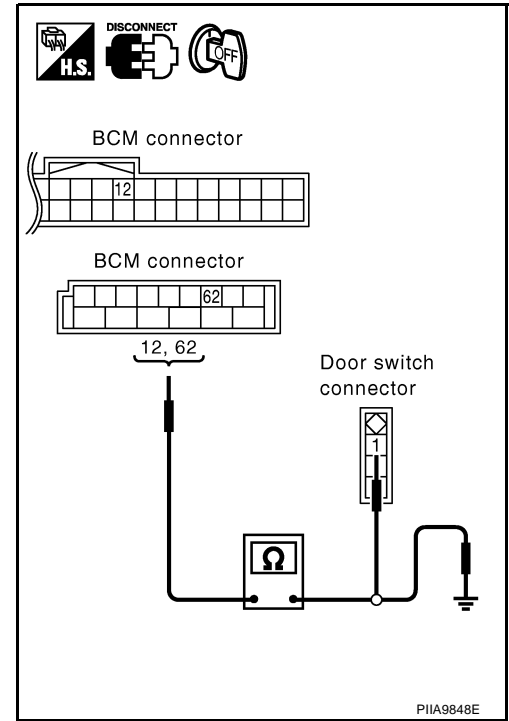
62 (Y) – Ground : Continuity should not exist.

12 (P) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK DOOR SWITCH

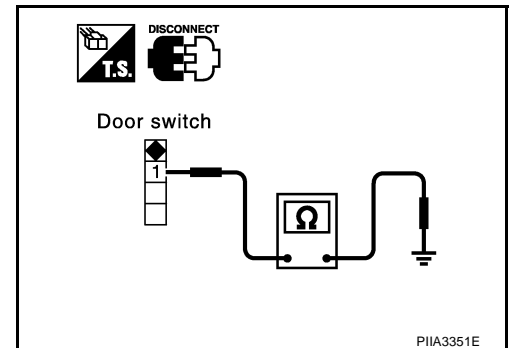
Check continuity between door switch B17 (driver side) or B410 (passenger side) terminal 1 and ground part of door switch.

Terminal	Door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

OK >> GO TO 4.

NG >> Replace door switch.

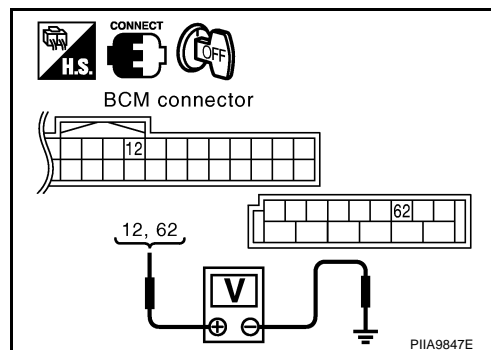


VEHICLE SECURITY (THEFT WARNING) SYSTEM

4. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Connect BCM connector.
3. Check voltage between BCM connector M1 and B4 terminals 12, 62 and ground.

Item	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
Driver side door switch	62 (Y)	Ground	CLOSE ↓ OPEN	5 ↓ 0
Passenger side door switch	12 (P)			



OK or NG

- OK >> Check harness connection.
- NG >> Replace BCM.

1 – 3 HOOD SWITCH CHECK

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-14, "CAN Communication Inspection Using CONSULT-II \(Self-Diagnosis\)"](#).

1. CHECK HOOD SWITCH

Check hood switch and hood fitting condition.

OK or NG

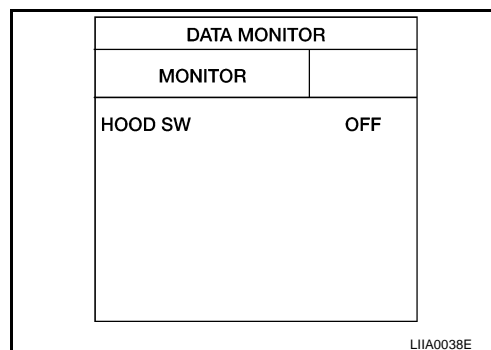
- OK >> GO TO 2.
- NG >> Adjust installation of hood switch.

2. CHECK HOOD SWITCH INPUT SIGNAL

With CONSULT-II

Check "HOOD SW" in "DATA MONITOR" mode with CONSULT-II.

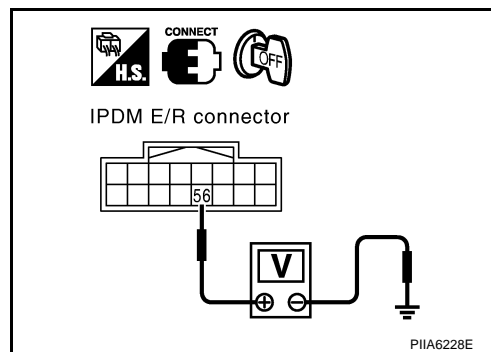
Monitor item	Condition
HOOD SW	Hood open : ON
	Hood closed : OFF



Without CONSULT-II

Check voltage between IPDM E/R connector and ground.

Terminals (Wire color)		Condition	Voltage (V) (Approx.)	
(+)	(-)			
Con- nector	Terminal (Wire color)	Ground	Closed	Battery voltage
			Open	0



OK or NG

- OK >> Hood switch is OK, and go to [BL-115, "1 – 4 TRUNK ROOM LAMP SWITCH CHECK"](#)
- NG >> GO TO 3.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

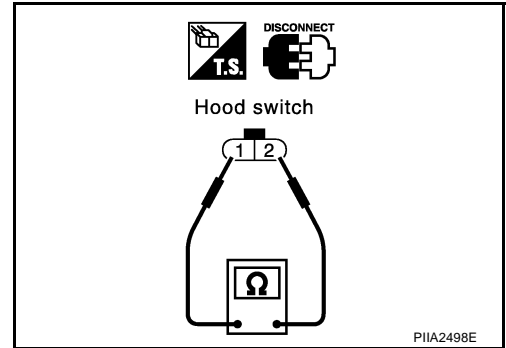
3. CHECK HOOD SWITCH

1. Disconnect hood switch connector.
2. Check continuity between hood switch connector E23 terminals 1 and 2.

Terminals	Condition	Continuity
1 - 2	Pressed	No
	Released	Yes

OK or NG

- OK >> GO TO 4.
NG >> Replace hood switch.



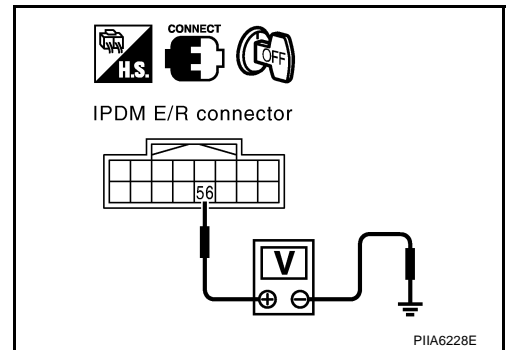
4. CHECK IPDM FUNCTION

Check voltage between IPDM E/R connector terminal 56 (LG/B) and ground.

56 (LG/B) - Ground : Battery voltage should exist.

OK or NG

- OK >> Check the following.
- Hood switch ground circuit.
 - Harness for open or short between food switch and IPDM E/R.
- NG >> Replace IPDM E/R.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

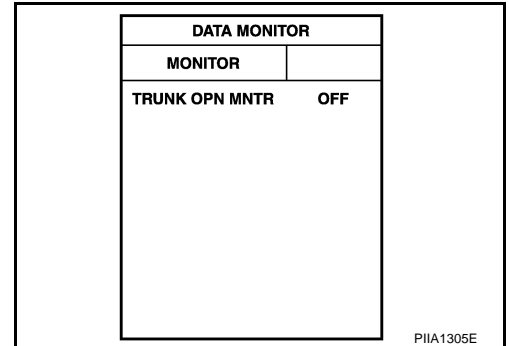
1 – 4 TRUNK ROOM LAMP SWITCH CHECK

1. CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL

Ⓟ With CONSULT-II

- Check "TRUNK OPN MNTR" in "DATA MONITOR" mode with CONSULT-II.

Monitor item	Condition
TRUNK OPN MNTR	Trunk lid open : ON
	Trunk lid closed : OFF

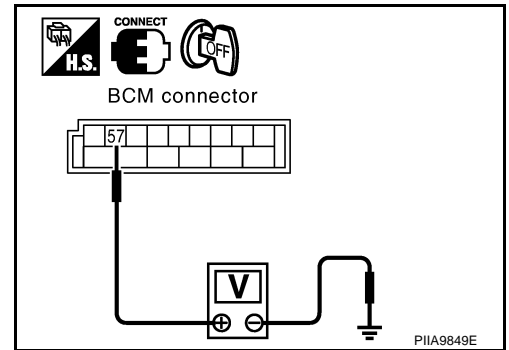


ⓧ Without CONSULT-II

- Check voltage between BCM connector and ground.

Terminals (wire color)		Condition	Voltage (V) (Approx.)
(+)			
Connector	Terminal (wire color)	(-)	
B4	57 (R)	Ground	Battery voltage*
			0

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



OK or NG

- OK >> Trunk room lamp switch is OK.
- NG >> GO TO 2.

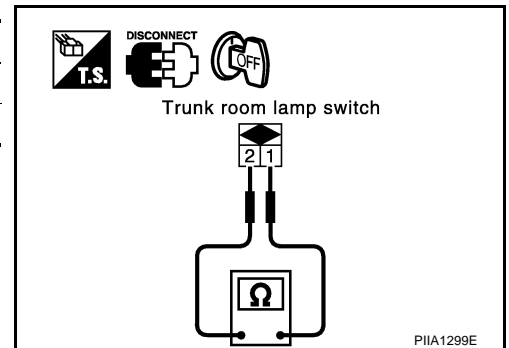
2. CHECK TRUNK ROOM LAMP SWITCH

1. Disconnect trunk room lamp switch connector.
2. Check continuity between trunk room lamp switch connector B420 terminals 1 and 2.

Connector	Terminals	Condition	Continuity
B420	1 – 2	Closed	No
		Open	Yes

OK or NG

- OK >> Check the following.
 - Trunk room lamp switch ground circuit
 - Harness for open or short between trunk room lamp switch and BCM
- NG >> Replace trunk room lamp switch.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 2 SECURITY INDICATOR LAMP CHECK

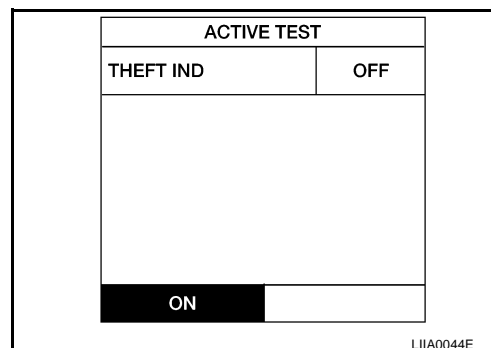
AIS0027Q

1. SECURITY INDICATOR LAMP ACTIVE TEST

④ With CONSULT-II

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

**Perform operation shown on display.
Indicator lamp should illuminate.**



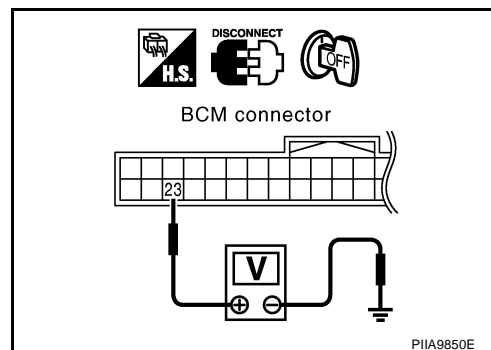
⊗ Without CONSULT-II

1. Disconnect BCM connector.
2. Check voltage between BCM connector M1 terminal 23 (OR) and ground.

23 (OR) - Ground : Battery voltage.

OK or NG

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



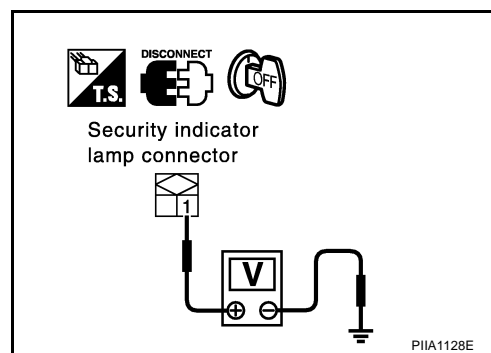
2. CHECK POWER SUPPLY CIRCUIT FOR SECURITY INDICATOR LAMP

1. Disconnect security indicator lamp connector.
2. Check voltage between security indicator lamp connector M34 terminal 1 (R/W) and ground.

1 (R/W) - Ground : Battery voltage.

OK or NG

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



Diagnostic Procedure 3 DOOR KEY CYLINDER SWITCH CHECK

AIS0027R

1. CHECK DOOR KEY CYLINDER SWITCH DRIVER SIDE OPERATION

Do doors lock/unlock with using the key?

YES or NO

- YES >> Door key cylinder switch operation is OK.
NO >> Check door key cylinder switch circuit. Refer to [BL-44, "Check Door Key Cylinder Switch"](#) .

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 4 VEHICLE SECURITY HORN ALARM CHECK

AIS0027S

1. CHECK HORN OPERATION

Check if horn sounds with horn switch.

Does horn operate?

Yes >> GO TO 2.

No >> Check horn circuit. Refer to [WW-40, "HORN"](#).

2. CHECK IPDM E/R INPUT VOLTAGE

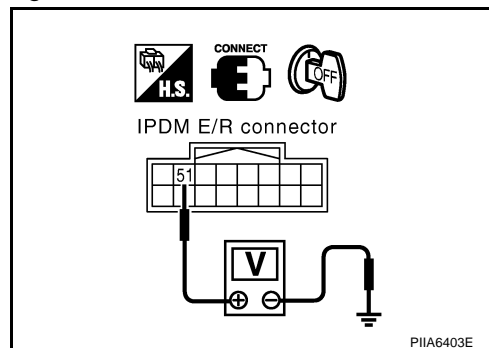
Check voltage between IPDM E/R connector E9 terminal 51 (G/B) and ground.

51(G/B) – Ground : Battery voltage

OK or NG

OK >> Replace IPDM E/R.

NG >> GO TO 3.



3. CHECK IPDM E/R HARNESS

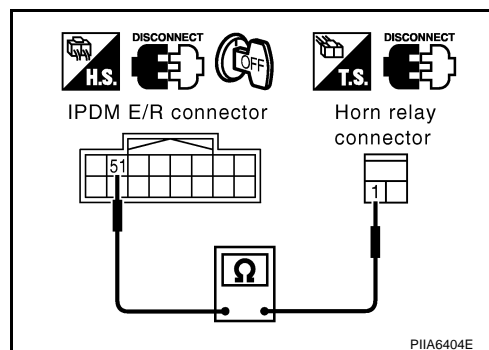
1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay connector.
3. Check continuity between IPDM E/R connector E9 terminal 51 (G/B) and horn relay connector E20 terminal 1 (G/B).

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

OK or NG?

OK >> Check harness connection.

NG >> Repair or replace harness.



Diagnostic Procedure 5 VEHICLE SECURITY HEADLAMP ALARM CHECK

AIS0027T

1. CHECK HEAD LAMP 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-7, "HEADLAMP \(FOR USA\)"](#), [LT-38, "HEADLAMP \(FOR CANADA\) - DAYTIME LIGHT SYSTEM -"](#).

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 6

AIS0027U

DOOR LOCK AND UNLOCK SWITCH CHECK

1. CHECK DOOR LOCK AND UNLOCK SWITCH INPUT SIGNAL

Do doors lock/unlock with using power window main switch (door lock and unlock switch) or power window sub-switch (door lock and unlock switch)?

YES or NO?

YES >> Door lock and unlock switch is OK.

NO >> Refer to [BL-39, "Check Door Lock and Unlock Switch"](#) .

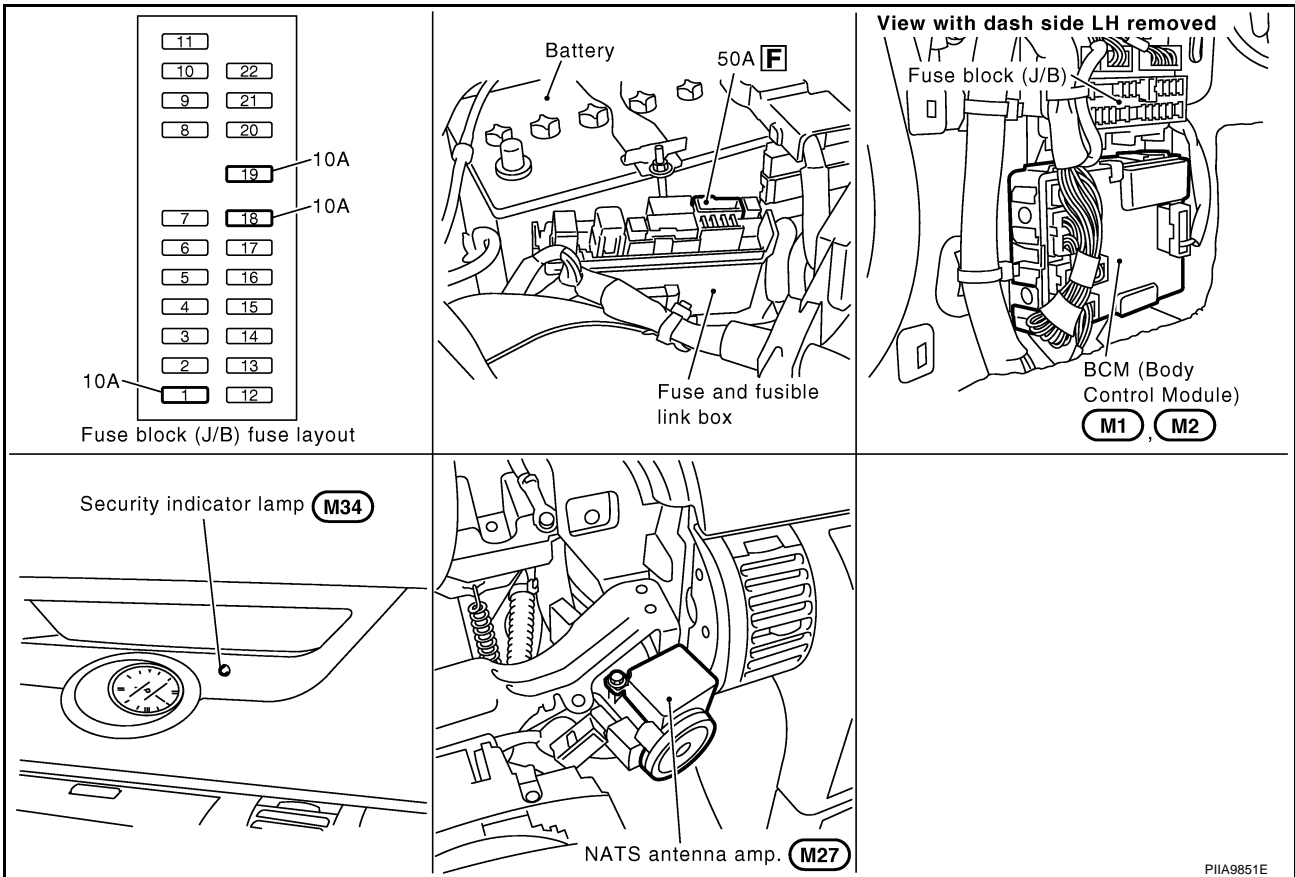
IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

PFP:28591

Component Parts and Harness Connector Location

AIS0027Z



NOTE:

If customer reports a “No start” condition, request ALL KEYS to be brought to an INFINITI dealer in case of a IVIS (NATS) malfunction.

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IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

System Description

AIS00280

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS) has the following immobilizer functions:

- Since only IVIS (NATS) ignition keys, whose ID No.s have been registered into the ECM and BCM (NATS control unit), allow the engine to run, a vehicle operation without a key registered in IVIS (NATS) is prevented by IVIS (NATS).
That is to say, IVIS (NATS) will immobilize the engine if someone tries to start it without the registered key of IVIS (NATS).
- All of the originally supplied ignition key IDs (except for card plate key) have been registered in IVIS (NATS).
If requested by the vehicle owner, a maximum of five key IDs can be registered into the IVIS (NATS) components.
- The security indicator blinks when the ignition switch is in “OFF” or “ACC” position. Therefore, IVIS (NATS) warns outsiders that the vehicle is equipped with the immobilizer system.
- When IVIS (NATS) detects trouble, the security indicator lamp lights up while ignition key is in the “ON” position.
- IVIS (NATS) trouble diagnoses, system initialization and additional registration of other IVIS (NATS) ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II IVIS (NATS) software.
When IVIS (NATS) initialization has been completed, the ID of the inserted ignition key is automatically registered in IVIS (NATS). Then, if necessary, additional registration of other IVIS (NATS) ignition key IDs can be carried out.
Regarding the procedures of IVIS (NATS) initialization and IVIS (NATS) ignition key ID registration, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.
- **When servicing a malfunction of the IVIS (NATS) (indicated by lighting up of Security Indicator Lamp) or registering another IVIS (NATS) ignition key ID No., it may be necessary to re-register original key identification. Therefore, be sure to receive ALL KEYS from vehicle owner.**

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AIIS00281

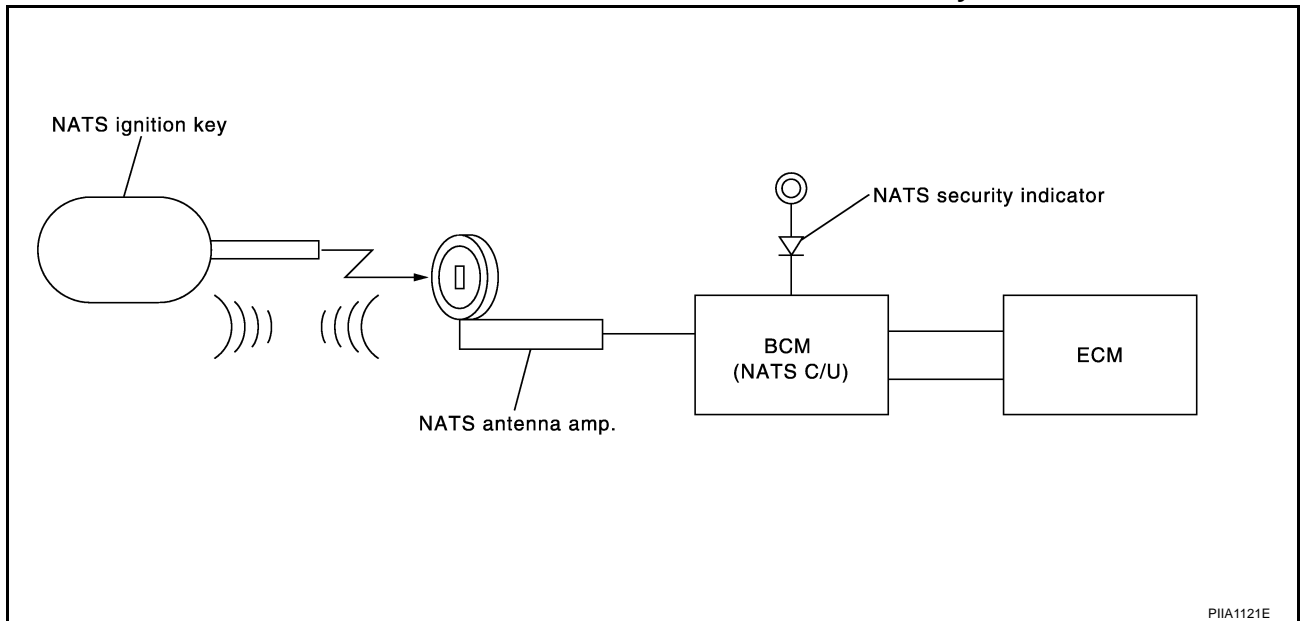
System Composition

The immobilizer function of the IVIS (NATS) consists of the following:

- NATS ignition key
- NATS antenna amp. located in the ignition key cylinder
- BCM (NATS control unit)
- Engine control module (ECM)
- Security indicator

NOTE:

The communication between ECM and BCM uses the CAN communication system.



