

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”

NIS0007G

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

Precautions for Work

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

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PREPARATION

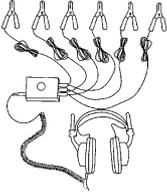
PREPARATION

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Special Service Tools

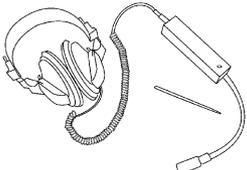
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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
(J-39570) Chassis ear  SIIA0993E	Locating the noise
(J-43980) NISSAN Squeak and Rattle Kit  SIIA0994E	Repairing the cause of noise

Commercial Service Tools

NIS000TK

Tool name	Description
Engine ear  SIIA0995E	Locating the noise

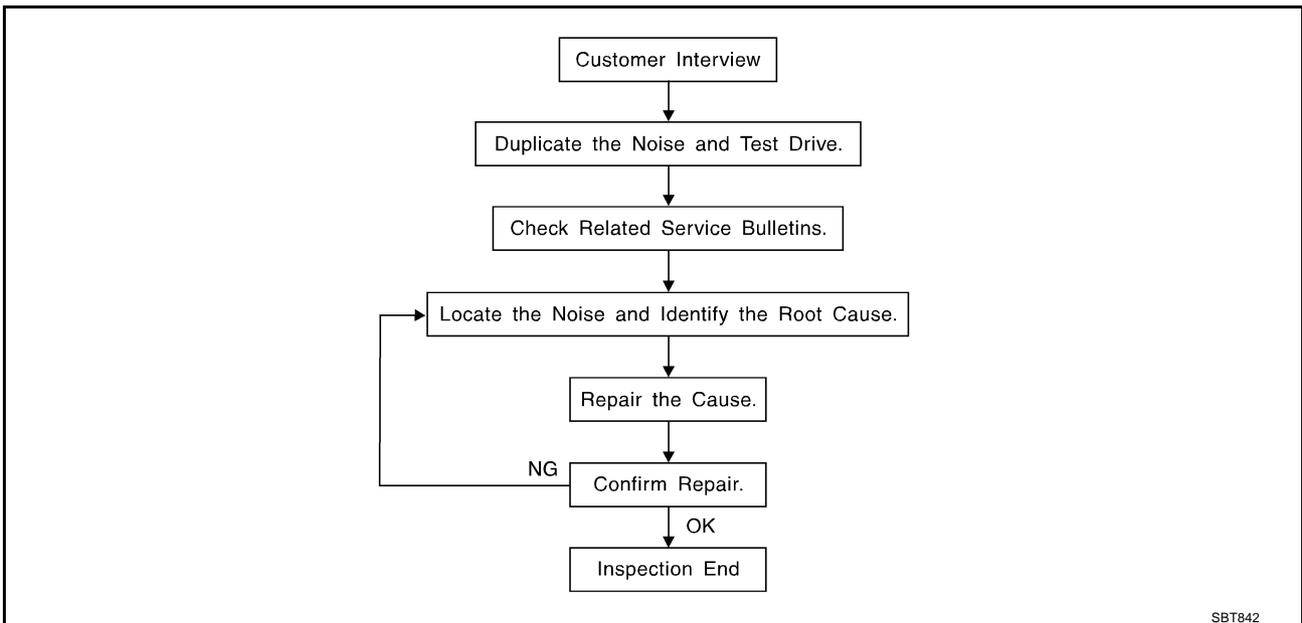
SQUEAK AND RATTLE TROUBLE DIAGNOSES

SQUEAK AND RATTLE TROUBLE DIAGNOSES

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Work Flow

NIS000TL



CUSTOMER INTERVIEW

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

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 models, drive position on A/T models).
 - 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
 - If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.

If a TSB relates to the symptom, follow the procedure to repair the noise.

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

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

REPAIR THE CAUSE

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

CAUTION:

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

NOTE:

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

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

71L02: 15 × 25 mm (0.59 × 0.98 in)

INSULATOR (Foam blocks)

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

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

50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)

SQUEAK AND RATTLE TROUBLE DIAGNOSES

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97 in)

FELT CLOTH TAPE

Used to insulate where movement does not occur. Ideal for instrument panel applications.

68370-4B000: 15 × 25 mm (0.59 × 0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll

The following materials, not found in the kit, can also be used to repair squeaks and rattles.

UHMW (TEFLON) TAPE

Insulates where slight movement is present. Ideal for instrument panel applications.

SILICONE GREASE

Used in place of UHMW tape that will be visible or not fit. 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

NIS0007M

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 DIAGNOSES

TRUNK

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

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

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

SUNROOF/HEADLINING

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

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

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

SEATS

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

Cause of seat noise include:

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

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Diagnostic Worksheet

NIS0007N



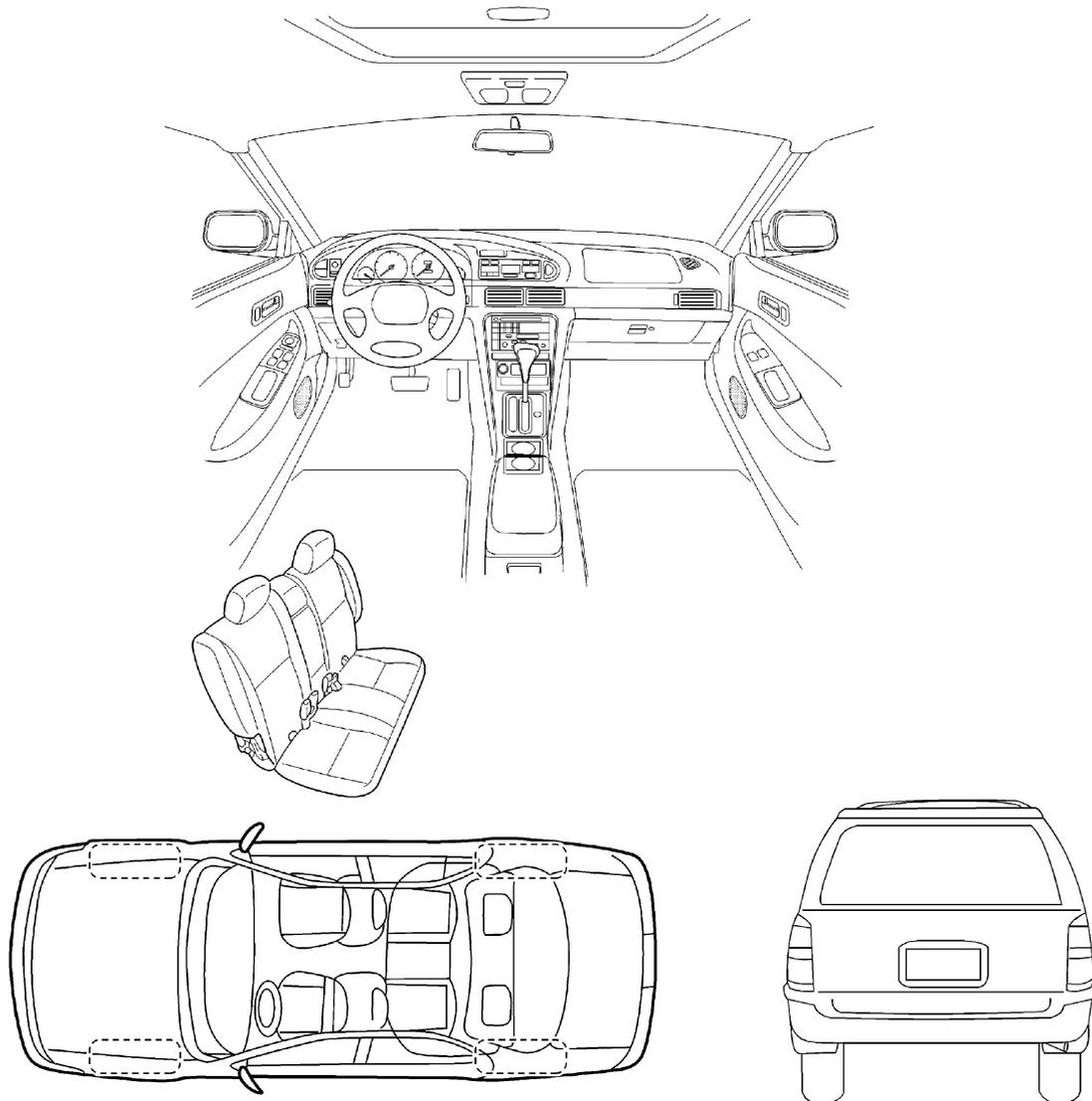
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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.

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SQUEAK AND RATTLE TROUBLE DIAGNOSES

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

SBT844

HOOD

PFP:F5100

NIS00070

HOOD

Fitting Adjustment

A
B
C
D
E
F
G
H
BL
J
K
L
M

4 Nut
10.1 (1.0, 7)

5 Bolt
16.7 (1.7, 12.5)

Hood lock adjustment

X Should be level.

Y Should be level.

A - A

B - B

C - C

D - D

CLEARANCE	a	$1.5 (0.06) \begin{matrix} +0.5 (0.02) \\ -0 (0) \end{matrix}$	SURFACE HEIGHT	e	$2.6 (0.10) \pm 1.0 (0.04)$
	b	$6.0 (0.24) \pm 2.0 (0.08)$		f	$1.0 (0.04) \pm 2.0 (0.08)$
	c	$5.9 (0.23) \pm 1.0 (0.04)$		g	$0 (0) \pm 2.0 (0.08)$
	d	$5.2 (0.20) \pm 2 (0.08)$		h	$0 (0) \pm 1.0 (0.04)$

Unit: mm (in)

: Apply body grease.

: N•m (kg-m, ft-lb)

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

LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

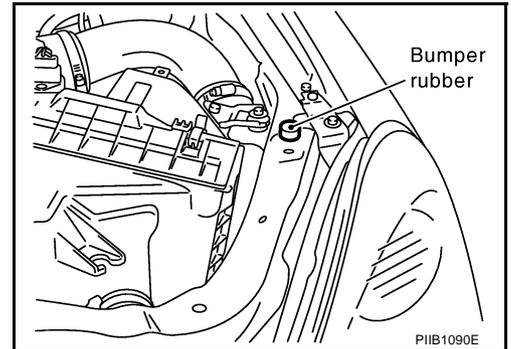
1. Remove hood lock assembly, loosen the hood hinge nuts and close the hood.

HOOD

2. Adjust the lateral and longitudinal clearance, and open the hood to tighten the hood hinge mounting nuts 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 fender (D-D) : Less than 1.0 mm (0.04 in)

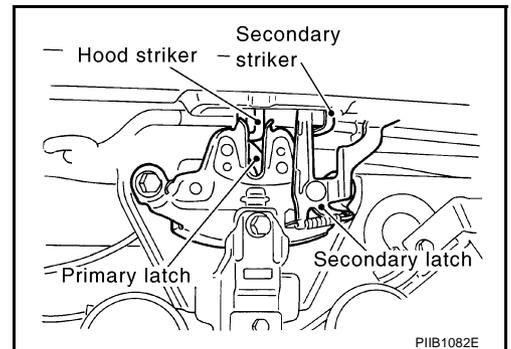
SURFACE HEIGHT ADJUSTMENT

1. Remove the hood lock, and adjust the surface height difference of the hood and fender according to the fitting standard dimension, by rotating RH and LH bumper rubbers.
2. 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.
3. Check that the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N).

CAUTION:

Do not drop the hood from 300 mm (11.81 in) height or higher.

4. Move the hood lock up and down so that the striker and lock are engaged firmly with the hood closed.
5. Tighten the lock mounting bolts to the specified torque.



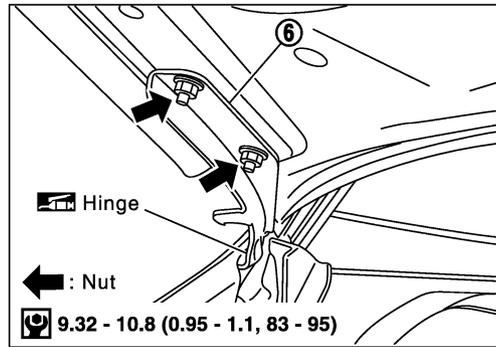
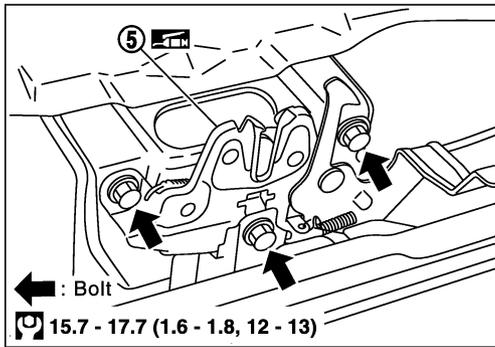
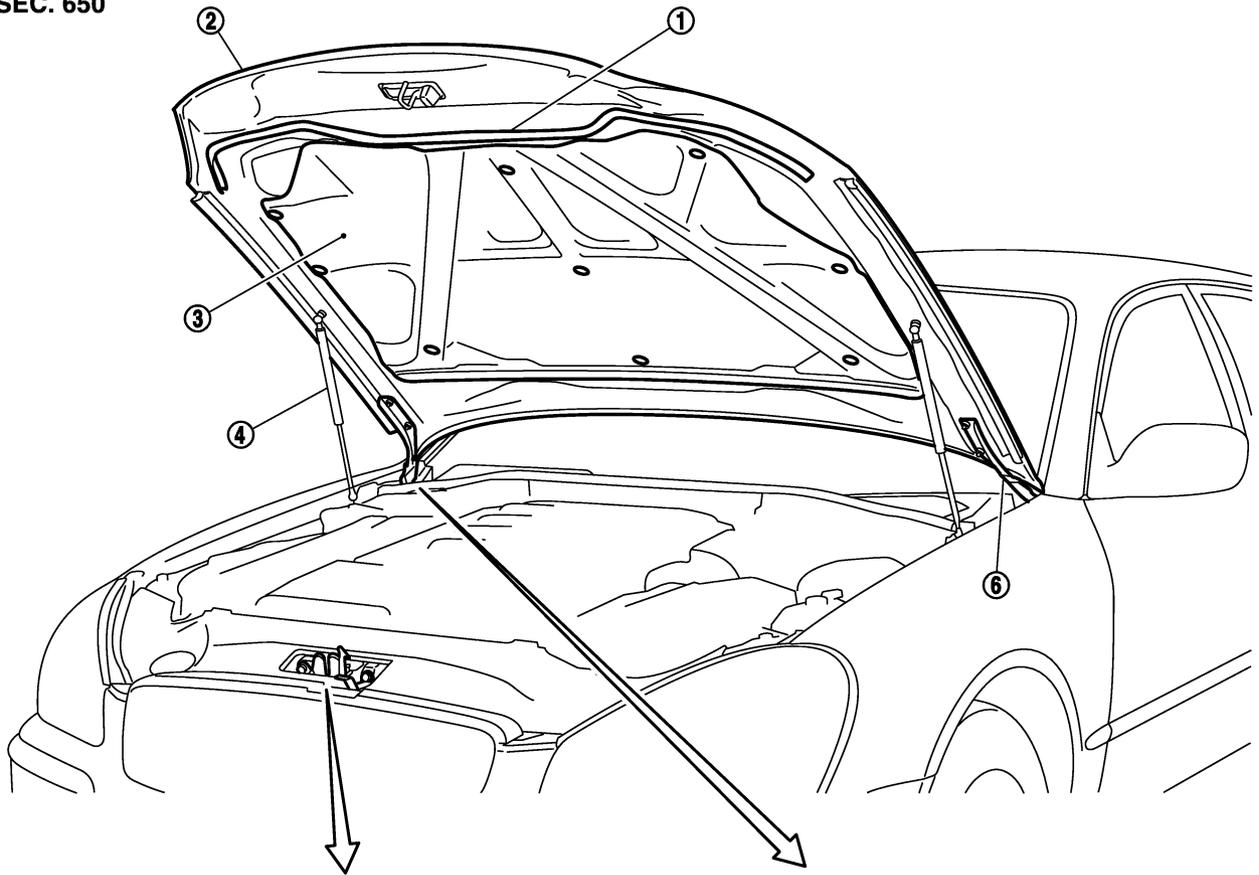
HOOD

Removal and Installation of Hood Assembly

NIS000TP

A
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BL
J
K
L
M

SEC. 650



: Apply body grease.

: N·m (kg-m, in-lb)

: N·m (kg-m, ft-lb)

PIIA3807E

- 1. Hood front sealing rubber
- 4. Hood stay

- 2. Hood assembly
- 5. Hood lock assembly

- 3. Hood insulator
- 6. Hood hinge

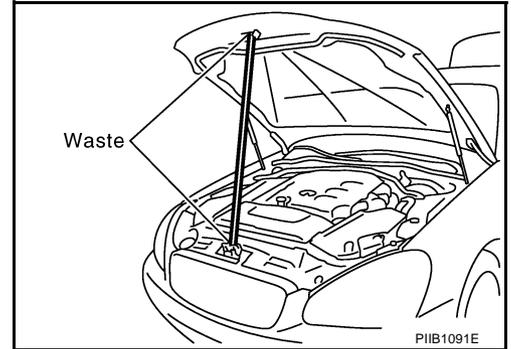
HOOD

REMOVAL

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

WARNING:

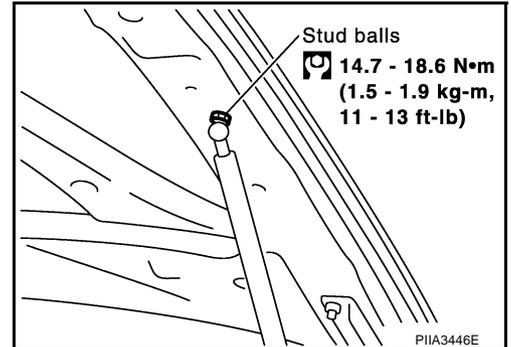
Body injury may occur if no supporting rod is holding the hood open when removing the damper stay.



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

CAUTION:

Operate with two workers, because of its heavy weight.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

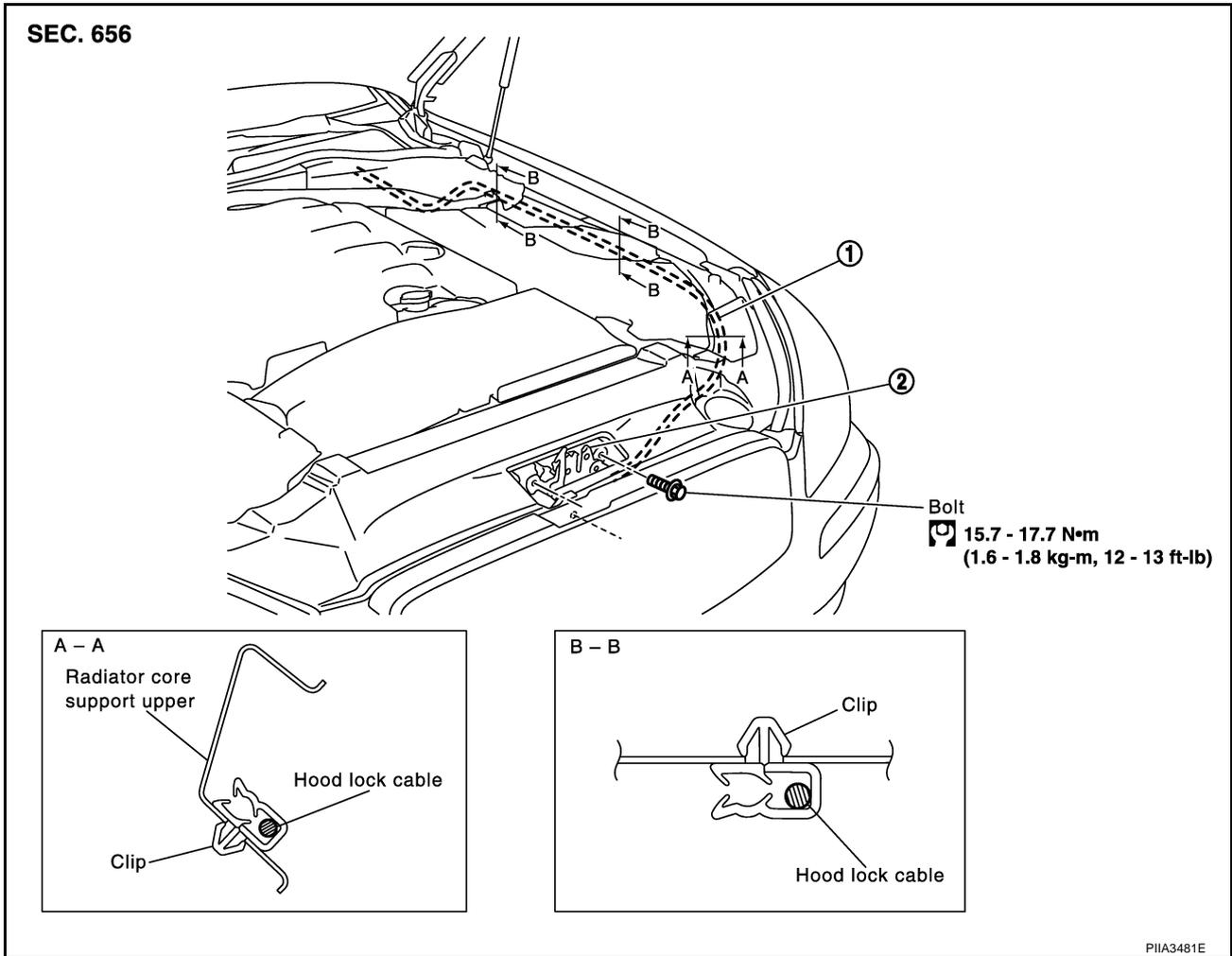
- Before installing hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installing, perform hood fitting adjustment. Refer to [BL-13, "Fitting Adjustment"](#).

HOOD

Removal and Installation of Hood Lock Control

NIS0007Q

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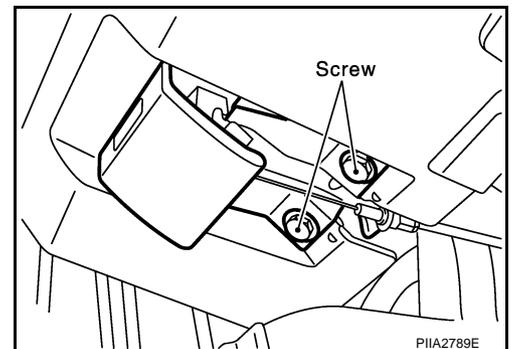


REMOVAL

1. Remove the front grille. Refer to [EI-21, "FRONT GRILLE"](#).
2. Remove the fender protector. Refer to [EI-24, "FENDER PROTECTOR"](#).
3. Remove the hood lock assembly.
4. Disconnect the hood lock cable from the hood lock, and clip it from the radiator core upper support and hood ledge.
5. Remove the mounting screws, and remove the hood opener.
6. Remove the grommet on the dash board, 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

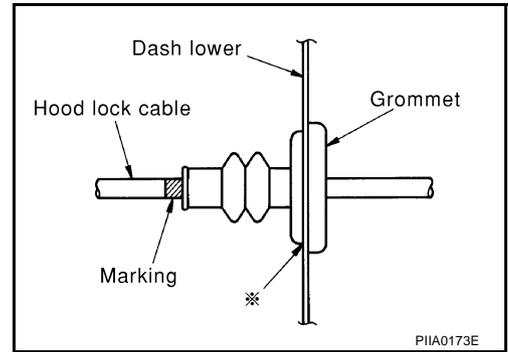
1. Pull the hood lock cable through the panel hole to the engine compartment.

HOOD

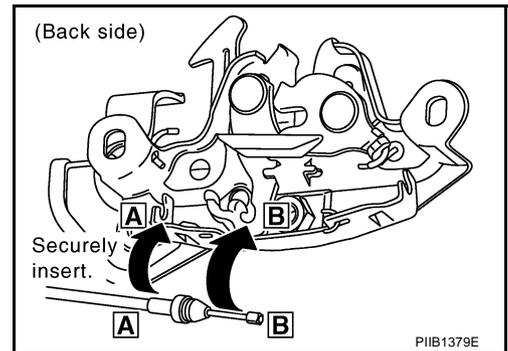
CAUTION:

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

2. Check 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, check the hood lock adjustment and hood opener operation.

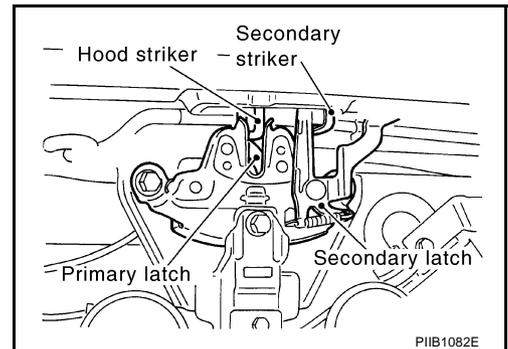


Hood Lock Control Inspection

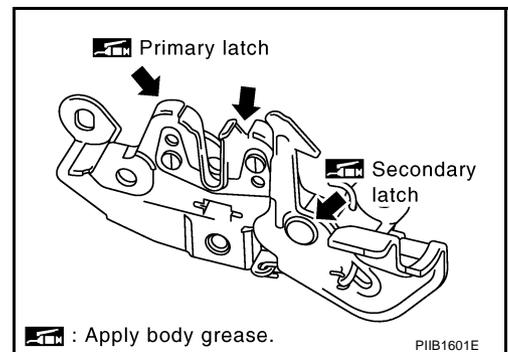
CAUTION:

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

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



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



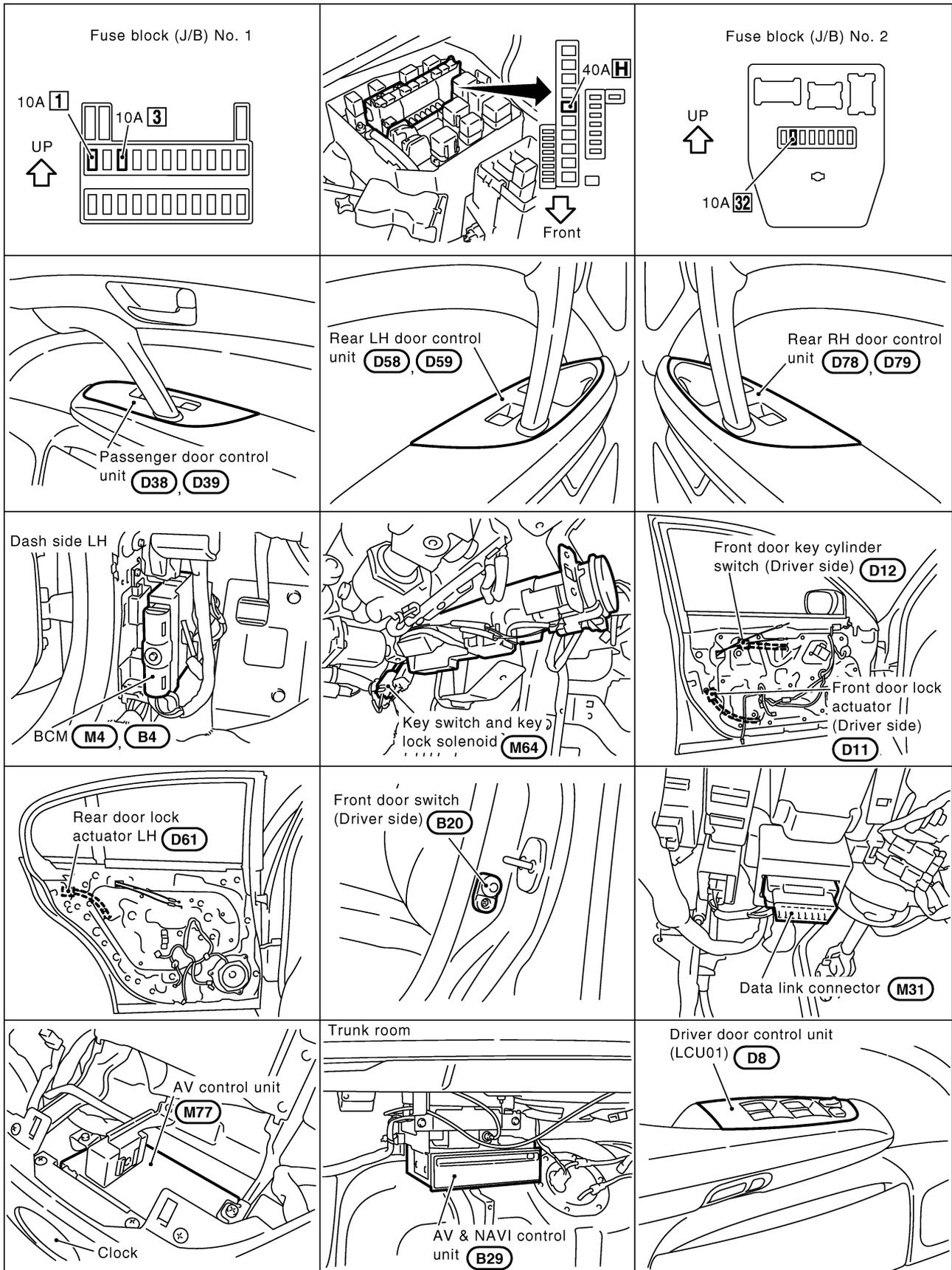
POWER DOOR LOCK SYSTEM

POWER DOOR LOCK SYSTEM

PPF:24814

Component Parts and Harness Connector Location

NIS0007S



A
B
C
D
E
F
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H
I
J
K
L
M

BL

PIIB0450E

POWER DOOR LOCK SYSTEM

NIS000TT

System Description

POWER SUPPLY AND GROUND

Power is supplied at all times

- to BCM terminal 105
- through 10A fuse [No. 3, located in the fuse block (J/B) No. 1].
- to key switch terminal 3
- through 10A fuse [No. 32, located in the fuse block (J/B) No. 2].
- to driver door control unit (LCU01) terminal 14
- to passenger door control unit, rear LH door control unit and rear door RH control unit terminal 6
- through 40A fusible link [No. H, located in the fuse, fusible link and relay box]

Ground is supplied at all times

- to BCM terminals 56 and 113
- to driver door control unit (LCU01) terminal 15
- to passenger door control unit, rear LH door control unit and rear RH door control unit terminal 7
- through grounds M24, M114, B17, B57, B217 and B256

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

- to BCM terminal 69
- through key switch terminals 3 and 4.

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

- to BCM terminal 68
- through 10A fuse [No.1, located in the fuse block (J/B) No. 1].

When front door switch is ON (front door is opened), ground is supplied

- to BCM terminal 142 (driver side), 37 (passenger side).
- through door switch terminal 1
- though front door switch case ground

When rear door switch is ON (rear door is opened), ground is supplied

- to BCM terminal 33 (rear LH), 143 (rear RH).
- through door switch terminals 1 and 2
- though body grounds B17 and B57 (rear LH), B217 and B256 (rear RH)

When door is unlocked, ground is supplied

- to driver door control unit (LCU01) terminal 6 or passenger, rear LH, RH door control unit terminal 13.
- through each door unlock sensor terminals 2 and 4
- through grounds M24, M114, B17, B57, B217 and B256

When the door is locked with the emergency key, ground is supplied

- to LCU01 terminal 10
- through front door key cylinder switch terminals 2 and 3
- through grounds M24 and M114.

When the door is unlocked with the emergency key, ground is supplied

- to LCU01 terminal 9
- through front door key cylinder switch terminals 1 and 2
- through grounds M24 and M114.

BCM is connected to LCU01 via DATA LINE A-3.

OPERATION

- The lock & unlock switch on driver's door trim and passenger's door trim can lock and unlock all doors.
- With the door key inserted in the key cylinder on front LH door, turning it to "LOCK", will lock all doors; turning it to "UNLOCK" once unlocks the corresponding door; turning it to "UNLOCK" again within 5 seconds after the first unlock operation unlocks all of the other doors. (Signals from front door key cylinder switch)

POWER DOOR LOCK SYSTEM

Key Reminder Door System

However, if the electronic key is in the electronic key cylinder and one or more of the front doors are open, setting the lock & unlock switch to "LOCK" locks the doors once but then immediately unlocks them. (Combination signals from key switch, door switch)

A

B

C

D

E

F

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H

BL

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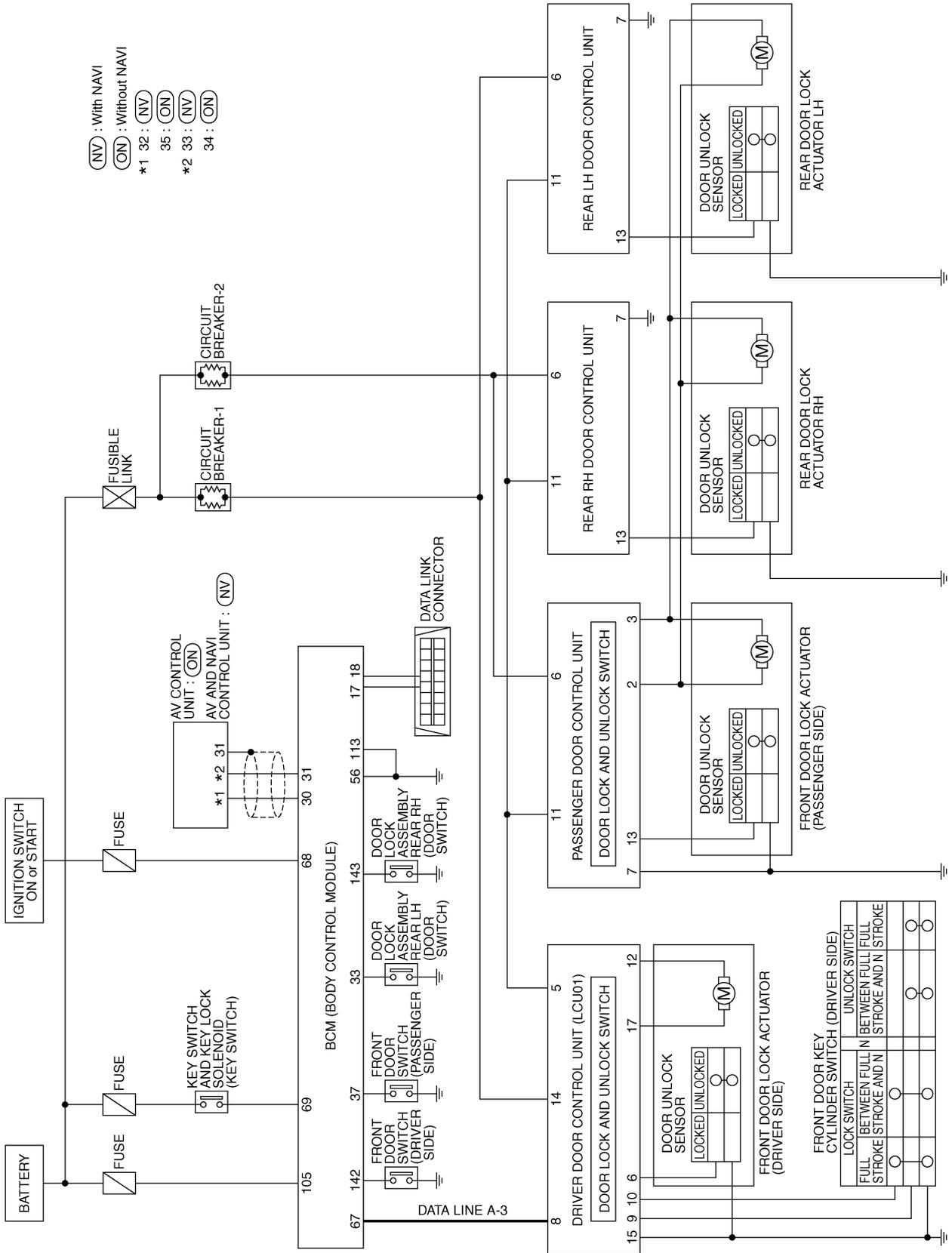
L

M

POWER DOOR LOCK SYSTEM

Schematic

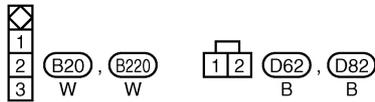
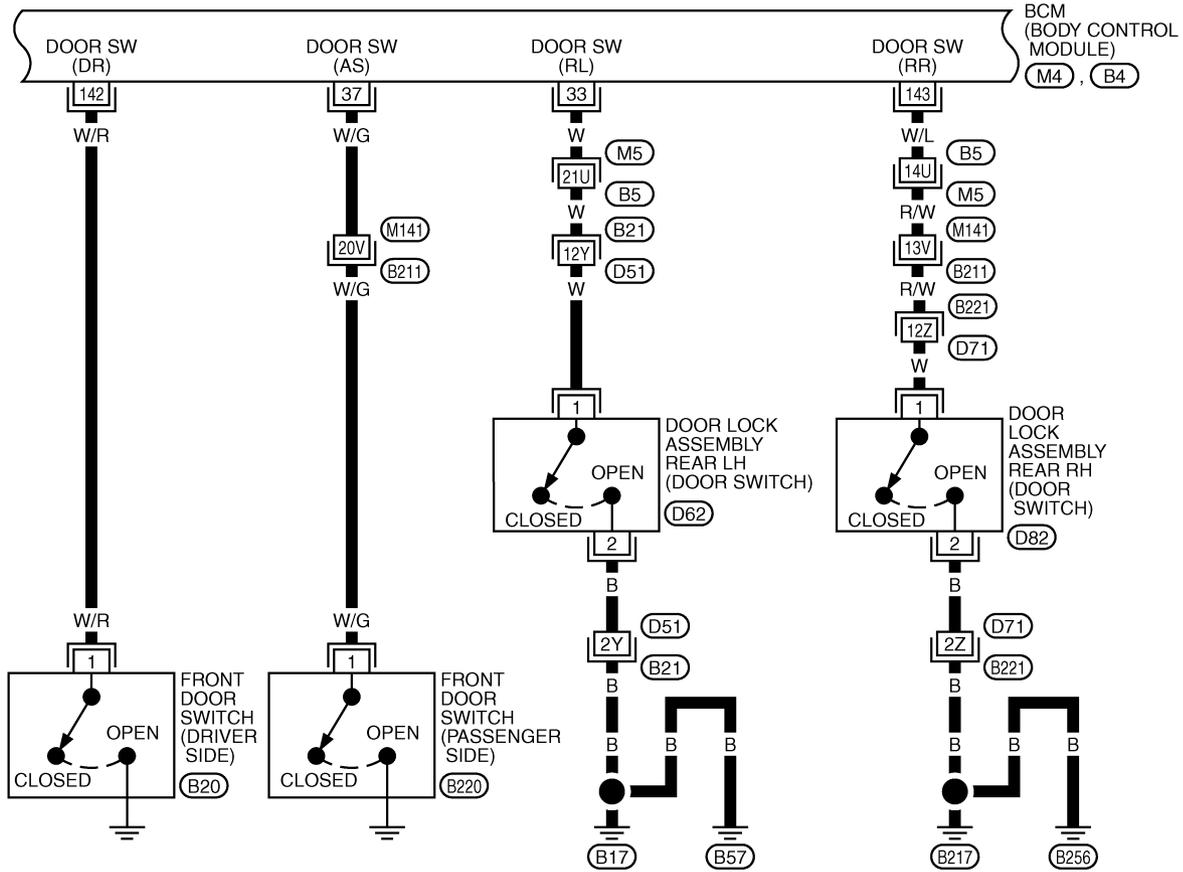
NIS000TU



TIWM0141E

POWER DOOR LOCK SYSTEM

BL-D/LOCK-02



REFER TO THE FOLLOWING.
 (M5), (B21), (B211), (B221)
 -SUPER MULTIPLE JUNCTION (SMJ)
 (M4), (B4) -ELECTRICAL UNITS

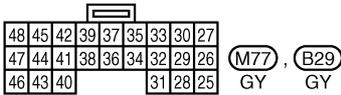
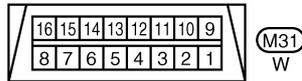
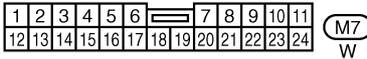
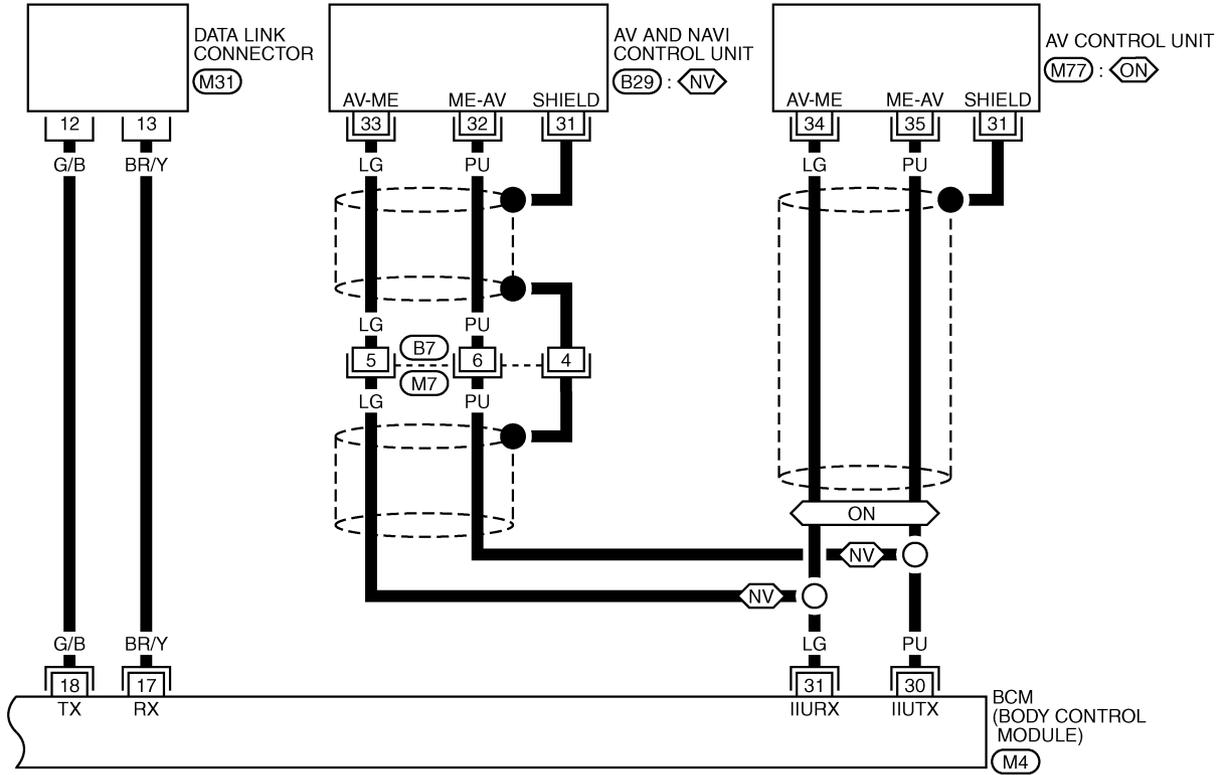
TIWM0661E

POWER DOOR LOCK SYSTEM

BL-D/LOCK-03

: WITH NAVI

: WITHOUT NAVI



REFER TO THE FOLLOWING.

(M4) -ELECTRICAL UNITS

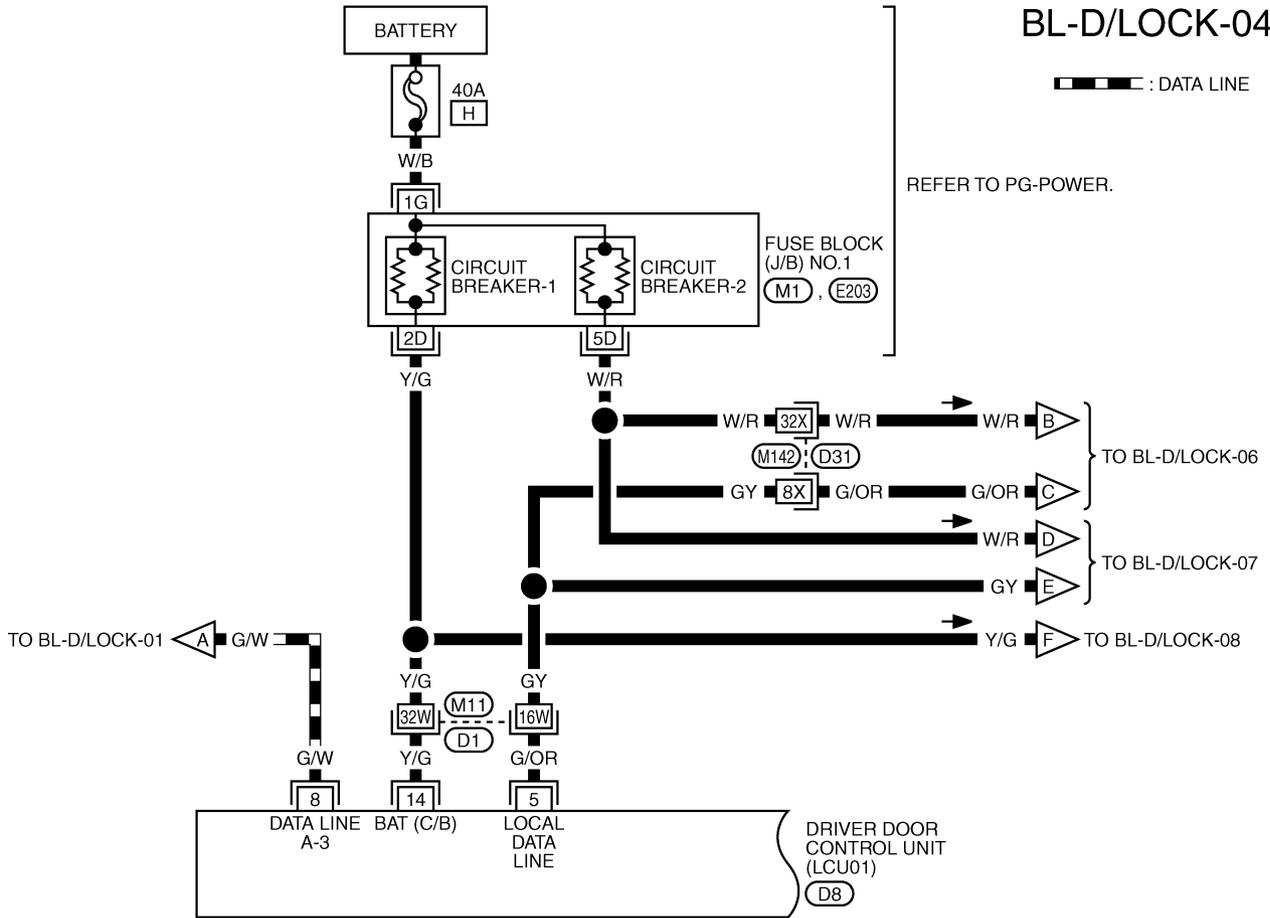
TIWM1543E

POWER DOOR LOCK SYSTEM

BL-D/LOCK-04

▬ : DATA LINE

REFER TO PG-POWER.



10	9	8	7	6	5	4	3	2	1
18	17	16	15	14	13	12	11		

(D8)
W

REFER TO THE FOLLOWING.

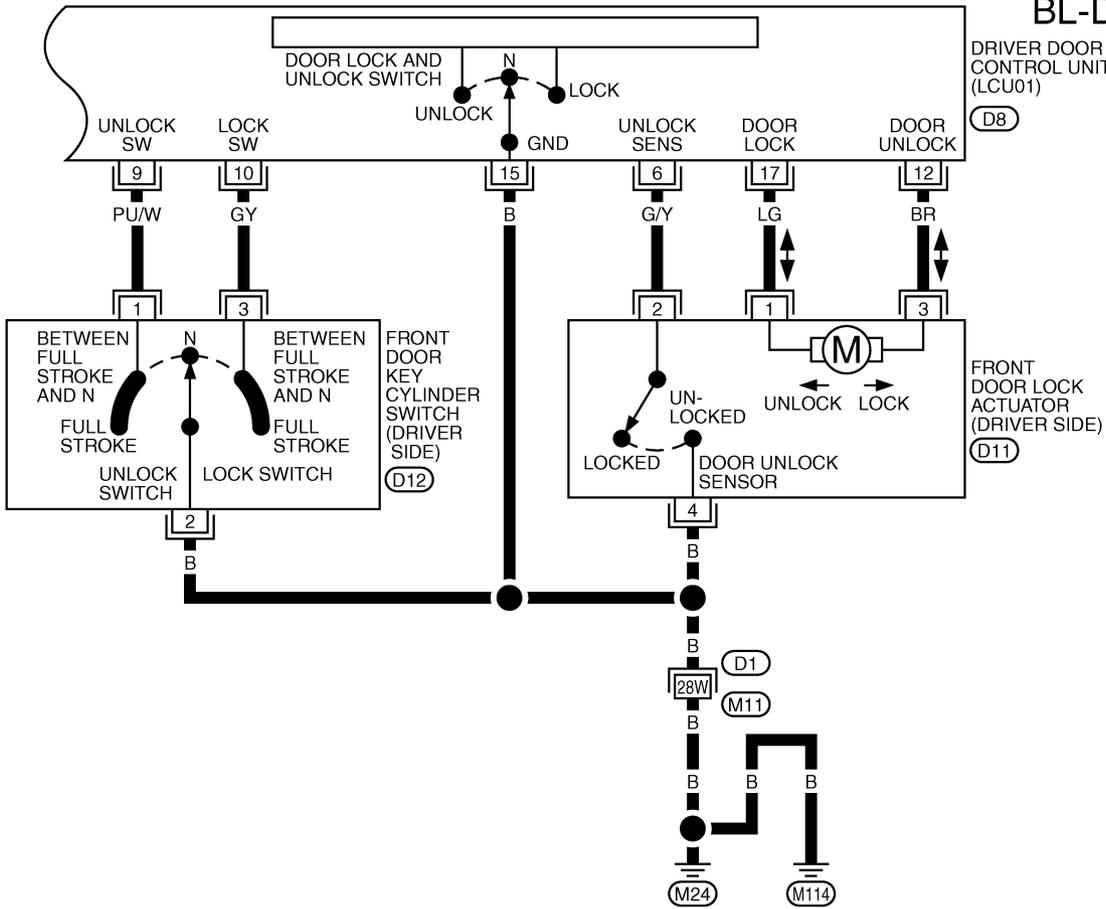
(D1), (D31) -SUPER MULTIPLE JUNCTION (SMJ)

(M1), (E203) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWM1544E

POWER DOOR LOCK SYSTEM

BL-D/LOCK-05

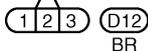


10	9	8	7	6	5	4	3	2	1
18	17	16	15	14	13	12	11		

D8
W



D11
SB



D12
BR

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

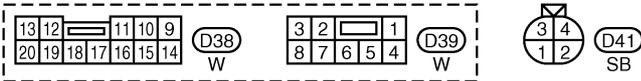
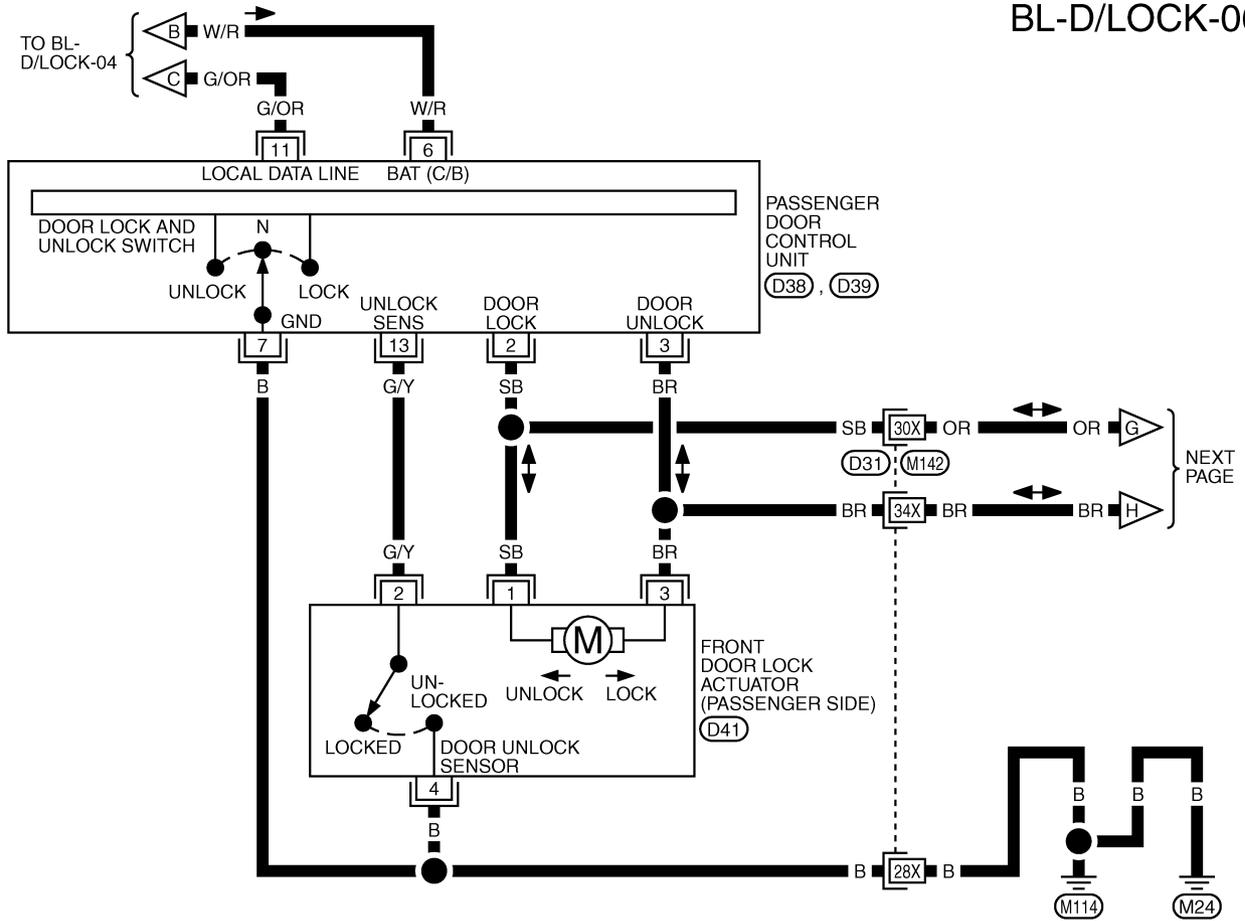
A
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BL

TIWM0664E

POWER DOOR LOCK SYSTEM

BL-D/LOCK-06

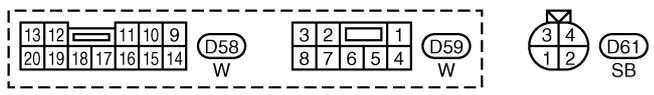
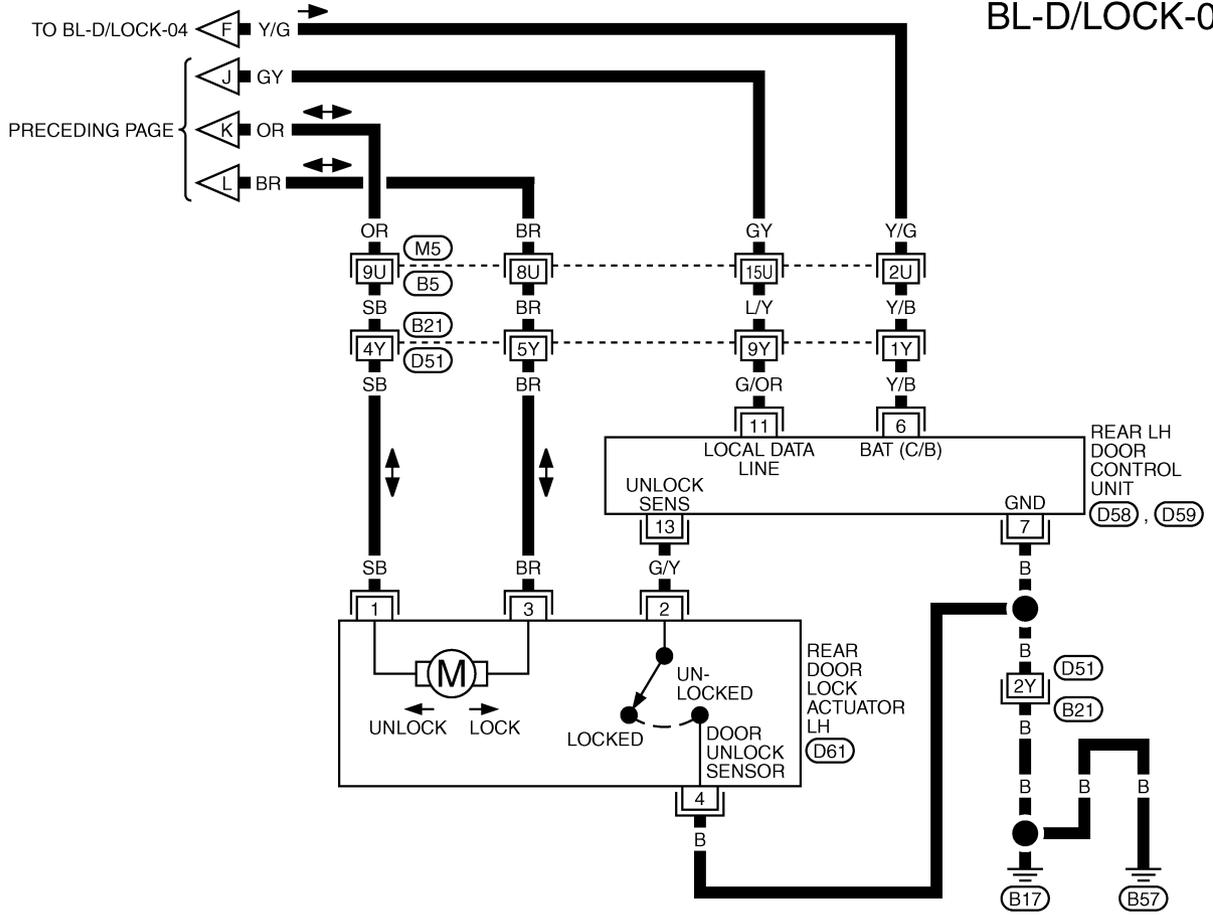


REFER TO THE FOLLOWING.
 (D31) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1545E

POWER DOOR LOCK SYSTEM

BL-D/LOCK-08



REFER TO THE FOLLOWING.
 (M5), (B21) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1547E

POWER DOOR LOCK SYSTEM

Terminals and Reference Value for BCM

NIS000TW

TER-MINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
17	BR/Y	Data link RX	Input	—	—
18	G/B	Data link TX	Output	—	—
30	PU	IIU TX	Output	—	—
31	LG	IIU RX	Input	—	—
33	W	Door switch rear LH	Input	Door open (ON) → close (OFF)	0 → Battery voltage
37	W/G	Front door switch passenger side	Input	Door open (ON) → close (OFF)	0 → Battery voltage
56	B	Ground	—	—	0
67	G/W	Data line A-3	Input/output	—	—
68	W/B	Ignition switch (ON)	Input	Ignition switch (ON or START position)	Battery voltage
69	PU/W	Key switch	Input	Key Inserted in IGN key cylinder (ON) → key removed from IGN key cylinder (OFF)	Battery voltage → 0
105	Y/L	Power source (Fuse)	Input	—	Battery voltage
113	B	Ground	—	—	0
142	W/R	Front door switch driver side	Input	Door open (ON) → close (OFF)	0 → Battery voltage
143	W/L	Door switch rear RH	Input	Door open (ON) → close (OFF)	0 → Battery voltage

Terminals and Reference Value for Driver Door Control Unit (LCU01)

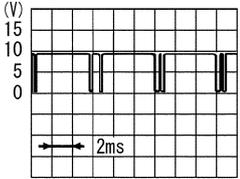
NIS000TX

TER-MINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
5	G/OR	Local data line	Input/output	—	
6	G/Y	Door unlock sensor	Input	OFF (Locked) → ON (Unlocked)	5 → 0
8	G/W	Data line A-3	Input/output	—	—
9	PU/W	Door key cylinder unlock switch	Input	OFF (Neutral) → ON (Unlocked)	5 → 0
10	GY	Door key cylinder lock switch	Input	OFF (Neutral) → ON (Locked)	5 → 0
12	BR	Driver door lock actuator (Unlock)	Output	Door lock & unlock switch (Free → Unlocked)	0 → Battery voltage → 0
14	Y/G	Power source (C/B)	Input	—	Battery voltage
15	B	Ground	—	—	0
17	LG	Driver door lock actuator (Lock)	Output	Door lock & unlock switch (Free → Locked)	0 → Battery voltage → 0

POWER DOOR LOCK SYSTEM

Terminals and Reference Value for Passenger and Rear LH, RH Door Control Units

NIS000TY

TERMI-NAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
*2	SB	Door lock actuator (Lock)	Output	Door lock & unlock switch (Free → Locked)	0 → Battery voltage → 0
*3	BR	Door lock actuator (Unlock)	Output	Door lock & unlock switch (Free → Unlocked)	0 → Battery voltage → 0
6	W/R (Y/B)	Power source (C/B)	Input	—	Battery voltage
7	B	Ground	—	—	0
11	G/OR	Local data line	Input/output	—	 <p style="text-align: right;">S1IA0591J</p>
13	G/Y	Door unlock sensor	Input	OFF (Locked) → ON (Unlocked)	5 → 0

*Only for passenger door control unit.

(): Wire color for rear RH/LH door control unit.

Work Flow

NIS000TZ

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [BL-20, "System Description"](#) .
3. Perform the preliminary check. Refer to [BL-33, "Preliminary Check"](#) .
4. Perform the communication inspection. If CONSULT-II is used, refer to [BL-36, "IVMS COMMUNICATION INSPECTION"](#) section. If CONSULT-II is not used, refer to [BL-39, "COMMUNICATION DIAGNOSIS"](#) . Is the communication diagnosis result OK?
OK: GO TO step 7.
NG: GO TO step 5
5. Repair or replace depending on the diagnosis result.
6. Perform the communication diagnosis again. If CONSULT-II is used, refer to [BL-36, "IVMS COMMUNICATION INSPECTION"](#) . If CONSULT-II is not used, refer to [BL-39, "COMMUNICATION DIAGNOSIS"](#) . Is communication diagnosis result OK?
OK: GO TO step 7.
NG: GO TO step 5.
7. Perform the self-diagnosis. If CONSULT-II is used, refer to [BL-36, "IVMS COMMUNICATION INSPECTION"](#) . If CONSULT-II is not used, refer to [BL-39, "COMMUNICATION DIAGNOSIS"](#) . Is self-diagnosis result OK?
OK: GO TO step 11.
NG: GO TO step 8.
8. Repair or replace depending on the diagnosis result.
9. Perform the self-diagnosis again. If CONSULT-II is used, refer to [BL-38, "SELF-DIAGNOSIS RESULTS"](#) , If CONSULT-II is not used, refer to [BL-43, "POWER DOOR LOCK SYSTEM SELF-DIAGNOSIS"](#) . Is self-diagnosis result OK?
OK: GO TO step 11.
NG: GO TO step 8.
10. Referring to trouble diagnosis chart, repair or replace the cause of the incident.
Refer to [BL-44, "Symptom Chart"](#)
11. Does power door lock system operate normally?
YES: GO TO step 12.
NO: GO TO step 10.
12. Inspection END.

POWER DOOR LOCK SYSTEM

NIS000U0

Preliminary Check POWER SUPPLY AND GROUND CIRCUIT INSPECTION

1. FUSE INSPECTION

Check if any of the following fuses are blown.

Unit	Power source	Fuse No.
BCM	Battery power supply	3 (10A)
	IGN power supply	1 (10A)

Refer to [BL-23, "Wiring Diagram — D/LOCK —"](#).

Unit	Power source	Fusible link letter
Driver door control unit Passenger door control unit Rear LH door control unit Rear RH door control unit	Battery power supply	H (40A)

Refer to [BL-23, "Wiring Diagram — D/LOCK —"](#).

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-2, "POWER SUPPLY ROUTING"](#).

2. POWER SUPPLY CIRCUIT INSPECTION

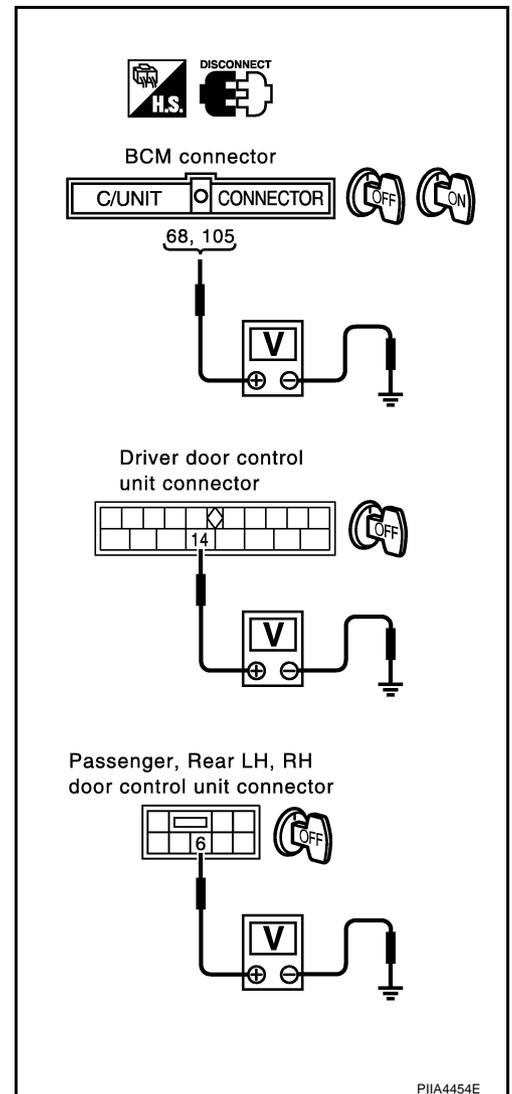
Remove the connectors of BCM and driver door LCU or passenger, rear LH, RH door control units, measure the voltage between the following terminals of connector and ground.

Unit (Connector)	Terminals (wire color)		Ignition switch condition	Voltage (V) (Approx.)
	(+)	(-)		
BCM (M4)	105 (Y/L)	Ground	OFF	Battery voltage
	68 (W/B)		ON	
Driver door control unit (D8)	14 (Y/G)		OFF	
Passenger door control unit (D39)	6 (W/R)		OFF	
Rear LH door control unit (D59)	6 (Y/B)			
Rear RH door control unit (D79)	6 (Y/B)			

OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short.



POWER DOOR LOCK SYSTEM

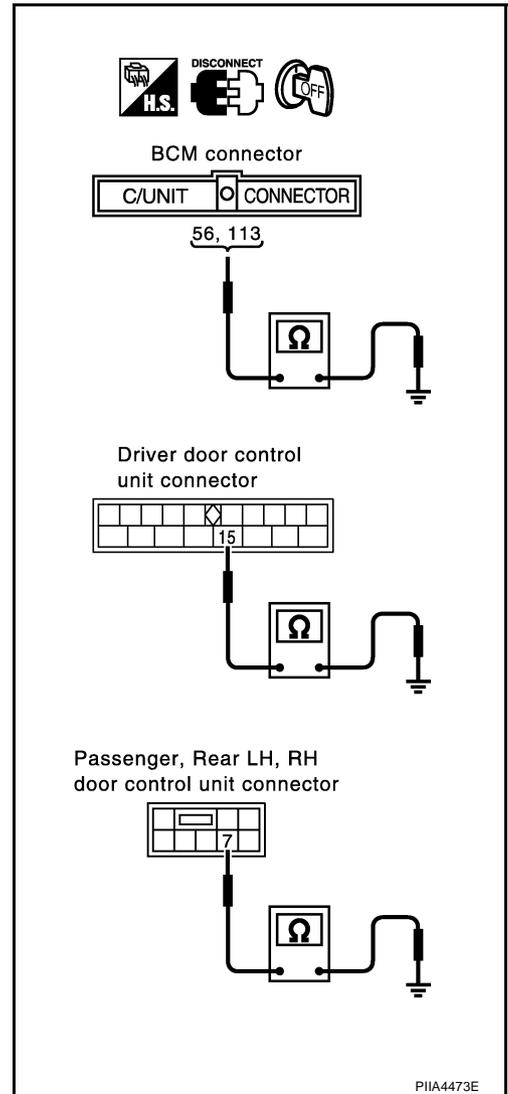
3. GROUND CIRCUIT INSPECTION

Check the continuity between the following terminals connector for BCM, driver door LCU, passenger or rear RH, LH door control units and ground.

Unit (Connector)	Terminals (wire color)		Continuity
	(+)	(-)	
BCM (M4)	56 (B)	Ground	Yes
	113 (B)		
Driver door control unit (D8)	15 (B)		
Passenger door control unit (D39)	7 (B)		
Rear LH door control unit (D59)			
Rear RH door control unit (D79)			

OK or NG

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



CONSULT-II Function

NIS000U1

CONSULT-II executes the following functions by combining data reception and command transmission via the communication line from BCM. IVMS communication inspection, work support (only function setting of seats and steering wheel), self-diagnosis, data monitor, and active test display.

DIAGNOSTIC ITEMS DESCRIPTION

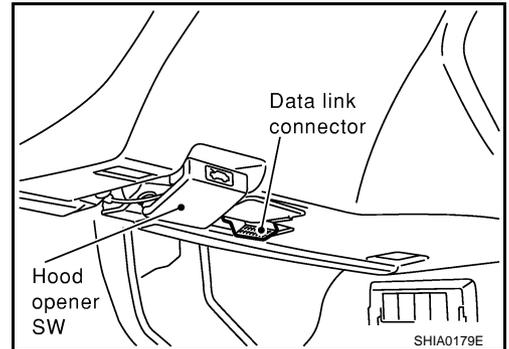
IVMS diagnosis position	Diagnosis mode	Description
IVMS-COMM CHECK	IVMS-COMM DIAGNOSIS	Diagnosis of continuity in the communication line(s), and of the function of the IVMS-communication interface between the body control module and the local control units, accomplished by transmitting a signal from the body control module to the local control units.
	WAKE-UP DIAGNOSIS	Diagnosis of the "wake-up" function of local control units by having a technician input the switch data into the local control unit that is in the temporary "sleep" condition.

POWER DOOR LOCK SYSTEM

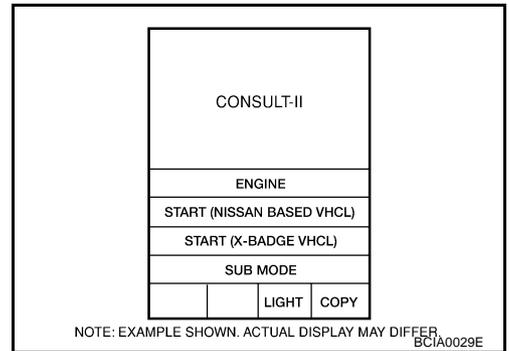
IVMS diagnosis position	Diagnosis mode	Description
Each system inspection	Work support	Changes the setting for each function.
	Self-diagnosis results	Carries out self-diagnosis.
	Data monitor	Displays data relative to the body control module (BCM) input signals and various control related data for each system.
	Active test	Turns on/off actuators, relay and according to the commands transmitted by the CONSULT-II unit.
BCM PART NUMBER		Displays BCM part No.

CONSULT-II BASIC OPERATION PROCEDURE

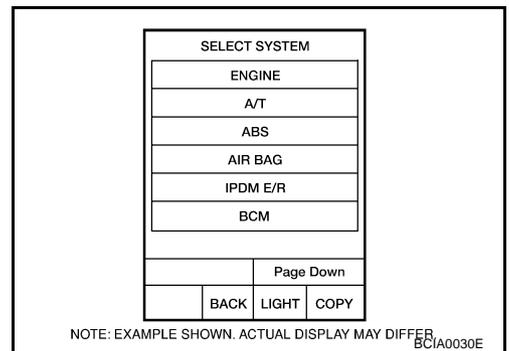
1. With the ignition switch OFF, connect "CONSULT-II" and "CONSULT-II CONVERTER" to the data link connector, and turn the ignition switch ON.



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



3. Touch "IVMS".
If "IVMS" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).

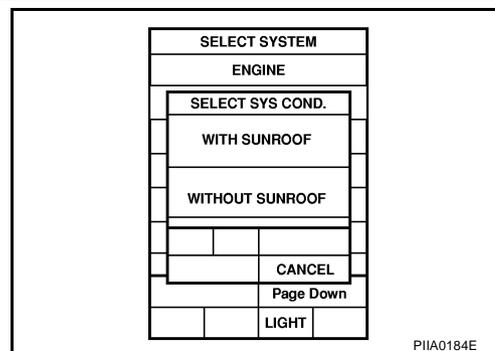


A
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M

BL

POWER DOOR LOCK SYSTEM

4. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
5. Touch "OK". If the selection is wrong, touch "CANCEL".



6. Select the desired part to be diagnosed on the "SELECT TEST ITEM" screen.

IVMS COMMUNICATION INSPECTION

IVMS contains the IVMS communication diagnosis and wake-up diagnosis.

IVMS Communication Diagnosis.

- IVMS communication diagnosis consists of the communication diagnosis, sleep diagnosis, and inactive communication diagnosis between BCM and each local unit (LCU), and display the results on the CONSULT-II screen.

NOTE:

Sleep is a power saving function when a vehicle is stationary (all BCM related electrical equipment: OFF, and the timer: OFF).

- The function also stores the communication malfunction records and inactive communication records, and displays the data on the CONSULT-II screen (Malfunction record diagnosis)

Malfunction description	CONSULT-II display item	Description
Communication malfunction	COMM DATA	Communicating with each LCU is judged sound when the communication is normally completed and the transmitted data and received data are identically the same. In other cases, it is judged malfunctioning. If the communication is inactive, no diagnosis result is displayed.
Inactive communication	NO RESPONSE	Communicating with each LCU is judged sound when at least one time communication is normally completed within three trials. In other cases, it is judged malfunctioning.
Sleep malfunction	SLEEP	Make sure that each LCU enters sleep mode.
Communication malfunction*	PAST COMM DATA	The records when communication signal malfunctions were continuously detected while the communication was normal are displayed. Or the records when a malfunction is detected during the past sleep mode are displayed.
Inactive communication*	PAST NO RESPONSE	The records when inactive communications were continuously detected while the communication was normal are displayed.

*: malfunctioning item record

Operation Procedure

1. Touch "IVMS-COMM CHECK" on "SELECT TEST ITEM".
2. Touch "IVMS-COMM DIAGNOSIS" on "SELECT DIAG ITEM" screen.
3. Touch "START" on "IVMS-COMM DIAGNOSIS" screen to start the diagnosis.
4. After the diagnosis is completed, the malfunctioning system is displayed.
5. When the malfunctioning items are displayed, touch "PRINT" to record.
6. Touch "ERASE".
7. Perform the communication inspection again to make sure that any malfunctioning item is displayed.
8. Check the displayed items.

Wake-Up Diagnosis

The wake-up diagnosis is carried out when BCM detects the wake-up signal from each local unit (LCU). When the switch shown on the screen is operated as instructed, each local control unit (LCU) outputs the wake-up

POWER DOOR LOCK SYSTEM

signal. If BCM cannot detect a wake-up signal, it is judged malfunctioning. The malfunctioning local control unit (LCU) is displayed on the screen.

NOTE:

If any unspecified switch is operated, "Switch data not match" is displayed as a malfunctioning system.

Operation Procedure

1. Touch "IVMS-COMM CHECK" on "SELECT TEST ITEM" screen.
2. Touch "WAKE-UP DIAGNOSIS" on "SELECT DIAG ITEM" screen.
3. Touch "START" on "WAKE-UP DIAGNOSIS" screen to start the diagnosis.
4. Touch "NEXT" to select the local control unit (LCU) to be diagnosed.
5. Make sure that any malfunction is displayed. If necessary, touch "PRINT" to record.
6. Perform the inspection to the malfunctioning item.

Malfunction Code Table

Malfunctioning item	Display unit	CONSULT-II IVMS communication diagnosis content	Self-diagnosis trouble code No.	Malfunctioning system and reference
COMM DATA	One LCU is displayed.	POWER WINDOW C/U-DR "COMM DATA"	24	Replace the displayed LCU.
		DOOR MIRROR C/U-RH "COMM DATA"	27	
		DOOR MIRROR C/U-LH "COMM DATA"	37	
		POWER SEAT C/U-DR "COMM DATA"	47	
	Multiple LCUs are displayed.	BCM "COMM FAIL1" ,"COMM FAIL2"	Displays in order of 24 →27→37→47 →and cycles from 24.	Communication system A: Refer to BL-41, "COMMUNICATION SYSTEM A" .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U-DR "NO RESPONSE"	25	Communication system B: Refer to BL-41, "COMMUNICATION SYSTEM B" .
		DOOR MIRROR C/U-RH "NO RESPONSE"	28	
		DOOR MIRROR C/U-LH "NO RESPONSE"	38	
		POWER SEAT C/U-DR "NO RESPONSE"	48	
	Multiple LCUs are displayed.	BCM/HARNESS	Displays in order of 25→28→38→48 and cycles from 25.	Communication system C: Refer to BL-41, "COMMUNICATION SYSTEM C" .
SLEEP malfunction	One LCU is displayed.	POWER WINDOW C/U-DR "SLEEP"	No self-diagnosis function	Replace the displayed LCU.
		DOOR MIRROR C/U-RH "SLEEP"		
		DOOR MIRROR C/U-LH "SLEEP"		
		POWER SEAT C/U-DR "SLEEP"		
	Multiple LCUs are displayed.	All the above control units are displayed.	No self-diagnosis function	Communication system A: Refer to BL-41, "COMMUNICATION SYSTEM A" .

NOTE:

- For a specific local control unit (LCU), either "PAST COMM DATA" or "PAST NO RESPONSE" may be displayed instead of the above results. This is caused by the data record, so erase the records.

POWER DOOR LOCK SYSTEM

(The display only shows the incident records, they are not malfunctions caused during the diagnosis. One possible cause is that an irreproducible incident symptom occurred.)

- Follow the steps below to erase the memory
Perform either disconnect BCM battery power supply or erase memory with CONSULT-II.
- With the battery connected, if the local control unit (LCU) connector is disconnected for approximately 1 minute, the BCM stores "NO RESPONSE" record.

SELF-DIAGNOSIS RESULTS

Operation Procedure

1. Touch "DOOR LOCK" on the "SELECT TEST ITEM" screen.
2. Touch "SELF-DIAG RESULTS" on the "SELECT DIAG MODE" screen.
3. Touch "START" on the "SELF DIAG RESULTS" screen.
4. Door lock actuator automatically locks/unlocks all the doors before the door lock actuator self-diagnosis start.
5. After the diagnosis is completed, the malfunctioning system name is displayed.
6. When the malfunctioning items are displayed, touch "PRINT" to keep the records.
7. Touch "ERASE".
8. Perform the self-diagnosis again to make sure that any malfunctioning item is displayed.
9. Perform out the inspection to the displayed items. If "No failure" is displayed, the malfunctioning item recorded at first shall be checked.

Self-Diagnostic Result List

Malfunctioning system.	Malfunction detecting condition
DOOR LOCK MOTOR-DR	The circuit for the driver side door lock actuator/unlock sensor is malfunctioning.
DOOR LOCK MOTOR-AS	The circuit for the passenger side door lock actuator/unlock sensor is malfunctioning.
DOOR LOCK MOTOR-RR/RH	The circuit for the rear RH side door lock actuator/unlock sensor is malfunctioning.
DOOR LOCK MOTOR-RR/LH	The circuit for the rear LH side door lock actuator/unlock sensor is malfunctioning.
NO DTC IS DETECTED/FURTHER TESTING MAY BE REQUIRED	No malfunction in the above items.

DATA MONITOR

Monitored item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
IGN KEY SW	Indicates [ON/OFF] condition of electronic key switch.
DOOR LK SW-LK	Indicates [ON/OFF] condition of lock signal from lock/unlock switch front LH.
DOOR LK SW-UN	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch front LH.
LOCK SIG-DR	Indicates [ON/OFF] condition of driver door unlock signal from door unlock sensor.
LOCK SIG-AS	Indicates [ON/OFF] condition of passenger door unlock signal from door unlock sensor.
LOCK SIG-RR/RH	Indicates [ON/OFF] condition of rear RH door unlock signal from door unlock sensor.
LOCK SIG-RR/LH	Indicates [ON/OFF] condition of rear LH door unlock signal from door unlock sensor.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
KEY CYL UN-DR	Indicates [ON/OFF] condition of unlock signal from driver door key cylinder.
KEY CYL LK-DR	Indicates [ON/OFF] condition of lock signal from driver door key cylinder.
MAIN/S LOCK AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch front RH
MAIN/S UNLK AS	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch front RH

ACTIVE TEST

Test item.	Malfunction detecting condition
DR LOCK MTR-ALL	This test is able to check all door lock actuators lock operation. These actuators lock when "ON" on CONSULT-II screen is touched.

POWER DOOR LOCK SYSTEM

On Board Diagnosis

NIS000U2

ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP

Front map lamps and step lamps (all seats) act as the indicators for the on board diagnosis.

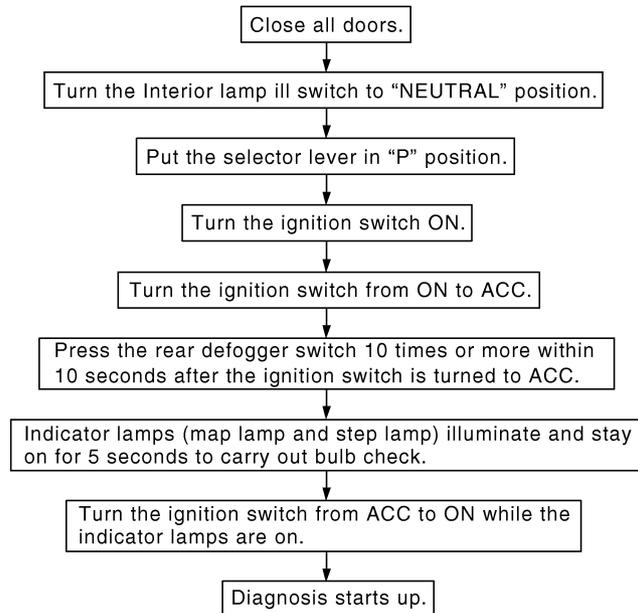
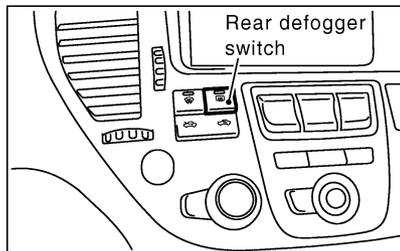
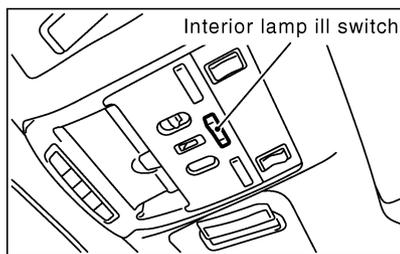
DIAGNOSIS ITEM

Diagnosis item	Content
IVMS communication diagnosis	Diagnosis any malfunction or inability of communication between BCM and LCU (DATA LINE A-3).
Switch monitor	Monitoring conditions of switches connected to BCM, LCU and Door control unit.
Power door lock system self-diagnosis	Diagnose malfunctions in the each door lock actuator system.

COMMUNICATION DIAGNOSIS

Check the communication between BCM and local control unit (LCU).

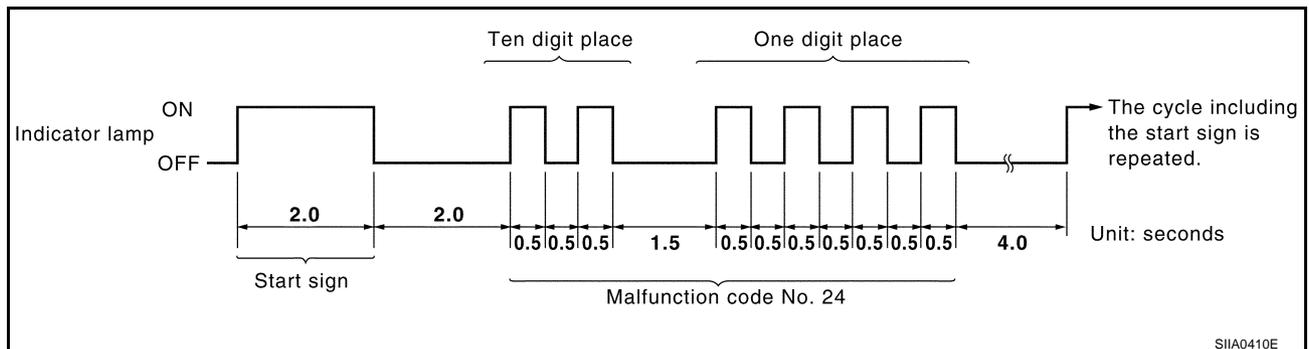
How To Perform Communication Diagnosis



PIIA3358E

Description

In this mode, a malfunction code is indicated by the number of flashes from the map lamps and step lamps as shown below:



After indicator lamp turns on for 2 seconds then off for 2 seconds, it flashes [cycling ON (0.5 sec.)/OFF (0.5 sec.)] to indicate a malfunction code of the first digit. Then, 1.5 second after indicator lamp turns off, it again flashes [cycling ON (0.5 sec.)/OFF (0.5 sec.)] to indicate a malfunction code of the second digit.

For example, the indicator lamp goes on and off for 0.5 seconds twice and after 1.5 seconds, it goes on and off for 0.5 seconds four times. This indicates malfunction code of driver door control unit communication.

POWER DOOR LOCK SYSTEM

Malfunction Code Table

Malfunctioning item	Display unit	CONSULT-II IVMS communication diagnosis content	Self-diagnosis trouble code No.	Malfunctioning system and reference
COMM DATA	One LCU is displayed.	POWER WINDOW C/U-DR "COMM DATA"	24	Replace the displayed LCU.
		DOOR MIRROR C/U-RH "COMM DATA"	27	
		DOOR MIRROR C/U-LH "COMM DATA"	37	
		POWER SEAT C/U-DR "COMM DATA"	47	
	Multiple LCUs are displayed.	BCM "COMM FAIL1", "COMM FAIL2"	Displays in order of 24 →27→37→47 →and cycles from 24.	Communication system A: Refer to BL-41, "COMMUNICATION SYSTEM A" .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U-DR "NO RESPONSE"	25	Communication system B: Refer to BL-41, "COMMUNICATION SYSTEM B" .
		DOOR MIRROR C/U-RH "NO RESPONSE"	28	
		DOOR MIRROR C/U-LH "NO RESPONSE"	38	
		POWER SEAT C/U-DR "NO RESPONSE"	48	
	Multiple LCUs are displayed.	BCM/HARNESS	Displays in order of 25→28→38→48 and cycles from 25.	Communication system C: Refer to BL-41, "COMMUNICATION SYSTEM C" .
SLEEP malfunction	One LCU is displayed.	POWER WINDOW C/U-DR "SLEEP"	No self-diagnosis function	Replace the displayed LCU.
		DOOR MIRROR C/U-RH "SLEEP"		
		DOOR MIRROR C/U-LH "SLEEP"		
		POWER SEAT C/U-DR "SLEEP"		
	Multiple LCUs are displayed.	All the above control units are displayed.	No self-diagnosis function	Communication system A: Refer to BL-41, "COMMUNICATION SYSTEM A" .

NOTE:

- For a specific local control unit (LCU), either "PAST COMM DATA" or "PAST NO RESPONSE" may be displayed instead of the above results. This is caused by the data record, so erase the records.
(The display only shows the error records, they are not malfunctions caused during the diagnosis. One possible cause is that an reproducible symptom occurred.)
- Follow the steps below to erase the memory
Carry out either disconnect BCM battery power supply or erase memory with CONSULT-II.
- With the battery connected, if the local control unit (LCU) connector is disconnected and left for approximately 1 minute, the BCM stores "NO RESPONSE" record.

Cancel of Communication Diagnosis

If one of the following conditions is satisfied, the communication diagnosis is cancelled.

- Turn ignition switch OFF.
- Drive the vehicle more than 7 km/h (4 MPH).
- Ten minutes have passed since the diagnosis result indication start without any diagnosis cancel operation.

POWER DOOR LOCK SYSTEM

COMMUNICATION SYSTEM A

1. BCM INSPECTION

Replace the malfunctioning BCM with a known-good one, and carry out the communication diagnosis. Refer to [BL-36, "IVMS COMMUNICATION INSPECTION"](#) (with CONSULT-II), [BL-39, "COMMUNICATION DIAGNOSIS"](#) (without CONSULT-II).