ECM Re-communicating Function

AIIS00282

Performing following procedure can automatically perform re-communication of ECM and BCM, 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.

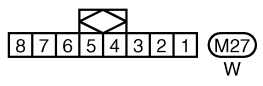
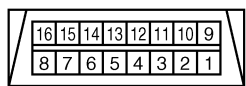
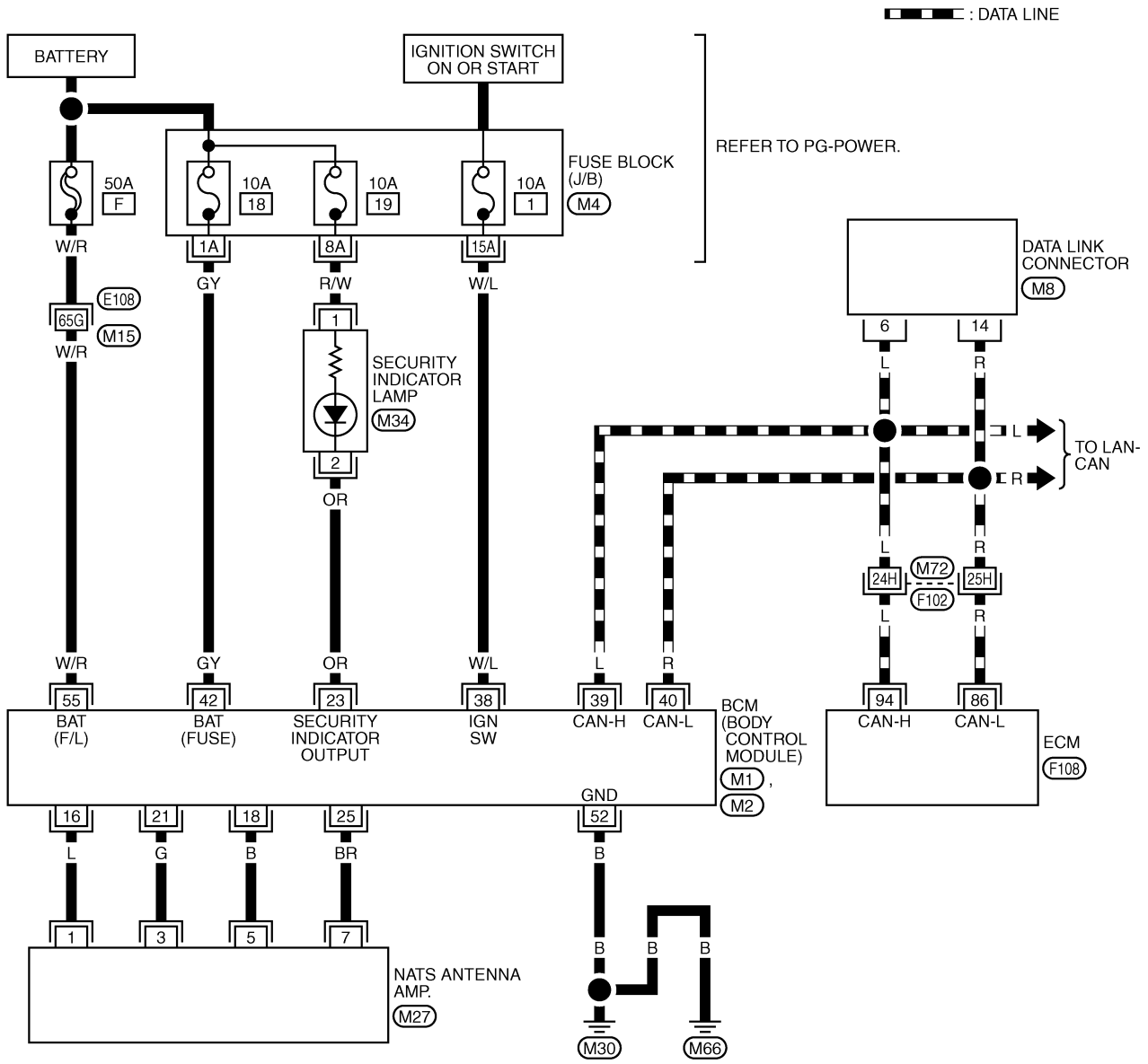
1. Install ECM.
2. Using a registered key (*2), turn ignition switch to "ON".
*2: To perform this step, use the key (except for card plate key) that has been used before performing ECM replacement.
3. Maintain ignition switch in "ON" position for at least 5 seconds.
4. Turn ignition switch to "OFF".
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.

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AIS00283

Wiring Diagram — NATS —

BL-NATS-01



REFER TO THE FOLLOWING.

- (E108), (F102) -SUPER MULTIPLE JUNCTION (SMJ)
- (M4) -FUSE BLOCK-JUNCTION BOX (J/B)
- (M1), (M2), (F108) -ELECTRICAL UNITS

TIWM0465E

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

Terminals and Reference Value for BCM

AIS00284

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
16	L	NATS antenna amp.	Ignition switch: OFF → ON	0 → 5 (for 3 seconds)
18	B	NATS antenna amp.	—	0
21	G	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch "ON": Pointer of tester should move.
23	OR	Security indicator lamp	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0
25	BR	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch "ON": Pointer of tester should move.
38	W/L	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
39	L	CAN-H	—	—
40	R	CAN-L	—	—
42	GY	Power source (fuse)	—	Battery voltage
52	B	Ground	—	0
55	W/R	Power source (Fusible link)	—	Battery voltage

CONSULT-II

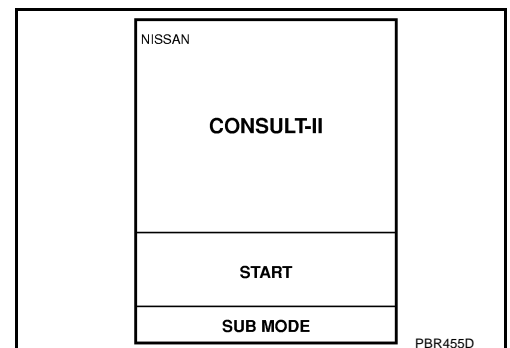
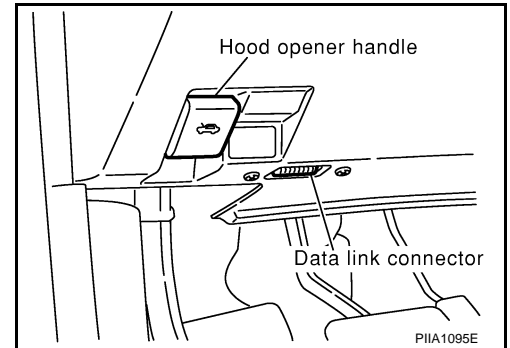
CONSULT-II INSPECTION PROCEDURE

AIS00285

CAUTION:

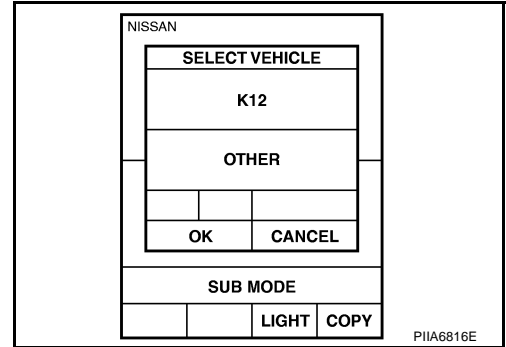
If CONSULT-II is used with no connection CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN Communication.

1. Turn ignition switch OFF.
2. Insert IVIS (NATS) program card into CONSULT-II.
Program card : NATS (AEN02C)
3. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.
4. Turn ignition switch ON.
5. Touch "START".

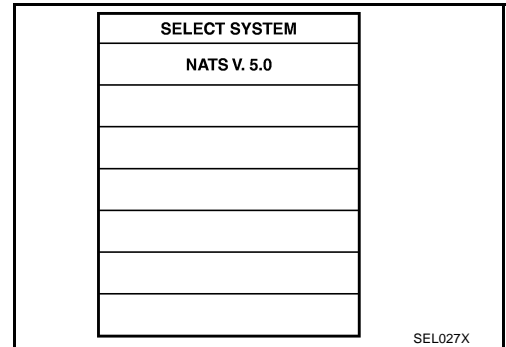


IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

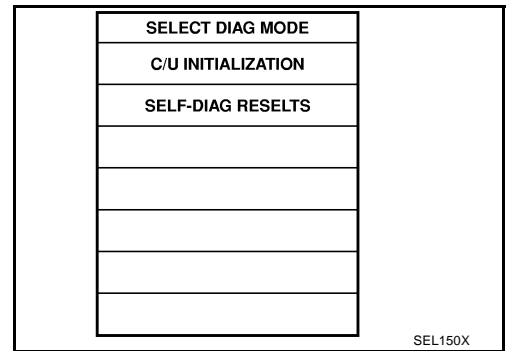
6. Touch "OTHER".



7. Select "NATS V.5.0".
If "NATS V5.0" is not indicated, go to [GI-39, "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 (NATS control unit)/ ECM*)]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart. Refer to BL-125, "IVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART" .

*: When replace ECM, refer to [BL-121, "ECM Re-communicating Function"](#) .

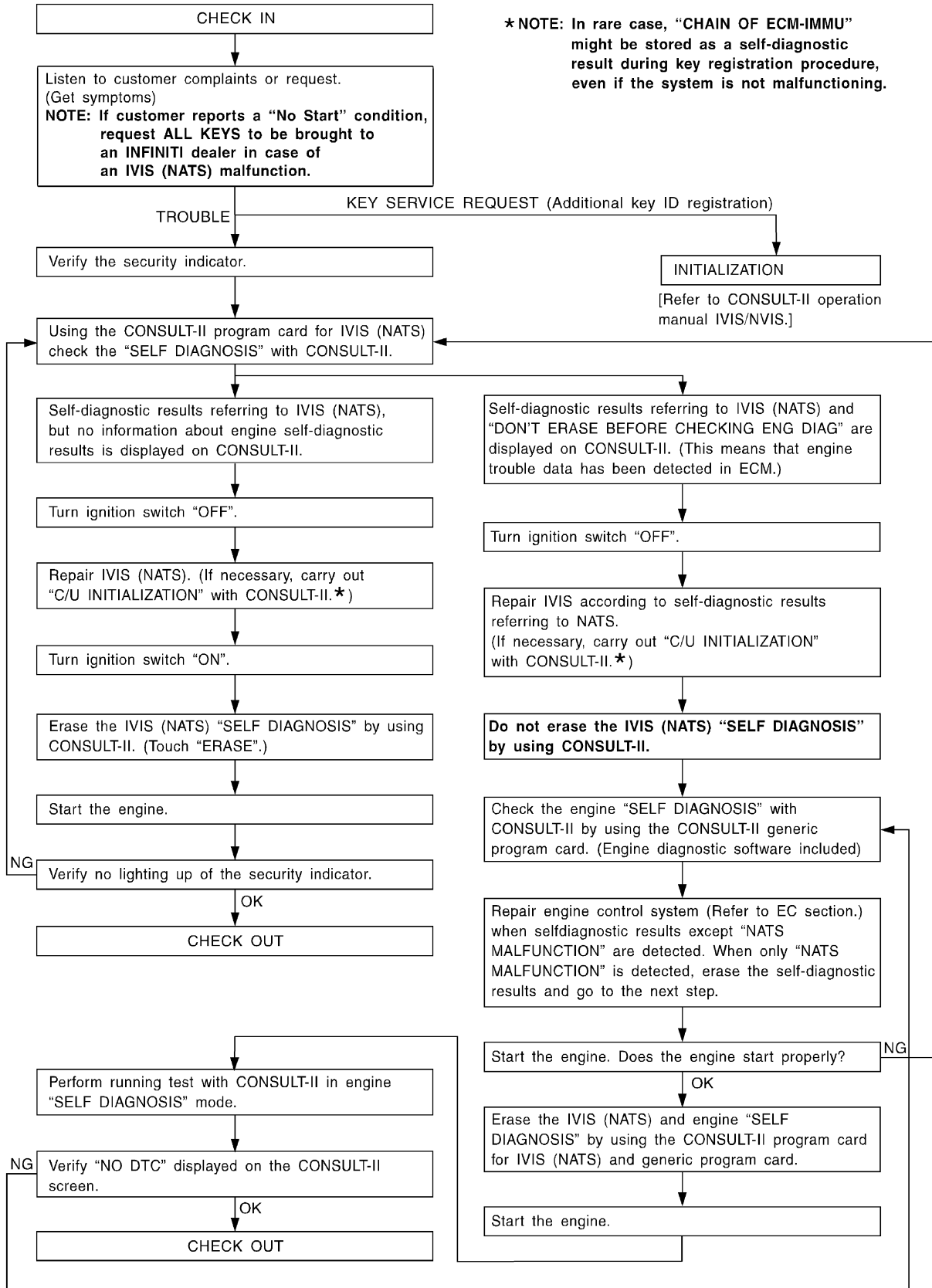
NOTE:

- 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.

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

Work Flow

AIS00286



SEL024X

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AIS00287

Trouble Diagnoses SYMPTOM MATRIX CHART 1

Self-diagnosis related item

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
<ul style="list-style-type: none"> ● Security indicator lighting up* ● Engine cannot be started 	CHAIN OF ECM-IMMU [P1612]	PROCEDURE 1 (BL-129)	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 (NATS control unit) circuit	C1
			Open circuit in ignition line of BCM (NATS control unit) circuit	C2
			Open circuit in ground line of BCM (NATS control unit) circuit	C3
			Open or short circuit between BCM (NATS control unit) and ECM communication line	C4
			ECM	B
			BCM (NATS control unit)	A
			DIFFERENCE OF KEY [P1615]	PROCEDURE 2 (BL-130)
	BCM (NATS control unit)	A		
	CHAIN OF IMMU-KEY [P1614]	PROCEDURE 3 (BL-130)	Malfunction of key ID chip	E5
			Communication line between ANT/ AMP and BCM (NATS control unit): Open circuit or short circuit of battery voltage line or ground line	E1
				E2
			Open circuit in power source line of ANT/ AMP circuit	E3
			Open circuit in ground line of ANT/ AMP circuit	E4
			NATS antenna amp.	E6
			BCM (NATS control unit)	A
			ID DISCORD, IMM-ECM [P1611]	PROCEDURE 4 (BL-132)
	ECM	B		

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IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
<ul style="list-style-type: none"> Security indicator lighting up* Engine cannot be started 	LOCK MODE [P1610]	PROCEDURE 6 (BL-135)	LOCK MODE	When the starting operation is carried out five or more times consecutively under the following conditions, IVIS (NATS) will shift the mode to one which prevents the engine from being started. <ul style="list-style-type: none"> Unregistered ignition key is used. BCM (NATS control unit) or ECM's malfunctioning.
Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-126)	Engine trouble data and IVIS (NATS) trouble data have been detected in ECM	—

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

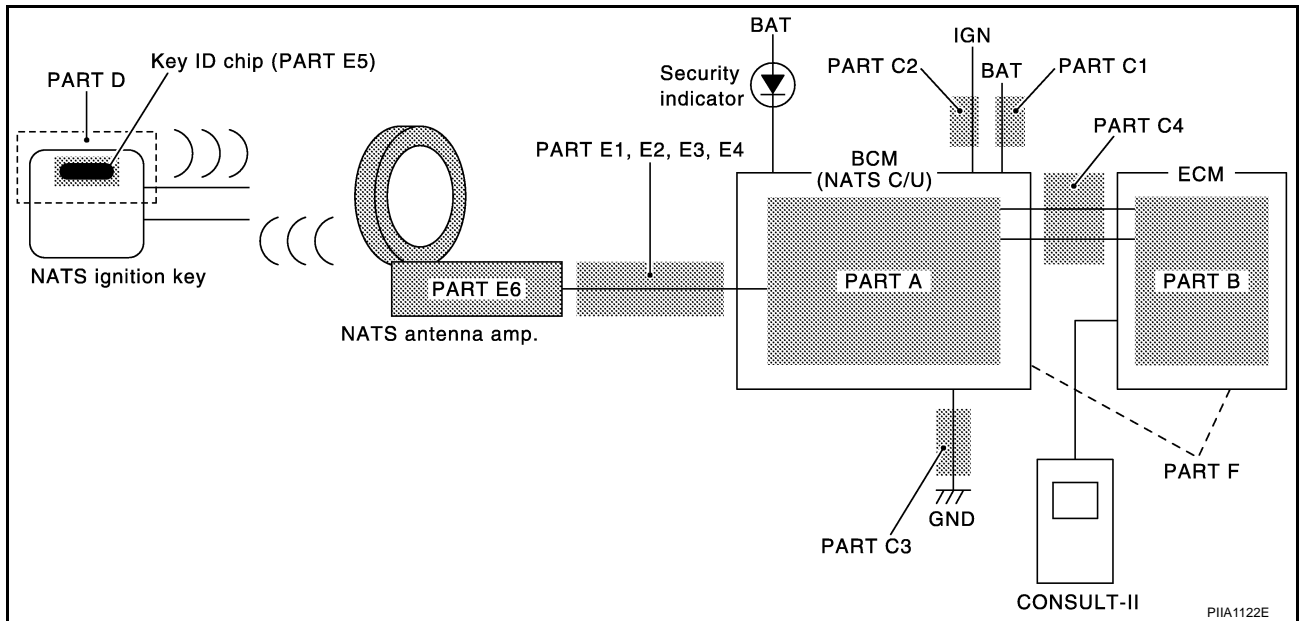
SYMPTOM MATRIX CHART 2

Non self-diagnosis related item

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
Security indicator does not light up*.	PROCEDURE 5 (BL-133)	Security indicator.	—
		Open circuit between Fuse and BCM (NATS control unit)	—
		BCM (NATS control unit)	A

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

DIAGNOSTIC SYSTEM DIAGRAM



IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AI500288

Diagnostic Procedure 1

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-14, "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 above?

YES >> GO TO 2.

NO >> GO TO [BL-127, "SYMPTOM MATRIX CHART 1"](#) .

SELF DIAGNOSIS	
DTC RESULTS	TIME
CHAIN OF ECM-IMMU [P1612]	0

2. CHECK IGN SW. ON SIGNAL

1. Turn ignition switch ON.
2. Check voltage between BCM (NATS control unit) connector M1 terminal 38 (W/L) and ground with CONSULT-II or tester.

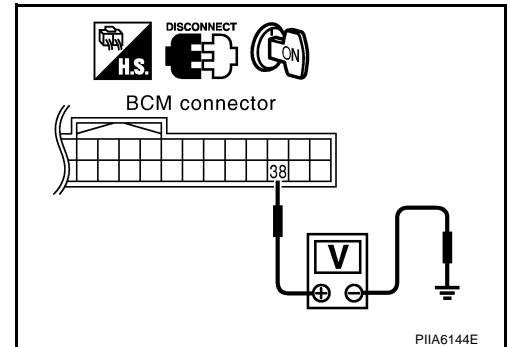
38 (W/L) – Ground : Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check the following.

- 10A fuse [No. 1, located in the fuse block (J/B)]
- Harness for open or short between fuse and BCM (NATS control unit) connector
Ref. part No. C2



3. REPLACE BCM (NATS CONTROL UNIT)

1. Replace BCM (NATS control unit) **Ref. part No. A**
2. Perform initialization with CONSULT-II.
For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

Does the engine start?

YES >> ● BCM (NATS control unit) is malfunctioning.

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

NO >> ● ECM is malfunctioning.

- Replace ECM. **Ref. part No. B**
- Perform initialization or re-communicating function.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.
- For re-communicating function, refer to [BL-121, "ECM Re-communicating Function"](#) .

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AIS00289

Diagnostic Procedure 2

Self-diagnostic results:

“DIFFERENCE OF KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

YES >> GO TO 2.

NO >> GO TO [BL-127, "SYMPTOM MATRIX CHART 1"](#).

SELF DIAG RESULTS	
DTC RESULTS	TIME
DIFFERENCE OF KEY [P1615]	0

PIIA1261E

2. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.

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

NOTE:

If the initialization is not completed or malfunctions, CONSULT-II shows message on the screen.

Can the system be initialized and can the engine be started with re-registered NATS ignition key?

YES >> Ignition key ID was unregistered. **Ref. part No. D**

NO >> ● BCM (NATS control unit) is malfunctioning.

● Replace BCM (NATS control unit). **Ref. part No. A**

● Perform initialization with CONSULT-II.

● For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

IMMU INITIALIZATION
INITIALIZATION FAIL
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.

SEL297W

Diagnostic Procedure 3

AIS0028A

Self-diagnostic results:

“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

YES >> GO TO 2.

NO >> GO TO [BL-127, "SYMPTOM MATRIX CHART 1"](#).

SELF DIAGNOSIS	
DTC RESULTS	TIME
CHAIN OF IMMU-KEY [P1614]	0

PIIA1263E

2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to [BL-136, "How to Replace NATS Antenna Amp."](#).

OK or NG

OK >> GO TO 3.

NG >> Reinstall NATS antenna amp. correctly.

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

3. CHECK IVIS (NATS) IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

Does the engine start?

YES >> Ignition key ID chip is malfunctioning.

- Replace the ignition key.
Ref. part No, E5
- Perform initialization with CONSULT-II.
For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

NO >> GO TO 4.

4. CHECK POWER SUPPLY FOR NATS ANTENNA AMP.

1. Turn ignition switch ON.
2. Check voltage between NATS antenna amp. connector M27 terminal 1 and ground with CONSULT-II or tester.

Just after turning ignition switch “ON”
1 (L) – Ground: Approx. 5V (For 3 seconds)

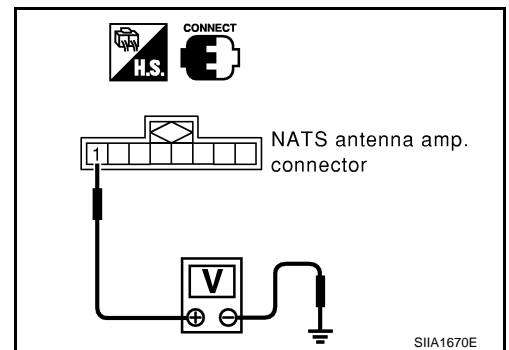
OK or NG

OK >> GO TO 5.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM (NATS control unit).

NOTE:

If harness is OK, replace BCM (NATS control unit), 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 M27 terminal 3 and ground with analogue tester.

Before turning ignition switch “ON”
3 (G) – Ground: 0V

Just after turning ignition switch “ON”
: Pointer of tester should move.

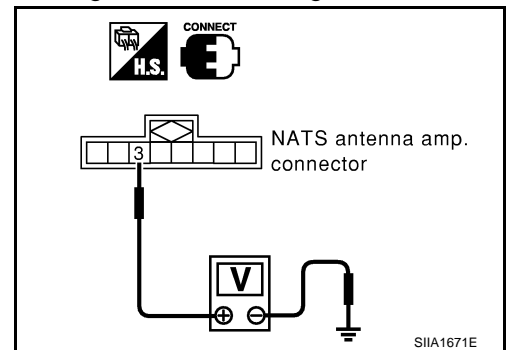
OK or NG

OK >> GO TO 6.

NG >> ● Check harness for open or short between NATS antenna amp. and BCM (NATS control unit).

NOTE:

If harness is OK, replace BCM (NATS control unit), perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.



IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

6. CHECK NATS ANTENNA AMP. SIGNAL LINE- 2

Check voltage between NATS antenna amp. connector M27 terminal 7 and ground with analogue tester.

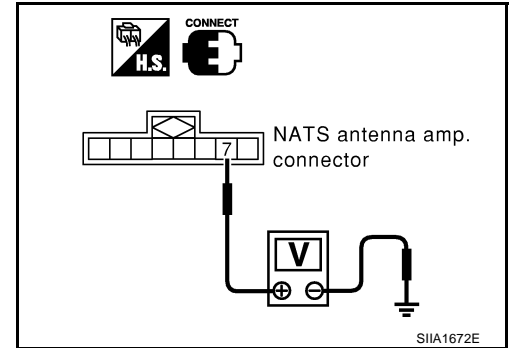
7 (BR) – Ground

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 (NATS control unit).

NOTE:

If harness is OK, replace BCM (NATS control unit), 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 M27 terminal 5 and ground.

5 (B) – Ground : Continuity should exist.

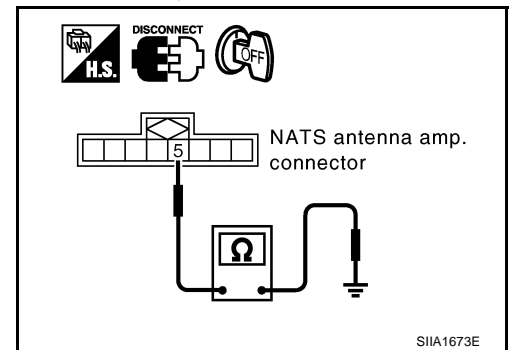
OK or NG

OK >> NATS antenna amp. is malfunctioning. **Ref. part No. E6**

NG >> ● Check harness for open or short between NATS antenna amp. and BCM (NATS control unit).

NOTE:

If harness is OK, replace BCM (NATS control unit), perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.



Diagnostic Procedure 4

AIS0028B

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 (NATS control unit) is in discord with that of ECM.

Is CONSULT-II screen displayed as above?

YES >> GO TO 2.

NO >> GO TO [BL-129, "Diagnostic Procedure 1"](#) .

SELF DIAG RESULTS	
DTC RESULTS	TIME
ID DISCORD, IMM-ECM [P1611]	0

PIA1262E

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

2. PERFORM INITIALIZATION WITH CONSULT-II

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

NOTE:

If the initialization is not completed or malfunctions, CONSULT-II shows message on the screen.

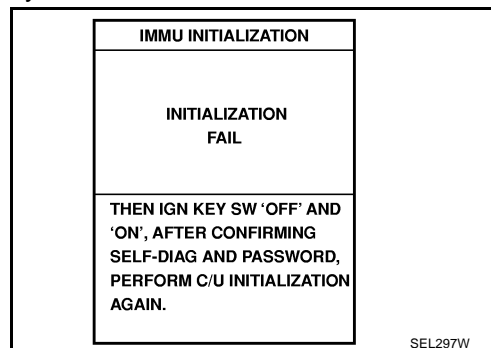
Can the system be initialized?

YES >> ● Start engine. (END)

- (System initialization had not been completed. **Ref. part No. F**)

NO >> ECM is malfunctioning.

- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II.
For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".



Diagnostic Procedure 5

AIS0028C

"SECURITY INDICATOR LAMP DOES NOT LIGHT UP"

1. CHECK FUSE

- Check 10A fuse [No.19, located in the fuse block (J/B)]

OK or NG

OK >> GO TO 2.

NG >> Replace fuse.

2. CHECK SECURITY INDICATOR LAMP

1. Start engine and turn ignition switch OFF.
2. Check the security indicator lamp lights up.

Security indicator lamp should light up.

OK or NG

OK >> Inspection END.

NG >> GO TO 3.

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

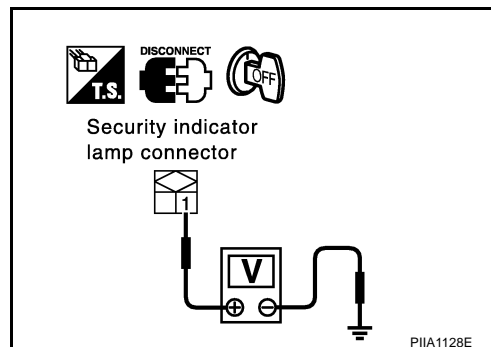
1. Disconnect security indicator lamp connector.
2. Check voltage between security indicator lamp connector M34 terminal 1 and ground.

1 (R/W) – Ground : Battery voltage

OK or NG

OK >> GO TO 4.

NG >> Check harness for open or short between fuse and security indicator lamp.



IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

4. CHECK BCM (NATS CONTROL UNIT) FUNCTION

1. Connect security indicator lamp connector.
2. Disconnect BCM (NATS control unit) connector M1.
3. Check voltage between BCM (NATS control unit) connector M1 terminal 23 and ground.

23 (OR) – Ground : Battery voltage

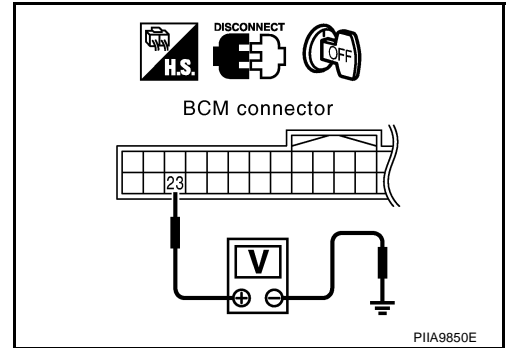
OK or NG

OK >> BCM (NATS control unit) is malfunctioning.

- Replace BCM (NATS control unit).
Ref. part No. A
- Perform initialization with CONSULT-II.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

NG >> Check the following.

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



IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

AIS0028D

Diagnostic Procedure 6

Self-diagnostic results:

“LOCK MODE” displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

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

Is CONSULT-II screen displayed as above?

- Yes >> GO TO 2.
- No >> GO TO [BL-129, "Diagnostic Procedure 1"](#) .

SELF DIAG RESULTS	
DTC RESULTS	TIME
LOCK MODE [P1610]	0

PIIA1264E

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

IMMU INITIALIZATION
INITIALIZATION FAIL
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.

SEL297W

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

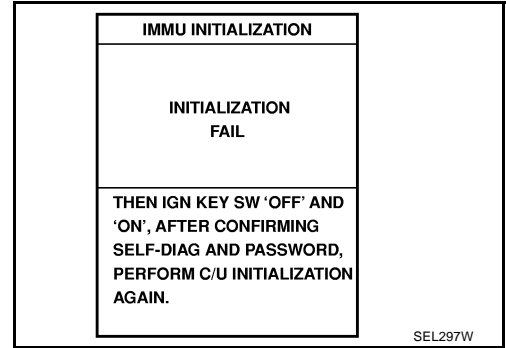
1. Replace BCM (NATS control unit).
2. Perform initialization with CONSULT-II.
For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".

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 (NATS control unit) is malfunctioning. **Ref. part No. A**)
- No >> ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
 - Perform initialization with CONSULT-II.
 - For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".

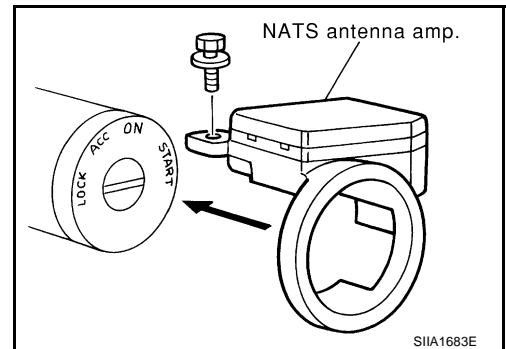


How to Replace NATS Antenna Amp.

AIS0028E

NOTE:

- If NATS antenna amp. is not installed correctly, IVIS (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

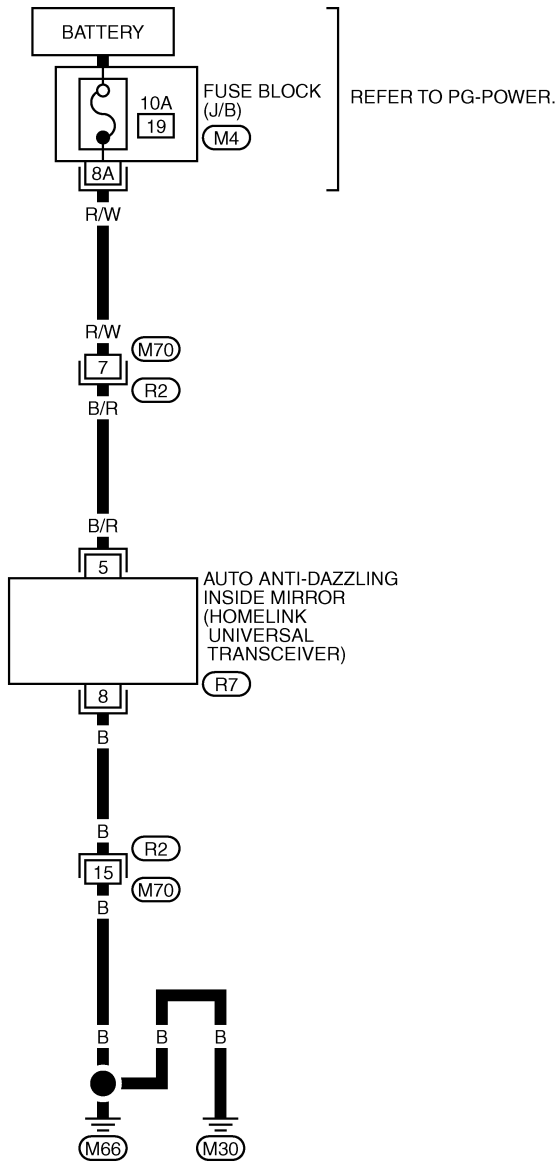
INTEGRATED HOMELINK TRANSMITTER

PPF:96401

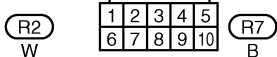
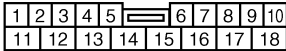
Wiring Diagram —TRNSCV—

AIS001WW

BL-TRNSCV-01



A
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REFER TO THE FOLLOWING.

(M4) - FUSE BLOCK-JUNCTION BOX (J/B)

INTEGRATED HOMELINK TRANSMITTER

AIS001WX

Trouble Diagnoses 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.

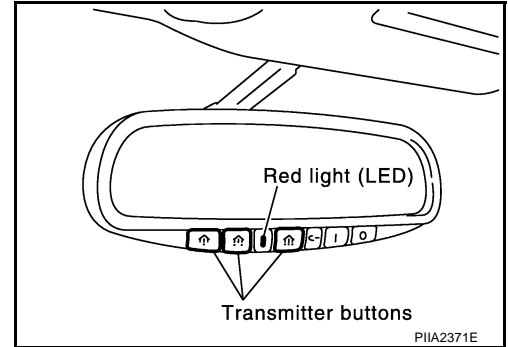
1. CHECK ILLUMINATION

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 transmitter with Tool*.

*:For details, refer to Technical Service Bulletin.

OK or NG

OK >> Receiver or hand-held transmitter malfunction, not vehicle related.

NG >> Replace inside mirror assembly.

3. CHECK POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect transmitter connector.
3. Check voltage between auto anti-dazzling inside mirror (homelink universal transceiver) connector R7 terminal 5 and ground.

5 (B/R) – Ground

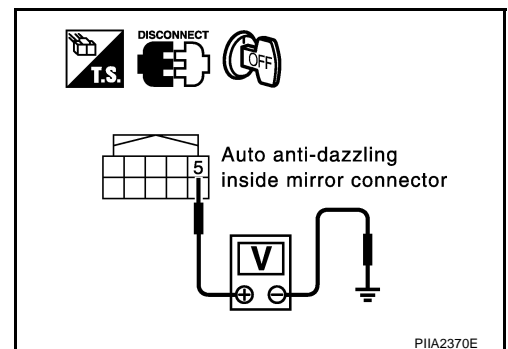
: Battery voltage

OK or NG

OK >> GO TO 4.

NG >> Check the following

- 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).



INTEGRATED HOMELINK TRANSMITTER

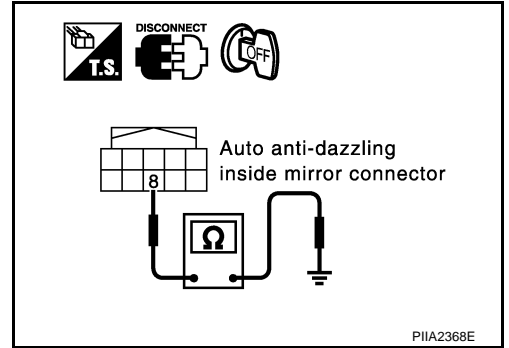
4. CHECK GROUND CIRCUIT

Check continuity between anti-dazzling inside mirror (homelink universal transceiver) connector R7 terminal 8 and ground.

8 (B) – Ground :Continuity should exist.

OK or NG

- OK >> Replace inside mirror assembly.
- NG >> Repair or replace harness between anti-dazzling inside mirror (homelink universal transceiver) and ground.



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BL

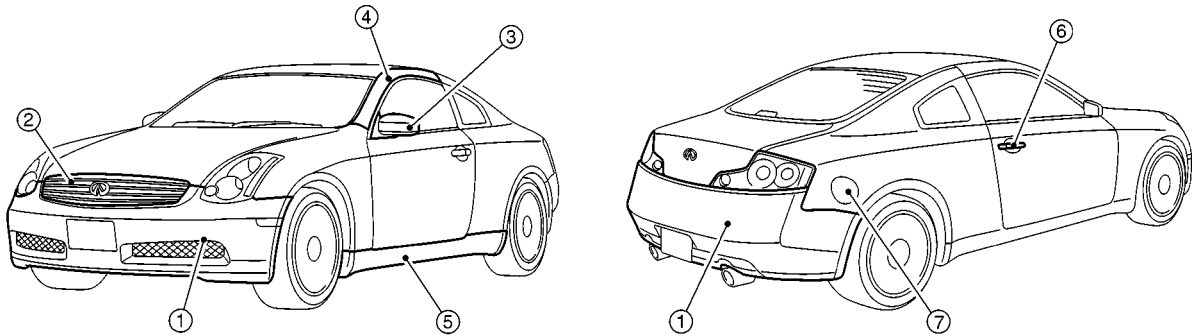
BODY REPAIR

BODY REPAIR

PFP:60100

Body Exterior Paint Color

AIS0018P



SIIA2128E

Component		Color code	BAX6	BB16	BKH3	BKX6	BKY0	BQX1	BWV2	
		Description	Red	Blue	Black	Silver	Silver	White	Gray	
		Paint type	2S	M	2S	TM	M	3P	M	
		Hard clear coat	×	×	×	-	-	-	-	
1	Bumper fascia	Body color	BAX6	BB16	BKH3	BKX6	BKY0	BQX1	BWV2	
2	Front grille	Chromium-plate + Smoke clear	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	
3	Door outside mirror	Case	Body color	BAX6	BB16	BKH3	BKX6	BKY0	BQX1	BWV2
		Base	Material color	AG01	AG01	AG01	AG01	AG01	AG01	AG01
4	Front pillar finisher	Body color	BAX6	BB16	BKH3	BKX6	BKY0	BQX1	BWV2	
5	Center mudguard	Body color	BAX6	BB16	BKH3	BKX6	BKY0	BQX1	BWV2	
6	Door outside handle	Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	
7	Fuel filler lid	Body color	BAX6	BB16	BKH3	BKX6	BKY0	BQX1	BWV2	

2S:Solid + Clear, M:Metallic, 3P:3-Coat pearl, TM:Micro titanium metallic

BODY REPAIR

Body Component Parts UNDERBODY COMPONENT PARTS

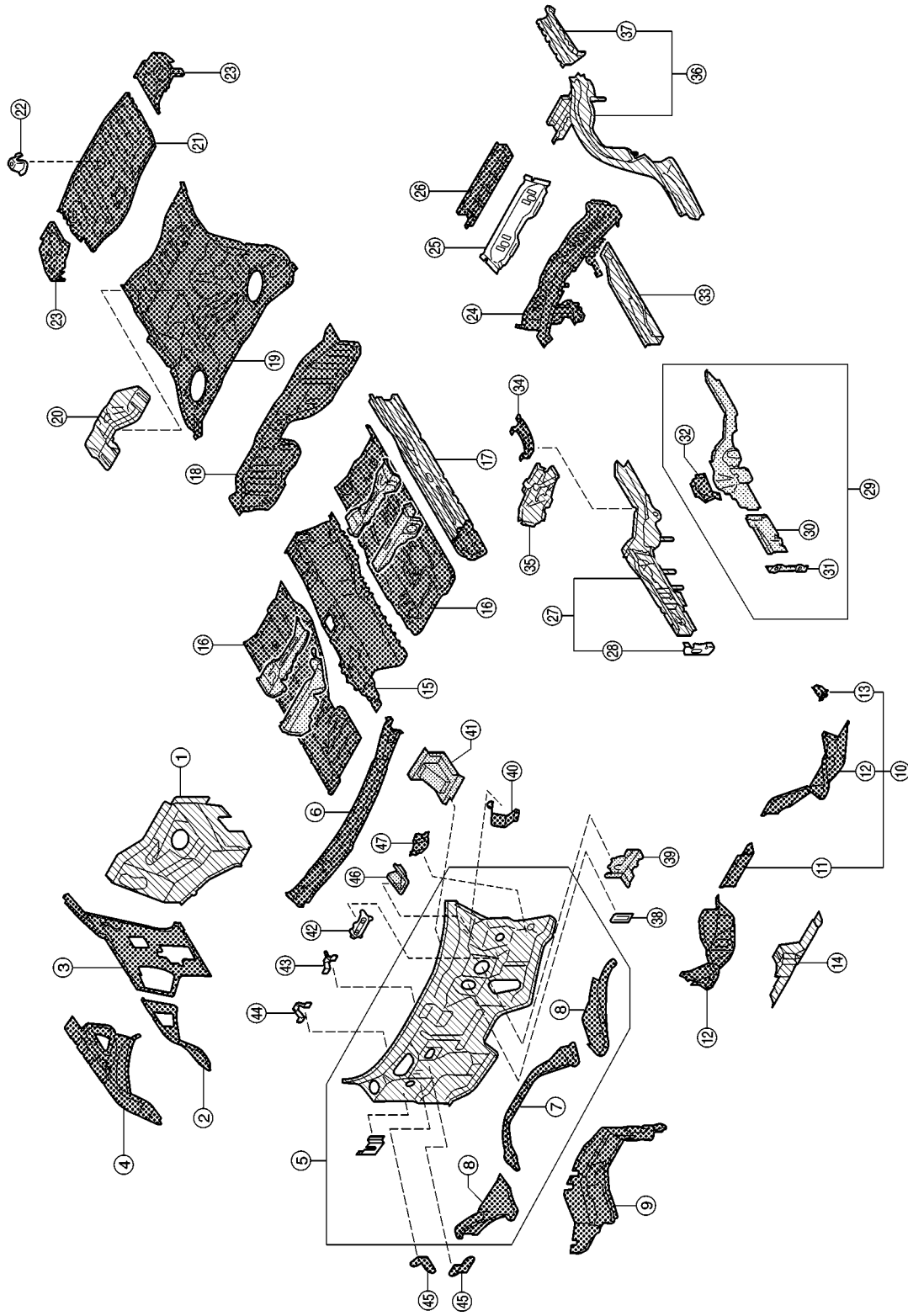
AIS0018Q

* Indicates aluminum portion

▨ : Indicates both sided anti-corrosive pre-coated steel portions

▧ : Indicates high strength steel (HSS) portions

▩ : Indicates both sided anti-corrosive steel and HSS portions



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SIIA2372E

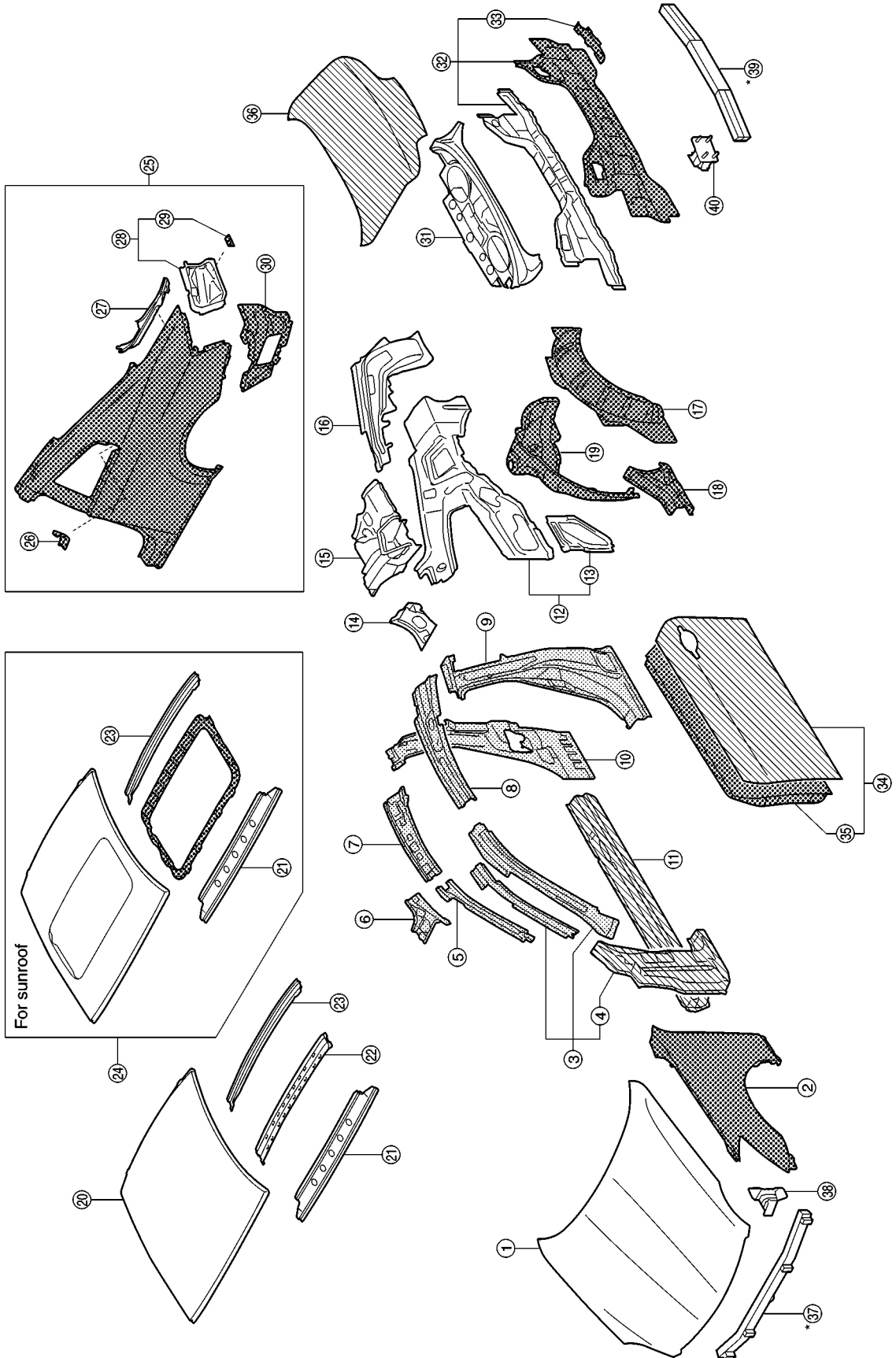
BODY REPAIR

1. Front strut housing (RH&LH)
2. Upper front hoodledge (RH&LH)
3. Upper rear hoodledge (RH&LH)
4. Hoodledge reinforcement (RH&LH)
5. Upper dash assembly
6. Upper dash crossmember assembly
7. Lower center dash crossmember reinforcement
8. Lower dash crossmember reinforcement
9. Cowl top
10. Lower dash crossmember assembly
11. Front crossmember center
12. Lower dash crossmember
13. Steering column mounting reinforcement
14. Lower dash
15. Front floor center
16. Front floor
17. Inner sill (RH&LH)
18. Rear seat crossmember assembly
19. Rear floor front
20. Rear floor seat belt anchor reinforcement
21. Rear floor rear
22. Spare tire clamp bracket
23. Rear floor side
24. Rear seat crossmember
25. 2ND rear crossmember assembly
26. Rear crossmember center assembly
27. Front side member assembly (RH&LH)
28. Front towing hook inner bracket (RH&LH)
29. Front side member closing plate assembly (RH&LH)
30. Front side member front closing plate (RH&LH)
31. Front towing hook outer bracket (RH&LH)
32. Front side member rear extension (RH&LH)
33. Front side member center closing plate (RH&LH)
34. Front side member rear reinforcement (RH&LH)
35. Front side member outrigger assembly (RH&LH)
36. Rear side member (RH&LH)
37. Rear side member extension (RH&LH)
38. Accel pedal bracket
39. Pedal bracket
40. Wiper mounting bracket
41. Parking brake mounting bracket
42. Parking brake bracket assembly
43. Instrument bracket
44. Upper instrument mounting bracket (RH&LH)
45. Harness clamp bracket
46. Clutch pedal bracket
47. Clutch orifice bracket