OK or NG

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

2. LCU INSPECTION

1. Replace the previously installed BCM.
2. Replace the LCU with a known-good one, and carry out the communication diagnosis. Refer to [BL-36, "IVMS COMMUNICATION INSPECTION"](#) (with CONSULT-II), [BL-39, "COMMUNICATION DIAGNOSIS"](#) (without CONSULT-II).

OK or NG

- OK >> Replace LCU.
- NG >> Repair communication harness between the indicated LCU and BCM.

COMMUNICATION SYSTEM B

1. CONNECTOR INSPECTION

Check the terminals (at the control unit and harness) on the malfunctioning LCU for disconnection, bend, and other malfunctions.

OK or NG

- OK >> GO TO 2.
- NG >> Repair the terminals and connectors.

2. LCU INSPECTION

Replace the LCU with a known-good one, and carry out the communication diagnosis. Refer to [BL-36, "IVMS COMMUNICATION INSPECTION"](#) (with CONSULT-II), [BL-39, "COMMUNICATION DIAGNOSIS"](#) (without CONSULT-II).

OK or NG

- OK >> Replace LCU.
- NG >> Repair communication harness between the indicated LCU and BCM.

COMMUNICATION SYSTEM C

1. CONNECTOR INSPECTION

Check the terminals (at the control unit and harness) on BCM and LCU for disconnection, bend, misalignment, and other malfunctions.

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminals and connectors.

2. BCM INSPECTION

Replace the BCM with a known-good one, and carry out the communication diagnosis. Refer to [BL-36, "IVMS COMMUNICATION INSPECTION"](#) (with CONSULT-II), [BL-39, "COMMUNICATION DIAGNOSIS"](#) (without CONSULT-II).

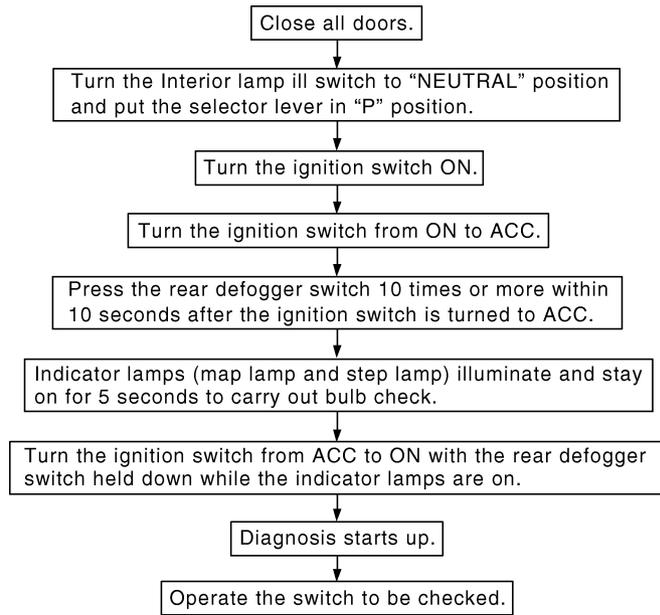
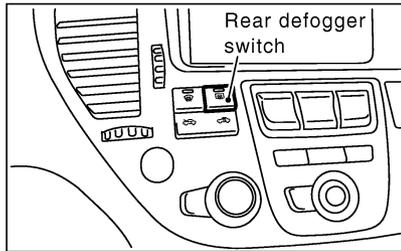
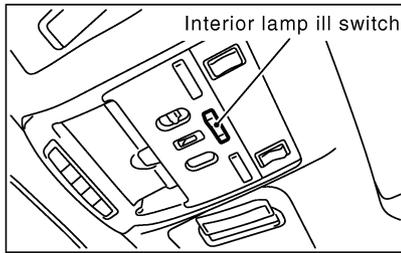
OK or NG

- OK >> Replace BCM.
- NG >> Repair the communication harness between LCU and BCM.

POWER DOOR LOCK SYSTEM

SWITCH MONITOR

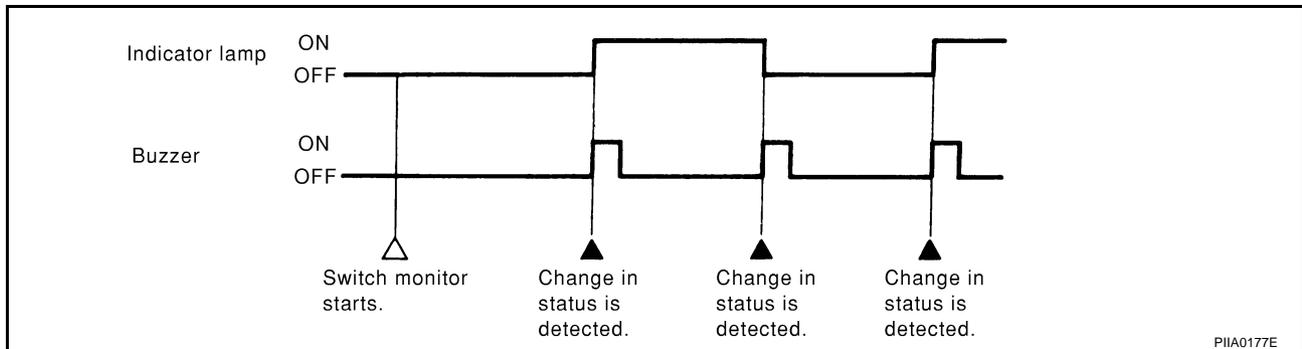
How To Perform Switch Monitor



PIIA3356E

Description

In this mode, when BCM detects the input signal from a switch in IVMS as shown below, the detection is indicated by the map lamp and step lamps with buzzer.



PIIA0177E

Switch Monitor Item

The status of the switch (except the ignition switch, interior ill lamp switch, and map lamp switch) as input to each control unit can be monitored.

Control unit name	Item
BCM	All door switch
	Electronic key (lock / unlock switch and trunk switch)
Driver door control unit (LCU01)	Door lock and unlock switch (LOCK / UNLOCK)
	Front door key cylinder switch
	Driver door unlock sensor
Passenger door control unit	Passenger door unlock sensor
Rear LH door control unit	Rear LH door unlock sensor
Rear RH door control unit	Rear RH door unlock sensor

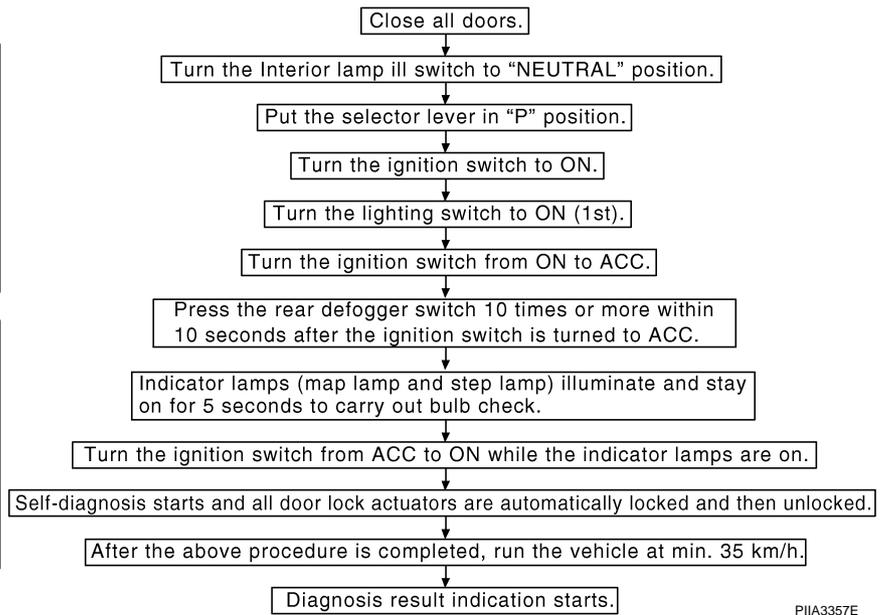
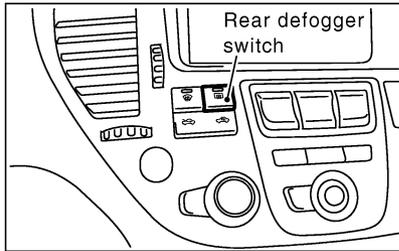
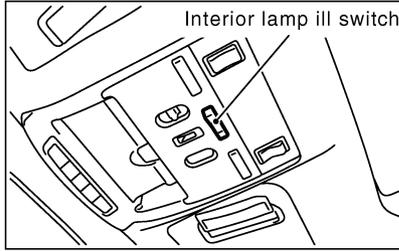
Cancel Of Switch Monitor

- Turn ignition switch OFF.
- Drive the vehicle at more than 7 km/h (4 MPH).

POWER DOOR LOCK SYSTEM

POWER DOOR LOCK SYSTEM SELF-DIAGNOSIS

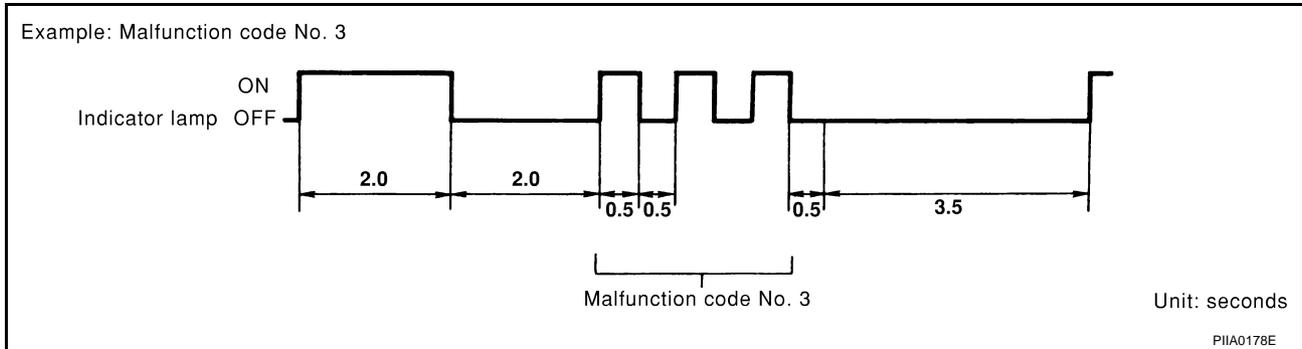
How To Perform Self-Diagnosis



PIIA3357E

Description

In this mode, a malfunction code is indicated by the number of flashes from the map lamps and step lamps as shown below:



After indicator lamp turns ON for 2 seconds and then turns OFF, it flashes to indicate a malfunction code. For example, the indicator lamp goes on and off for 0.5 seconds three times. This indicates malfunction code of rear RH door lock actuator / unlock sensor.

Malfunction Code Table

Code No.	Detected items	Diagnostic procedure
1	Driver door lock actuator / unlock sensor	Refer to BL-51. "Check Door Unlock Sensor" .
2	Passenger door lock actuator / unlock sensor	
3	Rear RH door lock actuator / unlock sensor	
4	Rear LH door lock actuator / unlock sensor	
9	No malfunction in the above items	

Cancel Of Self-Diagnosis

If one of the following condition is satisfied, the communication diagnosis is cancelled.

- Turn ignition switch OFF.
- Ten minutes has passed since the diagnosis result indication start without any diagnosis cancel operation.

POWER DOOR LOCK SYSTEM

Symptom Chart

NIS000U3

- Always check the "Work Flow" before troubleshooting. Refer to [BL-32, "Work Flow"](#) .
- Before carrying out the inspection on the following table, carry out the preliminary check. Refer to [BL-33, "Preliminary Check"](#) .

Symptom	Diagnosis procedure	Reference page
Power door lock does not operate with door lock and unlock switch on power window main switch.	1. Check door lock and unlock switch.	BL-45
	2. Check communication line.	BL-44
	3. Replace driver door control unit (LCU01).	—
Specific door lock actuator does not operate.	1. Check door lock actuator (Passenger, Rear LH, RH).	BL-46
	2. Check communication line.	BL-44
	3. Replace door control unit.	—
Power door lock does not operate with front key cylinder switch operation.	1. Check front door key cylinder switch.	BL-47
	2. Check communication line.	BL-44
	3. Replace driver door control unit (LCU01).	—
Key reminder door system does not operate properly.	1. Check front door switch.	BL-49
	2. Check key switch.	BL-48
	3. Replace BCM.	—

Check Communication Line

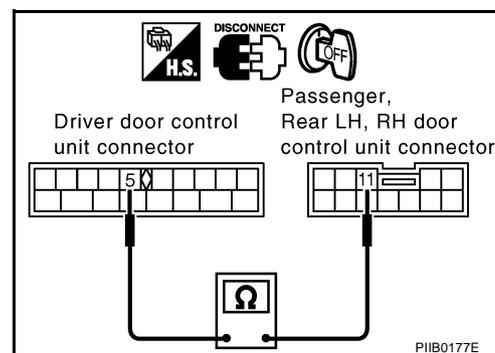
NIS000U4

1. CHECK COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect connectors for driver door control unit (LCU01) and malfunctioning door control unit.
3. Check continuity between driver door control unit (LCU01) connector and malfunctioning door control unit connector.

Terminal				Continuity
Driver door control unit (LCU01)		Passenger door control unit		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
D8	5 (G/OR)	D38	11 (G/OR)	Yes

Terminal				Continuity
Driver door control unit (LCU01)		Rear door control unit		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
D8	5 (G/OR)	D58 (LH) D78 (RH)	11 (G/OR)	Yes



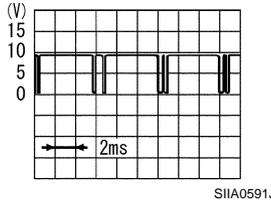
OK or NG

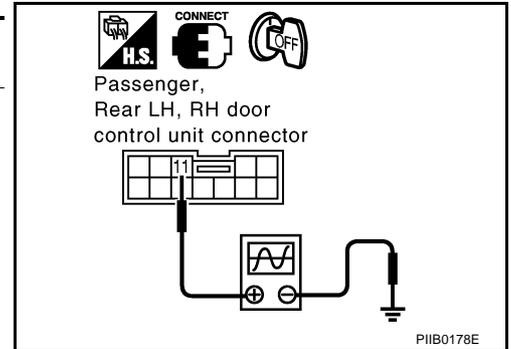
- OK >> GO TO 2.
 NG >> Repair or replace harness.

POWER DOOR LOCK SYSTEM

2. CHECK COMMUNICATION SIGNAL

1. Connect driver door control unit (LCU01) and malfunctioning door control unit connector.
2. Check the signal between malfunctioning door control unit connector and ground with oscilloscope.

	Terminal		Signal (Reference value)
	(+)	(-)	
Passenger door control unit	Connector	Terminal (Wire color)	
	D38	11 (G/OR)	
		Ground	
Rear LH, RH door control unit	Connector	Terminal (Wire color)	
	D58 (LH) D78 (RH)	11 (G/OR)	
		Ground	



OK or NG

- OK >> Communication signal is OK.
- NG >> ● All door control unit (passenger, rear LH and RH) are NG. → Replace Driver door control unit.
- Any of door control unit (passenger, rear LH or RH door control unit) are NG. → Replace malfunctioning door control unit.

Check Door Lock and Unlock Switch

NIS000U5

1. CHECK DOOR LOCK AND UNLOCK SWITCH

With CONSULT-II

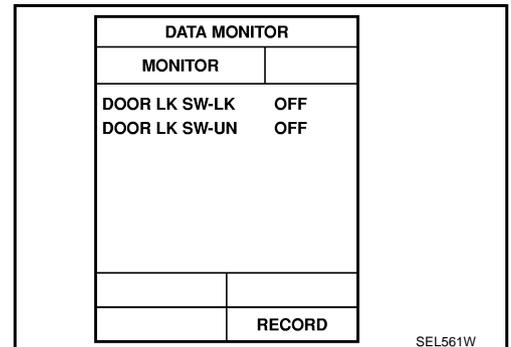
See "DOOR LK SW-LK and UN" in DATA MONITOR mode with CONSULT-II.

- When door lock and unlock switch is turned to lock:

DOOR LK SW-LK : ON

- When lock and unlock switch is turned to unlock:

DOOR LK SW-UN : ON



Without CONSULT-II

Check door lock and unlock switch operation in "SWITCH MONITOR" mode.

Refer to [BL-42, "SWITCH MONITOR"](#).

OK or NG

- OK >> Replace driver door control unit (LCU01).
- NG >> Replace door lock and unlock switch.

POWER DOOR LOCK SYSTEM

NIS000U6

Check Door Lock Actuator (Driver Side)

1. CHECK DOOR LOCK ACTUATOR HARNESS

1. Turn the ignition switch OFF.
2. Disconnect driver door control unit (LCU01) and door lock actuator connector.
3. Check continuity between driver door control unit (LCU01) connector D8 terminals 12, 17 and front door lock actuator connector D11 terminals 1, 3.

12 (BR) – 3 (BR) : Continuity should exist.

17 (LG) – 1 (LG) : Continuity should exist.

4. Check continuity between driver door control unit (LCU01) connector D8 terminals 12, 17 and ground.

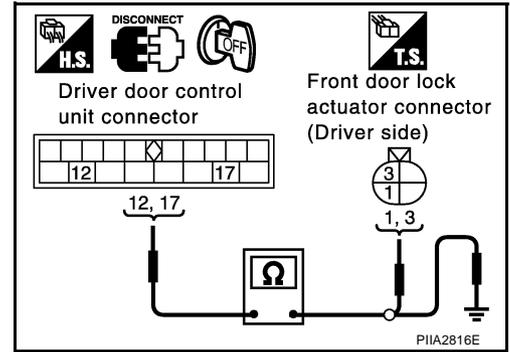
12 (BR) – Ground : Continuity should not exist.

17 (LG) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 2.

NG >> Repair or replace harness.



2. CHECK OUTPUT SIGNAL

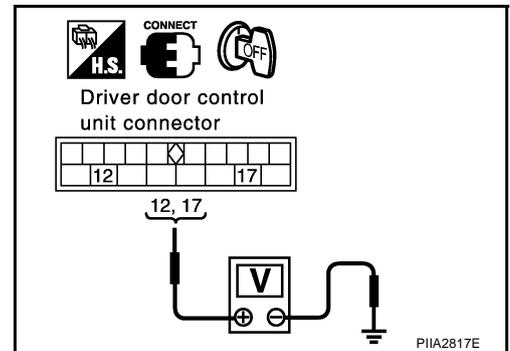
1. Connect driver door control unit (LCU01) connector.
2. Check voltage between driver door control unit (LCU01) connector and ground.

Connector	Terminal (Wire color)		Door lock operation	Voltage (V) (Approx.)
	(+)	(-)		
D8	17 (LG)	Ground	Free→Lock	0 → Battery voltage → 0
	12 (BR)		Free→Unlock	

OK or NG

OK >> Replace front door lock actuator (driver side).

NG >> Replace driver door control unit (LCU01).



Check Door Lock Actuator (Passenger, Rear LH, RH)

NIS000U7

1. CHECK DOOR LOCK ACTUATOR HARNESS

1. Turn the ignition switch OFF.
2. Disconnect passenger, rear LH, RH door control unit and door lock actuator connectors.
3. Check continuity between passenger door control unit connector D39 terminals 2, 3 and door lock actuator connector D41 (Passenger), D61 (Rear LH) and D81 (Rear RH) terminals 1, 3.

1 (SB) – 2 (SB) : Continuity should exist.

3 (BR) – 3 (BR) : Continuity should exist.

4. Check continuity between passenger door control unit connector terminals 2, 3 and ground.

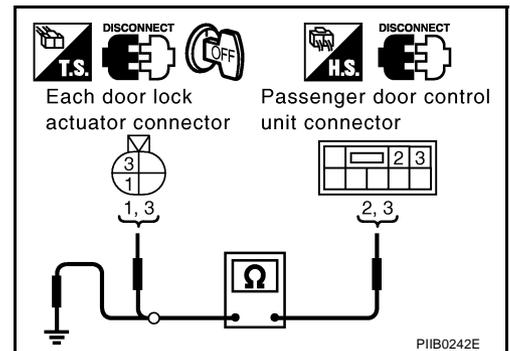
2 (SB) – Ground : Continuity should not exist.

3 (BR) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 2.

NG >> Repair or replace harness.



POWER DOOR LOCK SYSTEM

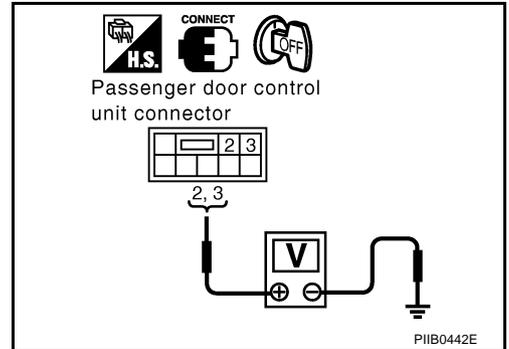
2. CHECK OUTPUT SIGNAL

1. Connect passenger door control unit connector.
2. Check voltage between passenger door control unit connector and ground.

Connector	Terminal (Wire color)		Door lock operation	Voltage (V) (Approx.)
	(+)	(-)		
D39	2 (SB)	Ground	Free → Lock	0 → Battery voltage → 0
	3 (BR)		Free → Unlock	

OK or NG

- OK >> Replace malfunction door lock actuator.
- NG >> Replace passenger door control unit.



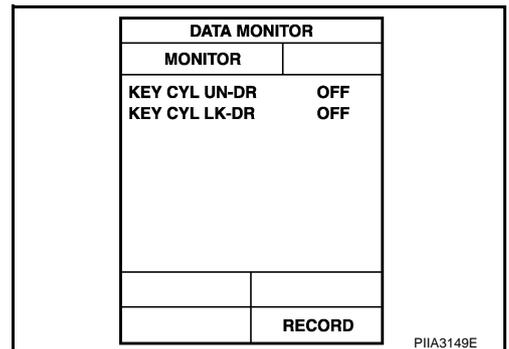
Check Front Door Key Cylinder Switch

1. CHECK DOOR KEY CYLINDER SWITCH SIGNAL

With CONSULT-II

Check front door key cylinder switch ("KEY CYL LK-SW", "KEY CYL UN-SW") in DATA MONITOR mode in CONSULT-II. Refer to [BL-38, "DATA MONITOR"](#).

- When key inserted in front key cylinder is turned to LOCK:
KEY CYL LK : ON
- When key inserted in front key cylinder is turned to UNLOCK:
KEY CYL UN : ON



Without CONSULT-II

Check front door key cylinder switch operation in "SWITCH MONITOR" mode. Refer to [BL-42, "SWITCH MONITOR"](#).

OK or NG

- OK >> System is OK.
- NG >> GO TO 2.

POWER DOOR LOCK SYSTEM

2. CHECK DOOR KEY CYLINDER SWITCH

Check continuity between door key cylinder switch terminals 1, 3 and 2.

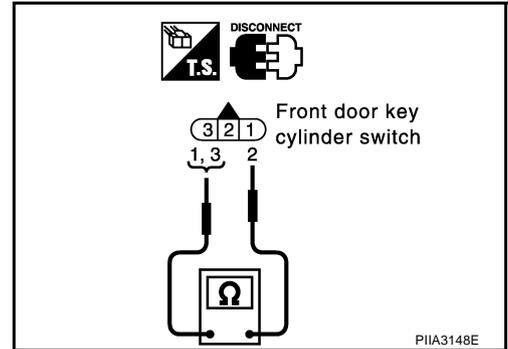
Terminals		Condition	Continuity
1	2	Key is turned to UNLOCK	Yes
		Key is turned to LOCK or neutral.	No
3	2	Key is turned to LOCK.	Yes
		Key is turned to UNLOCK or neutral.	No

OK or NG

OK >> Check the following.

- Harness between front key cylinder switch and driver door control unit
- Harness between front key cylinder switch and ground

NG >> Replace front door key cylinder switch.



Check Key Switch

1. CHECK KEY SWITCH

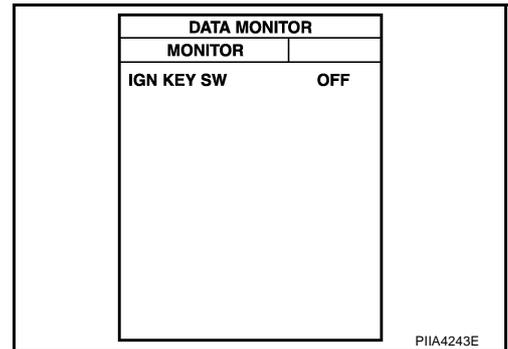
NIS000U9

With CONSULT-II

Check key switch "IGN KEY SW" in "DATA MONITOR" mode with CONSULT-II.

Key is inserted in ignition key cylinder : IGN KEY SW ON

Key is removed from ignition key cylinder : IGN KEY SW OFF



Without CONSULT-II

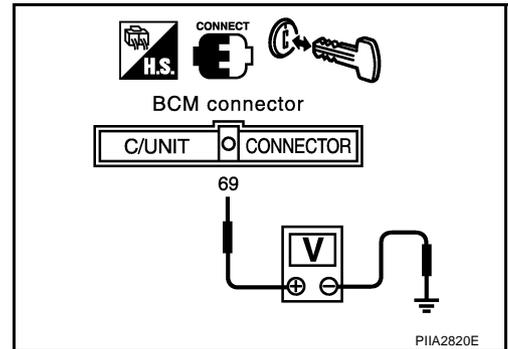
Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M4	69 (PU/W)	Ground	Key is inserted	Battery voltage
			Key is removed	0

OK or NG

OK >> Key switch is OK.

NG >> GO TO 2.



POWER DOOR LOCK SYSTEM

2. CHECK KEY SWITCH CIRCUIT

1. Disconnect key switch connector.
2. Check continuity between BCM connector M4 terminal 69 and key switch connector M64 terminal 4.

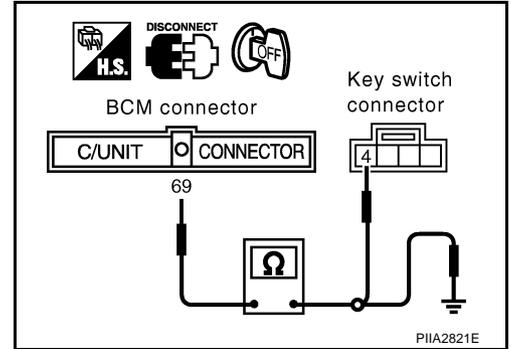
69 (PU/W) – 4 (PU/W) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 69 and ground.

69 (PU/W) – Ground : Continuity should not exist.

OK or NG

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



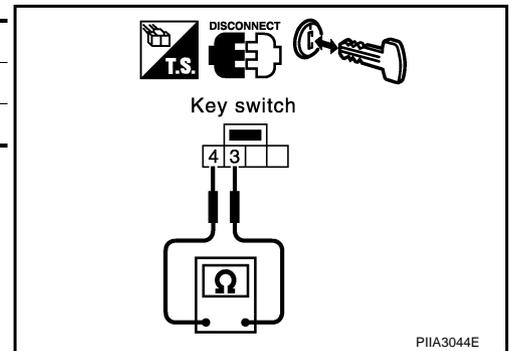
3. CHECK KEY SWITCH

Check continuity between key switch terminals 3 and 4.

Connector	Terminal	Condition of key switch	Continuity	
M64	3	4	Key is inserted in ignition key cylinder.	Yes
			Key is removed from ignition key cylinder.	No

OK or NG

- OK >> Check the following.
- 10A fuse [No. 32, located in fuse block (J/B) No. 2]
 - Harness for open or short between key switch and fuse
- NG >> Replace key switch.



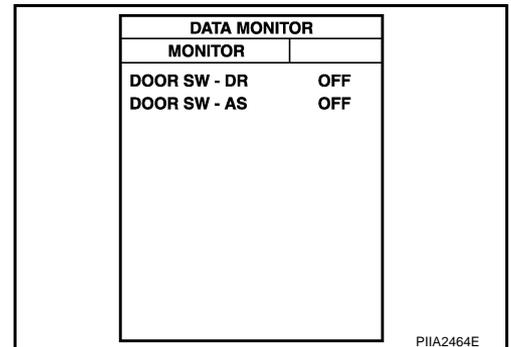
Check Front Door Switch

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check front door switch ("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 front door switch in "SWITCH MONITOR" mode. Refer to [BL-42, "SWITCH MONITOR"](#).

OK or NG

- OK >> Front door switch is OK.
 NG >> GO TO 2

POWER DOOR LOCK SYSTEM

2. CHECK FRONT DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect front door switch connector and BCM connector.
3. Check continuity between front door switch connector B20 (driverside), B220 (passenger side) terminal 1 and BCM connector M4 (passenger), B4 (driver) terminal 37, 142.

Driver side door switch

1 (W/R) – 142 (W/R) : Continuity should exist.

Passenger side door switch

1 (W/G) – 37 (W/G) : Continuity should exist.

4. Check continuity between front door switch connector B20 (driver side), B220 (passenger side) terminal 1 and ground.

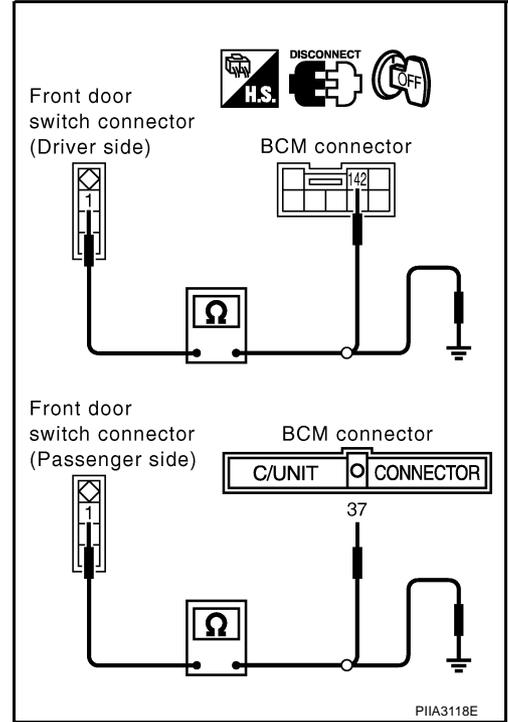
Each door switch

1 (W/R, W/G) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK FRONT DOOR SWITCH

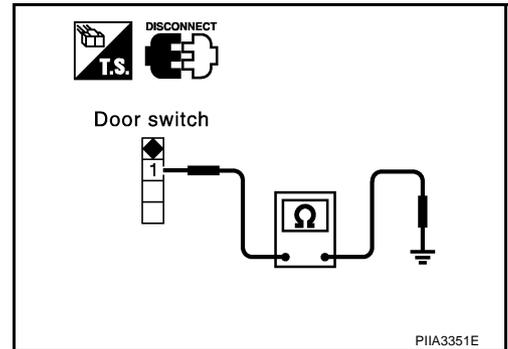
Check continuity between front door switch (driver side), (passenger side) terminal 1 and ground part of door switch.

Terminal		Front door switch	Continuity
1	Ground part of door switch	Pushed	NO
		Released	YES

OK or NG

OK >> Check door switch case ground. If door switch case ground is OK, replace BCM.

NG >> Replace malfunction front door switch.



POWER DOOR LOCK SYSTEM

NIS000UB

Check Door Unlock Sensor

1. CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

With CONSULT-II

Check door unlock sensor "LOCK SIG" in "DATA MONITOR" mode with CONSULT-II.

When door is locked : LOCK SIG LOCK

When door is unlocked : LOCK SIG UNLK

Without CONSULT-II

Check door lock knob operation in Switch monitor mode.

Refer to Remote keyless entry system [BL-42, "SWITCH MONITOR"](#)

OK or NG

OK >> Door unlock sensor is OK.

NG >> GO TO 2.

DATA MONITOR	
MONITOR	
LOCK SIG-DR	UNLK
LOCK SIG-AS	UNLK
LOCK SG-RR/RH	UNLK
LOCK SG-RR/LH	UNLK
RECORD	

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2. CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

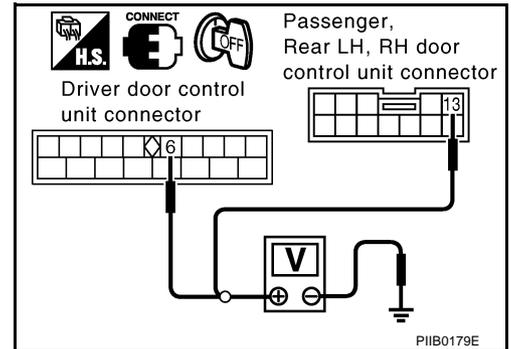
1. Turn ignition switch OFF.
2. Disconnect door lock actuator connector.
3. Check voltage between each door control unit connector and ground.

Door control unit connector		Terminal (Wire color)		Voltage (V) (Approx.)
		(+)	(-)	
Front door	Driver side: D8	6 (G/Y)	Ground	5
	Passenger side: D38	13 (G/Y)		
Rear door	LH: D58		13 (G/Y)	
	RH: D78			

OK or NG

OK >> GO TO 3.

NG >> Replace malfunctioning door control unit.

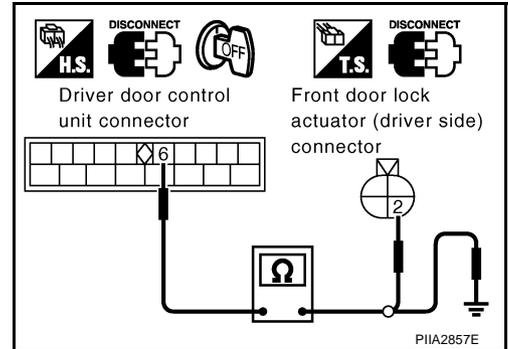


POWER DOOR LOCK SYSTEM

3. CHECK DOOR UNLOCK SENSOR SIGNAL CIRCUIT

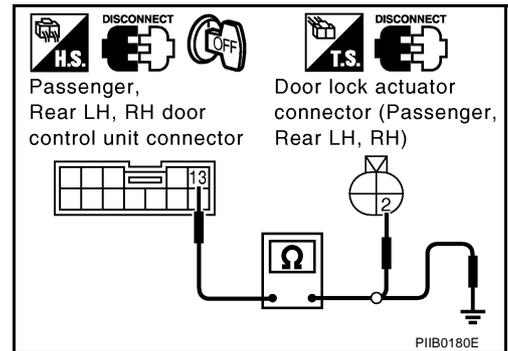
1. Disconnect door control unit connector.
2. Check continuity between door control unit connector and door lock actuator (door unlock sensor) connector.

Connector	Terminal (wire color)	Connector	Terminal (Wire color)	Continuity
Driver side: D8	6 (G/Y)	D11	2 (G/Y)	Yes
Passenger side: D38	13 (G/Y)	D41		
Rear LH: D58		D61		
Rear RH: D78		D81		



3. Check continuity between door control unit connector and ground.

Connector	Terminal (Wire color)	Continuity
Driver side: D8	6 (G/Y)	No
Passenger side: D38	13 (G/Y)	
Rear LH: D58		
Rear RH: D78		



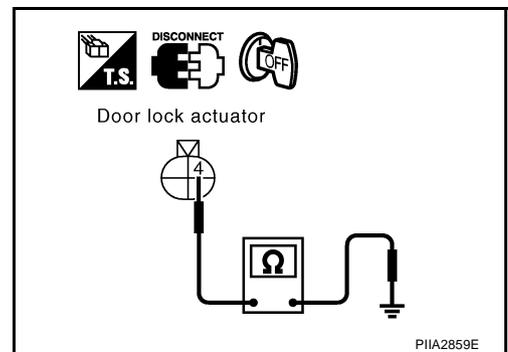
OK or NG

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

4. CHECK DOOR UNLOCK SENSOR GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door lock actuator connector.
3. Check continuity between each door control unit connector and ground.

Connector	Terminal (wire color)	Continuity
Driver side: D11	4 (B) Ground	Yes
Passenger side: D41		
Rear LH: D61		
Rear RH: D81		



OK or NG

- OK >> Replace door lock actuator (door unlock sensor).
 NG >> Repair or replace harness.

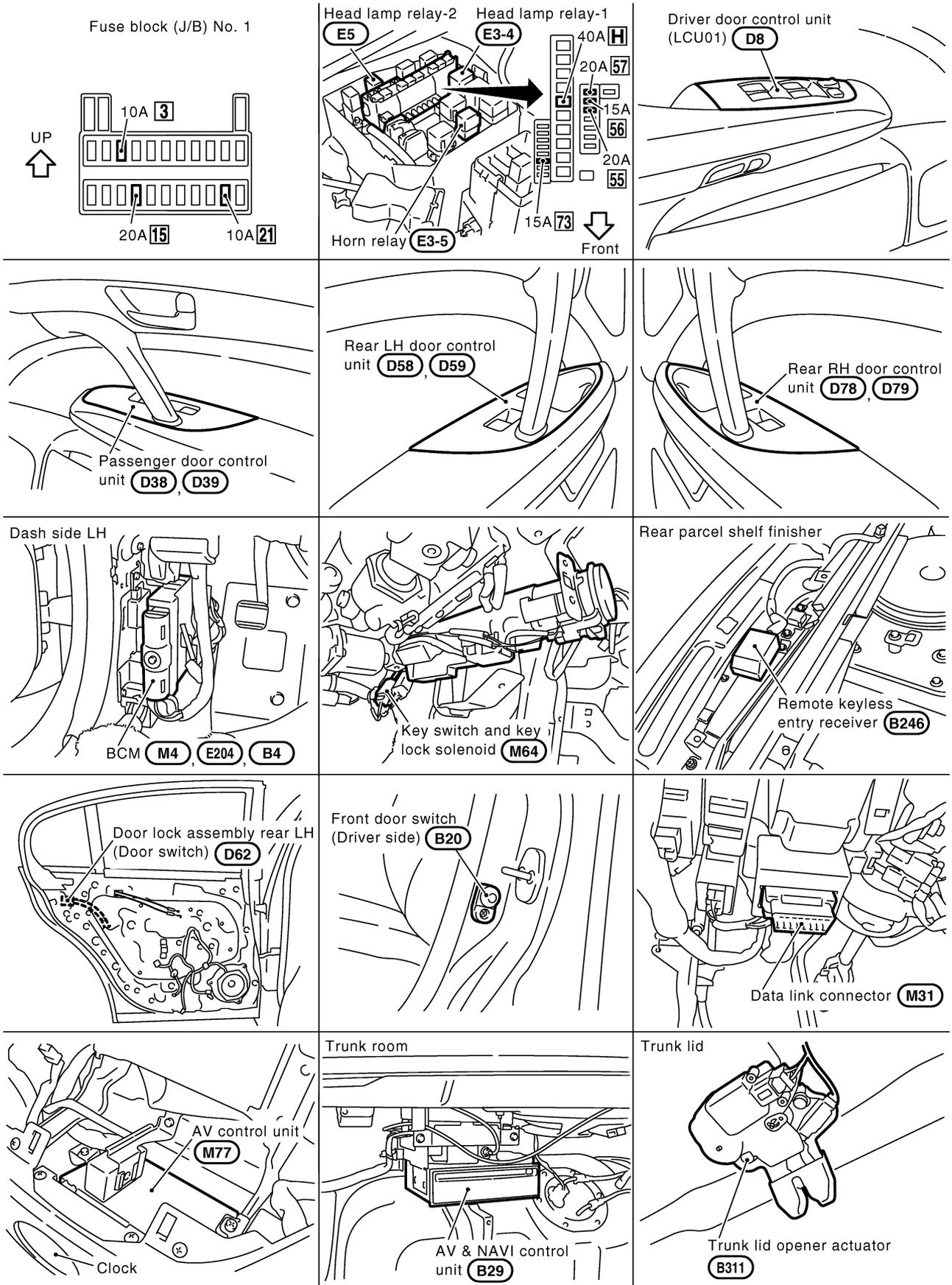
REMOTE KEYLESS ENTRY SYSTEM

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NIS000UC

REMOTE KEYLESS ENTRY SYSTEM

Component Parts and Harness Connector Location



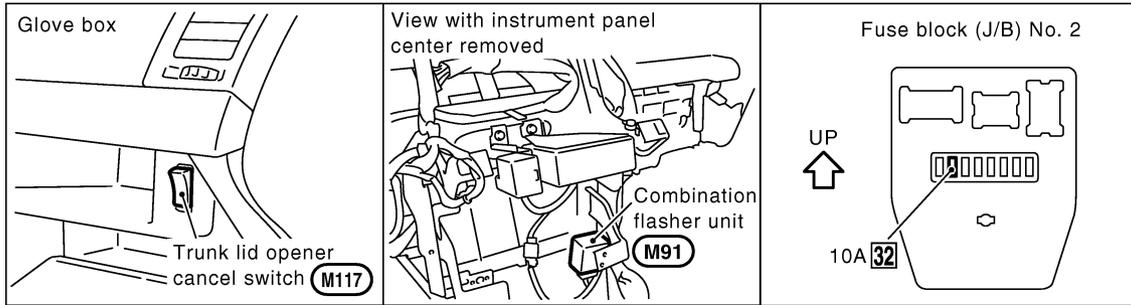
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REMOTE KEYLESS ENTRY SYSTEM

Component Parts and Harness Connector Location

NIS000UD



PIIB0453E

System Description POWER SUPPLY AND GROUND

NIS000UE

Power is supplied at all times

- to BCM terminal 105
- through 10A fuse [No. 3, located in the fuse block (J/B) No. 1].
- to key switch terminal 3
- through 10A fuse [No. 32, located in the fuse block (J/B) No. 2].

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

- to BCM terminal 69
- through key switch terminal 4.

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

- to BCM terminal 60
- through 10A fuse [No. 21, located in the fuse block (J/B) No. 1].

When front door switches are ON position (front doors are open), ground is supplied

- to BCM terminals 142 (driver side), 37 (passenger side).
- through front door switch terminals 1 and case ground

When rear door switches are ON position (rear doors are open), ground is supplied

- to BCM terminals 33 (rear LH), 143 (rear RH).
- through rear door switch terminals 1 and 2
- through grounds B17 and B57 (rear LH), B217 and B256 (rear RH)

When door is unlocked, ground is supplied

- to driver door control unit (LCU01) terminal 6 or passenger, rear LH, RH door control unit terminal 13.
- through each door unlock sensor terminals 2, 4
- through body grounds M24, M114, B17, B57, B217, B256

Electronic key signal input

- to BCM terminal 27
- through remote keyless entry receiver terminal 2.

The remote keyless entry system controls operation of the

- power door lock
- hazard and horn reminder
- trunk lid opener
- panic alarm
- keyless power window down (open)
- auto door lock
- interior lamp and step lamp

BCM is connected to LCU01 via DATA LINE A-3.

REMOTE KEYLESS ENTRY SYSTEM

OPERATING PROCEDURE

BCM can receive signals from electronic key when key switch is OFF position (key is not in ignition key cylinder). It then sends the signals to LCU01 via DATA LINE A-3.

POWER DOOR LOCK OPERATION

When BCM receives a LOCK signal from electronic key, BCM will then send a LOCK signal [when all door switches are OFF (all doors are closed)]

- from its terminal 67 (DATA LINE A-3)
- to driver door control unit (LCU01) terminal 8.

When an UNLOCK signal is sent from electronic key once, driver's door will be unlocked.

Then, if an UNLOCK signal is sent from electronic key again within 5 seconds, all other doors will be unlocked. For detailed description, Refer to [BL-19, "POWER DOOR LOCK SYSTEM"](#).

HAZARD AND HORN REMINDER

Power is supplied at all times

- to horn relay terminal 2
- through 15A fuse (No. 56, located in the fuse, fusible link and relay block).

When BCM receives a LOCK or UNLOCK signal from electronic key, ground is supplied [when specific door switch is ON (specific door is OPEN), BCM does not receive a LOCK signal (BCM receives a UNLOCK signal)]

- to horn relay terminal 1
- through BCM terminal 127
- through ground.

When BCM receives a LOCK or UNLOCK signal from electronic key, power is supplied

- to combination flasher unit terminal 6
- through BCM terminal 7.

combination flasher unit and security horn relay are now engaged, and hazard warning lamps flash and security horn sounds as a reminder.

OPERATING FUNCTION OF HAZARD AND HORN REMINDER

This vehicle is set in hazard and horn mode when you first receive the vehicle.

Hazard And Horn Mode

When the LOCK button is pushed, the hazard warning lamp flashes twice and horn chirps once.

When the UNLOCK button is pushed, the hazard warning lamp flashes once.

Hazard Only Mode

When the LOCK button is pushed, the hazard warning lamp flashes twice.

When the UNLOCK button is pushed, neither the hazard warning lamp nor the horn operates.

MODE (Push "LOCK" and "UNLOCK" buttons for more than 2 seconds to switch)	Switching indicator	LOCK	UNLOCK
Hazard and horn → Hazard only	Hazard - 3 times	Hazard - twice	No operation
Hazard only → Hazard and horn	Hazard - once Horn - once	Hazard - twice Horn - once	Hazard - once

REMOTE KEYLESS ENTRY SYSTEM

TRUNK LID OPENER OPERATION

Power is supplied at all times

- to trunk lid opener actuator terminal 1
- through 20A fuse [No. 15, located in the fuse block (J/B) No. 1].

When a TRUNK OPEN signal is sent from electronic key without the electronic key inserted in the ignition key cylinder, if the trunk lid opener cancel switch is ON position, power is supplied

- through 10A fuse [No. 3, located in the fuse block (J/B) No. 1].
- through trunk lid opener relay
- through trunk lid cancel switch terminals 1 and 2
- to BCM terminal 109.

Then ground is supplied

- to trunk lid opener actuator terminal 2
- through trunk lid opener relay
- through grounds E24 and E44.

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

PANIC ALARM OPERATION

Remote keyless entry system activates horn and headlamps intermittently when an ALARM signal is sent from electronic key to remote keyless entry system without the electronic key inserted in the ignition key cylinder. For detailed description, Refer to [BL-155, "VEHICLE SECURITY \(THEFT WARNING\) SYSTEM"](#) .

KEYLESS POWER WINDOW DOWN (OPEN) OPERATION

When electronic key unlock switch is turned ON with ignition switch OFF, and electronic key unlock switch is detected to be on continuously for 3 seconds, the front door LH, RH power windows are simultaneously opened.

Power window is operated to open and the operation continues as long as the electronic key unlock switch is pressed.

AUTO DOOR LOCK OPERATION

Auto lock function signal is sent for operation when any of the following signals are not sent within 5 minutes after the unlock signal is sent from the electronic key:

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

INTERIOR LAMP AND STEP LAMP OPERATION

When the following conditions come:

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

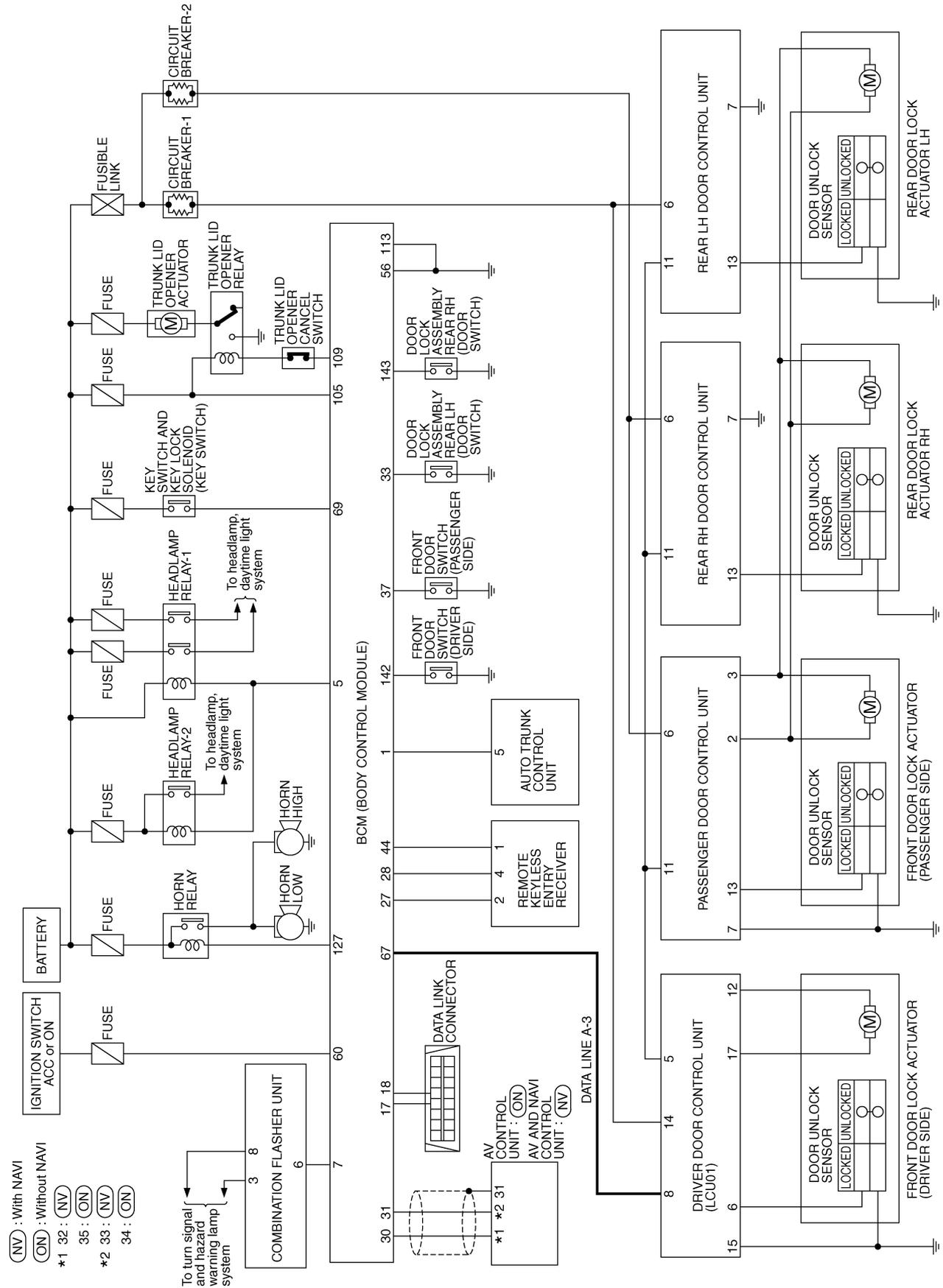
Remote keyless entry system turns on interior lamp (for 30 seconds) with input of UNLOCK signal from key fob. For detailed description, Refer to [LT-117, "INTERIOR ROOM LAMP"](#) .

REMOTE KEYLESS ENTRY SYSTEM

Schematic

NIS000UF

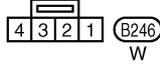
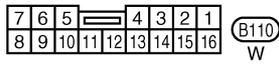
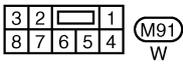
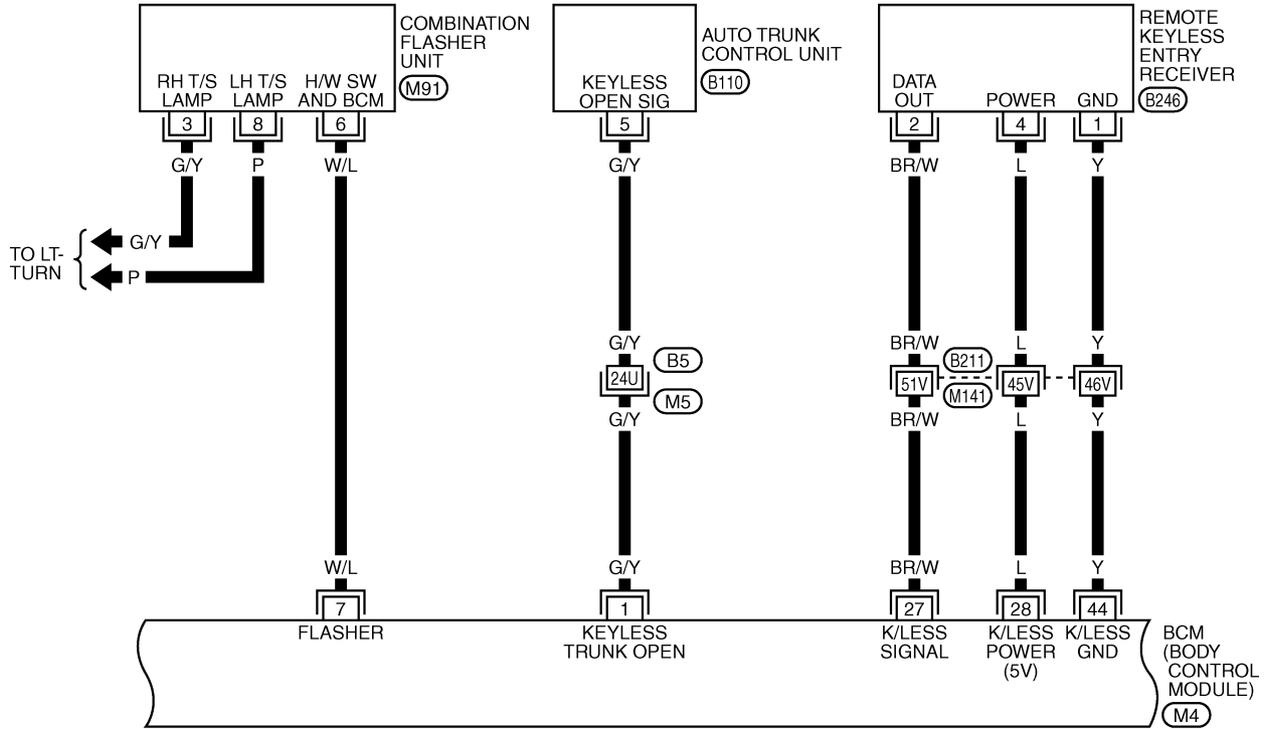
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REMOTE KEYLESS ENTRY SYSTEM

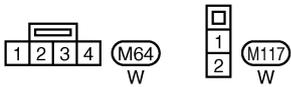
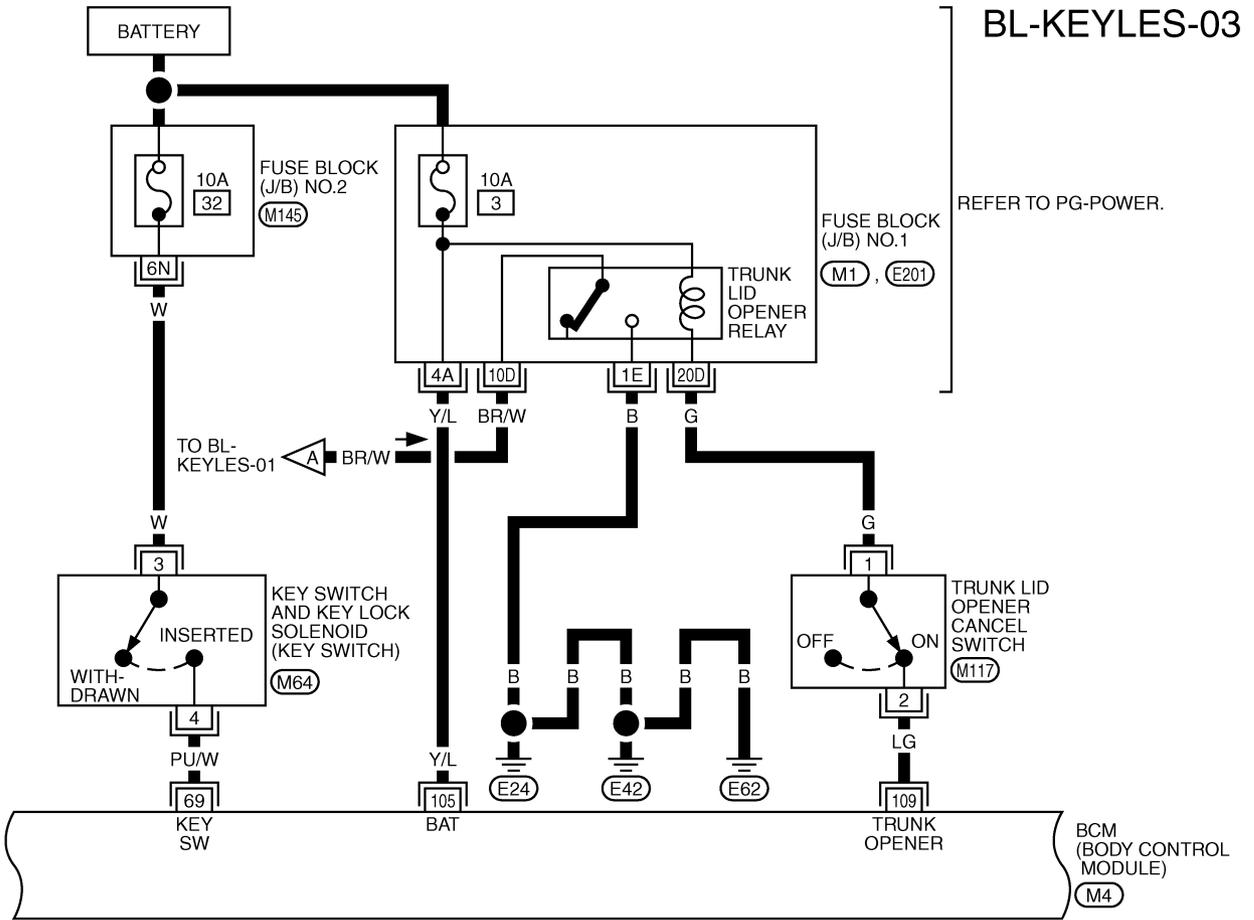
BL-KEYLES-02



REFER TO THE FOLLOWING.
 (M5), (B211) -SUPER MULTIPLE JUNCTION (SMJ)
 (M4) -ELECTRICAL UNITS

TIVM0670E

REMOTE KEYLESS ENTRY SYSTEM



REFER TO THE FOLLOWING.

(M1), (E201) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

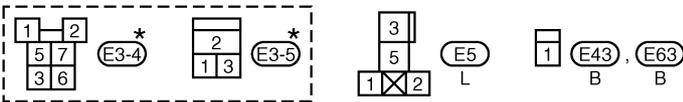
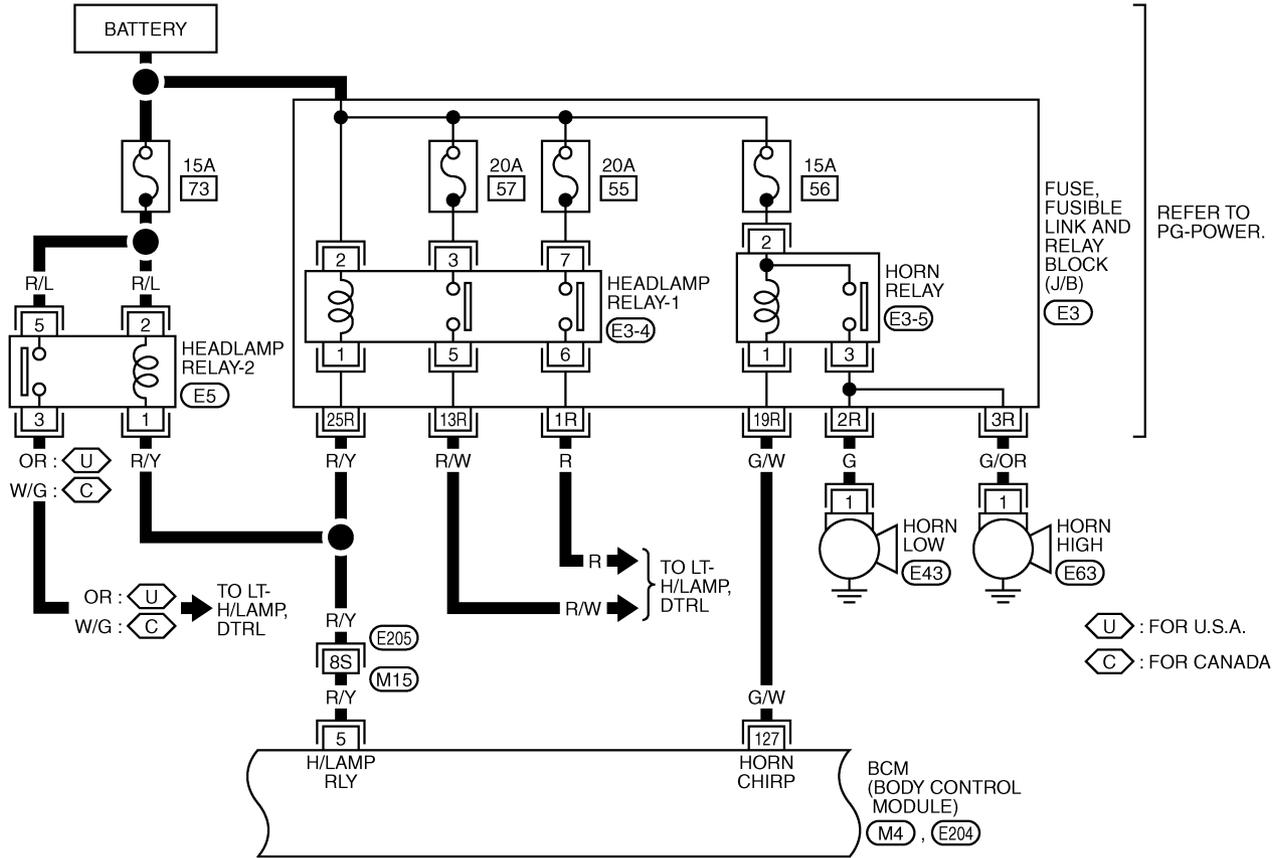
(M145) - FUSE BLOCK-JUNCTION BOX (J/B) NO.2

(M4) - ELECTRICAL UNITS

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REMOTE KEYLESS ENTRY SYSTEM

BL-KEYLES-05



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

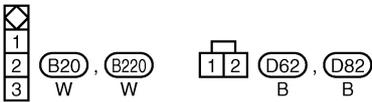
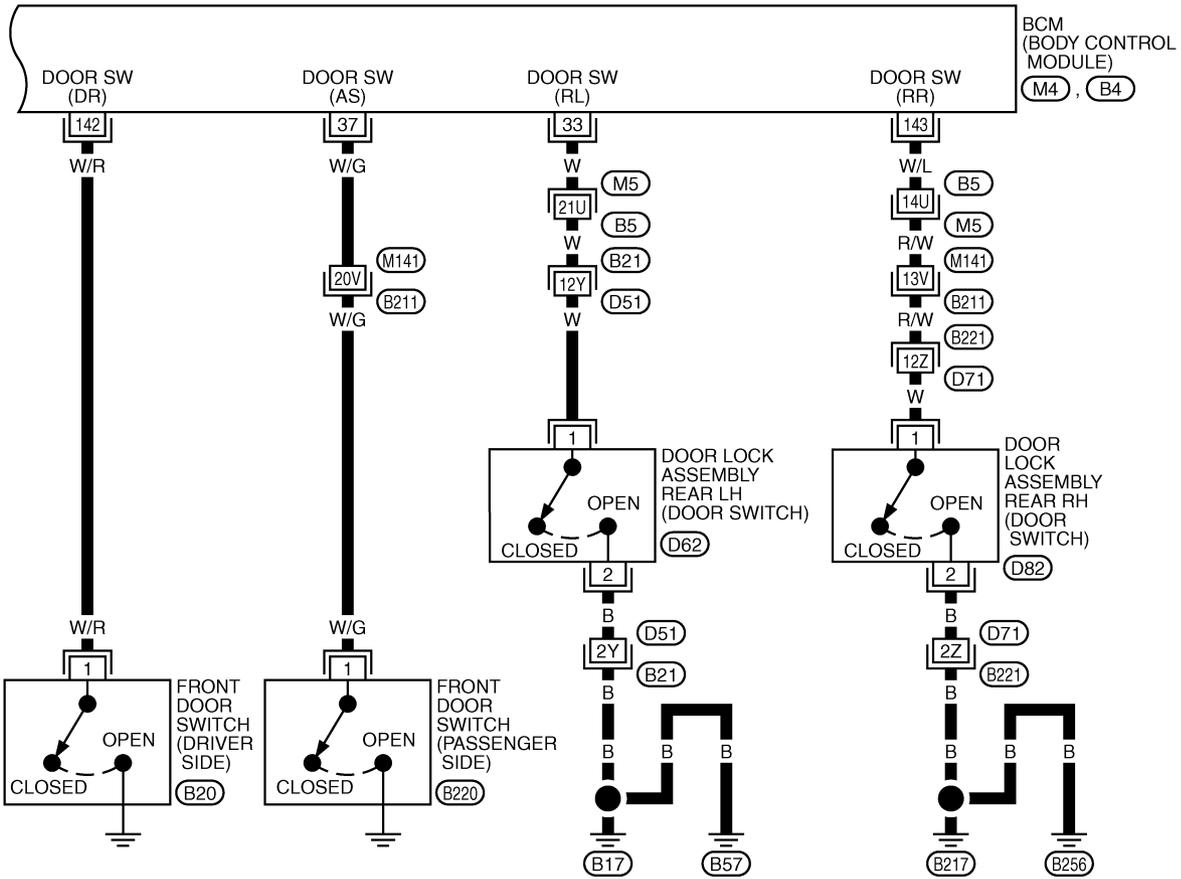
REFER TO THE FOLLOWING.

- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (E3) -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)
- (M4), (E204) -ELECTRICAL UNITS

TIWM1549E

REMOTE KEYLESS ENTRY SYSTEM

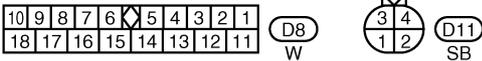
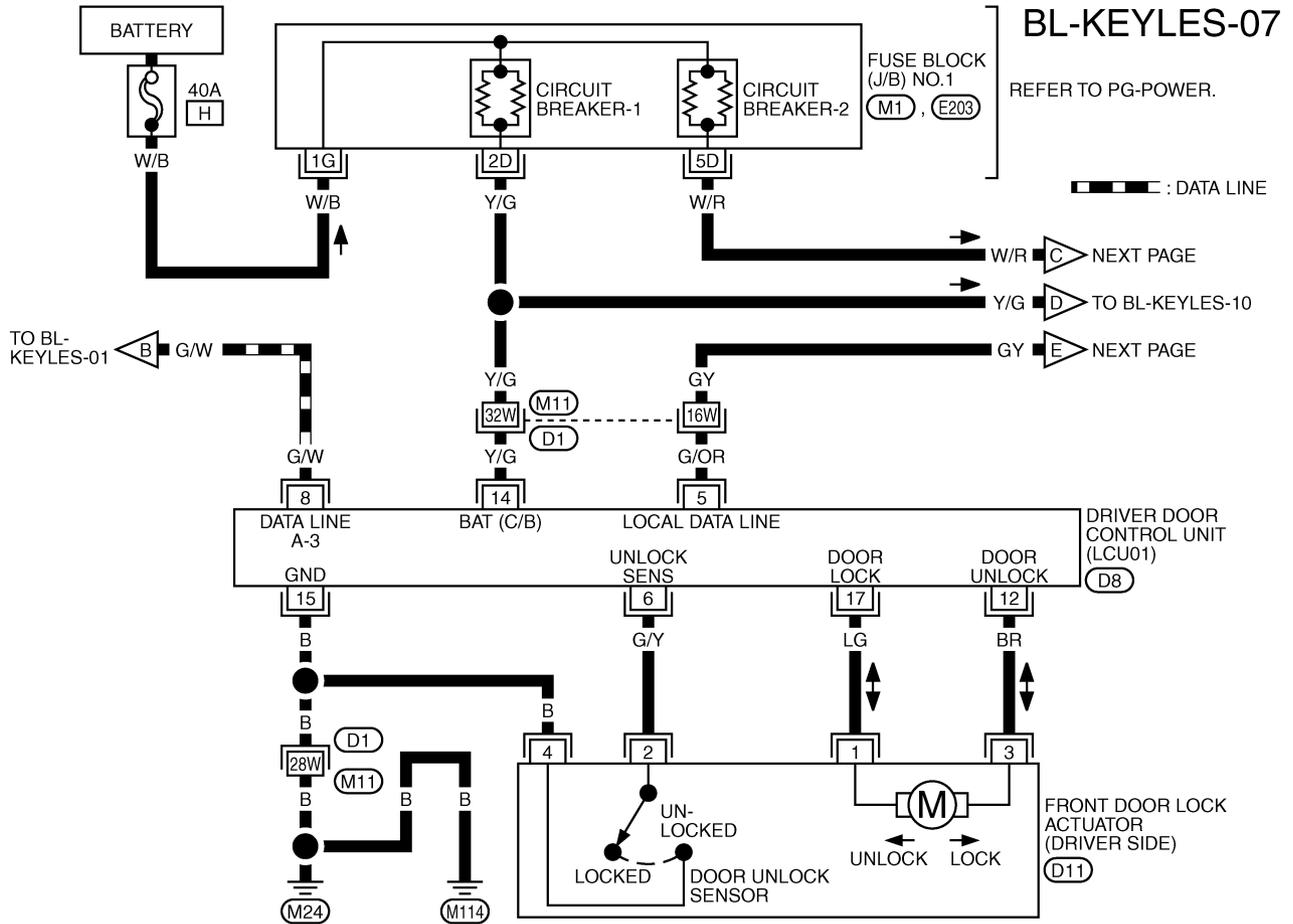
BL-KEYLES-06



REFER TO THE FOLLOWING.
 (M5), (B21), (B211), (B221)
 -SUPER MULTIPLE JUNCTION (SMJ)
 (M4), (B4) -ELECTRICAL UNITS

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REMOTE KEYLESS ENTRY SYSTEM

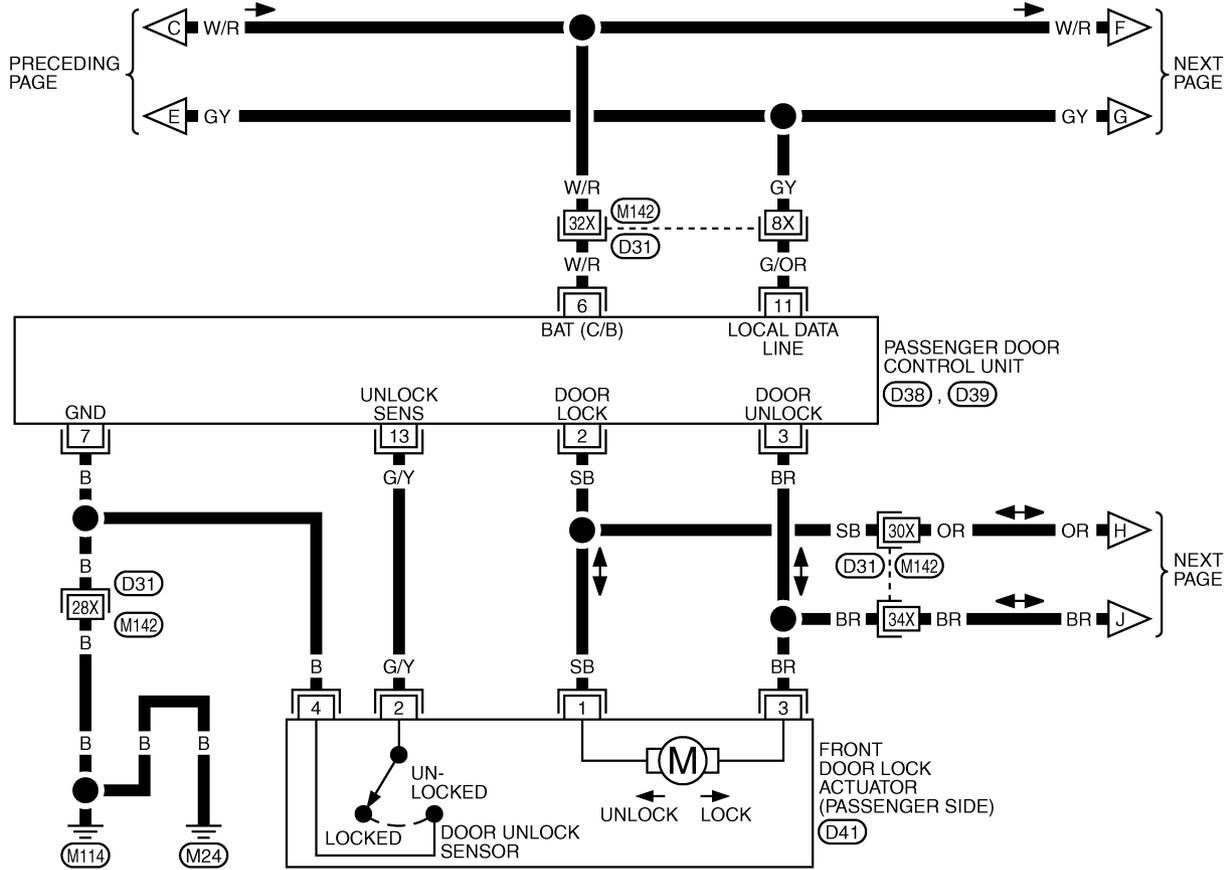


REFER TO THE FOLLOWING.
 (D1) -SUPER MULTIPLE JUNCTION (SMJ)
 (M1), (E203) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

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REMOTE KEYLESS ENTRY SYSTEM

BL-KEYLES-08



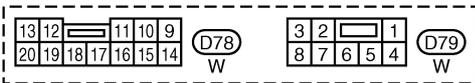
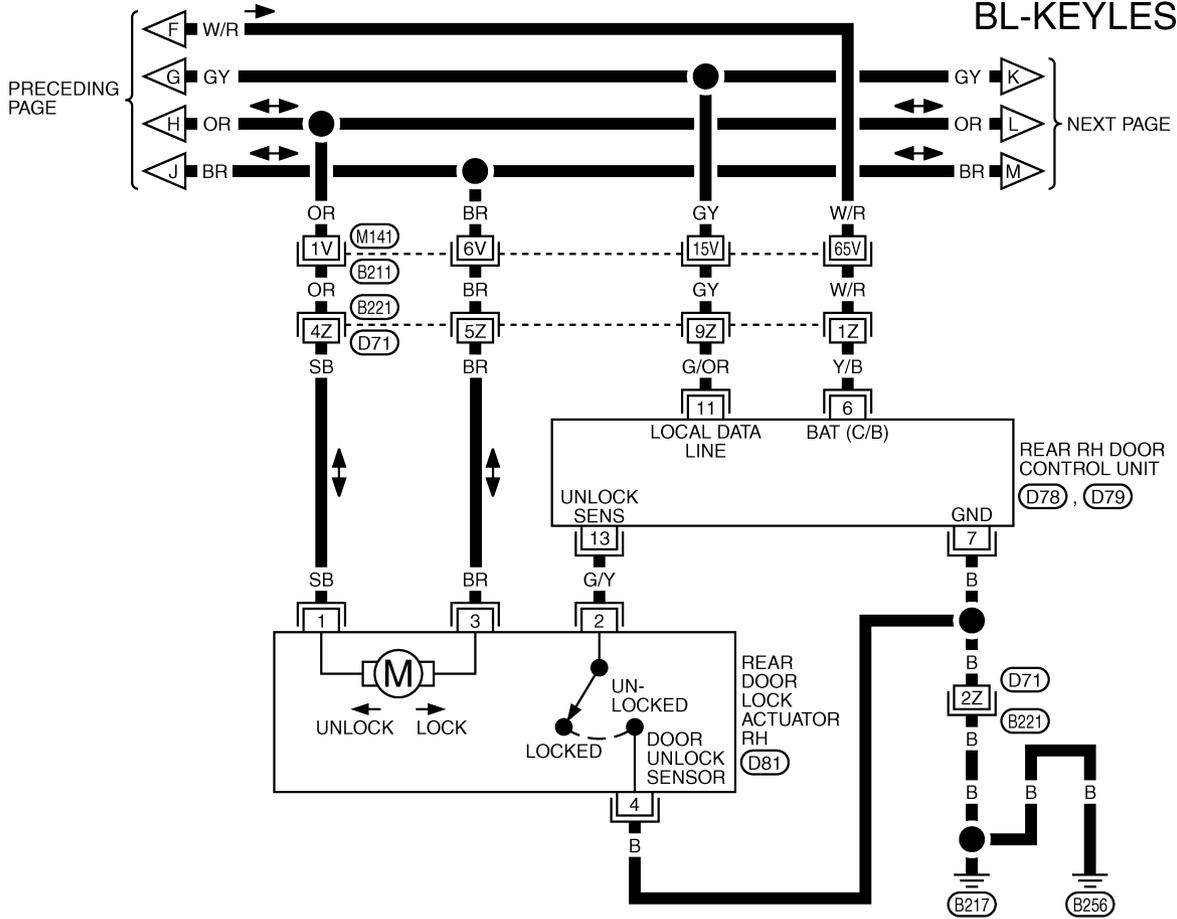
REFER TO THE FOLLOWING.

(D31) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1551E

REMOTE KEYLESS ENTRY SYSTEM

BL-KEYLES-09

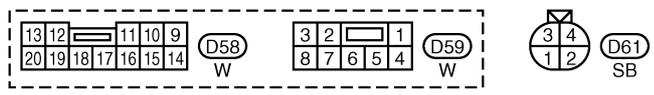
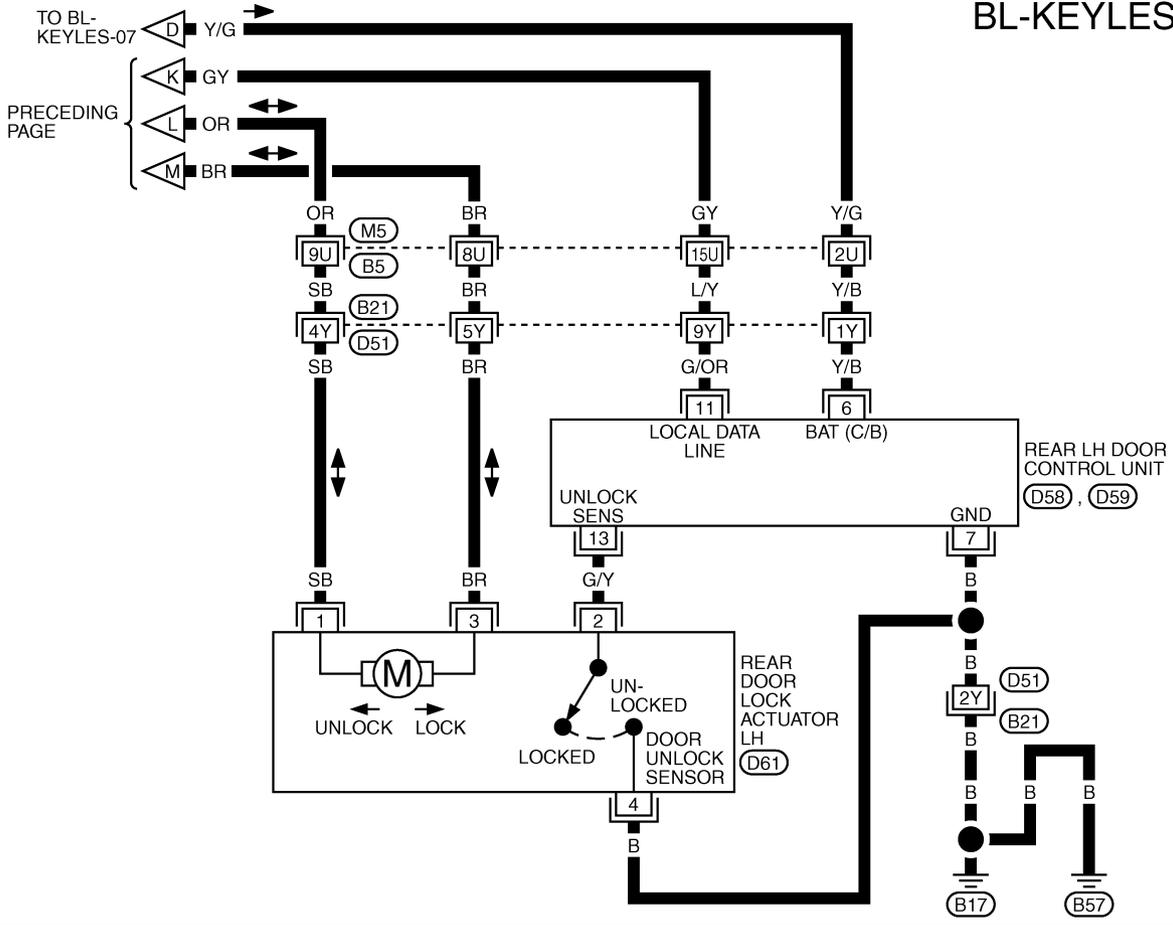


REFER TO THE FOLLOWING.
 (B211), (B221) -SUPER MULTIPLE
 JUNCTION (SMJ)

TIWM1552E

REMOTE KEYLESS ENTRY SYSTEM

BL-KEYLES-10



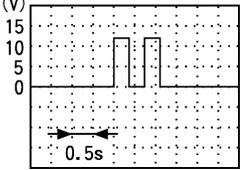
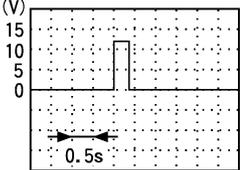
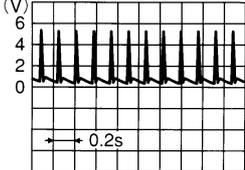
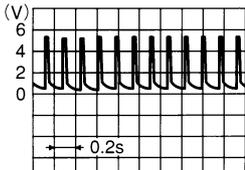
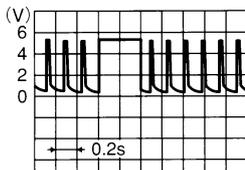
REFER TO THE FOLLOWING.
 (M5), (B21) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1553E

REMOTE KEYLESS ENTRY SYSTEM

Terminal and Reference Value for BCM

NIS000UH

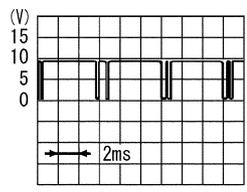
TER-MINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
1	G/Y	Auto trunk control unit	Output	When trunk opener is operated using electronic key. (OFF → ON)	5 → 0
5	R/Y	Headlamp relay	Input	Lighting switch is turned to OFF	Battery voltage
				Lighting switch is turned to ON	0
7	W/L	Combination flasher unit	Input/output	Door locking with electronic key (Twice)	 <p style="text-align: right;">PIIA2487J</p>
				Door unlocking with electronic key (Once)	 <p style="text-align: right;">PIIA2486J</p>
17	BR/Y	Data line RX	Input	—	—
18	G/B	Data line TX	Output	—	—
27	BR/W	Remote key less entry receiver (Pulse)	Input/output	Stand-by	 <p style="text-align: right;">OCC3879D</p>
				Press any of electronic key switches	 <p style="text-align: right;">OCC3880D</p>
28	L	Remote keyless entry receiver (Power supply)	Input/output	Stand-by	 <p style="text-align: right;">OCC3881D</p>
				Press any of electronic key switches	 <p style="text-align: right;">OCC3882D</p>
30	PU	IIU TX	Output	—	—
31	LG	IIU RX	Input	—	—

REMOTE KEYLESS ENTRY SYSTEM

TER-MINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
33	W	Door switch rear LH	Input	Door close (OFF) → Door open (ON)	Battery voltage → 0
37	W/G	Front door switch passenger side	Input	Door close (OFF) → Door open (ON)	Battery voltage → 0
44	Y	Remote keyless entry receiver (Ground)	—	—	0
56	B	Ground	—	—	0
60	L/OR	Ignition switch (ACC)	Input	Ignition switch (ACC or ON position)	Battery voltage
67	G/W	Data line A-3	Input/output	—	—
69	PU/W	Key switch	Input	Key Inserted in IGN key cylinder (ON) → key removed from IGN key cylinder (OFF)	Battery voltage → 0
105	Y/L	Power source (Fuse)	Input	—	Battery voltage
109	LG	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch ON → OFF	Battery voltage → 0
113	B	Ground	—	—	0
127	G/W	Horn relay	Input	When panic alarm is operated using electronic key. (OFF → ON)	Battery voltage → 0
142	W/R	Front door switch driver side	Input	Door close (OFF) → Door open (ON)	Battery voltage → 0
143	W/L	Door switch rear RH	Input	Door close (OFF) → Door open (ON)	Battery voltage → 0

Terminal and Reference Value for Driver Door Control Unit (LCU01)

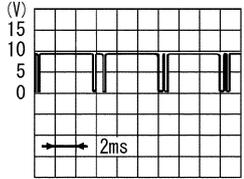
NIS000UI

TER-MINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
5	G/OR	Local data line	Input	—	 <p style="text-align: right; font-size: small;">S1IA0591J</p>
6	G/Y	Door unlock sensor	Input	OFF (Locked) → ON (Unlocked)	5 → 0
8	G/W	Data line A-3	Input/output	—	—
12	BR	Driver door lock actuator (Unlock)	Output	Door lock & unlock switch (Free → Unlock)	0 → Battery voltage → 0
14	Y/G	Power source (C/B)	Input	—	Battery voltage
15	B	Ground	—	—	0
17	LG	Driver door lock actuator (Lock)	Output	Door lock & unlock switch (Free → Lock)	0 → Battery voltage → 0

REMOTE KEYLESS ENTRY SYSTEM

Terminal and Reference Value for Passenger And Rear LH, RH Door Control Unit

NIS000JJ

TERMI-NAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
*2	SB	Door lock actuator (Lock)	Output	Door lock & unlock switch (Free → Lock)	0 → Battery voltage → 0
*3	BR	Door lock actuator (Unlock)	Output	Door lock & unlock switch (Free → Unlock)	0 → Battery voltage → 0
6	W/R (Y/B)	Power source (C/B)	Input	—	Battery voltage
7	B	Ground	—	—	0
11	G/OR	Local communication line	Input/output	—	 <p style="text-align: right;">S1IA0591J</p>
13	G/Y	Door unlock sensor	Input	OFF (Locked) → ON (Unlocked)	5V → 0V

NOTE:

*Only for passenger door control unit.

(): Wire color for rear LH, RH door control unit.

Work Flow

NIS000UK

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to [BL-54, "System Description"](#) .
3. Perform the preliminary check. Refer to [BL-71, "Preliminary Check"](#) .
4. Perform the communication inspection. If CONSULT-II is used, refer to [BL-75, "IVMS COMMUNICATION INSPECTION"](#) . If CONSULT-II is not used, refer to [BL-79, "COMMUNICATION DIAGNOSIS"](#) . Is the communication diagnosis result OK?
 OK: GO TO step 7.
 NG: GO TO step 5.
5. Repair or replace depending on the diagnosis result.
6. Perform the communication diagnosis again. If CONSULT-II is used, refer to [BL-75, "IVMS COMMUNICATION INSPECTION"](#) . If CONSULT-II is not used, refer to [BL-79, "COMMUNICATION DIAGNOSIS"](#) . Is communication diagnosis result OK?
 OK: GO TO step 7.
 NG: GO TO step 5.
7. Referring to Trouble diagnosis chart, repair or replace the cause of the incident. Refer to [BL-83, "Trouble Diagnosis Chart by Symptom"](#) .
8. Does the remote keyless entry system operate normally?
 YES: GO TO step 9.
 NO: GO TO step 7.
9. Inspection end.

REMOTE KEYLESS ENTRY SYSTEM

Preliminary Check POWER SUPPLY AND GROUND CIRCUIT INSPECTION

NIS000UL

1. FUSE INSPECTION

Check if any of the following fuses are blown.

Unit	Power source	Fuse No.
BCM	Battery power supply	3 (10A)
	ACC power supply	21 (10A)

Refer to [BL-58. "Wiring Diagram — KEYLES —"](#) .

Unit	Power source	Fusible link letter
Driver door control unit Passenger door control unit Rear LH door control unit Rear RH door control unit	Battery power supply	H (40A)

Refer to [BL-58. "Wiring Diagram — KEYLES —"](#) .

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-2. "POWER SUPPLY ROUTING"](#) .

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REMOTE KEYLESS ENTRY SYSTEM

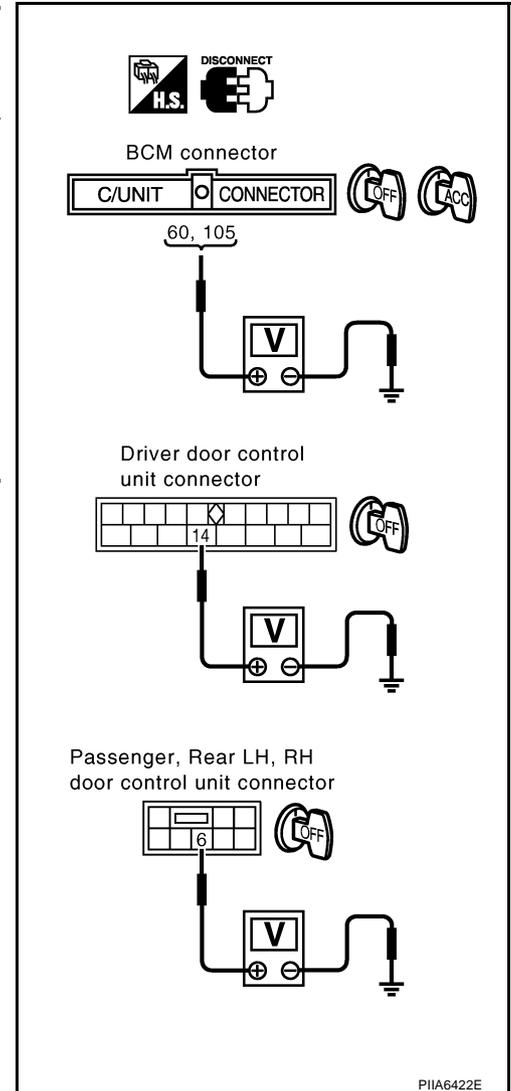
2. POWER SUPPLY CIRCUIT INSPECTION

1. Disconnect BCM connector and driver door LCU or passenger, rear LH, RH door control units.
2. Check voltage between following connectors and ground.