BODY REPAIR

BODY COMPONENT PARTS

-  : Indicates both sided anti-corrosive pre-coated steel portions
 -  : Indicates high strength steel (HSS) portions
 -  : Indicates both sided anti-corrosive steel and HSS portions
- * Indicates aluminum portion



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BL

BODY REPAIR

1. Hood
2. Front fender (RH&LH)
3. Front pillar reinforcement assembly (RH&LH)
4. Front pillar hinge brace (RH&LH)
5. Upper inner front pillar assembly (RH&LH)
6. Front roof rail brace (RH&LH)
7. Inner side roof rail (RH&LH)
8. Outer side roof rail reinforcement (RH&LH)
9. Outer lock pillar reinforcement (RH&LH)
10. Inner lock pillar assembly (RH&LH)
11. Outer sill reinforcement assembly (RH&LH)
12. Inner rear pillar assembly (RH&LH)
13. Lower inner rear pillar (RH&LH)
14. Seat back support (RH&LH)
15. Side parcel shelf (RH&LH)
16. Rear pillar reinforcement (RH&LH)
17. Outer rear wheel house (RH&LH)
18. Outer rear wheel house extension (RH&LH)
19. Inner rear wheel house (RH&LH)
20. Roof
21. Front roof rail assembly
22. Rear roof bow
23. Rear roof rail assembly
24. Roof assembly (for sunroof)
25. Rear fender assembly (RH&LH)
26. Rear fender drip (RH&LH)
27. Upper rear fender extension (RH&LH)
28. Rear combination lamp base (RH&LH)
29. Rear bumper bracket (RH&LH)
30. Lower rear fender extension (RH&LH)
31. Parcel shelf with rear waist
32. Rear panel assembly
33. Rear bumper fascia bracket (RH&LH)
34. Front door assembly (RH&LH)
35. Outer front door panel (RH&LH)
36. Trunk lid
37. Front bumper reinforcement
38. Front bumper stay (RH&LH)
39. Rear bumper reinforcement
40. Rear bumper stay (RH&LH)

BODY REPAIR

Corrosion Protection

AIS0018R

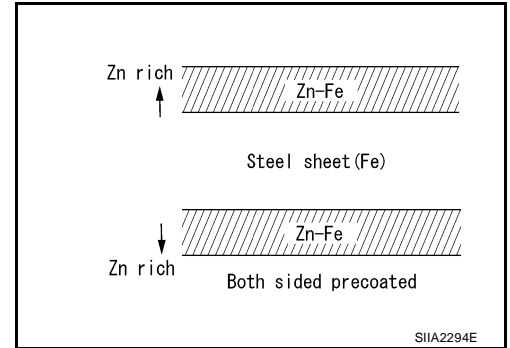
DESCRIPTION

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.



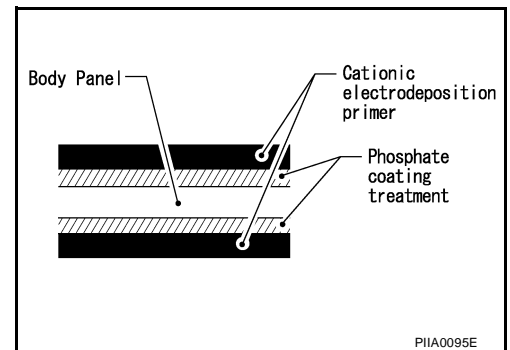
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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.

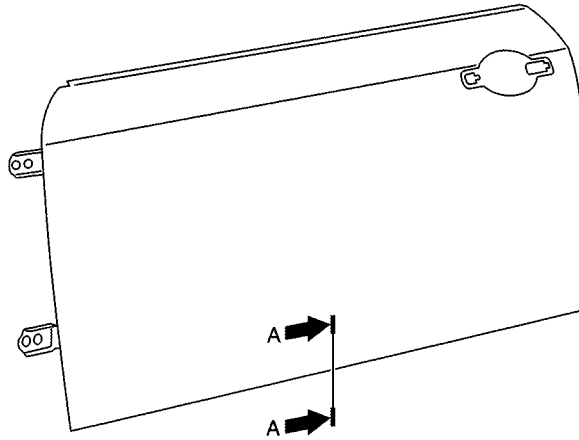



Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

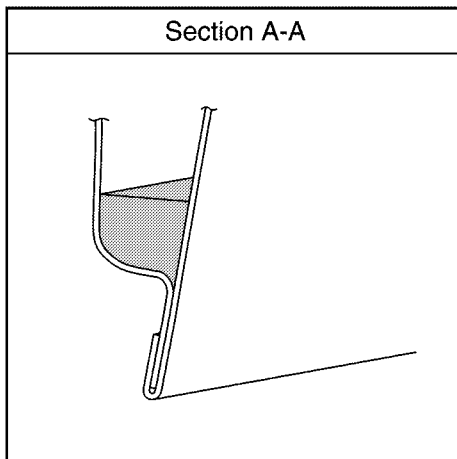
BODY REPAIR

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.



SIA2131E


BODY REPAIR


UNDERCOATING

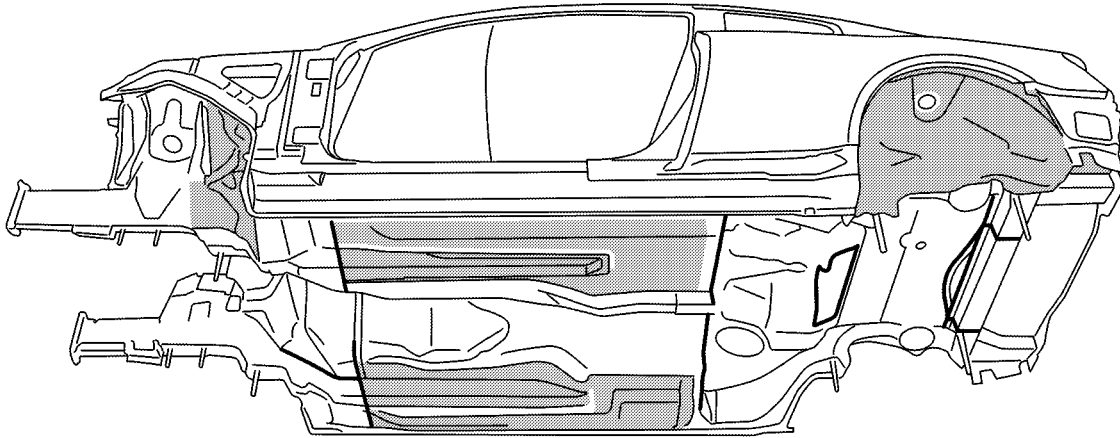
The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust preventive, soundproof, vibration-proof, shock-resistant, adhesive, 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.

 : Indicates sealed portions.




STONE GUARD COAT

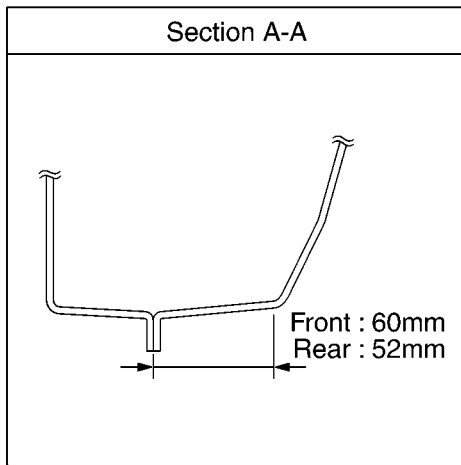
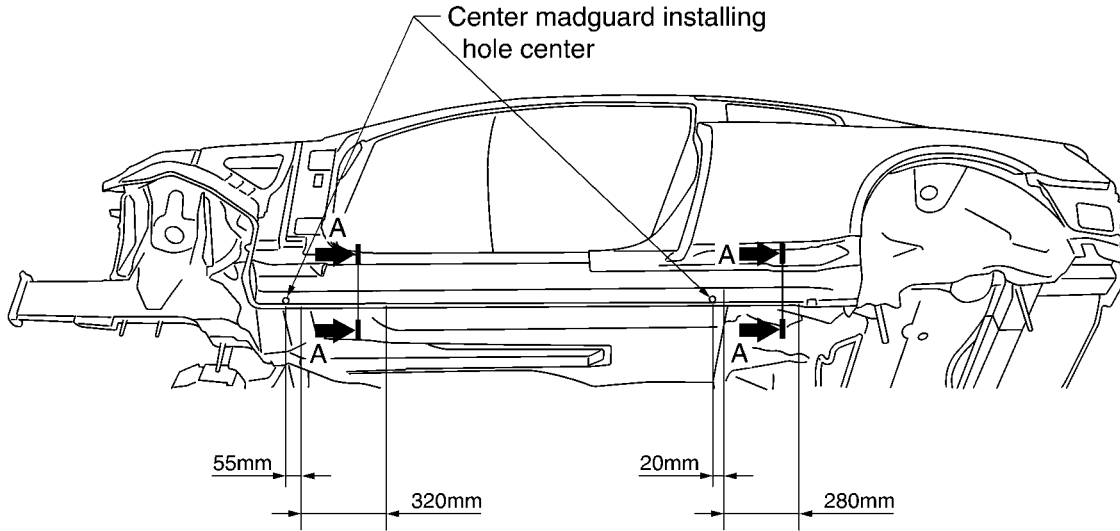
To prevent damage caused by stones, the lower outer body panel (fender, door, etc.) have an additional layer of Stone Guard Coating over the ED primer coating. When replacing or repairing these panels, apply Stone

SIIA2132E

BODY REPAIR

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.



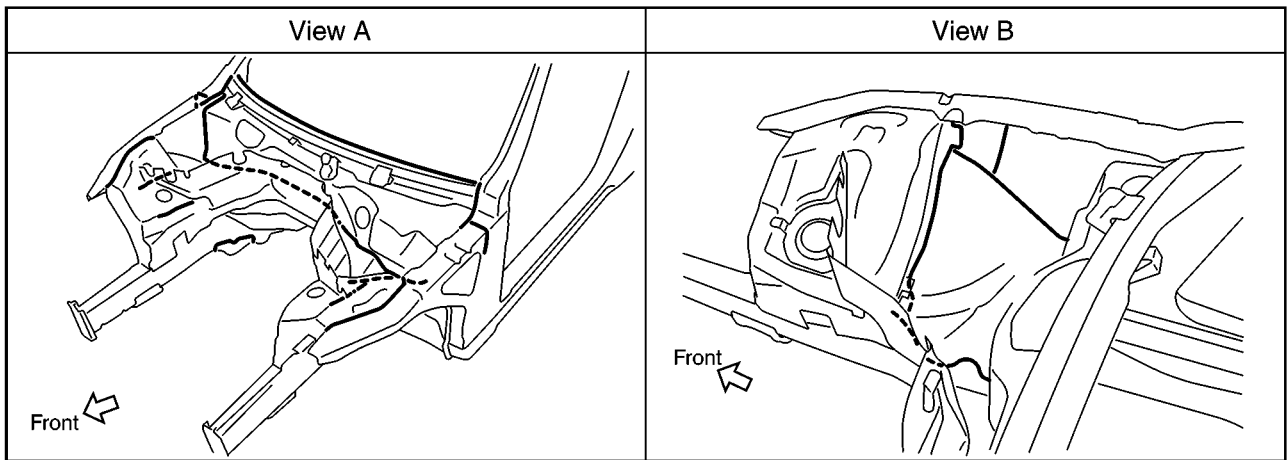
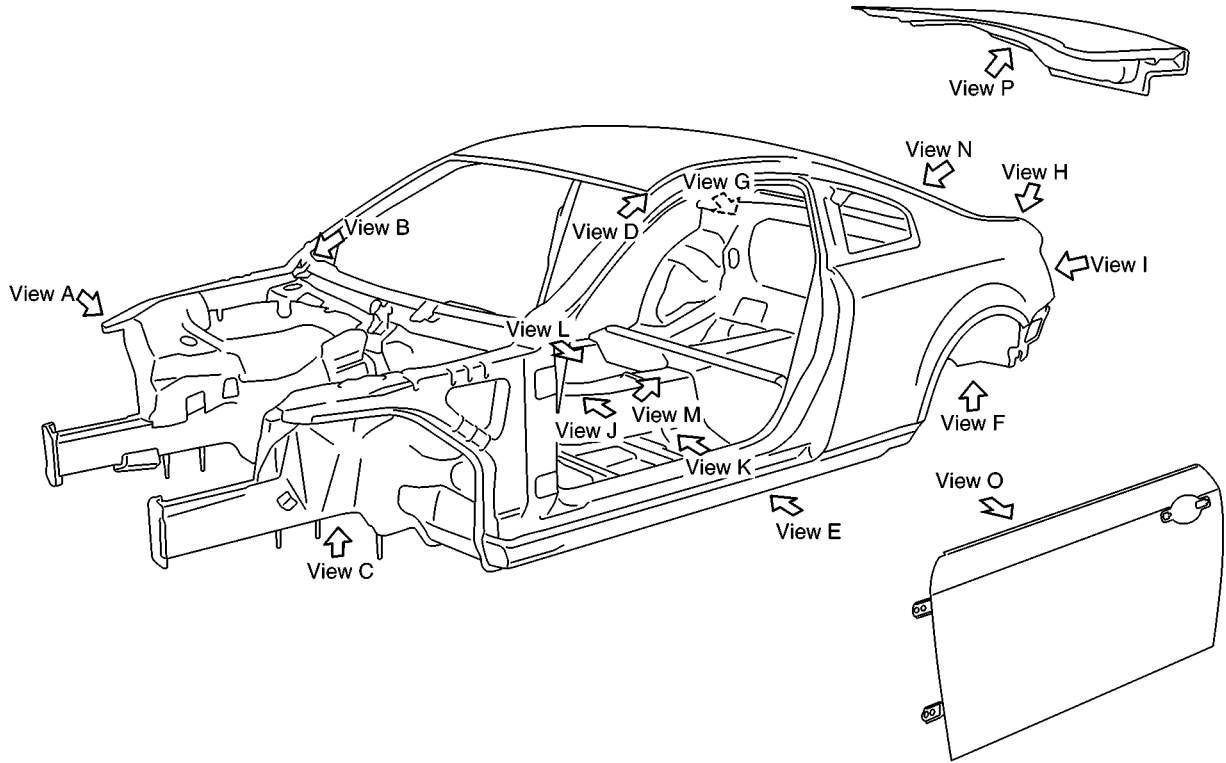
SIIA2133E

BODY REPAIR

Body Sealing DESCRIPTION

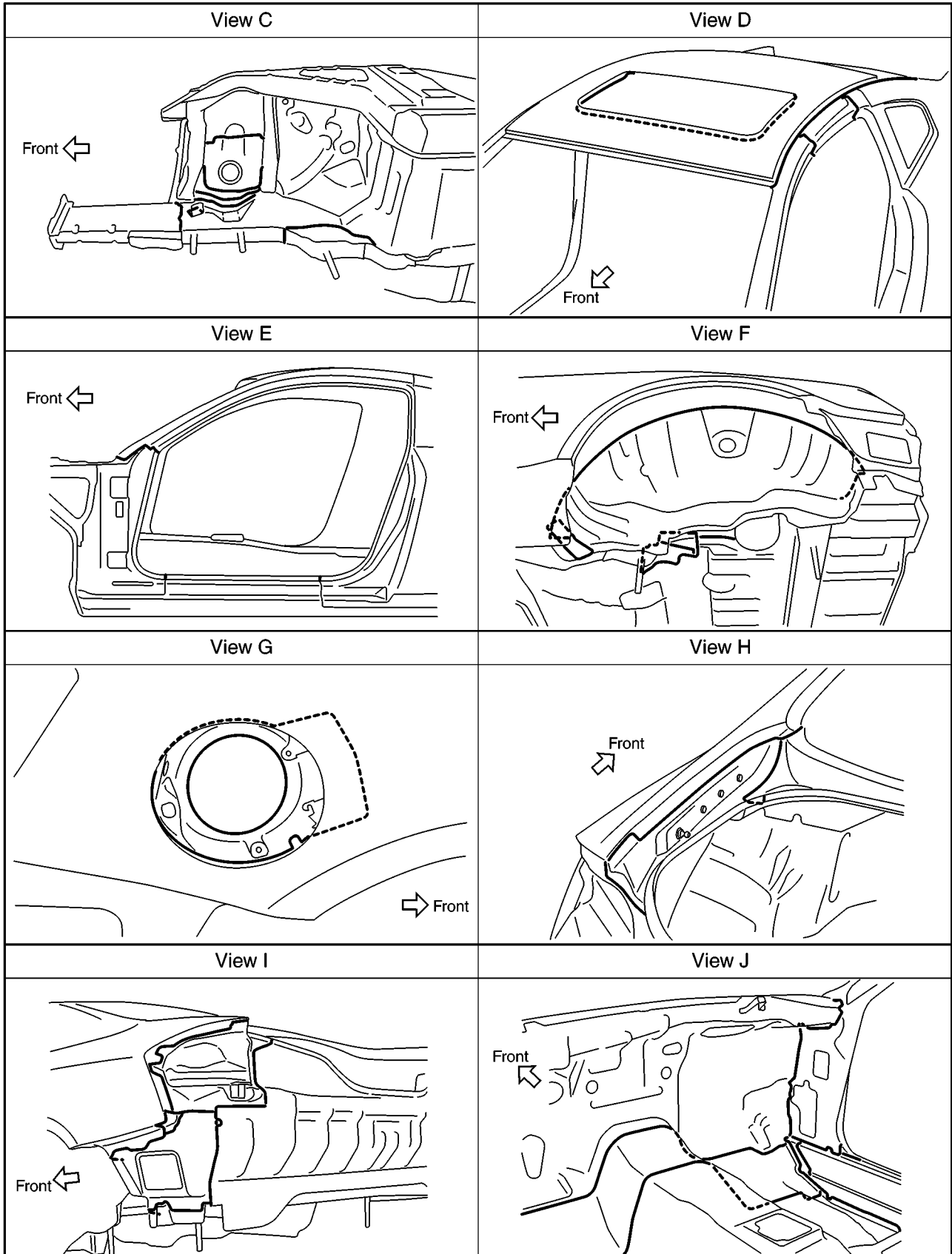
AIS0018S

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.