Unit (Connector)	Terminals (wire color)		Ignition switch condition	Voltage (V) (Approx.)
	(+)	(-)		
BCM (M4)	105 (Y/L)	Ground	OFF	Battery voltage
	60 (L/OR)		ACC or ON	
Driver door control unit (D8)	14 (Y/G)		OFF	
Passenger door control unit (D38)	6 (W/R)		OFF	
Rear LH door control unit (D58)	6 (Y/B)			
Rear RH door control unit (D78)	6 (Y/B)			

OK or NG

- OK >> GO TO 3.
 NG >> Check harness for open or short.



REMOTE KEYLESS ENTRY SYSTEM

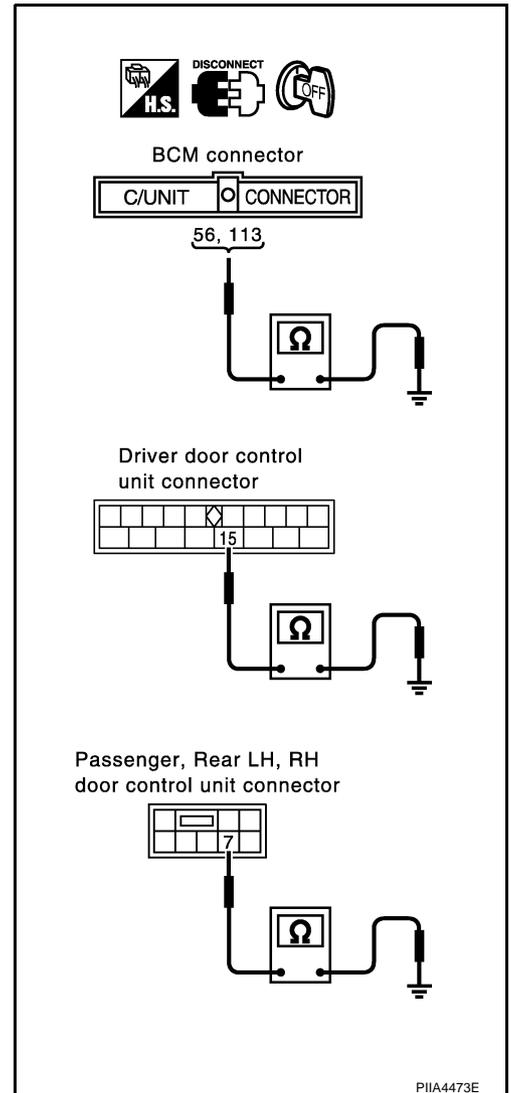
3. GROUND CIRCUIT INSPECTION

Check the continuity between the following connector and ground.

Unit (Connector)	Terminals (wire color)		Continuity
	(+)	(-)	
BCM (M4)	56 (B)	Ground	Yes
	113 (B)		
Driver door control unit (D8)	15 (B)		
Passenger door control unit (D39)	7 (B)		
Rear LH door control unit (D59)			
Rear RH door control unit (D79)			

OK or NG

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



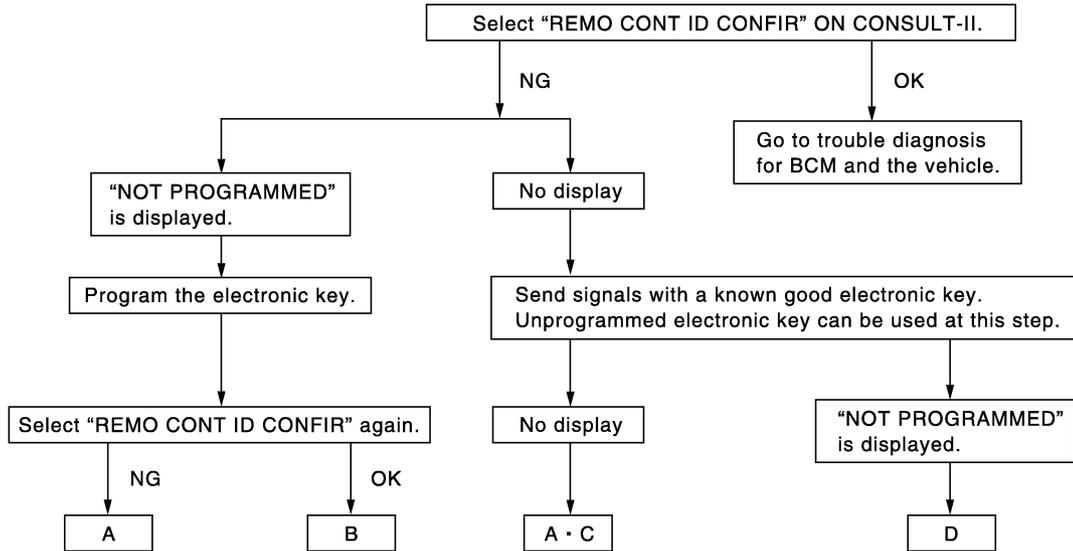
SYSTEM INSPECTION

- When the Remote Keyless Entry System is malfunctioning, determine which part has caused the incident, before carrying out the trouble diagnosis.
- Using the following diagnosis flow chart, determine whether the electronic key or the vehicle component (remote keyless entry receiver or BCM) has a malfunction and confirm the part to be checked.

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REMOTE KEYLESS ENTRY SYSTEM

Inspection with CONSULT-II



PIIA2842E

- A : Replace BCM
 B : Electronic key not registered
 C : Remote keyless receiver inspection
 Refer to [BL-96, "Check Remote Keyless Entry Receiver"](#)
 D : Electronic key inspection
 Refer to [BL-84, "Check Electronic Key"](#)

CONSULT-II Function

NIS000UM

CONSULT-II executes the following functions by combining data received and command transmitted via the communication line from BCM. IVMS communication inspection, work support (only function setting of seats and steering wheel), self-diagnosis, data monitor, and active test display.

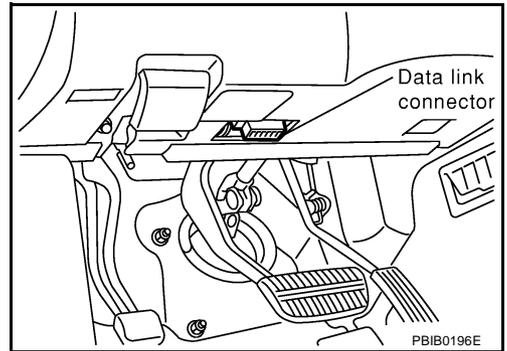
DIAGNOSTIC ITEMS DESCRIPTION

IVMS diagnosis position	Diagnosis mode	Description
IVMS-COMM CHECK	IVMS-COMM DIAGNOSIS	Diagnosis of continuity in the communication line(s), and of the function of the IVMS-communication interface between the body control module and the local control units, accomplished by transmitting a signal from the body control module to the local control units.
	WAKE-UP DIAGNOSIS	Diagnosis of the "wake-up" function of local control units by having a technician input the switch data into the local control unit that is in the temporary "sleep" condition.
Each system inspection	Work support	Changes the setting for each function.
	Self-diagnosis results	Carries out self-diagnosis.
	Data monitor	Displays data relative to the body control module (BCM) input signals and various control related data for each system.
	Active test	Turns on/off actuators, relay and according to the commands transmitted by the CONSULT-II unit.
BCM PART NUMBER		Displays BCM part No.

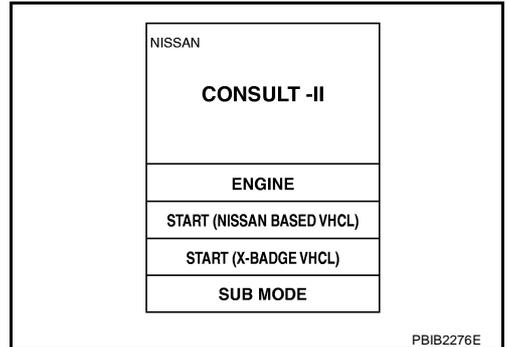
REMOTE KEYLESS ENTRY SYSTEM

CONSULT-II BASIC OPERATION PROCEDURE

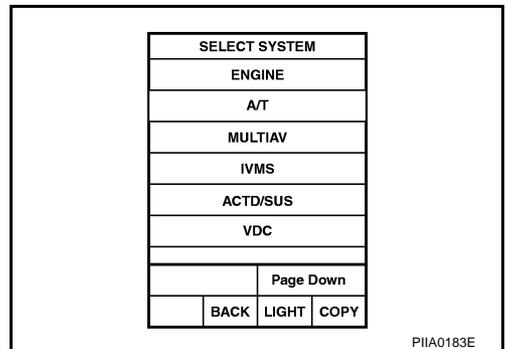
1. With the ignition switch OFF, connect "CONSULT-II" and "CONSULT-II CONVERTER" to the data link connector on vehicle side, and turn the ignition switch ON.



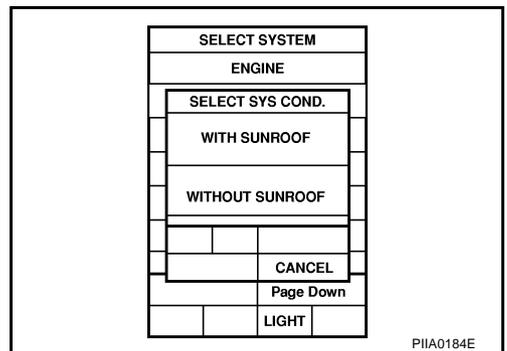
2. Touch "START (NISSAN BASED VHCL)".



3. Touch "IVMS".
If "IVMS" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



4. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
5. Touch "OK". If the selection is wrong, touch "CANCEL".



6. Select the desired part to be diagnosed on the "SELECT TEST ITEM" screen.

IVMS COMMUNICATION INSPECTION

IVMS contains the IVMS communication diagnosis and wake-up diagnosis.

IVMS Communication Diagnosis

- IVMS communication diagnosis consists of the communication diagnosis, sleep diagnosis, and inactive communication diagnosis between BCM and each local unit (LCU), and display the results on the CONSULT-II screen.

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REMOTE KEYLESS ENTRY SYSTEM

NOTE:

Sleep is a power saving function when a vehicle is stationary (all BCM related electrical equipment: OFF, and the timer: OFF).

- The function also stores the communication malfunction records and inactive communication records, and displays the data on the CONSULT-II screen (Malfunction record diagnosis)

Malfunction description	CONSULT-II display item	Description
Communication malfunction	COMM DATA	Communicating with each LCU is judged sound when the communication is normally completed and the transmitted data and received data are identically the same. In other cases, it is judged malfunctioning. If the communication is inactive, no diagnosis result is displayed.
Inactive communication	NO RESPONSE	Communicating with each LCU is judged sound when at least one time communication is normally completed within three trials. In other cases, it is judged malfunctioning.
Sleep malfunction	SLEEP	Make sure that each LCU enters sleep mode.
Communication malfunction*	PAST COMM DATA	The records when communication signal malfunctions were continuously detected while the communication was normal are displayed. Or the records when a malfunction is detected during the past sleep mode are displayed.
Inactive communication*	PAST NO RESPONSE	The records when inactive communications were continuously detected while the communication was normal are displayed.

*: malfunctioning item record

Operation Procedure

1. Touch "IVMS-COMM CHECK" on "SELECT TEST ITEM".
2. Touch "IVMS-COMM DIAGNOSIS" on "SELECT DIAG ITEM" screen.
3. Touch "START" on "IVMS-COMM DIAGNOSIS" screen to start the diagnosis.
4. After the diagnosis is completed, the malfunctioning system is displayed.
5. When the malfunctioning items are displayed, touch "PRINT" to record.
6. Touch "ERASE".
7. Perform the communication inspection again to make sure that any malfunctioning item is displayed.
8. Check the displayed items.

Wake-Up Diagnosis

The wake-up diagnosis is carried out when BCM detects the wake-up signal from each local unit (LCU). When the switch shown on the screen is operated as instructed, each local control unit (LCU) outputs the wake-up signal. If BCM cannot detect a wake-up signal, it is judged malfunctioning. The malfunctioning local control unit (LCU) is displayed on the screen.

NOTE:

If any unspecified switch is operated, "Switch data not match" is displayed as a malfunctioning system.

Operation Procedure

1. Touch "IVMS-COMM CHECK" on "SELECT TEST ITEM" screen.
2. Touch "WAKE-UP DIAGNOSIS" on "SELECT DIAG ITEM" screen.
3. Touch "START" on "WAKE-UP DIAGNOSIS" screen to start the diagnosis.
4. Touch "NEXT" to select the local control unit (LCU) to be diagnosed.
5. Check that any malfunction is displayed. If necessary, touch "PRINT" to record.
6. Perform the inspection to the malfunctioning item.

REMOTE KEYLESS ENTRY SYSTEM

Malfunction Code Table

Malfunctioning item	Display unit	CONSULT-II IVMS communication diagnosis content	Self-diagnosis trouble code No.	Malfunctioning system and reference
COMM DATA	One LCU is displayed.	POWER WINDOW C/U-DR "COMM DATA"	24	Replace the displayed LCU.
		DOOR MIRROR C/U-RH "COMM DATA"	27	
		DOOR MIRROR C/U-LH "COMM DATA"	37	
		POWER SEAT C/U-DR "COMM DATA"	47	
	Multiple LCUs are displayed.	BCM "COMM FAIL1", "COMM FAIL2"	Displays in order of 24 →27→37→47 →and cycles from 24.	Communication system A: Refer to BL-81, "COMMUNICATION SYSTEM A" .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U-DR "NO RESPONSE"	25	Communication system B: Refer to BL-81, "COMMUNICATION SYSTEM B" .
		DOOR MIRROR C/U-RH "NO RESPONSE"	28	
		DOOR MIRROR C/U-LH "NO RESPONSE"	38	
		POWER SEAT C/U-DR "NO RESPONSE"	48	
	Multiple LCUs are displayed.	BCM/HARNESS	Displays in order of 25→28→38→48 and cycles from 25.	Communication system C: Refer to BL-81, "COMMUNICATION SYSTEM C" .
SLEEP malfunction	One LCU is displayed.	POWER WINDOW C/U-DR "SLEEP"	No self-diagnosis function	Replace the displayed LCU.
		DOOR MIRROR C/U-RH "SLEEP"		
		DOOR MIRROR C/U-LH "SLEEP"		
		POWER SEAT C/U-DR "SLEEP"		
	Multiple LCUs are displayed.	All the above control units are displayed.	No self-diagnosis function	Communication system A: Refer to BL-81, "COMMUNICATION SYSTEM A" .

NOTE:

- For a specific local control unit (LCU), either "PAST COMM DATA" or "PAST NO RESPONSE" may be displayed instead of the above results. This is caused by the data record, so erase the records.
(The display only shows the incident records, they are not malfunctions caused during the diagnosis. One possible cause is that an reproducible incident occurred.)
- Follow the steps below to erase the memory
Perform either disconnect BCM battery power supply or erase memory with CONSULT-II.
- With the battery connected, if the local control unit (LCU) connector is disconnected and left for approximately 1 minute, the BCM stores "NO RESPONSE" record.

DATA MONITOR

Remote Keyless Entry Item

Monitored item	Description
IGN KEY SW	Indicates [ON/OFF] condition of ignition key switch.
IGN ACC SW	Indicates [ON/OFF] condition of ignition switch in ACC position.

REMOTE KEYLESS ENTRY SYSTEM

Monitored item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
LOCK SIG-DR	Indicates [ON/OFF] condition of driver door unlock signal from door unlock sensor.
LOCK SIG-AS	Indicates [ON/OFF] condition of passenger door unlock signal from door unlock sensor.
LOCK SIG-RR/RH	Indicates [ON/OFF] condition of rear RH door unlock signal from door unlock sensor.
LOCK SIG-RR/LH	Indicates [ON/OFF] condition of rear LH door unlock signal from door unlock sensor.
LOCK BUTTON	Indicates [ON/OFF] condition of lock signal from electronic key.
UNLOCK BUTTON	Indicates [ON/OFF] condition of unlock signal from electronic key.
PANIC BTN	Indicates [ON/OFF] condition of panic signal from electronic key.
TRUNK BTN-CON	Indicates [ON/OFF] condition of trunk open signal from electronic key.

Trunk Lid Opener Item

Monitored item	Description
TRUNK OPNR SW	Indicates [ON/OFF] condition of trunk open signal from trunk open switch.

ACTIVE TEST

Remote Keyless Entry Test Item

TEST ITEM	DESCRIPTION
TRUNK OPEN S/V	This test is able to check trunk lid opener actuator operation. The trunk is unlocked when "ON" on CONSULT-II screen is touched.
HAZARD	This test is able to check hazard reminder operation. The hazard lamp turns on when "ON" on CONSULT-II screen is touched.
HORN	This test is able to check panic alarm and horn reminder operations. The horn turns on when "ON" on CONSULT-II screen is touched.
FOOT ILL	This is displayed even when it is not equipped.

Trunk Lid Opener Test Item

TEST ITEM	DESCRIPTION
TRUNK OPEN S/V	This test is able to check trunk lid opener actuator operation. The trunk is unlocked when "ON" on CONSULT-II screen is touched.

WORK SUPPORT

Work Support Item

WORK ITEM	DESCRIPTION
KYLS OP CONF SET	Hazard and horn reminder mode can be changed in this mode. (NORMAL or MODE1)
KYLS ID P/W SET	Keyless power window down (open) operation mode can be changed in this mode. (ON or OFF)
REMO CONT ID CONFIR	It can be checked whether electronic key ID code is registered or not in this mode.
REMO CONT ID REG	electronic key ID code can be registered in this mode.
REMO CONT ID ERASER	electronic key ID code can be erased in this mode.

Hazard and Horn Reminder mode

	NORMAL		MODE1		MODE2*	MODE3*	MODE4*	MODE5*
Electronic key operation	Lock	Unlock	Lock	Unlock	—	—	—	—
Hazard warning lamp flash	Twice	Once	Twice	—				
Horn sound	Once	—	—	—				

*: These modes are not supported.

REMOTE KEYLESS ENTRY SYSTEM

NIS000UN

On Board Diagnosis

ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP

- Map lamps and step lamps (all seats) act as the indicators for the on board diagnosis.

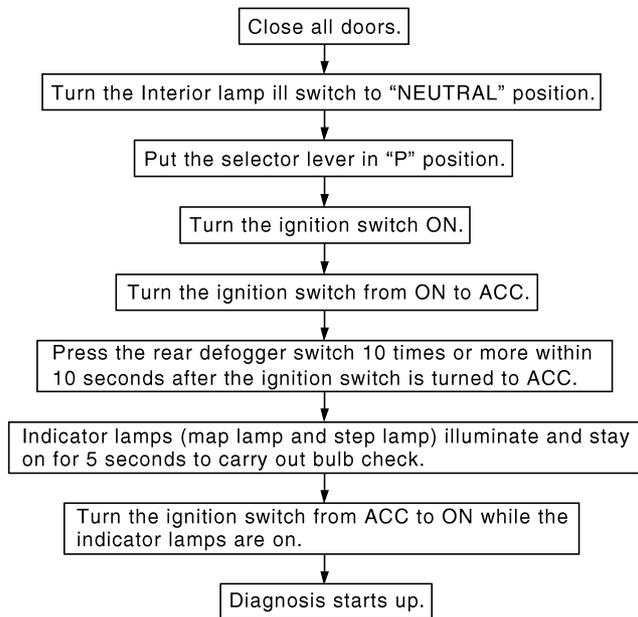
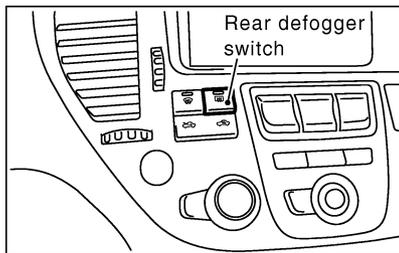
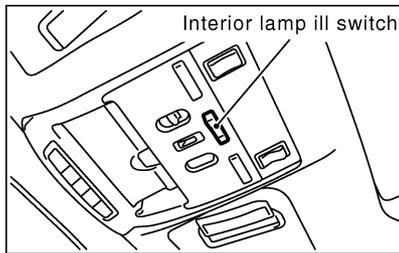
DIAGNOSIS ITEM

Diagnosis item.	Content
IVMS communication diagnosis	Diagnosing any abnormality or inability of communication between BCM and LCU (DATA LINE A-3).
Switch monitor	Monitoring conditions of switches connected to BCM, LCU and Door control unit.

COMMUNICATION DIAGNOSIS

Check the communication between BCM and local control unit (LCU).

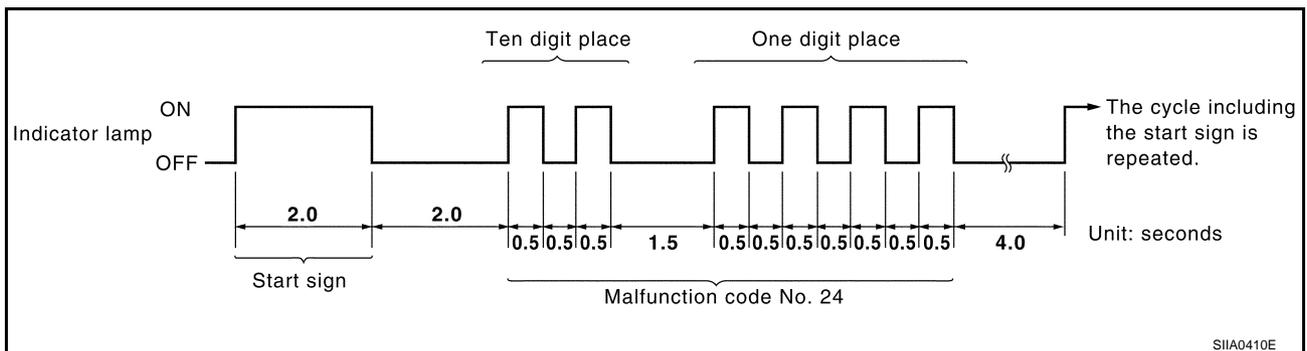
How To Perform Communication Diagnosis



PIIA3358E

Description

In this mode, a malfunction code is indicated by the number of flashes from the map lamps and step lamps as shown below:



SIIA0410E

After indicator lamp turns on for 2 seconds then off for 2 seconds, it flashes [cycling ON (0.5 sec.)/OFF (0.5 sec.)] to indicate a malfunction code of the first digit. Then, 1.5 second after indicator lamp turns off, it again flashes [cycling ON (0.5 sec.)/OFF (0.5 sec.)] to indicate a malfunction code of the second digit.

For example, the indicator lamp goes on and off for 0.5 seconds twice and after 1.5 seconds, it goes on and off for 0.5 seconds four times. This indicates malfunction code of driver door control unit communication.

REMOTE KEYLESS ENTRY SYSTEM

Malfunction Code Table

Malfunction item	Display unit	CONSULT-II IVMS communication diagnosis content	Self-diagnosis trouble code No.	Malfunctioning system and reference
COMM DATA	One LCU is displayed.	POWER WINDOW C/U-DR "COMM DATA"	24	Replace the displayed LCU.
		DOOR MIRROR C/U-RH "COMM DATA"	27	
		DOOR MIRROR C/U-LH "COMM DATA"	37	
		POWER SEAT C/U-DR "COMM DATA"	47	
	Multiple LCUs are displayed.	BCM "COMM FAIL1", "COMM FAIL2"	Displays in order of 24 →27→37→47 →and cycles from 24.	Communication system A: Refer to BL-81, "COMMUNICATION SYSTEM A" .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U-DR "NO RESPONSE"	25	Communication system B: Refer to BL-81, "COMMUNICATION SYSTEM B" .
		DOOR MIRROR C/U-RH "NO RESPONSE"	28	
		DOOR MIRROR C/U-LH "NO RESPONSE"	38	
		POWER SEAT C/U-DR "NO RESPONSE"	48	
	Multiple LCUs are displayed.	BCM/HARNESS	Displays in order of 25→28→38→48 and cycles from 25.	Communication system C: Refer to BL-81, "COMMUNICATION SYSTEM C" .
SLEEP malfunction	One LCU is displayed.	POWER WINDOW C/U-DR "SLEEP"	No self-diagnosis function	Replace the displayed LCU.
		DOOR MIRROR C/U-RH "SLEEP"		
		DOOR MIRROR C/U-LH "SLEEP"		
		POWER SEAT C/U-DR "SLEEP"		
	Multiple LCUs are displayed.	All the above control units are displayed.	No self-diagnosis function	Communication system A: Refer to BL-81, "COMMUNICATION SYSTEM A" .

NOTE:

- For a specific local control unit (LCU), either "PAST COMM DATA" or "PAST NO RESPONSE" may be displayed instead of the above results. This is caused by the data record, so erase the records.
(The display only shows the incident records, they are not malfunctions caused during the diagnosis. One possible cause is that an reproducible incident occurred.)
- Follow the steps below to erase the memory
Perform either disconnect BCM battery power supply or erase memory with CONSULT-II.
- With the battery connected, if the local control unit (LCU) connector is disconnected and left for approximately 1 minute, the BCM stores "NO RESPONSE" record.

Cancel of Communication Diagnosis

If one of the following conditions is satisfied, the communication diagnosis is cancelled.

- Turn ignition switch OFF.
- Drive the vehicle more than 7 km/h (4 MPH).
- Ten minutes have passed since the diagnosis result indication start without any diagnosis cancel operation.

REMOTE KEYLESS ENTRY SYSTEM

COMMUNICATION SYSTEM A

1. BCM INSPECTION

Replace the malfunctioning BCM with a known-good one, and perform the communication diagnosis. Refer to [BL-75, "IVMS COMMUNICATION INSPECTION"](#) (with CONSULT-II), [BL-79, "COMMUNICATION DIAGNOSIS"](#) (without CONSULT-II).

OK or NG

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

2. LCU INSPECTION

1. Replace with the previously installed BCM.
2. Replace the LCU with a known-good one, and perform the communication diagnosis. Refer to [BL-75, "IVMS COMMUNICATION INSPECTION"](#) (with CONSULT-II), [BL-79, "COMMUNICATION DIAGNOSIS"](#) (without CONSULT-II).

OK or NG

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

COMMUNICATION SYSTEM B

1. CONNECTOR INSPECTION

Check the terminals (at the control unit and harness) on the malfunctioning LCU for disconnection, bend, and other malfunctions.

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminals and connectors.

2. LCU INSPECTION

Replace the LCU with a known-good one, and perform the communication diagnosis. Refer to [BL-75, "IVMS COMMUNICATION INSPECTION"](#) (with CONSULT-II), [BL-79, "COMMUNICATION DIAGNOSIS"](#) (without CONSULT-II).

OK or NG

- OK >> Replace LCU.
- NG >> Repair communication harness between the indicated LCU and BCM.

COMMUNICATION SYSTEM C

1. CONNECTOR INSPECTION

Check the terminals (at the control unit and harness) on BCM and LCU for disconnection, bend and other malfunctions.

OK or NG

- OK >> GO TO 2.
- NG >> Repair terminals and connectors.

2. BCM INSPECTION

Replace the BCM with a known-good one, and perform the communication diagnosis. Refer to [BL-75, "IVMS COMMUNICATION INSPECTION"](#) (with CONSULT-II), [BL-79, "COMMUNICATION DIAGNOSIS"](#) (without CONSULT-II).

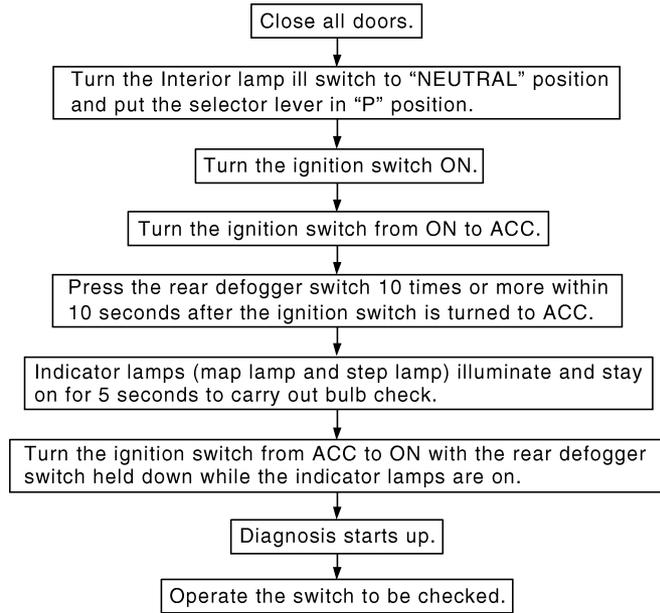
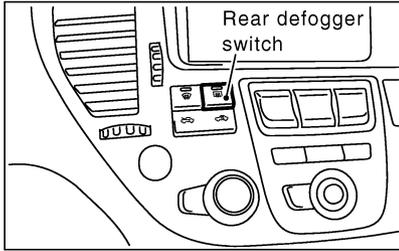
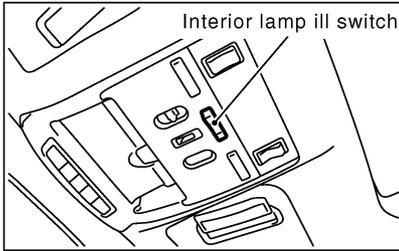
OK or NG

- OK >> Replace BCM
- NG >> Repair communication harness between LCU and BCM.

REMOTE KEYLESS ENTRY SYSTEM

SWITCH MONITOR

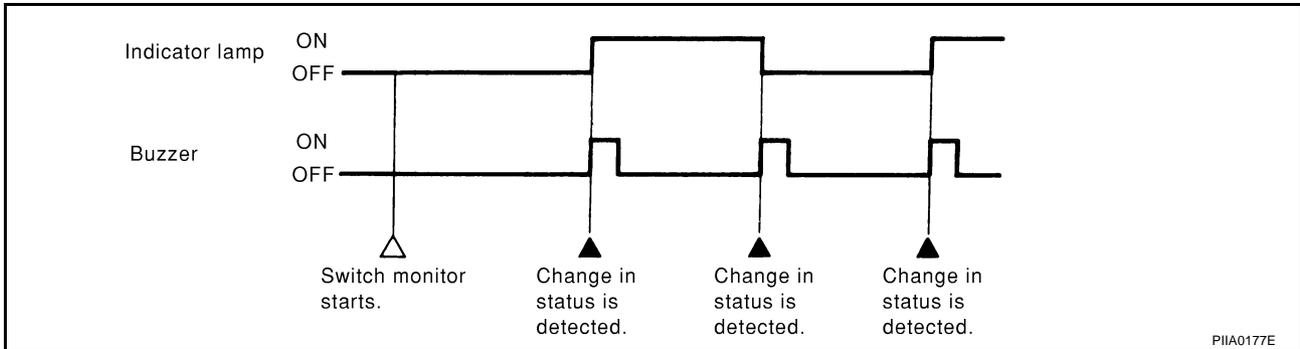
How To Perform Switch Monitor



PIIA3356E

Description

In this mode, when BCM detects the input signal from a switch in IVMS as shown below, the detection is indicated by the map lamp and step lamps with buzzer.



PIIA0177E

Switch Monitor Item

The status of the switch (except the ignition switch, interior ill lamp switch, and map lamp switch) as input to each control unit can be monitored.

Control unit	Item
BCM	All door switch
	Electronic key (lock / unlock switch and trunk switch)
Driver door control unit (LCU01)	Door lock & unlock switch (LOCK / UNLOCK)
	Driver door unlock sensor
Passenger door control unit.	Passenger door unlock sensor
RH rear door control unit.	Rear RH door unlock sensor
LH rear door control unit.	Rear LH door unlock sensor

Cancel of Switch Monitor

If one of the following conditions is satisfied, the switch monitor is cancelled.

- Turn ignition switch OFF.
- Drive the vehicle more than 7 km/h (4 MPH).

REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnosis Chart by Symptom

NIS000UO

- Always check the "Work Flow" before troubleshooting. Refer to [BL-70, "Work Flow"](#) .
- Before carrying out the inspection on the following table, perform the preliminary check. Refer to [BL-71, "Preliminary Check"](#) .

Symptom	malfunctioning system and reference	Reference page
All functions of remote keyless entry system does not operate.	1. Check electronic key battery.	BL-100
	2. Check electronic key.	BL-84
	3. Check remote keyless entry receiver.	BL-96
	4. Replace electronic key. NOTE: If the result of electronic key check with CONSULT-II is OK, electronic key is not malfunctioning. Refer to BL-84 .	BL-101
	5. Replace BCM.	-
The new ID of electronic key cannot be entered without CONSULT-II.	1. Check electronic key battery.	BL-100
	2. Check electronic key.	BL-84
	3. Check key switch.	BL-86
	4. Check door switch.	BL-87
	5. Check ACC power.	BL-85
	6. Check door lock and unlock switch.	BL-98
	7. Replace electronic key. NOTE: If the result of electronic key check with CONSULT-II is OK, electronic key is not malfunctioning. Refer to BL-84 .	BL-101
	8. Replace BCM.	-
Door lock or unlock does not function with electronic key. (Power door lock system is "OK".)	1. Check electronic key.	BL-84
	2. Check door switch.	BL-87
	3. Replace electronic key. NOTE: If the result of electronic key check with CONSULT-II is OK, electronic key is not malfunctioning. Refer to BL-84 .	BL-101
	4. Replace BCM.	-
Trunk lid does not open when trunk opener button is continuously pressed with electronic key.	1. First check trunk cancel switch position is "ON".	-
	2. Check electronic key.	BL-84
	3. Check trunk lid opener cancel switch.	BL-90
	4. Check trunk open signal.	BL-92
	5. Check trunk lid opener actuator.	BL-91
	6. Check key switch.	BL-86
	7. Replace electronic key. NOTE: If the result of electronic key check with CONSULT-II is OK, electronic key is not malfunctioning. Refer to BL-84 .	BL-101
	8. Replace BCM.	-
Hazard reminder does not activate properly when pressing lock or unlock button of electronic key. (Horn reminder is OK.)	1. Check hazard reminder mode* *: Hazard reminder can be changed. First check the hazard reminder setting.	BL-78
	2. Check hazard function with hazard switch.	BL-98
	3. Check hazard reminder operation.	BL-95
	4. Replace BCM.	-

REMOTE KEYLESS ENTRY SYSTEM

Symptom	malfunctioning system and reference	Reference page
Horn reminder does not activate properly when pressing lock button of electronic key. (Hazard reminder is OK.)	1. Check horn reminder mode* *: Horn reminder can be changed. First check the horn chirp setting.	BL-78
	2. Check horn function with horn switch.	BL-98
	3. Replace BCM.	–
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed. (All other system function is OK.)	1. Check electronic key.	BL-84
	2. Check horn function with horn switch.	BL-98
	3. Check headlamp function.	BL-98
	4. Check key switch.	BL-86
	5. Replace electronic key. NOTE: If the result of electronic key check with CONSULT-II is OK, electronic key is not malfunctioning. Refer to BL-84 .	BL-101
	6. Replace BCM.	–
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 activated or deactivated. First check the power window down setting.	BL-78
	2. Check power window function	GW-16
	3. Replace BCM.	–
Auto door lock operation does not activate properly. (All other system function is OK.)	1. Replace BCM.	–
Map lamp operation do not activate properly.	1. Check map lamp function.	BL-99
	2. Check door switch.	BL-87
	3. Replace BCM.	–

Check Electronic Key

NIS000UP

1. CHECK ELECTRONIC KEY

With CONSULT-II

Check Electronic key “LOCK / UNLOCK BUTTON”, “TRUNK BTN-CON” and “PANIC BTN” in “DATA MONITOR” mode with CONSULT-II.

Without CONSULT-II

Check electronic key in “SWITCH MONITOR” mode. Refer to [BL-82, "SWITCH MONITOR"](#) .

OK or NG

OK >> Electronic key is OK.

NG >> GO TO 2.

2. CHECK ELECTRONIC KEY ID

With CONSULT-II

Re-register electronic key ID Code.

Refer to [BL-102, "PROCEDURE 2 \(With CONSULT-II\)"](#) .

Without CONSULT-II

Re-register electronic key ID Code.

Refer to [BL-101, "PROCEDURE 1 \(WITHOUT CONSULT-II\)"](#) .

OK or NG?

OK >> Electronic key was not registered.

NG >> ● Check remote keyless entry receiver.

Refer to [BL-96, "Check Remote Keyless Entry Receiver"](#) .

● Check electronic key battery.

Refer to [BL-100, "CHECK ELECTRONIC KEY BATTERY"](#) .

REMOTE KEYLESS ENTRY SYSTEM

NIS000UQ

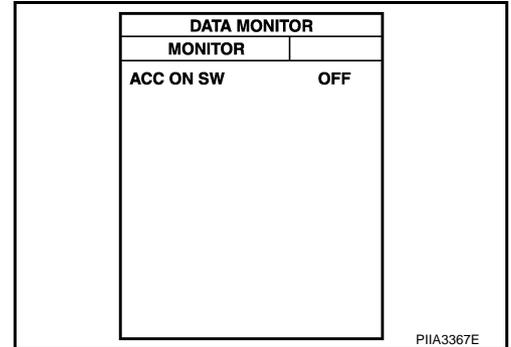
Check ACC Power

1. CHECK ACC POWER

① With CONSULT-II

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

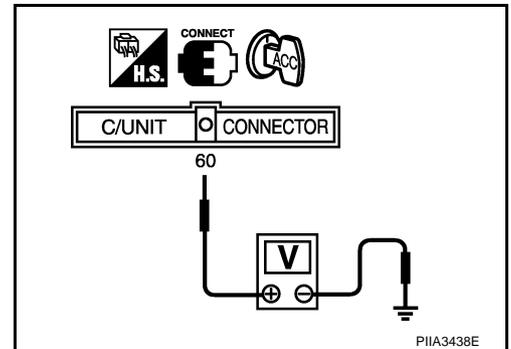
Monitor item	Condition
ACC ON SW	Ignition switch ACC or ON position : ON
	Ignition switch OFF position : OFF



⊗ Without CONSULT-II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M4	60 (L/OR)	Ground	ACC or ON	Battery voltage
			OFF	0



OK or NG

OK >> ACC power is OK.

NG >> Check the following.

- 10A fuse [No. 21, located in fuse block (J/B) No. 1]
- Harness for open or short between BCM and fuse

REMOTE KEYLESS ENTRY SYSTEM

NIS000UR

Check Key Switch

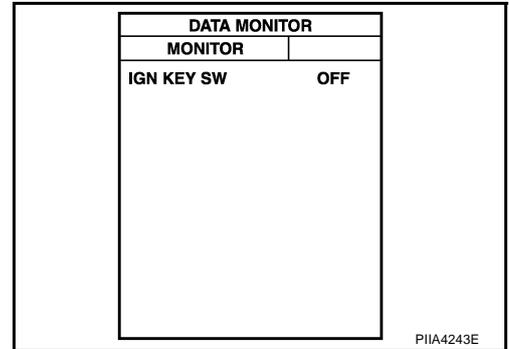
1. CHECK KEY SWITCH

With CONSULT-II

Check key switch "IGN KEY SW" in "DATA MONITOR" mode with CONSULT-II.

Key is inserted in ignition key cylinder : IGN KEY SW ON

Key is removed from ignition key cylinder : IGN KEY SW OFF



Without CONSULT-II

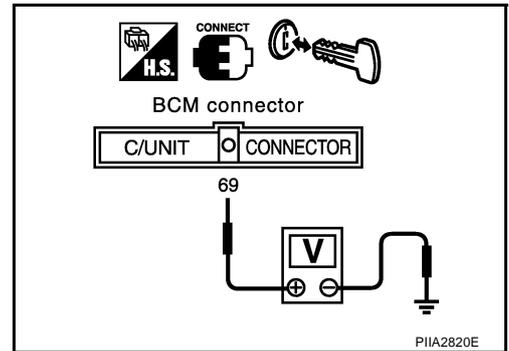
Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M4	69 (PU/W)	Ground	Key is inserted	Battery Voltage
			Key is removed	0

OK or NG

OK >> Key switch is OK.

NG >> GO TO 2.



2. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM connector and key switch connectors.
2. Check continuity between BCM connector M4 terminal 69 and key switch connector M64 terminal 4.

69 (PU/W) – 4 (PU/W) : Continuity should exist.

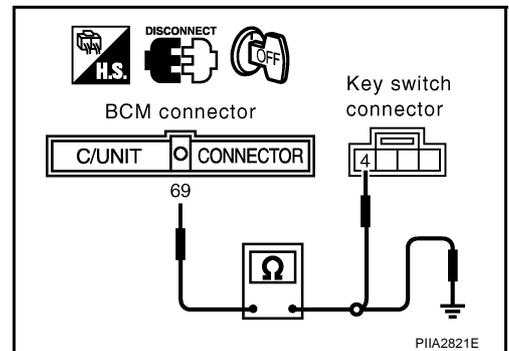
3. Check continuity between BCM connector M4 terminal 69 and ground.

69 (PU/W) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



REMOTE KEYLESS ENTRY SYSTEM

3. CHECK KEY SWITCH

Check continuity between key switch terminals 3 and 4.

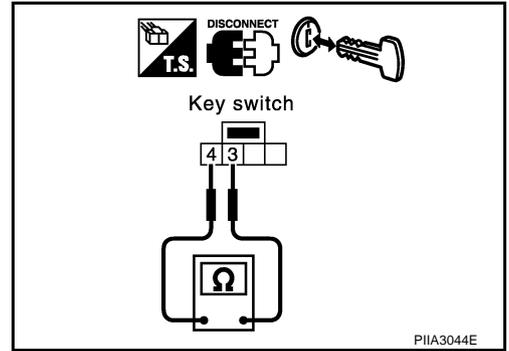
Terminal		Condition of key switch	Continuity
3	4	Key is inserted.	Yes
		Key is removed.	No

OK or NG

OK >> Check the following.

- 10A fuse [No. 32, located in fuse block (J/B) No.2]
- Harness for open or short between key switch and fuse

NG >> Replace key switch.



Check Door Switch CHECK FRONT DOOR SWITCH

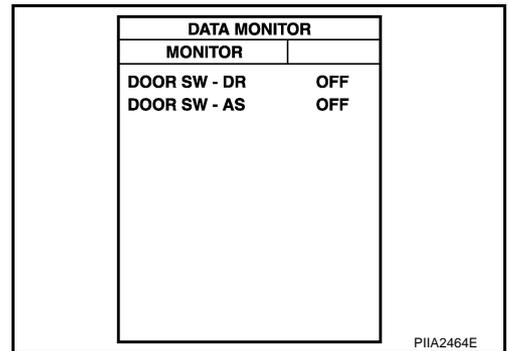
NIS000US

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check front door switch ("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 front door switch in "SWITCH MONITOR" mode. Refer to [BL-82, "SWITCH MONITOR"](#).

OK or NG

OK >> Front door switch is OK.

NG >> GO TO 2.

REMOTE KEYLESS ENTRY SYSTEM

2. CHECK FRONT DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect front door switch connector and BCM connector.
3. Check continuity between front door switch connector B20 (driver side), B220 (passenger side) terminal 1 and BCM connector M4 (passenger side), B4 (driver side) terminal 37, 142.

Driver side door switch

1 (W/R) – 142 (W/R) : Continuity should exist.

Passenger side door switch

1 (W/G) – 37 (W/G) : Continuity should exist.

4. Check continuity between front door switch connector B20 (driver side), B220 (passenger side) terminal 1 and ground.

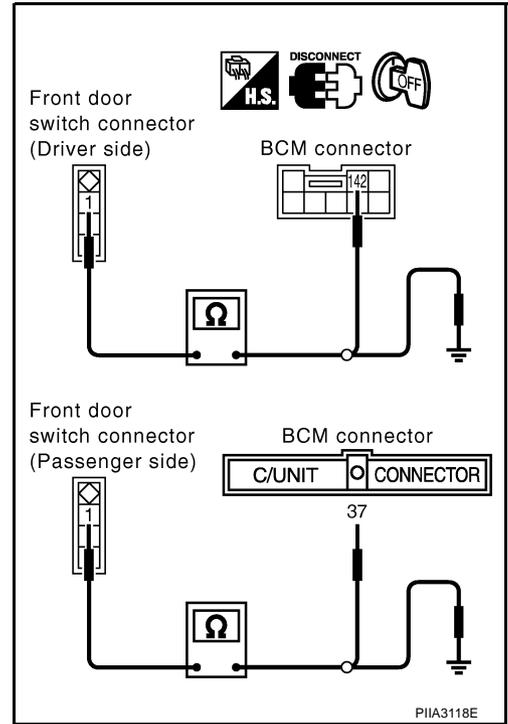
Each door switch

1 (W/R, W/G) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK FRONT DOOR SWITCH

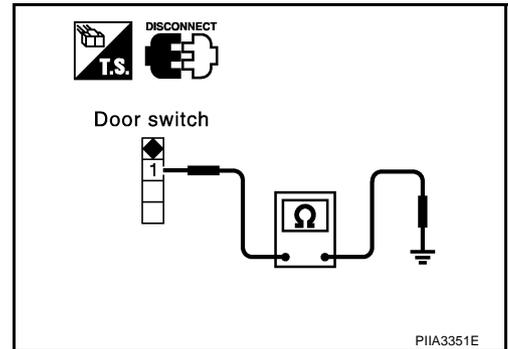
Check continuity between front door switch(driver side),(passenger side) terminal 1 and ground part of front door switch.

Terminal	Front door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

OK >> Check door switch case ground.

NG >> Replace malfunction front door switch.



REMOTE KEYLESS ENTRY SYSTEM

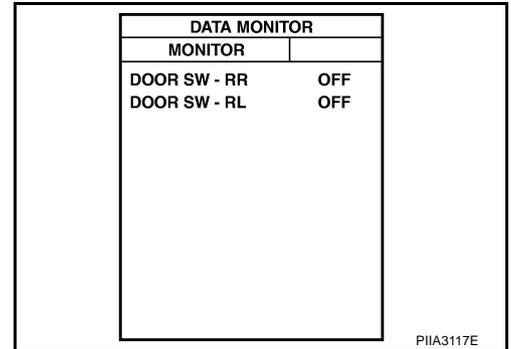
CHECK REAR DOOR SWITCH

1. CHECK REAR DOOR SWITCH INPUT SIGNAL

ⓑ With CONSULT-II

Check rear door switch ("DOOR SW-RR" and "DOOR SW-RL") in "DATA MONITOR" mode with CONSULT-II.

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



ⓧ Without CONSULT-II

Check front door switch in "SWITCH MONITOR" mode. Refer to [BL-82, "SWITCH MONITOR"](#).

OK or NG

- OK >> Rear door switch is OK.
- NG >> GO TO 2

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM connector.
3. Check continuity between rear door switch connector D62 (rear LH), D82 (rear RH) terminal 1 (W) and BCM connector M4 (rear LH), B4 (rear RH) terminal 33 (W), 143 (W/L).

Rear door switch LH

1 (W) – 33 (W) : Continuity should exist.

Rear door switch RH

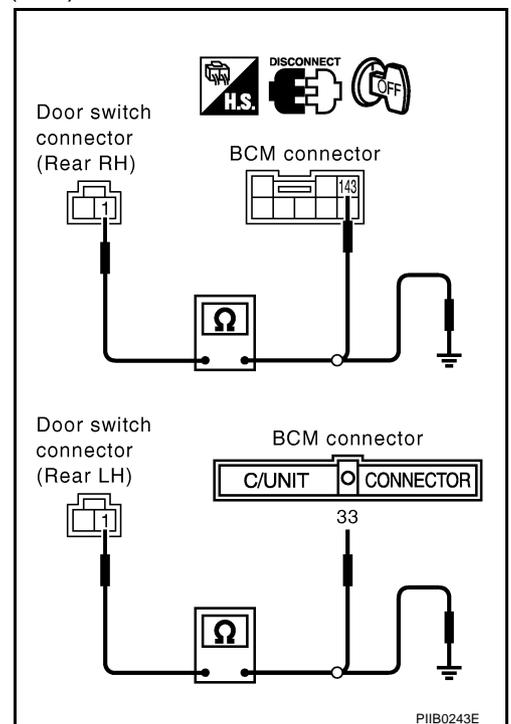
1 (W) – 143 (W/L) : Continuity should exist.

4. Check continuity between rear door switch connector D62 (rear LH), D82 (rear RH) terminal 1(W) and ground.

1 (W) – Ground : Continuity should not exist.

OK or NG

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



REMOTE KEYLESS ENTRY SYSTEM

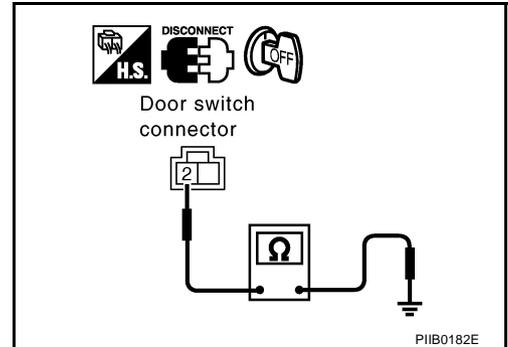
3. CHECK REAR DOOR SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between rear door switch connector D62 (rear LH), D82 (rear RH) terminal 2 and ground.

2 (B) – Ground : Continuity should exist.

OK or NG

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



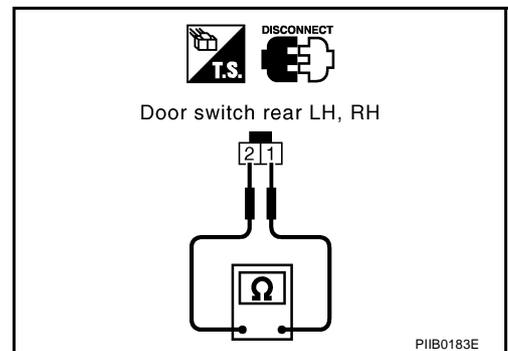
4. CHECK REAR DOOR SWITCH

Check continuity between rear door switch (rear LH), (rear RH) terminals 1 and 2.

Terminal		Condition of rear door	Continuity
1	2	Close	No
		Open	Yes

OK or NG

- OK >> Rear door switch is OK.
 NG >> Replace malfunction door lock assembly rear (door switch).



Check Trunk Lid Opener Cancel Switch

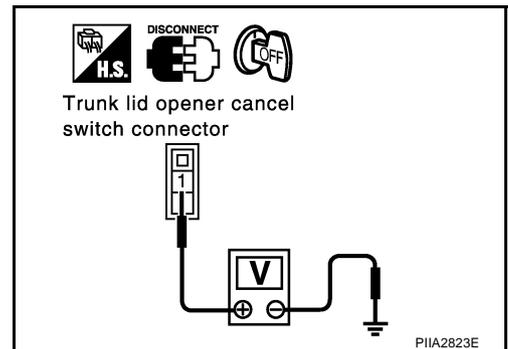
1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect trunk lid opener cancel switch connector.
3. Check voltage between trunk lid opener cancel switch connector M117 terminal 1 and ground.

1 (G) – Ground : Battery voltage.

OK or NG

- OK >> GO TO 2.
 NG >> Check the following.
- Trunk lid opener relay
 - Harness for open or short between trunk lid opener cancel switch and trunk lid opener relay



REMOTE KEYLESS ENTRY SYSTEM

2. CANCEL SWITCH INSPECTION

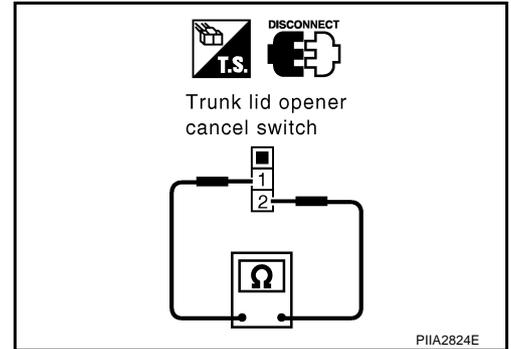
Check continuity between trunk lid opener cancel switch terminals 1 and 2.

Terminal		Condition of trunk lid opener cancel switch	Continuity
1	2	ON	Yes
		OFF	No

OK or NG

OK >> GO TO 3.

NG >> Replace trunk lid opener cancel switch.



3. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M4 terminal 109 and trunk lid opener cancel switch connector M117 terminal 2.

109 (LG) – 2 (LG) : Continuity should exist.

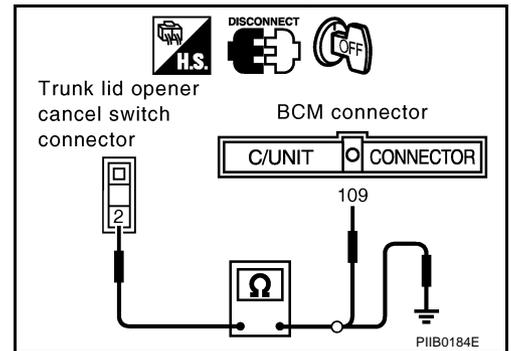
3. Check continuity between trunk lid opener cancel switch connector M117 terminal 2 and ground.

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

OK or NG

OK >> Trunk lid opener cancel switch circuit is OK.

NG >> Repair or replace harness.



Check Trunk Lid Opener Actuator

Before carrying out the following diagnosis, check that the trunk opener cancel switch is turned ON.

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect trunk lid opener actuator connector.
3. Check voltage between trunk lid opener actuator connector B311 terminal 1 and ground.

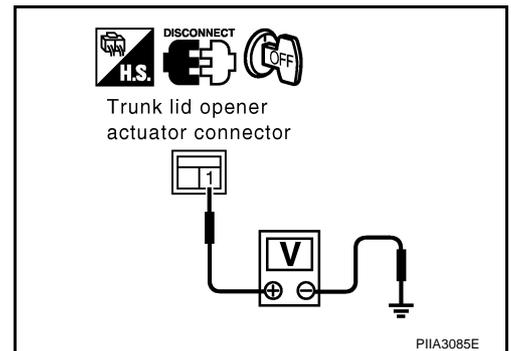
1 (PU) – Ground : Battery voltage.

OK or NG

OK >> GO TO 2.

NG >> Check the following.

- 20A fuse [No.15, located in the fuse block (J/B) No. 1]
- Harness for open and short between trunk lid opener actuator and fuse



REMOTE KEYLESS ENTRY SYSTEM

2. CHECK TRUNK LID OPENER ACTUATOR

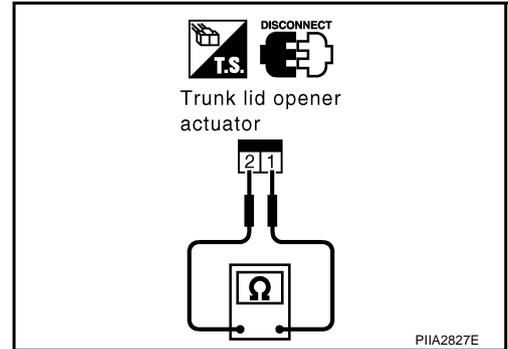
Check continuity between trunk lid opener actuator terminals 1 and 2.

1 – 2 : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Replace trunk lid opener actuator.



3. CHECK TRUNK LID OPENER RELAY CIRCUIT

1. Remove electronic key from ignition key cylinder.
2. Connect trunk lid opener actuator connector.
3. Check voltage between trunk lid opener actuator connector and ground.

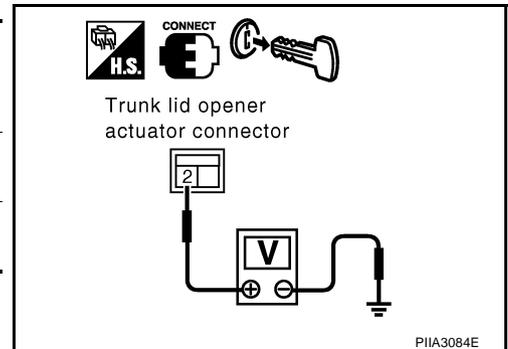
Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B 311	2 (BR/W)	Ground	Electronic key: Trunk open switch ON	0 (0.7 seconds)
			Electronic key: Trunk open switch OFF	Battery voltage

OK or NG

OK >> Trunk lid opener actuator circuit is OK.

NG >> Check the following.

- Harness between trunk lid opener actuator and trunk lid opener relay
- Harness between trunk lid opener relay and ground.
- Trunk lid opener relay



Check Trunk Open Signal

1. CHECK BCM OUTPUT SIGNAL

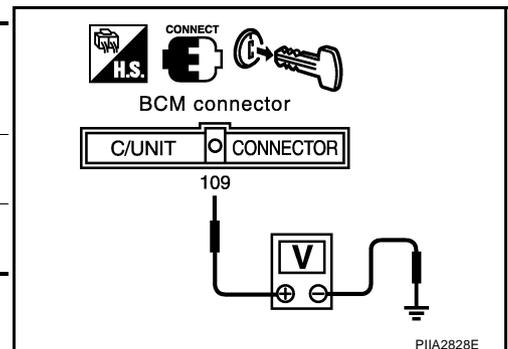
1. Remove electronic key from ignition key cylinder.
2. Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M4	109 (LG)	Ground	Electronic key: Trunk open switch ON	0 (0.7 Second)
			Electronic key: Trunk open switch OFF	Battery voltage

OK or NG

OK >> BCM output signal (trunk open signal) is OK.

NG >> Replace BCM.



REMOTE KEYLESS ENTRY SYSTEM

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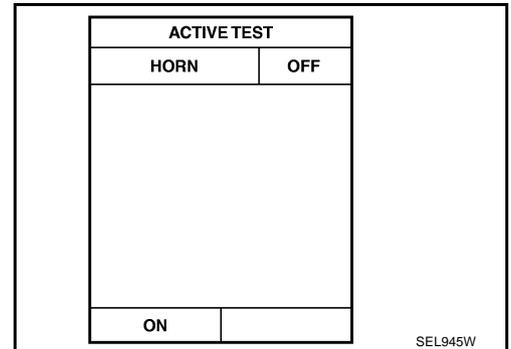
Check Horn Circuit

1. CHECK HORN CHIRP FUNCTION

With CONSULT-II

1. Check horn function "HORN" in "ACTIVE TEST" mode with CONSULT-II.
2. Perform operation shown on display.

Horn should sound.



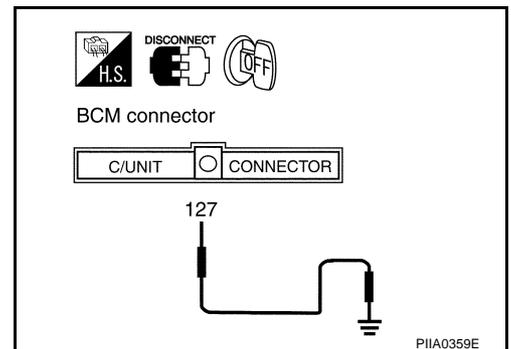
Without CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Apply ground to BCM connector E204 terminal 127.

Horn should sound.

OK or NG

- OK >> Horn alarm is OK.
NG >> GO TO 2.



2. CHECK HORN RELAY

Check horn relay condition.

OK or NG

- OK >> GO TO 3.
NG >> Replace horn relay.

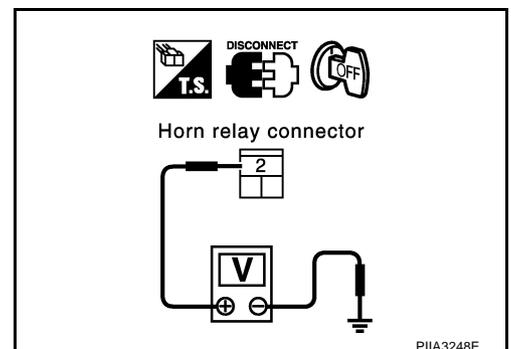
3. CHECK POWER SUPPLY FOR HORN RELAY

1. Turn ignition switch OFF.
2. Disconnect horn relay connector.
3. Check voltage between horn relay connector E3-5 terminal 2 and ground.

2 – Ground : Battery voltage.

OK or NG

- OK >> GO TO 4.
NG >> Check the following.
- 15A fuse [No. 56, located in the fuse, fusible link and relay block (J/B)]
 - Harness for open or short between horn relay and fuse



REMOTE KEYLESS ENTRY SYSTEM

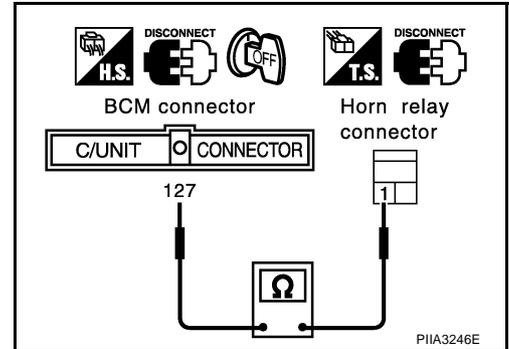
4. CHECK HORN RELAY CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM connector E204 terminal 127 and horn relay connector E3-5 terminal 1.

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

OK or NG

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



5. CHECK HORN RELAY CIRCUIT

1. Disconnect horn relay and horn high or low connector.
2. Check continuity between horn relay connector E3-5 terminal 3 and horn connector E43 (low), E63 (high) terminal 1.

LOW

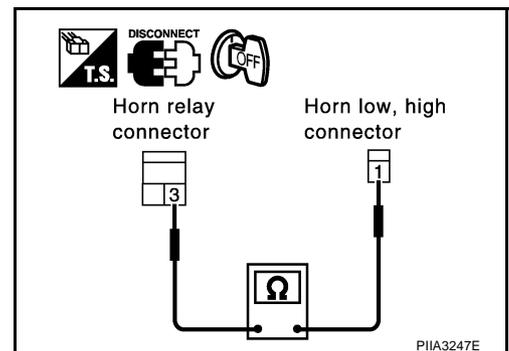
3 – 1 (G) :Continuity should exist.

HIGH

3 – 1 (G/OR) :Continuity should exist.

OK or NG

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



6. CHECK HORN AND HORN GROUND

1. Apply battery voltage to horn terminal 1.

Horn should sound.

OK or NG

- OK >> Replace BCM.
NG >> Replace horn or repair horn ground.

REMOTE KEYLESS ENTRY SYSTEM

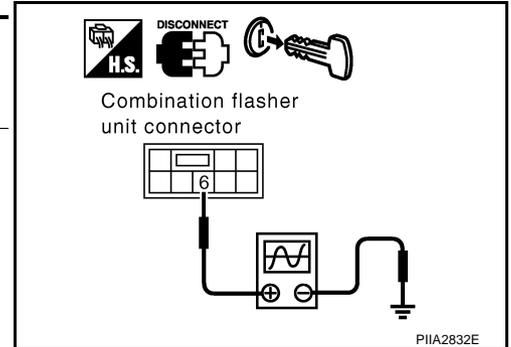
NIS000UX

Check Hazard Reminder Operation

1. CHECK BCM OUTPUT SIGNAL

1. Remove electronic key from ignition key cylinder.
2. Check the signal between combination flasher unit connector and ground with oscilloscope.

Con- nector	Terminal (Wire color)		Condition	Signal (Reference value)
	(+)	(-)		
M19	6 (W/L)	Ground	LOCK switch ON with electronic key	<p>PIIA2487J</p>
			UNLOCK switch ON with electronic key* *: In the state that hazard reminder operates.	<p>PIIA2486J</p>



OK or NG

- OK >> Check combination flasher unit. Refer to [LT-90, "TURN SIGNAL AND HAZARD WARNING LAMPS"](#).
- NG >> GO TO 2.

2. CHECK COMBINATION FLASHER UNIT CIRCUIT

1. Disconnect BCM and combination flasher unit connector.
2. Check continuity between BCM connector M4 terminal 7 and combination flasher unit connector M91 terminal 6.

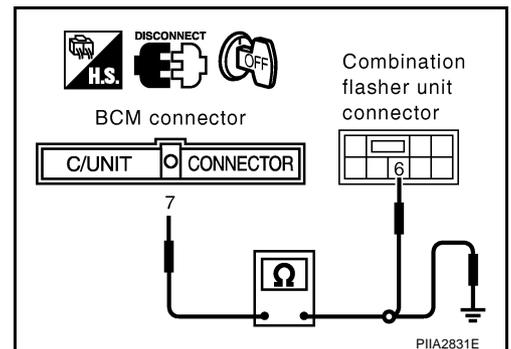
7 (W/L) – 6 (W/L) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 7 and ground.

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

OK or NG

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



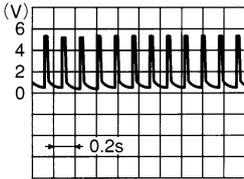
REMOTE KEYLESS ENTRY SYSTEM

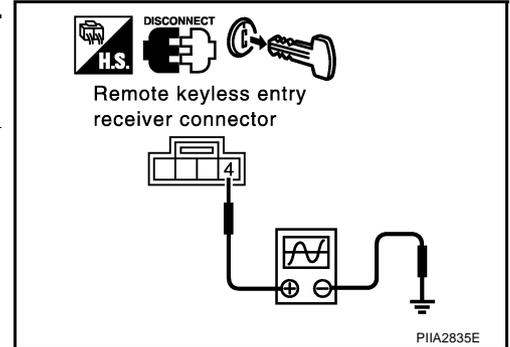
NIS000UY

Check Remote Keyless Entry Receiver

1. CHECK REMOTE KEYLESS ENTRY RECEIVER POWER SUPPLY CIRCUIT

1. Remove electronic key from ignition key cylinder.
2. Disconnect remote keyless entry receiver connector.
3. Check the signal between remote keyless entry receiver connector and ground with oscilloscope.

Connector	Terminal (Wire color)		Condition	Signal (Reference value)
	(+)	(-)		
B246	4 (L)	Ground	Stand-by	 <p>OCC3881D</p>

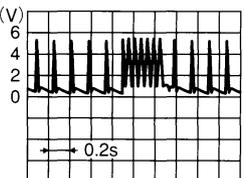


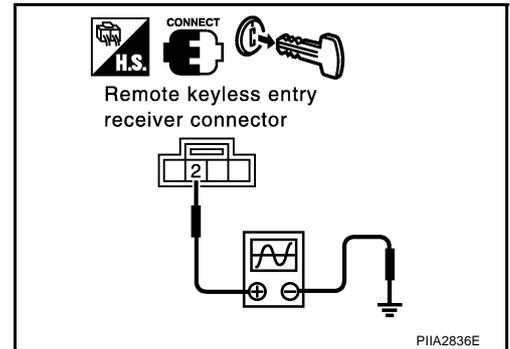
OK or NG

- OK >> GO TO 2.
 NG >> GO TO 5.

2. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

1. Connect remote keyless entry receiver connector.
2. Check the signal between remote keyless entry receiver connector and ground with oscilloscope.

Connector	Terminal (Wire color)		Condition	Signal (Reference value)
	(+)	(-)		
B246	2 (BR/W)	Ground	Stand-by	 <p>OCC3879D</p>
			Press any of the electronic key switches	 <p>OCC3880D</p>



OK or NG

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

REMOTE KEYLESS ENTRY SYSTEM

3. CHECK REMOTE KEYLESS ENTRY RECEIVER HARNESS

1. Disconnect BCM and remote keyless entry receiver connector.
2. Check continuity between BCM connector M4 terminal 44 and remote keyless entry receiver connector B246 terminal 1.

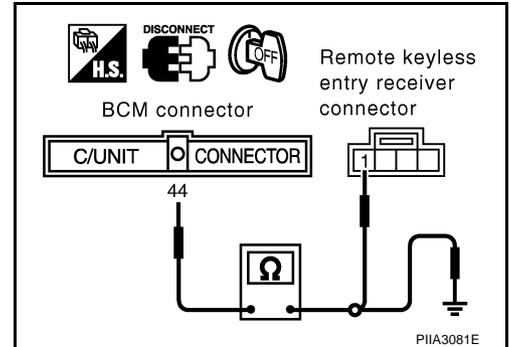
44 (Y) – 1 (Y) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 44 and ground.

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

OK or NG

- OK >> Remote keyless entry receiver circuit is OK.
- NG >> Repair or replace harness.



4. CHECK REMOTE KEYLESS ENTRY RECEIVER HARNESS

1. Disconnect BCM and remote keyless entry receiver connector.
2. Check continuity between remote keyless entry receiver connector B246 terminal 2 and BCM connector M4 terminal 27.

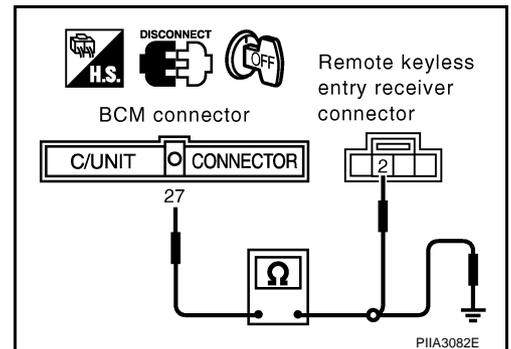
27 (BR/W) – 2 (BR/W) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 27 and ground.

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

OK or NG

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



5. CHECK REMOTE KEYLESS ENTRY RECEIVER HARNESS

1. Disconnect BCM and remote keyless entry receiver connector.
2. Check continuity between BCM connector M4 terminal 28 and remote keyless entry receiver connector B246 terminal 4.

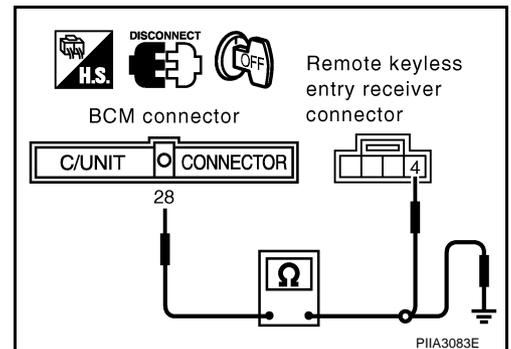
28 (L) – 4 (L) : Continuity should exist.

3. Check continuity between remote keyless entry receiver connector B246 terminal 4 and ground.

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

OK or NG

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



REMOTE KEYLESS ENTRY SYSTEM

Check Door Lock and Unlock Switch

NIS000UZ

1. CHECK DOOR LOCK AND UNLOCK SWITCH

④ With CONSULT-II

See "DOOR LK SW-LK and UN" in DATA MONITOR mode with CONSULT-II.

- When door lock and unlock switch is turned to lock:

DOOR LK SW-LK : ON

- When door lock and unlock switch is turned to unlock:

DOOR LK SW-UN : ON

DATA MONITOR	
MONITOR	
DOOR LK SW-LK	OFF
DOOR LK SW-UN	OFF
RECORD	

SEL561W

⊗ Without CONSULT-II

Check door lock and unlock switch operation in "SWITCH MONITOR" mode.

Refer to [BL-82, "SWITCH MONITOR"](#).

OK or NG

- OK >> Door lock and unlock switch is OK.
- NG >> Replace door lock and unlock switch.

Check Hazard Function

NIS000V0

1. CHECK HAZARD FUNCTION

Does hazard flash with hazard switch?

Yes or No

- Yes >> Hazard function circuit is OK.
- No >> Check hazard circuit. Refer to [LT-90, "TURN SIGNAL AND HAZARD WARNING LAMPS"](#).

Check Horn Function

NIS000V1

1. CHECK HORN FUNCTION

Does horn sound with horn switch?

Yes or No

- Yes >> Horn function circuit is OK.
- No >> Check horn circuit. Refer to [BL-93, "Check Horn Circuit"](#).

Check Headlamp Function

NIS000V2

1. CHECK HEADLAMP FUNCTION

Does headlamp come on when turning lighting switch "ON"?

Yes or No

- Yes >> Headlamp function circuit is OK.
- No >> Check headlamp system. Refer to [LT-5, "HEADLAMP \(FOR USA\)"](#), [LT-36, "HEADLAMP \(FOR CANADA\) - DAYTIME LIGHT SYSTEM -"](#).

REMOTE KEYLESS ENTRY SYSTEM

Check Map Lamp Function

NIS000V3

1. CHECK SPOT LAMP FUNCTION

When interior lamp ill switch is in "DOOR" position, open the front door (LH or RH).

Map lamp should illuminate.

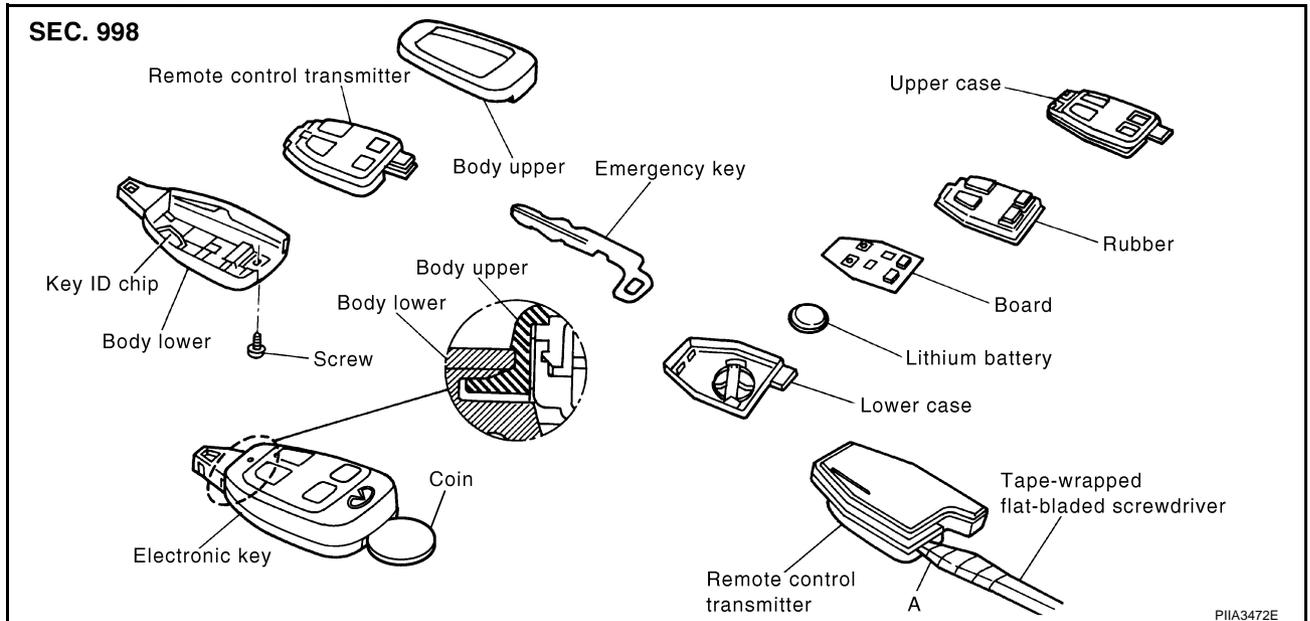
OK or NG

OK >> Map lamp function circuit is OK.

NG >> Check map lamp circuit. Refer to [LT-117, "INTERIOR ROOM LAMP"](#).

Electronic Key Battery Replacement

NIS000V4



1. Remove the mounting screw on the back side of the electronic key, and insert a slotted coin into the emergency key slot. Twist the coin to separate the upper body from the lower body. Then take out the electronic key transmitter.

CAUTION:

During disassembly, do not impact the transponder on the lower body.

2. Insert a slotted screwdriver wrapped with tape into the electronic key transmitter (A) and twist the screwdriver to disassemble the transmitter.
3. Replace the battery fixed on the lower body. Be sure to install new battery properly with the positive side facing the lower case.

CAUTION:

- During disassembly, be careful not to touch the board surface. Visually check the board for color change (bluish) and deposit.
- When replacing the battery, keep the electrode clear from contacting foreign materials such as dust and grease.

4. After replacing the battery, engage the tab on the side of the body while being careful not to pinch the rubber, and assemble the upper and lower bodies.
5. While being careful of engagement between the upper and lower bodies at the end, assemble the electronic key transmitter, and tighten it with screws.

CAUTION:

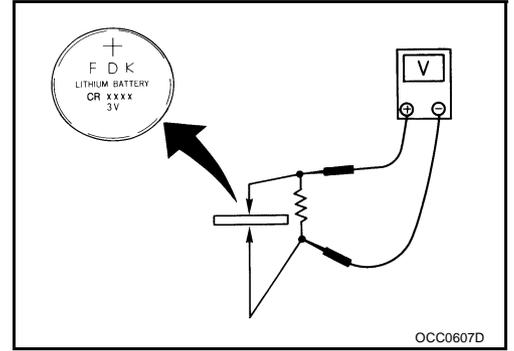
After replacing the battery, be sure to check that the door locking operates normally using the electronic key.

REMOTE KEYLESS ENTRY SYSTEM

CHECK ELECTRONIC KEY BATTERY

Remove battery and measure voltage between battery positive and negative terminals.

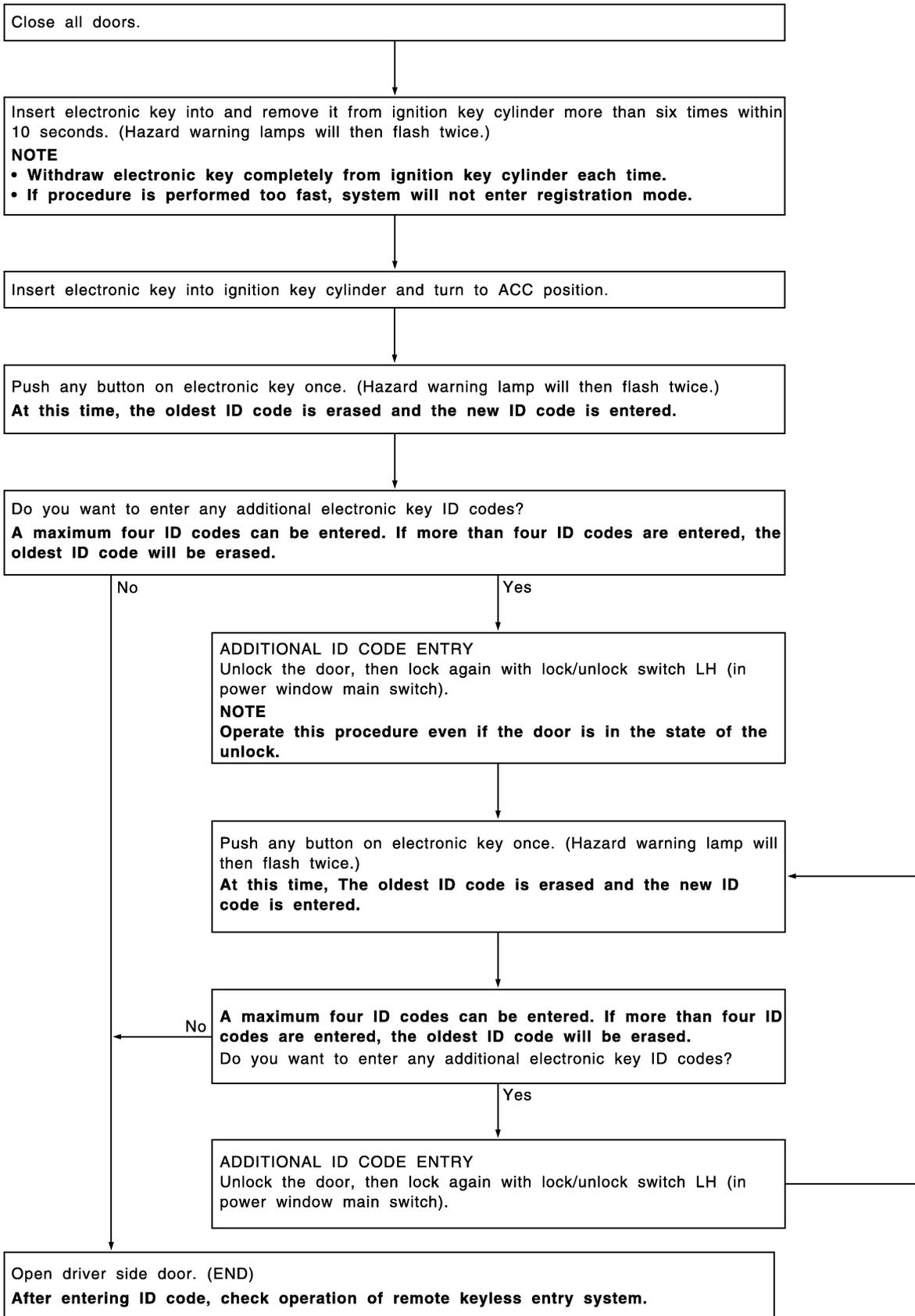
Voltage : 2.5V – 3.0V



REMOTE KEYLESS ENTRY SYSTEM

NIS000V5

ID Code Entry Procedure PROCEDURE 1 (WITHOUT CONSULT-II)



A
B
C
D
E
F
G
H
BL
J
K
L
M

PIIA4474E

REMOTE KEYLESS ENTRY SYSTEM

NOTE:

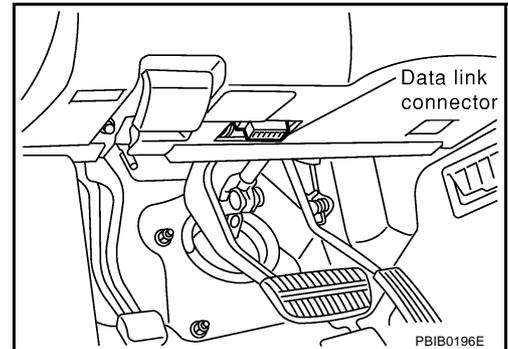
- If a electronic key is lost, the ID code of the lost electronic key must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-II. However, when the ID code of a lost electronic key is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new electronic key must be re-registered. To erase all ID codes in memory, register one ID code (electronic key) four times. After all ID codes are erased, the ID codes of all remaining and/or new electronic keys must be re-registered.
- When registering an additional electronic key, the existing ID codes in memory may or may not be erased. If four ID codes are stored in memory, when an additional code is registered, only the oldest code is erased. If less than four 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 electronic keys, repeat the procedure “Additional ID code entry” for each new electronic key.
- Entry of maximum four ID codes is allowed. When more than four 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.

PROCEDURE 2 (WITH CONSULT-II)

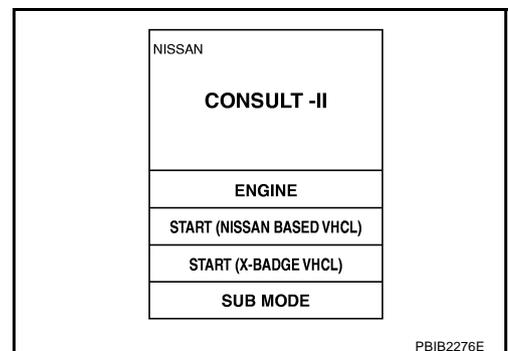
NOTE:

If a electronic key is lost, the ID code of the lost electronic key must be erased to prevent unauthorized use. When the ID code of a lost electronic key 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 electronic key must be re-registered.

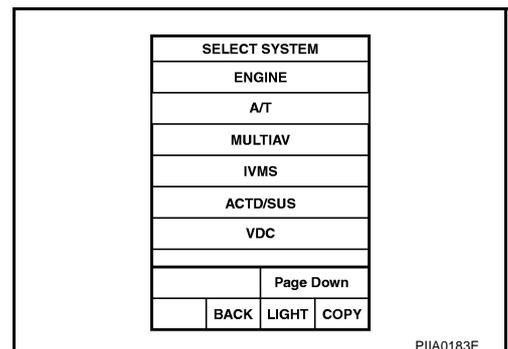
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” and “CONSULT-II CONVERTER” to the data link connector.



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

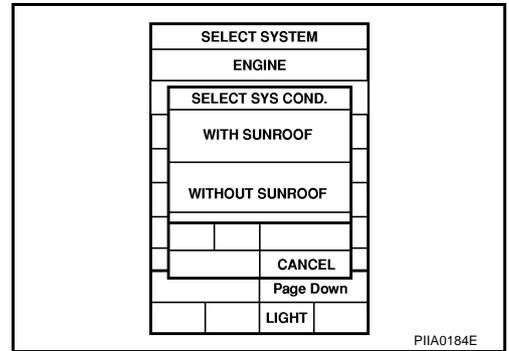


5. Touch “IVMS”
If “IVMS” is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#) .

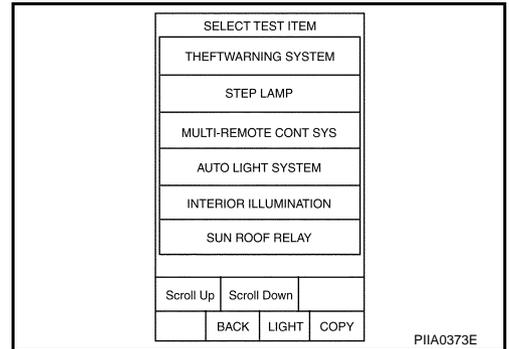


REMOTE KEYLESS ENTRY SYSTEM

6. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
7. Touch "OK". If the selection is wrong, touch "CANCEL".

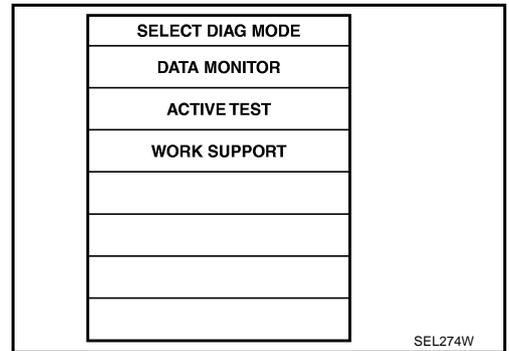


8. Touch "MULTI-REMOTE CONT SYS".



9. Touch "WORK SUPPORT".
10. The item shown on the figure at right can be set up.
 - "REMO CONT ID CONFIR" Use this mode to confirm if a electronic key ID code is registered or not.
 - "REMO CONT ID REG" Use this mode to register a electronic key ID code.

NOTE:
Register the ID code when electronic key or BCM is replaced, or when additional electronic key is required.
 - "REMO CONT ID ERASUR" Use this mode to erase a electronic key ID code.

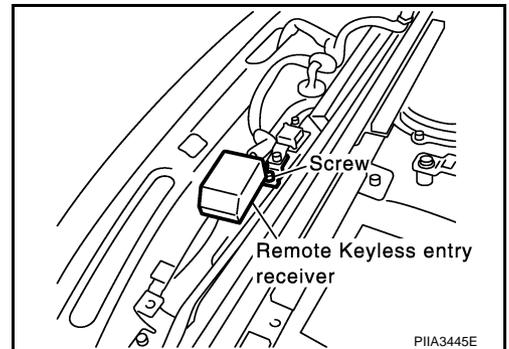


Removal and Installation of Remote Keyless Entry Receiver

NIS000V6

REMOVE

1. Remove the rear parcel shelf finisher. Refer to [EI-48, "Removal and Installation"](#).
2. Disconnect the remote keyless entry receiver connector, mounting screw and remove the remote keyless entry receiver.



INSTALLATION

Install in the reverse order of removal.