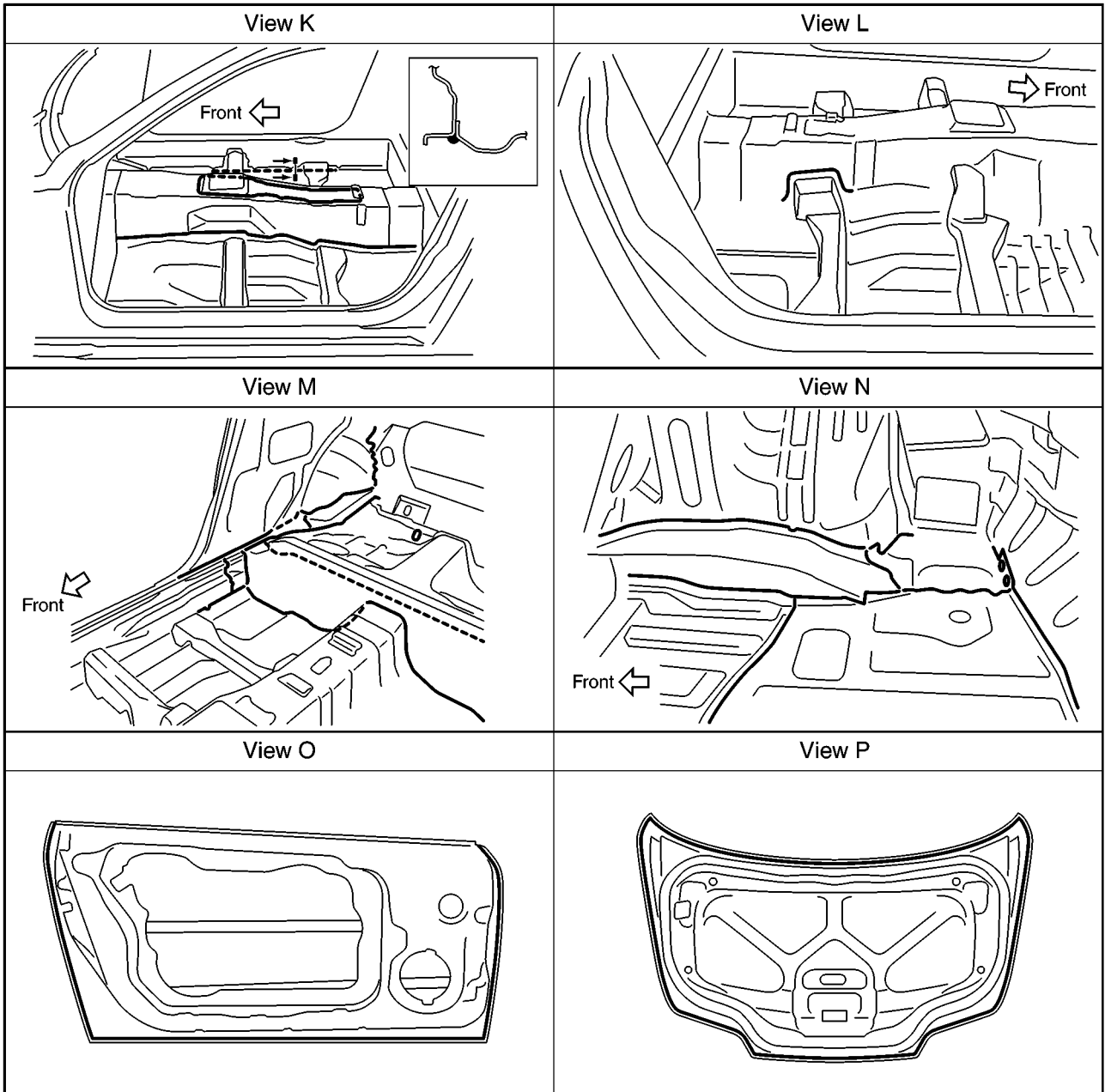
SIA2134E

BODY REPAIR



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BODY REPAIR

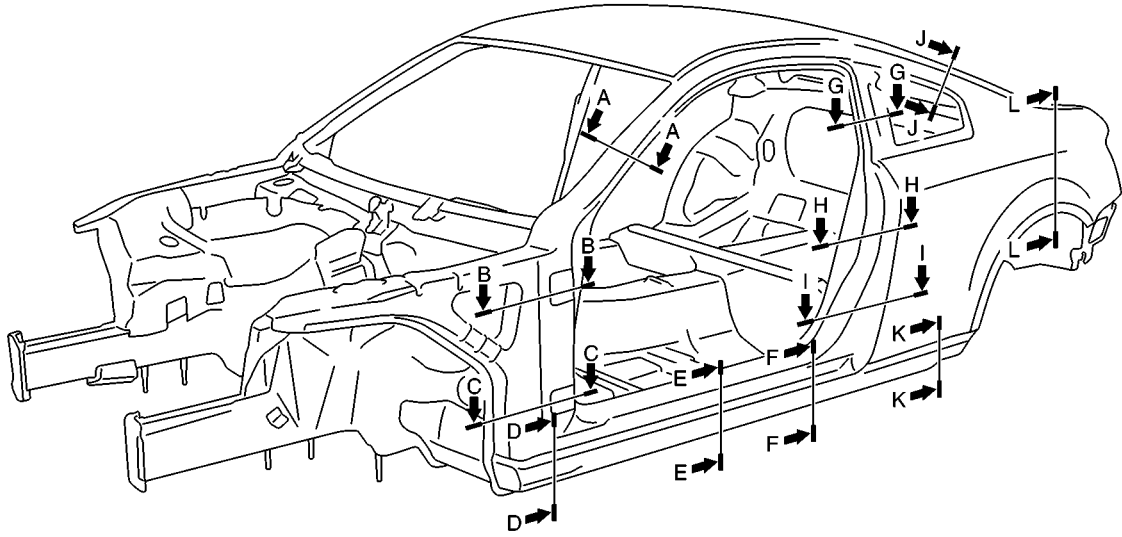


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BODY REPAIR

Body Construction BODY CONSTRUCTION

AIS0018T



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

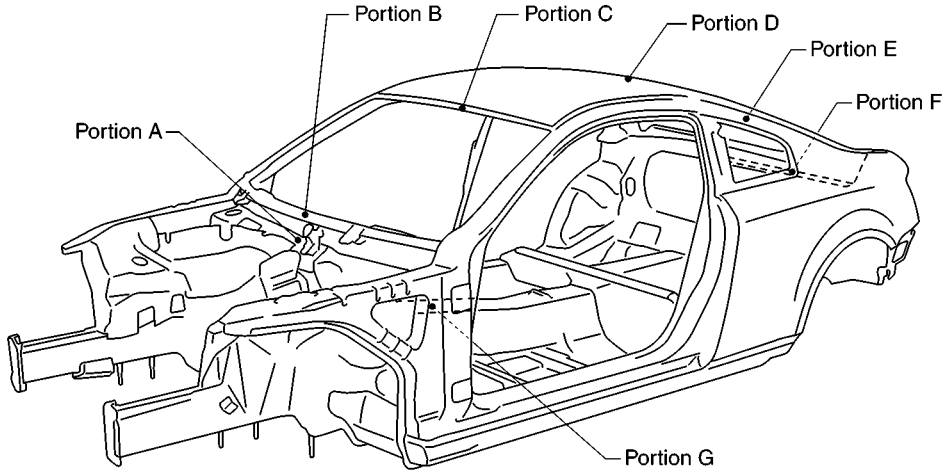
SIIA2137E

BODY REPAIR

AIS0018U

Body Alignment BODY CENTER MARKS

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



Portion A,B	Portion C,D	Portion E
<ul style="list-style-type: none"> ● Upper dash ● Upper dash cross member 	<ul style="list-style-type: none"> ● Front roof ● Rear roof 	<ul style="list-style-type: none"> ● Rear waist panel
Portion F	Portion G	
<ul style="list-style-type: none"> ● Rear panel 	<ul style="list-style-type: none"> ● Front floor 	

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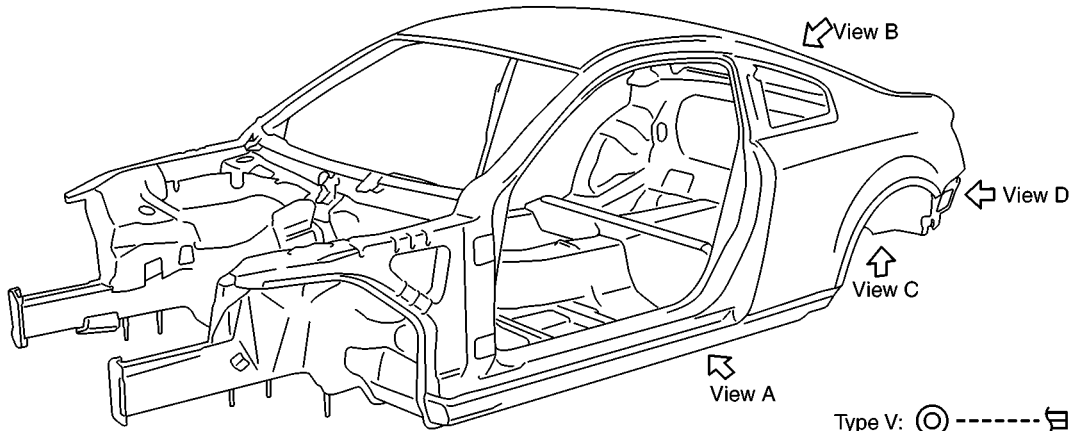
BL

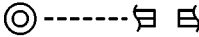
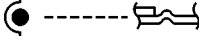
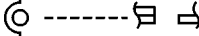
SIA2138E

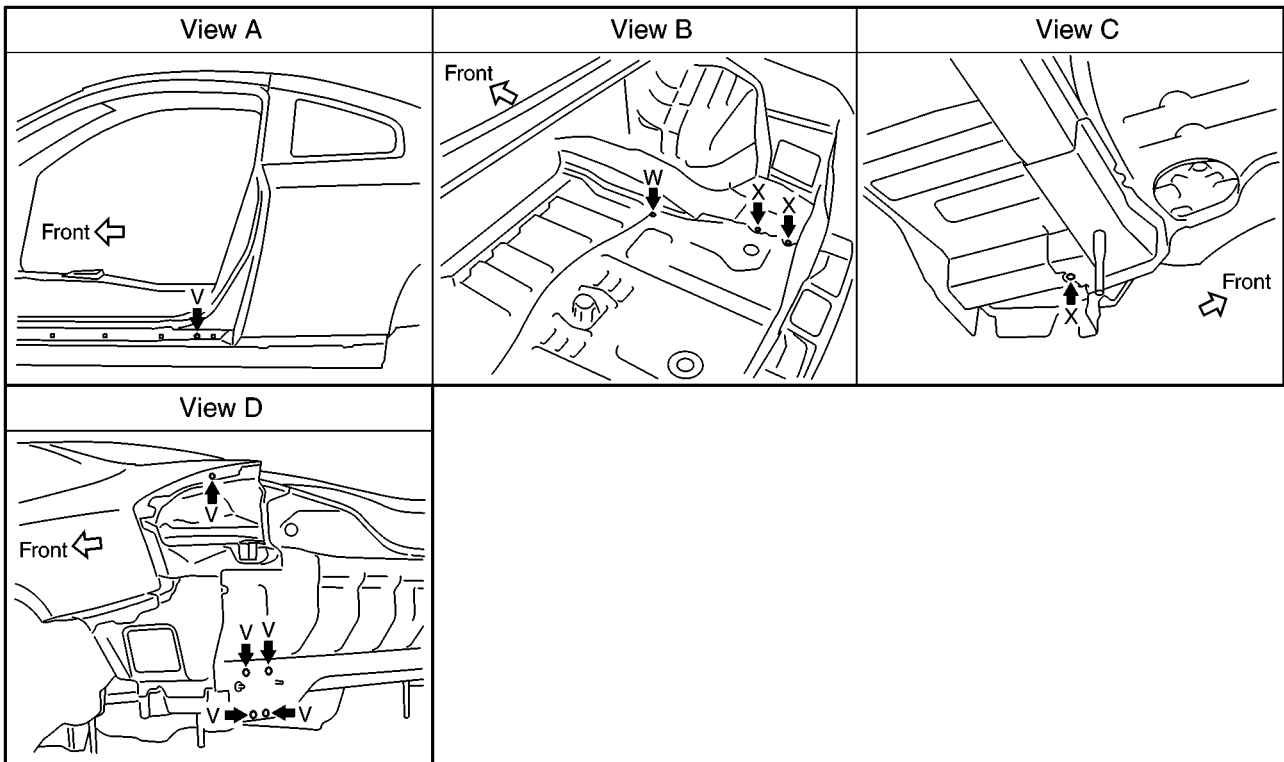
BODY REPAIR

PANEL PARTS MATCHING MARKS

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



- Type V: 
- Type W: 
- Type X: 

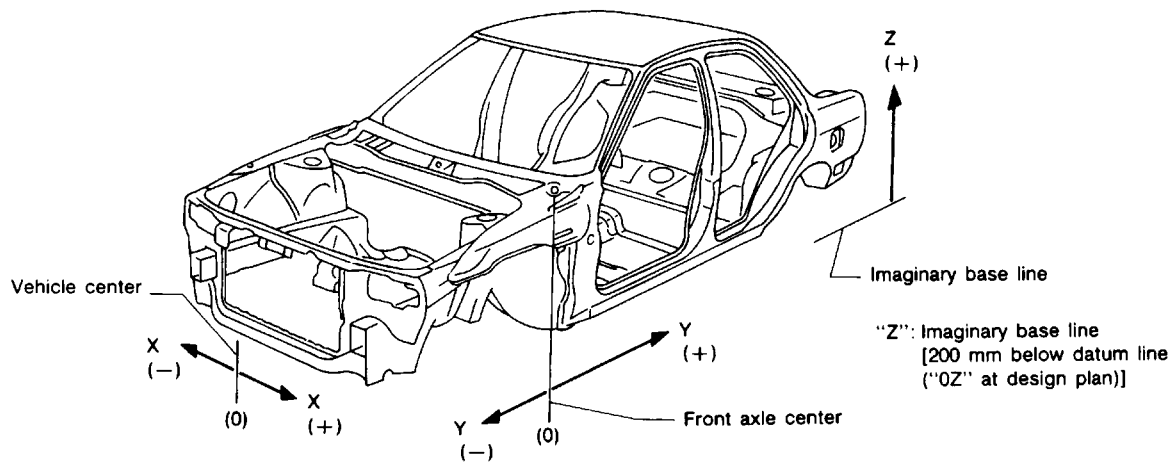


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BODY REPAIR

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".



PIIA0104E

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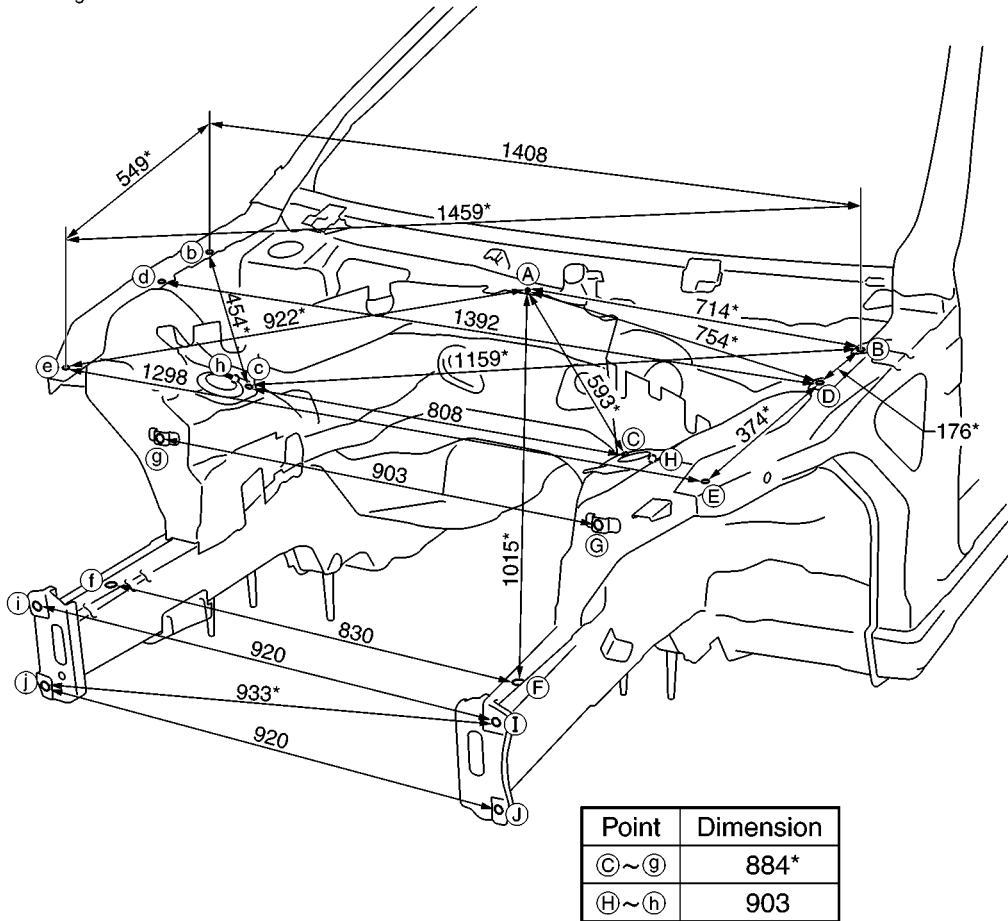
BODY REPAIR

ENGINE COMPARTMENT

Measurement

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

Unit : mm

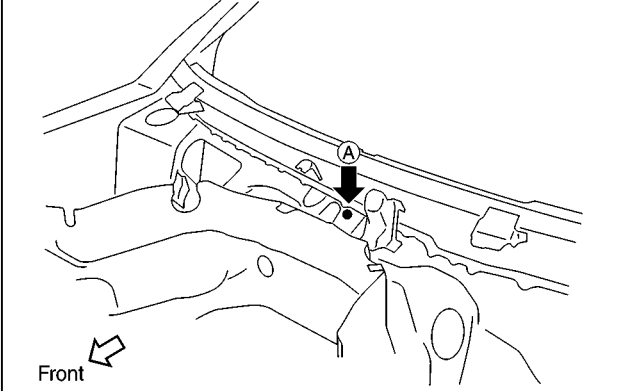


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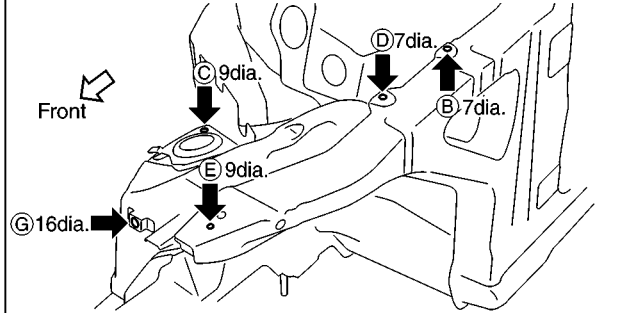
BODY REPAIR

Measurement Points

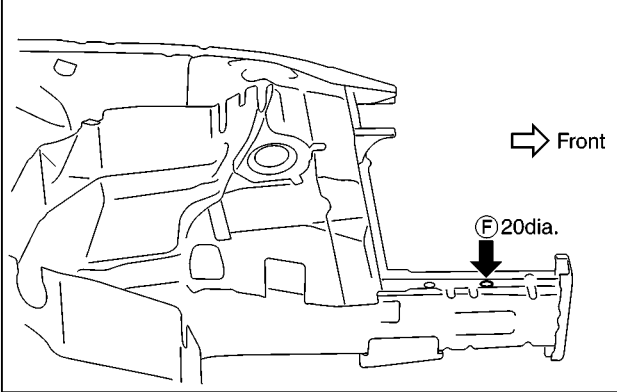
(A) : Upper dash positioning mark center of center positioning mark



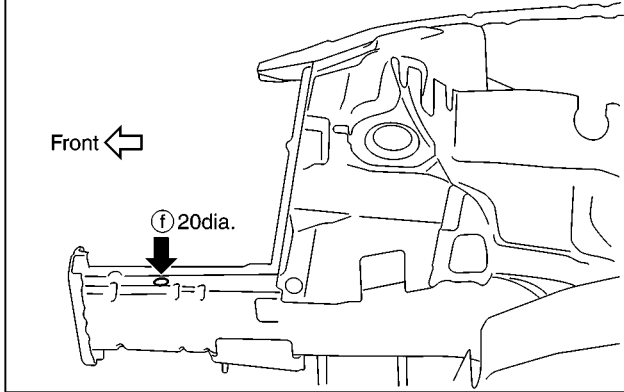
(B, b, D, d) : Front fender installing hole center (7dia.)
 (C, c) : Front strut installing hole center (9dia.)
 (E, e) : Radiator core support installing hole center (9dia.)
 (G, g) : Nut holder hole center (16dia.)



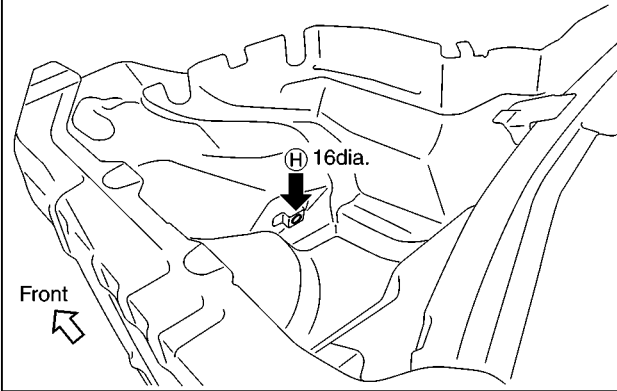
(F) : Front side member hole center (20dia.)



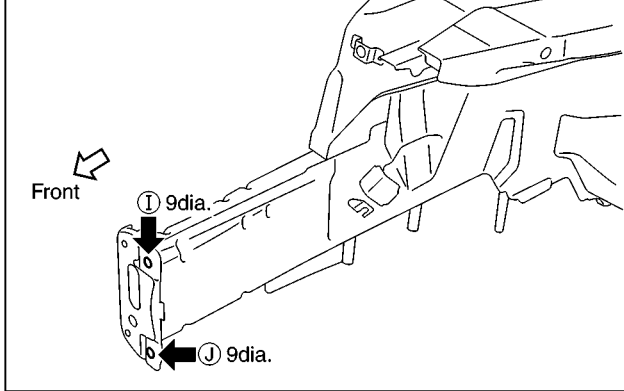
(f) : Front side member hole center (20dia.)



(H, h) : Nut holder hole center (16dia.)



(I, i, J, j) : Front bumper stay installing hole center (9dia.)



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BODY REPAIR

UNDERBODY Measurement

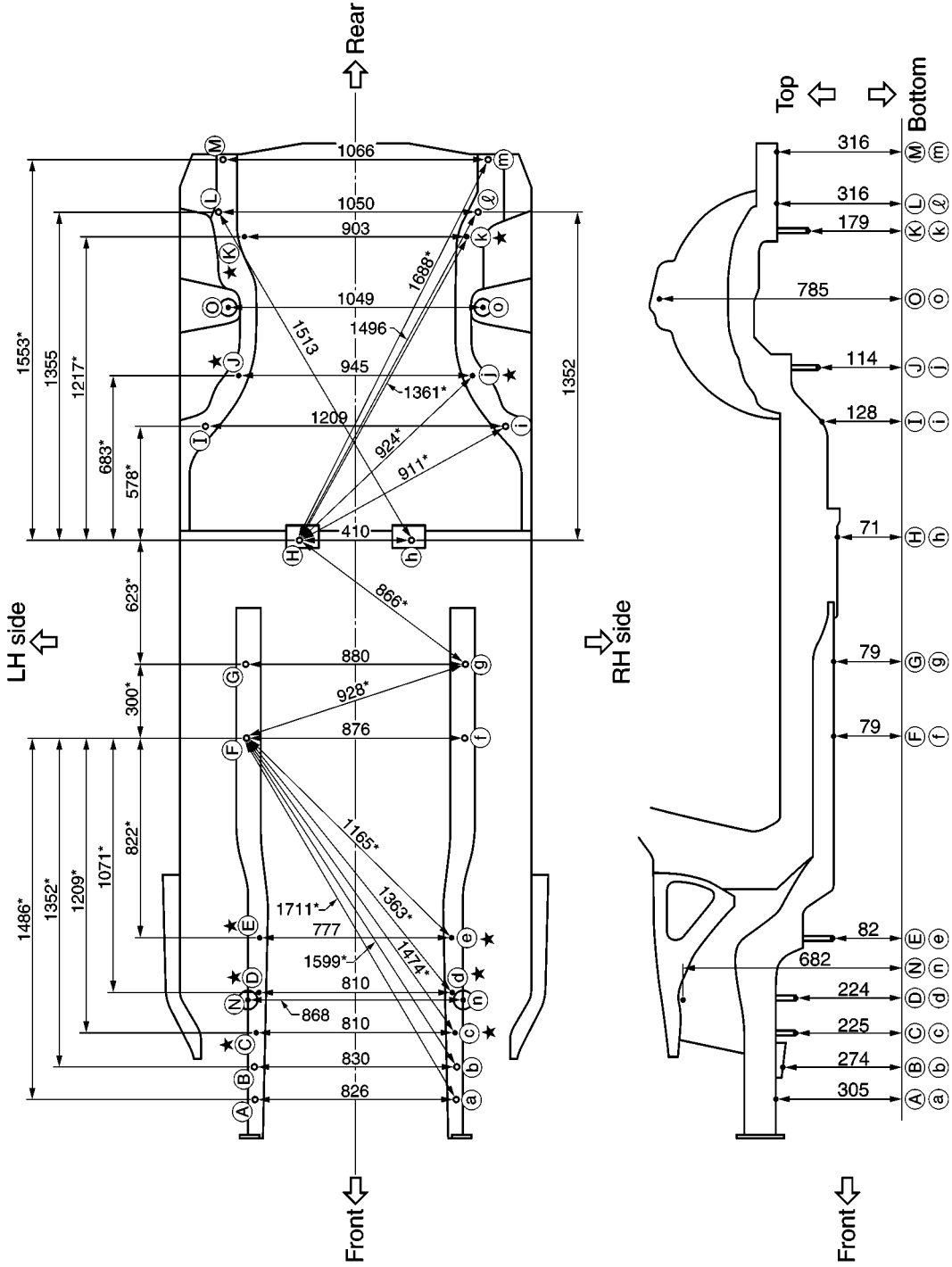
Unit : mm

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

As viewed from underside.

* : Bolt head

All dimensions indicated in this figure are actual.

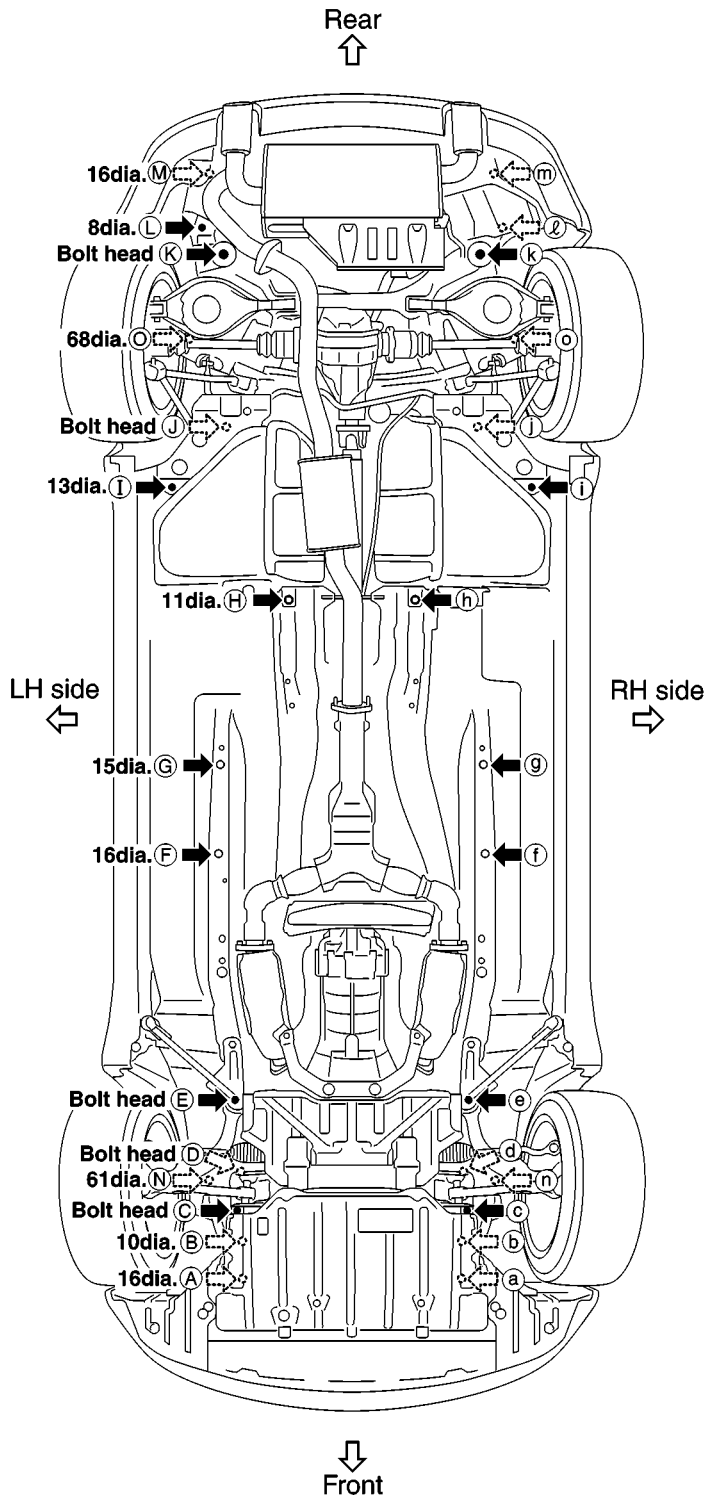


BODY REPAIR

Measurement Points

Unit : mm

As viewed from underside.



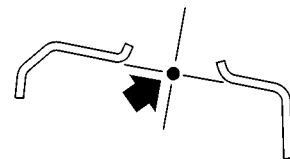
Coordinates:

(A), (a)	(I), (i)
X:413	X:605
Y:-368	Y:2391
Z:305	Z:128
(B), (b)	(J), (j)
X:415	X:473
Y:-238	Y:2604
Z:274	Z:114
(C), (c)	(K), (k)
X:405	X:452
Y:-100	Y:3164
Z:225	Z:179
(D), (d)	(L)
X:405	X:550
Y:39	Y:3265
Z:224	Z:316
(E), (e)	(L)
X:388	X:500
Y:279	Y:3273
Z:82	Z:316
(F), (f)	(M), (m)
X:438	X:533
Y:1100	Y:3475
Z:79	Z:316
(G), (g)	
X:440	
Y:1400	
Z:79	
(H), (h)	
X:205	
Y:1977	
Z:71	

Front and rear strut tower centers

Coordinates:

(N), (n)
X:434
Y:29
Z:682
(O), (o)
X:524
Y:2882
Z:785



Front: (N), (n) 61dia.
Rear: (O), (o) 68dia.

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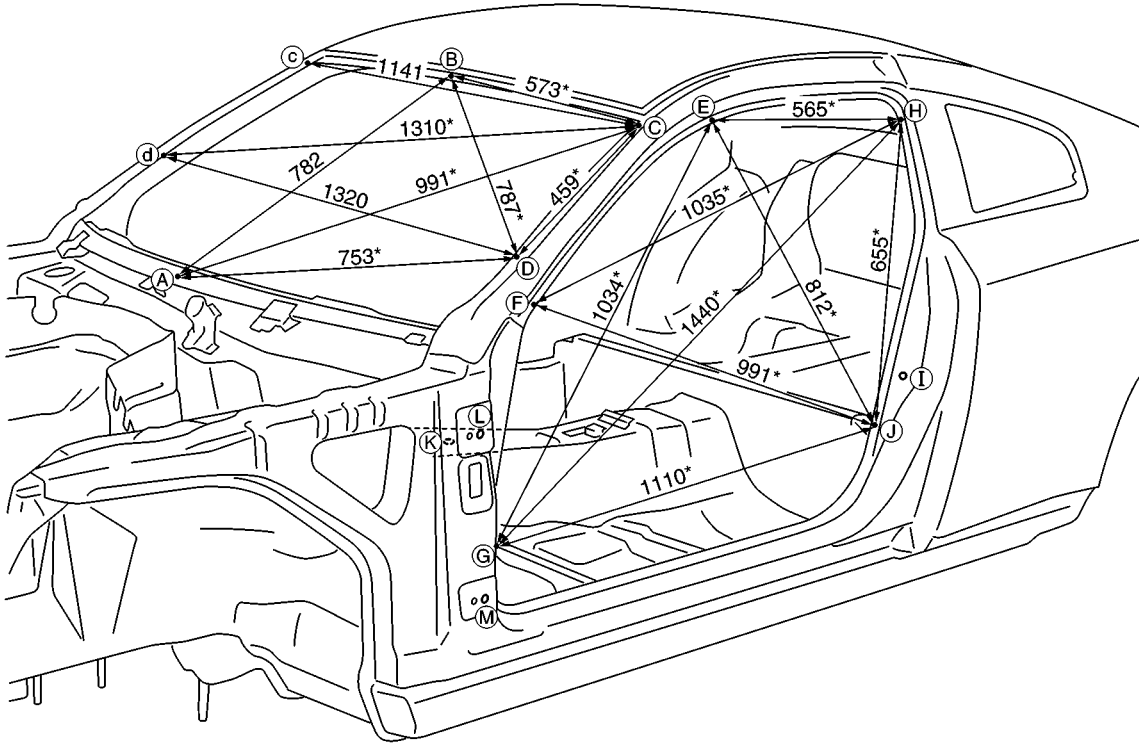
BODY REPAIR

PASSENGER COMPARTMENT

Measurement

Unit : mm

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

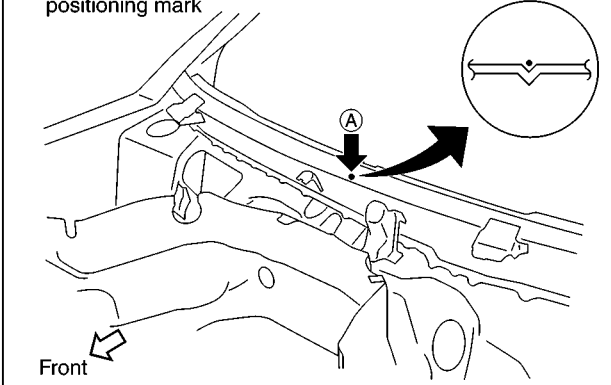


Point	Dimension	Point	Dimension	Point	Dimension
⑤~⑤	1,184	⑦~⑧	1,979*	①~②	893*
⑤~⑥	1,669*	⑦~⑨	1,827*	①~③	755*
⑤~⑧	1,350*	⑧~⑨	1,270	①~④	1,428*
⑤~⑩	1,542*	⑧~⑩	1,507*	①~⑤	1,162*
⑥~⑥	1,379	⑩~⑩	1,452	②~⑥	1,265*
⑥~⑥	1,450	①~⑤	1,099*	③~⑥	1,282*

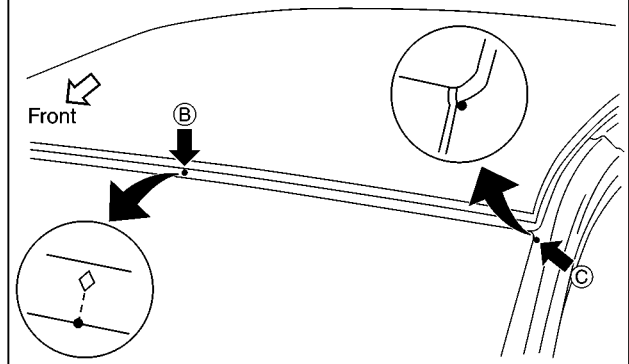
BODY REPAIR

Measurement Points

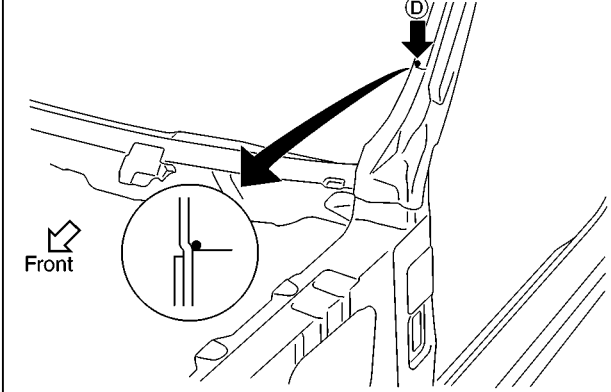
(A) : Upper dash crossmember positioning mark center of center positioning mark



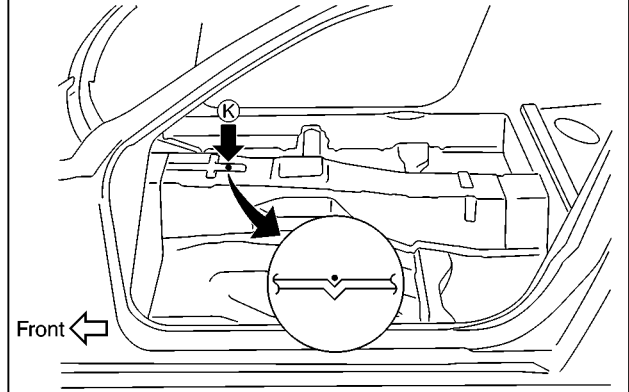
(B) : Front roof flange end of center positioning mark
(C), (c) : Front pillar joggle



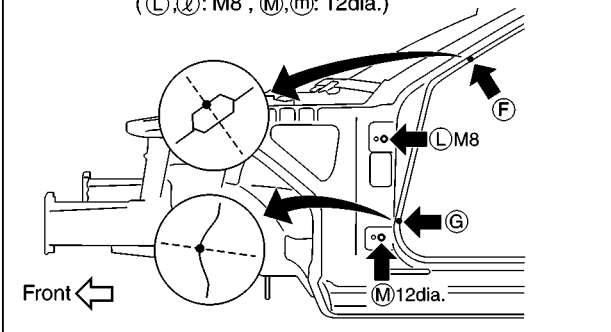
(D), (d) : Front pillar joggle



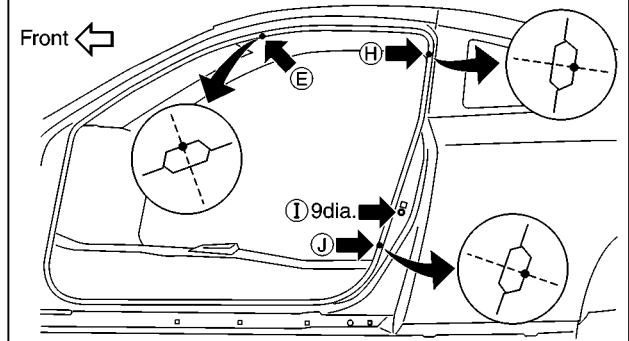
(K) : Center front floor positioning mark center of center positioning mark



(F), (f) : Front pillar indent
(G), (g) : Front pillar notch
(L), (l), (M), (m) : Door hinge installing nut center
(L, l) : M8, (M, m) : 12dia.)



(E), (e) : Front pillar indent
(H), (h), (J), (j) : Rear fender indent
(I), (i) : Door switch installing hole center (9dia.)



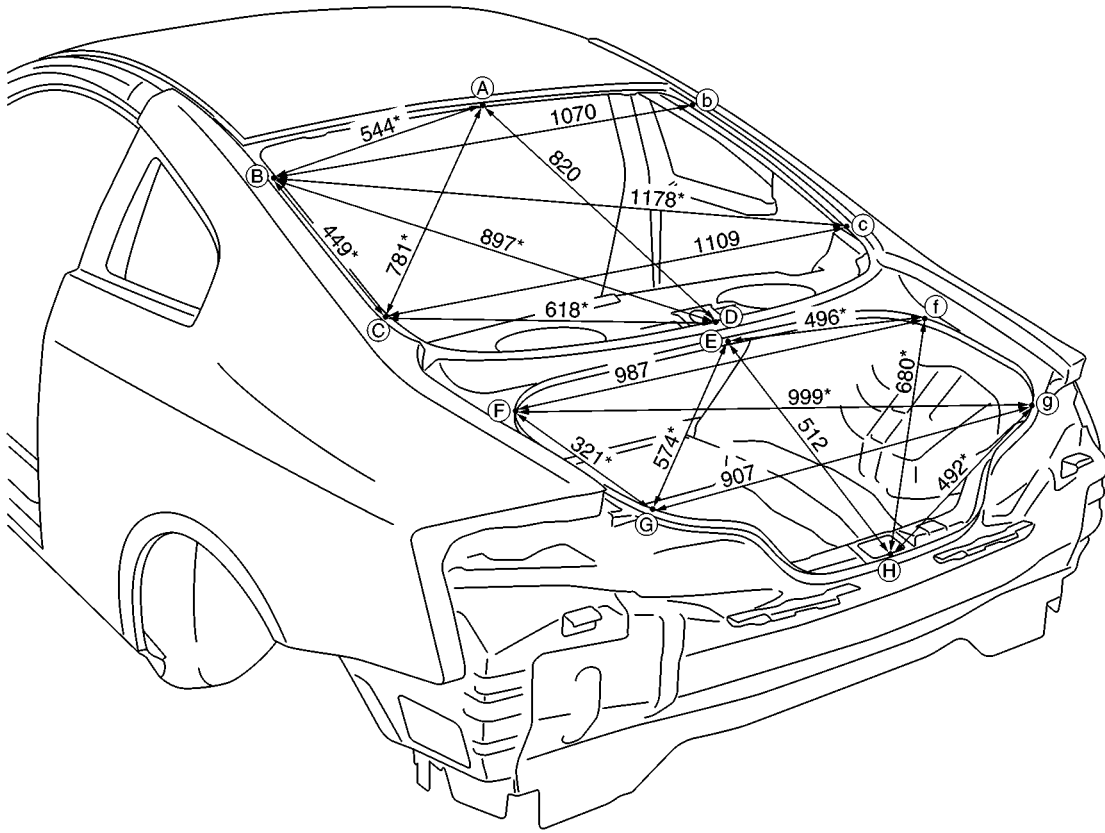
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BODY REPAIR

REAR BODY Measurement

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

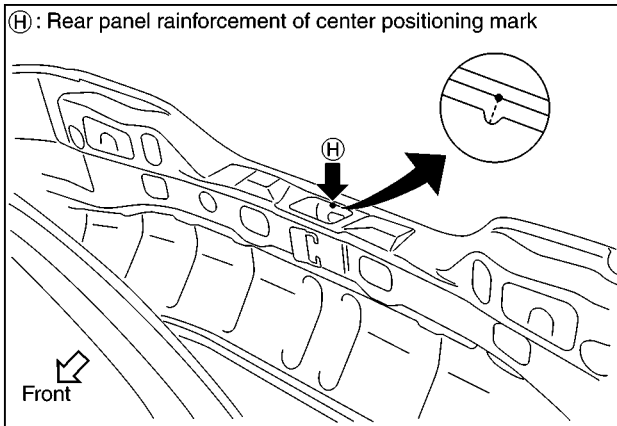
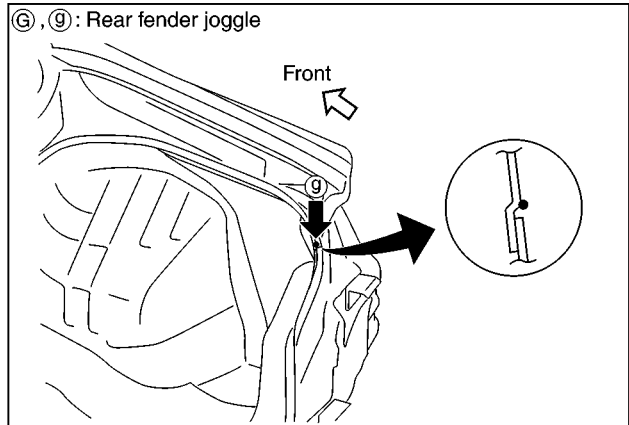
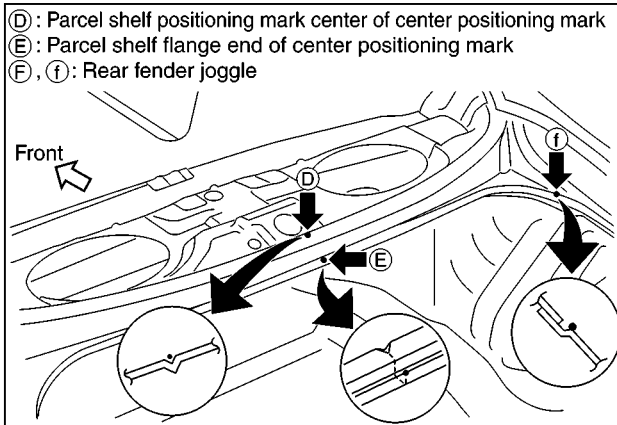
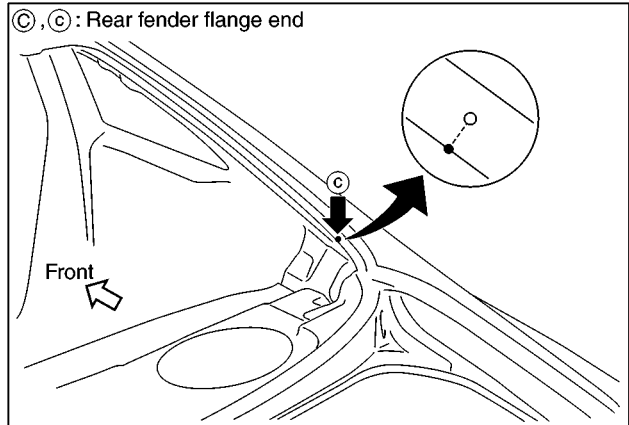
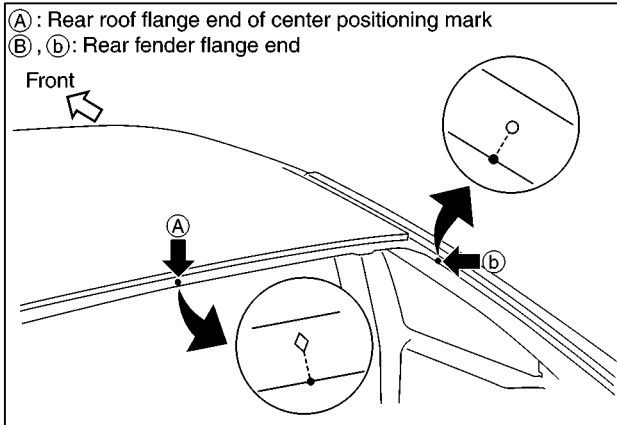
Unit : mm



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BODY REPAIR

Measurement Points



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BODY REPAIR

Handling Precautions For Plastics HANDLING PRECAUTIONS FOR PLASTICS

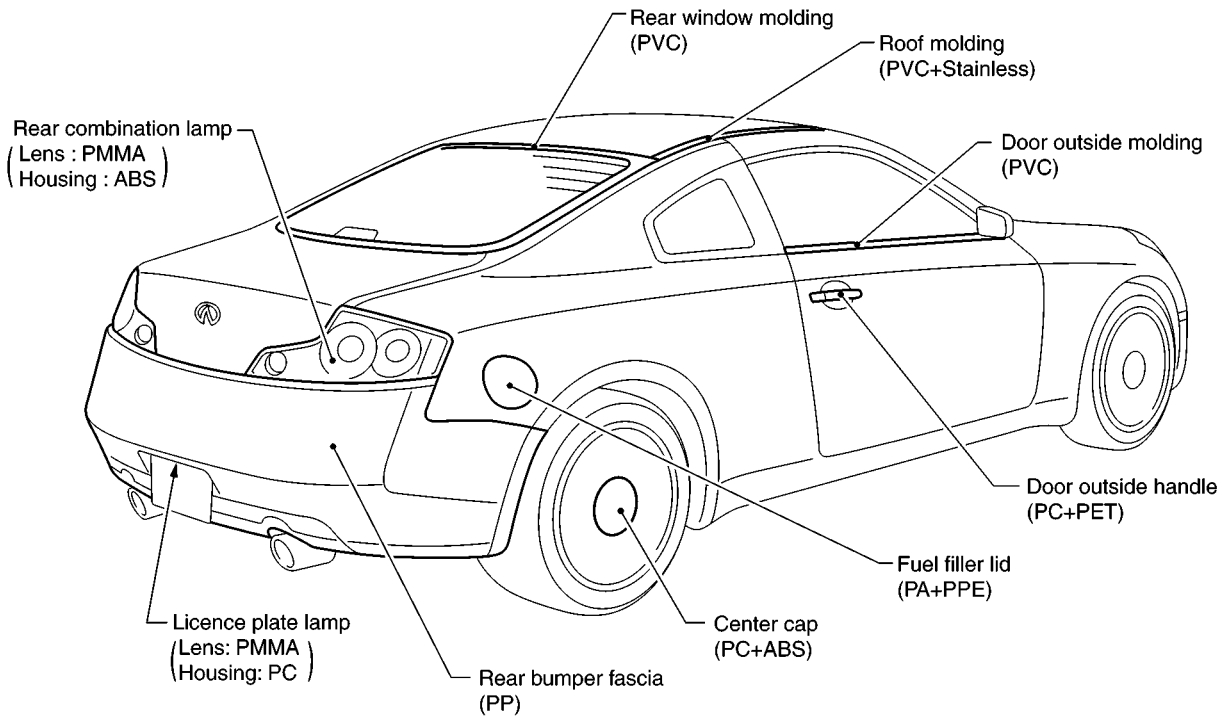
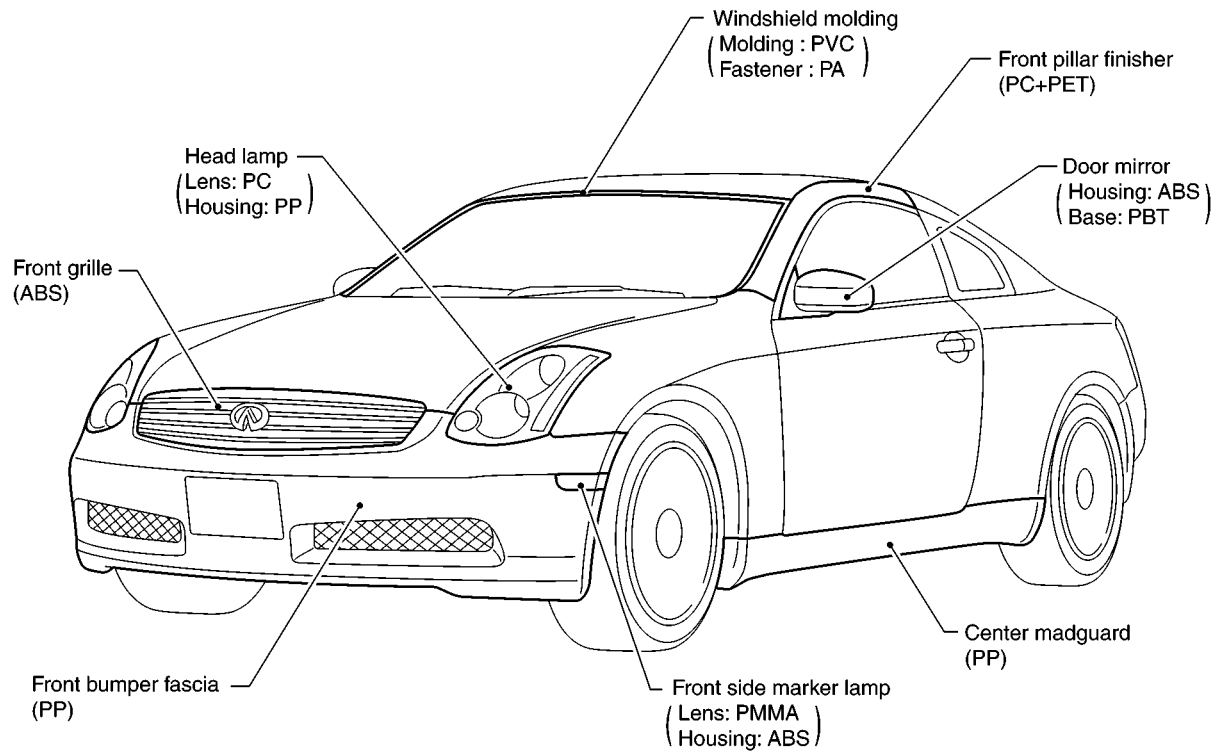
AIS0018V

Abbreviation	Material name	Heat resisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	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
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.