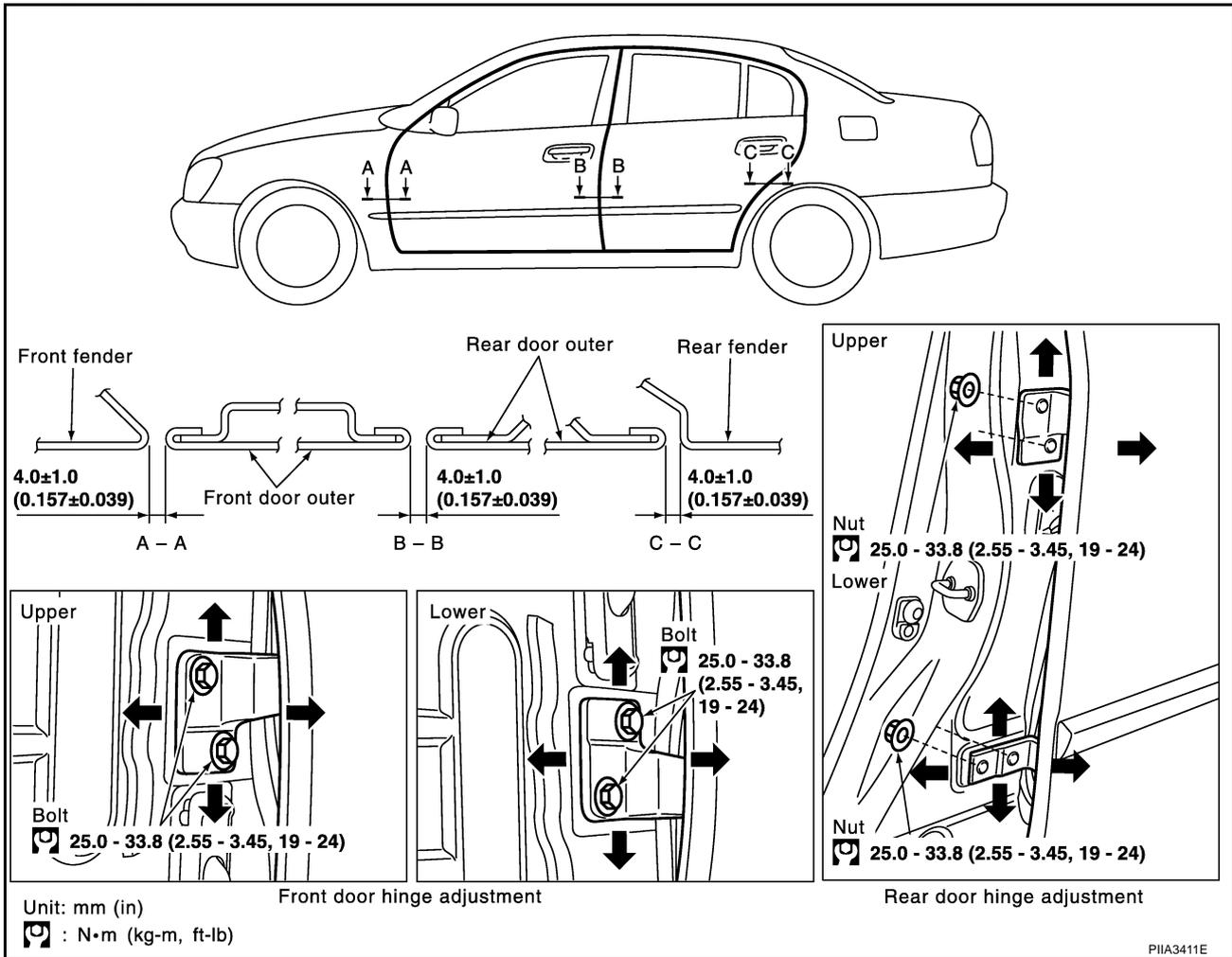
DOOR

DOOR

PFP:80100

Fitting Adjustment

NIS000V7



FRONT DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

Accessing from inside the fender, loosen the hinge mounting bolts. Raise the front door at rear end to adjust.

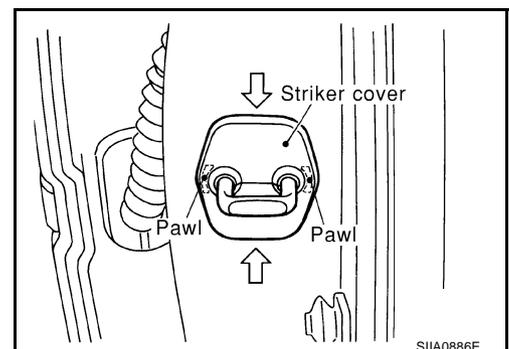
REAR DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

1. Remove the center pillar upper garnish and center pillar lower garnish. Refer to [EI-43, "BODY SIDE TRIM"](#).
2. Accessing from inside the vehicle, loosen the mounting nuts. Open the rear door, and raise the rear door at rear end to adjust.

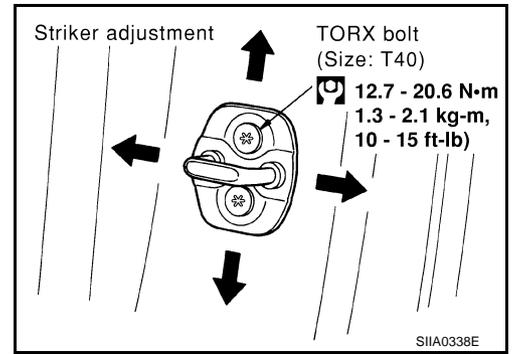
STRIKER ADJUSTMENT

1. Remove the striker cover.



DOOR

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



Removal and Installation of Front Door

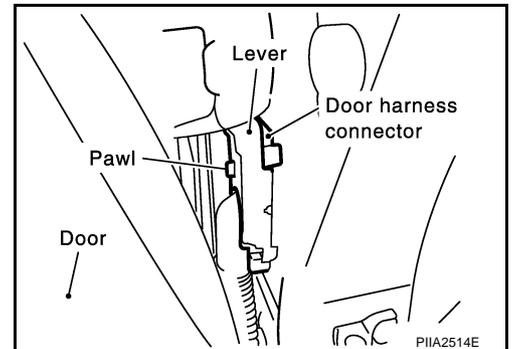
NIS000V8

CAUTION:

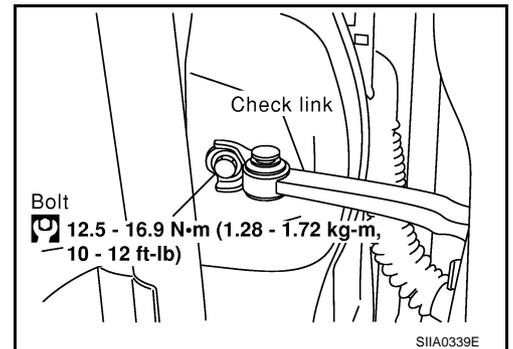
- When removing and installing the door assembly, support the door with a jack and cloth to protect the door and body.
- Operate with two workers, because of its heavy weight.
- When removing and installing front door assembly, be sure to perform the fitting adjustment Refer to [BL-104, "Fitting Adjustment"](#).
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".
- After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.
- After installing, check operation.

REMOVAL

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

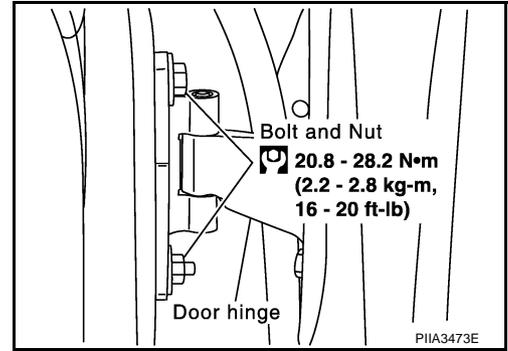


- Remove the check link cover.
- Remove the mounting bolts of the check link on the vehicle.



DOOR

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



INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Rear Door

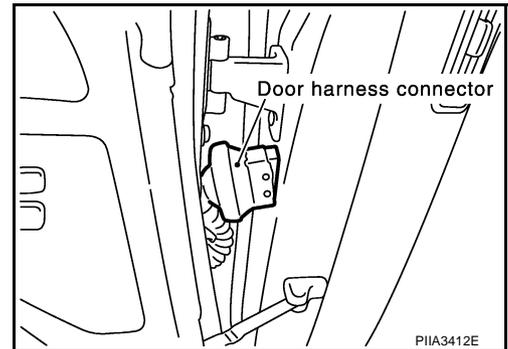
NIS000V9

CAUTION:

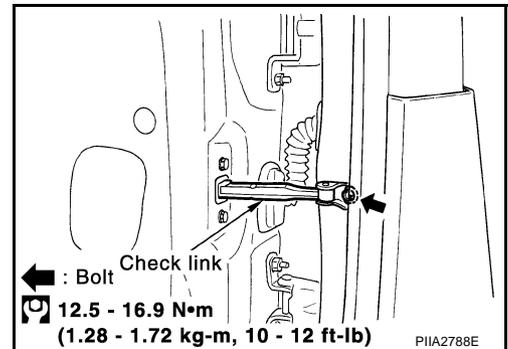
- When removing and installing the rear door assembly, support the door with a jack and cloth to protect the door and body.
- Operate with two workers, because of its heavy weight.
- When removing and installing rear door assembly, be sure to perform the fitting adjustment Refer to [BL-104, "Fitting Adjustment"](#).
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".
- After installing, apply touch-up paint (the body color) onto the head of the hinge mounting nuts.
- After installing, check operation.

REMOVAL

- Grommet is pulled out, and the Rear door harness connector is detached.

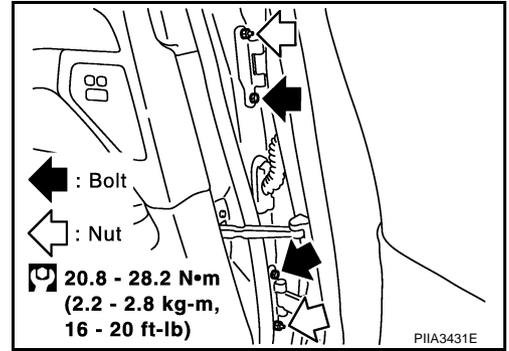


- Remove the check link cover.
- Remove the mounting bolts of the check link on the vehicle.



DOOR

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

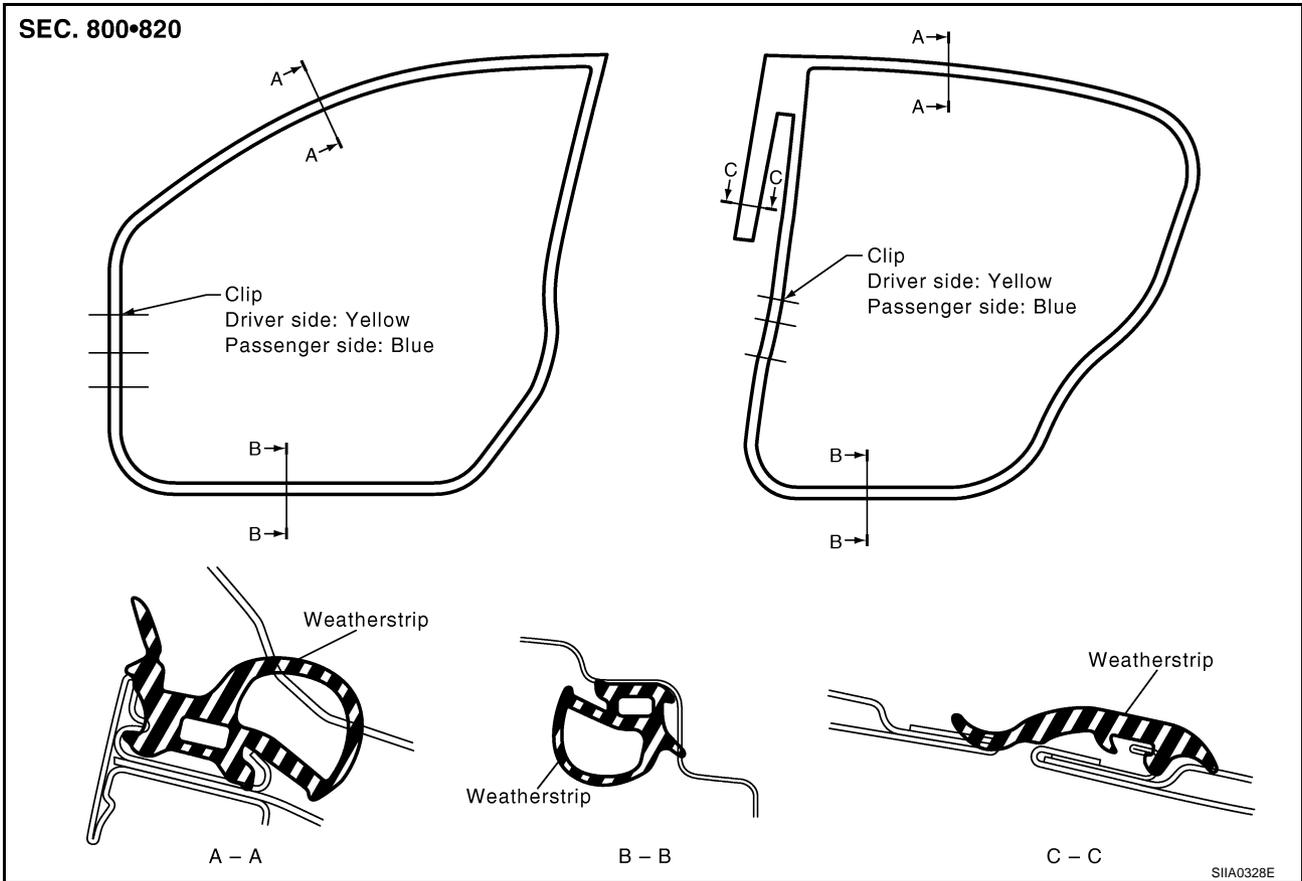


INSTALLATION

Install in the reverse order of removal.

Door Weatherstrip

NIS000VA



REMOVAL

1. Remove the mounting bolts of the check link on the vehicle. Refer to [BL-105, "Removal and Installation of Front Door"](#) or [BL-106, "Removal and Installation of Rear Door"](#).
2. Remove the weatherstrip clips and remove weatherstrip.

CAUTION:

After removal, do not pull strongly on the weatherstrip.

INSTALLATION

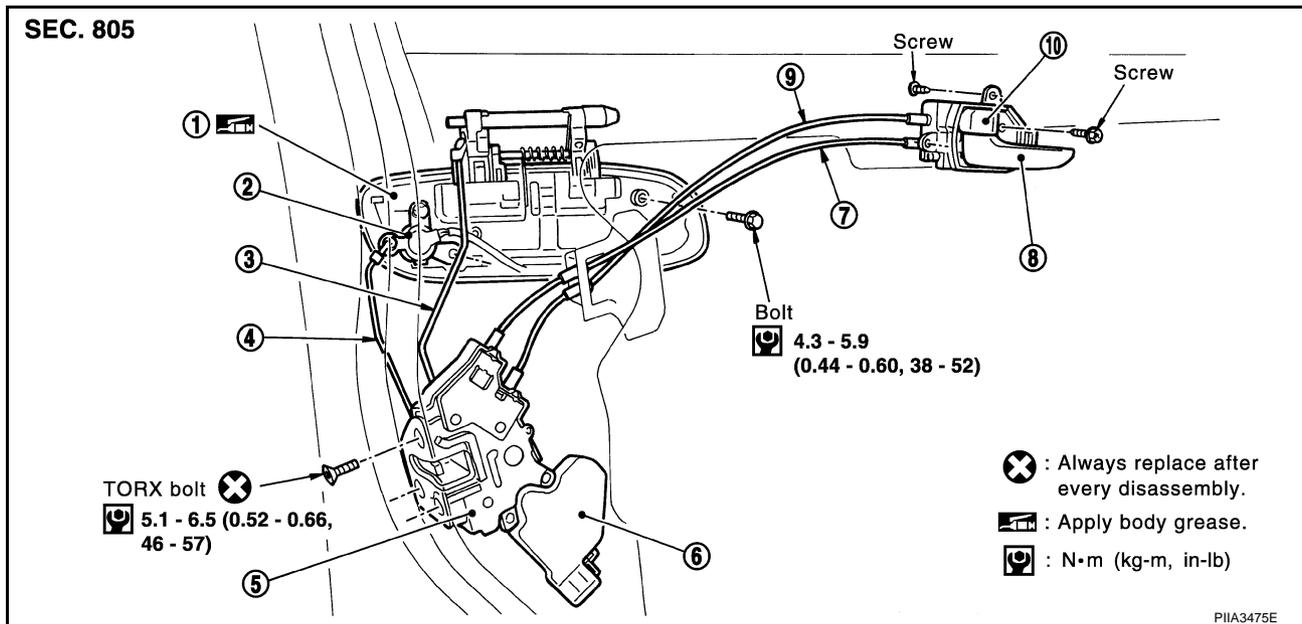
Install in the reverse order of removal.

FRONT DOOR LOCK

FRONT DOOR LOCK Component Structure

PFP:80502

NIS000VB



- | | | |
|------------------------|------------------------------------|-----------------------|
| 1. Outside handle | 2. Key cylinder (Driver side only) | 3. Outside handle rod |
| 4. Key lock rod | 5. Door lock assembly | 6. Door lock actuator |
| 7. Inside handle cable | 8. Inside handle | 9. Lock knob cable |
| 10. Lock knob | | |

Inspection and Adjustment

NIS000VC

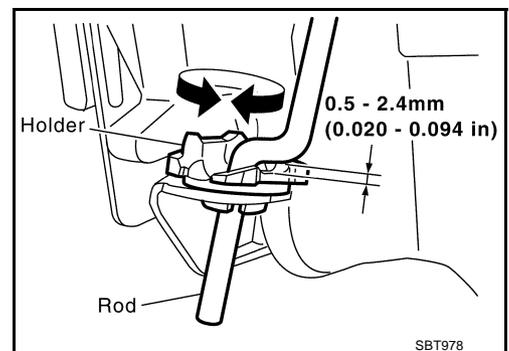
1. Remove the front door finisher. Refer to [EI-35, "Removal and Installation"](#).
2. Remove the front speaker. Refer to [AV-53, "Removal and Installation of Door Speaker"](#).
3. Remove the front door window. Refer to [GW-51, "Removal and Installation"](#).
4. Remove the front door module assembly. Refer to [GW-51, "Removal and Installation"](#).

EXTERIOR HANDLE ROD ADJUSTMENT

Rotate the bushing to adjust so that the clearance between the bushing and rod becomes as shown in the figure.

CAUTION:

Be careful not to make the clearance 0 mm (0 in) or the rod pressed continuously.



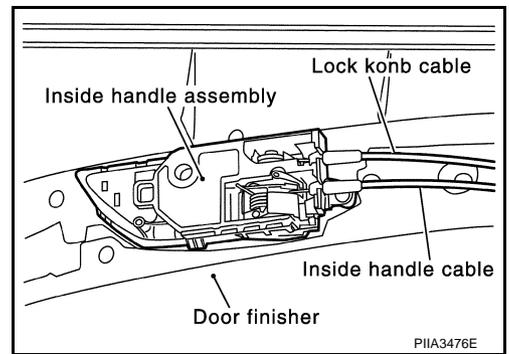
Removal and Installation REMOVAL

NIS000VD

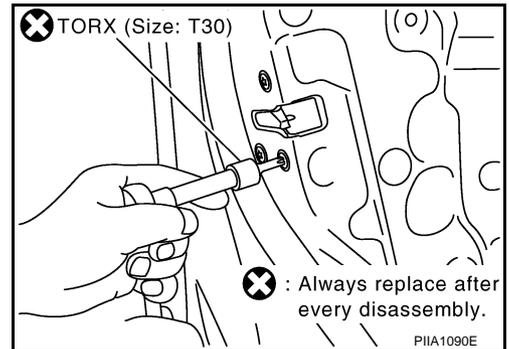
1. Remove the front door finisher. Refer to [EI-35, "Removal and Installation"](#).
2. Remove the front speaker. Refer to [AV-53, "Removal and Installation of Door Speaker"](#).
3. Remove the front door window. [GW-51, "Removal and Installation"](#).
4. Remove the front door module assembly. [GW-51, "Removal and Installation"](#).

FRONT DOOR LOCK

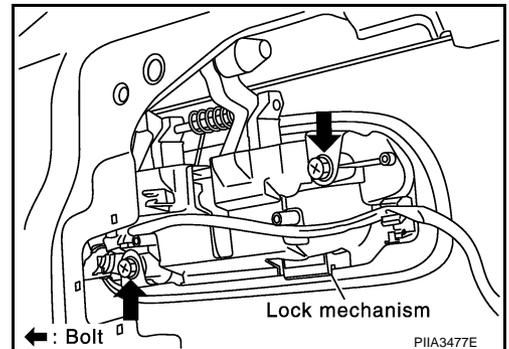
5. Disconnect the inside handle cable and locking knob cable from the back side of the front door finisher.



6. Reach to separate the key cylinder rod and exterior handle rod connection (on the handle).
7. Remove the mounting bolts (TORX T30), remove the door lock assembly.
8. Disconnect the door lock actuator connector.



9. Remove the exterior handle mounting bolts, move the exterior handle assembly backward, and then remove it from the panel in front of the exterior handle escutcheon.



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.
- After installing, check operation.
- After installing, perform fitting adjustment. Refer to [BL-104, "Fitting Adjustment"](#) .

FRONT DOOR LOCK

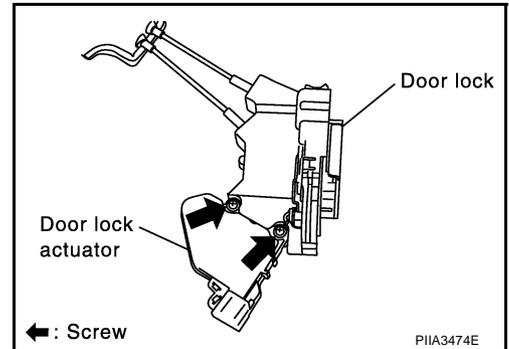
Disassembly and Assembly DISASSEMBLY

NIS000VE

CAUTION:

Be sure to remove or install the actuator with the door lock assembly removed.

1. Remove the mounting screws, and remove the actuator from the door lock assembly.
2. Pull the actuator straight downward to separate it from the door lock assembly.



ASSEMBLY

1. Align the actuator pivot with the cutout on the knob lever of the door lock assembly, then assemble the actuator.
2. Move the knob lever and the actuator pivot toward the lock-on direction, and check that it engages securely.

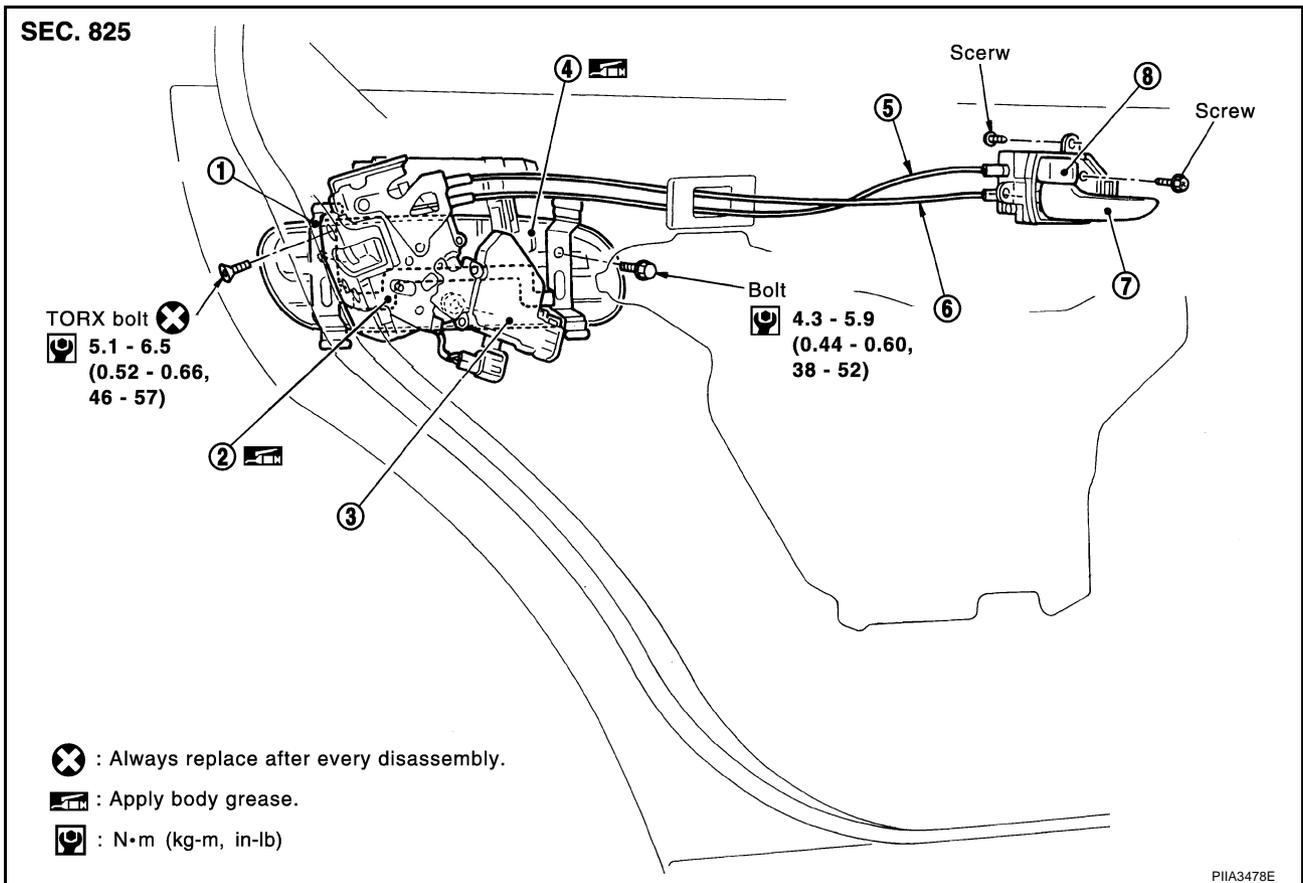
REAR DOOR LOCK

REAR DOOR LOCK

PFP:82502

Components

NIS000VF



- | | | |
|-------------------|-----------------------|------------------------|
| 1. Handle bracket | 2. Door lock assembly | 3. Door lock actuator |
| 4. Outside handle | 5. Lock knob cable | 6. Inside handle cable |
| 7. Inside handle | 8. Lock knob | |

Inspection and Adjustment

NIS000VG

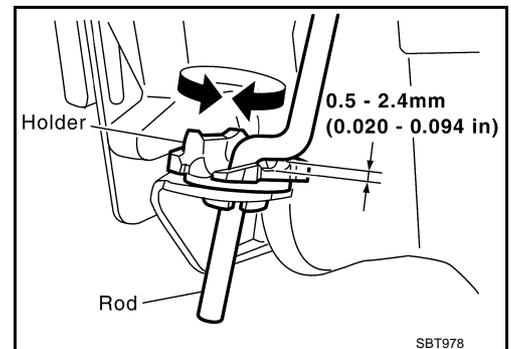
1. Remove the rear door finisher. Refer to [EI-35, "Removal and Installation"](#).
2. Remove the frame assembly. Refer to [GW-55, "Removal and Installation"](#).

EXTERIOR HANDLE ROD ADJUSTMENT

Rotate the bushing to adjust so that the clearance between the bushing and rod becomes as shown in the figure.

CAUTION:

Be careful not to make the clearance 0 mm (0 in) or the rod pressed continuously.



Removal and Installation of Door Lock

NIS000VH

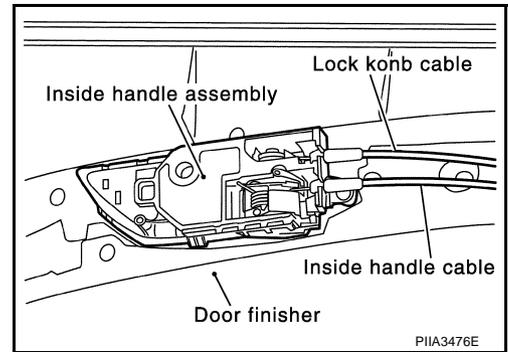
REMOVAL

1. Remove the rear door finisher. Refer to [EI-35, "Removal and Installation"](#).
2. Remove the frame assembly. Refer to [GW-55, "Removal and Installation"](#).

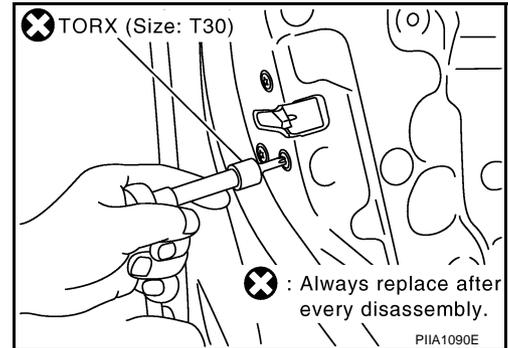
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REAR DOOR LOCK

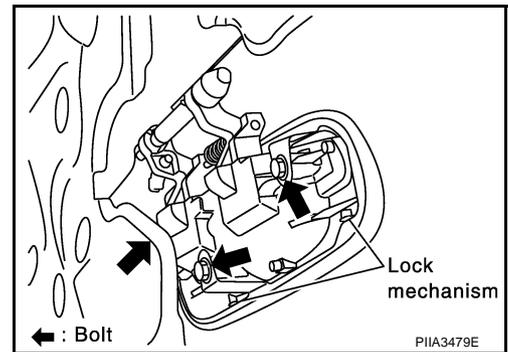
3. After gaining access to the inside handle on the back side of the rear door finisher, disconnect the inside handle cable and locking knob cable.



4. Remove the mounting bolts (TORX T30), remove the door lock assembly.
5. Disconnect the door lock actuator connector.



6. Remove the exterior handle mounting bolts, and move the handle backward to disengage it from the panel in front of the exterior handle escutcheon, then remove the handle.



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.
- After installing, check operation.
- After installing, perform fitting adjustment. Refer to [BL-104, "Fitting Adjustment"](#).

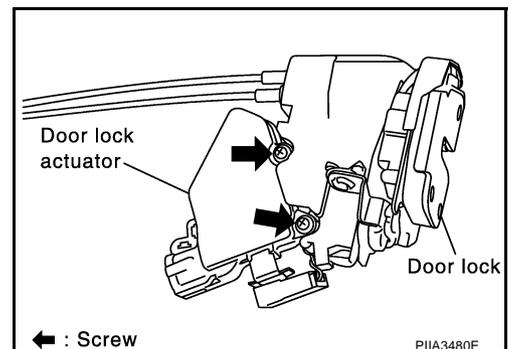
Disassembly and Assembly

DISASSEMBLY

CAUTION:

Be sure to remove or install the actuator with the door lock assembly removed.

1. Remove the mounting screws, and remove the actuator from the door lock assembly.
2. Pull the actuator straight downward to separate it from the door lock assembly.



REAR DOOR LOCK

ASSEMBLY

1. Align the actuator pivot with the cutout on the knob lever of the door lock assembly, then assemble the actuator. A
2. Move the knob lever and the actuator pivot toward the lock-on direction, and check that it engages securely. B

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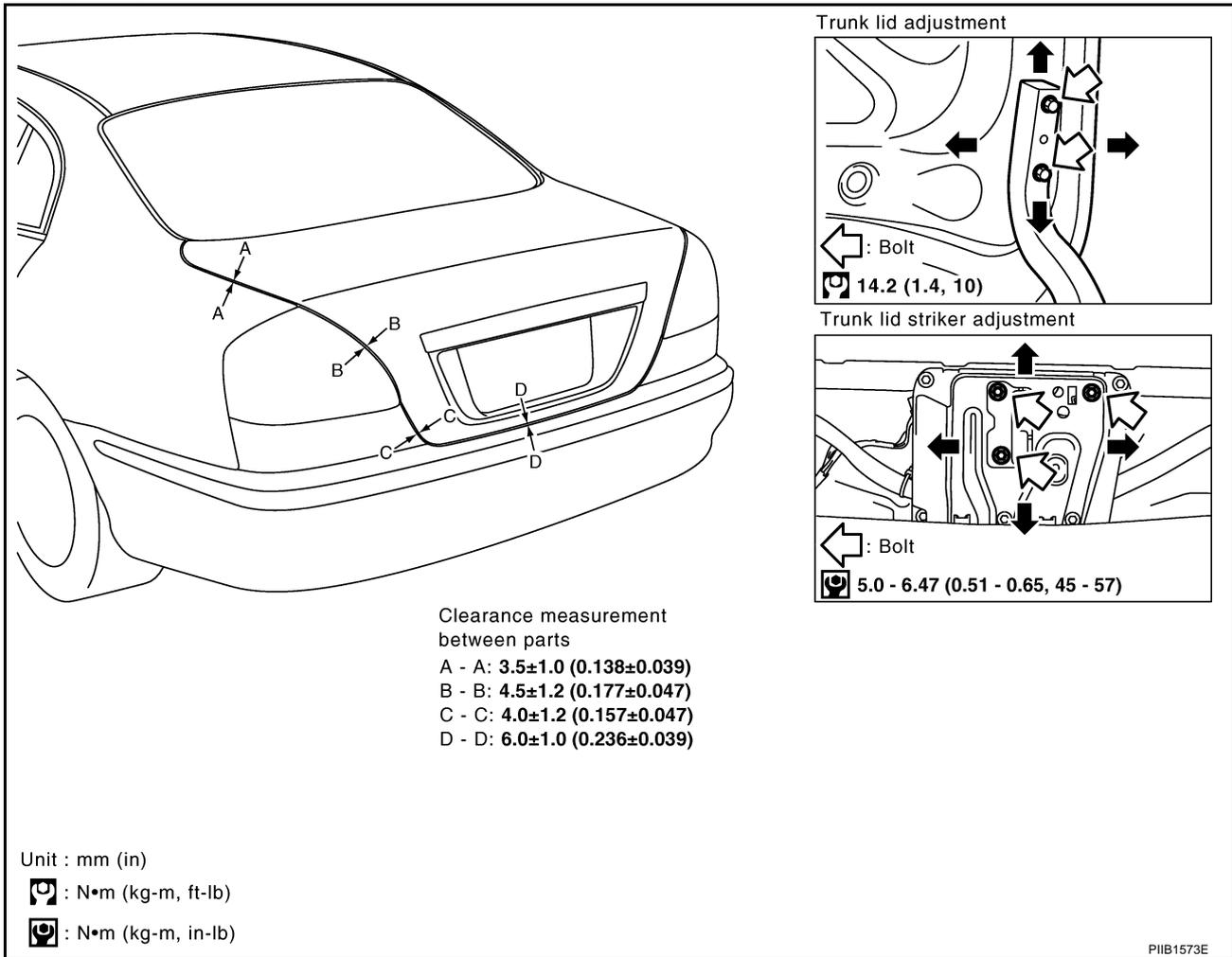
TRUNK LID

PFP:H4300

TRUNK LID

Fitting Adjustment

NIS000VJ



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

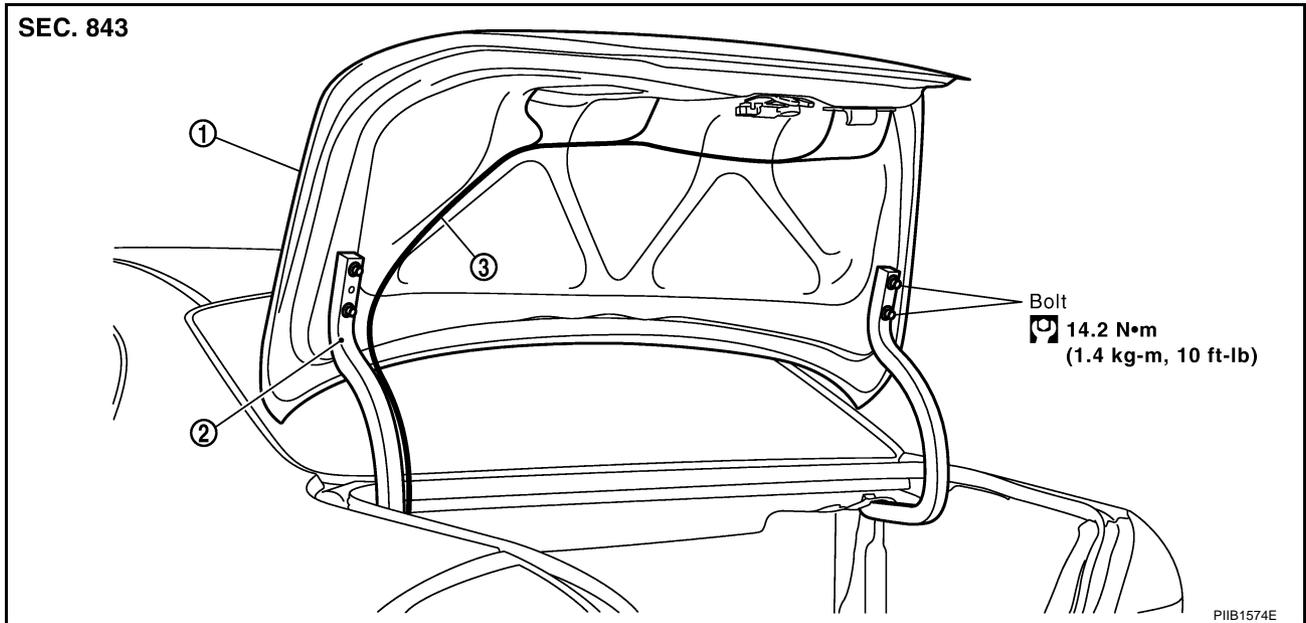
1. Loosen the striker mounting bolts. Raise the striker to the top position, and temporarily tighten the upper mounting bolt at the position.
2. Close the trunk lid lightly and adjust the surface height, then open the trunk lid to finally tighten the striker mounting bolts to the specified torque.

TRUNK LID

Removal and Installation of Trunk Lid Assembly

NIS000VK

SEC. 843



1. Trunk lid assembly

2. Trunk lid hinge

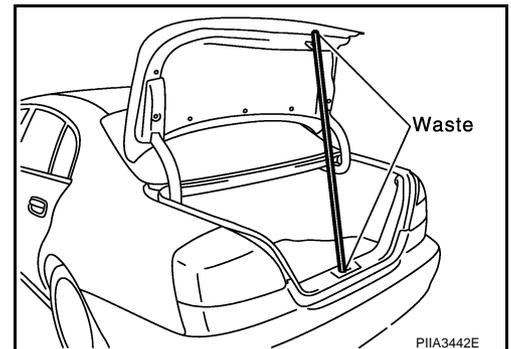
3. Trunk lid harness

REMOVAL

1. Remove the trunk lid finisher. Refer to [EI-60, "Removal and Installation"](#).
2. Support the trunk lid closure & striker with a proper material to prevent it from falling.

WARNING:

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



3. Disconnect the connectors in the trunk lid, and remove the harness clamps to pull the harness out of the trunk lid.
4. Remove the mounting bolts, and remove the trunk lid assembly.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- After installing, apply touch-up paint (the body color) onto the head of the hinge mounting bolts.
- After installing, check operation.
- After installing, perform fitting adjustment. Refer to [BL-114, "Fitting Adjustment"](#).

Removal and Installation of Trunk Lid Stay

NIS000VL

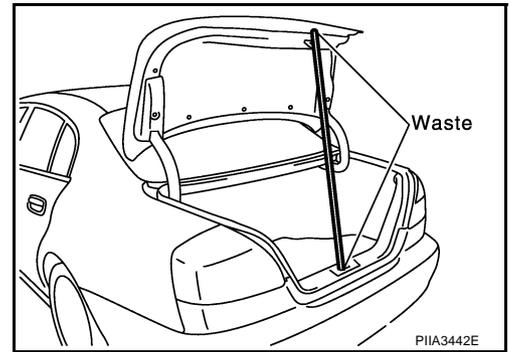
REMOVAL

1. Remove the trunk front finisher. Refer to [EI-60, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#)
2. Support the trunk lid closure & striker with a proper material to prevent it from falling.

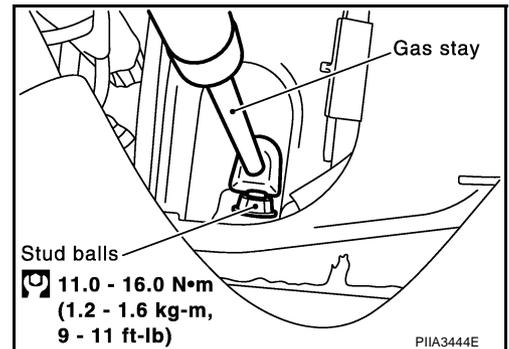
TRUNK LID

WARNING:

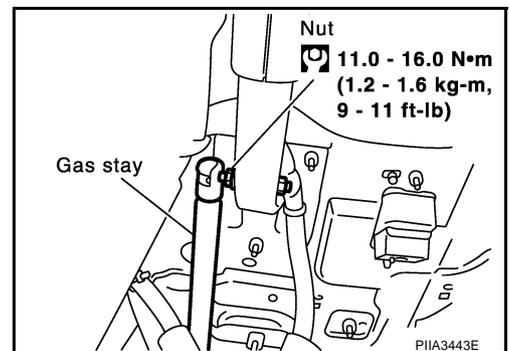
Body injury may occur if no supporting rod is holding the trunk lid open when removing the damper stay.



3. Remove the mounting bolts on the vehicle.



4. Remove the mounting nuts on trunk lid hinge, and remove trunk lid stay.



INSTALLATION

Install in the reverse order of removal.

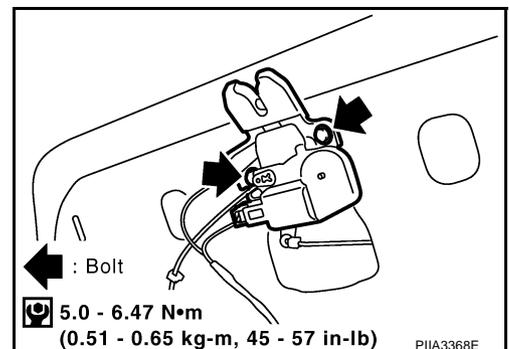
CAUTION:

After installing, check operation.

Removal and Installation of Trunk Lid Lock REMOVAL

NIS000VM

1. Remove the trunk lid finisher. Refer to [EI-61, "TRUNK LID FINISHER \(INNER\)"](#).
2. Separate the key cylinder rod.
3. After removing the harness connector, remove the mounting bolts, and remove the trunk lid lock.



TRUNK LID

INSTALLTION

Install in the reverse order of removal.

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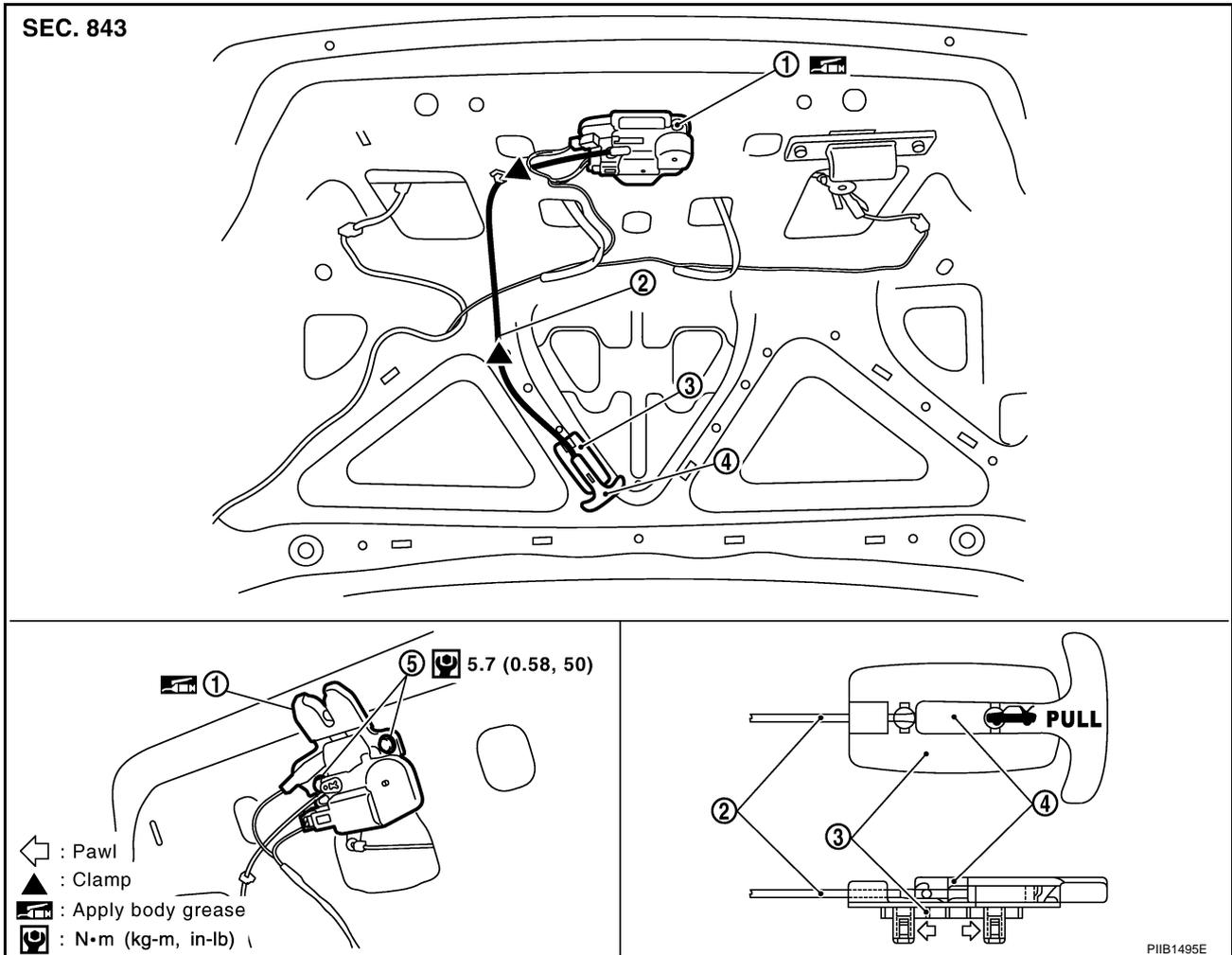
L

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TRUNK LID

Removal and Installation of Trunk lid Emergency Opener Cable

NIS000VN



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

REMOVAL

1. Remove trunk lid finisher. Refer to [EI-60, "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.

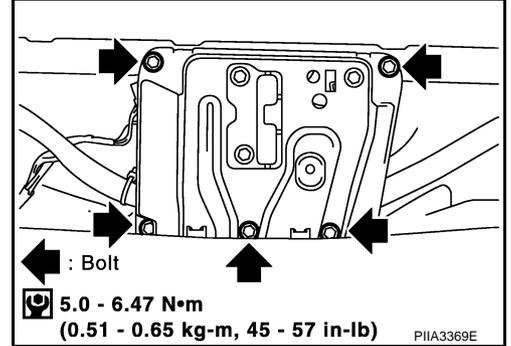
TRUNK LID

Removal and Installation of Trunk Closure Control Unit

NIS000VO

REMOVAL

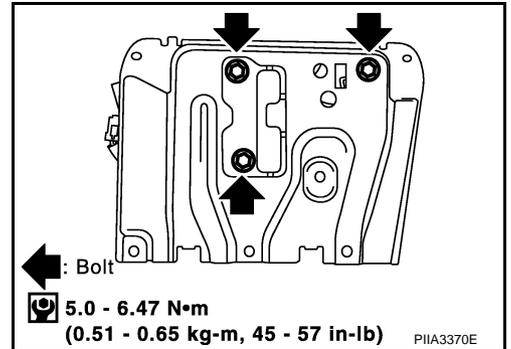
1. Remove trunk rear finisher. Refer to [EI-60, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#)
2. Remove the mounting bolts, and trunk closure control unit bracket.



3. After removing trunk closure control unit bracket together, remove the harness connector, remove the mounting bolts, and remove the trunk closure control unit.

CAUTION:

- After installing, check operation.
- After installing, perform fitting adjustment. Refer to [BL-114, "Fitting Adjustment"](#).



INSTALLATION

Install in the reverse order of removal.

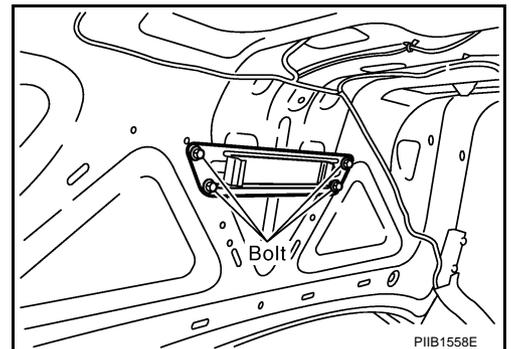
Removal and Installation of Dynamic Damper

NIS000VP

REMOVAL

1. Remove the trunk lid finisher. Refer to [EI-60, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#)
2. Remove dynamic damper mounting bolt, and then remove dynamic damper.

:5.0 N•m (0.51 kg-m, 44 in-lb)



INSTALLATION

Install in the reverse order of removal.

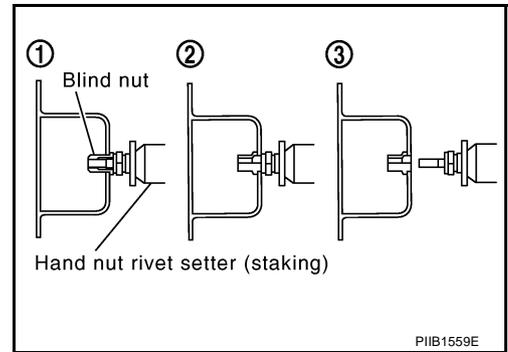
If trunk lid panel is replaced with new parts, install following the steps below.

1. Select blind nut (M6.0 X 1.0/aluminum).

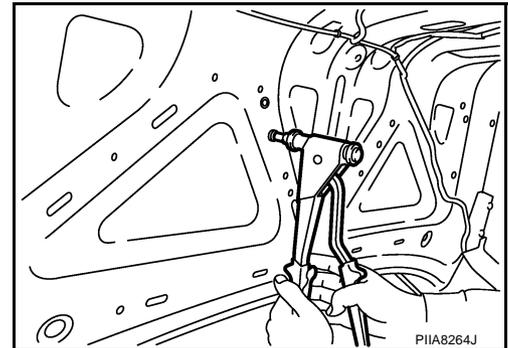
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TRUNK LID

2. Set blind nut to hand nut rivet setter.



3. Stake blind nut using hand nut rivet setter.

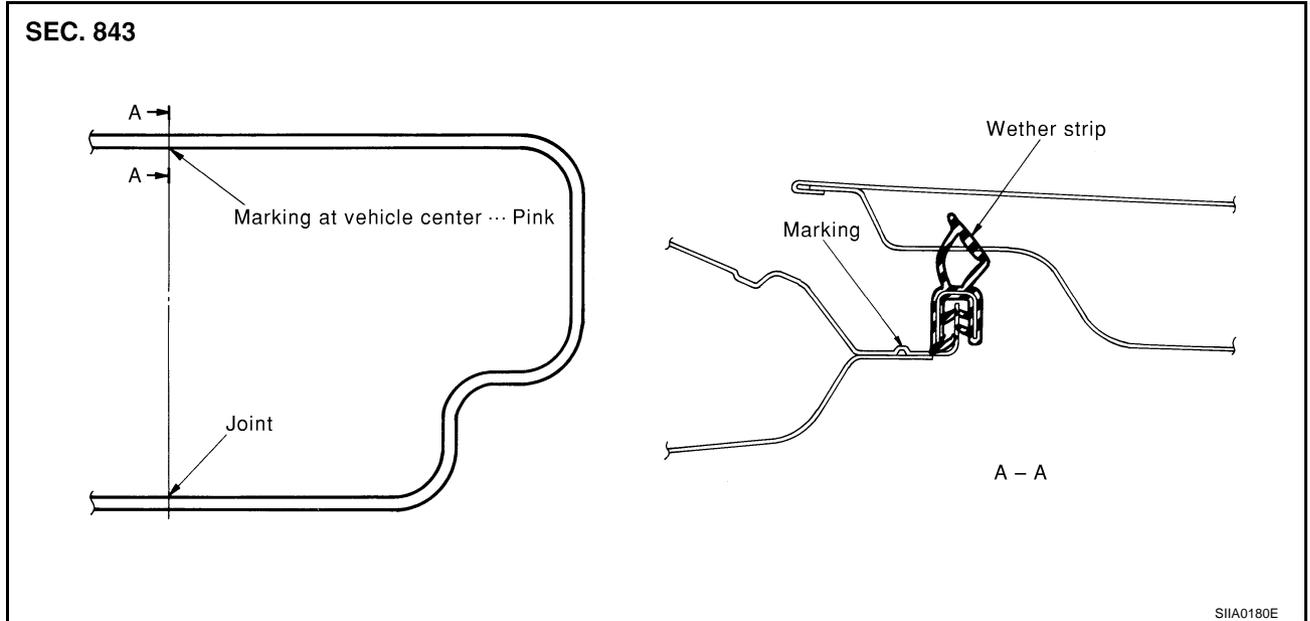


4. Install dynamic damper to trunk lid panel.

TRUNK LID

Removal and Installation of Trunk Lid Weatherstrip

NIS000VQ



REMOVAL

1. 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.

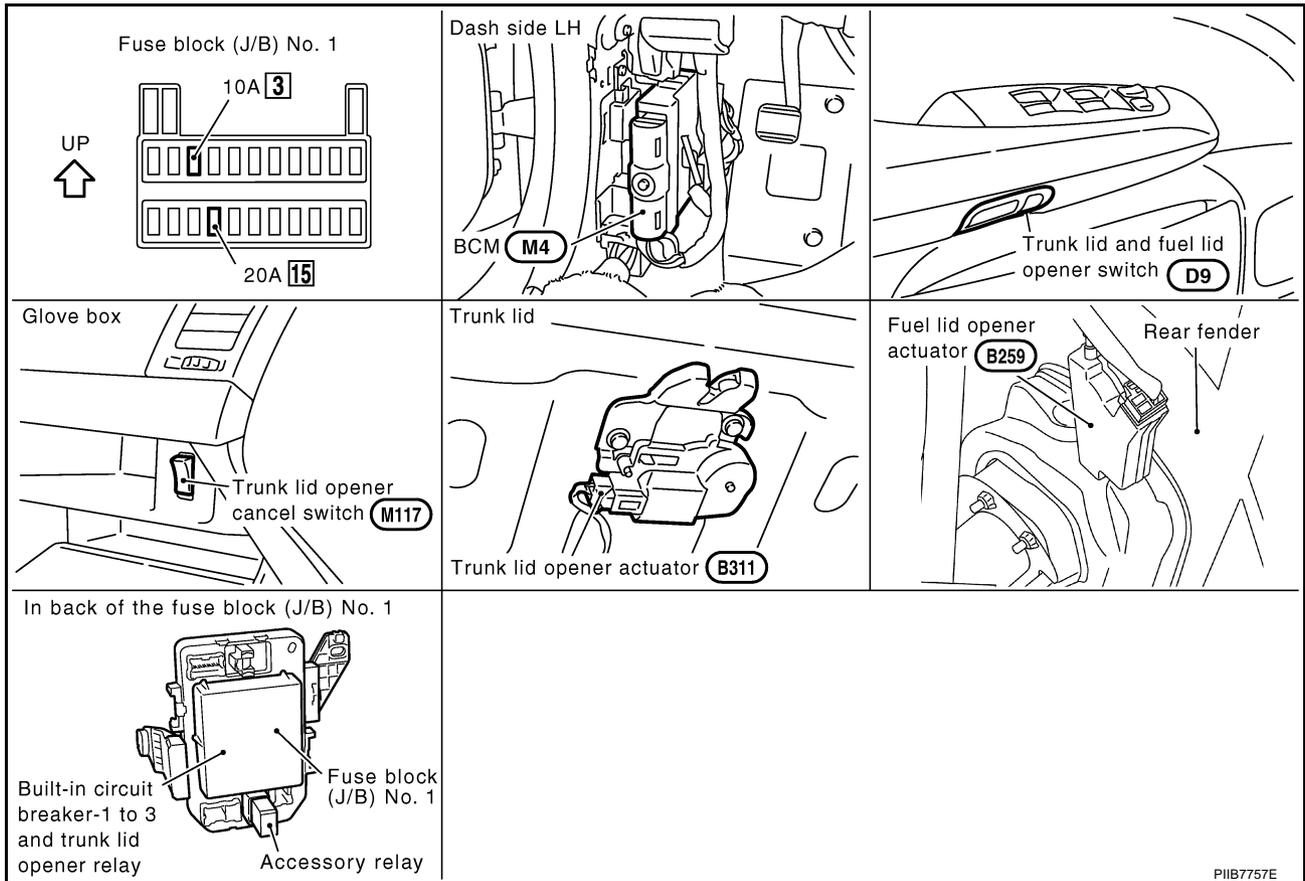
TRUNK LID AND FUEL FILLER LID OPENER

PF8:84640

TRUNK LID AND FUEL FILLER LID OPENER

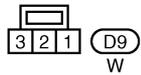
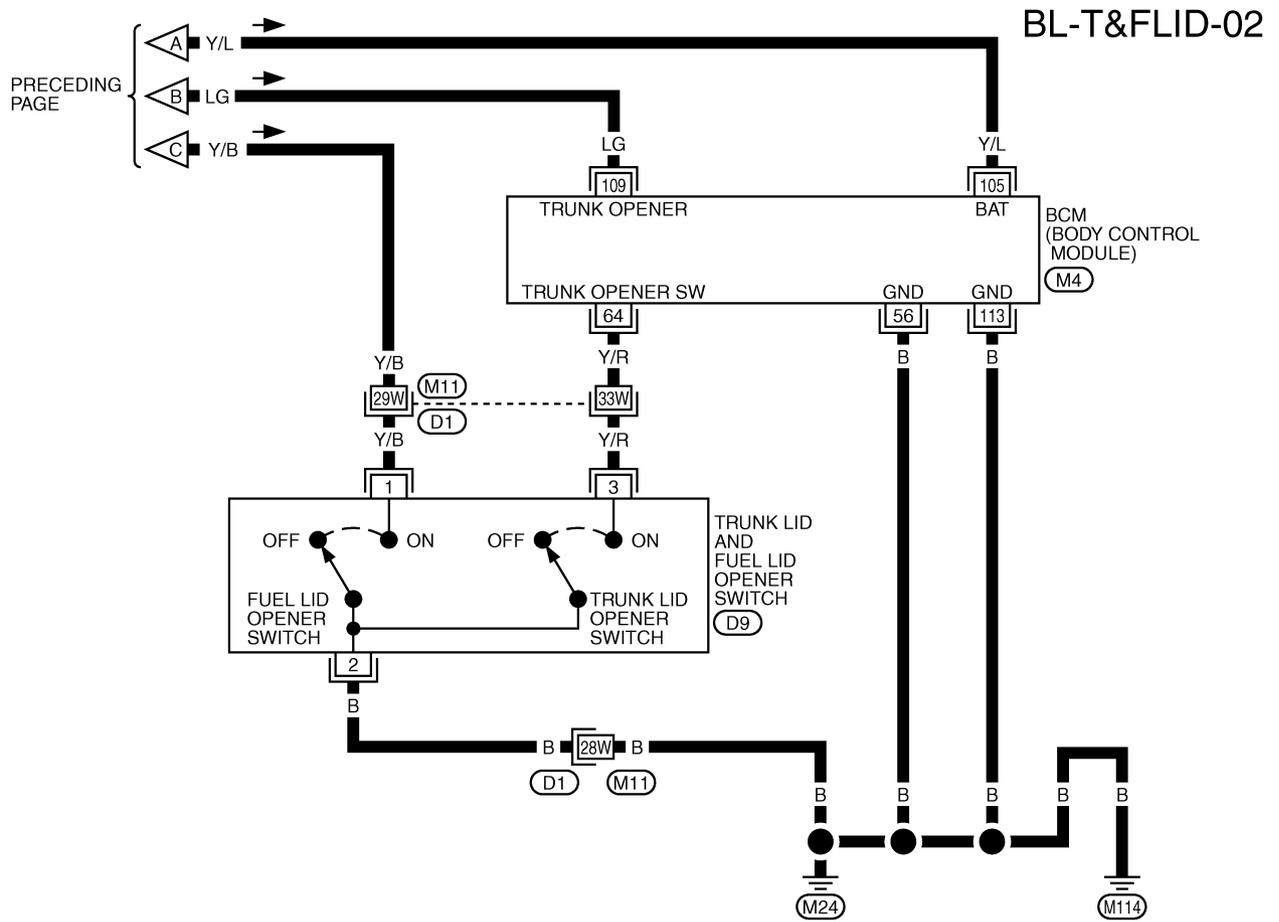
Component Part and Harness Connector Location

NIS000VR



PIIB7757E

TRUNK LID AND FUEL FILLER LID OPENER



REFER TO THE FOLLOWING.
 (D1) -SUPER MULTIPLE JUNCTION (SMJ)
 (M4) -ELECTRICAL UNITS

TIWM0681E

TRUNK LID AND FUEL FILLER LID OPENER

Terminals and Reference Value for BCM

NIS000VT

Terminal	Wire color	Item	Signal Input/Output	Condition	Voltage (V) (Approx.)
56	B	Ground	—	—	0
64	Y/R	Trunk lid opener switch	Input	Trunk lid opener switch OFF→ON	5 → 0
105	Y/L	Power source (Fuse)	Input	—	Battery voltage
109	LG	Trunk lid opener relay	Input	Trunk lid opener switch OFF→ON	Battery voltage → 0
113	B	Ground	—	—	0

NOTE:

For Trouble diagnosis of trunk lid opener, refer to [BL-53, "REMOTE KEYLESS ENTRY SYSTEM"](#) .

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TRUNK CLOSURE SYSTEM

TRUNK CLOSURE SYSTEM

PFP:84622

System Description

NIS000VU

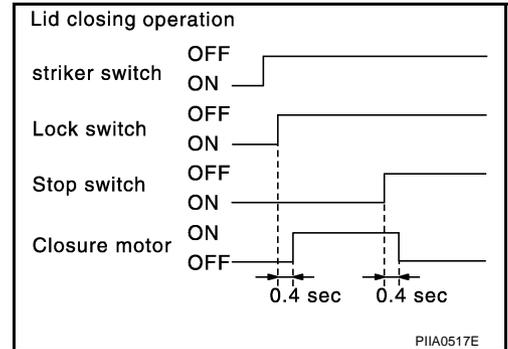
- When the trunk lid lock latch engaged with striker, striker is lowered by means of a motor the trunk lid fully closed.

Operation Description

NIS000VV

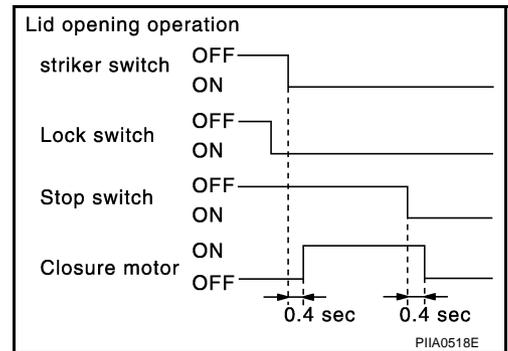
Trunk lid closing operation.

- With the striker switch: OFF (trunk lock pressed the striker switch), when the Lid lock switch is operated: ON→OFF (trunk lock is engaged with the striker).



Trunk lid opening operation

- With the locking switch: ON (trunk lock is not engaged with the striker), when the striker switch is operated: OFF→ON (the trunk lock releases the striker switch).

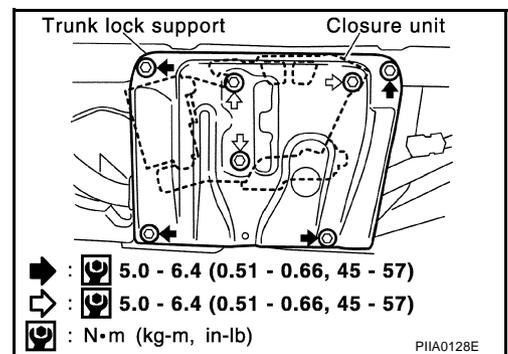


Removal and Installation of Auto Closure Unit

REMOVAL

- Remove trunk rear finisher. Refer to [BL-119, "Removal and Installation of Trunk Closure Control Unit"](#).
- Disconnect the harness connector.
- Remove the mounting bolt, and remove auto closure unit.

NIS000VV



INSTALLATION

Install in the reverse order of removal.

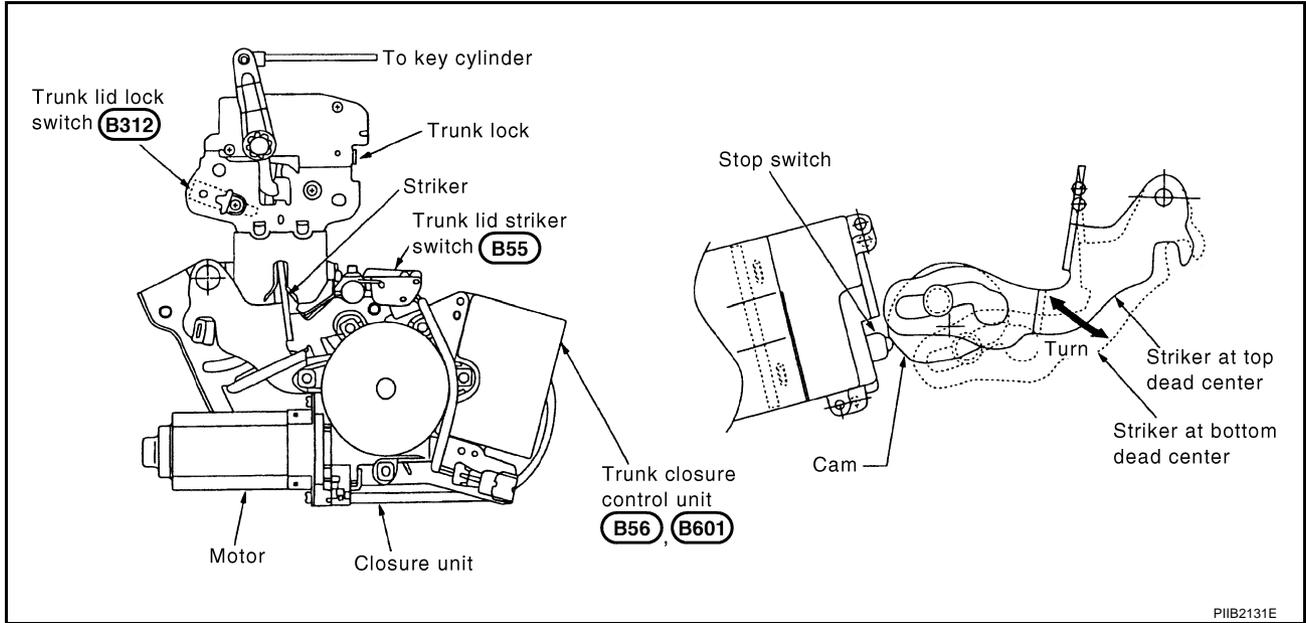
CAUTION:

When installing the auto closure unit, be careful not to pinch nearby wiring harnesses.

TRUNK CLOSURE SYSTEM

Component Installation Location

NIS000VX



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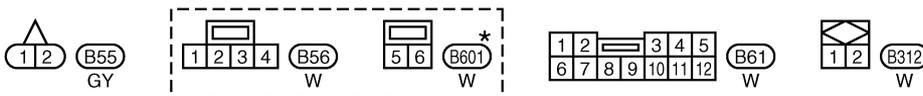
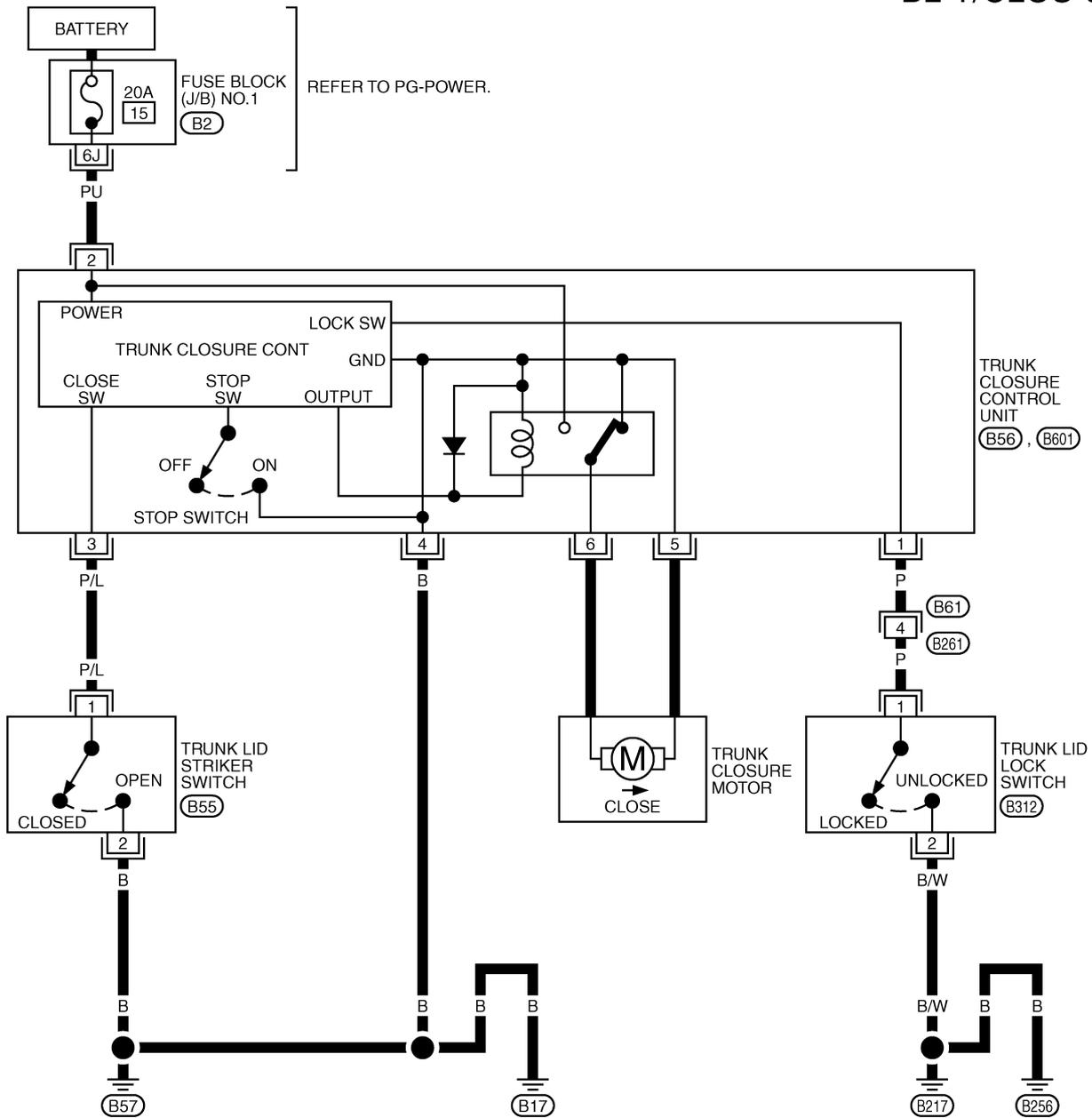
BL

TRUNK CLOSURE SYSTEM

Wiring Diagram — T/CLOS —

NIS000VY

BL-T/CLOS-01



REFER TO THE FOLLOWING.
(B2) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

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

TIWM1388E

TRUNK CLOSURE SYSTEM

Terminal and Reference Value for Trunk Closure Control Unit

NIS000VZ

Terminal	Wire color	Item	Condition	Voltage (V) (Approx.)
1	P	Trunk lid lock switch signal	Engage the trunk lock (OFF)	Battery voltage
			Except than the above (ON)	0
2	PU	Power source (Fuse)	—	Battery voltage
3	P/L	Trunk lid striker switch signal	Pressed the striker switch lever (OFF)	Battery voltage
			Except than the above (ON)	0*
4	B	Ground	—	0
5	—	Trunk closure motor ground	—	0
6	—	Trunk closure motor output signal	Trunk closure motor is operation	Battery voltage
			Except than the above	0

*: The trunk room lamp illuminates.

Preliminary Check

NIS000W0

- Remove the fuse No.15 for the trunk closure with the trunk closure inactive. Check that the trunk lid can be open/closed normally with the trunk opener switch, trunk button on electronic key, or key in trunk key cylinder.

Symptom Chart

NIS000W1

Symptom	Malfunctioning system	Reference page
Trunk closure does not operate (opening/closing)	Trunk closure control unit power supply and ground circuit check.	BL-129
	Trunk lid lock switch check.	BL-130
	Trunk lid striker switch check.	BL-131
	If above systems are "OK", replace closure control unit.	—
Trunk closure does not operate. (Trunk room lamp illuminates / goes off with the striker switch ON-OFF operation.)	Replace closure control unit.	—
Trunk closure does not stop.	Replace closure control unit (stop switch is malfunction).	—
Malfunctioning trunk closure stop position.		

Closure Control Unit Power Supply and Ground Circuit Check

NIS000W2

1. POWER SUPPLY CIRCUIT CHECK

- Turn ignition switch OFF.
- Disconnect trunk closure control unit connector.
- Check voltage between trunk closure control unit connector B56 terminal 2 and ground.

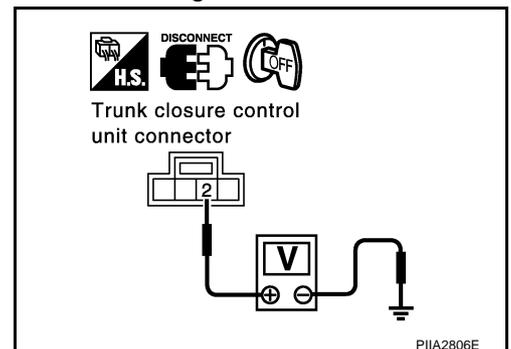
2 (PU) – Ground : Battery voltage

OK or NG

OK >> GO TO 2.

NG >> Check the following.

- 20A fuse [No.15, located in the fuse block (J/B) No.1].
- Harness for open or short between trunk closure control unit and fuse.



TRUNK CLOSURE SYSTEM

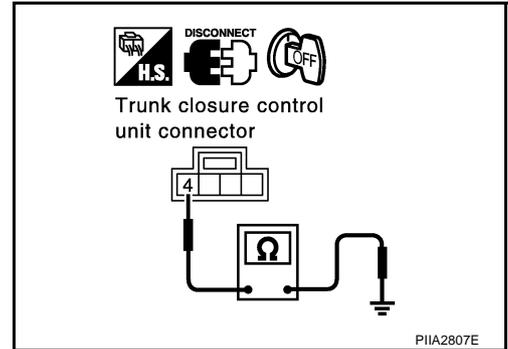
2. GROUND CIRCUIT CHECK

Check continuity between trunk closure control unit connector B56 terminal 4 and ground.

4 (B) – Ground : Continuity should exist.

OK or NGF

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

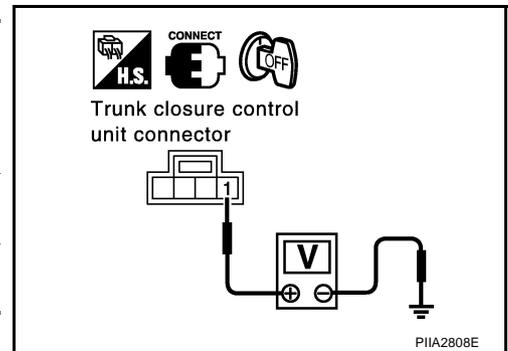


Trunk Lid Lock Switch Check

1. TRUNK LID LOCK SWITCH SIGNAL CHECK

1. Turn ignition switch OFF.
2. Check voltage between trunk closure control unit connector and ground.

Terminals		Condition	Voltage (V) (Approx.)
(+)	(-)		
Connector	Terminal (Wire color)	Engage the latch of trunk lock (OFF)	Battery voltage
B56	1 (P)		
		Other than the above (ON)	0



OK or NG

- OK >> Trunk lid lock switch is OK.
- NG >> GO TO 2.

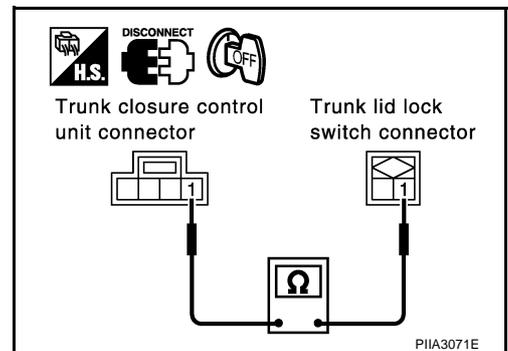
2. TRUNK LID LOCK SWITCH CIRCUIT CHECK

1. Disconnect trunk closure control unit and trunk lid lock switch connector.
2. Check continuity between trunk closure control unit connector B56 terminal 1 and trunk lid lock switch connector B312 terminal 1.

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

OK or NG

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



TRUNK CLOSURE SYSTEM

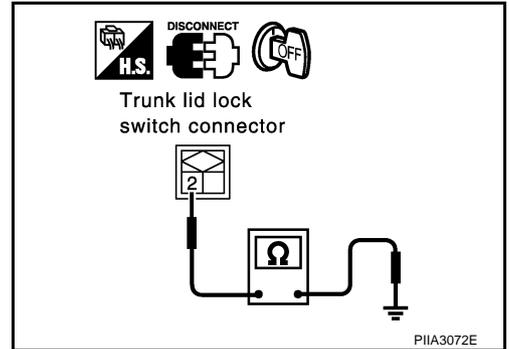
3. TRUNK LID LOCK SWITCH GROUND CIRCUIT CHECK

Check continuity between trunk lid lock switch connector B312 terminal 2 and ground.

2 (B/W) – Ground : Continuity should exist.

OK or NG

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



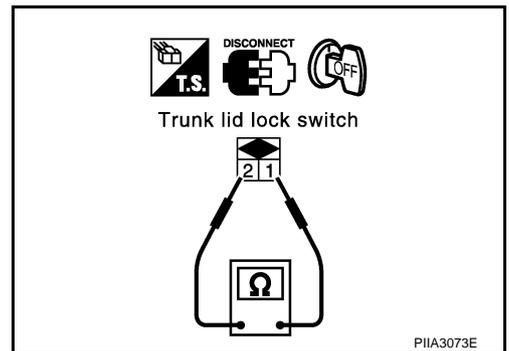
4. TRUNK LID LOCK SWITCH CHECK

Check continuity between trunk lid lock switch terminals 1 and 2.

Terminals		Condition	Continuity
1	2	Trunk is closed	No
		Trunk is opened	Yes

OK or NG

- OK >> Replace trunk closure control unit.
- NG >> Replace trunk lid lock switch.



Trunk Lid Striker Switch Check

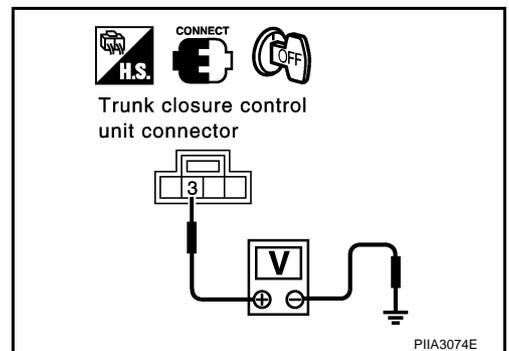
1. TRUNK LID STRIKER SWITCH SIGNAL CHECK

1. Turn ignition switch OFF.
2. Check voltage between trunk closure control unit connector and ground.

Terminals		Condition	Voltage (V) (Approx.)
(+)	(-)		
Connector	Terminal (Wire color)	Ground	Battery voltage
B56	3 (P/L)		
		Pressed the striker switch lever (OFF)	Battery voltage
		Other than the above (ON)	0

OK or NG

- OK >> Trunk lid striker switch is OK.
- NG >> GO TO 2.



TRUNK CLOSURE SYSTEM

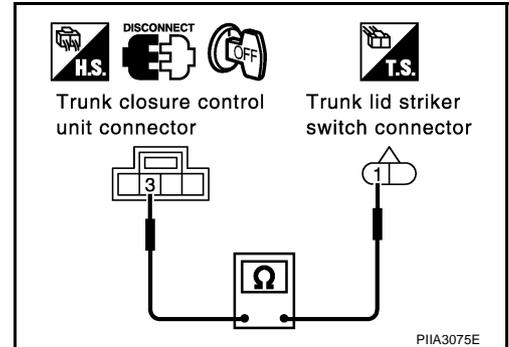
2. TRUNK LID STRIKER SWITCH CIRCUIT CHECK

1. Disconnect trunk closure control unit and trunk lid striker switch connector.
2. Check continuity between trunk closure control unit connector B56 terminal 3 and trunk lid striker switch connector B55 terminal 1.

3 (P/L) – 1 (P/L) : Continuity should exist

OK or NG

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



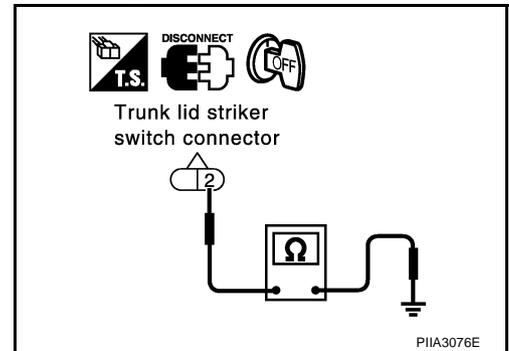
3. TRUNK LID STRIKER SWITCH GROUND CIRCUIT CHECK

Check continuity between trunk lid striker switch connector B55 terminal 2 and ground.

2 (B) – Ground : Continuity should exist

OK or NG

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



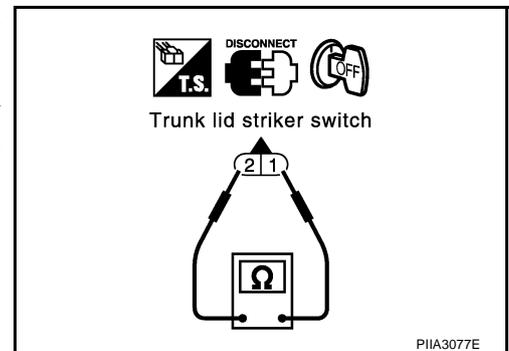
4. TRUNK LID STRIKER SWITCH CHECK

Check continuity between trunk lid striker switch terminals 1 and 2.

Terminals		Condition	Continuity
1	2	Pressed the striker switch lever (OFF)	No
		Other than the above (ON)	Yes

OK or NG

- OK >> Replace trunk closure control unit.
 NG >> Replace trunk lid striker switch.



AUTO TRUNK SYSTEM

AUTO TRUNK SYSTEM

PFP:98841

Outline of System

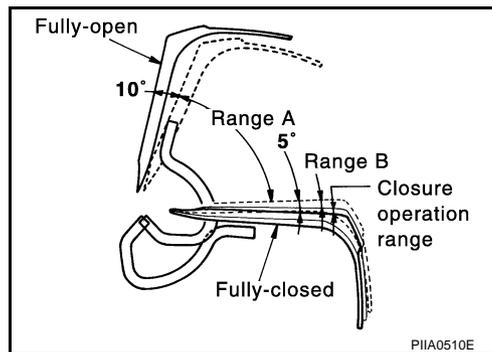
NIS000W5

- Operating trunk button (on electronic key) or trunk lid opener switch (under the driver door armrest) allows trunk lid auto OPEN operation. Also, operating trunk lid close switch (inside the trunk lid) allows trunk lid auto CLOSE operation.
- If any pinched foreign material is detected during auto CLOSE operation, the anti-pinch mechanism stops trunk lid from closing and shifts the operation to manual.
- The buzzer sounds when trunk lid auto operation starts (operation start buzzer).
- The buzzer sounds during trunk lid auto CLOSE operation (warning buzzer).

OPERATING CONDITION

Any of the following operations during trunk lid auto operation stops the auto operation and shifts the operation to manual. Moving trunk lid manually to a position just before fully closed position activates the auto closure mechanism to close trunk lid completely.

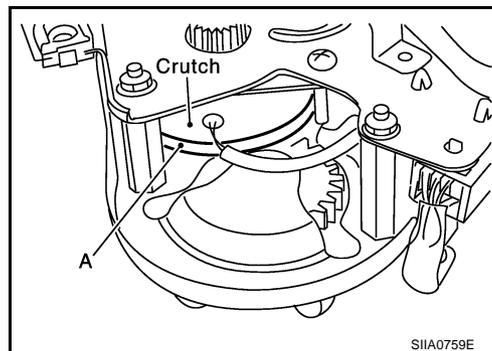
- When trunk lid opener switch is operated.
- When trunk lid close switch is operated.
- When trunk button on electronic key is operated (at least 0.5 seconds).
- When selector lever is shifted to a position other than "P" position (detention switch: ON).
- When vehicle speed becomes 7 km/h or higher.
- When auto operation does not end after 10 seconds since the start.
- With trunk lid position falls within ranges A and B in the figure, when trunk lid stops auto operation forcefully or because of pinched foreign material.



Removal and Installation PRECAUTIONS FOR WORK

NIS000W6

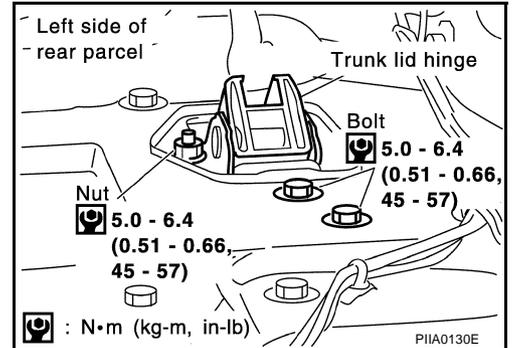
- During removal and installation, be careful not to allow any grease to adhere to the solenoid clutch joint (A in the figure).
- If grease adheres to the solenoid clutch joint (A in the figure), clutch becomes slippery and generates a transmission loss resulting in inactive auto operation.



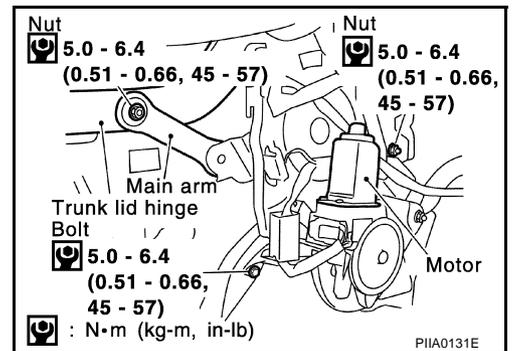
AUTO TRUNK SYSTEM

REMOVAL

1. Open trunk lid.
2. Remove rear parcel shelf finisher. Refer to [EI-48, "REAR PARCEL SHELF FINISHER"](#).
3. Remove trunk motor assembly mounting bolts and nut.



4. Remove trunk front finisher and trunk side finisher (LH). Refer to [EI-60, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#).
5. Disconnect trunk motor connector.
6. Remove main arm mounting nut on trunk lid hinge.
7. Remove mounting bolt and nut, and remove trunk motor assembly.



INSTALLATION

Install in reverse order of removal.

CAUTION:

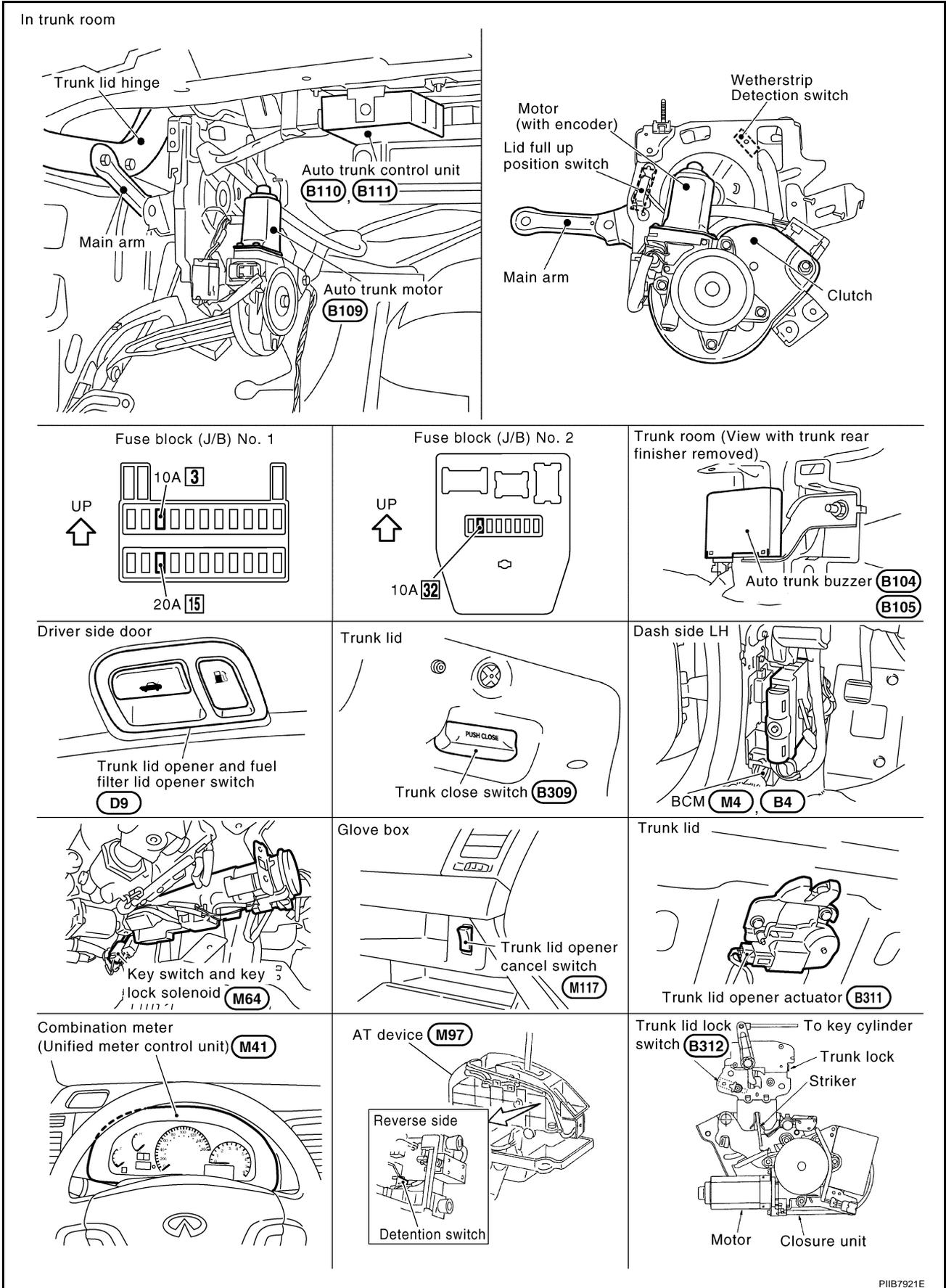
Be careful not to pinch the harnesses. Be sure to check operation after installation is completed.