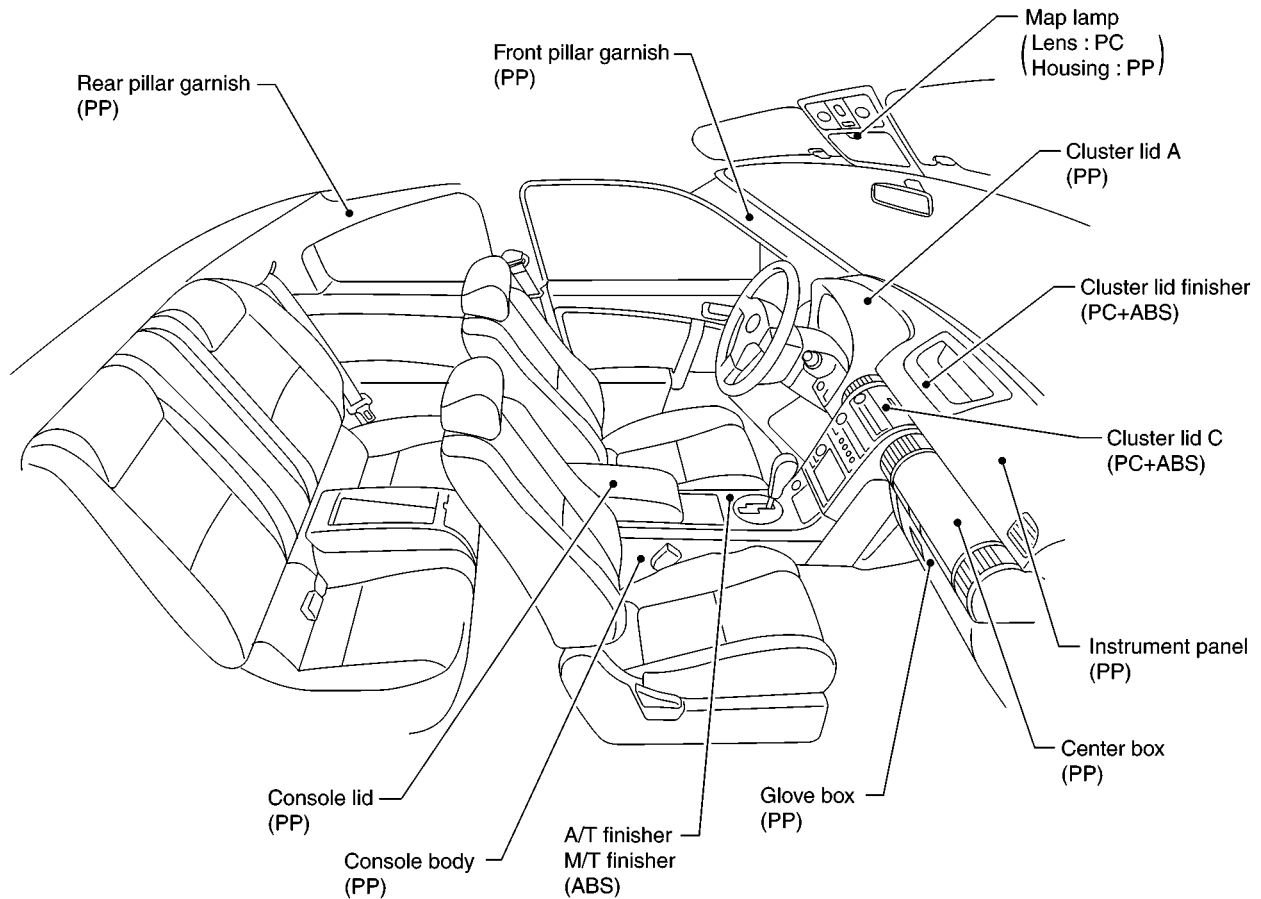
BODY REPAIR

LOCATION OF PLASTIC PARTS



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BODY REPAIR



SIIA2149E

AI50018W

Precautions In Repairing High Strength Steel

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	<ul style="list-style-type: none"> ● Front side member assembly ● Hoodedge assembly ● Upper dash ● Front pillar reinforcement assembly ● Rear side member assembly ● Other reinforcements

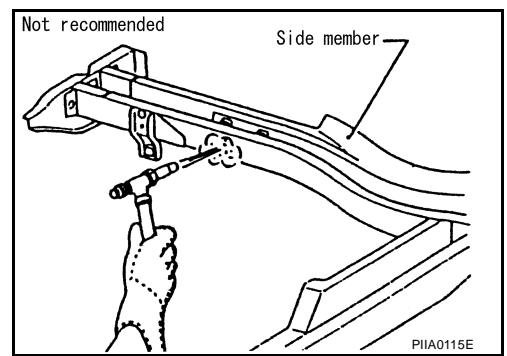
SP130 is the most commonly used HSS.

Read the following precautions when repairing HSS:

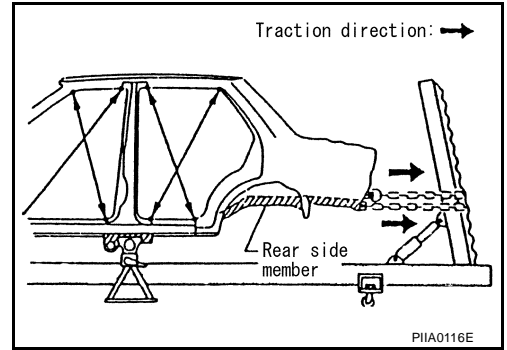
1. Additional points to consider

BODY REPAIR

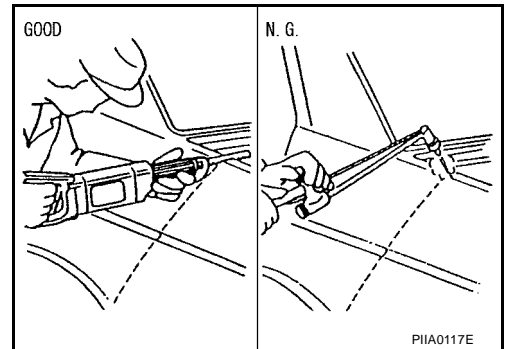
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F). Verify heating temperature with a thermometer. (Crayon-type and other similar type thermometer are appropriate.)



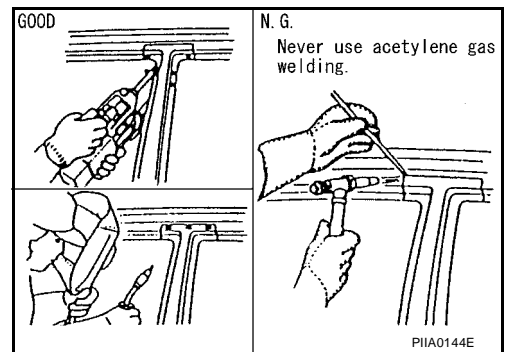
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



- 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).



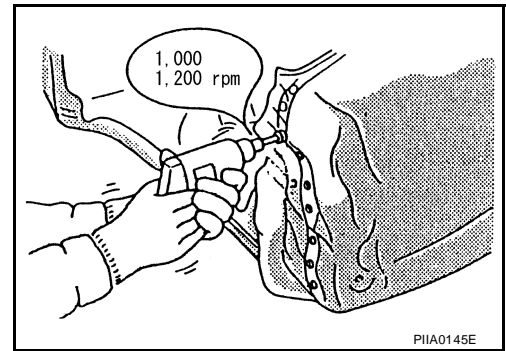
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat. If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



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BODY REPAIR

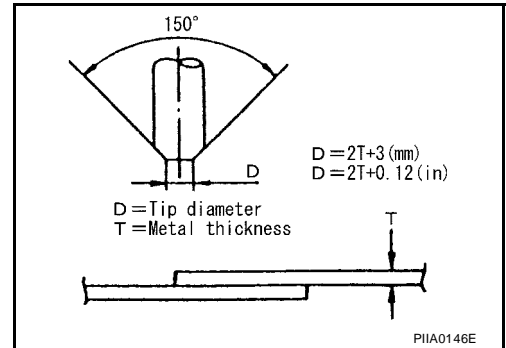
- The spot weld on HSS panels is harder than that of an ordinary steel panel. Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



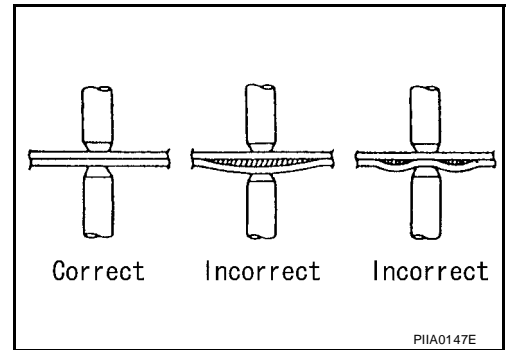
2. Precautions in spot welding HSS

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.



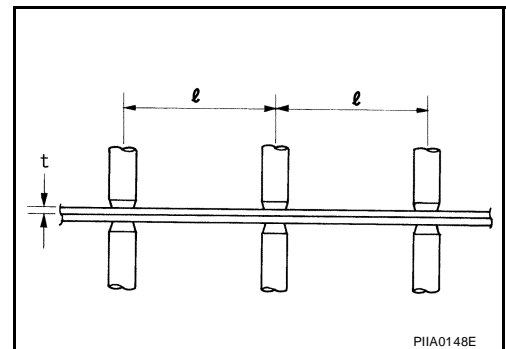
- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

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

Unit:mm



Replacement Operations


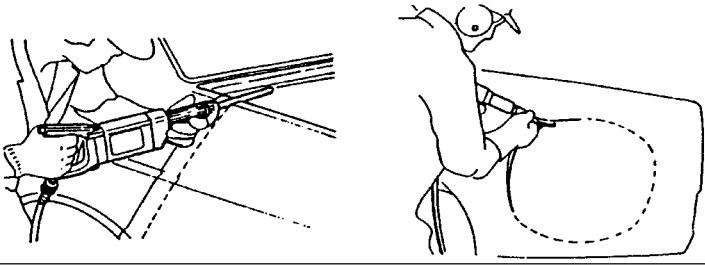
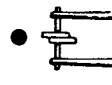
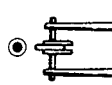
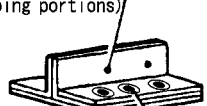
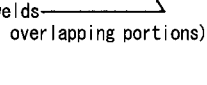
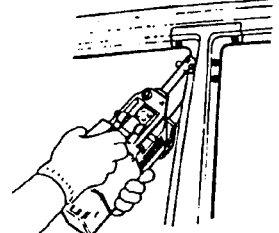
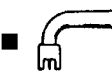

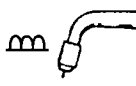
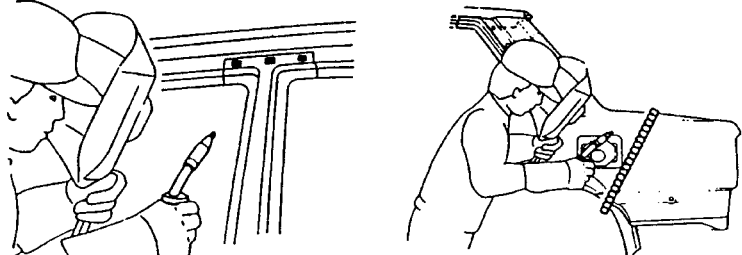


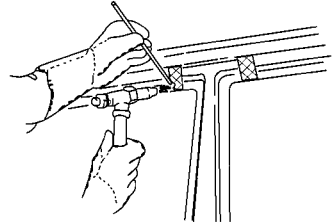


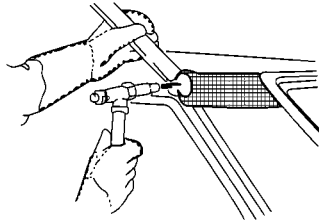
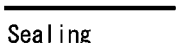
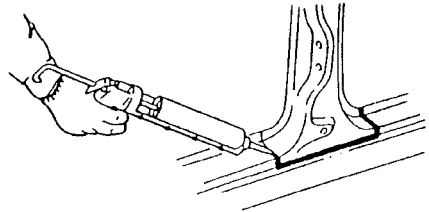
DESCRIPTION

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.

BODY REPAIR

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.

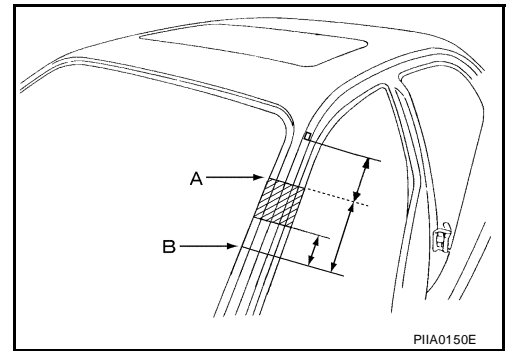
 <p>Saw cut or air chisel cut</p>	
<p>Spot weld</p> <p>●●●● 2-spot welds</p>  <p>●●●●● 3-spot welds</p> 	<p>2-spot welds (2-panel overlapping portions)</p>  <p>3-spot welds (3-panel overlapping portions)</p>  
<p>■ ■ ■ ■ MIG plug weld</p>  <p> MIG seam weld/ Point weld</p> 	
<p> Braze</p> 	
<p> Soldering</p> 	
<p>Sealing</p> 	

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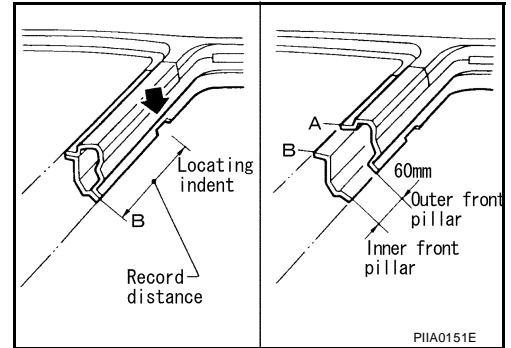
BL

BODY REPAIR

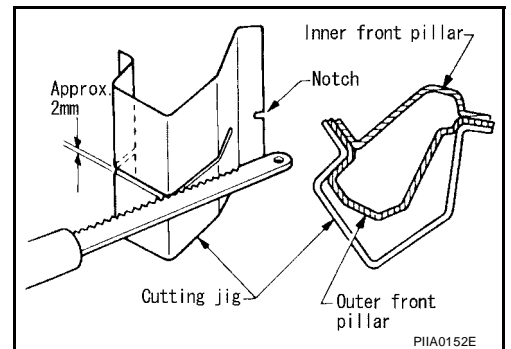
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- 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.

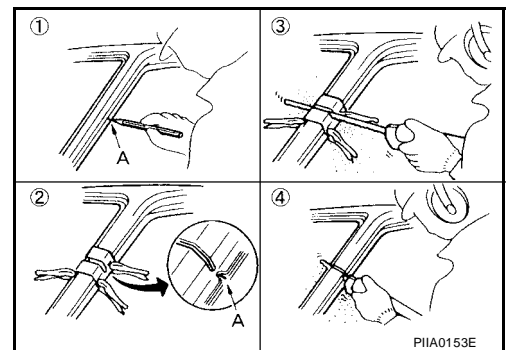


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- 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.

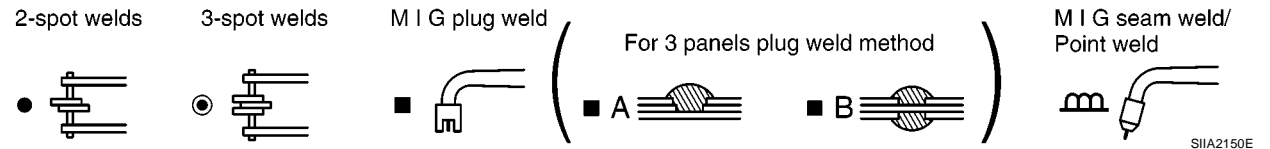
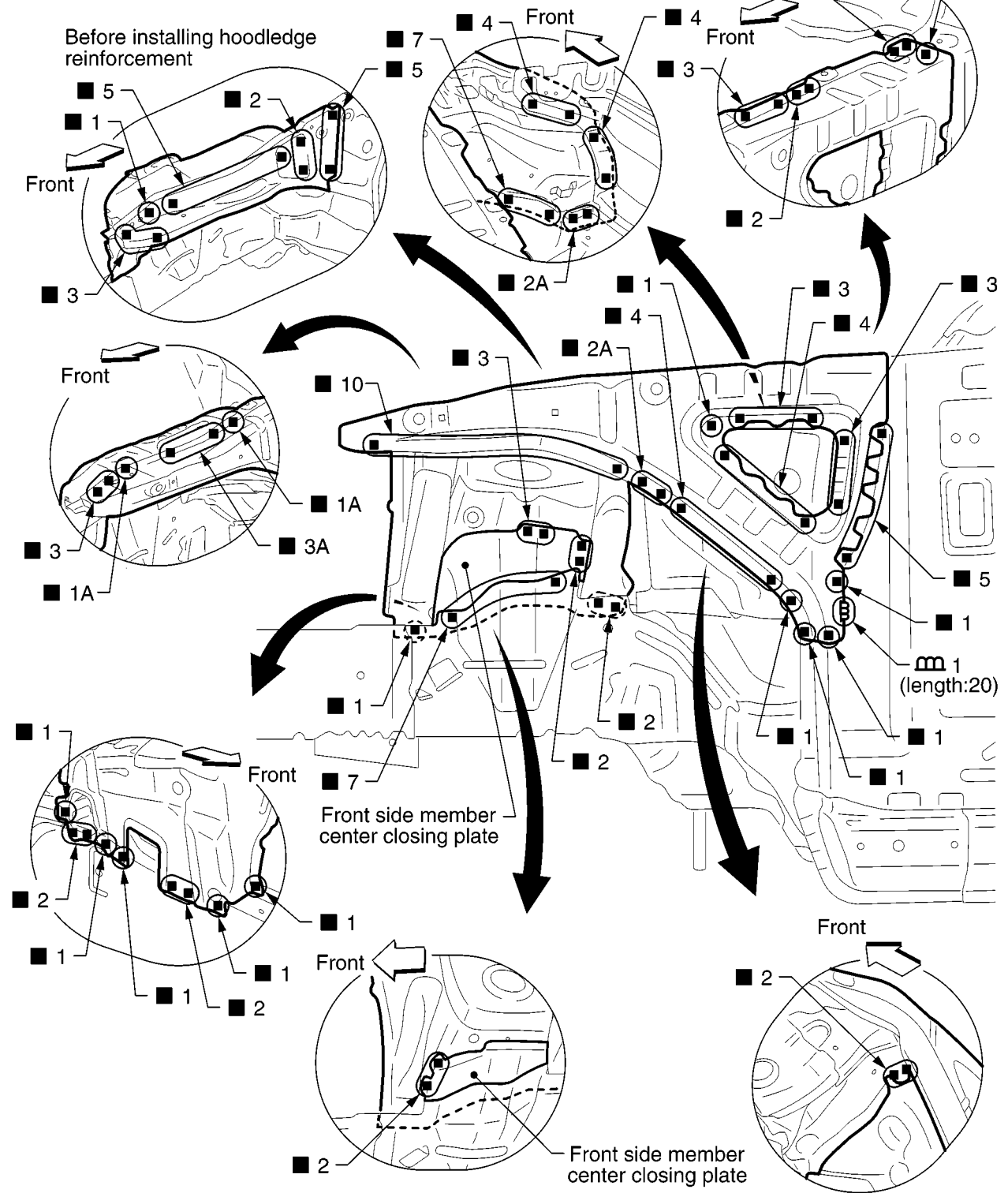


BODY REPAIR

HOODLEDGE

Service Joint

Remove front side member center closing plate for easier installation.