AUTO TRUNK SYSTEM

NIS000W7

Component Installation Location

A
B
C
D
E
F
G
H
BL
J
K
L
M

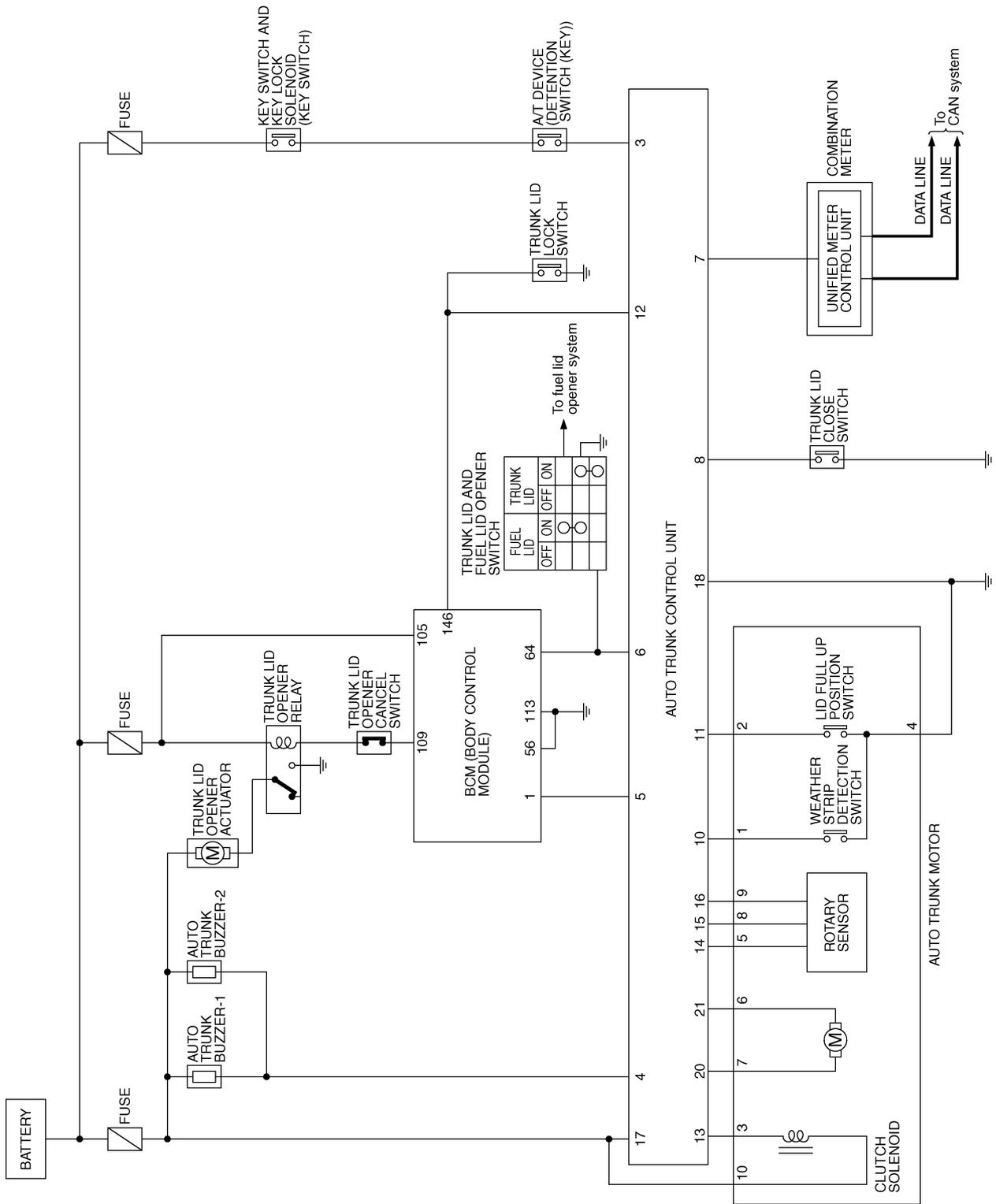


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AUTO TRUNK SYSTEM

Schematic

NIS000W8



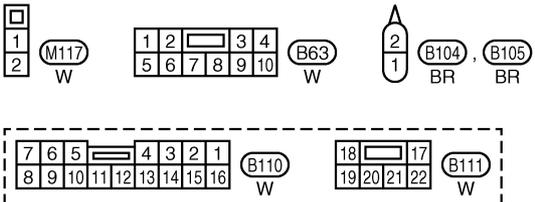
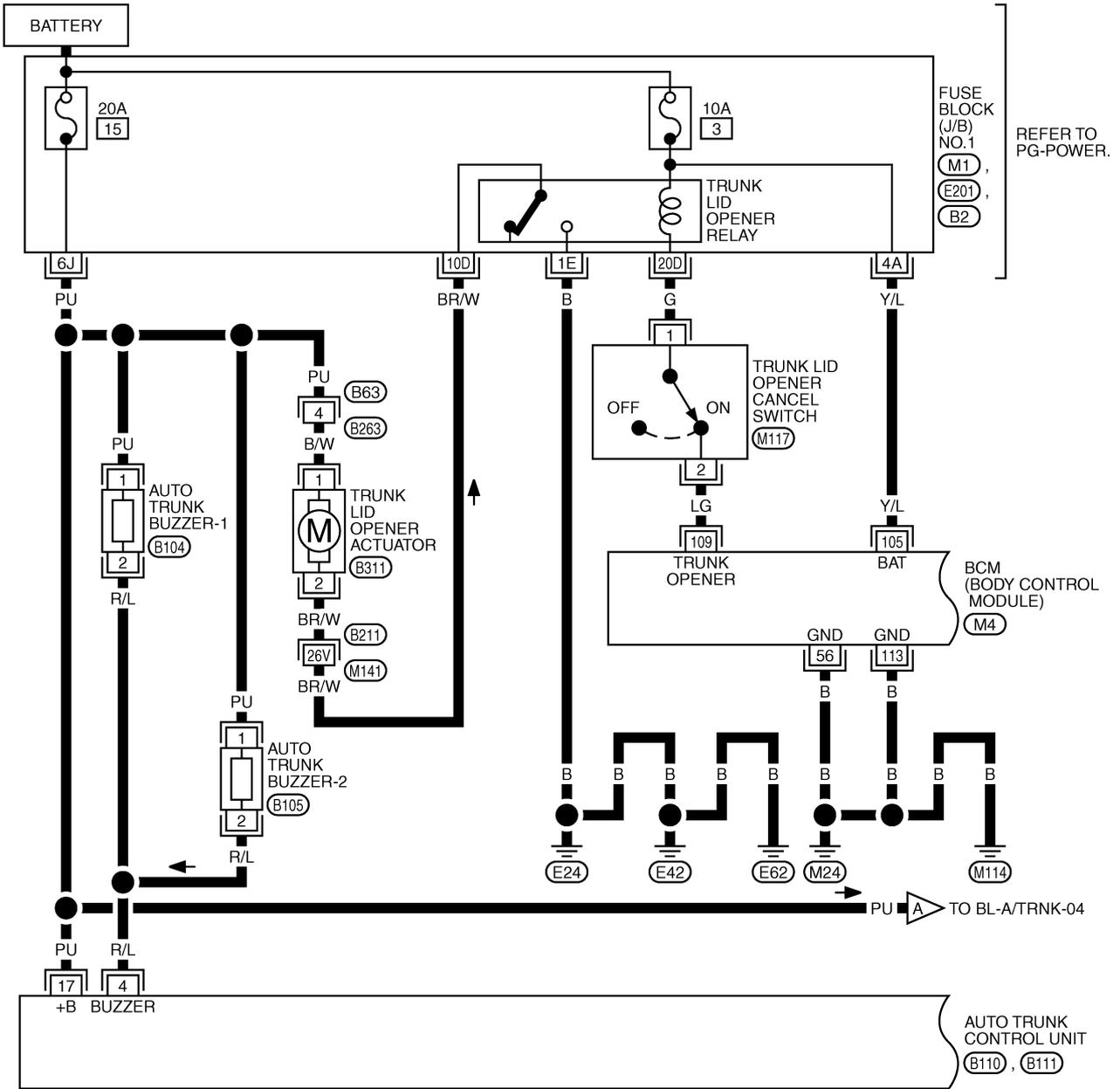
TIWM0406E

AUTO TRUNK SYSTEM

Wiring Diagram — A/TRNK —

NIS000W9

BL-A/TRNK-01



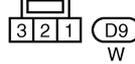
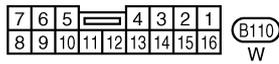
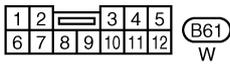
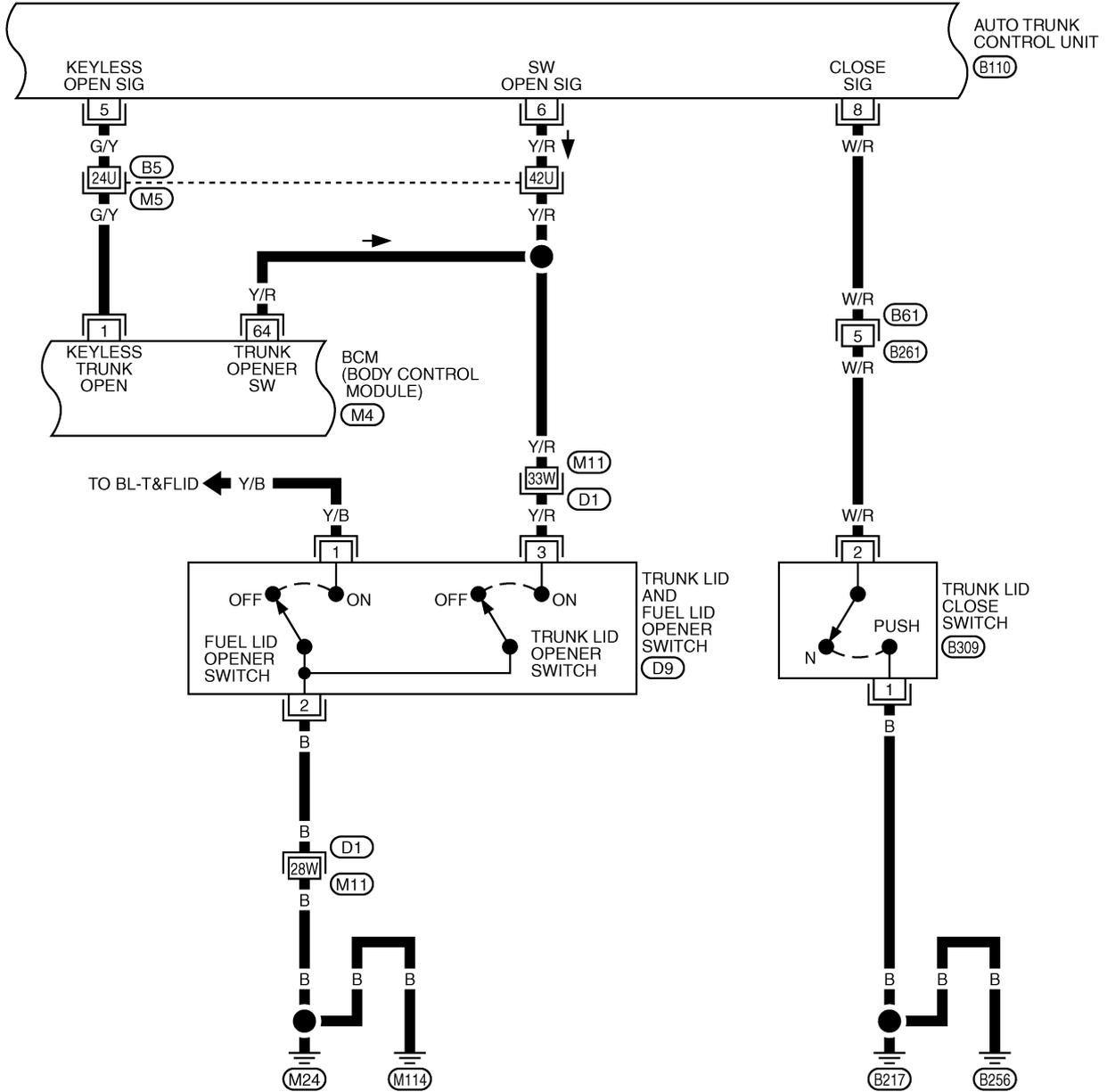
REFER TO THE FOLLOWING.

- (B211) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1), (E201), (B2) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (M4) -ELECTRICAL UNITS

TIWM1391E

AUTO TRUNK SYSTEM

BL-A/TRNK-02



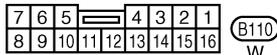
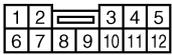
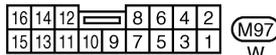
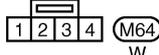
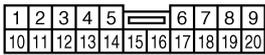
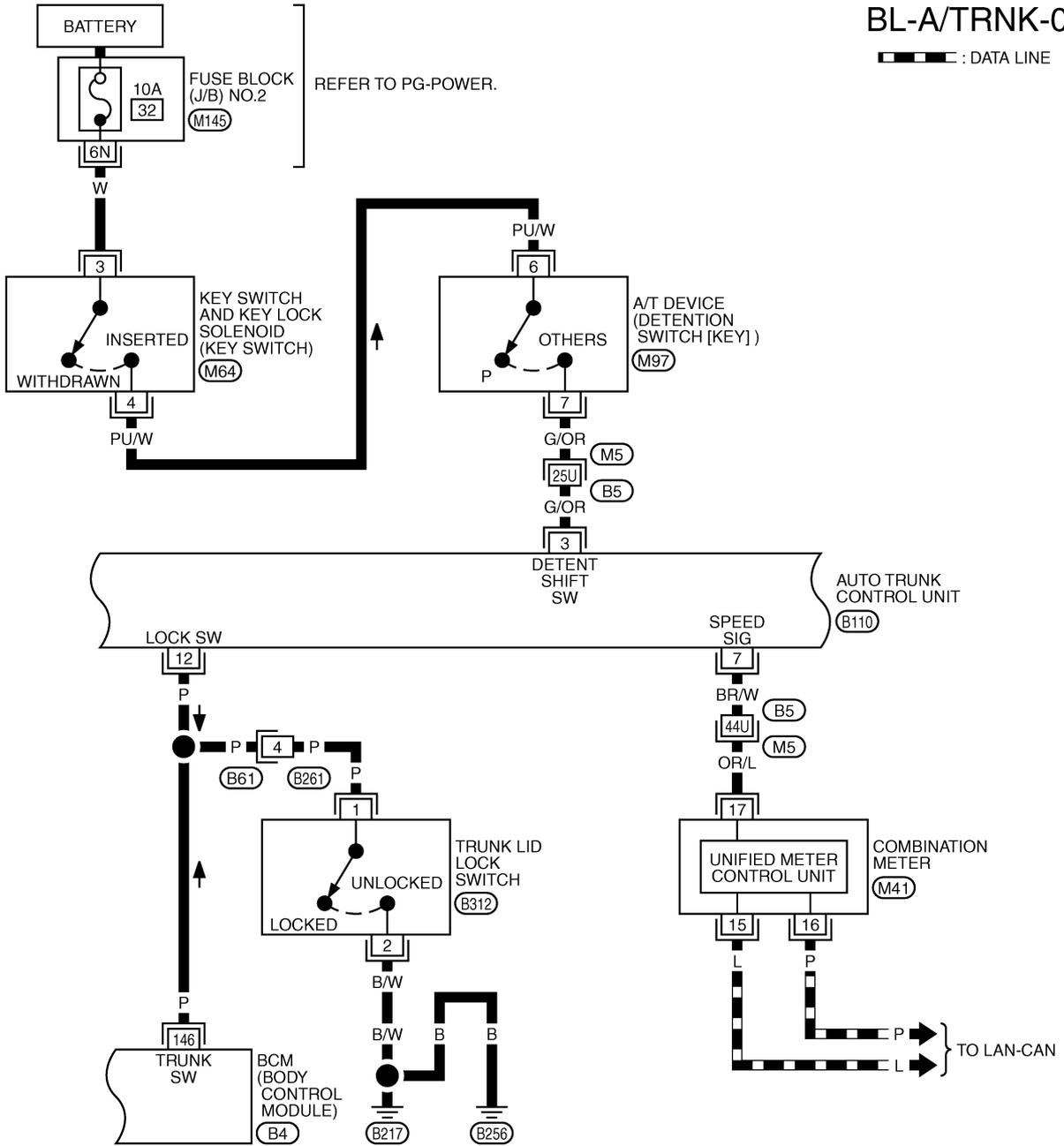
REFER TO THE FOLLOWING.
 (M5), (D1) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (M4) -ELECTRICAL UNITS

TIWM0693E

AUTO TRUNK SYSTEM

BL-A/TRNK-03

▬ : DATA LINE



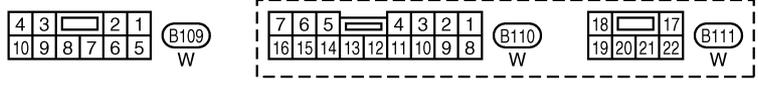
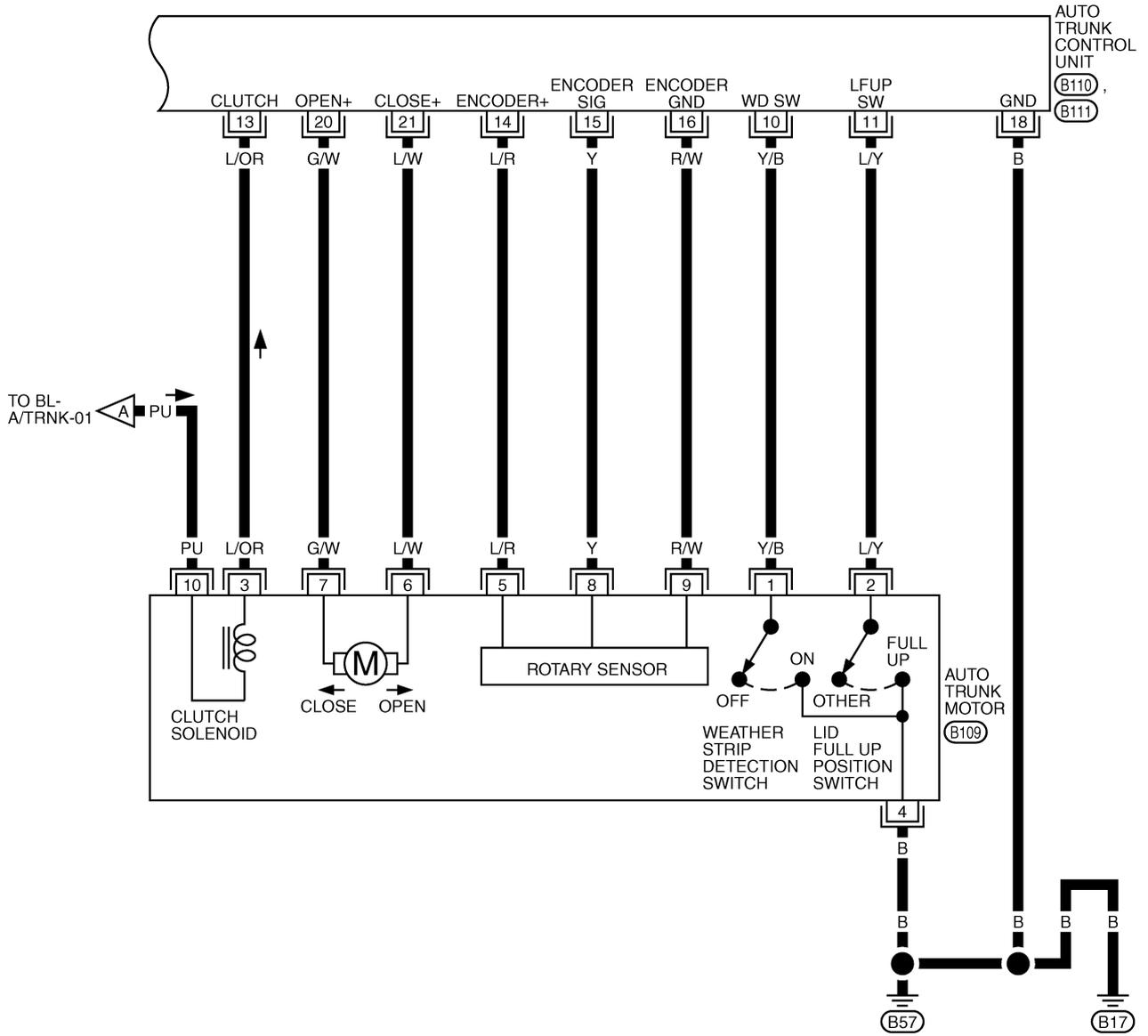
REFER TO THE FOLLOWING.

- (M5) -SUPER MULTIPLE JUNCTION (SMJ)
- (M145) -FUSE BLOCK-JUNCTION BOX (J/B) NO.2
- (B4) -ELECTRICAL UNITS

TIWM1560E

AUTO TRUNK SYSTEM

BL-A/TRNK-04

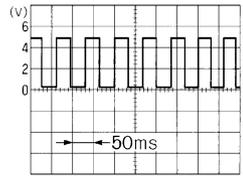
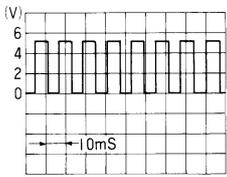


TIWM0695E

AUTO TRUNK SYSTEM

Terminals and Reference Value for Auto Trunk Control Unit

NIS000WA

Terminal	Wire color	Item	Signal Input/Output	Condition		Voltage (V) (Approx.)
3	G/OR	Detention switch	Input	Vehicle key inserted	A/T selector lever in P position	0
					A/T selector lever in other position	Battery voltage
4	R/L	Trunk buzzer	Input	Buzzer OFF		Battery voltage
				Buzzer ON		0
5	G/Y	Electronic key trunk opening signal	Input	Electronic key trunk button (ON)		5 → 0 → 5
6	Y/R	Trunk lid opener switch	Input	OFF → ON (OPEN)		5 → 0
7	BR/W	Vehicle speed signal	Input	Speedometer operation [the vehicle speed is approx. 40 km/h (25 MPH)].		 <p style="text-align: right;">PIIA0536E</p>
8	W/R	Trunk lid close switch	Input	Trunk lid close switch ON		0
				Trunk lid close switch OFF		5
10	Y/B	Weather strip detection switch	Input	Trunk lid is between just before fully closed position and fully closed position (OFF)		5
				Other than above (ON)		0
11	L/Y	Lid full up position switch	Input	Trunk lid fully opened position (ON)		0
				Other than above (OFF)		5
12	P	Trunk lid lock switch	Input	Engage the latch of trunk lock (lock)		5
				Engage the latch of trunk lock (unlock)		0
13	L/OR	Clutch solenoid	Input	Trunk auto operation		0
				Other than above		Battery voltage
14	L/R	Encoder power supply	Output	—		Battery voltage
15	Y	Encoder pulse signal	Input/Output	Trunk motor operation		 <p style="text-align: right;">OCC3383D</p>
16	R/W	Encoder ground	—	—		0
17	PU	Power source (Fuse)	Input	—		Battery voltage
18	B	Ground	—	—		0
20	G/W	Trunk motor OPEN signal	Output	When trunk lid auto open operates		Battery voltage
				Other than above		0
21	L/W	Trunk motor CLOSE signal	Output	When trunk lid auto close operates		Battery voltage
				Other than above		0

Preliminary Check

NIS000WB

- Trunk opener switch can unlock the trunk in regular mode.

AUTO TRUNK SYSTEM

- Trunk lid opener cancel switch is ON.
- Trunk lid can be open/closed properly with manual operation.

Symptom Chart

NIS000WC

Symptom	Malfunctioning system and reference	Refer to page
Trunk lid auto OPEN/CLOSE operation does not work.	1. Check auto trunk control unit power supply and ground circuit	BL-142
	2. Check vehicle speed signal	DI-18
	3. Check A/T device (detention switch)	BL-143
	4. Check trunk motor	BL-145
	5. Check clutch solenoid	BL-145
	6. Check weather strip detection switch	BL-148
	7. Check lid full up position switch	BL-149
	8. Replace auto trunk control unit	BL-135
Trunk lid auto OPEN operation does not work with the trunk lid opener switch.	1. Check trunk lid opener switch	BL-150
	2. Check trunk cancel switch	BL-90
	3. Replace auto trunk control unit	BL-135
Trunk lid auto OPEN operation does not work with electronic key. (Door locking/unlocking operation with electronic key is normal.)	1. Check trunk open signal	BL-152
	2. Check trunk motor	BL-145
	3. Replace auto trunk control unit	BL-135
Trunk lid stops during auto OPEN/CLOSE operation.	1. Check trunk motor	BL-145
	2. Check clutch solenoid	BL-145
	3. Replace auto trunk control unit	BL-135
Trunk lid auto CLOSE operation does not work with trunk lid close switch.	1. Check trunk lid close switch	BL-146
	2. Replace auto trunk control unit	BL-135
Trunk lid stops immediately after auto CLOSE operation starts	1. Check encoder circuit	BL-153
	2. Replace auto trunk control unit.	BL-135

Auto Trunk Control Unit Power Supply and Ground Circuit Check

NIS000WD

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect auto trunk control unit connector.
3. Check voltage between auto trunk control unit harness connector B111 terminal 17 and ground.

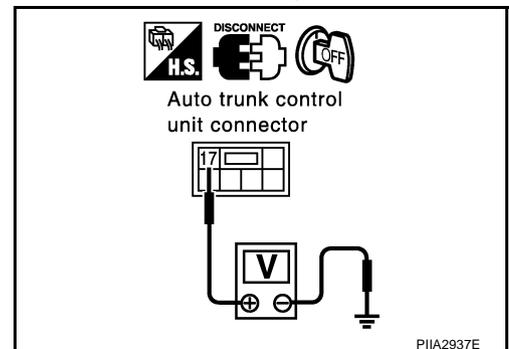
17 (PU) – Ground : Battery voltage

OK or NG

OK >> GO TO 2.

NG >> Check the following.

- 20A fuse [No.15, located in fuse block (J/B) No.1]
- Harness for open or short between auto trunk control unit and fuse.



AUTO TRUNK SYSTEM

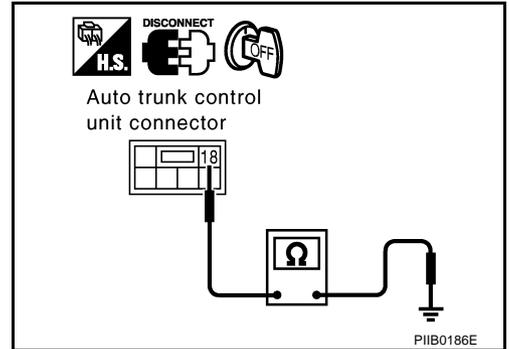
2. CHECK GROUND CIRCUIT

Check continuity between auto trunk control unit harness connector B111 terminal 18 and ground.

18 (B) – Ground : Continuity should exist.

OK or NG

- OK >> Auto trunk control unit power supply and ground circuit is OK.
 NG >> Repair or replace harness.



NIS000WE

A/T Device (Detention Switch) Check

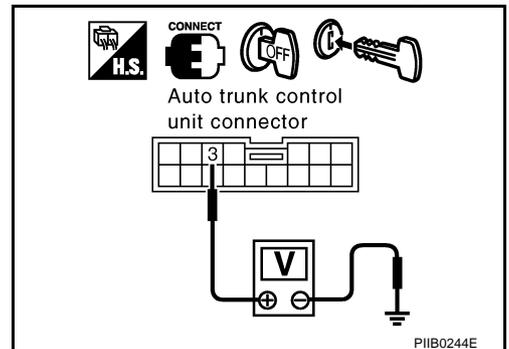
1. CHECK DETENT SWITCH SIGNAL

Insert key to ignition key switch cylinder, check voltage between auto trunk control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B110	3 (G/OR)	Ground	A/T selector lever in P position	0
			Other than above	Battery voltage

OK or NG

- OK >> A/T device (detention switch) is OK.
 NG >> GO TO 2.



PIIB0244E

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect auto trunk control unit and A/T device (detention switch) connector.
- Check continuity between auto trunk control unit connector B110 terminal 3 and A/T device (detention switch) connector M97 terminal 7.

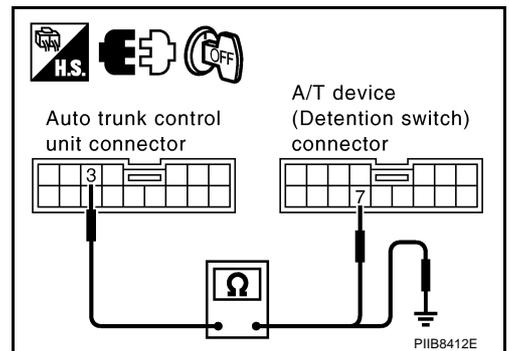
3 (G/OR) – 7 (G/OR) : Continuity should exist.

- Check continuity between auto trunk control unit connector B110 terminal 3 and ground.

3 (G/OR) – Ground : Continuity should not exist.

OK or NG

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



PIIB8412E

AUTO TRUNK SYSTEM

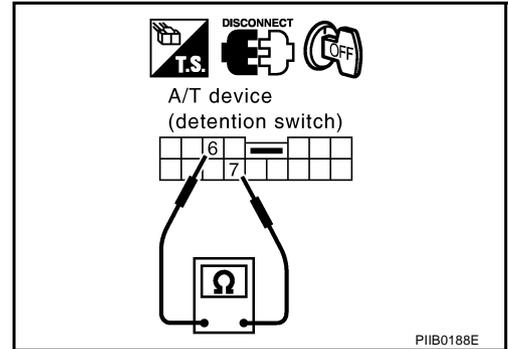
3. CHECK DETENTION SWITCH

Check continuity between A/T device (detention switch) terminals 6 and 7.

Terminals		Condition	Continuity
6	7	A/T selector lever in P position	No
		Other than above	Yes

OK or NG

- OK >> GO TO 4.
 NG >> Replace A/T device (detention switch).



4. CHECK HARNESS CONTINUITY

1. Disconnect key switch connector.
2. Check continuity between A/T device (detention switch) connector M97 terminal 6 and key switch and key lock solenoid connector M64 terminal 4.

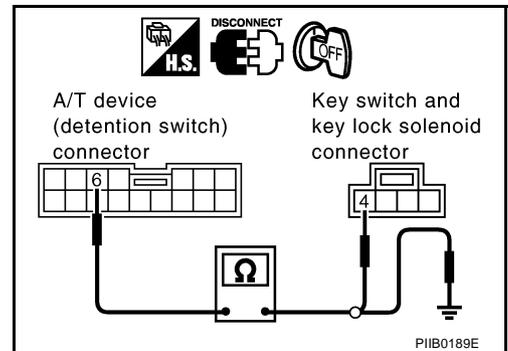
6 (PU/W) – 4 (PU/W) : Continuity should exist,

3. Check continuity between detention switch connector M97 terminal 6 and ground.

6 (PU/W) – Ground : Continuity should not exist.

OK or NG

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



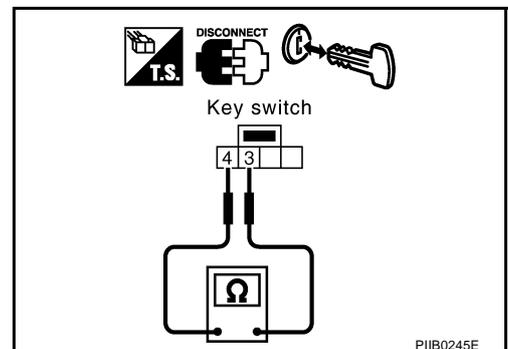
5. CHECK KEY SWITCH

Check continuity between key switch terminals 3 and 4.

Terminals		Condition	Continuity
3	4	Key is inserted	Yes
		Key is removed	No

OK or NG

- OK >> Check the following.
- 10A fuse [No.32, located in fuse block (J/B) No.2]
 - Harness for open or short between key switch and fuse.
- NG >> Repair or replace harness.



AUTO TRUNK SYSTEM

NIS000WF

Trunk Motor Check

1. MOTOR OPERATION CHECK

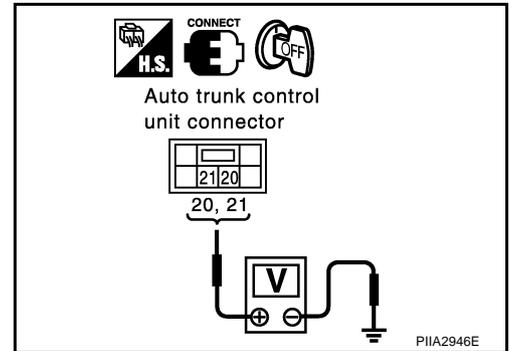
Check voltage between auto trunk control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B111	20 (G/W)	Ground	Trunk is closed	0
			Trunk is opened	Battery voltage
	21 (L/W)		Trunk is closed	Battery voltage
			Trunk is opened	0

OK or NG

OK >> GO TO 2.

NG >> Replace auto trunk control unit.



2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect auto trunk control unit and auto trunk motor connectors.
- Check continuity between auto trunk control unit connector B111 terminals 20, 21 and auto trunk motor connector B109 terminals 6, 7.

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

21 (L/W) – 6 (L/W) : Continuity should exist.

- Check continuity between auto trunk motor connector B109 terminals 6, 7 and ground.

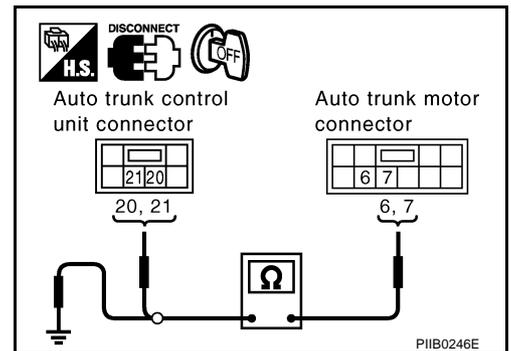
6 (L/W) – Ground : Continuity should not exist.

7 (G/W) – Ground : Continuity should not exist.

OK or NG

OK >> Replace auto trunk motor.

NG >> Repair or replace harness.



Clutch Solenoid Check

NIS000WG

1. CHECK CLUTCH SOLENOID POWER SUPPLY

Check voltage between auto trunk motor connector B109 terminal 10 and ground.

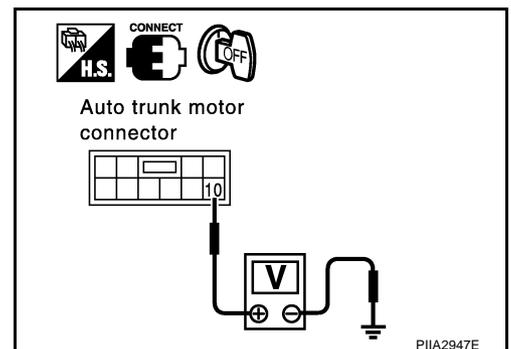
10 (PU) – Ground : Battery voltage

OK or NG

OK >> GO TO 2.

NG >> Check the following.

- 20A fuse [No.15, located in fuse block (J/B) No.1]
- Harness for open or short between auto trunk motor and fuse.



AUTO TRUNK SYSTEM

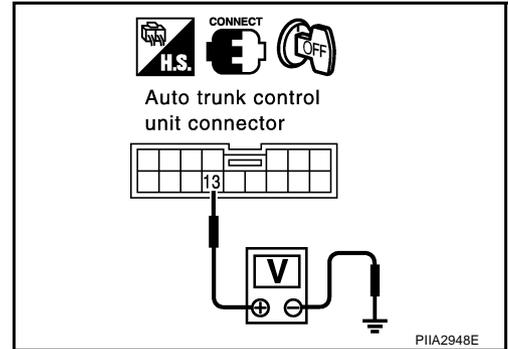
2. CHECK CLUTCH SOLENOID SIGNAL

Check voltage between auto trunk control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B110	13 (L/OR)	Ground	Trunk auto operation	0
			Other than above	Battery voltage

OK or NG

- OK >> Clutch solenoid system is OK.
- NG >> GO TO 3.



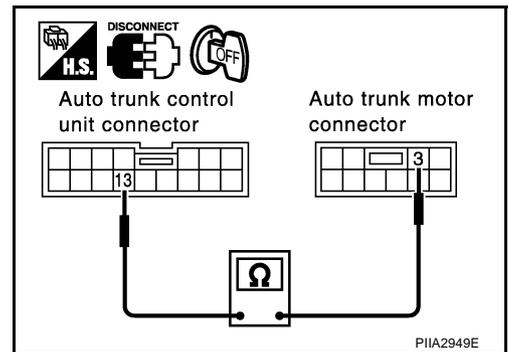
3. CHECK HARNESS CONTINUITY

1. Disconnect auto trunk control unit and auto trunk motor connector.
2. Check continuity between auto trunk control unit connector B110 terminal 13 and auto trunk motor connector B109 terminal 3.

13 (L/OR) – 3 (L/OR) : Continuity should exist.

OK or NG

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



Trunk Lid Close Switch Check

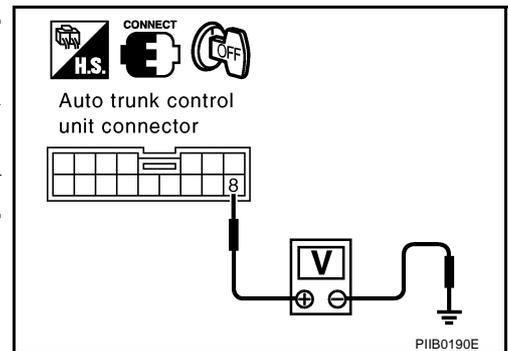
1. CHECK TRUNK LID CLOSE SWITCH SIGNAL

Check voltage between auto trunk control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B110	8 (W/R)	Ground	Trunk lid close switch pressed (ON)	0
			Other than above (OFF)	5

OK or NG

- OK >> Trunk lid close switch is OK.
- NG >> GO TO 2.



AUTO TRUNK SYSTEM

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect auto trunk control unit and trunk lid close switch connector.
3. Check continuity between auto trunk control unit connector B110 terminal 8 and trunk lid close switch connector B309 terminal 2.

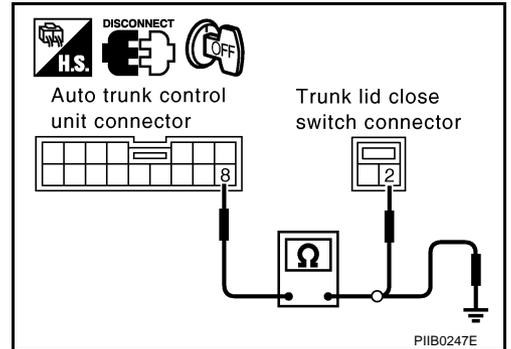
8 (W/R) – 2 (W/R) : Continuity should exist.

4. Check continuity between auto trunk control unit connector B110 terminal 8 and ground.

8 (W/R) – Ground : Continuity should not exist.

OK or NG

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



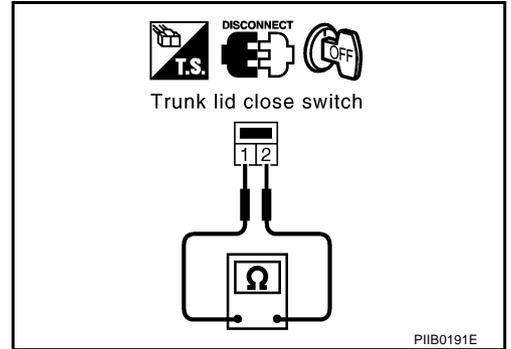
3. CHECK TRUNK LID CLOSE SWITCH

Check continuity between trunk lid close switch terminals 1 and 2.

Terminals		Condition	Continuity
1	2	Trunk lid switch pressed (ON)	Yes
		Other than above	No

OK or NG

- OK >> GO TO 4.
 NG >> Replace trunk lid close switch.



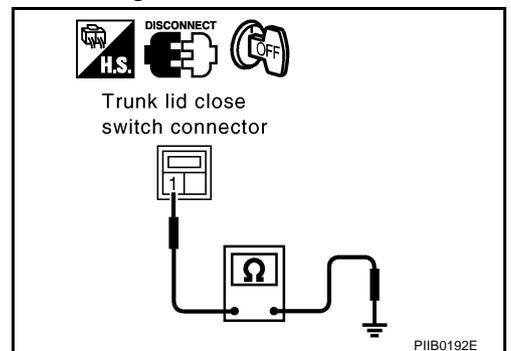
4. TRUNK LID CLOSE SWITCH GROUND CIRCUIT CHECK

Check continuity between trunk lid close switch connector B309 terminal 1 and ground.

1 (B) – Ground : Continuity should exist.

OK or NG

- OK >> Replace auto trunk control unit.
 NG >> Repair or replace harness.



AUTO TRUNK SYSTEM

NIS000WI

Weather Strip Detection Switch System Check

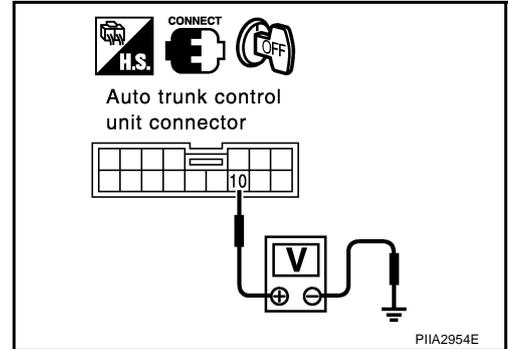
1. CHECK WEATHER STRIP DETECTION SWITCH SIGNAL

Check voltage between auto trunk control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B110	10 (Y/B)	Ground	Trunk lid fully is between just before fully closed position and fully closed position (OFF)	5
			Other than above	0

OK or NG

- OK >> Weather strip detection switch is OK.
 NG >> GO TO 2.



2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect auto trunk control unit and auto trunk motor connector.
- Check continuity between auto trunk control unit connector B110 terminal 10 and auto trunk motor connector B109 terminal 1.

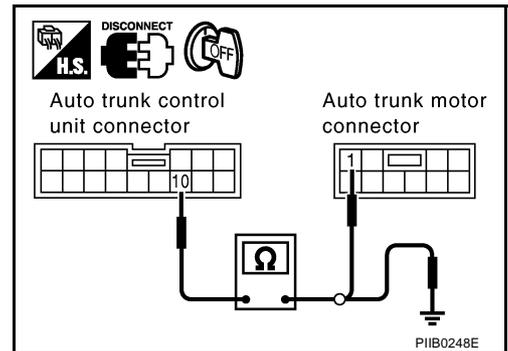
10 (Y/B) – 1 (Y/B) : Continuity should exist.

- Check continuity between auto trunk control unit connector B110 terminal 10 and ground.

10 (Y/B) – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness between auto trunk control unit and auto trunk motor.



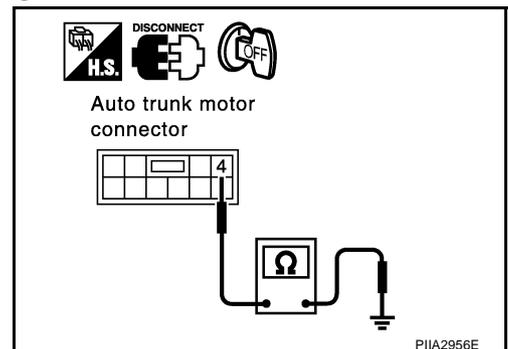
3. CHECK GROUND CIRCUIT

Check continuity between trunk motor connector B109 terminal 4 and ground.

4 (B) – Ground : Continuity should exist.

OK or NG

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



AUTO TRUNK SYSTEM

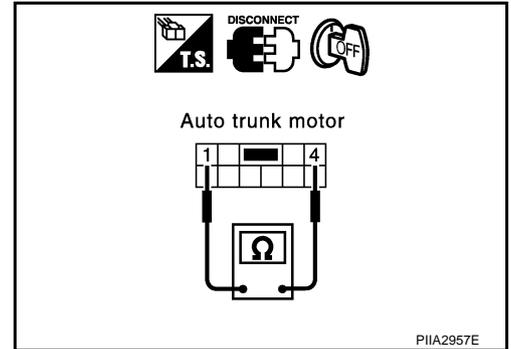
4. CHECK WEATHERSTRIP DETECTION SWITCH

Check continuity between auto trunk motor terminals 1 and 4.

Terminals		Condition	Continuity
1	4	Trunk lid fully is between just before fully closed position and fully closed position (OFF)	No
		Other than above	Yes

OK or NG

- OK >> Replace auto trunk control unit.
- NG >> Replace auto trunk motor.



Lid Full Up Position Switch Check

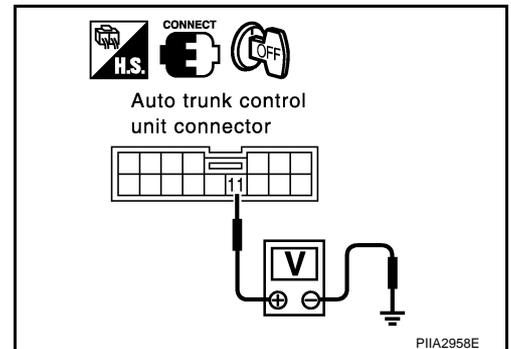
1. CHECK LID FULL UP POSITION SWITCH SIGNAL

Check voltage between auto trunk control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B110	11 (L/Y)	Ground	Trunk lid fully opened position (ON)	0
			Other than above (OFF)	5

OK or NG

- OK >> Lid full up position switch is OK.
- NG >> GO TO 2.



2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect auto trunk control unit and auto trunk motor connector.
3. Check continuity between auto trunk control unit connector B110 terminal 11 and auto trunk motor connector B109 terminal 2.

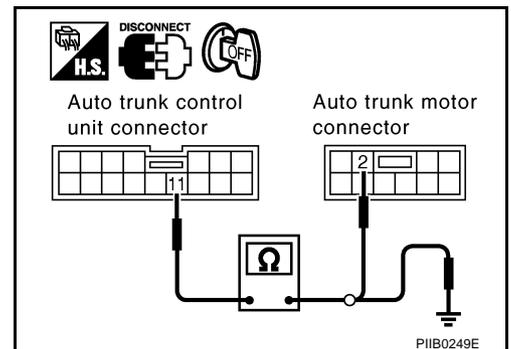
11 (L/Y) – 2 (L/Y) : Continuity should exist.

4. Check continuity between auto trunk control unit connector B110 terminal 11 and ground.

11 (L/Y) – Ground : Continuity should not exist.

OK or NG

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



AUTO TRUNK SYSTEM

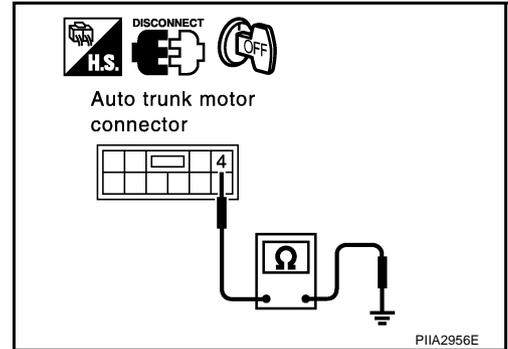
3. GROUND CIRCUIT CHECK

Check continuity between auto trunk motor connector B109 terminal 4 and ground.

4 (B) – Ground : Continuity should exist.

OK or NG

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



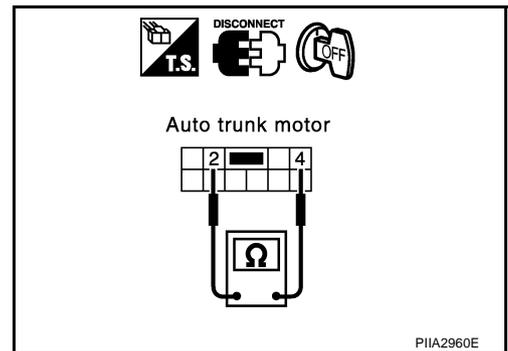
4. CHECK LID FULL UP POSITION SWITCH

Check continuity between auto trunk motor terminals 2 and 4.

Terminals		Condition	Continuity
2	4	Trunk lid fully opened position (ON)	Yes
		Other than above	No

OK or NG

- OK >> Replace auto trunk control unit.
- NG >> Replace auto trunk motor.



NIS000WK

Trunk Lid Opener Switch Check

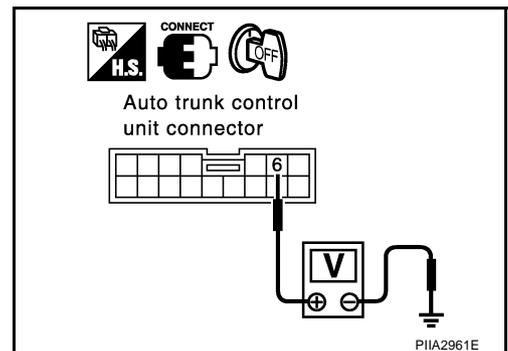
1. CHECK TRUNK LID OPENER SWITCH SIGNAL

Check voltage between auto trunk control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B110	6 (Y/R)	Ground	Trunk lid opener switch pressed (ON)	0
			Other than above (OFF)	5

OK or NG

- OK >> Trunk lid opener switch is OK.
- NG >> GO TO 2.



AUTO TRUNK SYSTEM

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect auto trunk control unit and trunk lid opener switch connector.
3. Check continuity between auto trunk control unit connector B110 terminal 6 and trunk lid and fuel lid opener switch connector D9 terminal 3.

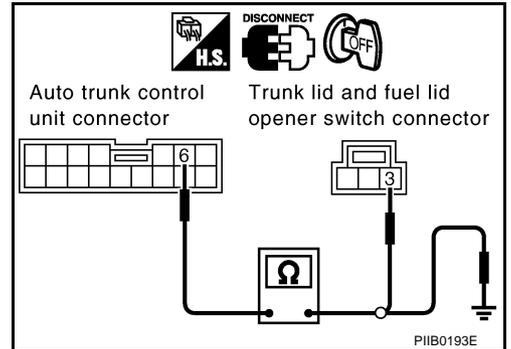
6 (Y/R) – 3 (Y/R) : Continuity should exist.

4. Check continuity between auto trunk control unit connector B110 terminal 6 and ground.

6 (Y/R) – Ground : Continuity should not exist.

OK or NG

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



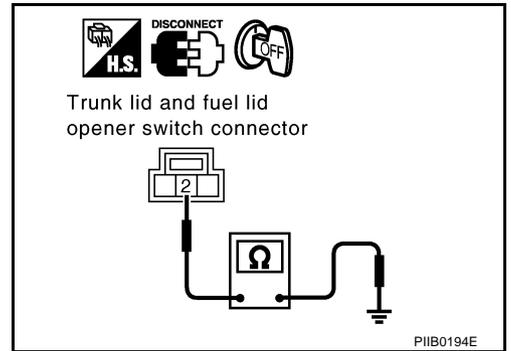
3. CHECK TRUNK LID OPENER SWITCH GROUND CIRCUIT

Check continuity between trunk lid and fuel lid opener switch connector D9 terminal 2 and ground.

2 (B) – Ground : Continuity should exist.

OK or NG

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



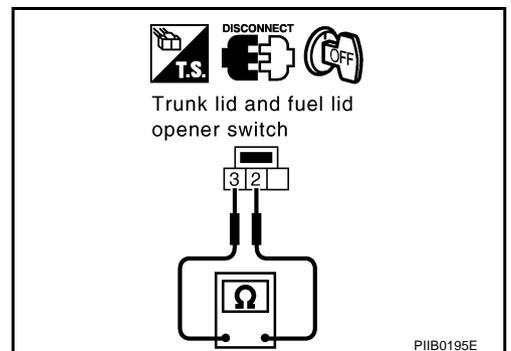
4. CHECK TRUNK LID OPENER SWITCH

Check continuity between trunk lid opener switch terminals 2 and 3.

Terminals		Condition	Continuity
2	3	Trunk lid opener switch pressed (ON)	Yes
		Other than above (OFF)	No

OK or NG

- OK >> Replace auto trunk control unit.
 NG >> Replace trunk lid opener switch.



AUTO TRUNK SYSTEM

NIS000WL

Trunk Open Signal Check

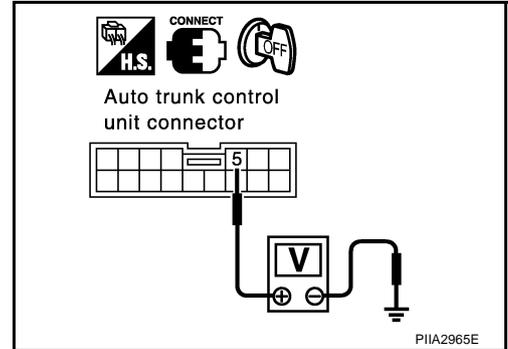
1. CHECK ELECTRONIC KEY TRUNK OPENING SIGNAL

Check voltage between auto trunk control unit connector B110 terminal 5 and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
B110	5 (G/Y)	Ground	Trunk button on electronic key ON	5 → 0 → 5
			Other than above	5

OK or NG

- OK >> Trunk open signal is OK.
 NG >> GO TO 2.



2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect BCM and auto trunk control unit connector.
- Check continuity between BCM connector M4 terminal 1 and auto trunk control unit connector B110 terminal 5.

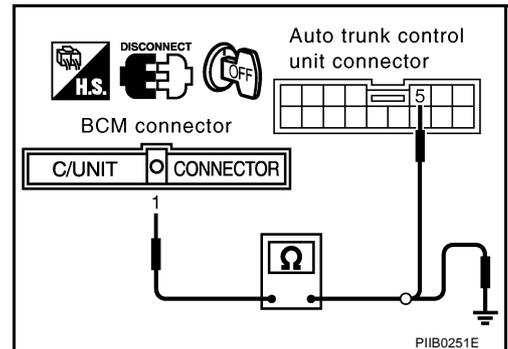
1 (G/Y) – 5 (G/Y) : Continuity should exist.

- Check continuity between BCM connector M4 terminal 1 and ground.

1 (G/Y) – Ground : Continuity should not exist.

OK or NG

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



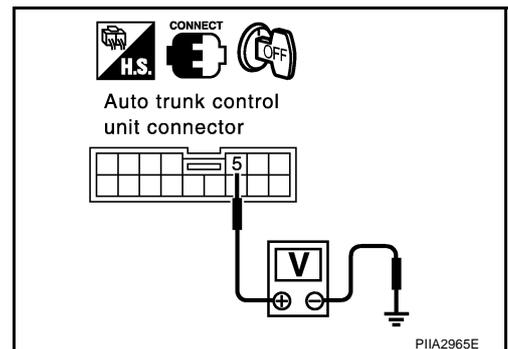
3. CHECK AUTO TRUNK CONTROL UNIT OUTPUT SIGNAL

- Connect auto trunk control unit connector.
- Check voltage between auto trunk control unit connector B110 terminal 5 and ground.

5 (G/Y) – Ground : Approx. 5V

OK or NG

- OK >> Check the condition of the harness and the connector.
 NG >> Replace auto trunk control unit.



AUTO TRUNK SYSTEM

NIS000WM

Encoder Circuit Check

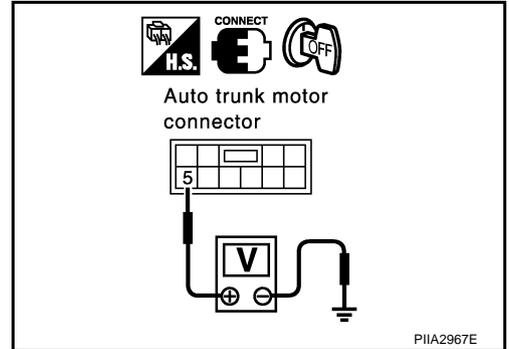
1. CHECK ENCODER POWER SUPPLY

Check voltage between auto trunk motor connector B109 terminal 5 and ground.

5 (L/R) – Ground : Battery voltage

OK or NG

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



2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect auto trunk control unit and auto trunk motor connector.
3. Check continuity between auto trunk control unit connector B110 terminal 14 and auto trunk motor connector B109 terminal 5.

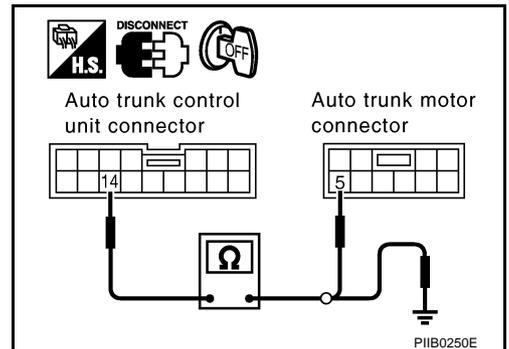
14 (L/R) – 5 (L/R) : Continuity should exist.

4. Check continuity between auto trunk control unit connector B110 terminal 14 and ground.

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

OK or NG

- OK >> Replace auto trunk control unit.
- NG >> Repair or replace harness.



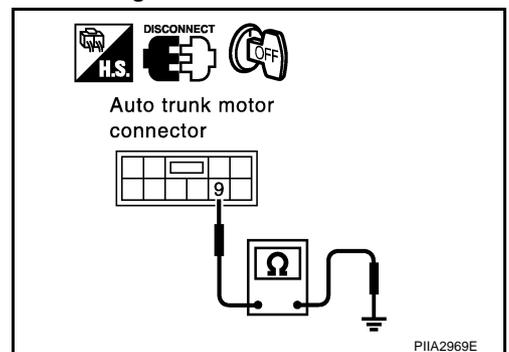
3. CHECK ENCODER GROUND

1. Turn ignition switch OFF.
2. Disconnect auto trunk motor connector.
3. Check continuity between auto trunk motor connector B109 terminal 9 and ground.

9 (R/W) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 5.
- NG >> GO TO 4.



AUTO TRUNK SYSTEM

4. CHECK ENCODER GROUND CIRCUIT

1. Disconnect auto trunk control unit.
2. Check continuity between auto trunk control unit connector B110 terminal 16 and auto trunk motor connector B109 terminal 9.

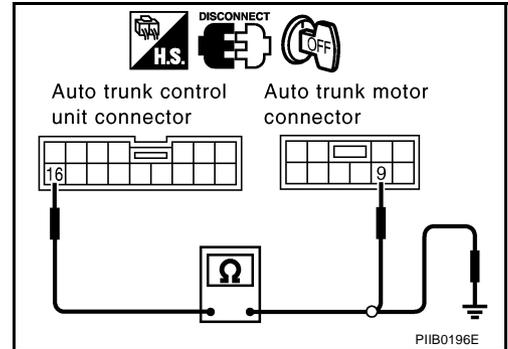
16 (R/W) – 9 (R/W) : Continuity should exist.

3. Check continuity between auto trunk control unit connector B110 terminal 16 and ground.

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

OK or NG

- OK >> Replace auto trunk control unit.
 NG >> Repair or replace harness.

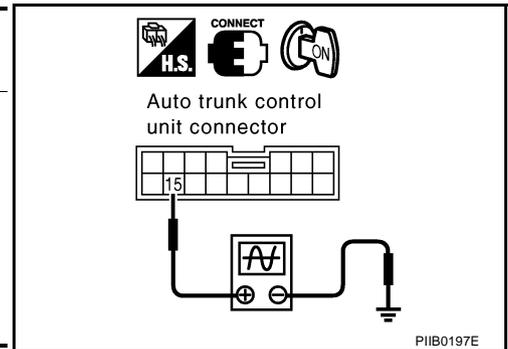


5. CHECK ENCODER SIGNAL

1. Connect auto trunk motor connector.
2. Turn ignition switch ON.
3. Check the signal between auto trunk control unit connector B110 terminal 15 and ground with oscilloscope.

Connector	Terminals (Wire color)		Condition	Signal (Reference value)
	(+)	(-)		
B110	15 (Y)	Ground	trunk motor operation	

OCC3383D



OK or NG

- OK >> Encoder function is OK.
 NG >> GO TO 6.

6. CHECK ENCODER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect auto trunk control unit and auto trunk motor connector.
3. Check continuity between auto trunk control unit connector B110 terminal 15 and auto trunk motor connector B109 terminal 8.

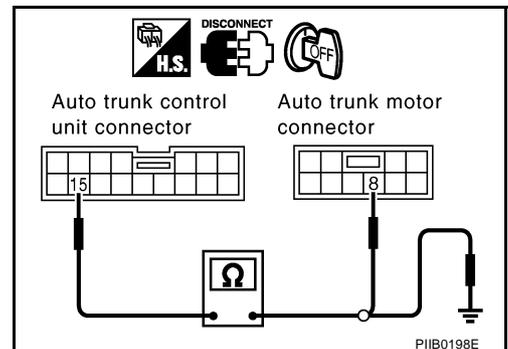
15 (Y) – 8 (Y) :Continuity should exist.

4. Check continuity between auto trunk control unit connector B110 terminal 15 and ground.

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

OK or NG

- OK >> Replace auto trunk motor.
 NG >> Repair or replace harness.



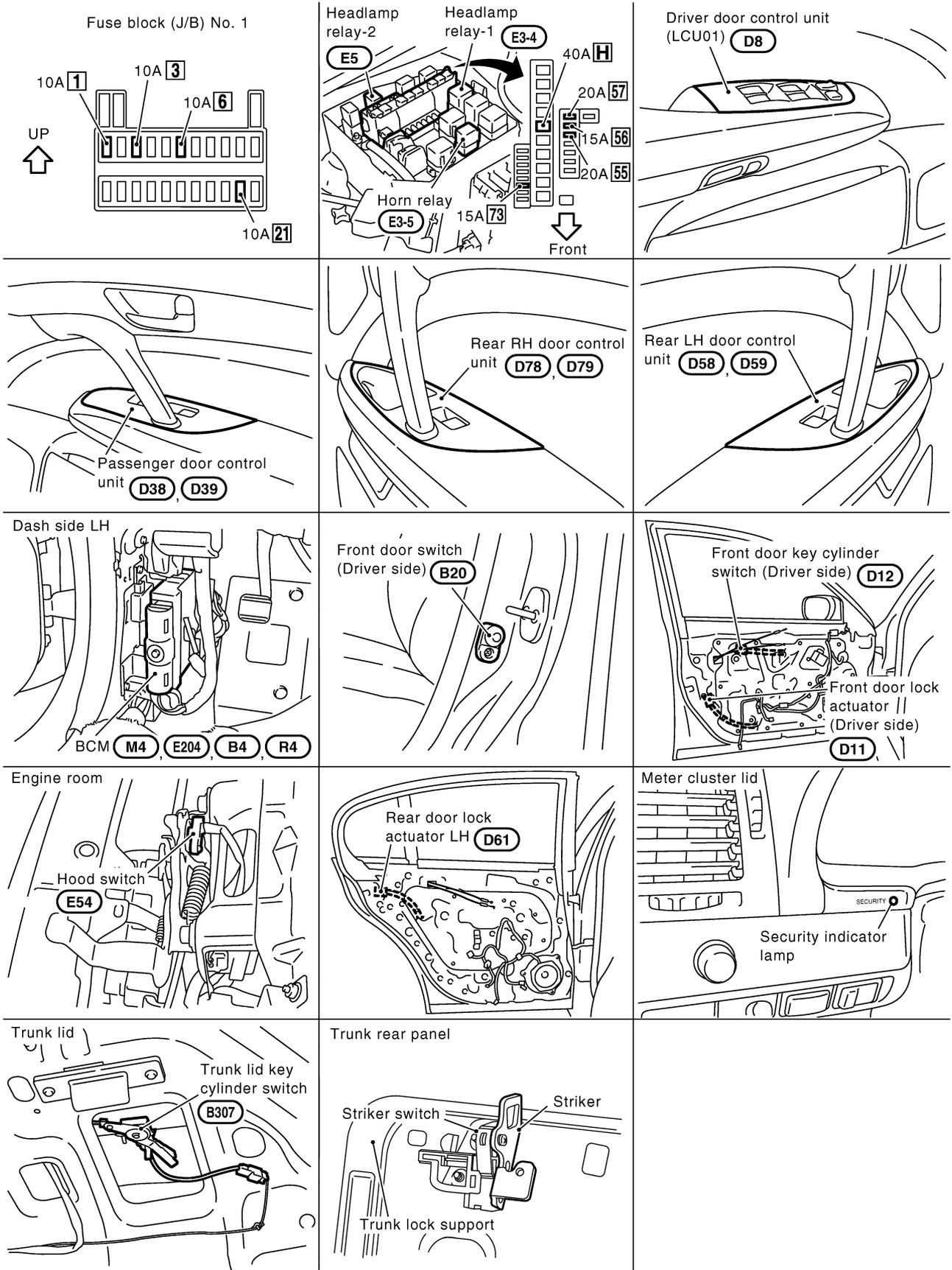
VEHICLE SECURITY (THEFT WARNING) SYSTEM

VEHICLE SECURITY (THEFT WARNING) SYSTEM

PF28491

Component Parts Harness Connector Location

NIS000WN



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BL

VEHICLE SECURITY (THEFT WARNING) SYSTEM

NIS000WO

System Description

DESCRIPTION

Setting the Vehicle Security System

Disarmed phase

- When the vehicle is being driven or when 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.

Pre-armed phase and armed phase

- The vehicle security system turns into the “pre-armed” phase when hood, trunk lid and all doors are closed and locked by electronic key. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the “armed” phase.

Canceling the Set Vehicle Security System

When the following 1 or 2 operation is performed, the armed phase is canceled.

1. Unlock the doors with the electronic key or emergency key.
2. Open the trunk lid with the electronic key or emergency key. When the trunk lid is closed after opening the trunk lid with the electronic key, the system returns to the armed phase.

Activating the Alarm Operation of the Vehicle Security System

Make sure the system is in the armed phase.

When the following operation 1, 2 or 3 is performed, the system sounds the horn and flashes the head-lamps for about 50 seconds.

1. Engine hood, trunk lid or any door is opened before unlocking door with electronic key or emergency key.
2. Door is unlocked without using electronic key or emergency key.
3. Trunk lid is opened without using electronic key or emergency key.

POWER SUPPLY

Power is supplied at all times

- through 10A fuse [No. 6, located in the fuse block (J/B) No. 1]
- to security indicator lamp terminal 20.
- through 10A fuse [No. 3, located in the fuse block (J/B) No. 1]
- to BCM terminal 105.

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

- through 10A fuse [No. 1, located in the fuse block (J/B) No. 1]
- to BCM terminal 68.

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

- through 10A fuse [No. 21, located in the fuse block (J/B) No. 1]
- to BCM terminal 60.

BCM is connected to LCU01 via DATA LINE A -3.

INITIAL CONDITION TO ACTIVATE THE SYSTEM

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

To activate the vehicle security system, BCM must receive signals indicating the doors, hood and trunk lid are closed and the doors are locked.

When a door is open, BCM terminal 33 (rear LH door), 37 (passenger door), 142 (driver door) or 143 (rear RH door) receives a ground signal from each door switch.

When the driver door is unlocked, driver door control unit (LCU01) terminal 6 receives a ground signal from terminal 2 of driver side door unlock sensor.

When the passenger, rear LH or RH door is unlocked, passenger, rear LH or RH door control unit terminal 13 receives a ground signal from terminal 2 of each door unlock sensor.

When the hood is open, BCM terminal 122 receives a ground signal

- to terminals 1 and 2 of the hood switch
- through body grounds E24, E42 and E62.

When the trunk lid is open, BCM terminal 146 receives a ground signal

- to terminal 1 and 2 of trunk lid lock switch
- through body grounds B217, B256.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

When the doors are locked with electronic key and none of the described conditions exist, the vehicle security system will automatically shift to armed phase.

A

VEHICLE SECURITY SYSTEM ACTIVATION (WITH KEY OR ELECTRONIC KEY USED TO LOCK DOORS)

If the emergency key is used to lock doors, driver side door control unit (LCU01) terminal 10 receives a ground signal

B

- to terminal 3 and 2 of the front door key cylinder switch (driver side).
- through body grounds M24 and M114

C

If this signal (lock signal) from electronic key is received by BCM, the vehicle security system will activate automatically.

Once the vehicle security system has been activated, BCM terminal 65 supplies ground to terminal 19 of the security indicator lamp.

D

The security indicator lamp will illuminate for approximately 30 seconds and then blinks.

Now the vehicle security system is in armed phase.

E

VEHICLE SECURITY SYSTEM ALARM OPERATION

The vehicle security system is triggered by

- opening a door
- opening the trunk lid
- opening the hood
- unlocking door without using the electronic key or emergency key.

F

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

- when BCM receives a ground signal at terminal 33, 37, 142, 143 (door switches), 146 (trunk lid lock switch) or 122 (hood switch)
- when driver door control unit (LCU01) receives a ground signal at terminal 6 (driver side door unlock sensor)
- when passenger, rear LH, RH door control unit receives a ground signal at terminal 13 (each door unlock sensor)

H

BL

Power is supplied at all times

- to headlamp relay-1 terminal 2 and
- through 15A fuse [No. 73, located in the fuse, fusible link and relay block (J/B)]
- to headlamp relay-2 terminal 2 and
- through 10A fuse [No. 56, located in the fuse, fusible link and relay block (J/B)]
- to security horn relay terminal 2.

J

K

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

- from BCM terminal 5 (lamp relay) and 127 (security horn relay)
- to headlamp relay-1 terminal 1 and
- to headlamp relay-2 terminal 1 and
- to security horn relay terminal 1.

L

M

The headlamps flash and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds but will reactivate if the vehicle is tampered with again.

VEHICLE SECURITY SYSTEM DEACTIVATION

To deactivate the vehicle security system, a door or the trunk lid must be unlocked with the key or electronic key.

When the key is used to unlock a door, driver door control unit (LCU01) terminal 9 receives a ground signal

- from terminal 1 and 2 of the driver side door key cylinder switch.

When the emergency key is used to unlock the trunk lid, BCM terminal 145 receives a ground signal

- from terminal 1 and 2 of the trunk lid key cylinder switch.

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

VEHICLE SECURITY (THEFT WARNING) SYSTEM

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.

- to BCM terminal 5 (lamp relay) and 127 (security horn relay)
- to headlamp relay-1 terminal 1 and
- to headlamp relay-2 terminal 1 and
- to security horn relay terminal 1.

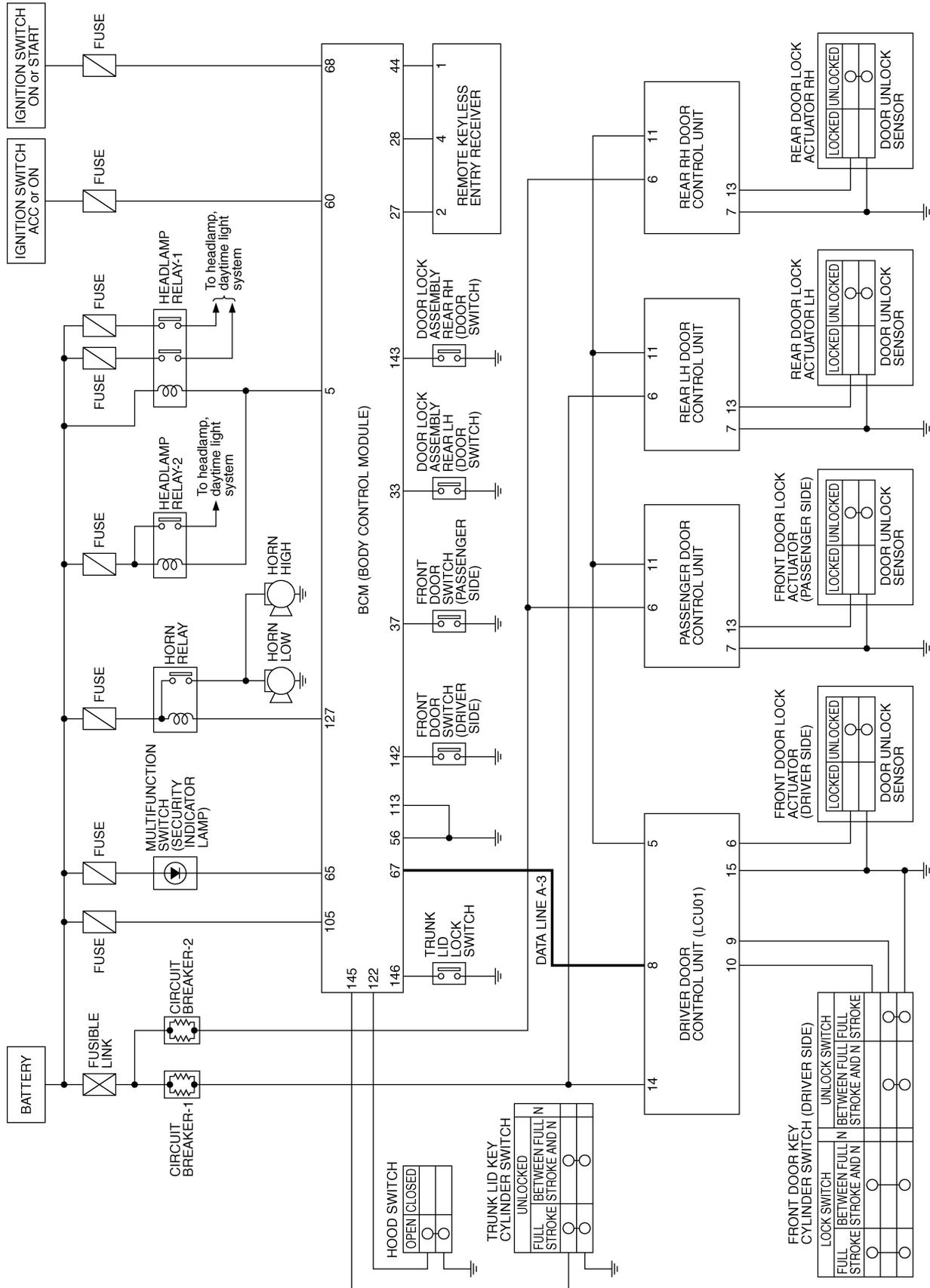
The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 30 seconds or when BCM receives any signal from electronic key or ignition key cylinder (emergency key is inserted).

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Schematic

NIS000WP



TIWM0146E

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VEHICLE SECURITY (THEFT WARNING) SYSTEM

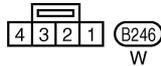
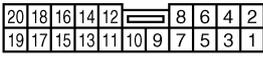
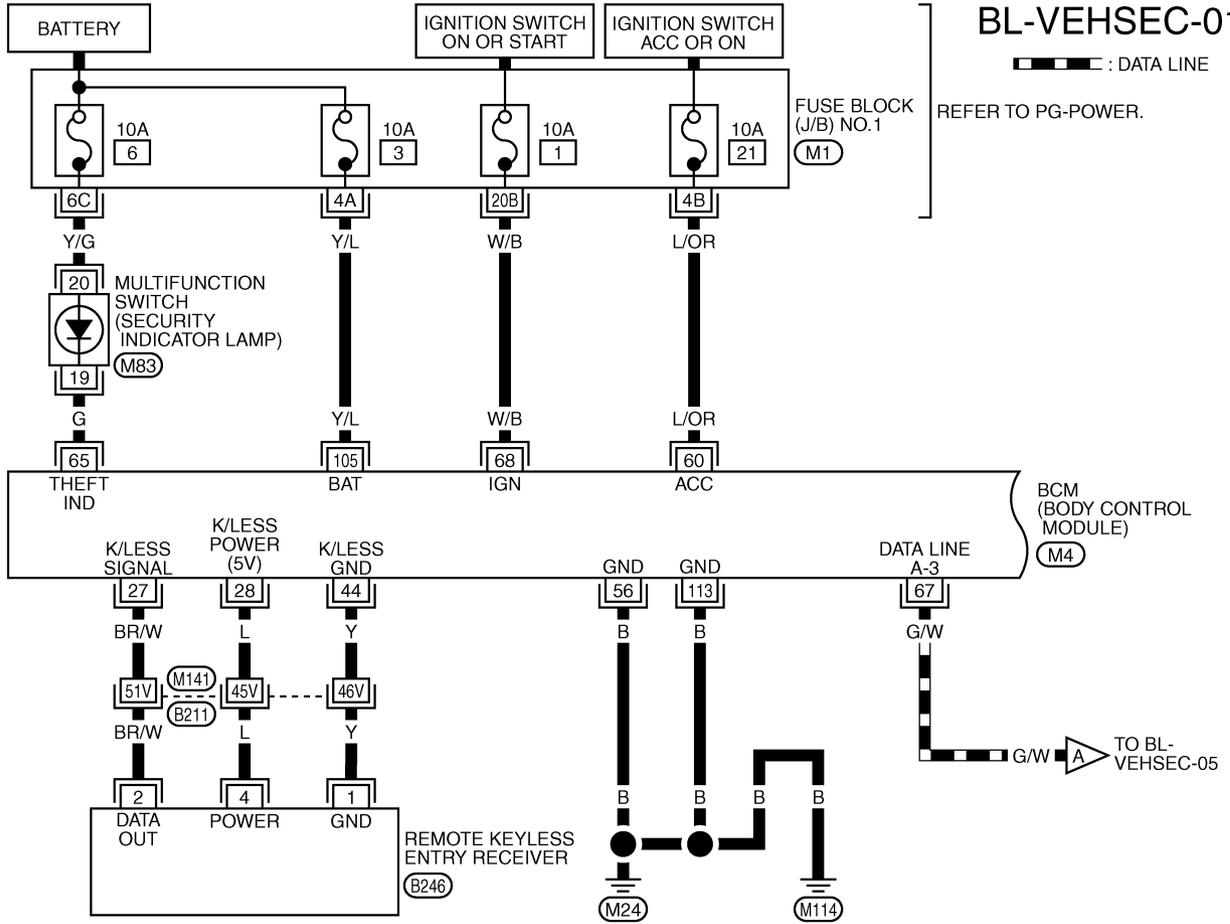
NIS000WQ

Wiring Diagram — VEHSEC —

BL-VEHSEC-01

▬ : DATA LINE

REFER TO PG-POWER.



REFER TO THE FOLLOWING.

(B211) -SUPER MULTIPLE JUNCTION (SMJ)

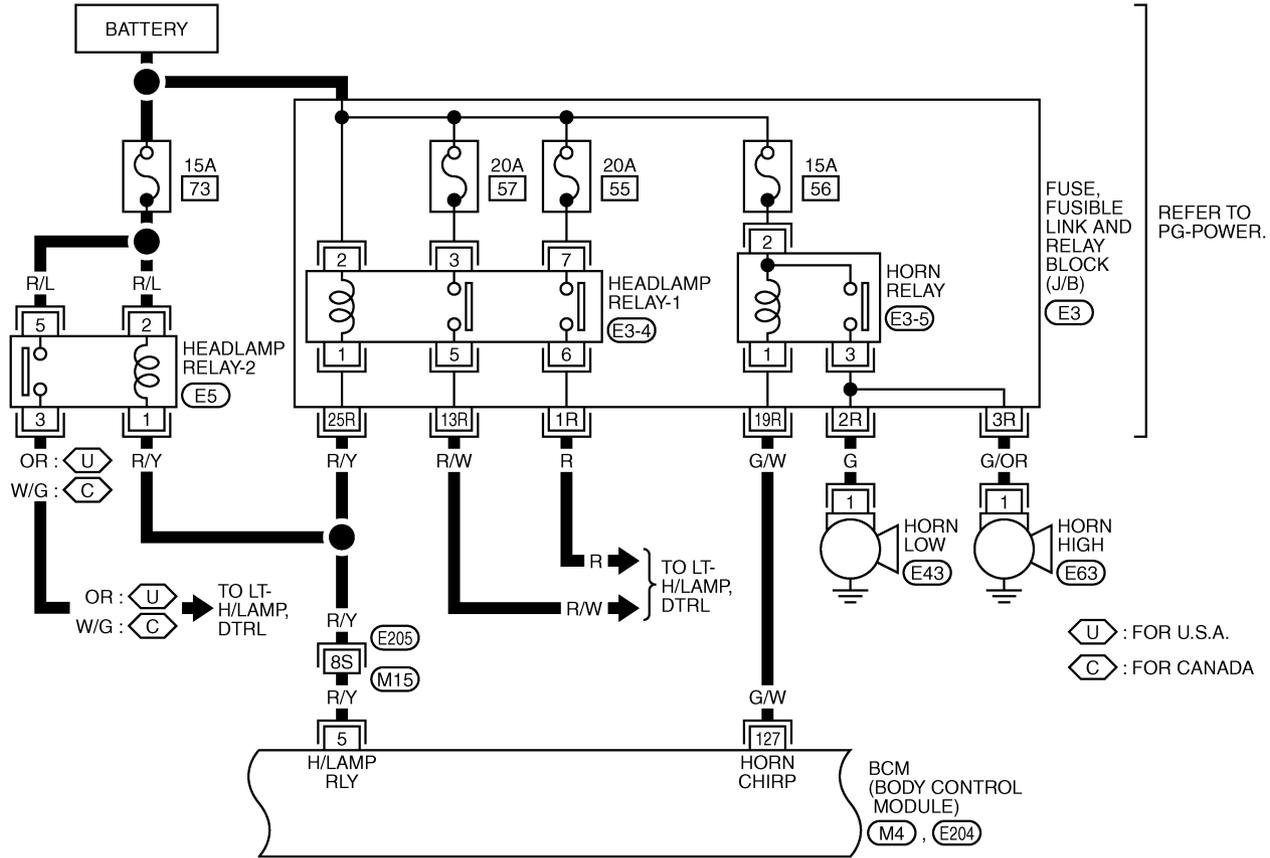
(M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

(M4) -ELECTRICAL UNITS

T1WM0682E

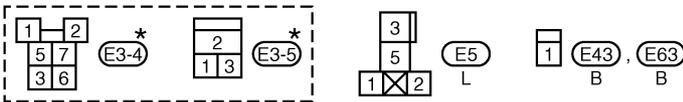
VEHICLE SECURITY (THEFT WARNING) SYSTEM

BL-VEHSEC-02



FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B) REFER TO PG-POWER.

U : FOR U.S.A.
C : FOR CANADA



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

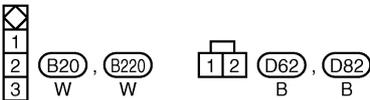
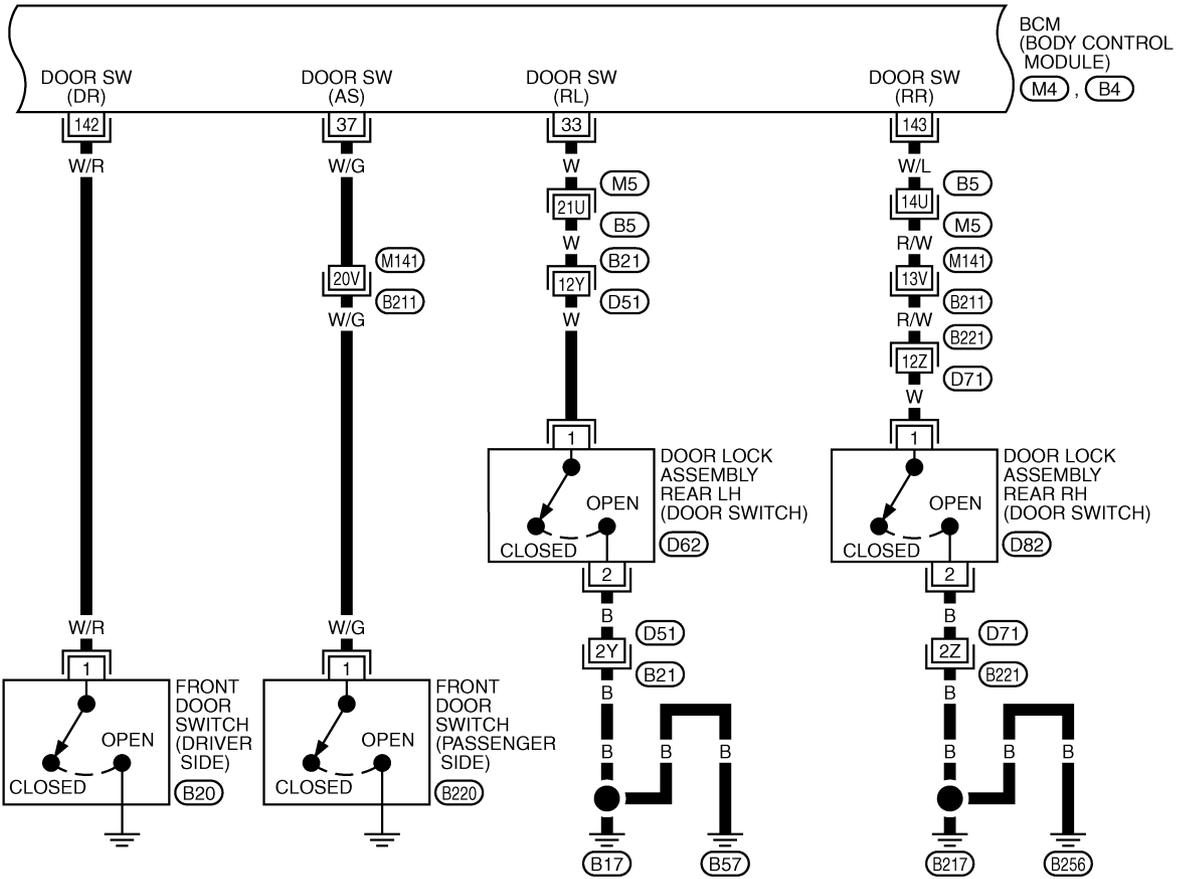
REFER TO THE FOLLOWING.

- E205 -SUPER MULTIPLE JUNCTION (SMJ)
- E3 -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)
- M4, E204 -ELECTRICAL UNITS

TIWM1554E

VEHICLE SECURITY (THEFT WARNING) SYSTEM

BL-VEHSEC-03



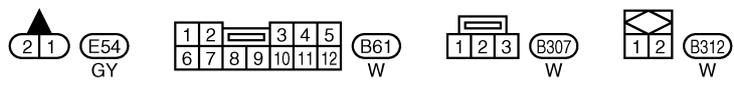
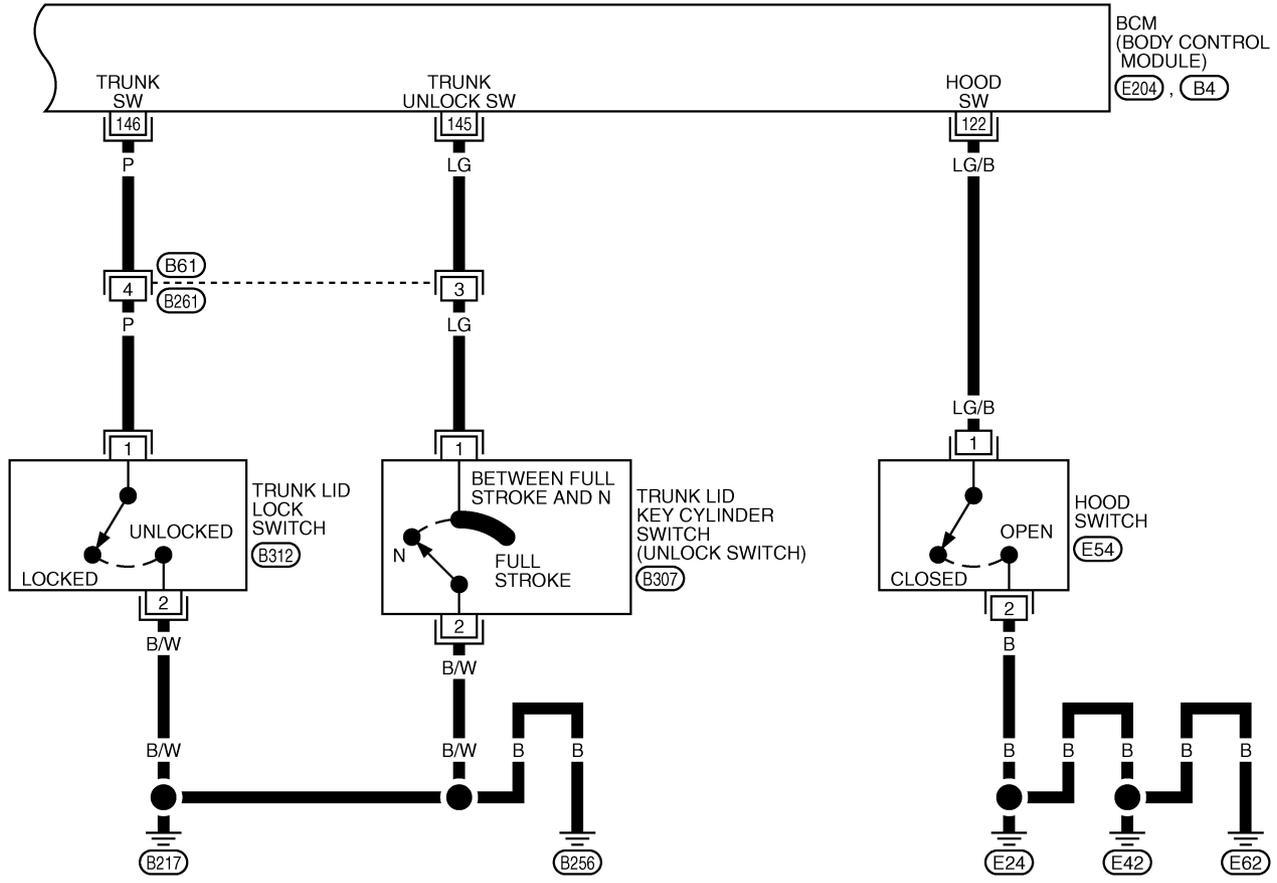
REFER TO THE FOLLOWING.
 (M5), (B21), (B211), (B221)
 -SUPER MULTIPLE JUNCTION (SMJ)
 (M4), (B4) -ELECTRICAL UNITS

TIWM0684E

VEHICLE SECURITY (THEFT WARNING) SYSTEM

BL-VEHSEC-04

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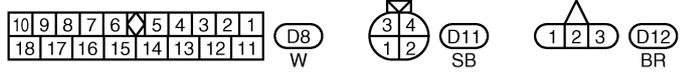
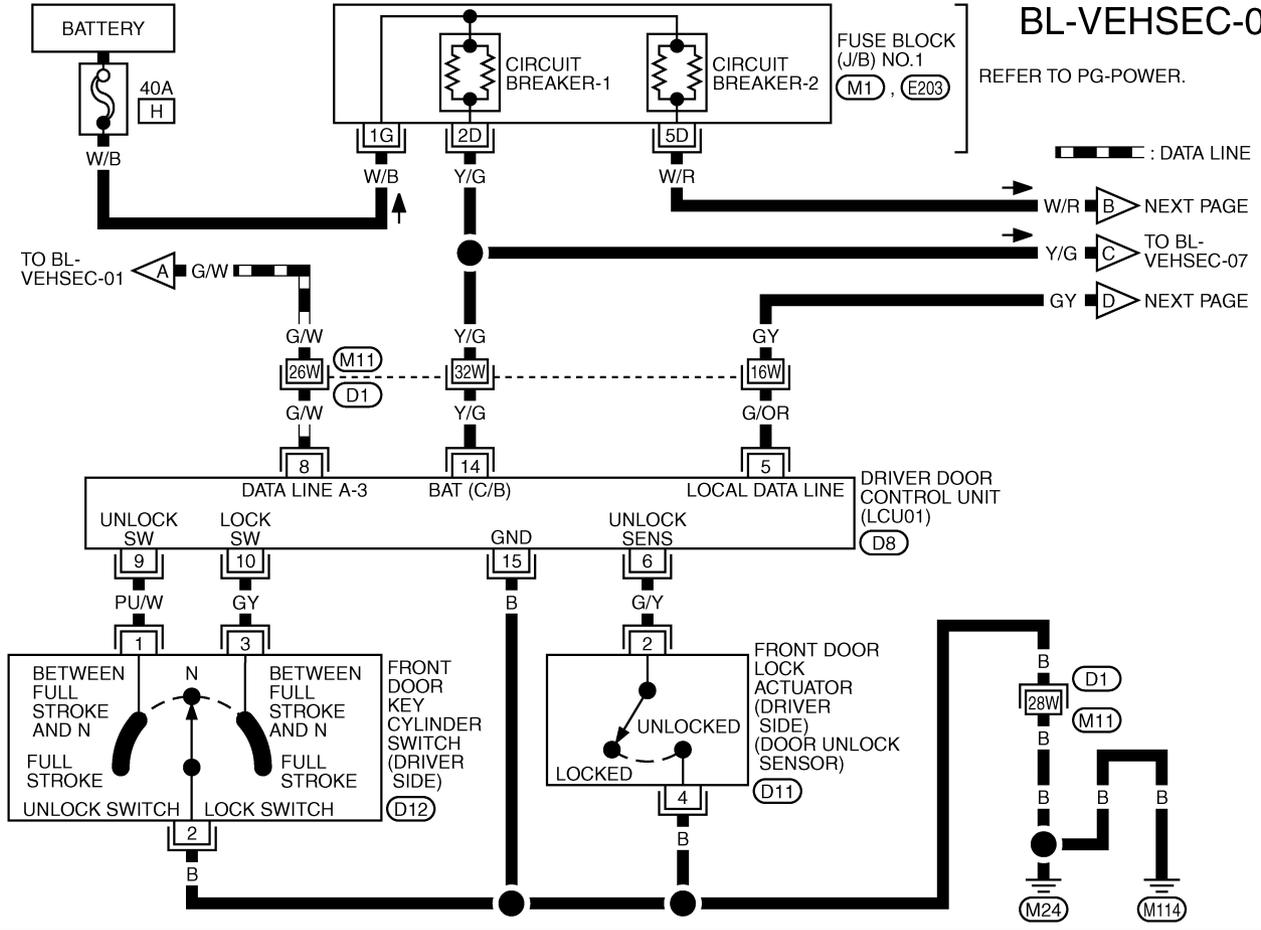
REFER TO THE FOLLOWING.
E204, B4 -ELECTRICAL UNITS

TIWM1555E

VEHICLE SECURITY (THEFT WARNING) SYSTEM

BL-VEHSEC-05

REFER TO PG-POWER.



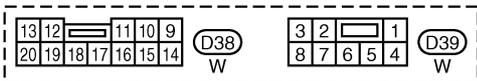
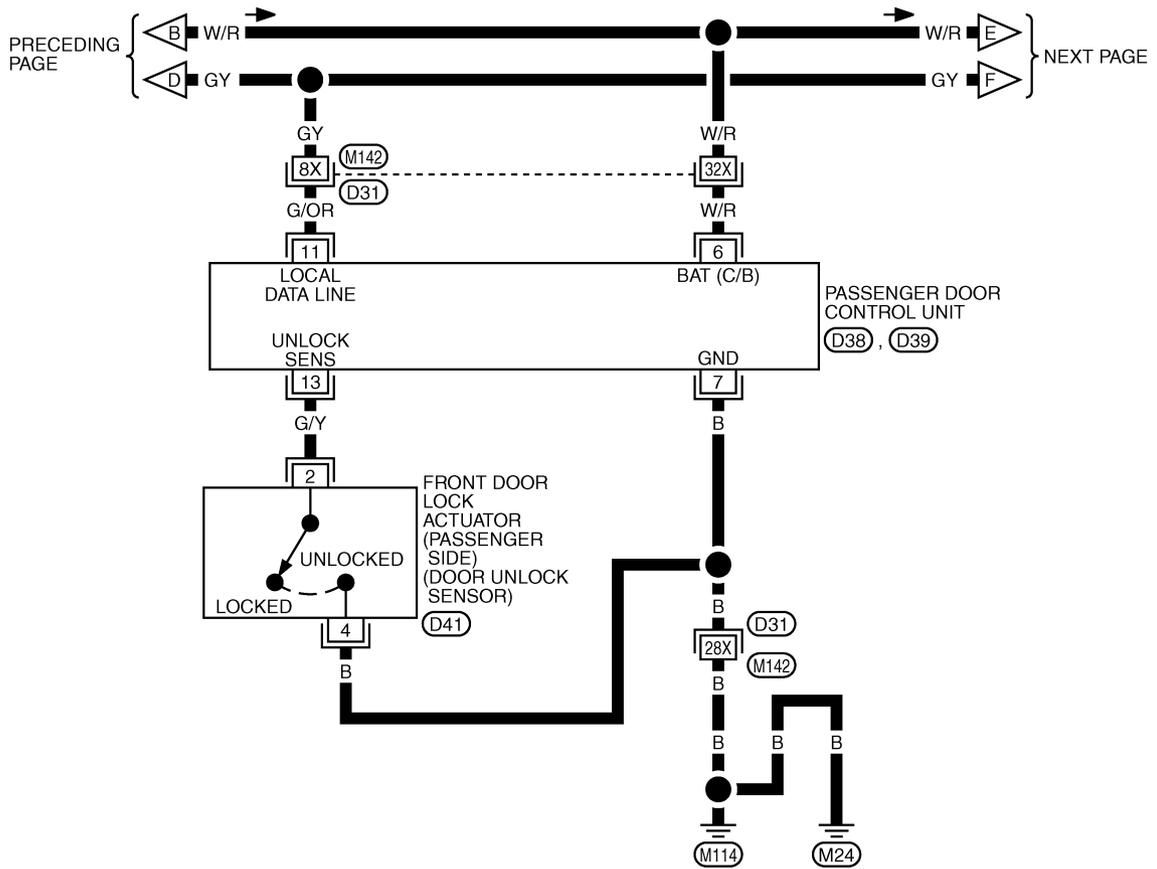
REFER TO THE FOLLOWING.

- (D1) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) , (E203) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWM1556E

VEHICLE SECURITY (THEFT WARNING) SYSTEM

BL-VEHSEC-06



REFER TO THE FOLLOWING.

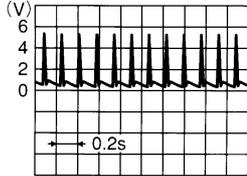
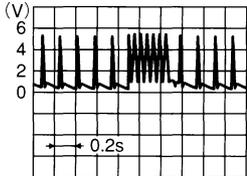
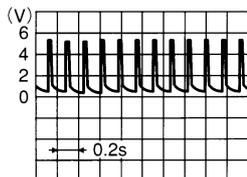
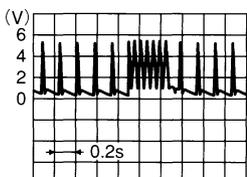
(D31) -SUPER MULTIPLE JUNCTION (SMJ)

TIWM1557E

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Terminal and Reference Value for BCM

NIS000WR

TER-MINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
5	R/Y	Headlamp relay	Input	Lighting switch is turned OFF position	Battery voltage
				Lighting switch is turned ON position	0
27	BR/W	Remote keyless entry receiver (Pulse)	Input/output	Stand-by	 OCC3879D
				Press any of the electronic key switches	 OCC3880D
28	L	Remote keyless entry receiver (Power supply)	Input/output	Stand-by	 OCC3881D
				Press any of the electronic key switches	 OCC3880D
33	W	Rear LH door switch	Input	Door open (ON) → close (OFF)	0 → Battery voltage
37	W/G	Passenger door switch	Input	Door open (ON) → close (OFF)	0 → Battery voltage
44	Y	Remote keyless entry receiver (Ground)	—	—	0
56	B	Ground	—	—	0
60	L/OR	Ignition switch (ACC)	Input	Ignition switch (ACC or ON position)	Battery voltage
65	G	Multifunction switch (security indicator lamp)	Input	Goes OFF → Illuminates (every 2.4 seconds)	Battery voltage → 0
67	G/W	Data line A-3	Input/output	—	—
68	W/B	Ignition switch (ON)	Input	Ignition switch (ON or START position)	Battery voltage
105	Y/L	Power source (Fuse)	Input	—	Battery voltage
113	B	Ground	—	—	0
122	LG/B	Hood switch	Input	Hood open (ON) → close (OFF)	0 → Battery voltage
127	G/W	Horn relay	Input	When panic alarm is operated using electronic key. (ON → OFF)	0 → Battery voltage

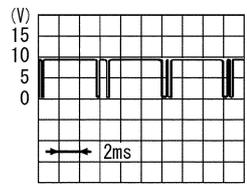
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VEHICLE SECURITY (THEFT WARNING) SYSTEM

TERMINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
142	W/R	Driver door switch	Input	Door open (ON) → close (OFF)	0 → Battery voltage
143	W/L	Rear RH door switch	Input	Door open (ON) → close (OFF)	0 → Battery voltage
145	LG	Trunk lid key cylinder switch (unlock switch)	Input	Trunk lid switch "N" position → between full stroke and "N" position	5 → 0
146	P	Trunk lid lock switch	Input	Trunk lid open (ON) → close (OFF)	0 → Battery voltage

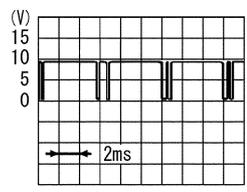
Terminal and Reference Value for Driver Door Control Unit (LCU01)

NIS000WS

TERMINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
5	G/OR	Local communication line	Input/output	—	 <p style="text-align: right; font-size: small;">S1IA0591J</p>
6	G/Y	Door unlock sensor	Output	OFF (Locked) → ON (unlocked)	5 → 0
8	G/W	Data line A-3	Input/output	—	—
9	PU/W	Door key cylinder switch	Input	OFF (Neutral) → ON (Unlocked)	5 → 0
10	GY	Door key cylinder lock switch	Input	OFF (Neutral) → ON (Locked)	5 → 0
14	Y/G	Power source (C/B)	Input	—	Battery voltage
15	B	Ground	—	—	0

Terminal and Reference Value Passenger And Rear LH, RH Door Control Unit

NIS000WT

TERMINAL	WIRE COLOR	ITEM	Signal input/output	CONDITION	VOLTAGE (V) (Approx.)
6	W/R (Y/B)	Power source (C/B)	Input	—	Battery voltage
7	B	Ground	—	—	0
11	G/OR	Local communication line	Input/output	—	 <p style="text-align: right; font-size: small;">S1IA0591J</p>
13	G/Y	Door unlock sensor	Output	OFF (Locked) → ON (Unlocked)	5 → 0

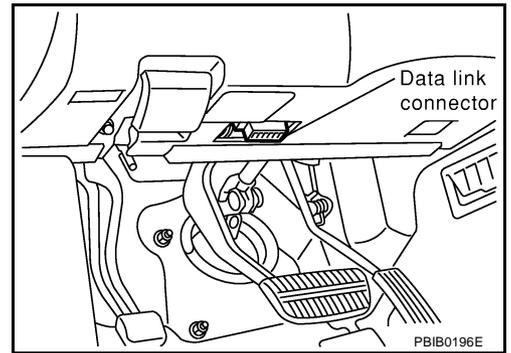
(): Wire color for rear LH, RH door control unit.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

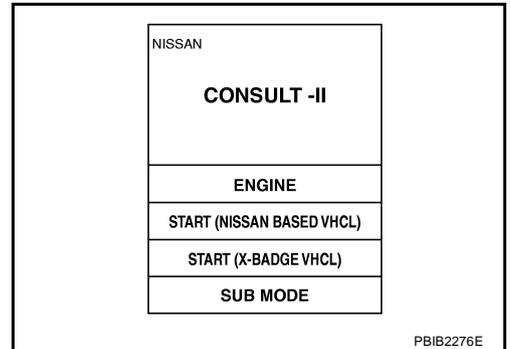
CONSULT-II Function CONSULT-II INSPECTION PROCEDURE

NIS000WU

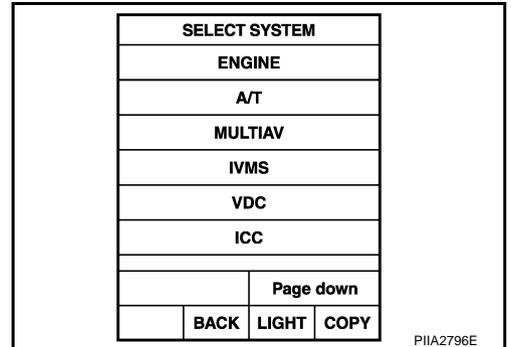
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" and "CONSULT-II CONVERTER" to data link connector.



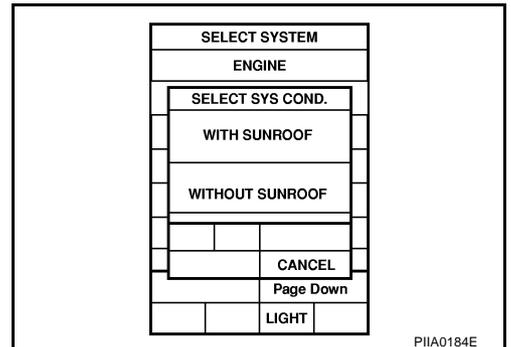
3. Turn ignition switch "ON".
4. Touch "START (NISSAN BASED VHCL)".



5. Touch "IVMS" on the "SELECT SYSTEM" screen.
If "IVMS" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



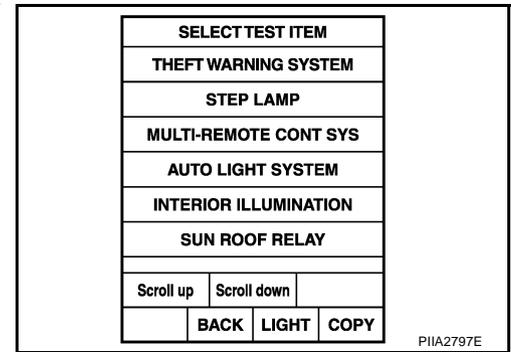
6. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
7. Touch "OK". If the selection is wrong, touch "CANCEL".



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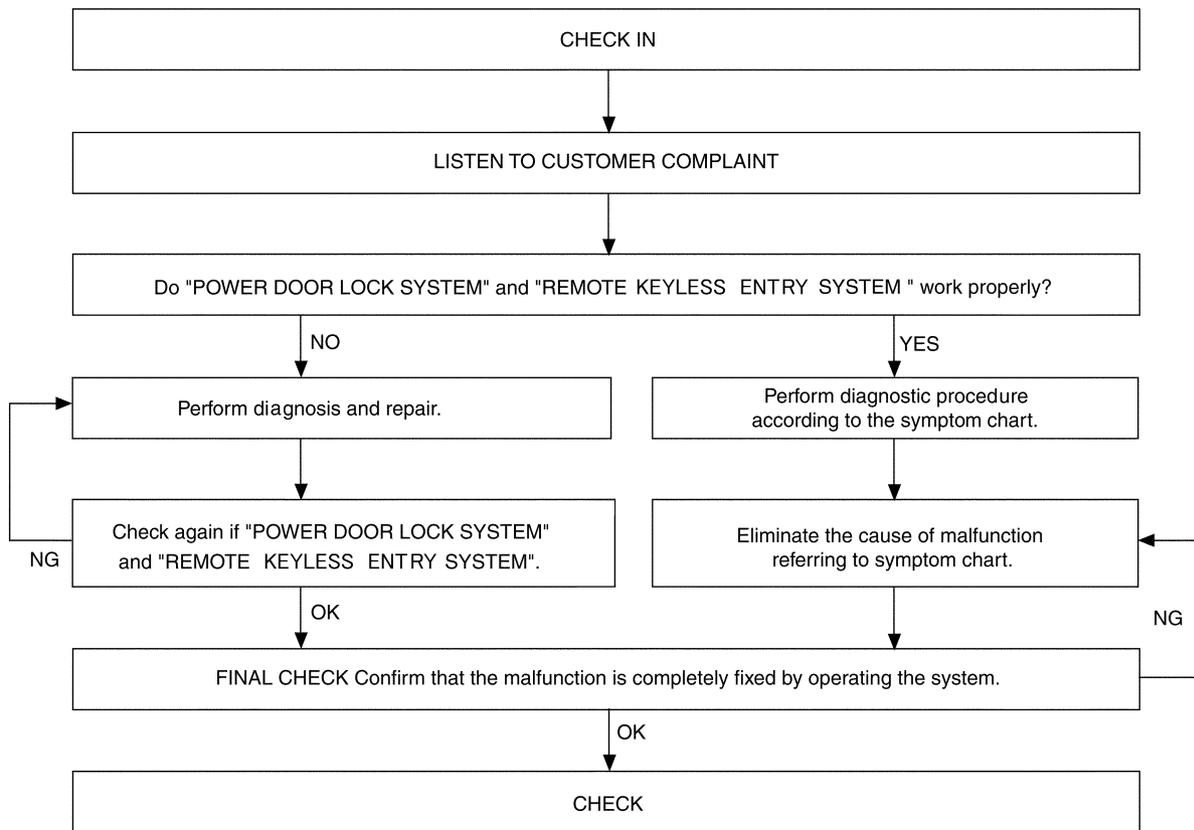
VEHICLE SECURITY (THEFT WARNING) SYSTEM

8. Touch "THEFT WARNING SYSTEM" on the "SELECT TEST ITEM" screen.
 - WORK SUPPORT, DATA MONITOR and ACTIVE TEST are available for the vehicle security system.



Trouble Diagnoses WORK FLOW

NIS000WV



LIA0123E

- "POWER DOOR LOCK SYSTEM" Diagnosis refer to [BL-19, "POWER DOOR LOCK SYSTEM"](#) .
- "REMOTE KEYLESS ENTRY SYSTEM" Diagnosis refer to [BL-53, "REMOTE KEYLESS ENTRY SYSTEM"](#) .

VEHICLE SECURITY (THEFT WARNING) SYSTEM

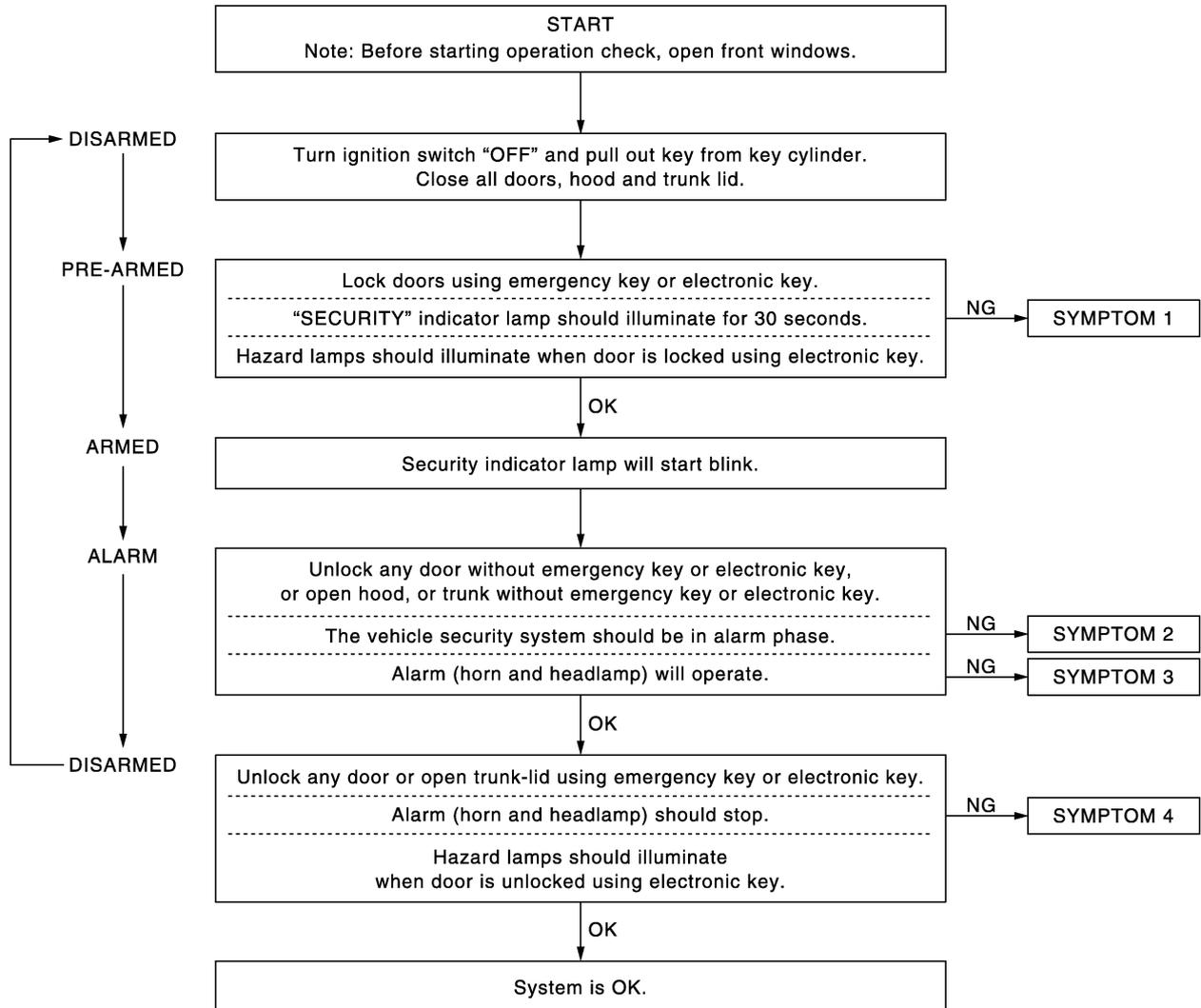
NIS000WW

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.

NOTE:

Before performing PRELIMINARY CHECK, disconnect IVCS unit connectors not to operate INFINITI communicator.



PIIA2861E

After performing preliminary check, go to symptom chart.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Symptom Chart

NIS000WX

PROCEDURE		Diagnostic procedure
SYMPTOM		
1	Vehicle security system cannot be set by	Diagnostic Procedure 1 (Check door, hood and trunk room lamp switch) Refer to BL-173, "Diagnostic Procedure 1" .
		Diagnostic Procedure 3 (Check door unlock sensor) Refer to BL-179, "Diagnostic Procedure 3" .
		Diagnostic Procedure 5 (Check trunk lid key unlock signal) Refer to BL-184, "Diagnostic Procedure 5" .
		Diagnostic Procedure 8 (Check ACC power supply) Refer to BL-188, "Diagnostic Procedure 8" .
		If the above systems are "OK", replace BCM.
	Door key cylinder	Diagnostic Procedure 4 (Check door key cylinder switch) Refer to BL-181, "Diagnostic Procedure 4" .
		If the above systems are "OK", check driver door control unit (LCU01).
Security indicator does not turn "ON".		Diagnostic Procedure 2 (Check security indicator lamp) Refer to BL-178, "Diagnostic Procedure 2" .
		If the above systems are "OK", replace BCM.
2	*1 Vehicle security system does not alarm when	Diagnostic Procedure 1 (Check door, hood and trunk room lamp switch) Refer to BL-173, "Diagnostic Procedure 1" .
		If the above systems are "OK", replace BCM.
	Any door is unlocked without using electronic key	Diagnostic Procedure 3 (Check door unlock sensor) Refer to BL-179, "Diagnostic Procedure 3" .
		If the above system is "OK", check driver door control unit (LCU01) or door control unit.
3	Vehicle security alarm does not activate.	Diagnostic Procedure 6 (Check theft warning horn alarm) Refer to BL-185, "Diagnostic Procedure 6" .
		If the above systems are "OK", check horn system. Refer to WW-41, "HORN" .
		If the above systems are "OK", replace BCM.
	Headlamp alarm	Diagnostic Procedure 7 (Check headlamp alarm) Refer to BL-187, "Diagnostic Procedure 7" .
		If the above systems are "OK", replace BCM.
4	Vehicle security system cannot be canceled by	Diagnostic Procedure 4 (Check door key cylinder switch) Refer to BL-181, "Diagnostic Procedure 4" .
		If the above systems are "OK", check driver door control unit (LCU01).
	Trunk lid key cylinder	Diagnostic Procedure 5 (Check trunk lid key cylinder switch) Refer to BL-184, "Diagnostic Procedure 5" .
		If the above systems are "OK", replace BCM.

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

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 1

NIS000WY

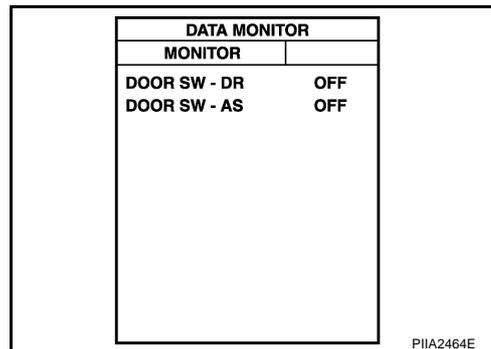
1 – 1 CHECK FRONT DOOR SWITCH

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Ⓟ With CONSULT-II

Check front door switch ("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 front door switch in "SWITCH MONITOR" mode. Refer to [BL-82, "SWITCH MONITOR"](#).

OK or NG

- OK >> Front door switch is OK.
- NG >> GO TO 2

2. CHECK FRONT DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect front door switch connector and BCM connector.
3. Check continuity between front door switch connector B20 (driver), B220 (passenger) terminal 1 and BCM connector M4 (passenger), B4 (driver) terminal 37, 142.

Driver side door switch

1 (W/R) – 142 (W/R) : Continuity should exist.

Passenger side door switch

1 (W/G) – 37 (W/G) : Continuity should exist.

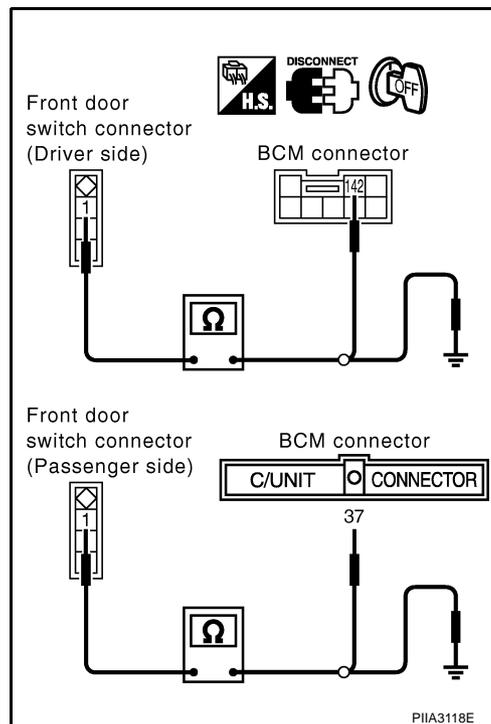
4. Check continuity between front door switch connector B20 (driver), B220 (passenger) terminal 1 and ground.

Each door switch

1 (W/R, W/G) – Ground : Continuity should not exist.

OK or NG

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



VEHICLE SECURITY (THEFT WARNING) SYSTEM

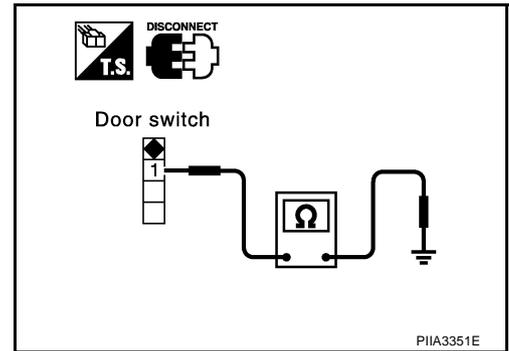
3. CHECK FRONT DOOR SWITCH

Check continuity between front door switch terminal 1 and ground part of door switch.

Terminal	Front door switch	Continuity
1	Pushed	No
	Released	Yes

OK or NG

- OK >> Check door switch case ground. If door switch case ground is OK, replace BCM.
- NG >> Replace malfunction front door switch.



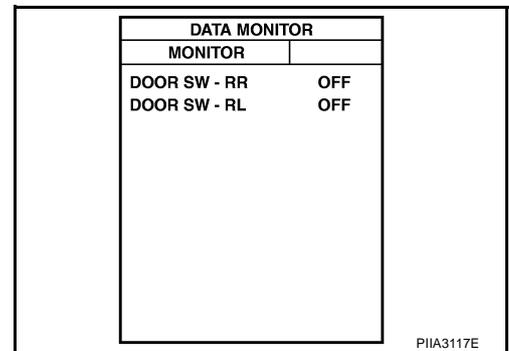
1 – 2 CHECK REAR DOOR SWITCH

1. CHECK REAR DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check rear door switch (“DOOR SW-RR” and “DOOR SW-RL”) in “DATA MONITOR” mode with CONSULT-II.

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



Without CONSULT-II

Check front door switch in “SWITCH MONITOR” mode. Refer to [BL-82, "SWITCH MONITOR"](#) .

OK or NG

- OK >> Rear door switch is OK.
- NG >> GO TO 2

VEHICLE SECURITY (THEFT WARNING) SYSTEM

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM connector.
3. Check continuity between rear door switch connector D62 (rear LH), D82 (rear RH) terminal 1 and BCM connector M4 (rear LH), B4 (rear RH) terminal 33, 143.

Rear door switch LH

1 (W) – 33 (W) : Continuity should exist.

Rear door switch RH

1 (W) – 143 (W/L) : Continuity should exist.

4. Check continuity between rear door switch connector D62, D82 terminal 1 and ground.

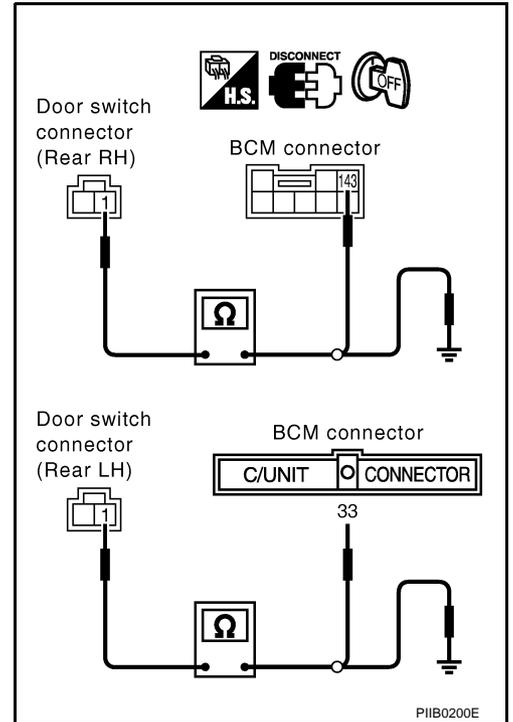
Each door switch

1 (W) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK REAR DOOR SWITCH GROUND CIRCUIT

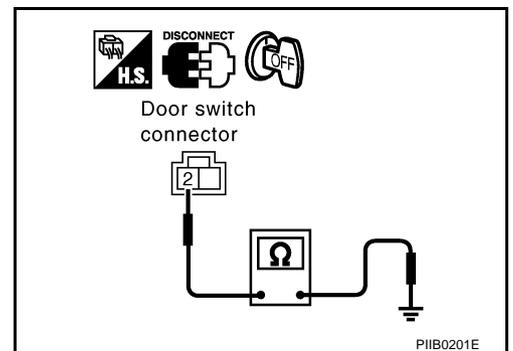
1. Turn ignition switch OFF.
2. Disconnect rear door switch and BCM connector.
3. Check continuity between rear door switch connector D62 (rear LH), D82 (rear RH) terminal 2 and ground.

2 (B) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 4.

NG >> Repair or replace harness.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

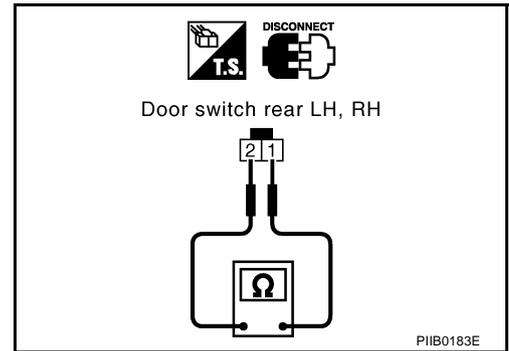
4. CHECK FRONT DOOR SWITCH

Check continuity between rear door switch (rear LH), (rear RH) terminals 1 and 2.

Terminal		Condition of rear door	Continuity
1	2	Close	No
		Open	Yes

OK or NG

- OK >> Door lock assembly rear is OK, replace BCM.
 NG >> Replace malfunction door lock assembly rear (door switch).



1 – 3 CHECK HOOD SWITCH

1. CHECK HOOD SWITCH INPUT SIGNAL

With CONSULT-II

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

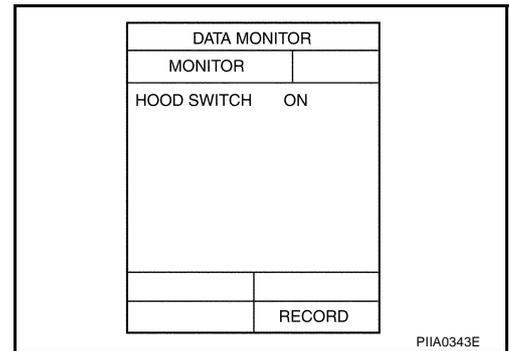
- When hood is open : HOOD SW ON**
When hood is closed : HOOD SW OFF

Without CONSULT-II

Check hood switch in Switch monitor mode.
 Refer to Remote keyless entry system [BL-82, "SWITCH MONITOR"](#)

OK or NG

- OK >> Hood switch is OK.
 NG >> GO TO 2.



2. CHECK HOOD SWITCH CONDITION

Check hood switch and hood fitting condition.

OK or NG

- OK >> GO TO 3.
 NG >> Adjust installation of hood switch.

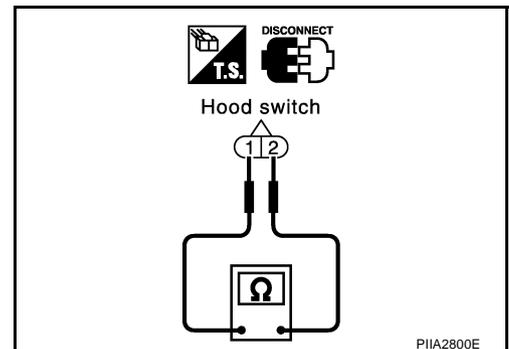
3. CHECK HOOD SWITCH

1. Turn ignition switch OFF.
2. Disconnect hood switch connector.
3. Check continuity between hood switch terminals 1 and 2.

Terminal		Condition of hood	Continuity
1	2	Closed	No
		Open	Yes

OK or NG

- OK >> Check the following. Repair or replace following item, when there is a malfunction.
- Hood switch ground circuit
 - Harness for open or short between hood switch and BCM
- NG >> Replace hood switch.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

1 – 4 CHECK TRUNK LID LOCK SWITCH

1. CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL

Ⓟ With CONSULT-II

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

When trunk lid is open : TRUNK SW ON

When trunk lid is closed : TRUNK SW OFF

⊗ Without CONSULT-II

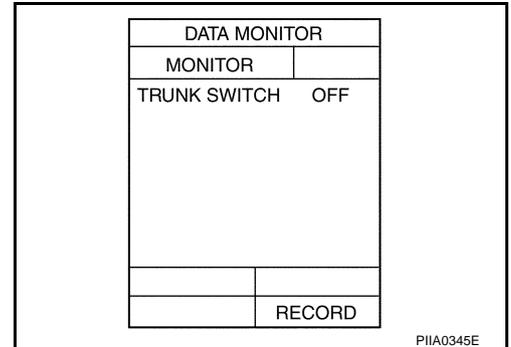
Check trunk lid lock switch in Switch monitor mode.

Refer to Remote keyless entry system [BL-82. "SWITCH MONITOR"](#)

OK or NG

OK >> Trunk lid lock switch is OK.

NG >> GO TO 2.



2. CHECK TRUNK LID LOCK SWITCH

1. Turn ignition switch OFF.
2. Disconnect trunk lid lock switch connector.
3. Check continuity between trunk lid lock switch terminals 1 and 2.

Terminal		Condition of trunk lid	Continuity
1	2	Closed	No
		Open	Yes

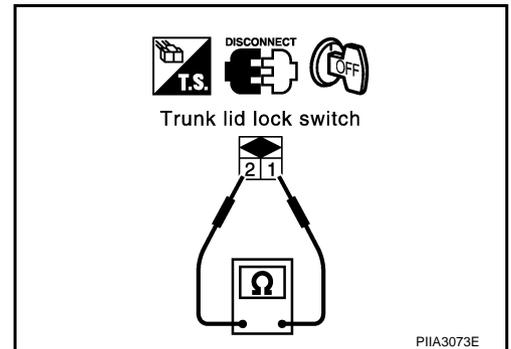
(): with auto trunk

OK or NG

OK >> Check the following. Repair or replace following item, when there is a malfunction.

- Trunk lid lock switch ground circuit
- Harness for open or short between trunk lid lock switch and BCM

NG >> Replace trunk lid lock switch.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 2 CHECK SECURITY INDICATOR LAMP

NIS000WZ

1. INDICATOR LAMP ACTIVE TEST

ⓐ With CONSULT-II

Check "INDICATOR LAMP" in "ACTIVE TEST" mode with CONSULT-II.

Perform operation shown on display.
Indicator lamp should illuminate.

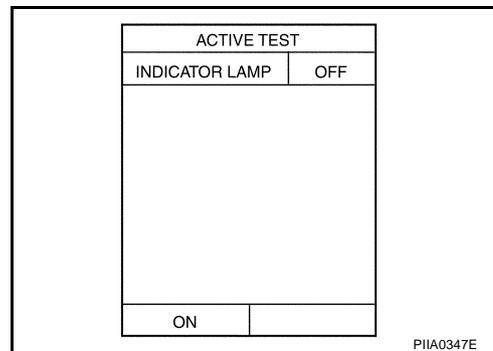
NOTE:

If CONSULT-II is not available, skip this procedure and go to the next procedure.

OK or NG

OK >> Security indicator lamp is OK.

NG >> GO TO 2.



2. CHECK INDICATOR LAMP

1. Turn ignition switch OFF.
2. Check indicator lamp condition.

OK or NG

OK >> GO TO 3.

NG >> Replace indicator lamp.

3. CHECK POWER SUPPLY CIRCUIT FOR INDICATOR LAMP

1. Disconnect multifunction switch (security indicator lamp) connector.
2. Check voltage between multifunction switch (security indicator lamp) connector M83 terminal 20 and ground.

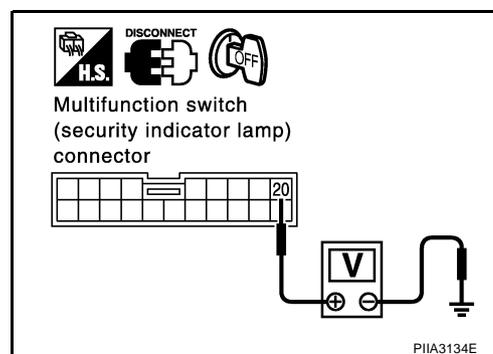
20 (Y/G) – Ground : Battery voltage.

OK or NG

OK >> Check harness for open or short between multifunction switch (security indicator lamp) and BCM.

NG >> Check the following.

- 10A fuse [No. 6, located in fuse block (J/B) No. 1]
- Harness for open or short between multifunction switch (security indicator lamp) and fuse.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 3 CHECK DOOR UNLOCK SENSOR

NIS000X0

1. CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

Ⓟ With CONSULT-II

Check door unlock sensor "LOCK SIG" in "DATA MONITOR" mode with CONSULT-II.

When door is locked : LOCK SIG LOCK
When door is unlocked : LOCK SIG UNLK

ⓧ Without CONSULT-II

Check door lock knob operation in Switch monitor mode.
Refer to Remote keyless entry system [BL-82, "SWITCH MONITOR"](#)

OK or NG

- OK >> Door unlock sensor is OK.
- NG >> GO TO 2. (Diagnose the malfunctioning door parts in accordance with the following charts.)

DATA MONITOR	
MONITOR	
LOCK SIG-DR	UNLK
LOCK SIG-AS	UNLK
LOCK SG-RR/RH	UNLK
LOCK SG-RR/LH	UNLK
RECORD	

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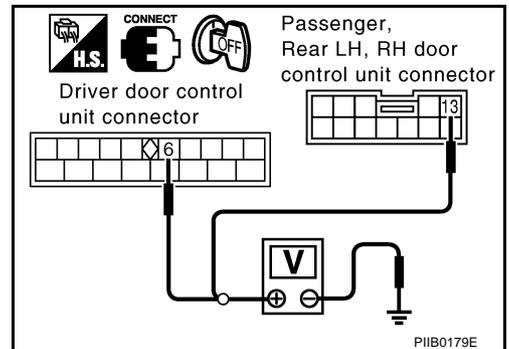
2. CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

1. Turn ignition switch "OFF".
2. Disconnect door lock actuator connector.
3. Check voltage between each door control unit connector and ground.

Door control unit connector		Terminal (Wire color)		Voltage (V) (Approx.)
		(+)	(-)	
Front door	Driver side: D8	6 (G/Y)	Ground	5
	Passenger side: D38	13 (G/Y)		
Rear door	LH: D58	13 (G/Y)	Ground	5
	RH: D78			

OK or NG

- OK >> GO TO 3.
- NG >> Replace malfunctioning door control unit.

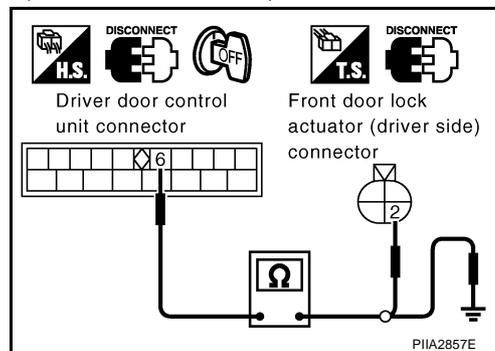


VEHICLE SECURITY (THEFT WARNING) SYSTEM

3. CHECK DOOR UNLOCK SENSOR SIGNAL CIRCUIT

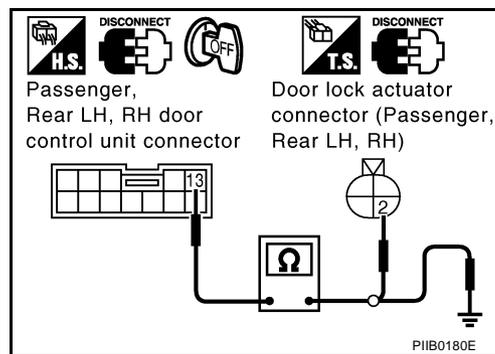
1. Disconnect door control unit connector.
2. Check continuity between door control unit and door lock actuator (door unlock sensor) connectors.

Connector	Terminal (wire color)	Connector	Terminal (Wire color)	Continuity
Driver side: D8	6 (G/Y)	D11	2 (G/Y)	Yes
Passenger side: D38	13 (G/Y)	D41		
Rear LH: D58		D61		
Rear RH: D78		D81		



3. Check continuity between door control unit and ground.

Connector	Terminal (wire color)	Continuity
Driver side: D8	6 (G/Y)	No
Passenger side: D38	13 (G/Y)	
Rear LH: D58		
Rear RH: D78		



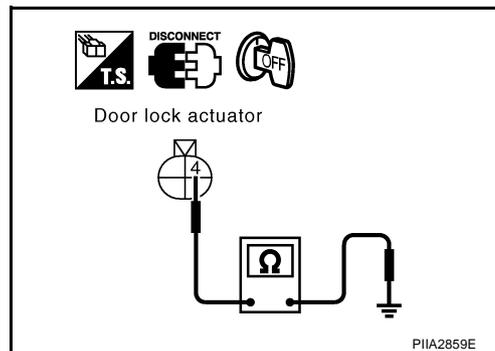
OK or NG

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

4. CHECK DOOR UNLOCK SENSOR GROUND CIRCUIT

1. Turn ignition switch "OFF".
2. Disconnect door lock actuator connector.
3. Check continuity between each door control unit and ground.

Connector	Terminal (wire color)	Continuity
Driver side: D11	4 (B)	Yes
Passenger side: D41		
Rear LH: D61		
Rear RH: D81		



OK or NG

- OK >> Replace door lock actuator (door unlock sensor).
 NG >> Repair or replace harness.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 4

NIS000X1

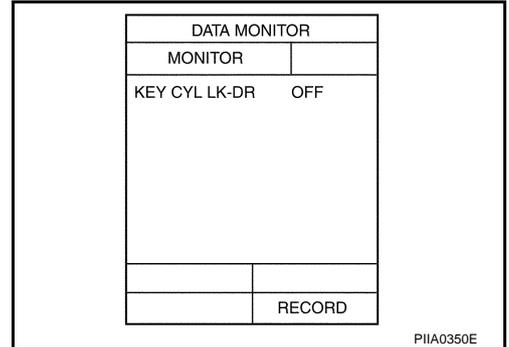
4-1 CHECK DOOR KEY CYLINDER LOCK SWITCH

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK SIGNAL)

Ⓟ With CONSULT-II

Check front door key cylinder switch (driver side) "KEY CYL LK-DR" in "DATA MONITOR" mode with CONSULT-II.

"KEY CYL LK-DR" should be "ON" when key inserted in door key cylinder was turned to lock.



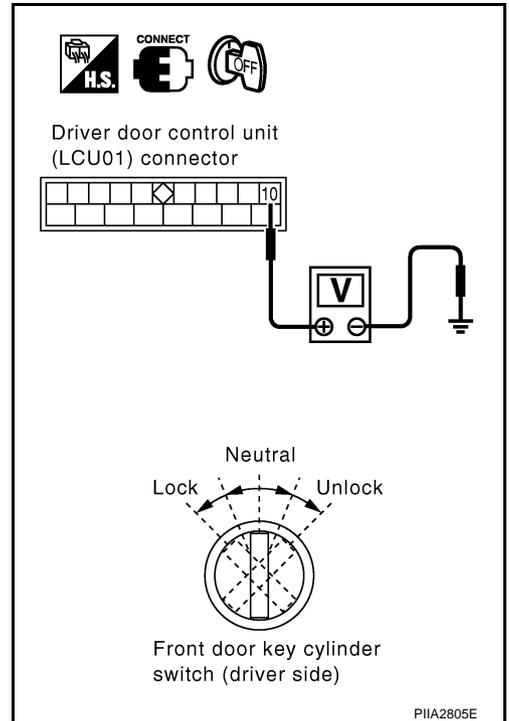
ⓧ Without CONSULT-II

Check voltage between driver door control unit (LCU01) connector and ground.

Connector	Terminal (wire color)		Key position	Voltage (V) (Approx.)
	(+)	(-)		
D8	10 (GY)	Ground	Neutral / Unlock	5
			Lock	0

OK or NG

- OK >> Front door key cylinder switch (driver side) "lock" is OK.
- NG >> GO TO 2.



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VEHICLE SECURITY (THEFT WARNING) SYSTEM

2. CHECK DOOR KEY CYLINDER SWITCH

1. Turn ignition switch "OFF".
2. Disconnect front door key cylinder switch (driver side) connector.
3. Check continuity between front door key cylinder switch (driver side) terminals 2 and 3.

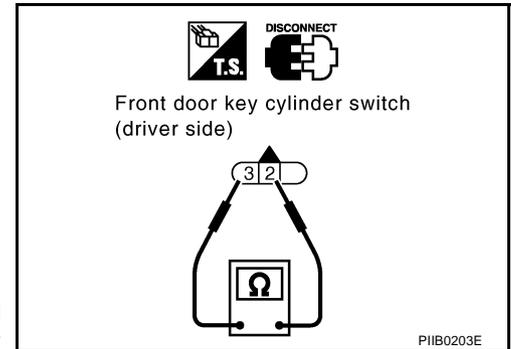
Terminal		Condition	Continuity
2	3	Neutral / Unlock	No
		Lock	Yes

OK or NG

OK >> Check the following.

- Front door key cylinder switch (driver side) ground circuit
- Harness for open or short between driver door control unit (LCU01) and front door key cylinder switch (driver side)

NG >> Replace front door key cylinder switch (driver side).



VEHICLE SECURITY (THEFT WARNING) SYSTEM

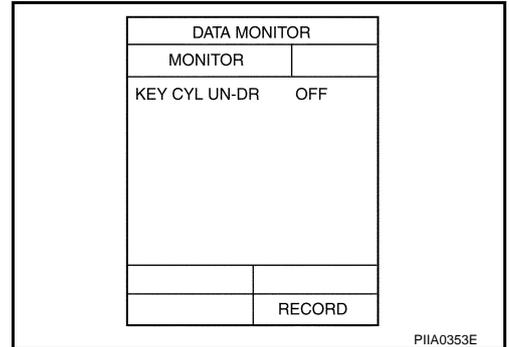
4-2 CHECK DOOR KEY CYLINDER UNLOCK SWITCH

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (UNLOCK SIGNAL)

Ⓟ With CONSULT-II

Check front door key cylinder switch (driver side) "KEY CYL UN-DR" in "DATA MONITOR" mode with CONSULT-II.

"KEY CYL UN-DR" should be "ON" when key inserted in driver door key cylinder was turned to unlock.



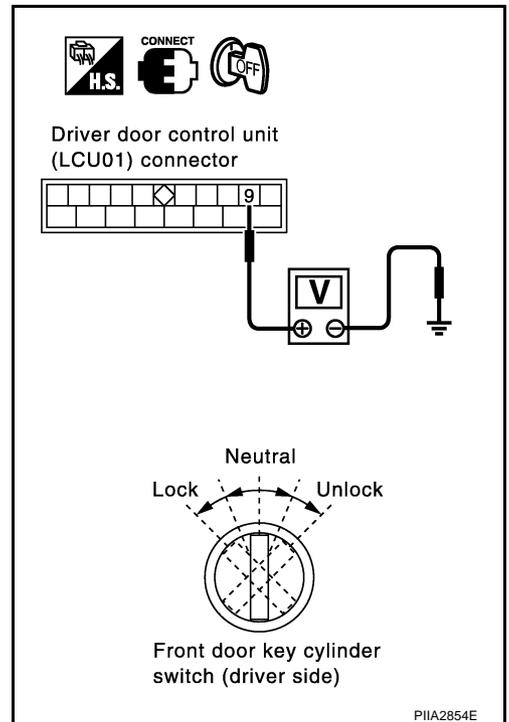
ⓧ Without CONSULT-II

Check voltage between driver door control unit (LCU01) connector and ground.

Connector	Terminal (wire color)		Key position	Voltage (V) (Approx.)
	(+)	(-)		
D8	9 (PU/W)	Ground	Neutral / Lock	5
			Unlock	0

OK or NG

- OK >> Front door key cylinder switch (driver side) (unlock) is OK.
- NG >> GO TO 2.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

2. CHECK DOOR KEY CYLINDER SWITCH

1. Turn ignition switch "OFF".
2. Disconnect front door key cylinder switch (driver side) connector.
3. Check continuity between front door key cylinder switch (driver side) terminals 1 and 2.

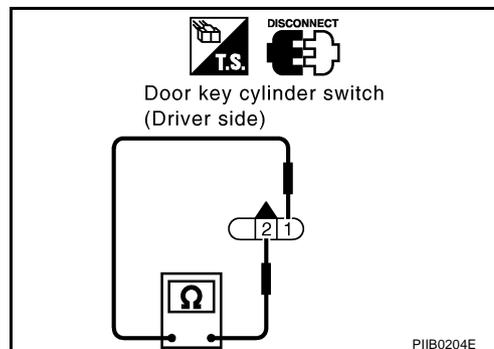
Terminal		Condition	Continuity
1	2	Neutral / Lock	No
		Unlock	Yes

OK or NG

OK >> Check the following.

- Front door key cylinder switch (driver side) ground circuit
- Harness for open or short between driver door control unit (LCU01) and front door key cylinder switch (driver side)

NG >> Replace front door key cylinder switch (driver side).



Diagnostic Procedure 5 CHECK TRUNK LID KEY UNLOCK SIGNAL

NIS000X2

1. CHECK TRUNK KEY CYLINDER SWITCH INPUT SIGNAL (UNLOCK SIGNAL)

With CONSULT-II

Check trunk lid key cylinder switch "TRUNK UNLK SW" in "DATA MONITOR" mode with CONSULT-II.

- When key in key cylinder is at "NEUTRAL" position,

TRUNK UNLK SW: OFF

- When key is "UNLOCK" position,

TRUNK UNLK SW: ON

Without CONSULT-II

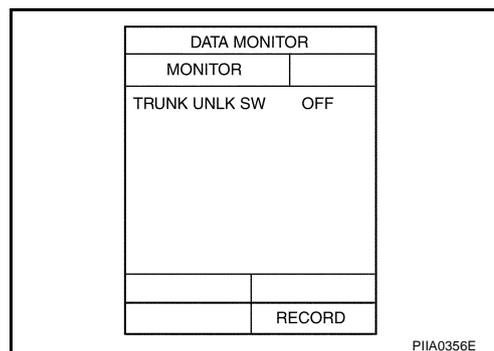
Check trunk lid key cylinder switch in Switch monitor mode.

Refer to Remote keyless entry system [BL-82](#), "SWITCH MONITOR"

OK or NG

OK >> Trunk lid key cylinder switch is OK.

NG >> GO TO 2.



2. CHECK TRUNK KEY CYLINDER SWITCH (UNLOCK SWITCH)

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

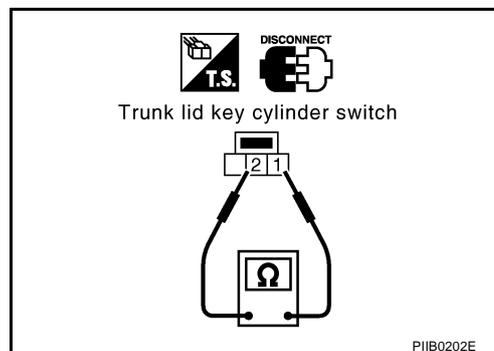
Terminals		Condition	Continuity
1	2	Neutral	No
		Unlocked	Yes

OK or NG

OK >> Check the following.

- Trunk lid key cylinder switch ground circuit
- Harness for open or short between trunk lid key cylinder switch and BCM

NG >> Replace trunk lid key cylinder switch.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 6 CHECK THEFT WARNING HORN ALARM

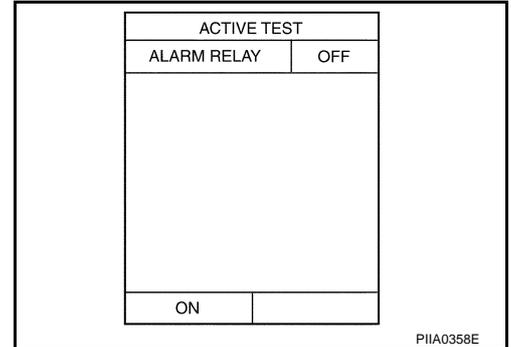
NIS000X3

1. CHECK VEHICLE SECURITY HORN ALARM OPERATION

④ With CONSULT-II

- Check horn relay "ALARM RELAY" in "ACTIVE TEST" mode with CONSULT-II.
- Perform operation shown on display.

Theft warning horn alarm should operate.



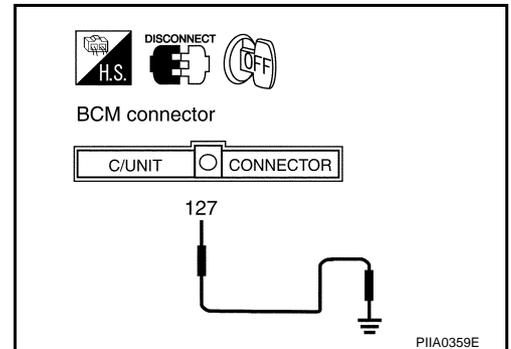
⊗ Without CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Apply ground to BCM connector E204 terminal 127.

Does horn alarm activate?

OK or NG

- OK >> Horn alarm is OK.
- NG >> GO TO 2.



2. CHECK SECURITY HORN RELAY

Check horn relay condition.

OK or NG

- OK >> GO TO 3.
- NG >> Replace horn relay.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

3. CHECK POWER SUPPLY FOR HORN RELAY

1. Turn ignition switch OFF.
2. Disconnect horn relay connector.
3. Check voltage between horn relay connector E3-5 terminal 2 and ground.

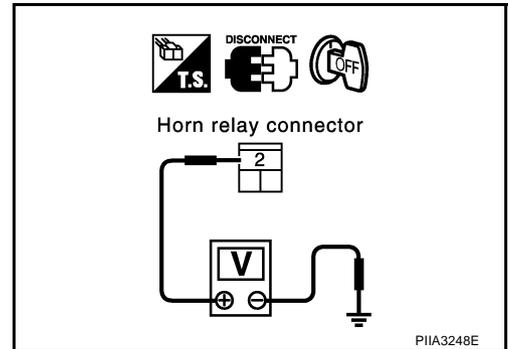
2 – Ground : **Battery voltage.**

OK or NG

OK >> GO TO 4.

NG >> Check the following.

- 15A fuse [No. 56, located in the fuse, fusible link and relay block (J/B)]
- Harness for open or short between horn relay and fuse



4. CHECK HORN RELAY CIRCUIT

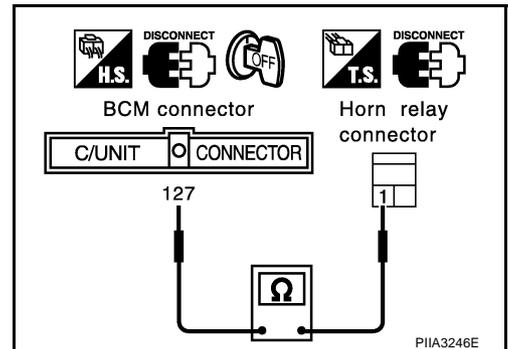
1. Disconnect BCM connector.
2. Check continuity between BCM connector E204 terminal 127 and horn relay connector E3-5 terminals 1.

127 (G/W) – 1 (G/W) : **Continuity should exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair or replace harness.



5. CHECK HORN RELAY CIRCUIT

1. Disconnect horn relay and security horn connector.
2. Check continuity between horn relay connector E3-5 terminal 3 and horn connector E43,E63 terminal 1.

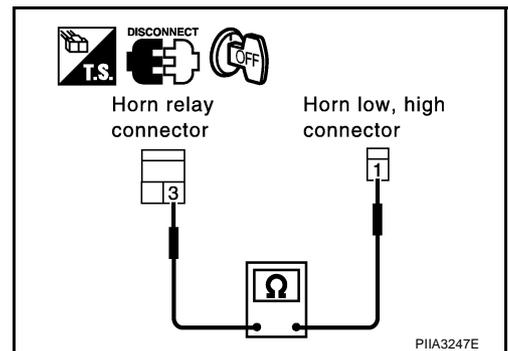
3 – 1 (G) : **Continuity should exist.**

3 – 1 (G/OR) : **Continuity should exist.**

OK or NG

OK >> Replace horn.

NG >> Repair or replace harness.



VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 7

NIS000X4

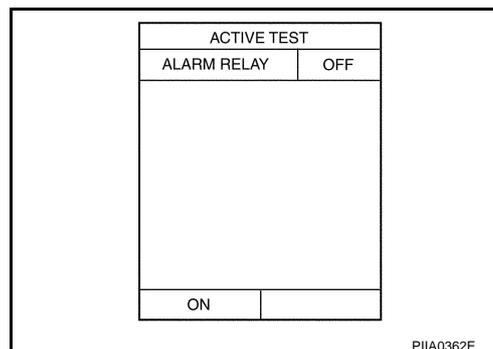
CHECK THEFT WARNING HEADLAMP ALARM

1. CHECK VEHICLE SECURITY HEADLAMP ALARM OPERATION

Ⓟ With CONSULT-II

- Check headlamp relay "ALARM RELAY" in "ACTIVE TEST" mode with CONSULT-II.
- Perform operation shown on display.

Theft warning headlamp alarm should operate.



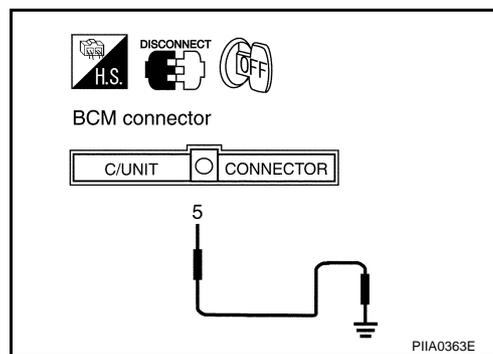
ⓧ Without CONSULT-II

1. Disconnect BCM connector.
2. Apply ground to BCM connector M4 terminal 5.

Does headlamp alarm activate?

OK or NG

- OK >> Headlamp alarm is OK.
- NG >> GO TO 2.



2. CHECK HEADLAMP RELAY 1 AND 2

Does headlamp come on when turning lighting switch "ON"?

Yes or No

- Yes >> Check harness for open or short between each headlamp relay and BCM.
- No >> Check headlamp system. Refer to [LT-5, "HEADLAMP \(FOR USA\)"](#), [LT-36, "HEADLAMP \(FOR CANADA\) - DAYTIME LIGHT SYSTEM -"](#).

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Diagnostic Procedure 8 CHECK ACC POWER SUPPLY

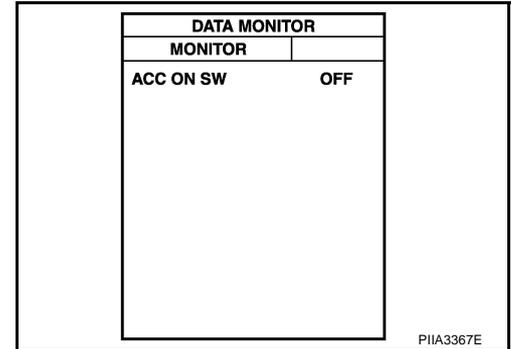
NIS000X5

1. CHECK ACC POWER

Ⓟ With CONSULT-II

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

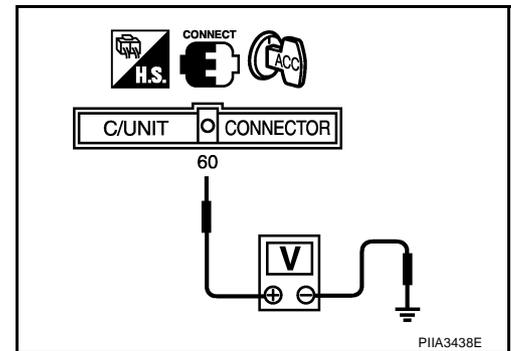
Monitor item	Condition	
ACC ON SW	Ignition switch ACC or ON position	: ON
	Ignition switch OFF position	: OFF



⊗ Without CONSULT-II

Check voltage between BCM connector and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M4	60 (L/OR)	Ground	ACC or ON	Battery voltage
			OFF	0



OK or NG

OK >> ACC power is OK.

NG >> Check the following.

- 10A fuse [No. 21, located in fuse block (J/B)No.1]
- Harness for open or short between BCM and fuse

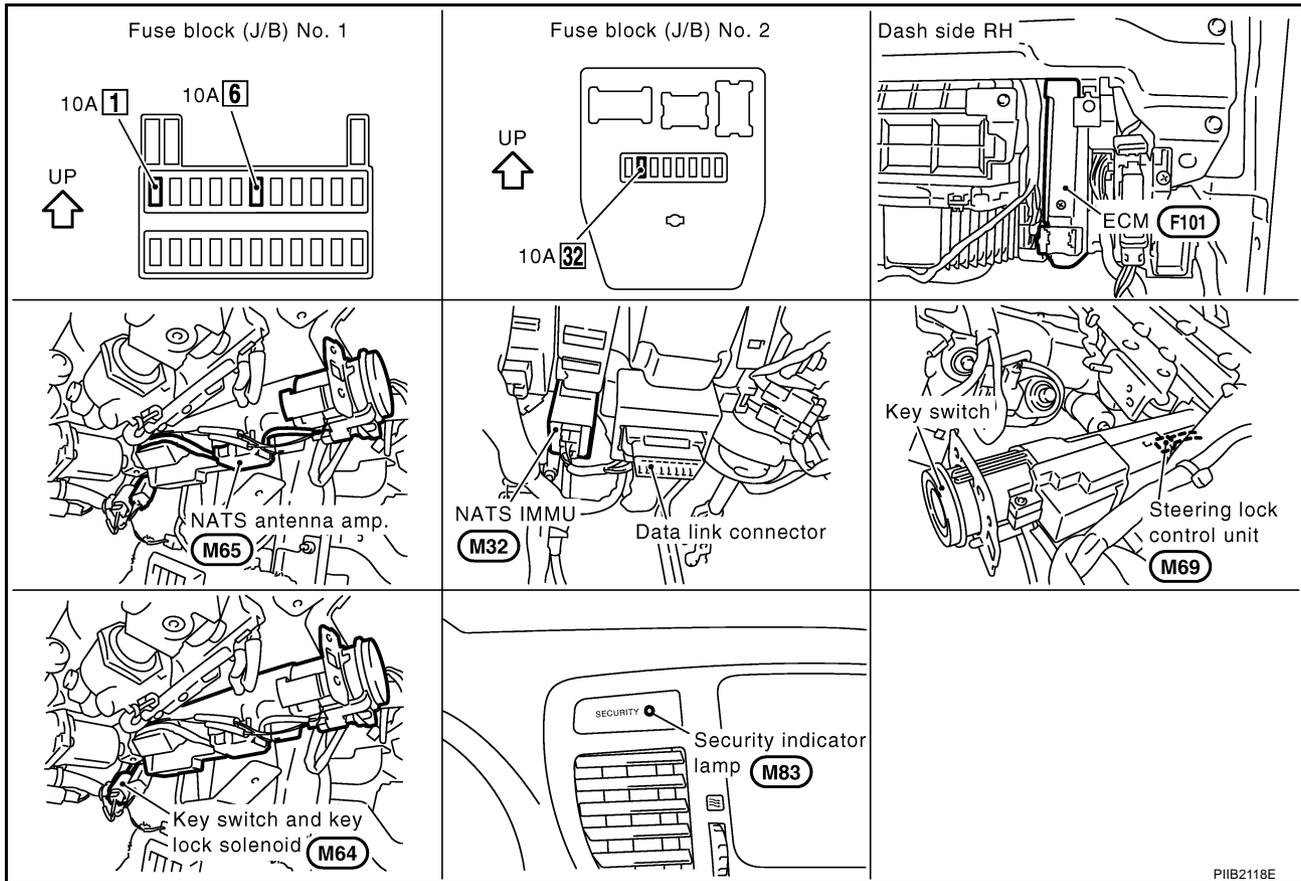
ELECTRONIC KEY SYSTEM

ELECTRONIC KEY SYSTEM

PFP:80561

Component Parts and Connector Location

NIS000X6



System Description

NIS000X7

- Every electronic key (including transponder) has its own key ID No. However, only an electronic key with the key ID registered in the NATS IMM and ECM can turn ON while inserted in the ignition key cylinder, allowing the engine to start.
- An ignition key (electronic key) with straight contour is adopted to prevent the electronic key from vehicle theft by abuse of duplicated key etc.
- If the batteries of the vehicle and handheld transmitter are discharged, using the emergency key integrated into the electronic key, the driver/passenger doors and trunk lid can be operated for open/close, and the steering wheel lock can be unlocked.

NOTE:

The engine cannot be started with an emergency key.

- If any of ECM, NATS IMM, steering lock control unit (integrated in the key cylinder) or ignition key (electronic key) has been replaced, or if the trouble diagnosis requires additional registration, mandatory re-registration procedure and registration of the electronic key ID code (if an ignition-key is added) are required.

NOTE:

All the keys kept by the vehicle owner re-registration of the key ID (electronic key) is necessary.

- If the vehicle owner requires, electronic key ID codes can be registered for up to four keys (including the electronic key). In this case, the key IDs shall also be registered.

NOTE:

- The key ID code for the key equipped on the vehicle have already been registered at factory.
- When conducting key ID registration for repair, part replacement, or electronic key addition, even the registered ignition (standard) key shall be registered again. Therefore, collect all keys from the vehicle owner.

ELECTRONIC KEY SYSTEM

SECURITY INDICATOR

Condition of security indicator	Key	Operation or condition			
		Ignition switch: ON position	Ignition switch: ACC position	Ignition switch: OFF position (electronic key is inserted.)	Ignition switch: OFF position (electronic key is not inserted.)
	Electronic key	Lamp OFF	Lamp OFF	Lamp OFF	Blinking
	Emergency key	ON	ON	ON	Blinking

OUTLINE OF ELECTRONIC KEY OPERATION

Operation 1 (Insert the Key into the Ignition Key Cylinder.)

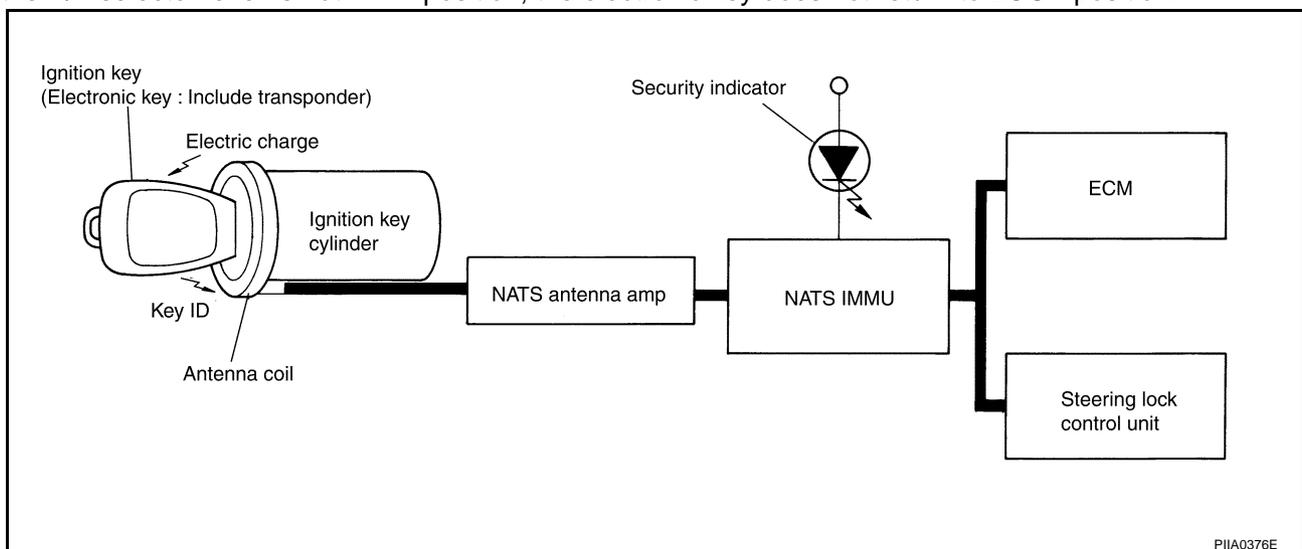
1. By inserting the ignition key (electronic key: built-in transponder) into the key cylinder, the key detection switch is turned to ON.
2. The power is supplied from the NATS IMMU → NATS antenna amp. → antenna coil.
3. The current through the antenna coil induces a magnetic field.
4. The coil in the transponder induces electromotive force by mutual induction, which is charged in the capacitor.
5. The transponder uses the charged energy to transmit the built-in key ID signal.
6. The sent key ID signal is received by the antenna coil and transmitted via the NATS antenna amp. to NATS IMMU.
7. NATS IMMU compares the stored key ID and received one, and only if the matching result is OK, it transmits the key rotation permission signal to the steering lock control unit (integrated in the key cylinder).
8. When the key rotation permission signal is input, the steering lock control unit activates the electronic key solenoid valve in the key cylinder to allow the electronic key to turn.
9. Turn ignition switch ON.
10. Only if the key ID matching result is OK, the ECM allows the engine to start.

Operation 2 (Withdraw the Key from the Ignition Key Cylinder.)

1. Return the electronic key to the LOCK position of the steering system lock.
2. When the key is removed, the electronic key solenoid valve in the key cylinder returns to inhibit the key from turning. In this case, the steering lock control unit processes the key switch ON → OFF signal by itself to inhibit the electronic key from turning.

NOTE:

If the A/T selector lever is not in "P" position, the electronic key does not return to LOCK position.



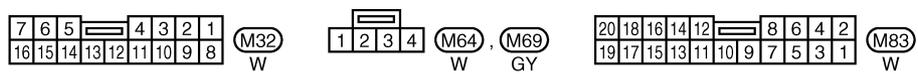
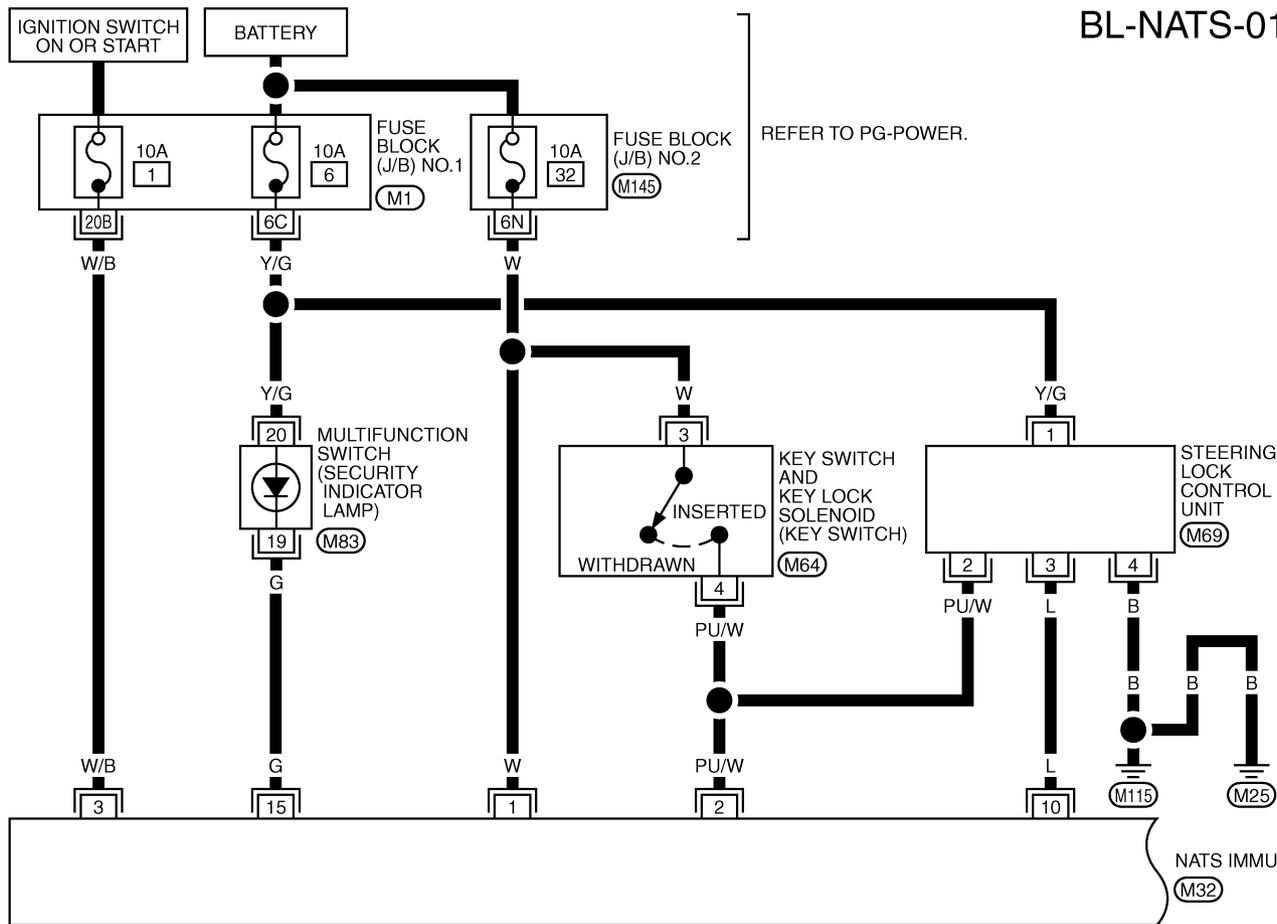
ELECTRONIC KEY SYSTEM

Wiring Diagram – NATS –

NIS000X8

BL-NATS-01

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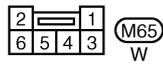
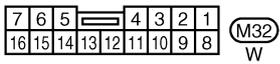
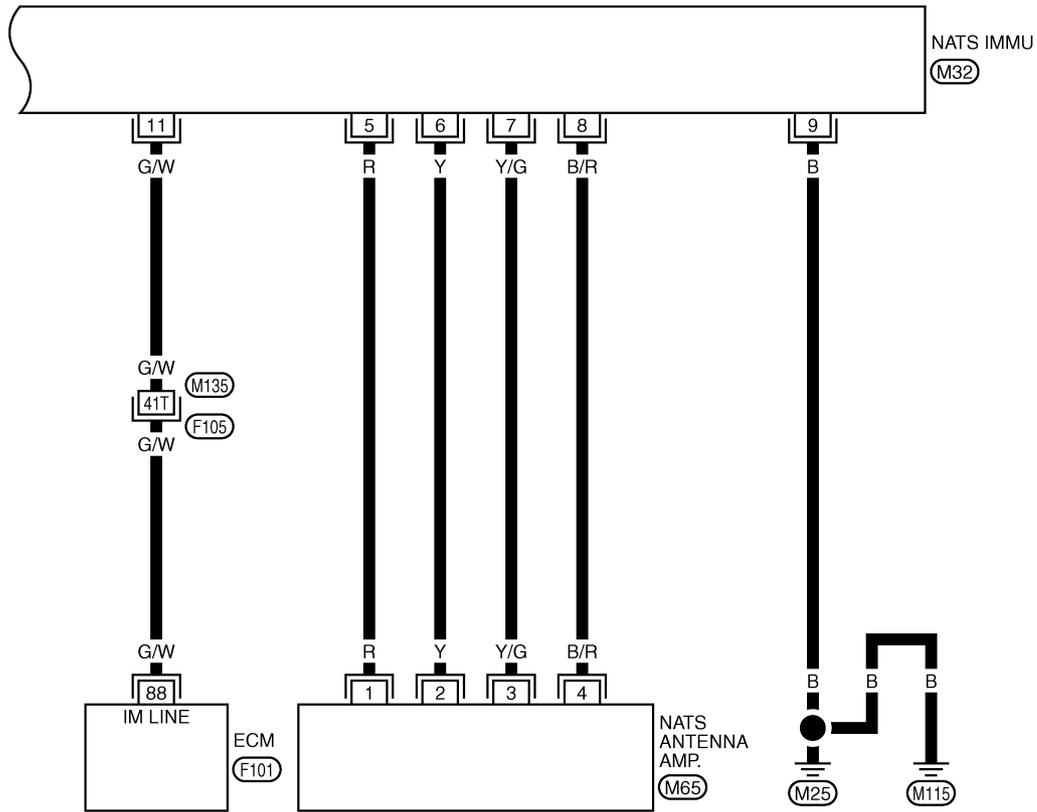


REFER TO THE FOLLOWING.
 (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
 (M145) -FUSE BLOCK-JUNCTION BOX (J/B) NO.2

TIWM0689E

ELECTRONIC KEY SYSTEM

BL-NATS-02



REFER TO THE FOLLOWING.

(F105) -SUPER MULTIPLE JUNCTION (SMJ)

(F101) -ELECTRICAL UNITS

TIWM1559E

ELECTRONIC KEY SYSTEM

Terminals and Reference Value for Steering Lock Control Unit

NIS000X9

TERMI- NAL	WIRE COLOR	ITEM	Signal input/ output	CONDITION	VOLTAGE (V) (Approx.)
1	Y/G	Power source (Fuse)	Input	—	Battery voltage
2	PU/W	Key switch	Input	Key inserted (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
3	L	NATS IMMU	Input	Key inserted (key switch OFF → ON)	Just after inserting electronic key to key cylinder: Point of tester should move
4	B	Ground	—	—	0

Terminals and Reference Value for NATS IMMU

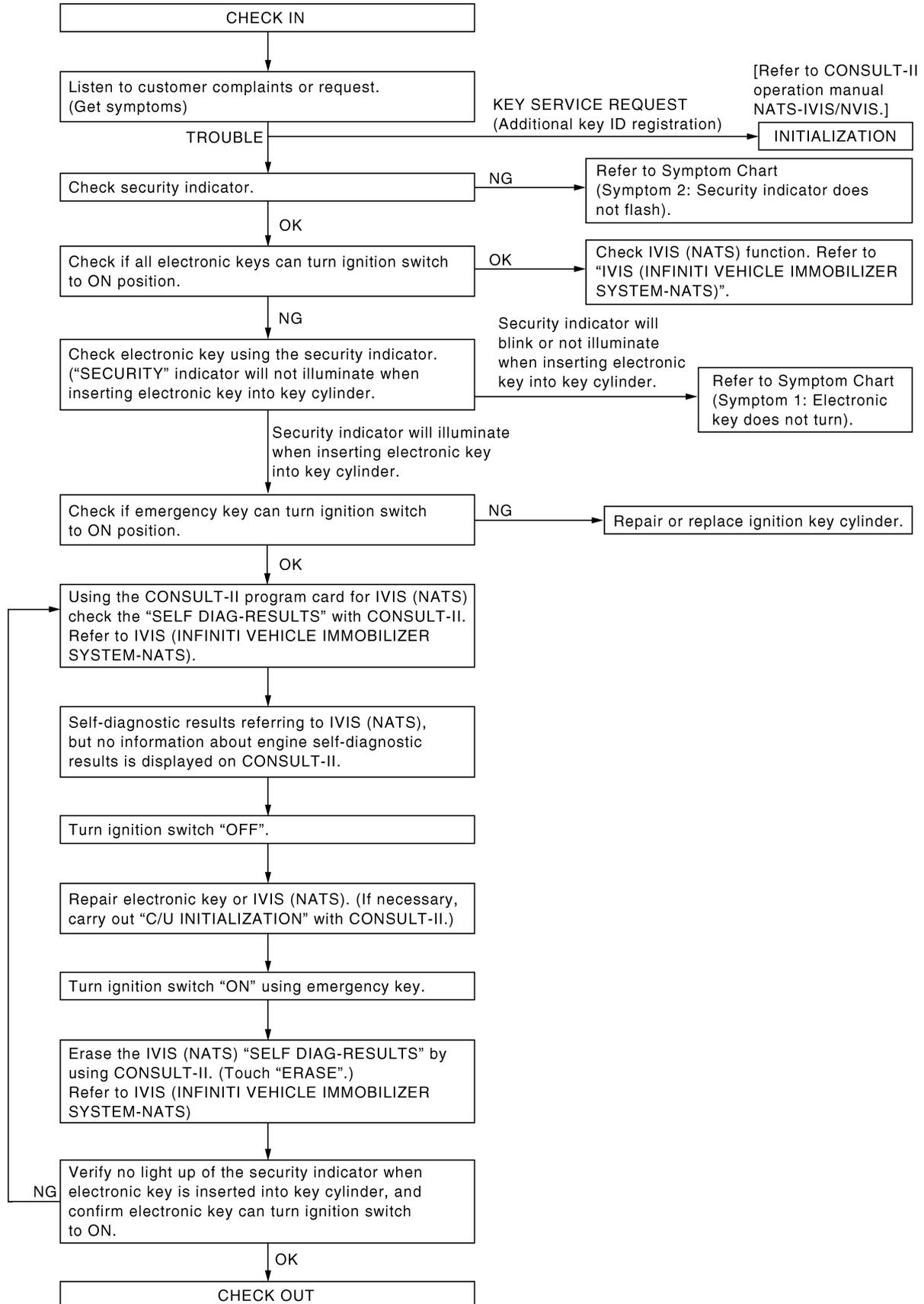
NIS000XA

TERMI- NAL	WIRE COLOR	ITEM	Signal input/ output	CONDITION	VOLTAGE (V) (Approx.)
1	W	Power source (Fuse)	Input	—	Battery voltage
2	PU/W	Key switch	Input	Key inserted (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
3	W/B	Ignition switch (ON)	Input	Ignition switch (ON or START posi- tion)	Battery voltage
5	R	NATS antenna amp.	Output	key inserted (key switch OFF → ON)	0 → 5 (for 3 seconds)
6	Y	NATS antenna amp.	Input/ output	Key inserted (key switch OFF → ON)	Just after inserting electronic key to key cylinder: Point of tester should move
7	Y/G	NATS antenna amp.	Input	Key inserted (key switch OFF → ON)	Just after inserting electronic key to key cylinder: Point of tester should move
8	B/R	NATS antenna amp.	—	—	0
9	B	Ground	—	—	0
10	L	Steering lock control unit	Input	Key inserted (key switch OFF → ON)	Just after inserting electronic key to key cylinder: Point of tester should move
11	G/W	ECM	Output	—	—
15	G	Security indicator lamp	Output	Goes OFF → illuminates (every 2.4 seconds)	Battery voltage → 0

ELECTRONIC KEY SYSTEM

Work Flow

NIS000XB

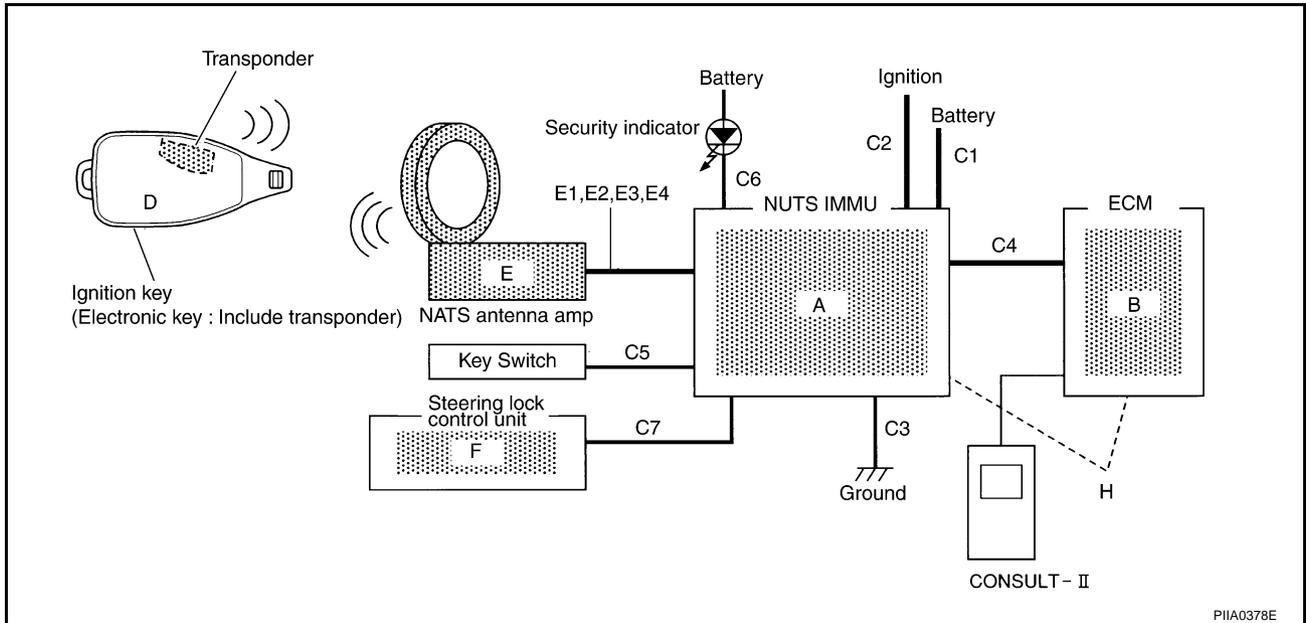


PIIB2132E

ELECTRONIC KEY SYSTEM

Diagnostic System Diagram

NIS000XC



Symptom Chart

SYMPTOM 1: ELECTRONIC KEY DOES NOT TURN

NIS000XD

Symptom	Diagnostic Procedure	Possible malfunctioning part or status	Reference part in the trouble diagnostic system diagram	Reference page
Security indicator remains flashing with Electronic key inserted.	Diagnostic Procedure 1	Key switch	C5	BL-196
Security indicator turns OFF with Electronic key inserted.	Diagnostic Procedure 2	NUTS IMMU	A	BL-197
		Steering lock control unit	F	
	Checking with the emergency key	Ignition key cylinder*	—	—

*: If the ignition key cylinder cannot be turned by the emergency key, the ignition key cylinder is malfunctioning.