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BODY REPAIR

Change parts

- Front strut housing (LH)
- Upper front hoodledge (LH)
- Hoodledge reinforcement (LH)

BODY REPAIR

Change parts

- Front side member assembly (LH)
- Front side member outrigger assembly (LH)
- Front side member rear reinforcement (LH)
- Front side member closing plate assembly (LH)

BODY REPAIR

Change parts

- Front side member assembly (RH)
- Front side member front closing plate (RH)
- Front towing hook outer bracket (RH)

BODY REPAIR

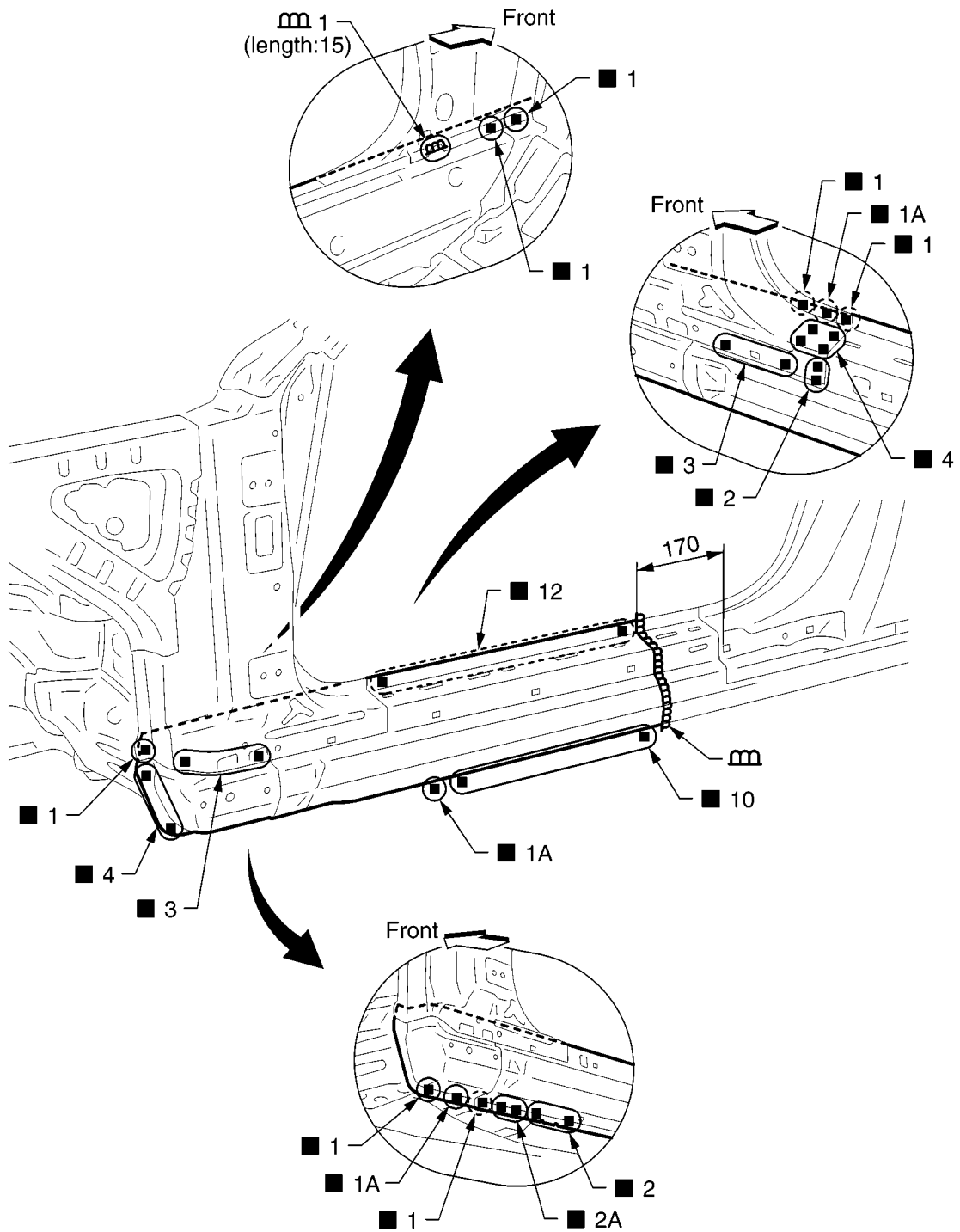
Change parts

- Front pillar reinforcement assembly (LH)
- Upper inner front pillar assembly (LH)
- Upper rear hoodledge (LH)

BODY REPAIR

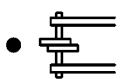
OUTER SILL

Service Joint

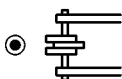


Unit:mm

2-spot welds



3-spot welds



MIG plug weld



For 3 panels plug weld method



MIG seam weld/
Point weld



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BODY REPAIR

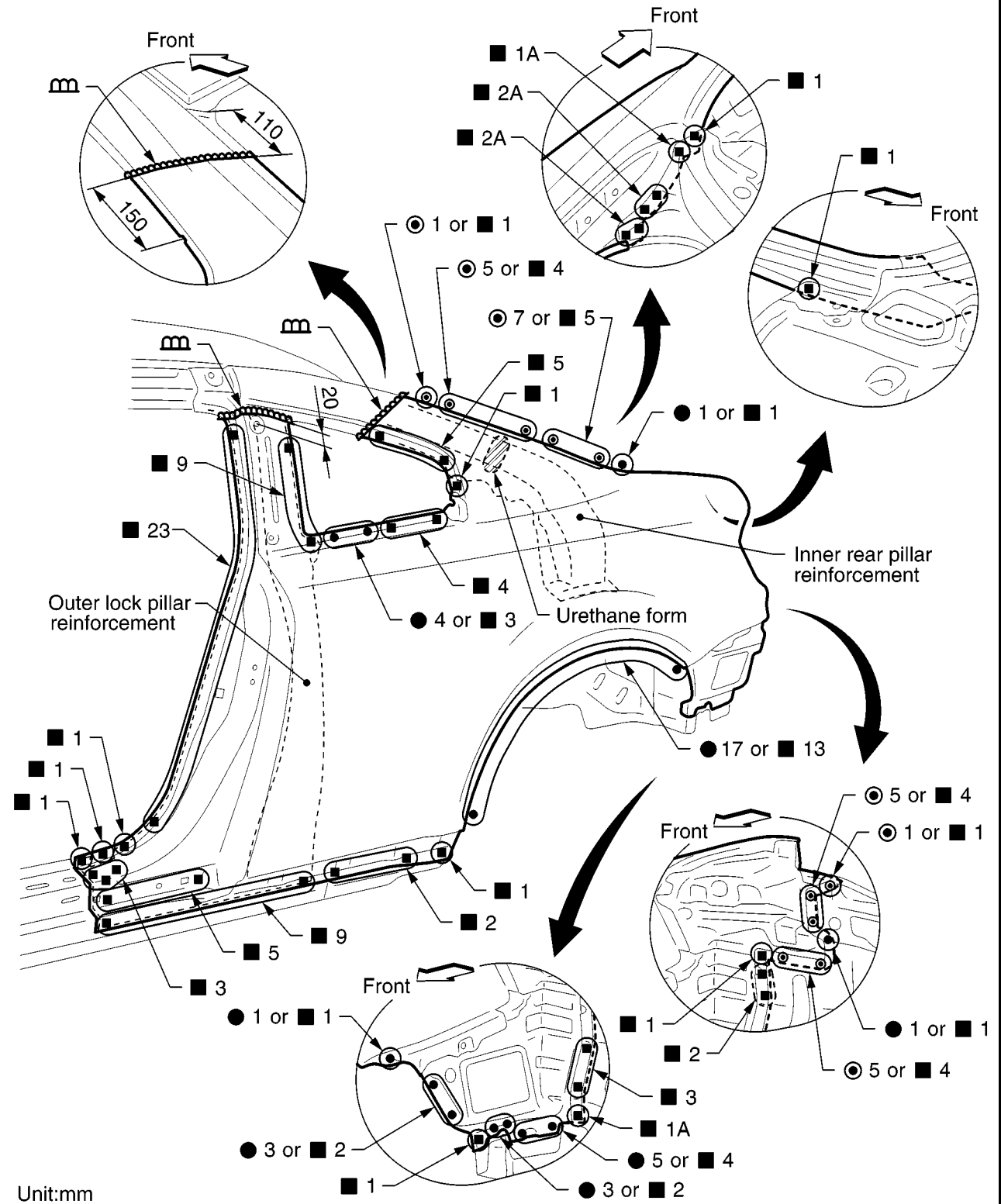
Change parts

- Outer sill reinforcement assembly (LH)

BODY REPAIR

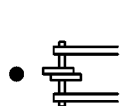
REAR FENDER

Service Joint

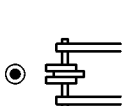


Unit:mm

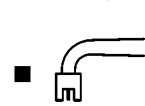
2-spot welds



3-spot welds



M I G plug weld



For 3 panels plug weld method



M I G seam weld/
Point weld



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BODY REPAIR

Change parts

- Rear fender assembly (LH)

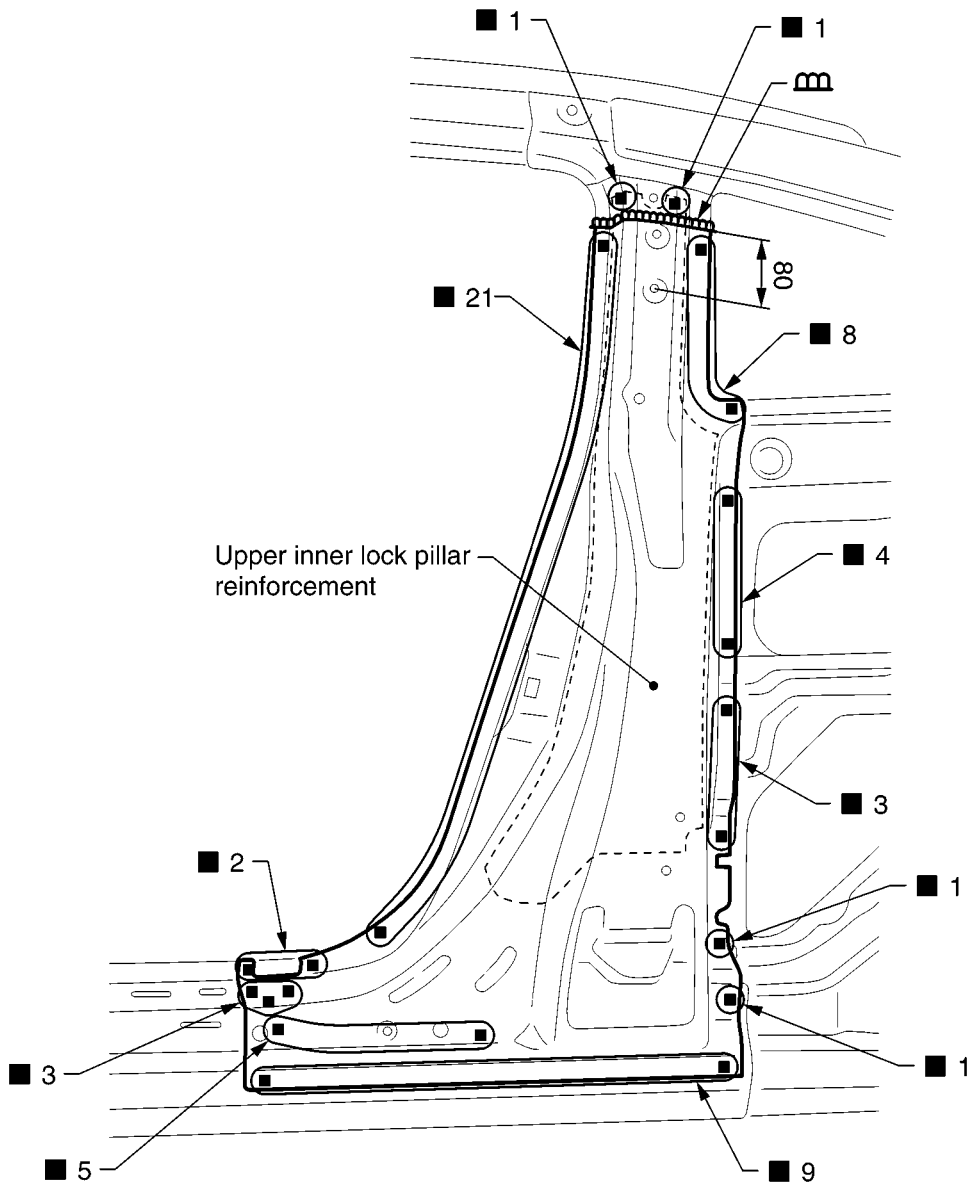
BODY REPAIR

LOCK PILLAR REINFORCEMENT

- Work after rear fender has been removed.

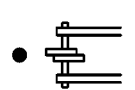
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Service Joint

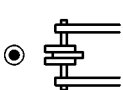


Unit:mm

2-spot welds



3-spot welds



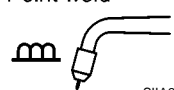
M I G plug weld



For 3 panels plug weld method



M I G seam weld/
Point weld



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BODY REPAIR

Change parts

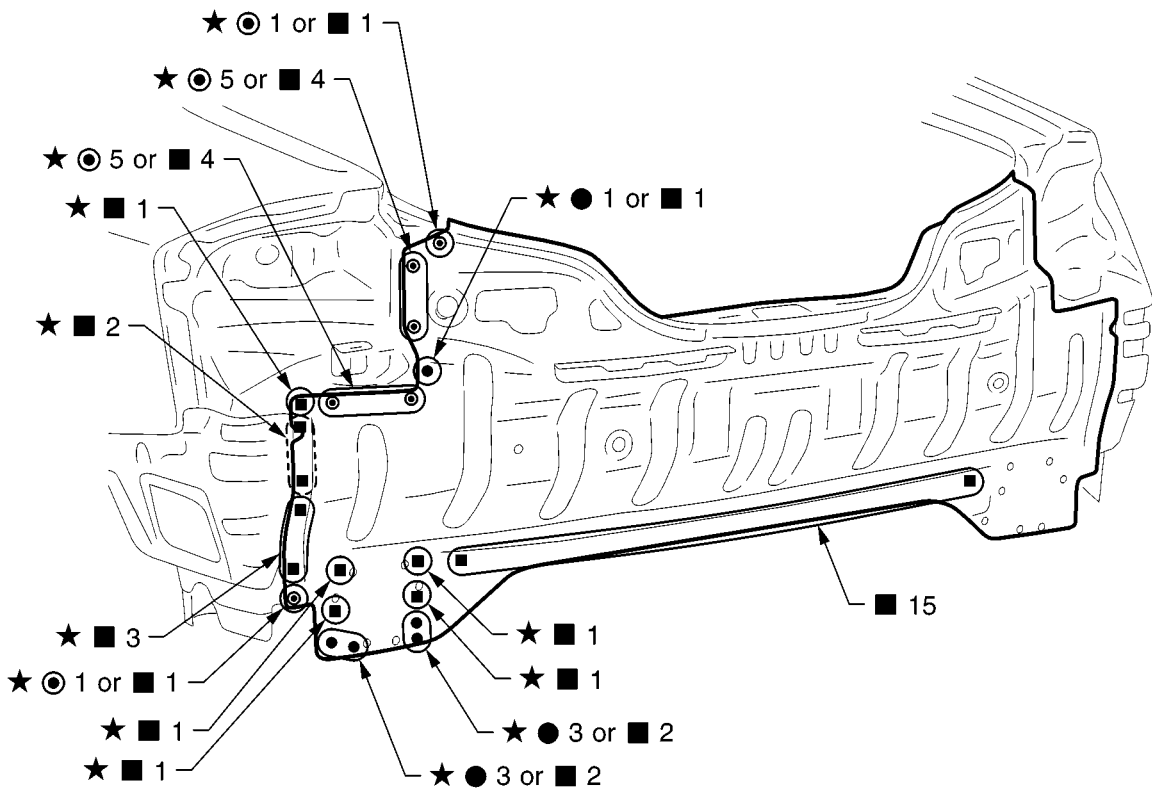
- Outer lock pillar reinforcement (LH)

BODY REPAIR

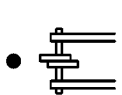
REAR PANEL

Service Joint

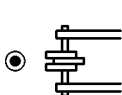
★ indicates that there is an equivalent welding portion with the same dimensions on the opposite side.



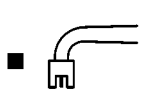
2-spot welds



3-spot welds



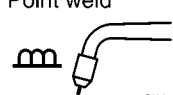
M I G plug weld



For 3 panels plug weld method



M I G seam weld/
Point weld



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BODY REPAIR

Change parts

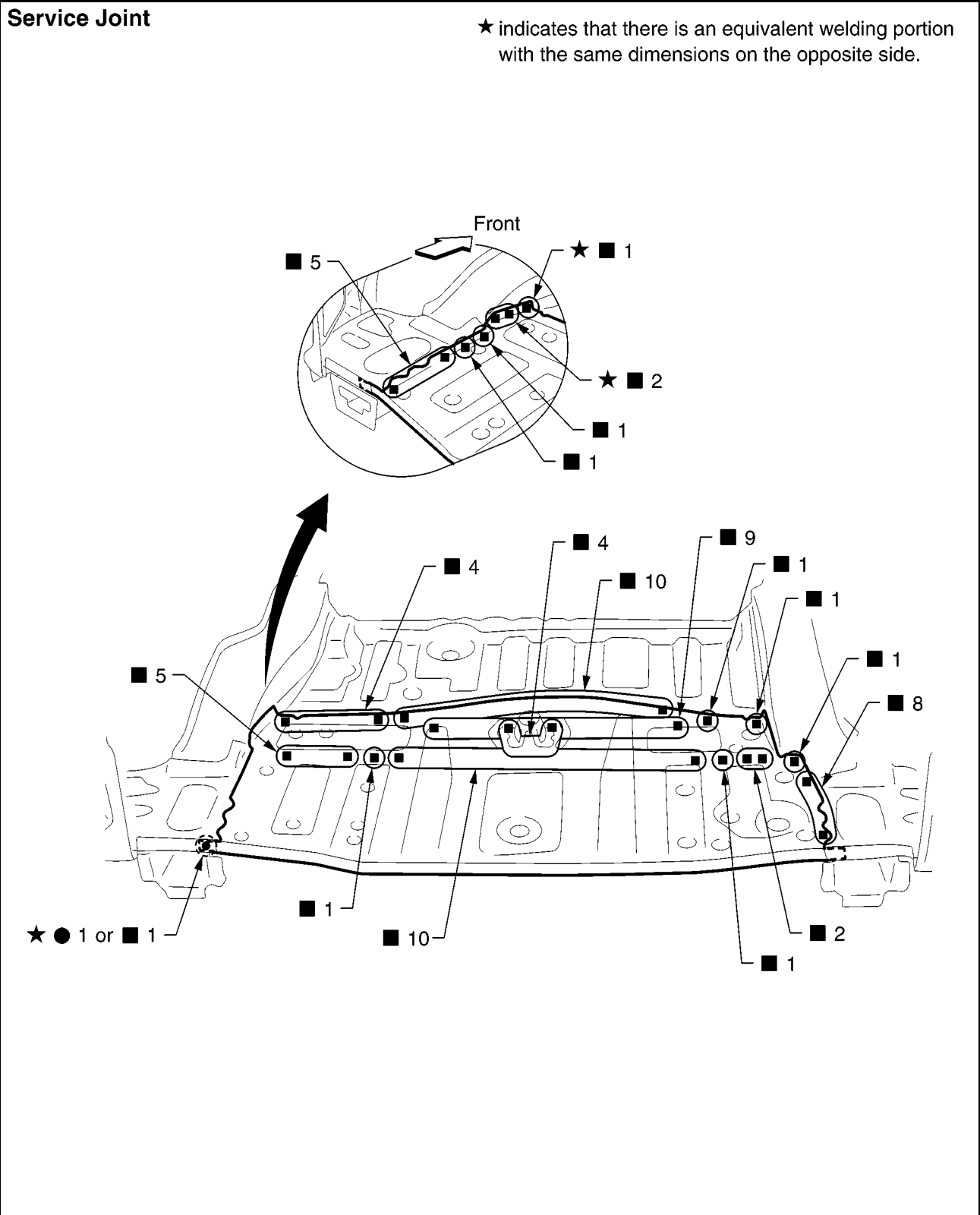
- Rear panel assembly

BODY REPAIR

REAR FLOOR REAR

- Work after rear panel assembly has been removed.

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

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BODY REPAIR

Change parts

- Rear floor rear
- Spare tire clamp bracket

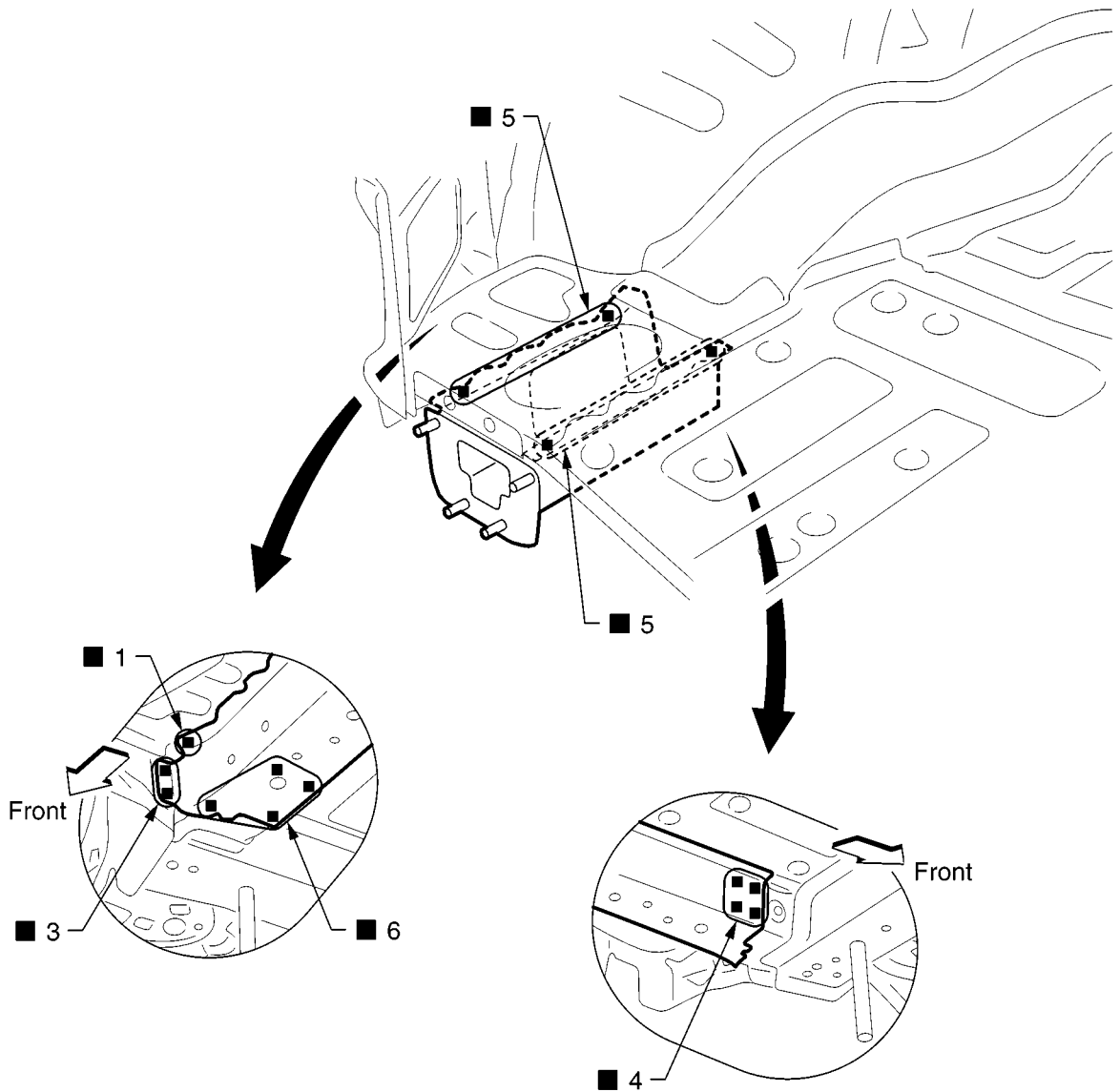
BODY REPAIR

REAR SIDE MEMBER EXTENSION

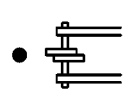
- Work after rear panel assembly has been removed.

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Service Joint



2-spot welds



3-spot welds



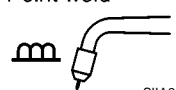
M I G plug weld



For 3 panels plug weld method



M I G seam weld/
Point weld



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BODY REPAIR

Change parts

- Rear side member extension (LH)