SYMPTOM 2: SECURITY INDICATOR DOES NOT FLASH

Symptom	Diagnostic Procedure	Possible malfunctioning part or status	Reference part in the trouble diagnostic system diagram	Reference page
Security indicator does not turn ON.	Diagnostic Procedure 3	Security indicator	—	BL-198
		Open circuit in the battery power supply line to the security indicator	—	
		NUTS IMMU	A	
		Harness system	C6	

ELECTRONIC KEY SYSTEM

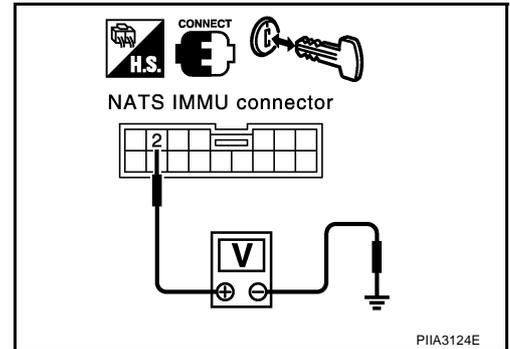
NIS000XE

Diagnostic Procedure 1

1. CHECK ELECTRONIC KEY INSERT SIGNAL

Check voltage between NATS IMMU connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M32	2 (PU/W)	Ground	Electronic key removed from ignition key cylinder	0
			Electronic key inserted in ignition key cylinder	Battery voltage



OK or NG

- OK >> Replace NATS IMMU.
- NG >> GO TO 2.

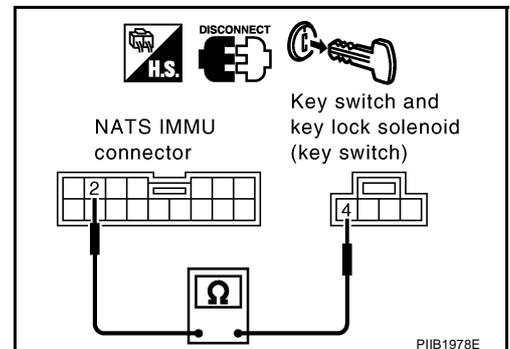
2. CHECK KEY SWITCH CIRCUIT

1. Remove the key from the ignition key cylinder.
2. Disconnect NATS IMMU and key switch and key lock solenoid (key switch) connector.
3. Check continuity between NATS IMMU connector M32 terminal 2 and key switch and key lock solenoid (key switch) connector M64 terminal 4.

2 (PU/W) – 4 (PU/W) : Continuity should exist.

OK or NG

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



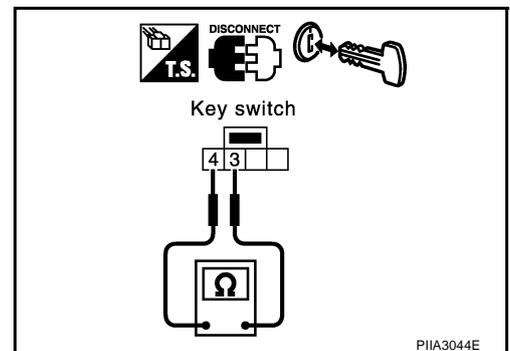
3. CHECK KEY SWITCH

Check continuity between key switch terminals 3 and 4.

Terminal		Condition of key switch	Continuity
3	4	Key is inserted.	Yes
		Key is removed.	No

OK or NG

- OK >> Check the following.
 - 10A fuse [No. 32, located in fuse block (J/B) No.2]
 - Harness for open or short between key switch and fuse
- NG >> Replace key switch.



ELECTRONIC KEY SYSTEM

NIS000XF

Diagnostic Procedure 2

1. CHECK POWER SUPPLY CIRCUIT FOR STEERING LOCK CONTROL UNIT

1. Turn ignition switch OFF.
2. Disconnect steering lock control unit connector.
3. Check voltage between steering lock control unit connector M69 terminal 1 and ground.

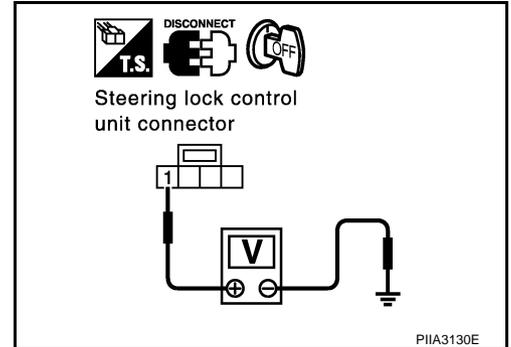
1 (Y/G) – Ground : Battery voltage.

OK or NG

OK >> GO TO 2.

NG >> Check the following.

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



2. CHECK GROUND CIRCUIT FOR STEERING LOCK CONTROL UNIT

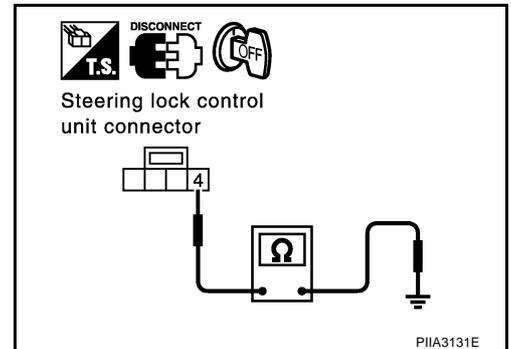
Check voltage continuity steering lock control unit connector M69 terminal 4 and ground.

4 (B) – Ground : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



3. CHECK ELECTRONIC KEY INSERT SIGNAL 2

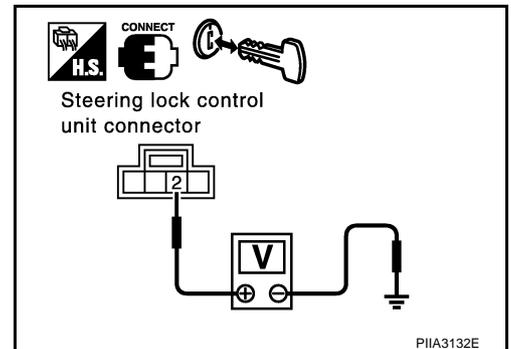
1. Connect steering lock control unit connector.
2. Check voltage between steering lock control unit connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M69	2 (PU/W)	Ground	Electronic key removed from ignition key cylinder	0
			Electronic key inserted in ignition cylinder	Battery voltage

OK or NG

OK >> GO TO 4.

NG >> Check harness for open or short between key switch and steering lock control unit.



ELECTRONIC KEY SYSTEM

4. CHECK STEERING LOCK CONTROL UNIT

Insert the electronic key into the ignition key cylinder, and immediately check voltage between steering control unit connector and ground.

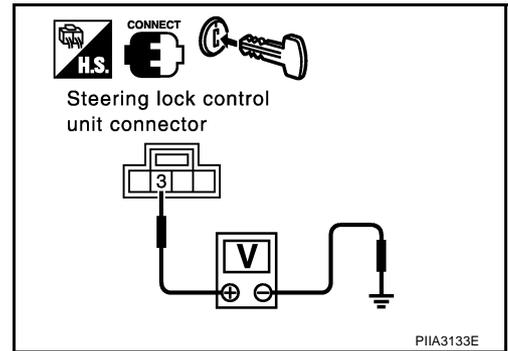
Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M69	3 (L)	Ground	Insert electronic key into ignition key cylinder.	Pointer of tester should move.

OK or NG

OK >> Replace steering lock control unit.

NG >> ● Replace NATS IMMU.

- Check harness for open or short between NATS IMMU and steering lock control unit.



Diagnostic Procedure 3

NIS000XG

1. CHECK SECURITY INDICATOR POWER SUPPLY CIRCUIT

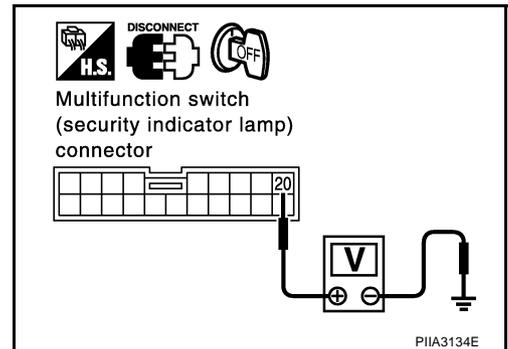
1. Turn ignition switch OFF.
2. Disconnect the multifunction switch (security indicator lamp) connector.
3. Check voltage between multifunction switch (security indicator lamp) connector M83 terminal 20 and ground.

20 (Y/G) – Ground : Battery voltage.

OK or NG

OK >> GO TO 2.

NG >> Check harness for open or short between fuse block and multifunction switch (security indicator lamp).



2. CHECK SECURITY INDICATOR GROUND CIRCUIT

1. Disconnect the NATS IMMU connector.
2. Check continuity between multifunction switch (security indicator lamp) connector M83 terminal 19 and NATS IMMU connector M32 terminal 15.

19 (G) – 15 (G) : Continuity should exist.

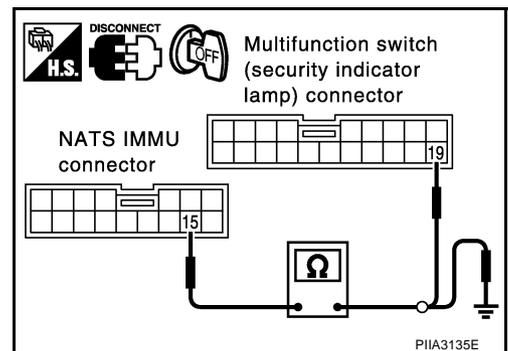
3. Check continuity between NATS IMMU harness connector M32 terminal 15 and ground.

15 (G) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair or replace harness.



ELECTRONIC KEY SYSTEM

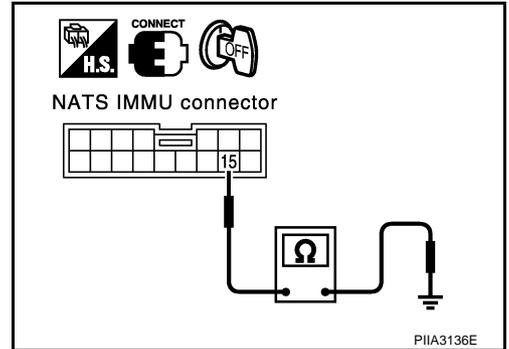
3. CHECK SECURITY INDICATOR GROUND SIGNAL

1. Connect NATS IMMU connector.
2. Check continuity between NATS IMMU connector M32 terminal 15 and ground.

15 (G) – Ground : Continuity should exist intermittently.

OK or NG

- OK >> Replace multifunction switch (security indicator lamp).
- NG >> Replace NATS IMMU



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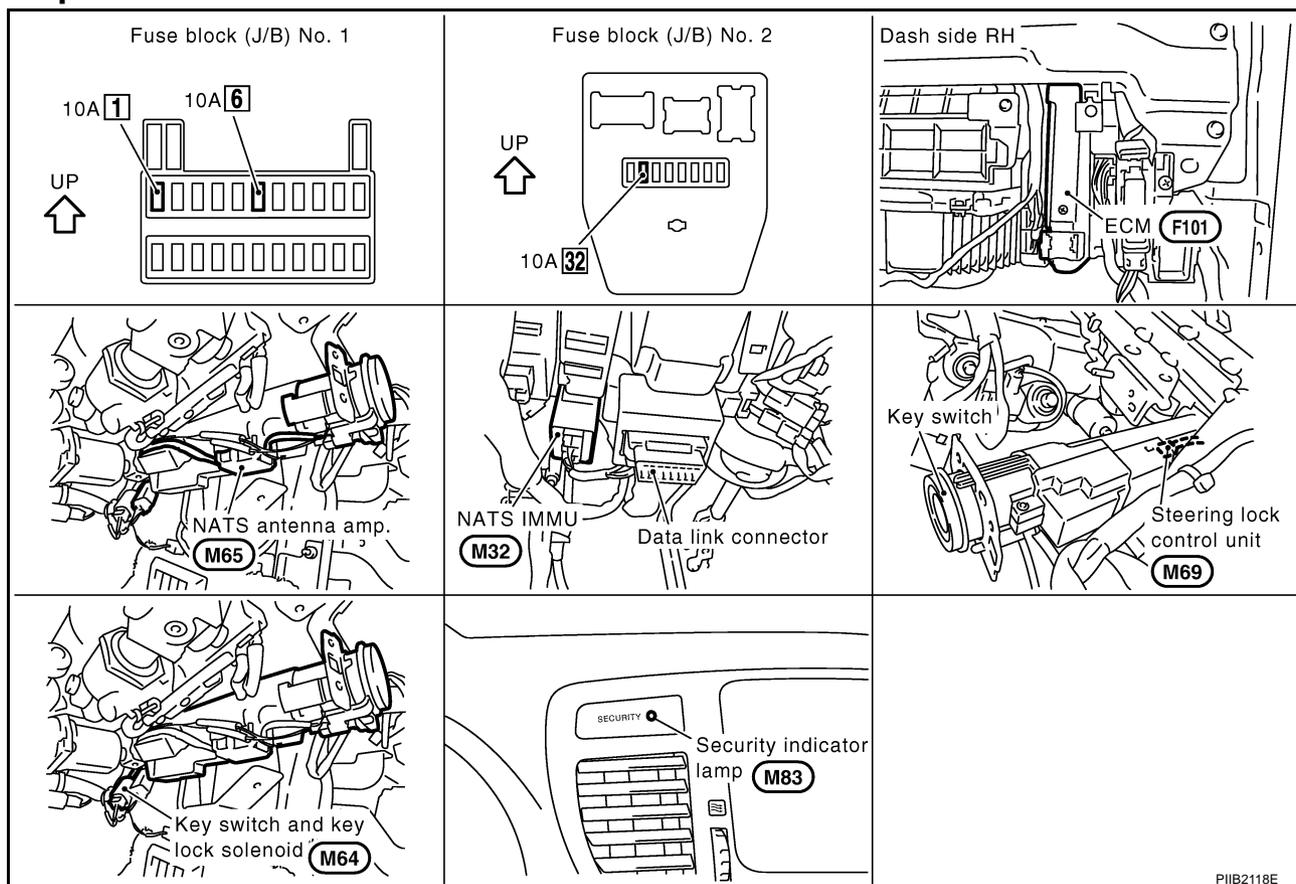
IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

PFP:28591

Component Parts and Harness Connector Location

NIS000XH



NOTE:

If customer reports a “No start” condition, request ALL ELECTRONIC KEY to be brought to the Dealer in case of a NATS malfunction.

System Description

NIS000XI

IVIS (Infinity Vehicle Immobilizer System – NATS) has the following immobilizer functions:

- Since only IVIS (NATS) electronic keys, whose ID numbers have been registered into the ECM and NATS IMMU of IVIS (NATS), allow the engine to run, operation of a stolen vehicle without a IVIS (NATS) registered electronic key is prevented by IVIS (NATS).
IVIS (NATS) will immobilize the engine if someone tries to start it without the registered electronic key of IVIS (NATS).
- All of the originally supplied electronic key IDs (except for card key and emergency key) have been IVIS (NATS) registered. If requested by the vehicle owner, a maximum of four 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 anti-theft system.
- When IVIS (NATS) detects any malfunctions, the security indicator lamp lights up while electronic key is in the “ON” position.
- IVIS (NATS) trouble diagnoses, system initialization and additional registration of other IVIS (NATS) electronic 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 electronic key is automatically IVIS (NATS) registered. Then, if necessary, additional registration of IVIS (NATS) electronic key IDs can be carried out.
Regarding the procedures of IVIS (NATS) initialization and IVIS (NATS) electronic key ID registration, refer to CONSULT-II operation manual, IVIS/NVIS.

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

NOTE:

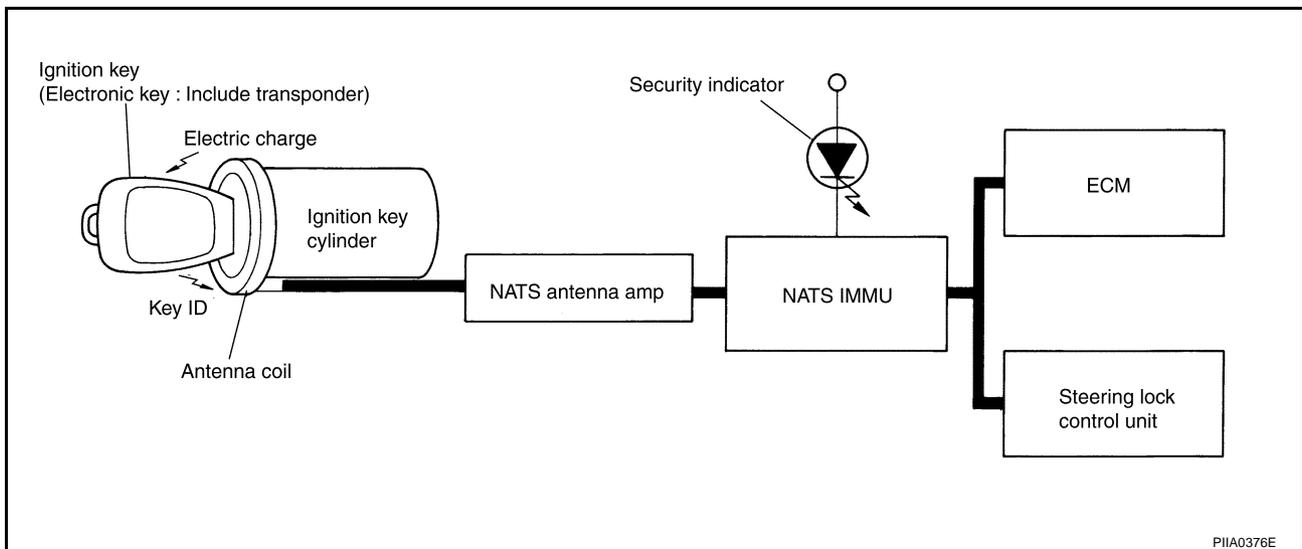
When servicing a malfunction of the IVIS (NATS) indicated by lighting up of Security Indicator Lamp or registering another IVIS (NATS) electronic key ID no., it is necessary to re-register original key identification. Therefore, be sure to obtain ALL ELECTRONIC KEYS from vehicle owner.

System Composition

NIS000XJ

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

- IVIS (NATS) electronic key
- IVIS (NATS) antenna amp. Located in the ignition key cylinder
- Steering lock control unit.
- IVIS (NATS) immobilizer control unit (NATS IMMU)
- Engine control module (ECM)
- Security indicator



OUTLINE OF IVIS (NATS) FUNCTION

Operation 1 (Insert the Key into the Ignition Key Cylinder.)

1. By inserting the ignition key (electronic key: built-in transponder) into the key cylinder, the key detection switch is turned to ON.
2. The power is supplied from the NATS IMMU → NATS antenna amp. → antenna coil.
3. The current through the antenna coil induces a magnetic field.
4. The coil in the transponder induces electromotive force by mutual induction, which is charged in the capacitor.
5. The transponder uses the charged energy to transmit the built-in key ID signal.
6. The sent key ID signal is received by the antenna coil and transmitted via the NATS antenna amp. to NATS IMMU.
7. NATS IMMU compares the stored key ID and received one, and only if the matching result is OK, it transmits the key rotation permission signal to the steering lock control unit (integrated in the key cylinder).
8. When the key rotation permission signal is input, the steering lock control unit activates the electronic key solenoid valve in the key cylinder to allow the electronic key to turn.
9. Turn ignition switch ON.
10. Only if the key ID matching result is OK, the ECM allows the engine to start.

Operation 2 (Withdraw the Key from the Ignition Key Cylinder.)

1. Return the electronic key to the LOCK position of the steering system lock.
2. When the key is removed, the electronic key solenoid valve in the key cylinder returns to inhibit the key from turning. In this case, the steering lock control unit processes the key switch ON → OFF signal by itself to inhibit the electronic key from turning.

NOTE:

If the A/T selector lever is not in "P" position, the electronic key does not return to LOCK position.

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

ECM Re-Communicating Function

NIS000XK

Performing following procedure can automatically perform re-communication of ECM and NATS IMMU, 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:

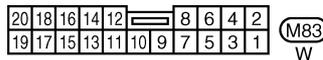
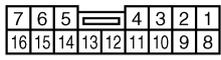
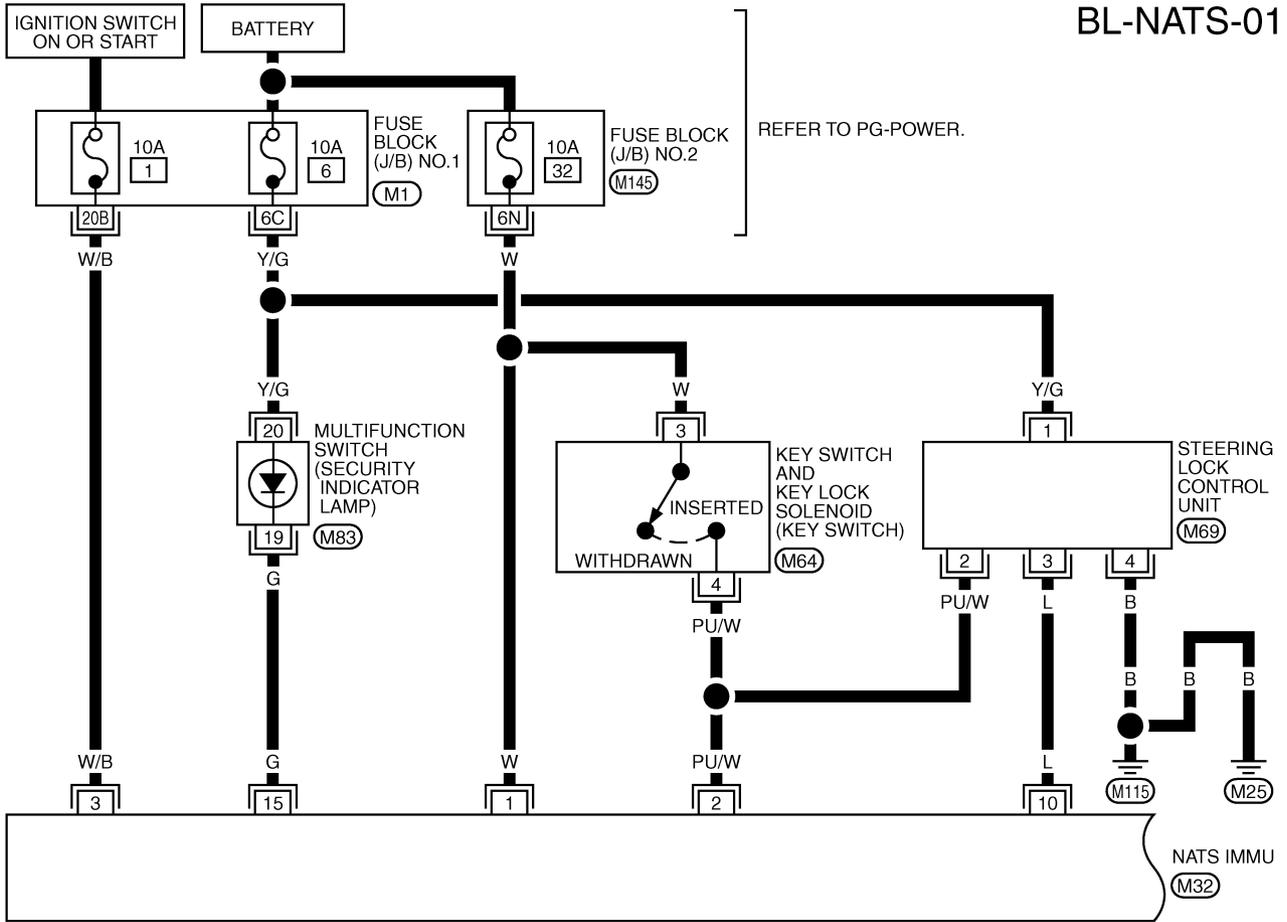
- **When registering new Key IDs or replacing the ECM other than brand new, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.**
 - **If multiple keys are attached to the key holder, separate them before work.**
 - **Distinguish keys with unregistered key ID from those with registered ID.**
1. Install 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)

Wiring Diagram – NATS –

NIS000XL

BL-NATS-01



REFER TO THE FOLLOWING.

(M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

(M145) -FUSE BLOCK-JUNCTION BOX (J/B) NO.2

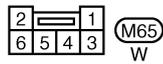
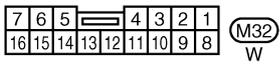
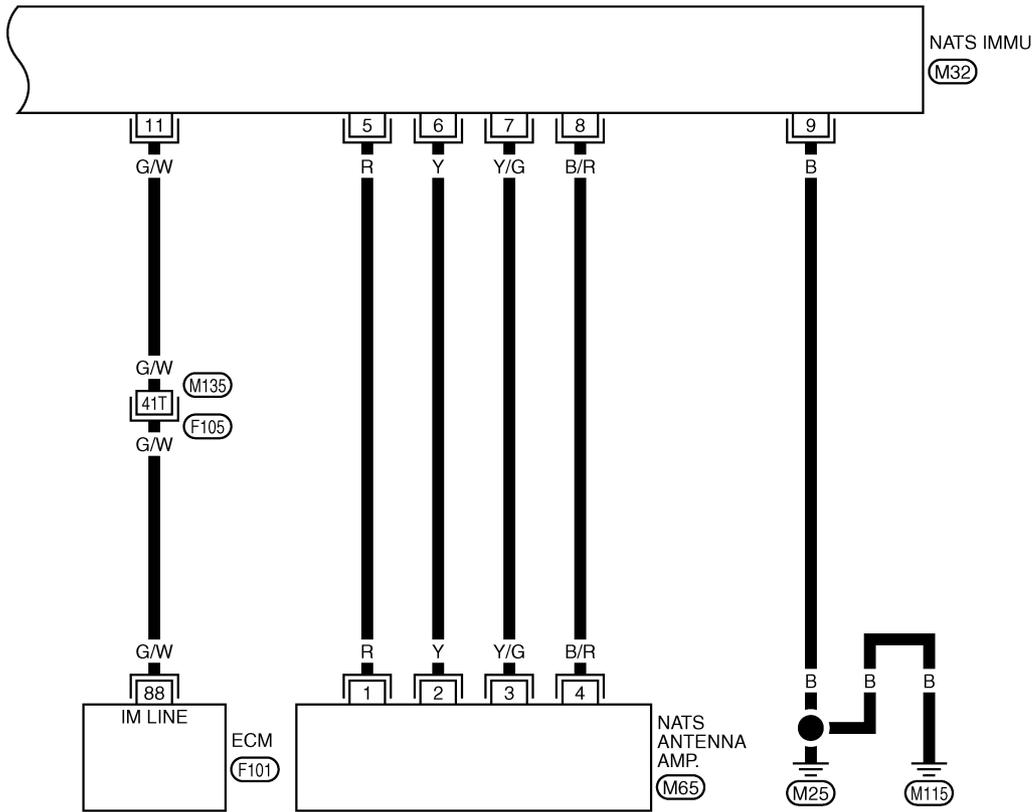
TIWM0689E

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BL

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

BL-NATS-02



REFER TO THE FOLLOWING.

(F105) -SUPER MULTIPLE JUNCTION (SMJ)

(F101) -ELECTRICAL UNITS

TIWM1559E

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

Terminals and Reference Value for Steering Lock Control Unit

NIS000XM

TERMI- NAL	WIRE COLOR	ITEM	Signal input/ output	CONDITION	VOLTAGE (V) (Approx.)
1	Y/G	Power source (Fuse)	Input	—	Battery voltage
2	PU/W	Key switch	Input	Key inserted (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
3	L	NATS IMMU	Input	Key inserted (key switch OFF → ON)	Just after inserting electronic key to key cylinder: Point of tester should move
4	B	Ground	—	—	0

Terminals and Reference Value for NATS IMMU

NIS000XN

TERMI- NAL	WIRE COLOR	ITEM	Signal input/ output	CONDITION	VOLTAGE (V) (Approx.)
1	W	Power source (Fuse)	Input	—	Battery voltage
2	PU/W	Key switch	Input	Key inserted (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
3	W/B	Ignition switch (ON)	Input	Ignition switch (ON or START position)	Battery voltage
5	R	NATS antenna amp.	Output	key inserted (key switch OFF → ON)	0 → Approx. 5 (for 3 seconds)
6	Y	NATS antenna amp.	Input/ output	Key inserted (key switch OFF → ON)	Just after inserting electronic key to key cylinder: Point of tester should move
7	Y/G	NATS antenna amp.	Input	Key inserted (key switch OFF → ON)	Just after inserting electronic key to key cylinder: Point of tester should move
8	B/R	NATS antenna amp.	—	—	0
9	B	Ground	—	—	0
10	L	Steering lock con- trol unit	Input	Key inserted (key switch OFF → ON)	Just after inserting electronic key to key cylinder: Point of tester should move
11	G/W	ECM	Output	—	—
15	G	Security indicator lamp	Output	Goes OFF → illuminates (every 2.4 sec- onds)	Battery voltage → 0

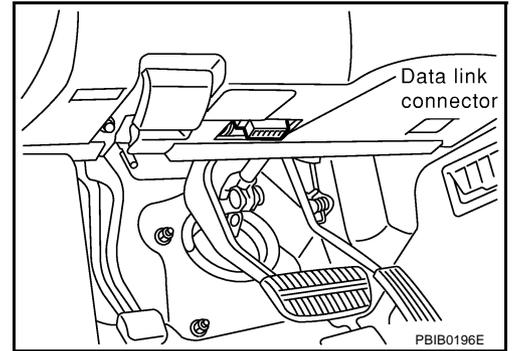
IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

NIS000XO

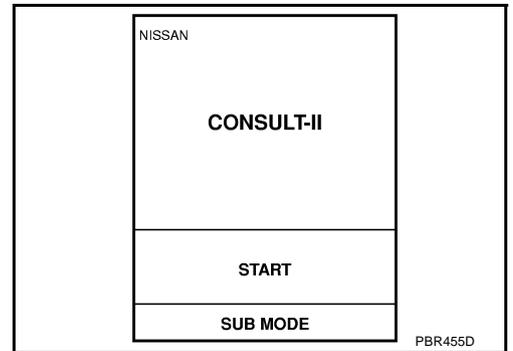
CONSULT-II CONSULT-II INSPECTION PROCEDURE

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

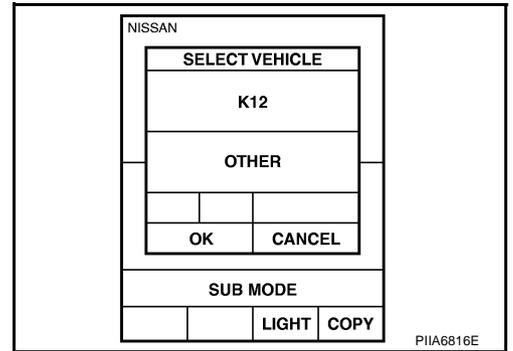
Program card : NATS (AEN04A-1)
3. Connect CONSULT-II and "CONSULT-II CONVERTER" to data link connector.



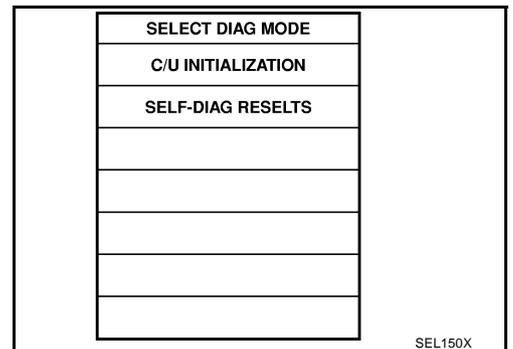
4. Turn ignition switch ON.
5. Touch "START".



6. Touch "OTHER".



7. Perform each diagnostic test mode according to each service procedure.
For further information, see the CONSULT-II Operation Manual, IVIS/NVIS.



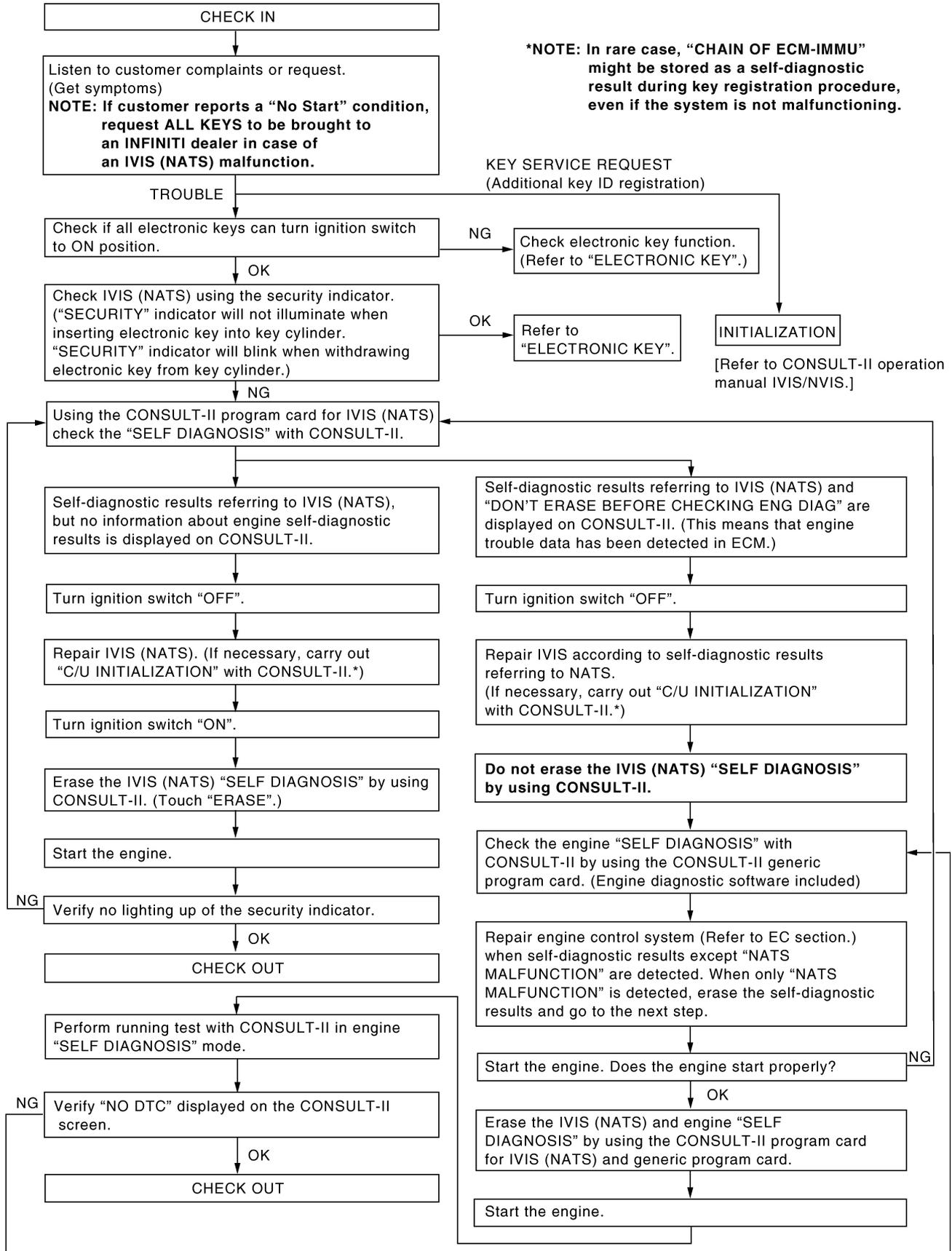
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

CONSULT- II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following three components, C/U initialization is necessary. [IVIS (NATS) electronic key/ NATS IMMU/ ECM]
SELF- DIAGNOSTIC RESULTS	Detected items (screen terms) are as shown in the chart.

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

NIS000XP

Work Flow



PIIA0379E

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

Symptom Chart 1

NIS000XQ

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION
<ul style="list-style-type: none"> ● Security indicator lighting up* ● Engine hard to start 	ECM INT CIRC-IMMU [P1613]	Refer to BL-210, "Diagnostic Procedure 1" .	ECM	B
	CHAIN OF ECM-IMMU [P1612]	Refer to BL-211, "Diagnostic Procedure 2" .	Open circuit in battery voltage line of NATS IMMU circuit	C1
			Open circuit in ignition line of NATS IMMU circuit	C2
			Open circuit in ground line of NATS IMMU circuit	C3
			Open or short circuit between NATS IMMU and ECM communication line.	C4
			ECM	B
			NATS IMMU	A
	DIFFERENCE OF KEY [P1615]	Refer to BL-213, "Diagnostic Procedure 3" .	Unregistered key	D
			NATS IMMU	A
	CHAIN OF IMMU-KEY [P1614]	Refer to BL-215, "Diagnostic Procedure 6" .	Open or short circuit between NATS IMMU and NATS antenna amp.	E1 - E4
			Malfunction of key ID chip	D
			NATS IMMU	A
			Antenna amp.	E
	ID DISCORD, IMM-ECM [P1611]	Refer to BL-213, "Diagnostic Procedure 4" .	System initialization has not yet been completed.	F
			ECM	B
LOCK MODE [P1610]	Refer to BL-214, "Diagnostic Procedure 5" .	LOCK MODE	When the starting operation is carried out 5 or more times consecutively under the following conditions, IVIS(NATS) will shift the mode to prevent the engine start. <ul style="list-style-type: none"> ●unregistered electronic key is used ●NATS IMMU or ECM malfunctioning 	
<ul style="list-style-type: none"> ● MIL staying ON ● Security indicator lighting up* 	DON'T ERASE BEFORE CHECKING ENG DIAG	Refer to BL-208, "Work Flow" .	Engine trouble data and IVIS (NATS) trouble data have been detected in ECM	—

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

A
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M

BL

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

Symptom Chart 2

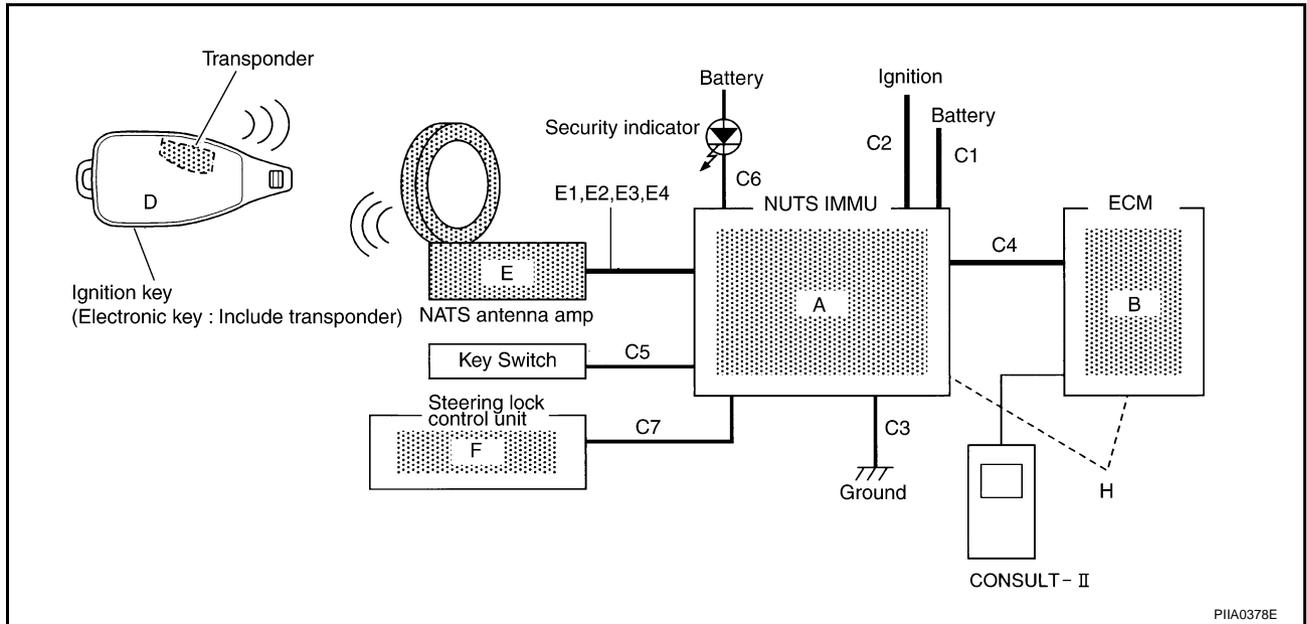
NIS000XR

SYMPTOM	SYSTEM (Malfunctioning part or mode)
Security indicator does not light up*	Security indicator
	Open circuit between Fuse and NATS IMMU
	Continuation of initialization mode
	NATS IMMU

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

Diagnostic System Diagram

NIS000XS



PIIA0378E

Diagnostic Procedure 1

NIS000XT

Self-diagnostic results:

"ECM INT CIRC-IMMU" displayed on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS "ECM INT CIRC-IMMU" displayed on CONSULT-II screen.

Is CONSULT-II screen displayed as above?

Yes >> 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-202, "ECM Re-Communicating Function"](#).

No >> GO TO [BL-209, "Symptom Chart 1"](#).

SELF DIAGNOSIS	
DTC RESULTS	TIME
ECM INT CIRC-IMMU	0

SEL314W

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

NIS000XU

Diagnostic Procedure 2

Self-diagnostic results:
"CHAIN OF ECM-IMMU" display on CONSULT-II screen

1. CONFIRM SELF-DIAGNOSTIC RESULTS

Confirm SELF-DIAGNOSTIC RESULTS "CHAIN OF ECM-IMMU" displayed on the 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-209, "Symptom Chart 1"](#) .

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

PIIA1260E

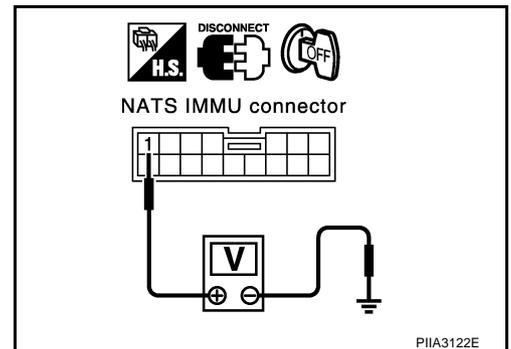
2. CHECK POWER SUPPLY CIRCUIT FOR NATS IMMU

1. Turn ignition switch OFF.
2. Disconnect NATS IMMU connector M32.
3. Check voltage between NATS IMMU connector M32 terminal 1 and ground.

1 (W) – Ground : Battery voltage.

OK or NG

- OK >> GO TO 3.
NG >> Check the following.
- 10A fuse [No.32, located in fuse block (J/B)No.2]
 - Harness for open or short between fuse and NATS IMMU. **Ref. part No. C1.**



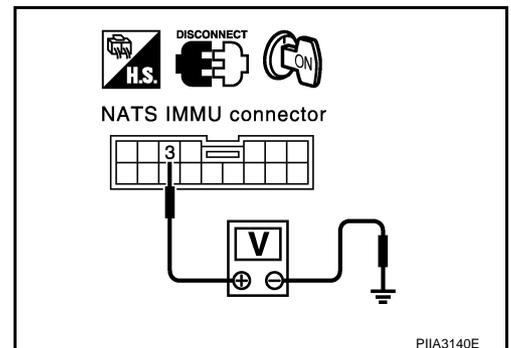
3. CHECK IGNITION SWITCH ON SIGNAL

1. Turn ignition switch ON.
2. Check voltage between NATS IMMU connector M32 terminal 3 and ground.

3 (W/B) – Ground : Battery voltage.

OK or NG

- OK >> GO TO 4.
NG >> Check the following.
- 10A fuse [No.1, located in fuse block (J/B) No.1]
 - Harness for open or short between fuse and NATS IMMU. **Ref. part No. C2.**



IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

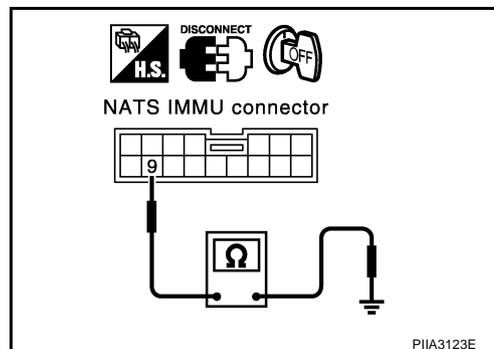
4. CHECK GROUND CIRCUIT FOR NATS IMMU

1. Turn ignition switch OFF.
2. Check continuity between NATS IMMU connector M32 terminal 9 and ground.

9 (B) – Ground : Continuity should exist.

OK or NG

- OK >> GO TO 5.
NG >> Repair or replace harness. **Ref. part No. C3.**



5. CHECK COMMUNICATION LINE CIRCUIT

1. Disconnect ECM connector.
2. Check continuity between NATS IMMU connector M32 terminal 11 and ECM connector F101 terminal 88.

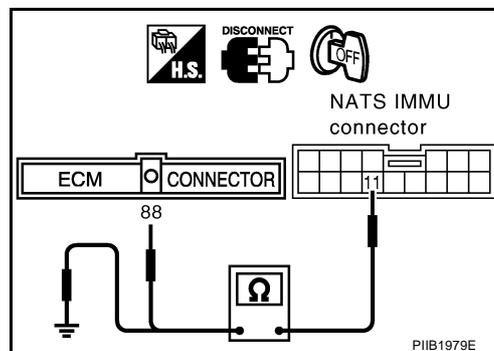
11 (G/W) – 88 (G/W) : Continuity should exist.

3. Check continuity between NATS IMMU connector M32 terminal 11 and ground.

11 (G/W) – Ground : Continuity should not exist.

OK or NG

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



6. REPLACE NATS IMMU

1. Replace NATS IMMU **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 >> NATS IMMU is malfunctioning.
No >> ECM is malfunctioning.

- Replace ECM. **Ref. part No. B**
- Perform initialization or re-communicating function.
 - For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".
 - For re-communicating function, refer to [BL-202, "ECM Re-Communicating Function"](#).

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

Diagnostic Procedure 3

NIS000XV

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-209, "Symptom 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 >> NATS IMMU is malfunctioning.
- Replace NATS IMMU. **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 4

NIS000XW

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 NATS IMMU is in discord with that of ECM.

Is CONSULT-II screen displayed as above?

- Yes >> GO TO 2.
No >> GO TO [BL-209, "Symptom Chart 1"](#).

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

PIIA1262E

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.

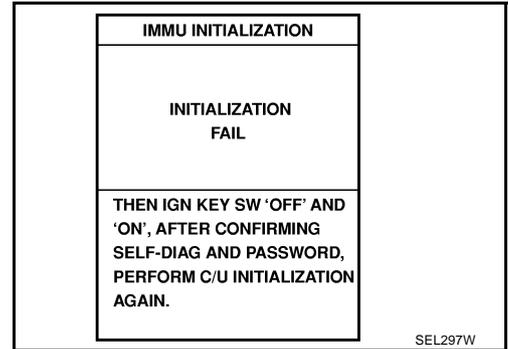
Can the system be initialized?

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 or re-communicating function.
 - For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".
 - For re-communicating function, refer to [BL-202, "ECM Re-Communicating Function"](#) .



Diagnostic Procedure 5

NIS000XX

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-209, "Symptom Chart 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.

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

3. PERFORM INITIALIZATION WITH CONSULT-II

Perform initialization with CONSULT-II.

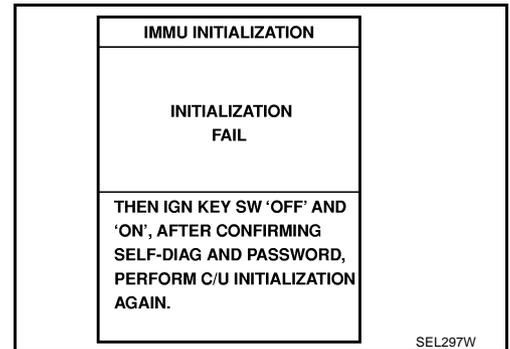
For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".

NOTE:

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

Can the system be initialized?

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



4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

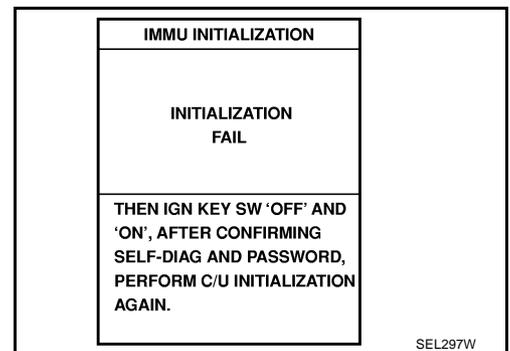
1. Replace NATS IMMU.
2. Perform initialization with CONSULT-II.
For initialization, refer to "CONSULT-II Operation Manual NATS-IVIS/NVIS".

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. NATS IMMU is malfunctioning. **Ref. part No. A)**
- 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-202, "ECM Re-Communicating Function"](#) .



Diagnostic Procedure 6

NIS000XY

Self-diagnostic results:

"CHAIN OF IMMU-KEY" displayed on CONSULT-II screen

1. CHECK OF ELECTRONIC KEY (TRANSPONDER)

Using the other registered electronic key, check that the ignition switch can be turned ON.

OK or NG

- OK >> Electronic key (transponder) malfunction. **Ref. part D.**
NG >> GO TO 2.

2. CHECK NATS ANTENNA AMP. INSTALLATION

1. Turn ignition switch OFF.
2. Check the installation condition of the NATS antenna amp.

OK or NG

- OK >> GO TO 3.
NG >> Install the NATS antenna amp. correctly. **Reference part E.**

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

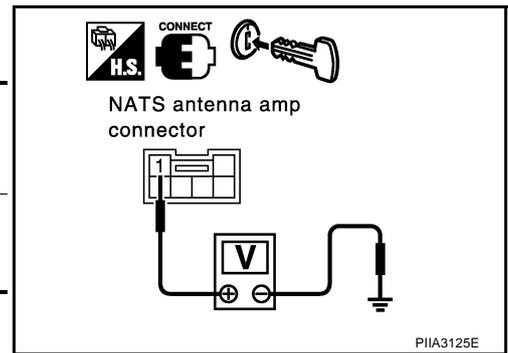
3. CHECK NATS ANTENNA AMP. CIRCUIT 1

Insert electronic key into ignition key cylinder, and immediately check voltage between NATS antenna amp. connector and ground.

Con- nector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M65	1 (R)	Ground	Insert electronic key into ignition key cylinder.	Approx. 5V (for 3 seconds after inserting the key)

OK or NG

- OK >> GO TO 4.
NG >> GO TO 7.



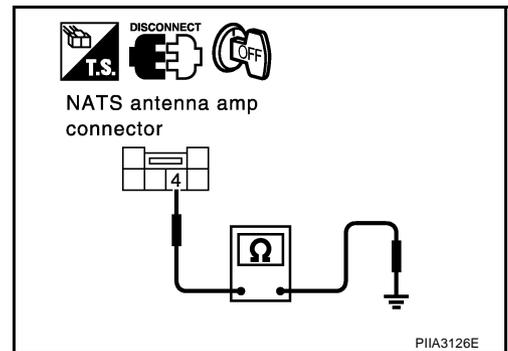
4. CHECK NATS ANTENNA AMP. CIRCUIT 2

1. Disconnect NATS antenna amp. connector.
2. Check continuity between NATS antenna amp. connector M65 terminal 4 and ground.

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

OK or NG

- OK >> GO TO 5.
NG >> GO TO 7.



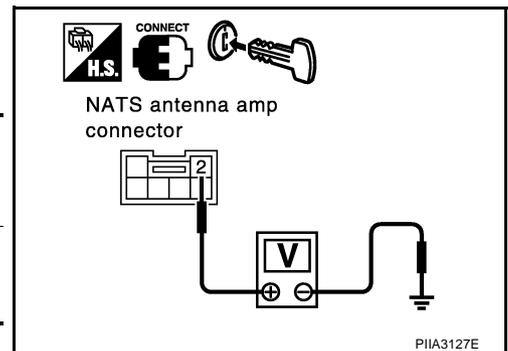
5. CHECK NATS ANTENNA AMP. CIRCUIT 3

1. Connect NATS antenna amp. connector.
2. Insert the electronic key into the ignition key cylinder, and immediately check voltage between NATS antenna amp. connector and ground.

Con- nector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M65	2 (Y)	Ground	Insert electronic key into ignition key cylinder.	Pointer of tester should move.

OK or NG

- OK >> GO TO 6.
NG >> GO TO 7.



IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

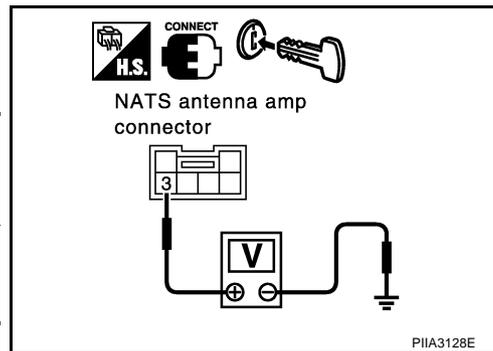
6. CHECK NATS ANTENNA AMP. CIRCUIT 4

Insert the electronic key into the ignition key cylinder, and immediately check voltage between NATS antenna amp. connector and ground.

Con- nector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M65	3 (Y/G)	Ground	Insert electronic key into ignition key cylinder.	Pointer of tester should move.

OK or NG

- OK >> Replace NATS antenna amp.: Reference part E.
 NG >> GO TO 7.



7. CHECK NATS ANTENNA AMP. CIRCUIT 5

- Turn ignition switch OFF.
- Disconnect NATS IMMU and NATS antenna amp. connector.
- Check continuity between NATS IMMU connector M32 terminals 5, 6, 7, 8 and NATS antenna amp. connector M65 terminals 1, 2, 3, 4.

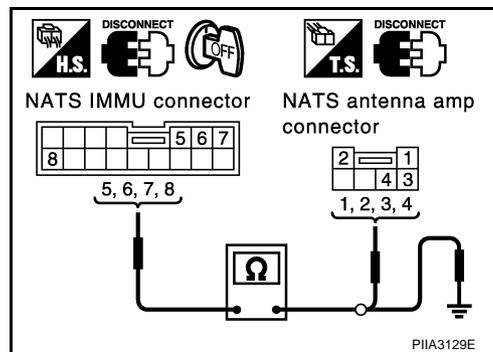
- 5 (R) - 1 (R) : Continuity should exist.**
6 (Y) - 2 (Y) : Continuity should exist.
7 (Y/G) - 3 (Y/G) : Continuity should exist.
8 (B/R) - 4 (B/R) : Continuity should exist.

- Check continuity between NATS IMMU connector M32 terminals 5, 6, 7, 8 and ground.

- 5 (R) - Ground : Continuity should not exist.**
6 (Y) - Ground : Continuity should not exist.
7 (Y/G) - Ground : Continuity should not exist.
8 (B/R) - Ground : Continuity should not exist.

OK or NG

- OK >> Replace NATS IMMU: Reference part A.
 NG >> Check harness for open or short between NATS IMMU and NATS antenna amp.: Reference parts E1, 2, 3, 4



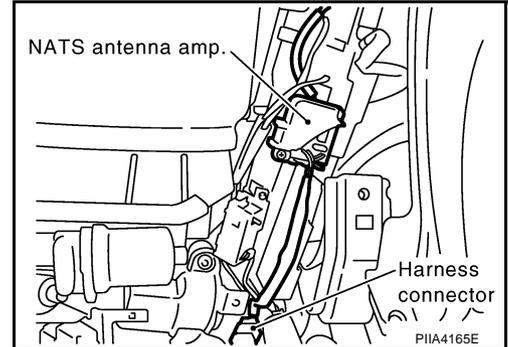
IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

NIS000XZ

Removal and Installation NATS Antenna Amp.

REMOVAL

1. Remove the Cluster lid D. Refer to [IP-12, "\(C\) Cluster Lid D"](#) .
2. Remove the Knee protector lower. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
3. Remove the Instrument lower driver panel. Refer to [IP-16, "\(V\) Instrument Lower Driver Panel"](#) .
4. Remove the Instrument panel bracket. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
5. Remove the mounting screw, harness connector and remove NATS antenna amp.



INSTALLATION

Install in the reverse order of removal.

HOMELINK UNIVERSAL TRANSCEIVER

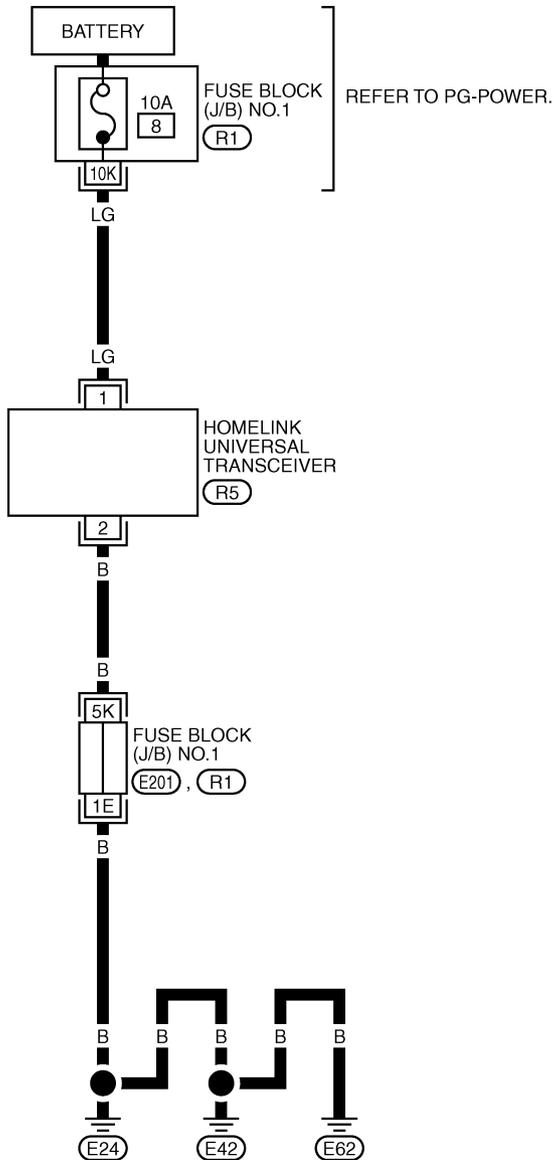
HOMELINK UNIVERSAL TRANSCEIVER

PFP:96401

Wiring Diagram – TRNSCV –

NIS000Y0

BL-TRNSCV-01



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REFER TO THE FOLLOWING.
 (E201), (R1) - FUSE BLOCK-
 JUNCTION BOX (J/B) NO.1

HOMELINK UNIVERSAL TRANSCEIVER

NIS000Y1

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.

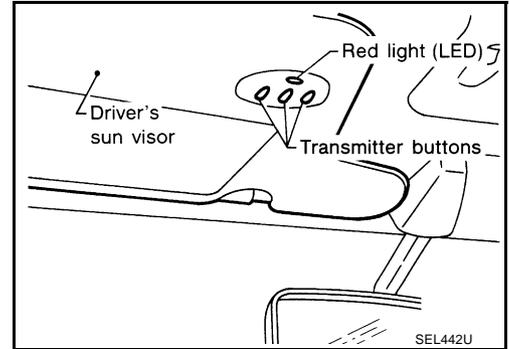
1. CHECK ILLUMINATION

- Turn ignition switch "OFF".
- Does red light (LED) of transmitter illuminate when any button is pressed?

YES or NO

YES >> GO TO 2.

NO >> GO TO 3.



2. TRANSMITTER CHECK

Check transmitter with Tool*.

*: For details, refer to Technical Service Bulletin.

OK or NG

OK >> Receiver or handheld transmitter malfunction, not vehicle related.

NG >> Replace transmitter with sun visor assembly.

3. CHECK BATTERY POWER SUPPLY

1. Disconnect transmitter connector.
2. Turn ignition switch "OFF".
3. Check voltage between transmitter harness connector R5 terminal 1 and ground.

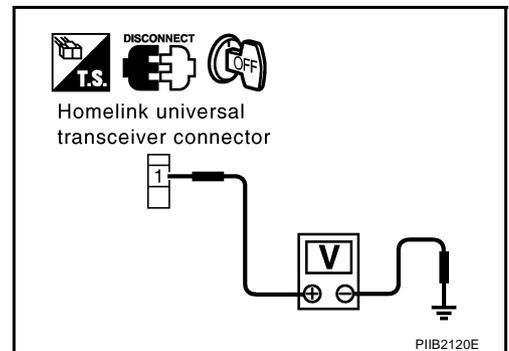
1 (LG) – Ground : **Battery voltage.**

OK or NG

OK >> GO TO 4.

NG >> ● Check 10A fuse [No. 8 located in the fuse block (J/B) No.1]

- Harness for open or short between fuse and transmitter



HOMELINK UNIVERSAL TRANSCEIVER

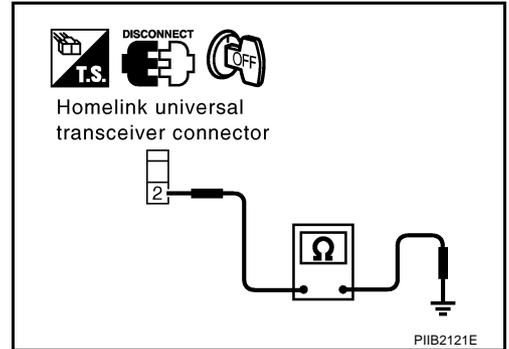
4. CHECK GROUND CIRCUIT

Check continuity between transmitter harness connector R5 terminal 2 and ground.

2 (B) – Ground : Continuity should exist.

OK or NG

- OK >> Replace transmitter with sun visor assembly.
- NG >> Repair harness.



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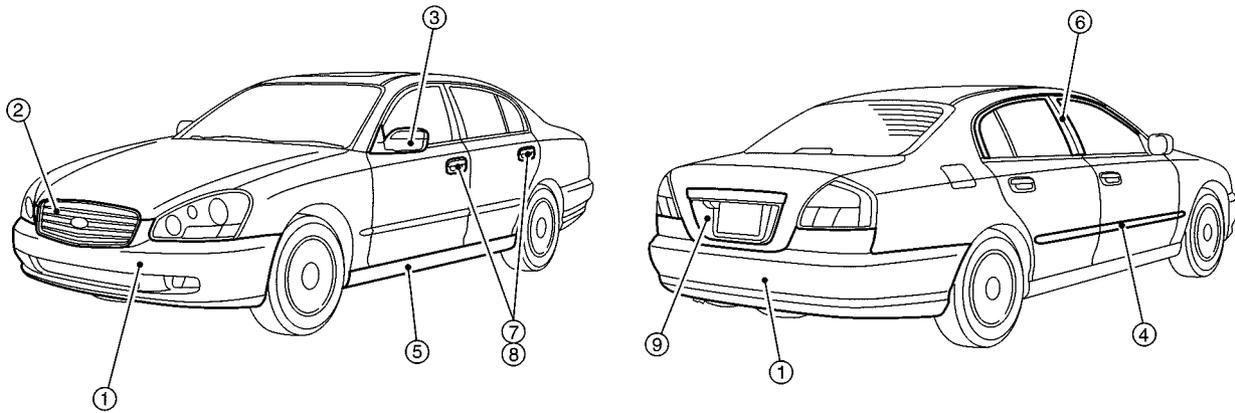
BODY REPAIR

PFP:60100

BODY REPAIR

Body Exterior Paint Color

NIS000Y2



PIIA0090E

Component			Color code	BBW5	BB30	BC16	BKH3	BKX6	BKY0	BK22	BQX1
			Description	Dark Blue	Blue	Grayish brown	Black	Silver	Silver	Brown-ish Gray	White
			Paint type	2P	M	PM	2S	TM	M	M	3P
			Hard clear coat	X	X	X	X	X	X	X	X
1	Bumper fascia	Body	Body color	BBW5	BB30	BC16	BKH3	BKX6	BKY0	BK22	BQX1
2	Front grille	Body	Black	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01
		Molding	Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
3	Door outside mirror	Case	Body color	BBW5	BB30	BC16	BKH3	BKX6	BKY0	BK22	BQX1
		Base	Body color	BBW5	BB30	BC16	BKH3	BKX6	BKY0	BK22	BQX1
4	Side guard molding		Body color	BBW5	BB30	BC16	BKH3	BKX6	BKY0	BK22	BQX1
5	Center mudguard		Body color	BBW5	BB30	BC16	BKH3	BKX6	BKY0	BK22	BQX1
6	Door sash		Black	701G-1	701G-1	701G-1	701G-1	701G-1	701G-1	701G-1	701G-1
7	Door outside handle escutcheon		Body color	BBW5	BB30	BC16	BKH3	BKX6	BKY0	BK22	BQX1
8	Door outside handle		Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
9	Trunk lid finisher	Body	Body color	BBW5	BB30	BC16	BKH3	BKX6	BKY0	BK22	BQX1
		Molding	Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr

2S:2-Coat solid, M:Metallc, 2P:2-Coat pearl, 3P:3-Coat pearl, TM:Micro titanium metallic, PM:Pearl + Metallc

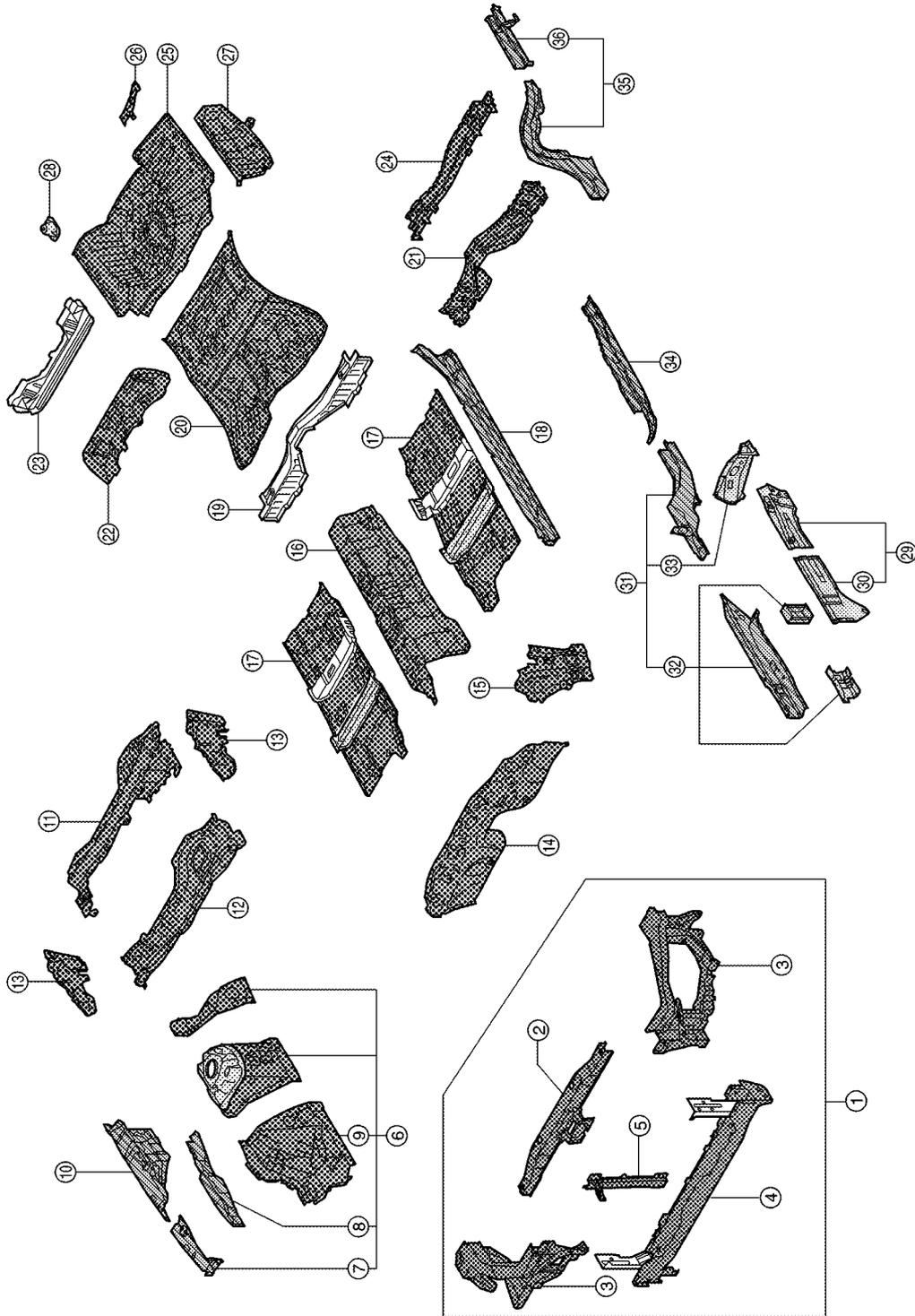
BODY REPAIR

Body Component Parts UNDERBODY COMPONENT PARTS

NIS000Y3

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



SIIA2424E

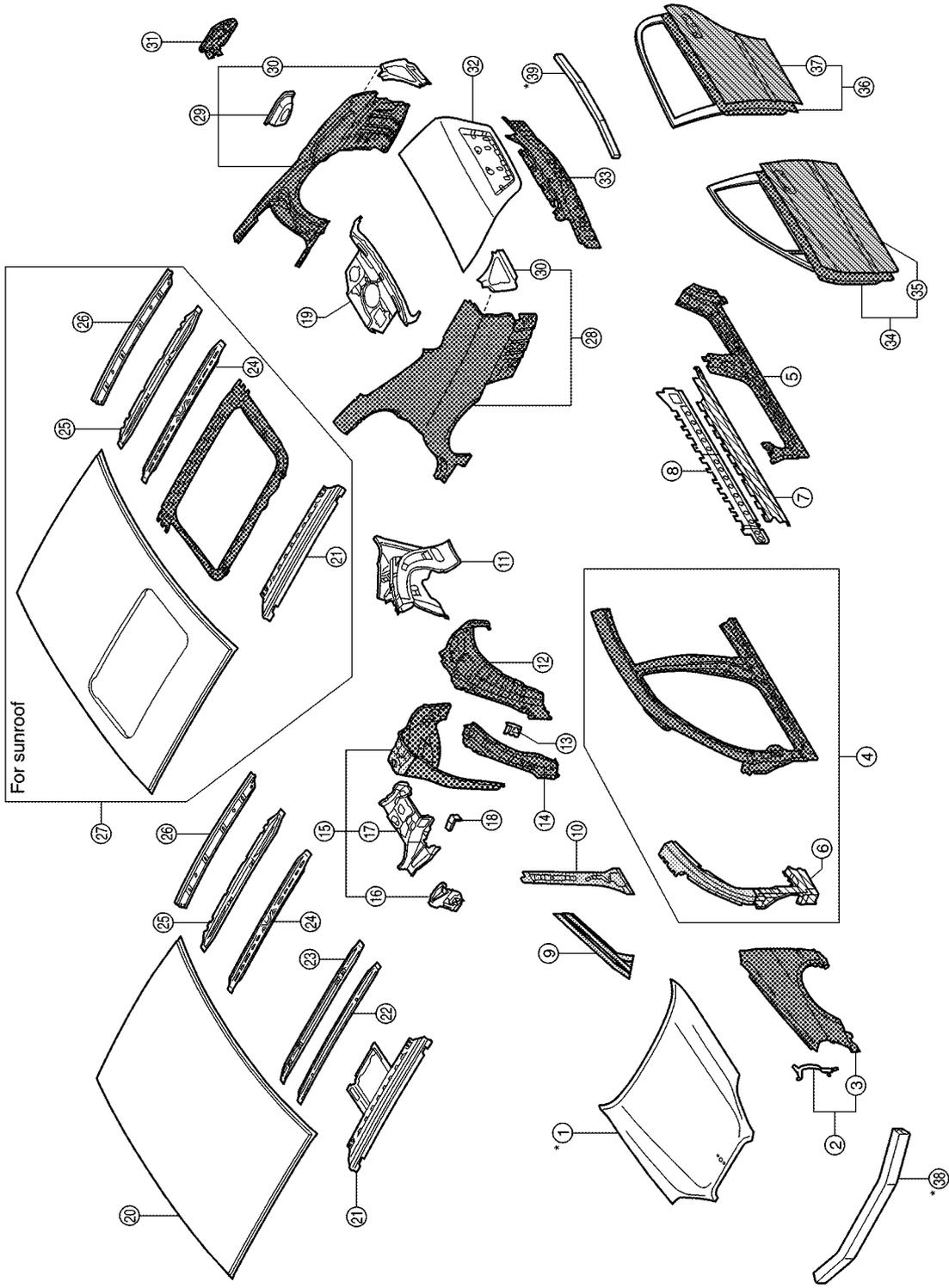
BODY REPAIR

1. Radiator core support assembly
2. Upper radiator core support
3. Side radiator core support
4. Lower radiator core support
5. Hood lock stay
6. Hoodledge assembly (RH&LH)
7. Hoodledge reinforcement (RH&LH)
8. Upper hoodledge (RH&LH)
9. Lower front hoodledge (RH&LH)
10. Rear hoodledge reinforcement (RH&LH)
11. Upper dash crossmember assembly
12. Upper dash assembly
13. Side cowl top
14. Lower dash
15. Side dash (RH&LH)
16. Front floor center
17. Front floor
18. Inner sill (RH&LH)
19. Rear seat crossmember assembly
20. Rear floor front
21. Rear seat crossmember
22. Rear floor belt anchor reinforcement
23. Rear seat back support assembly
24. Center rear crossmember
25. Rear floor rear
26. Muffler mounting bracket
27. Rear floor side (RH&LH)
28. Spare tire clamp bracket
29. Front side member closing plate assembly (RH&LH)
30. Front side member front closing plate (RH&LH)
31. Front side member assembly (RH&LH)
32. Front side member (RH&LH)
33. Front side member outrigger assembly (RH&LH)
34. Front side member rear extension (RH&LH)
35. Rear side member assembly (RH&LH)
36. Rear side member extension (RH&LH)

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 pre-coated steel and HSS portions
- * : Indicates aluminum portion



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SIIA2425E

BODY REPAIR

1. Hood
2. Front fender (RH&LH)
3. Front fender bracket (RH&LH)
4. Side body assembly (RH&LH)
5. Outer sill (RH&LH)
6. Upper front pillar hinge brace assembly (RH&LH)
7. Outer sill reinforcement (RH&LH)
8. Center sill reinforcement (RH&LH)
9. Upper inner front pillar assembly (RH&LH)
10. Inner center pillar (RH&LH)
11. Inner rear pillar (RH&LH)
12. Outer rear wheelhouse (RH&LH)
13. Outer rear wheelhouse brace (RH&LH)
14. Outer rear wheelhouse reinforcement (RH&LH)
15. Inner rear wheelhouse assembly (RH&LH)
16. Seat back support (RH&LH)
17. Side parcel shelf (RH&LH)
18. Rear parcel shelf bracket (RH&LH)
19. Parcel shelf with rear waist
20. Roof
21. Front roof rail
22. Front roof bow
23. Center roof bow No.1
24. Rear roof bow
25. Center roof bow No.2
26. Rear roof rail
27. Roof assembly
28. Rear fender (LH)
29. Rear fender (RH)
30. Rear combination lamp base
31. Fuel filler lid
32. Trunk lid
33. Rear panel assembly
34. Front door assembly (RH&LH)
35. Outer front door panel (RH&LH)
36. Rear door assembly (RH&LH)
37. Outer rear door panel (RH&LH)
38. Front bumper reinforcement
39. Rear bumper reinforcement

BODY REPAIR

Corrosion Protection

NIS000Y4

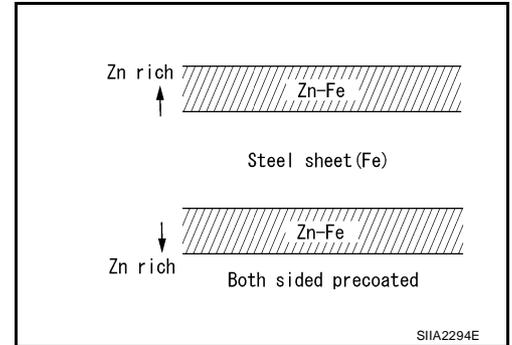
DESCRIPTION

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.



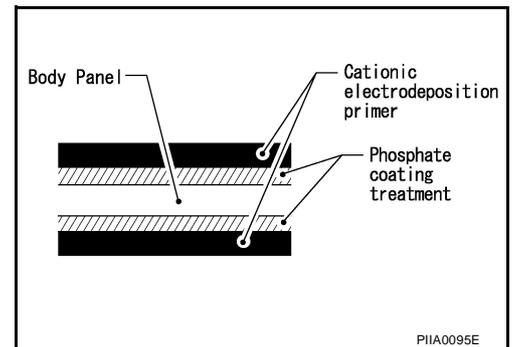
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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.

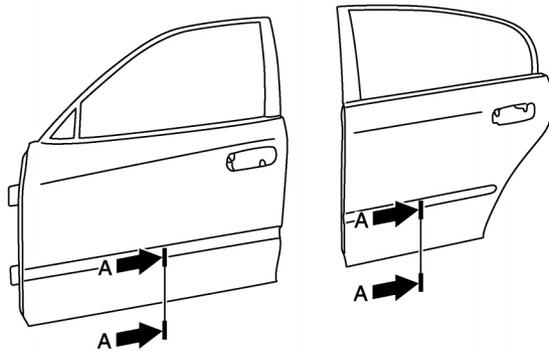
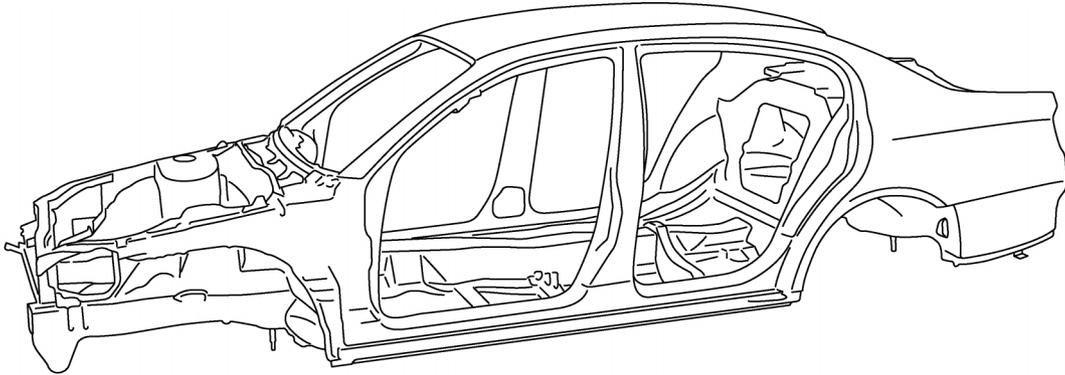


Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

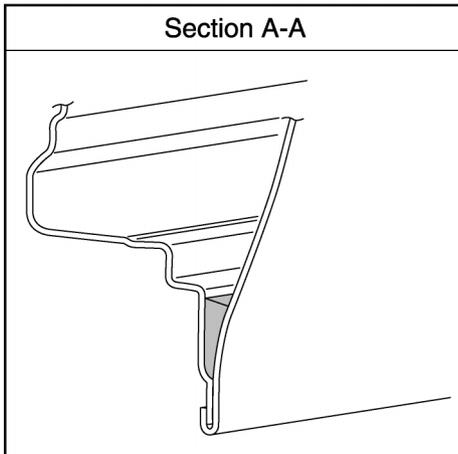
BODY REPAIR

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.



PIIA0096E

BODY REPAIR

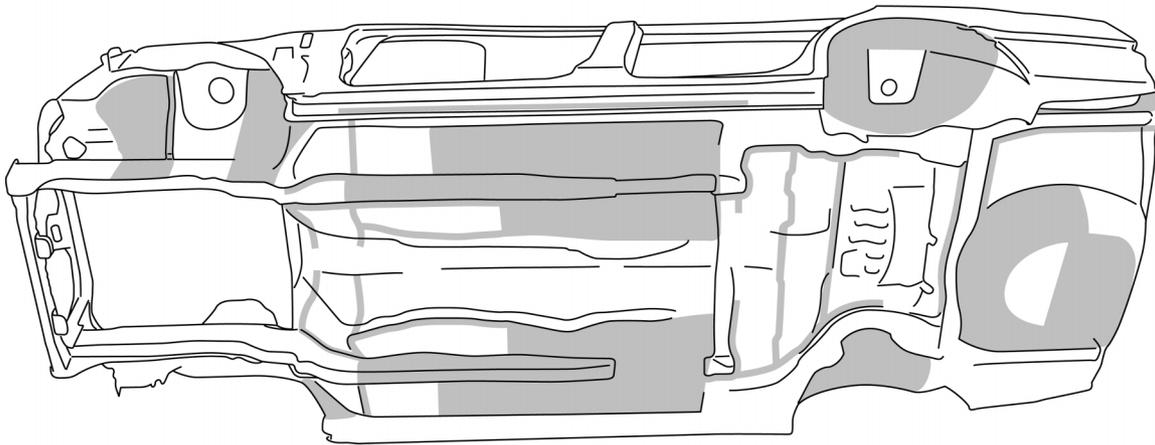
UNDERCOATING

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.

 : Indicates undercoated portions.



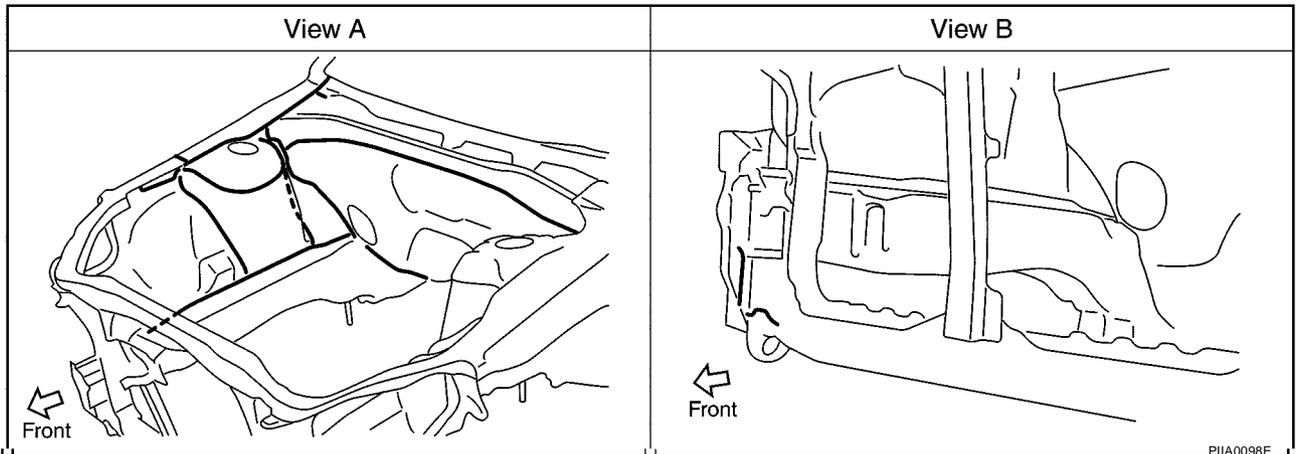
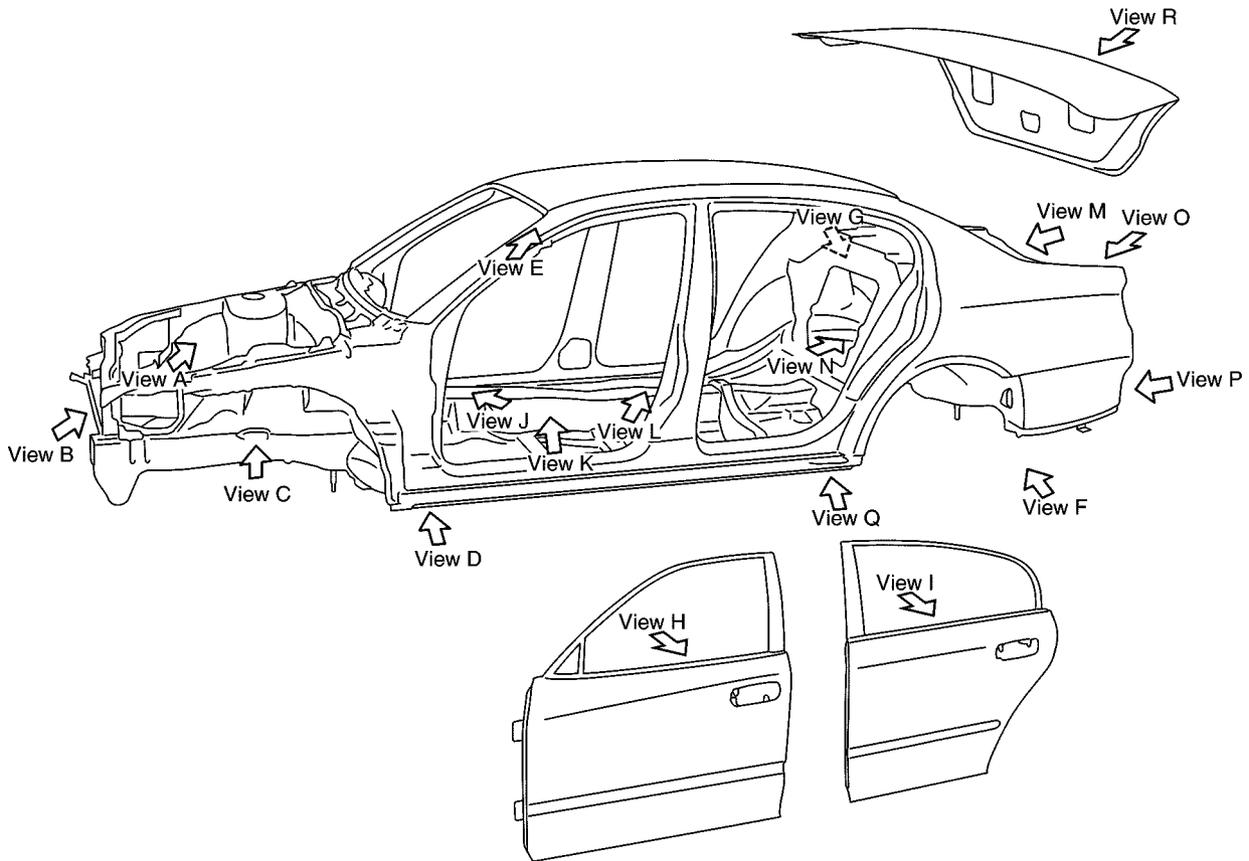
PIIA0097E

BODY REPAIR

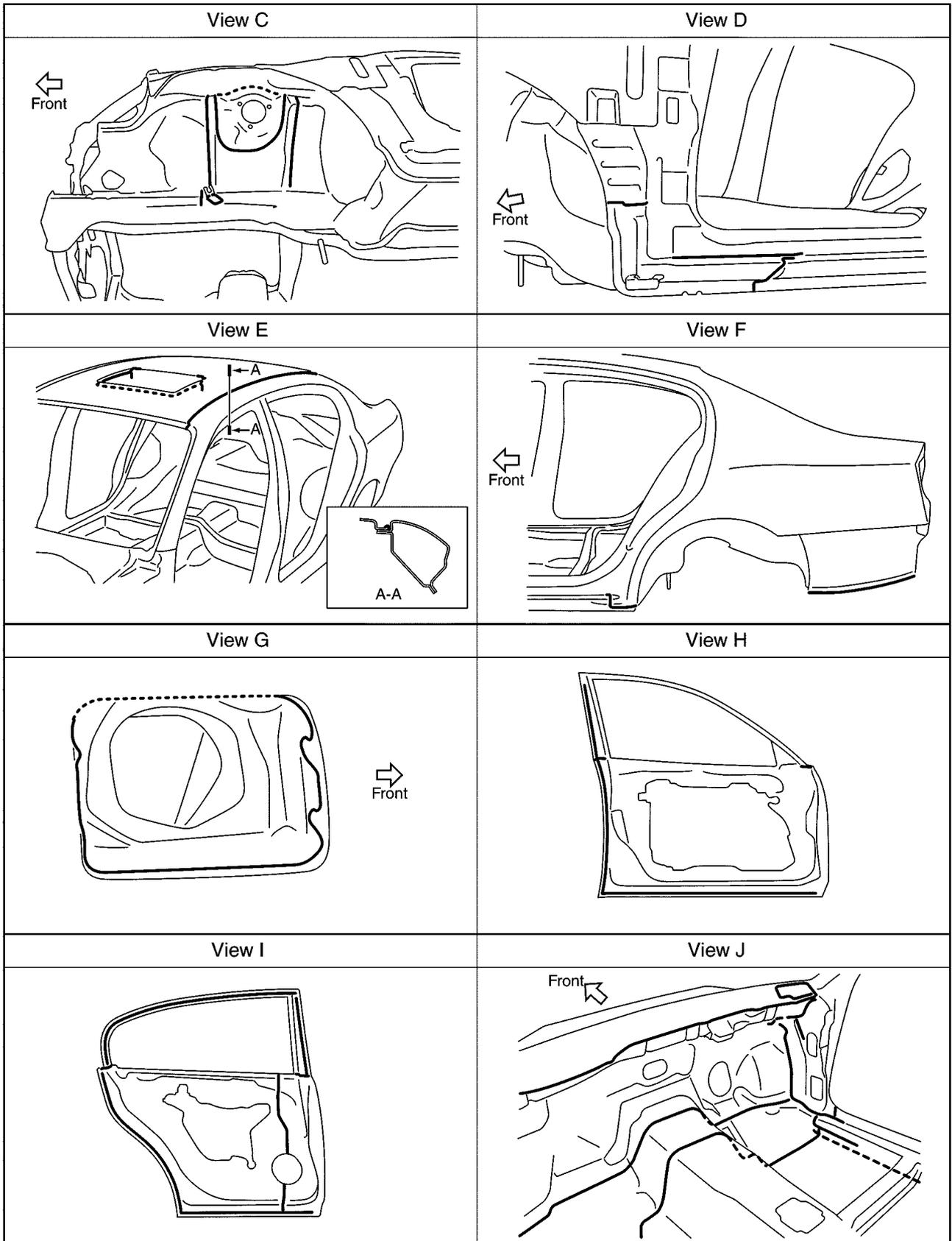
NIS000Y5

Body Sealing DESCRIPTION

The following figure shows the areas which are sealed at the factory. Sealant which has been applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.



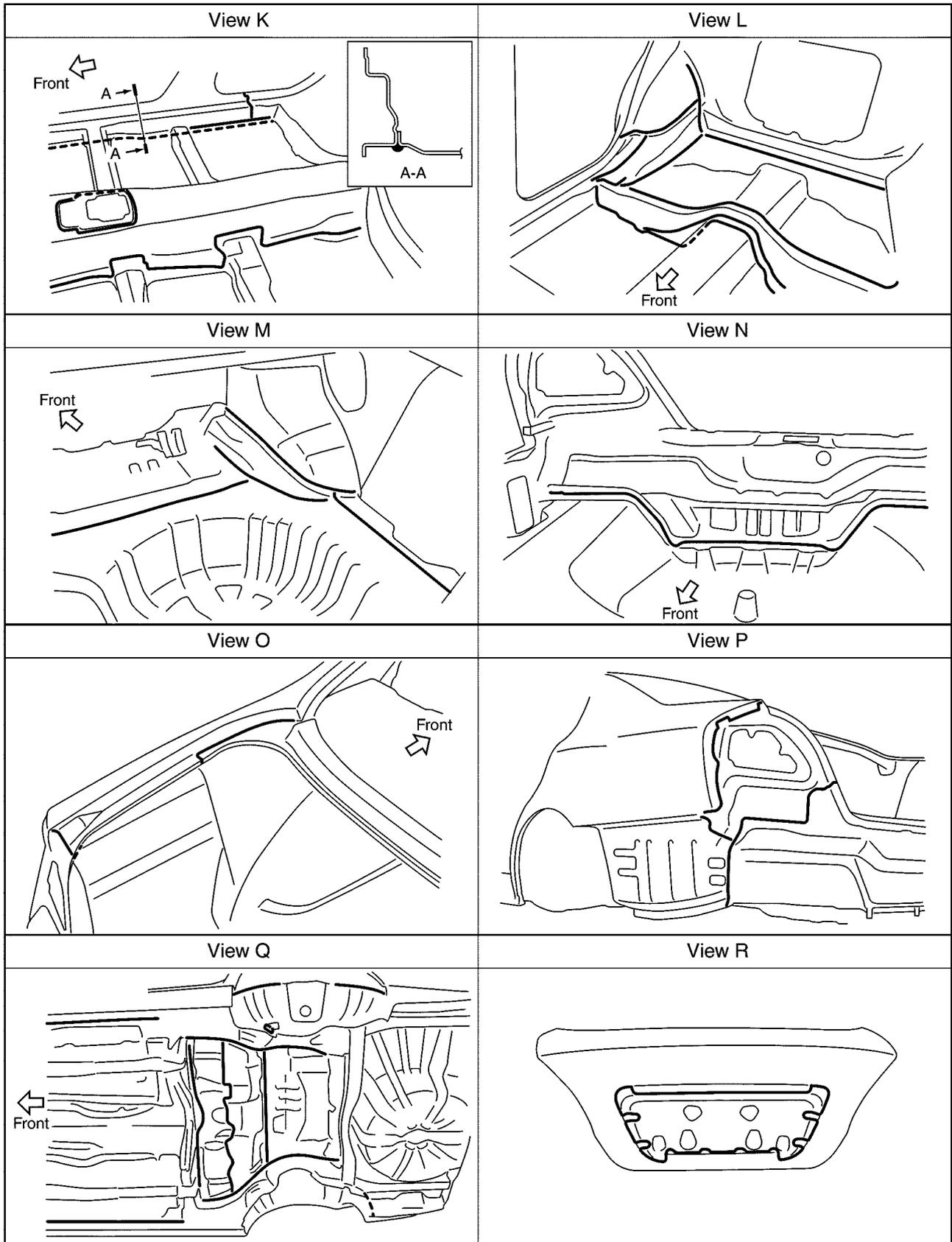
BODY REPAIR



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PIIA0099E

BODY REPAIR

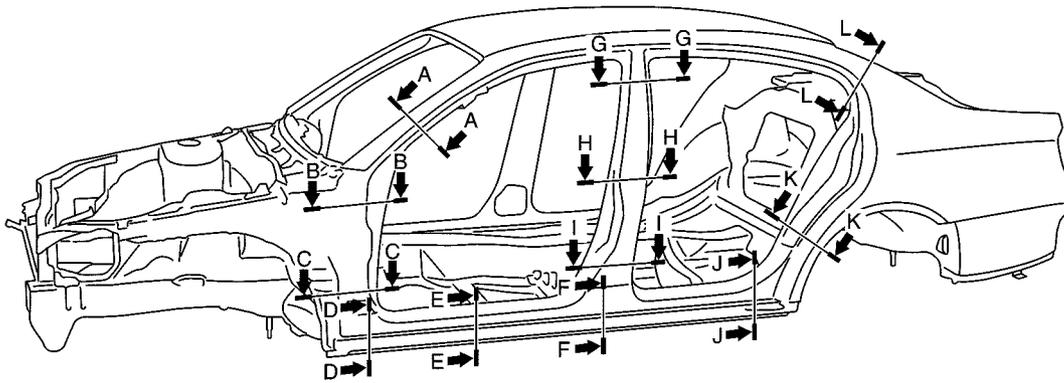


PIIA0100E

BODY REPAIR

Body Construction BODY CONSTRUCTION

NIS000Y6



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

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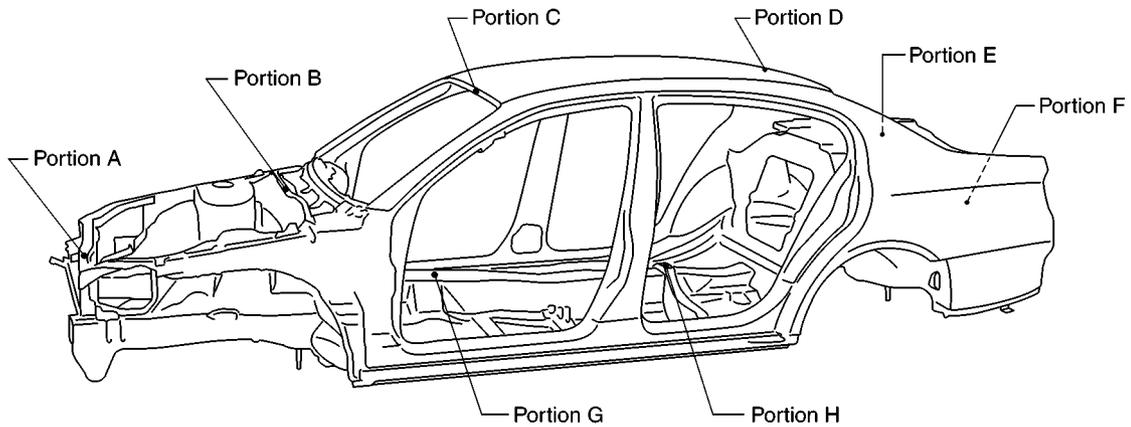
PIIA0101E

BODY REPAIR

NIS000Y7

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.



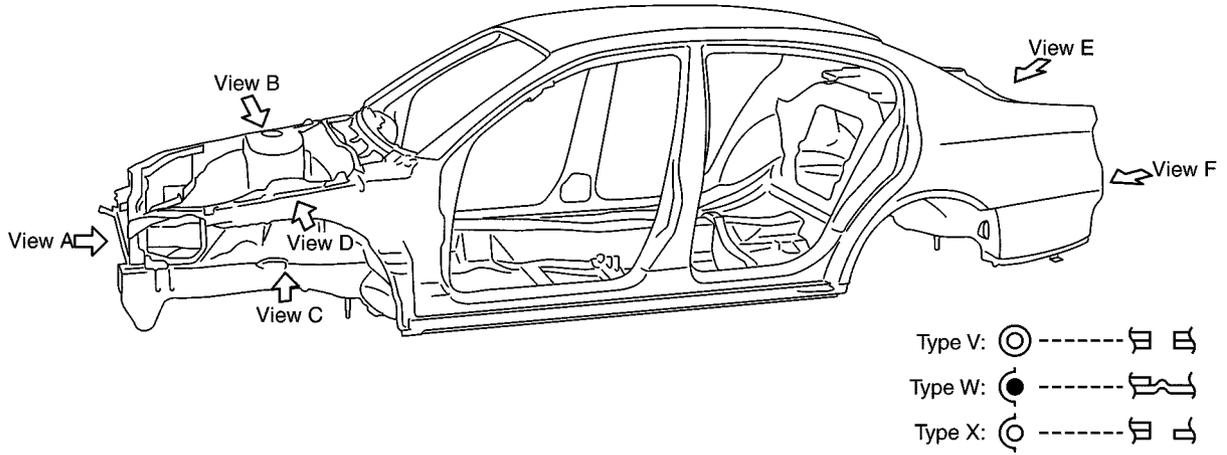
<p style="text-align: center;">Portion A</p> <p style="text-align: center;">Hole 5dia.</p> <p>● Upper radiator core support</p>	<p style="text-align: center;">Portion B</p> <p style="text-align: center;">Hole 5dia.</p> <p>● Cowl top</p>	<p style="text-align: center;">Portion C,D</p> <p style="text-align: center;">Embossment</p> <p>● Front roof ● Rear roof</p>
<p style="text-align: center;">Portion E</p> <p style="text-align: center;">Embossment</p> <p>● Rear waist panel</p>	<p style="text-align: center;">Portion F</p> <p style="text-align: center;">Groove</p> <p>● Rear panel</p>	<p style="text-align: center;">Portion G,H</p> <p style="text-align: center;">Embossment</p> <p style="text-align: center;">Indent</p> <p>● Front floor ● Rear floor</p>

SIA2399E

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.



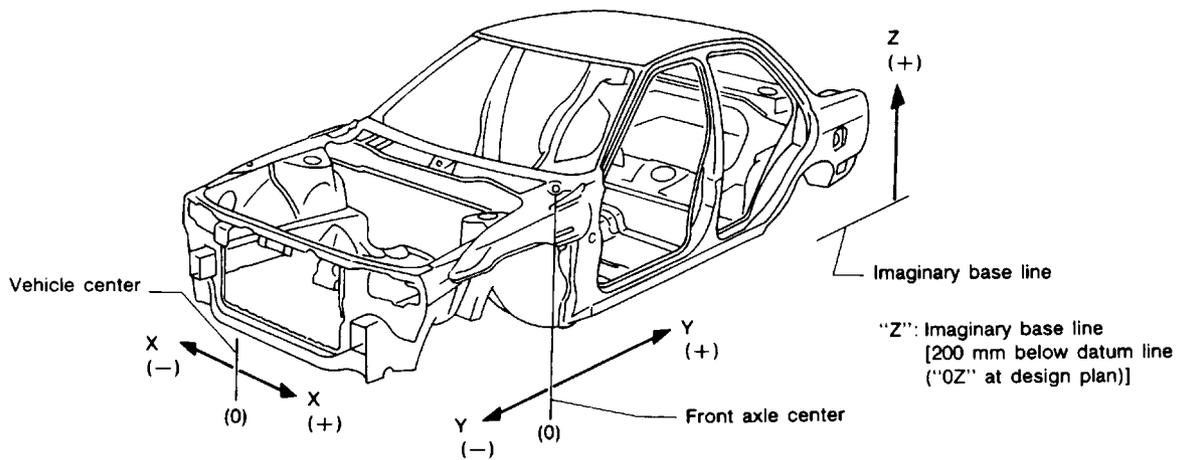
View A	View B	View C
View D	View E	View F

PIIA0103E

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".



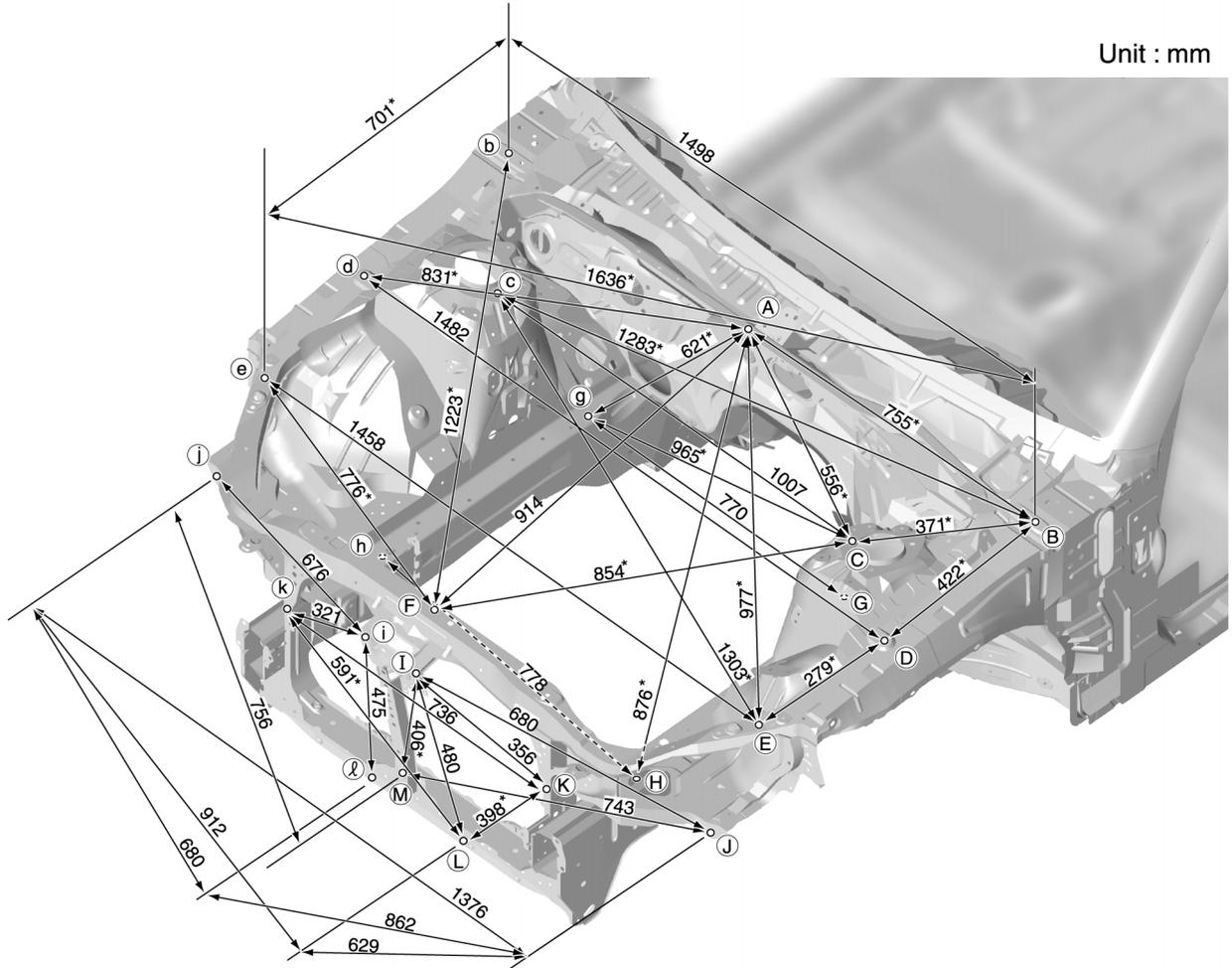
PIIA0104E

BODY REPAIR

ENGINE COMPARTMENT

Measurement

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

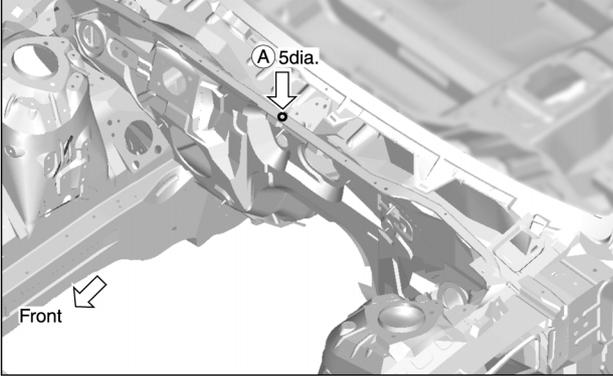


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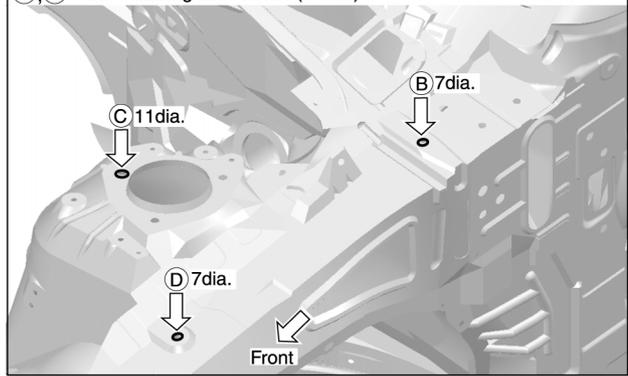
BODY REPAIR

Measurement Points

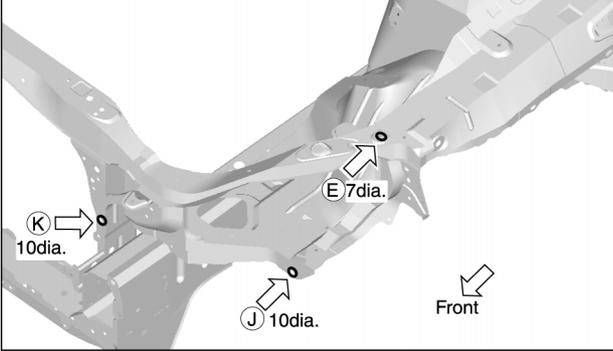
(A) :Cowl top seal rubber installing hole center of center positioning mark (5dia.)



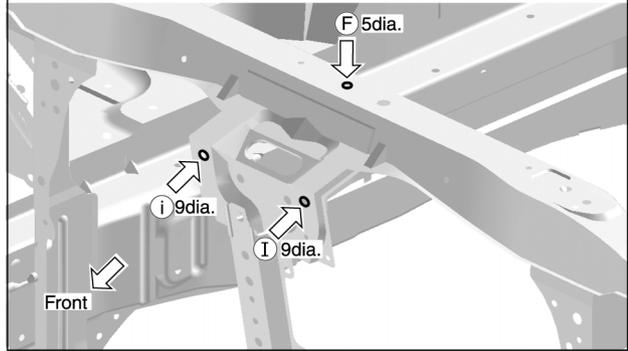
(B, b, D, d) :Fender installing hole center (7dia.)
(C, c) :Strut installing hole center (11dia.)



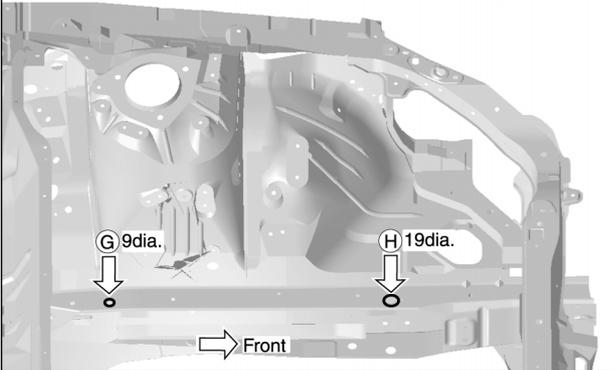
(E, e) :Fender installing hole center(7dia.)
(J, j, K, k) :Side radiator core support hole center
(J, j) :10dia. , (K, k) :10dia.)



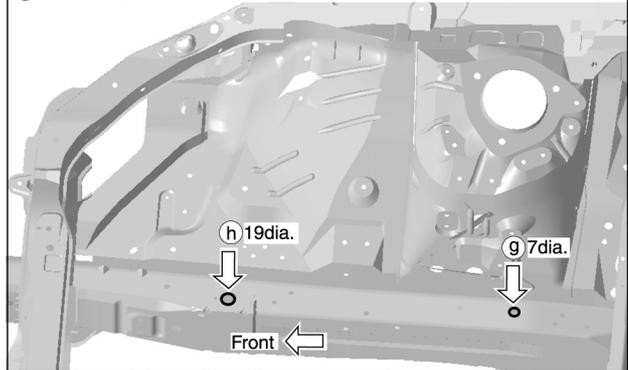
(F) :Upper radiator core support hole center of center positioning mark (5dia.)
(I, i) :Hood lock installing hole center (9dia.)



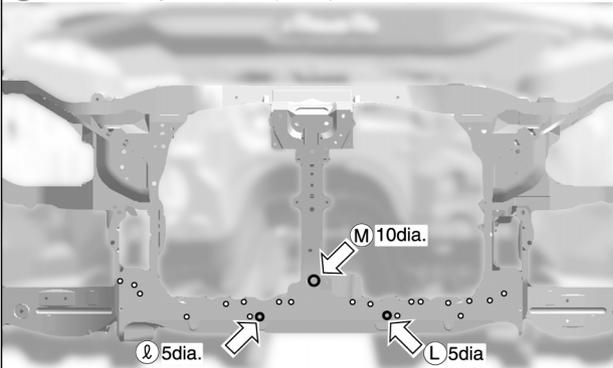
(G) :Front side member LH side hole center (9dia.)
(H) :Front suspension member installing hole center (19dia.)



(g) :Front side member RH side hole center (7dia.)
(h) :Front suspension member installing hole center (19dia.)



(L, l) : Harnes installing hole center (5dia.)
(M) :Hood lock stay hole center (10dia.)



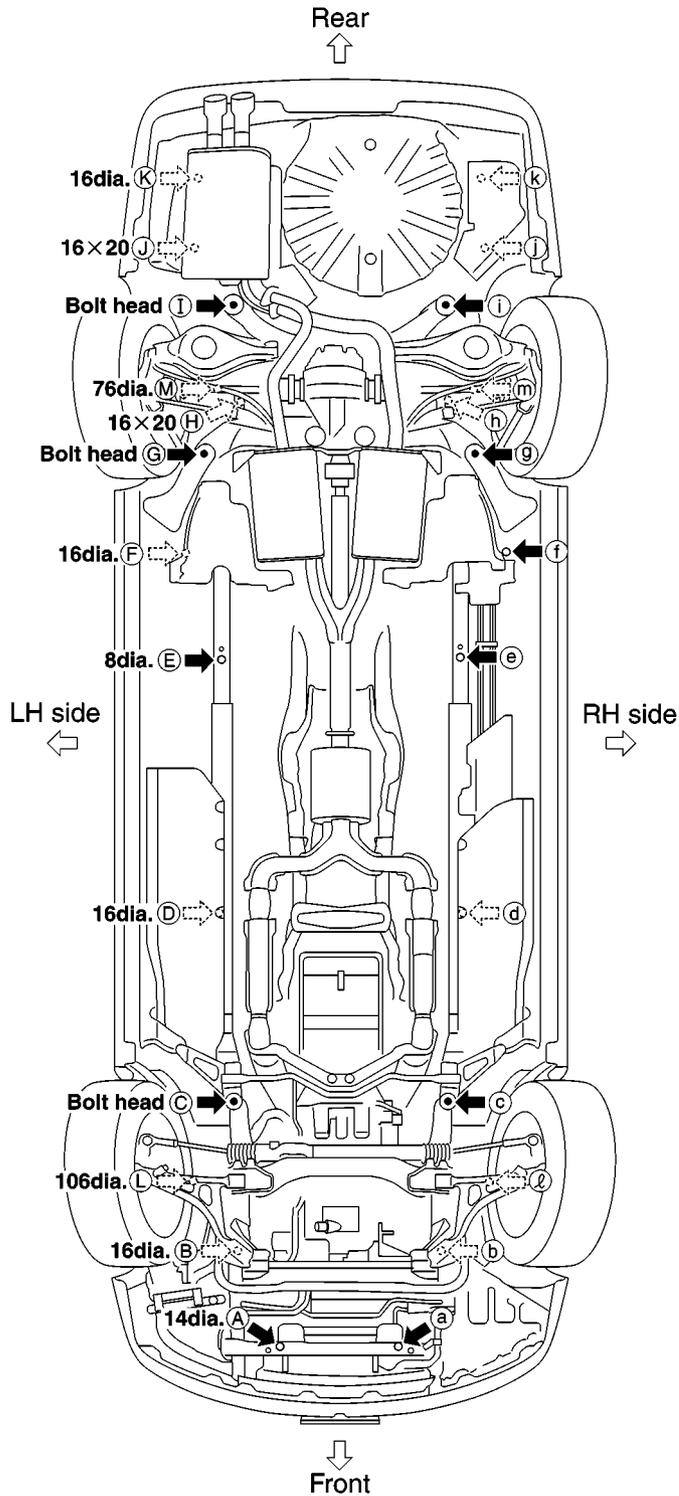
SIIA2364E

BODY REPAIR

Measurement Points

Unit : mm

As viewed from underside.



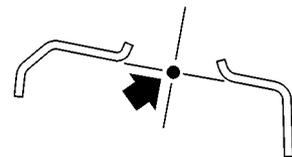
Coordinates:

(A), (a)	(I), (i)
X:215	X:412
Y:-637	Y:3164
Z:155	Z:225
(B), (b)	(J), (j)
X:400	X:580
Y:-290	Y:3370
Z:283	Z:314
(C), (c)	(K), (k)
X:395	X:580
Y:270	Y:3620
Z:104	Z:313
(D), (d)	
X:432	
Y:950	
Z:95	
(E), (e)	
X:432	
Y:1840	
Z:85	
(F), (f)	
X:610	
Y:2210	
Z:123	
(G), (g)	
X:503	
Y:2609	
Z:147	
(H), (h)	
X:437	
Y:2803	
Z:438	

Front and rear strut tower centers

Coordinates:

(L), (l)
X:572
Y:72
Z:790
(M), (m)
X:513
Y:2900
Z:803



Front: (L), (l) 106dia
Rear: (M), (m) 76dia

SIIA2366E

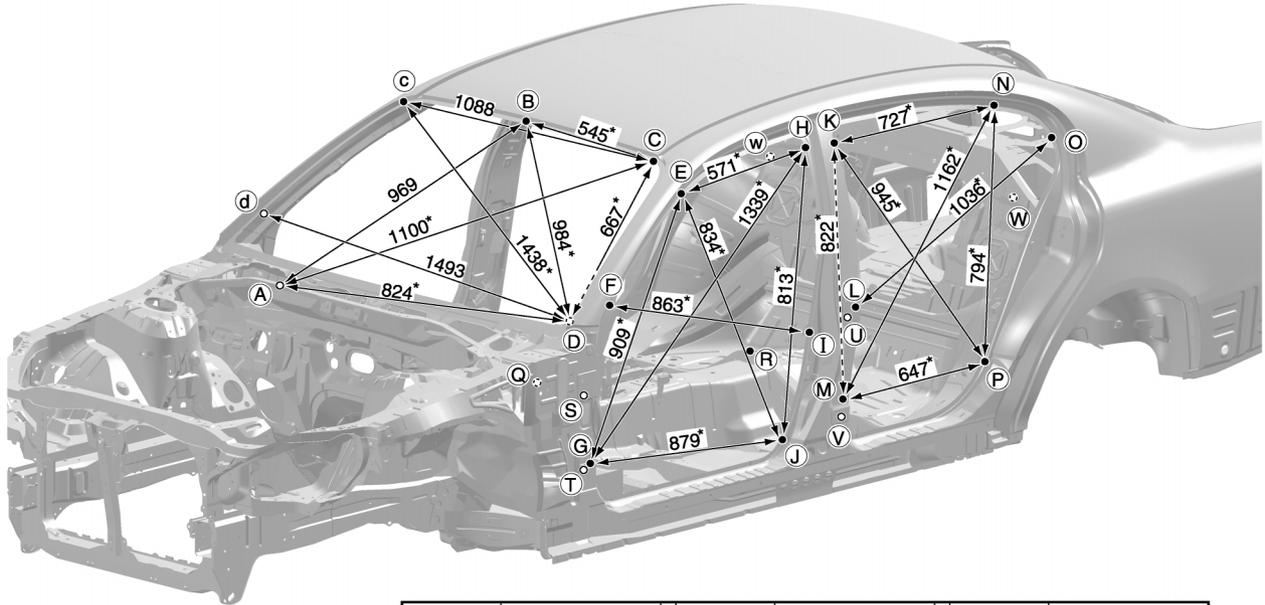
BODY REPAIR

PASSENGER COMPARTMENT

Measurement

Unit : mm

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



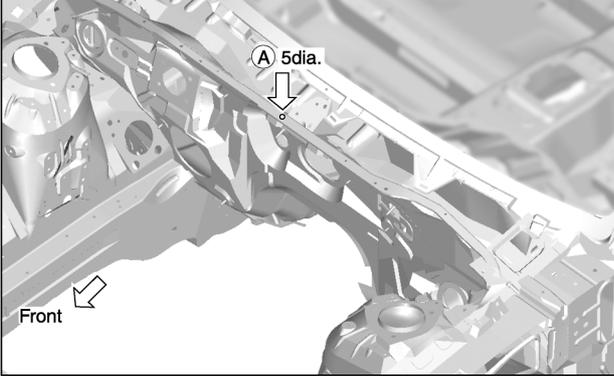
Point	Dimension	Point	Dimension	Point	Dimension
E~e	1,263	Q~F	923*	G~J	1,744*
F~f	1,453	Q~G	795*	H~J	1,588*
G~g	1,507	Q~H	1,316*	K~m	1,594*
H~h	1,235	Q~I	1,077*	K~n	1,440*
I~i	1,493	Q~J	982*	K~P	1,664*
J~j	1,507	R~K	1,074*	M~P	1,647*
K~k	1,235	R~L	883*	N~P	1,590*
L~l	1,493	R~M	847*	S~U	1,161*
M~m	1,511	R~N	1,134*	S~V	1,160*
N~n	1,251	R~O	1,170*	T~U	1,197*
O~o	1,356	R~P	807*	T~V	1,124*
P~p	1,518	E~g	1,652*	R~W	1,046*
W~w	967	E~h	1,373*		
Q~E	1,033*	G~h	1,911*		

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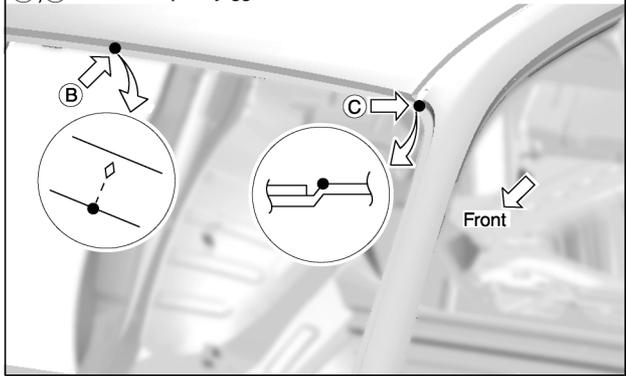
BODY REPAIR

Measurement Points

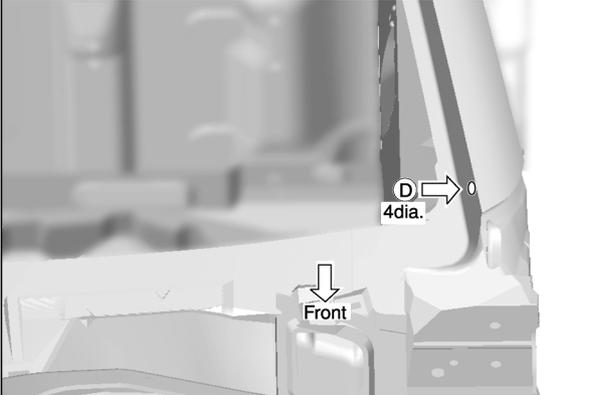
(A) :Cowl top seal rubber installing hole center of center positioning mark (5dia.)



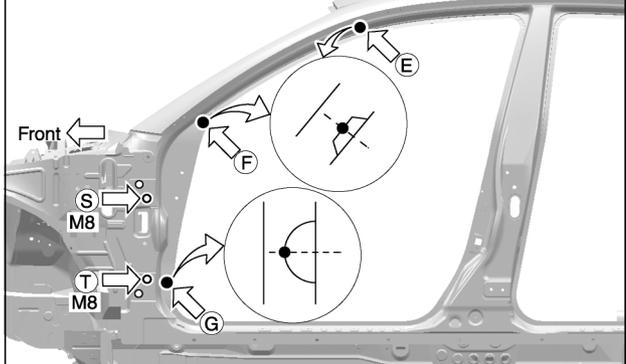
(B) :Front roof flange end of center positioning mark
(C) :Outer front pillar joggle



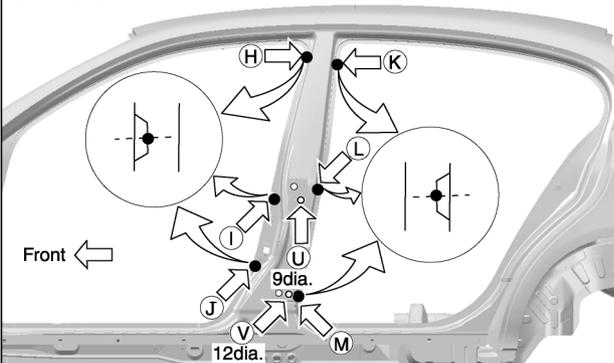
(D, d) :Windshield-molding installing hole center (4dia.)



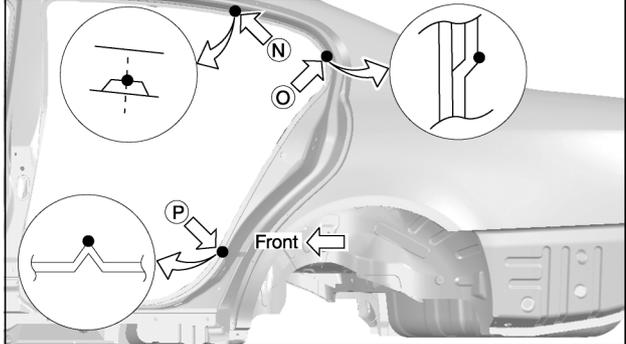
(E, e, F, f, G, g) :Outer front pillar indent
(S, s, T, t) :Door hinge installing nut center (M8)



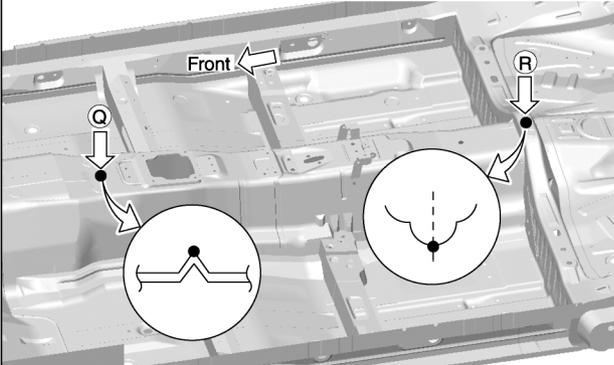
(H, h, I, i, J, j, K, k, L, l, M, m) :Outer center pillar indent
(U, u, V, v) :Door hinge installing nut center (U, u :9dia. , V, v :12dia.)



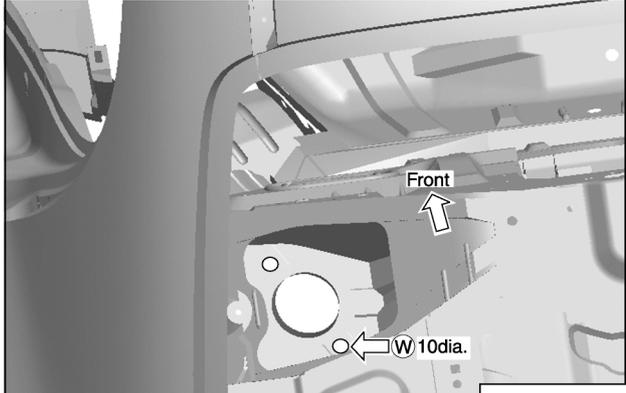
(N, n) :Rear fender indent
(O, o) :Rear fender joggle
(P, p) :Rear fender positioning mark



(Q) :Center front floor hole center of center positioning mark
(R) :Center seat installing indent on the hole of center positioning mark



(W, w) :Rear suspension installing hole center (10dia.)



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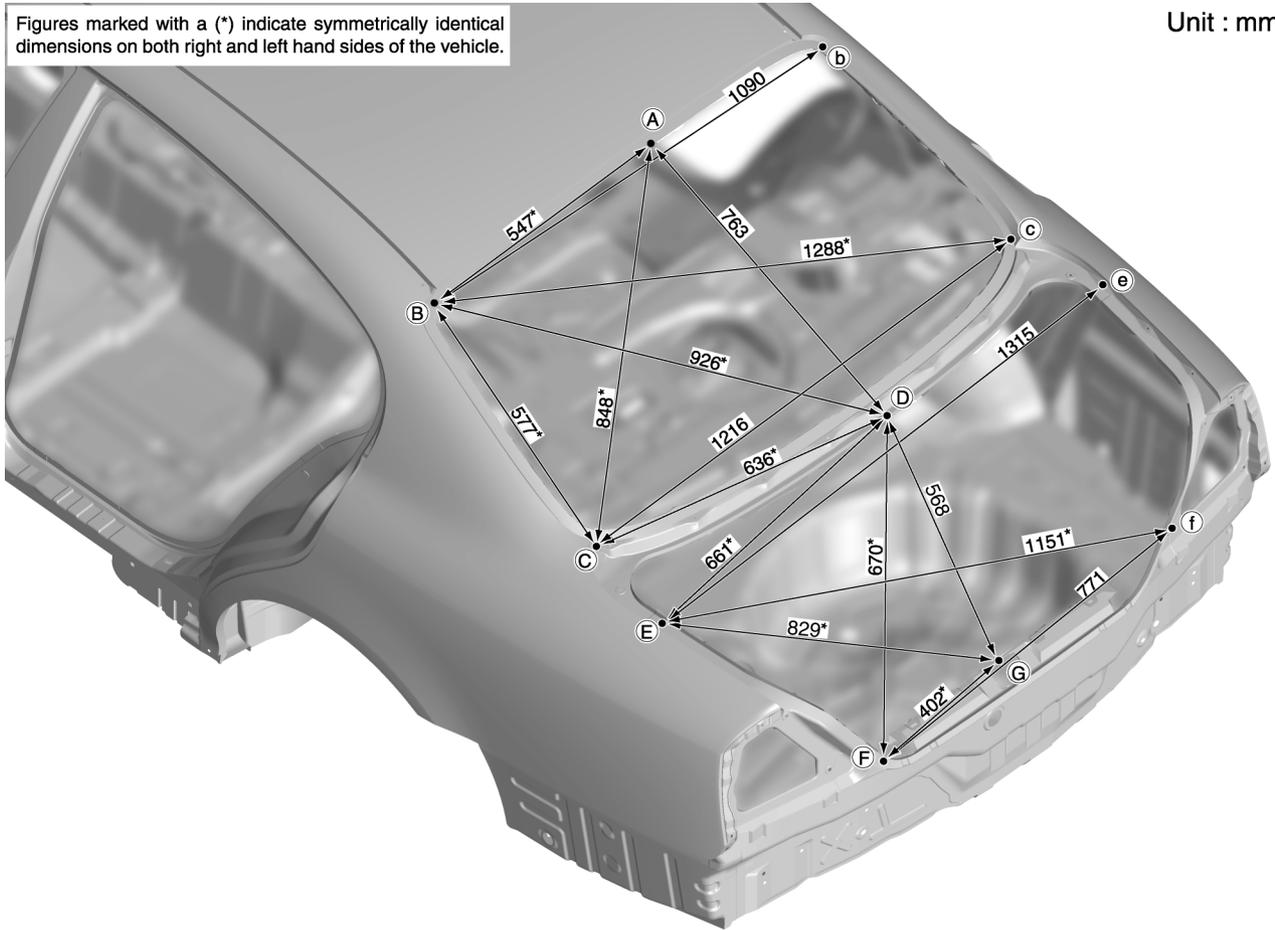
BODY REPAIR

REAR BODY

Measurement

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

Unit : mm

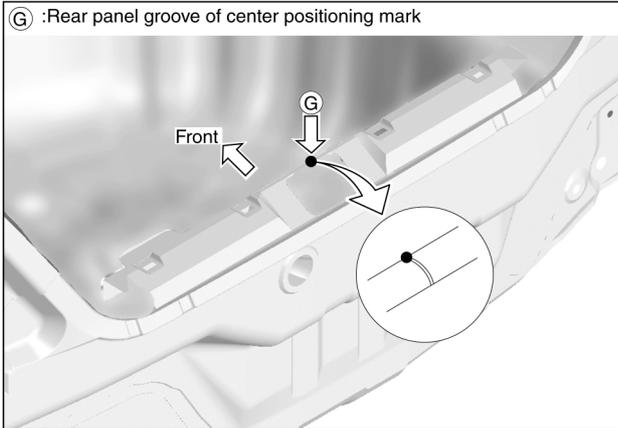
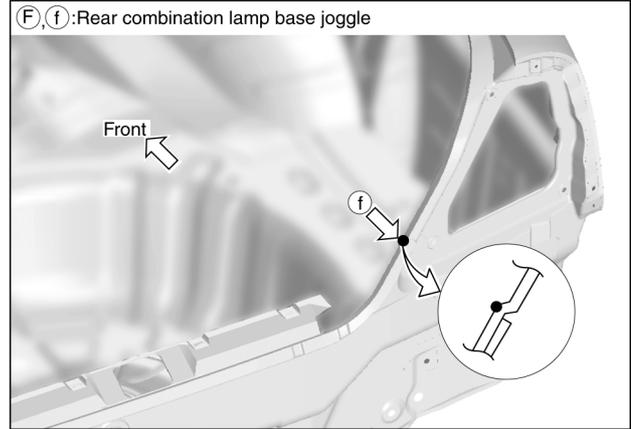
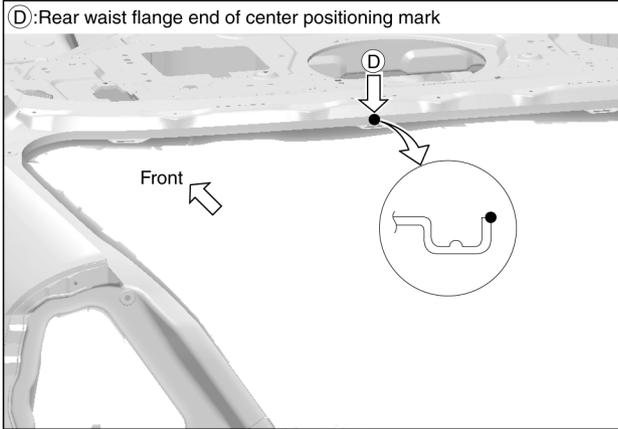
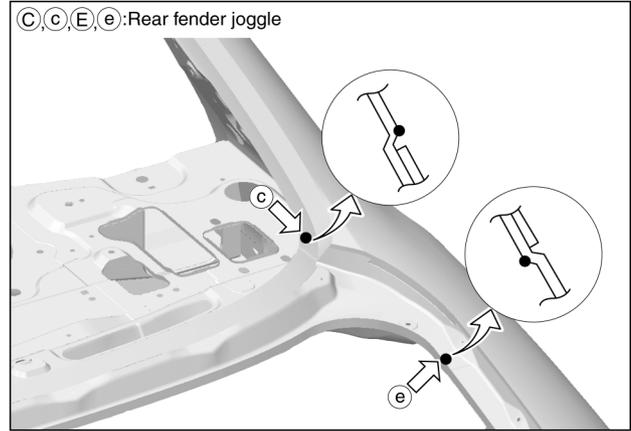
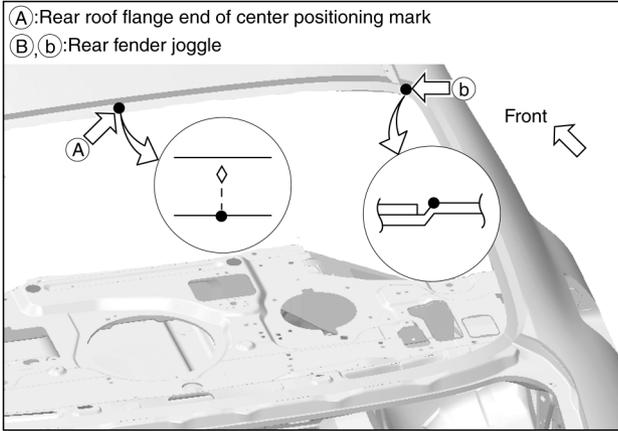


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BODY REPAIR

Measurement Points



SIIA2401E

BODY REPAIR

Handling Precautions for Plastics HANDLING PRECAUTIONS FOR PLASTICS

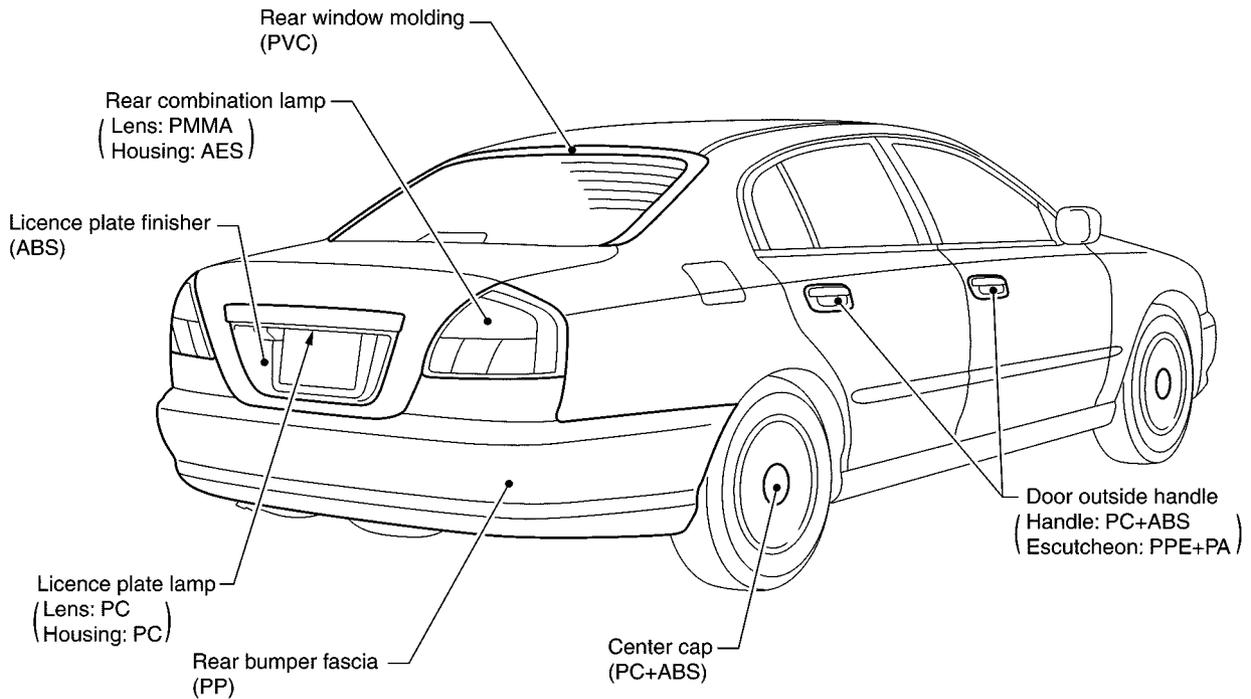
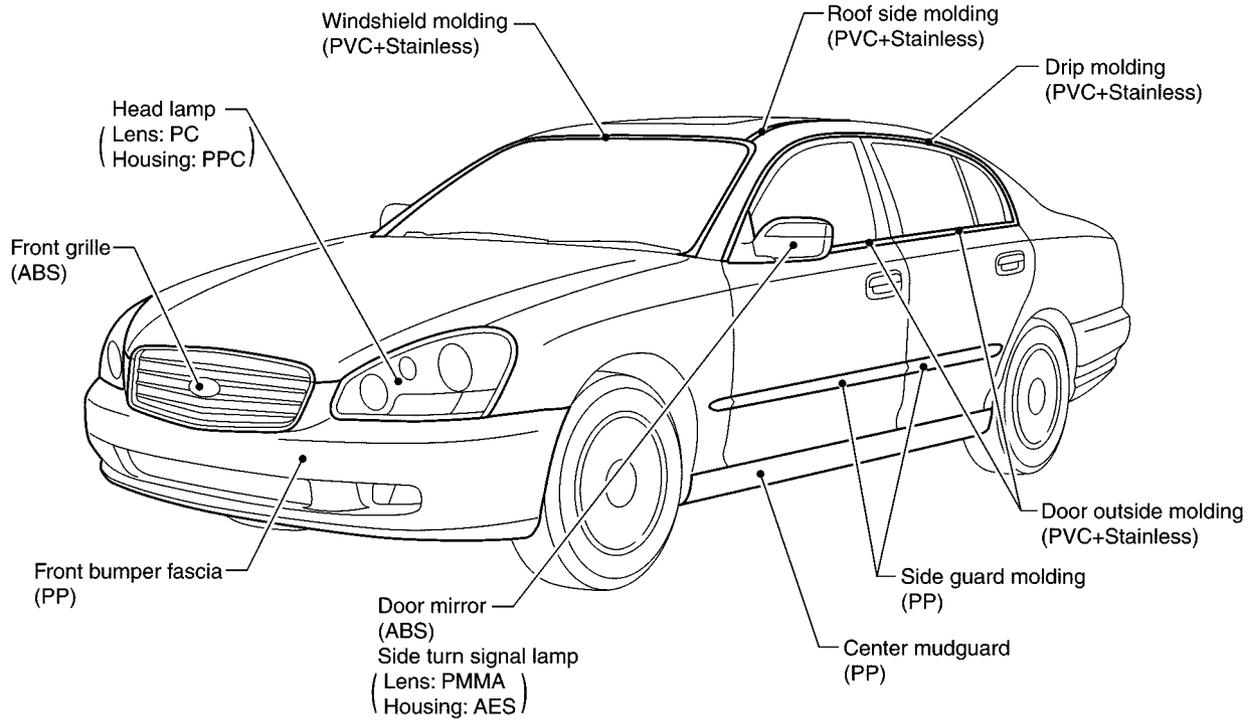
NIS000Y8

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.

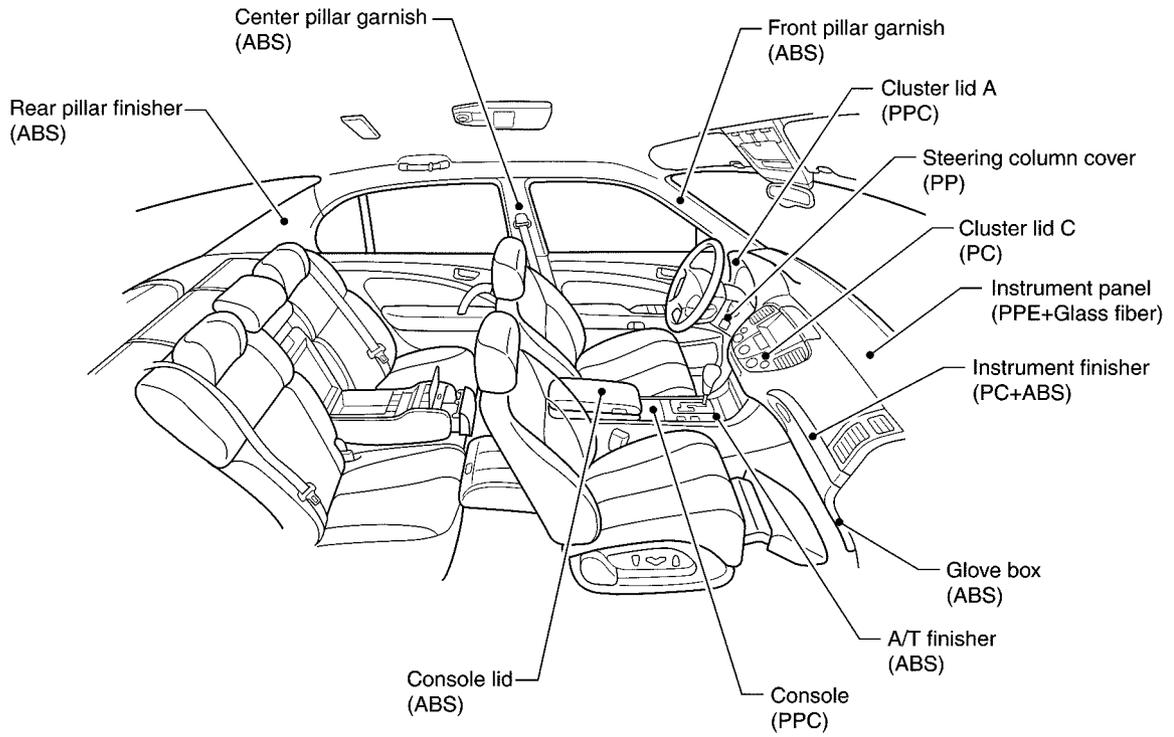
BODY REPAIR

LOCATION OF PLASTIC PARTS



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BODY REPAIR



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PIIA0114E

BODY REPAIR

Precautions in Repairing High Strength Steel

NIS000Y9

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/Infinity 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● Upper hoodledge● Upper pillar hinge brace assembly● Rear side member extension● Other reinforcements
785-981 N/mm ² (80-100kg/mm ² 114-142klb/sq in)	SP150	<ul style="list-style-type: none">● Front bumper reinforcement● Rear bumper reinforcement

SP130 is the most commonly used HSS.

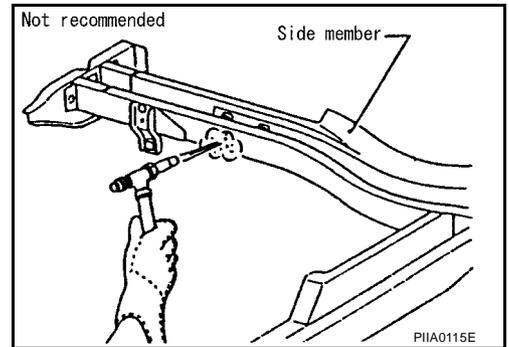
SP150 HSS is used only on parts that require much more strength.

BODY REPAIR

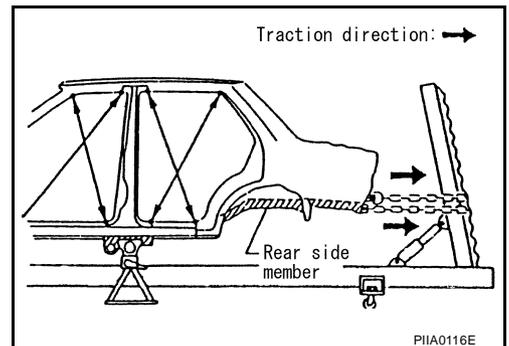
Read the Following Precautions When Repairing HSS:

1. Additional points to consider

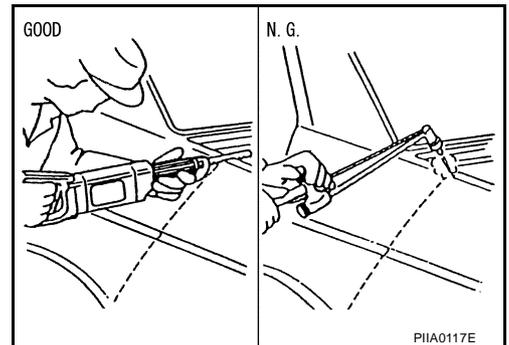
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F). Verify heating temperature with a thermometer. (Crayon-type and other similar type thermometer are appropriate.)



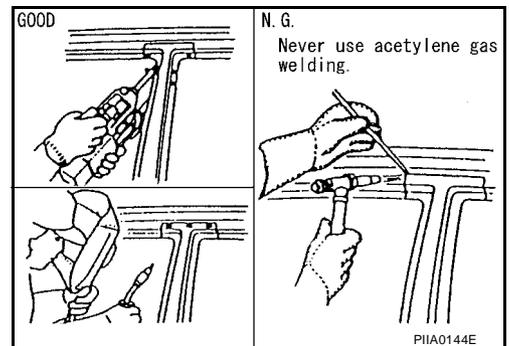
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



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



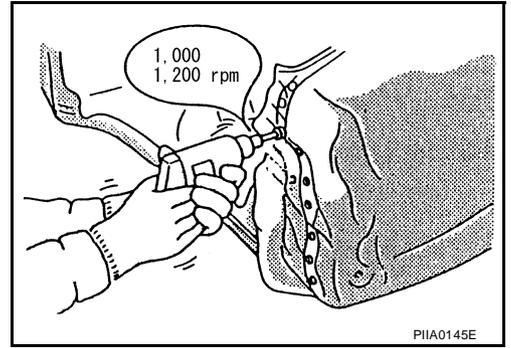
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat. If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



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BODY REPAIR

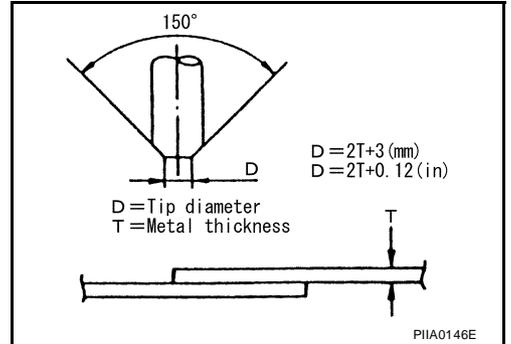
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.
- SP150 HSS panels with a tensile strength of 785 to 981 N/mm² (80 to 100 kg/mm², 114 to 142 klb/sq in), used as reinforcement in the door guard beams, is too strong to repair. When these HSS parts are damaged, the outer panels also sustain substantial damage; therefore, the assembly parts must be replaced.



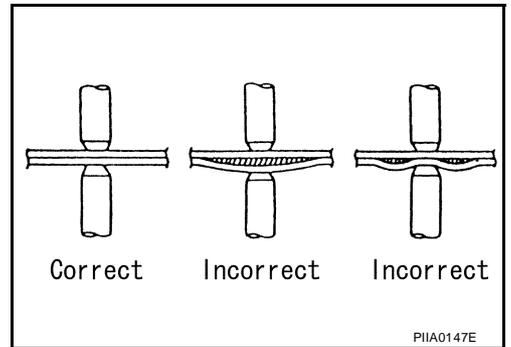
2. Precautions in spot welding HSS

This work should be performed under standard working conditions. Always note the following when spot welding HSS:

- The electrode tip diameter must be sized properly according to the metal thickness.



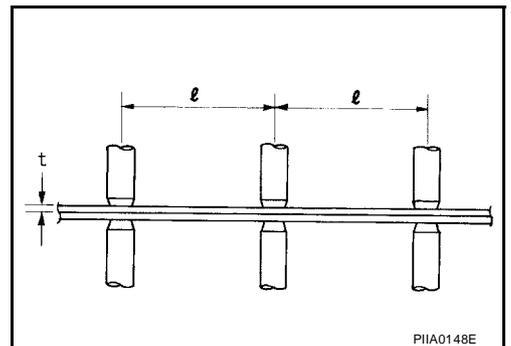
- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

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



BODY REPAIR

Replacement Operations

NIS000YA

DESCRIPTION

This section is prepared for technicians who have attained a high level of skill and experience in repairing collision-damaged vehicles and also use modern service tools and equipment. Persons unfamiliar with body repair techniques should not attempt to repair collision-damaged vehicles by using this section.

Technicians are also encouraged to read Body Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle can be maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warning, that are not including in this manual. Technicians should refer to both manuals to ensure proper repairs.

Please note that these information are prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

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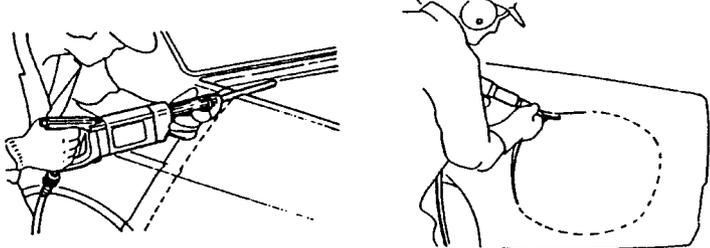
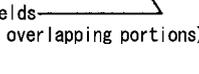
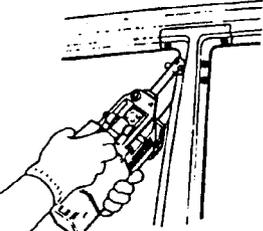
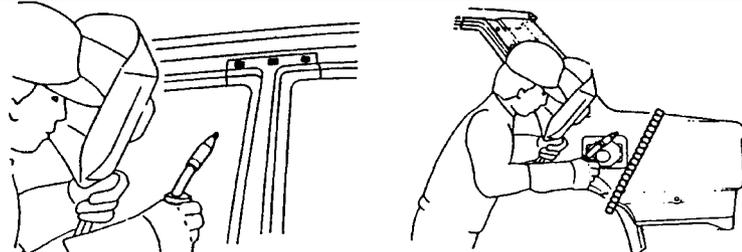
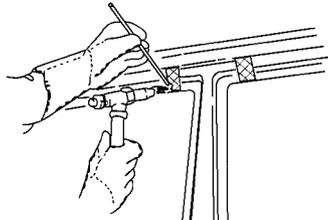
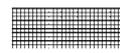
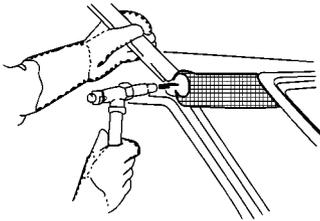
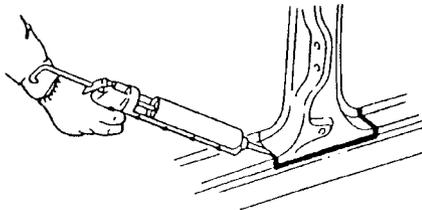
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BODY REPAIR

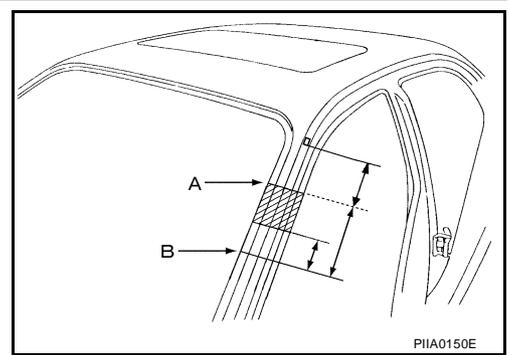
The symbols used in this section for cutting and welding / brazing operations are shown below.

 <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>▨ ▨ ▨ ▨ Brazing</p>  		
<p>▩ ▩ ▩ ▩ Soldering</p>  		
<p>————— Sealing</p>		

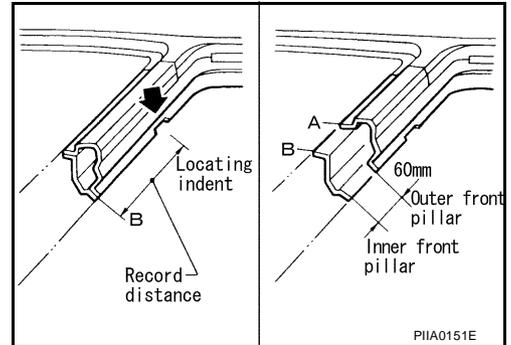
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BODY REPAIR

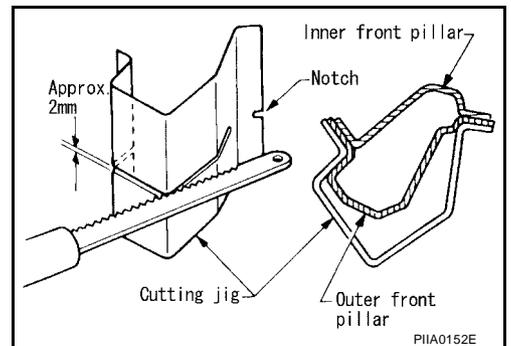
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- 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.

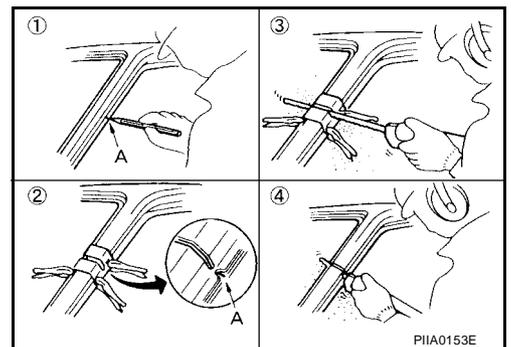


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- 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.



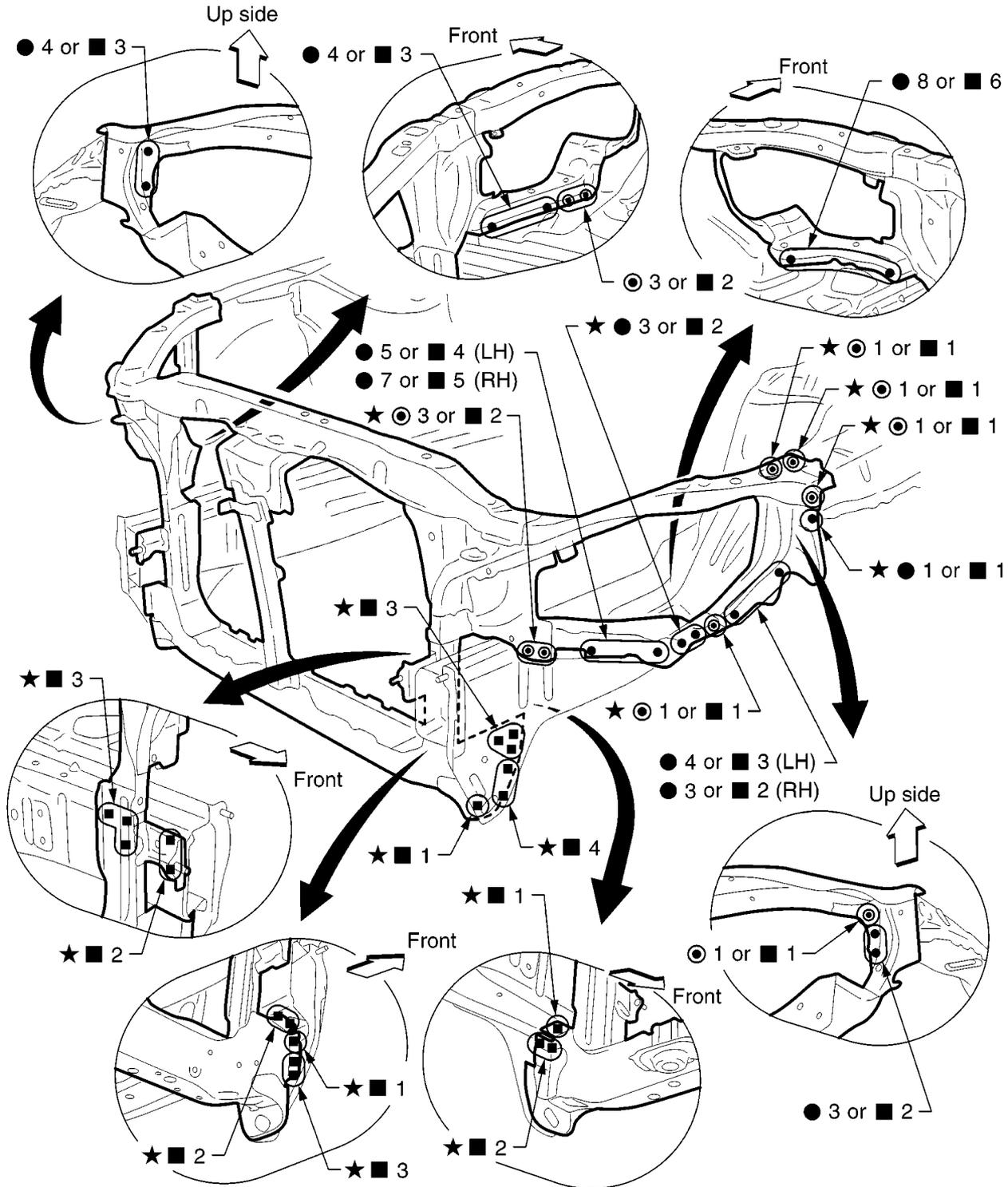
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BODY REPAIR

RADIATOR CORE SUPPORT

Service Joint

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



2-spot welds



3-spot welds



MIG plug weld



For 3 panels plug weld method



MIG seam weld/
Point weld



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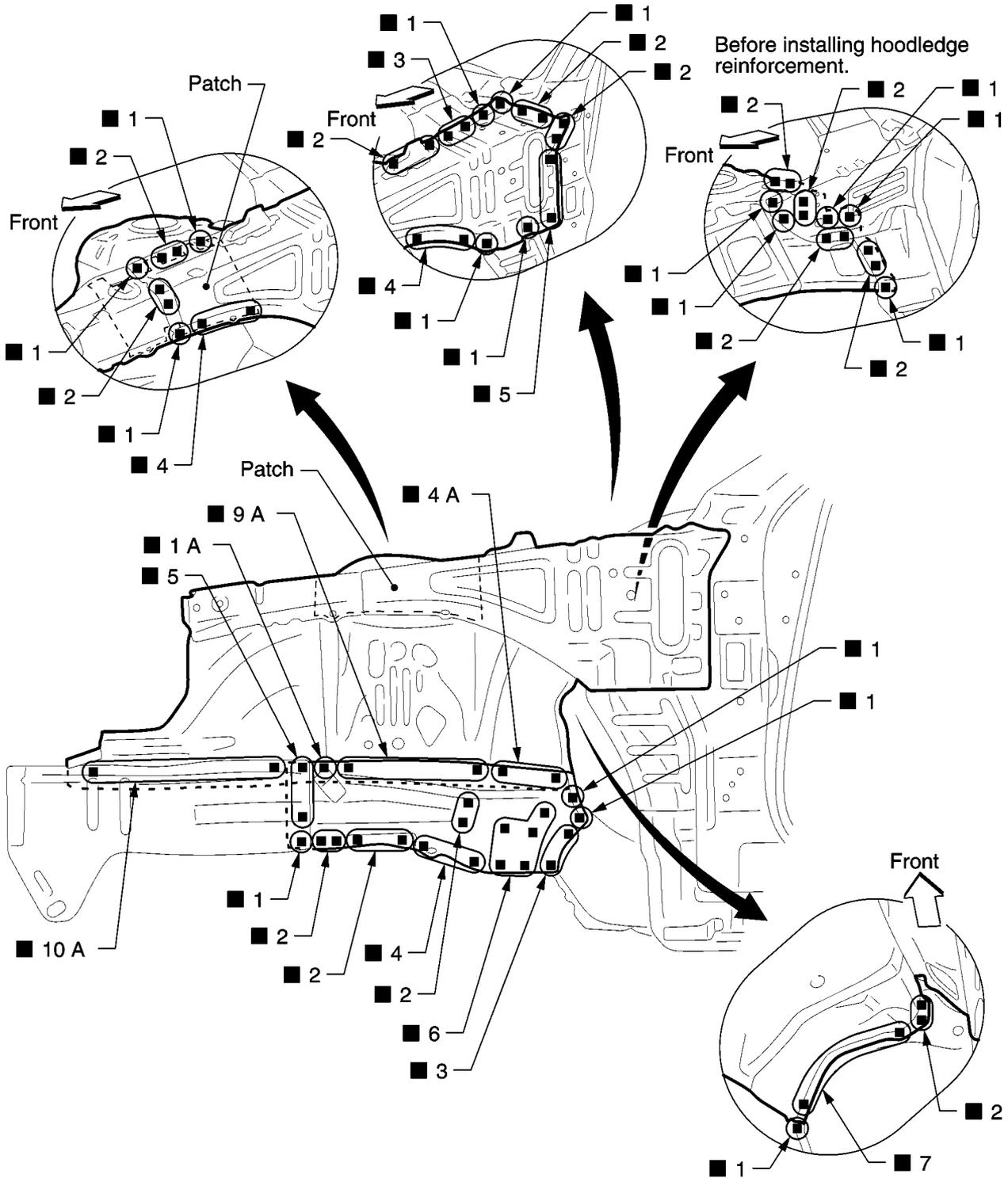
BODY REPAIR

HOODLEDGE

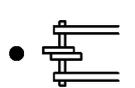
- Work after radiator core support has been removed.

Service Joint

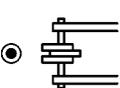
Remove front side member closing plate for easier installation.



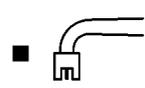
2-spot welds



3-spot welds



MIG plug weld



For 3 panels plug weld method



MIG seam weld/
Point weld



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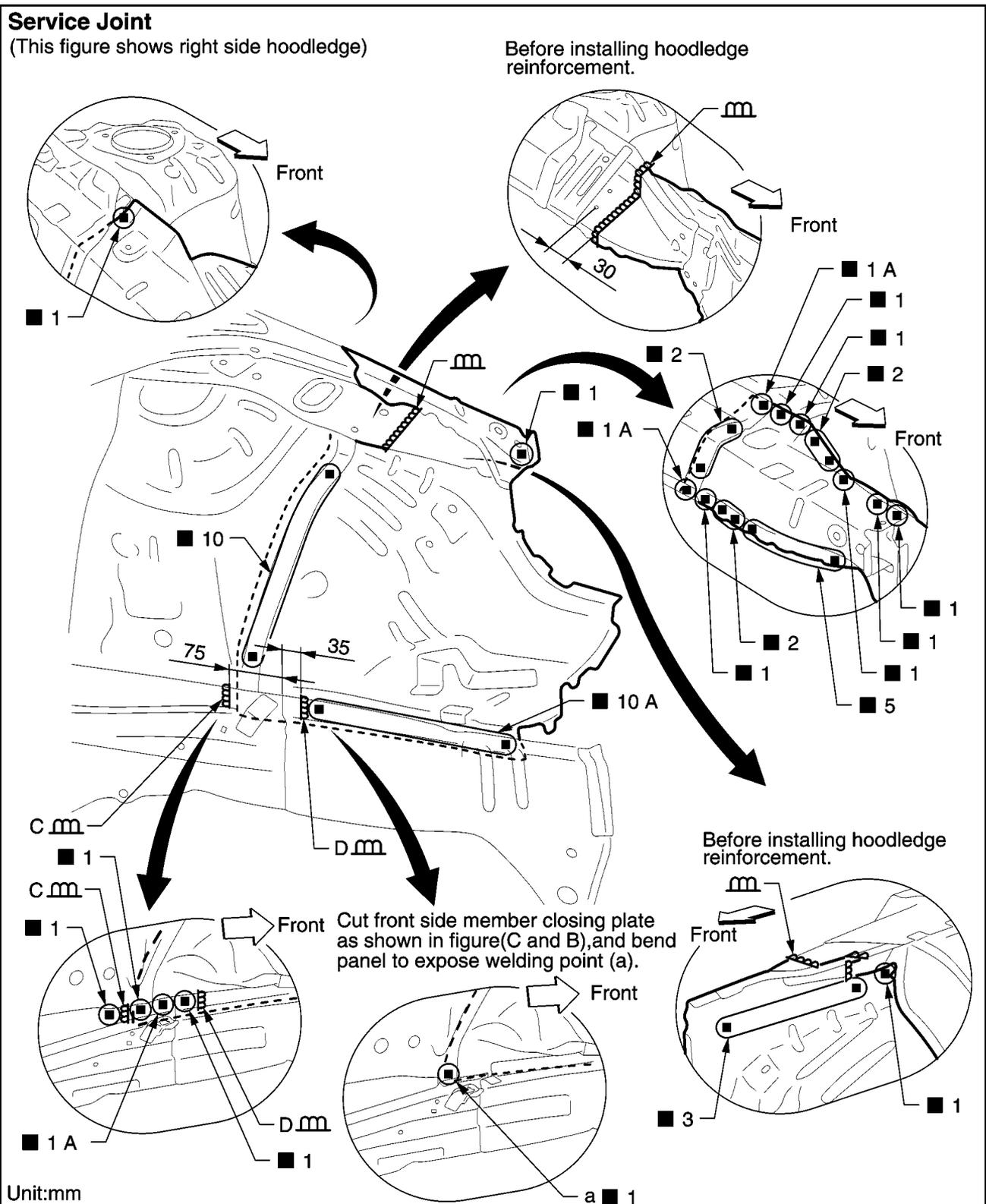
BODY REPAIR

HOODLEDGE (PARTIAL REPLACEMENT)

- Work after radiator core support has been removed.

Service Joint

(This figure shows right side hoodledge)



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



PIIA0079E

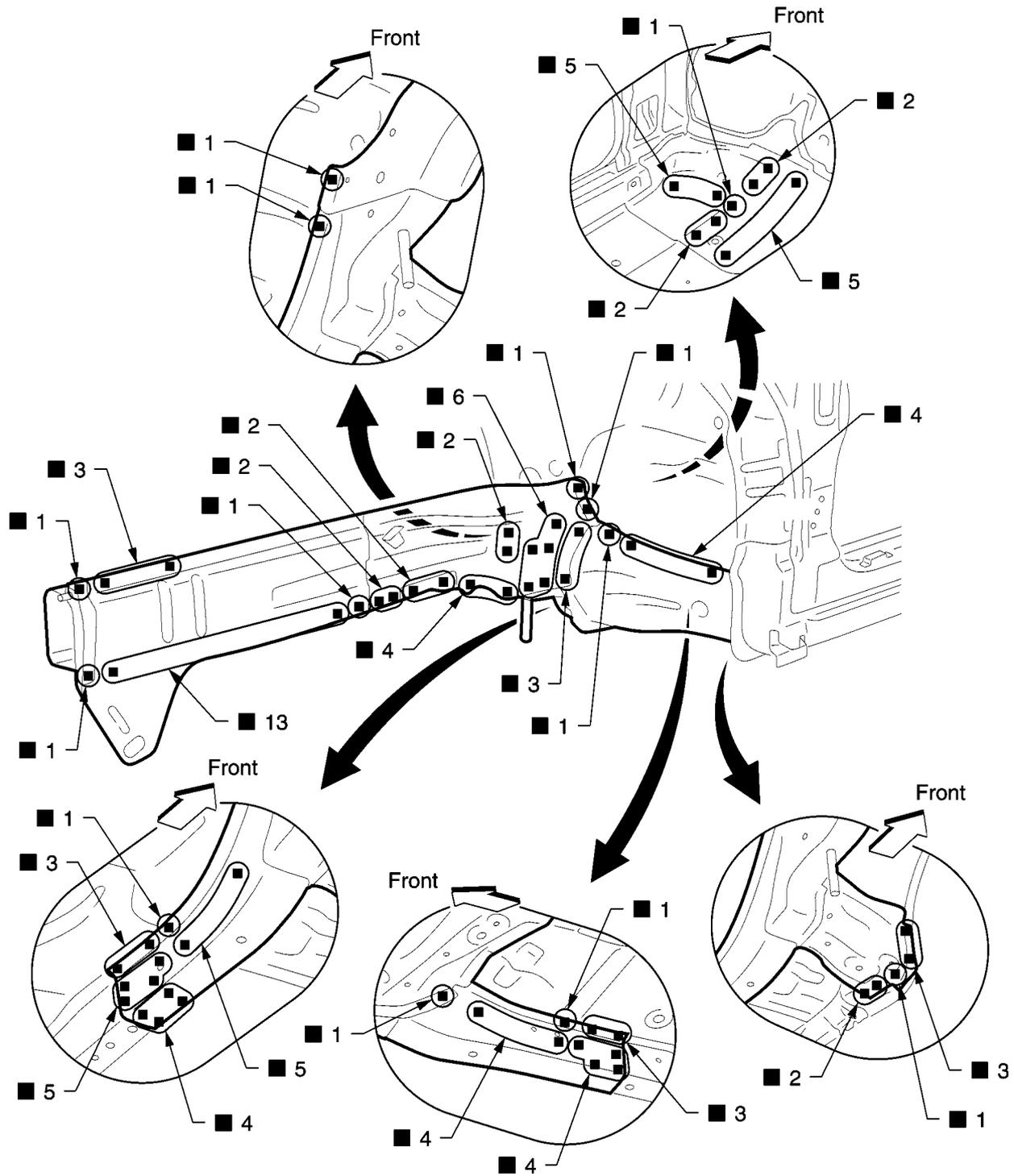
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BODY REPAIR

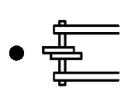
FRONT SIDE MEMBER

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

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



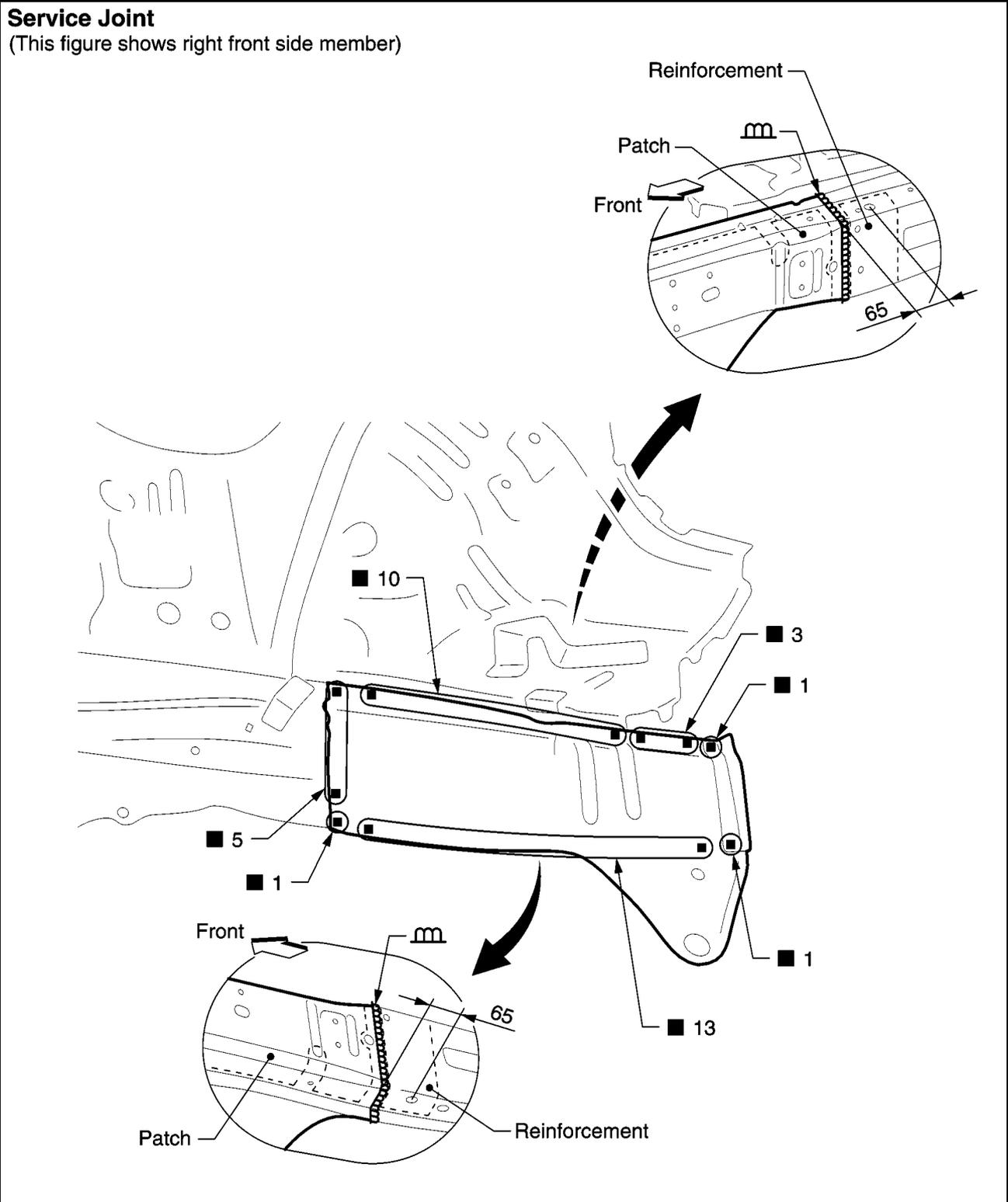
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BODY REPAIR

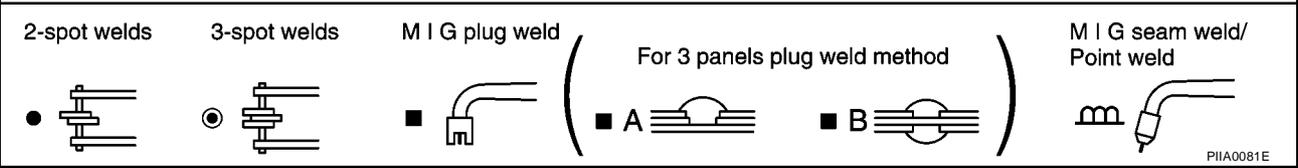
FRONT SIDE MEMBER (PARTIAL REPLACEMENT)

- Work after radiator core support has been removed.

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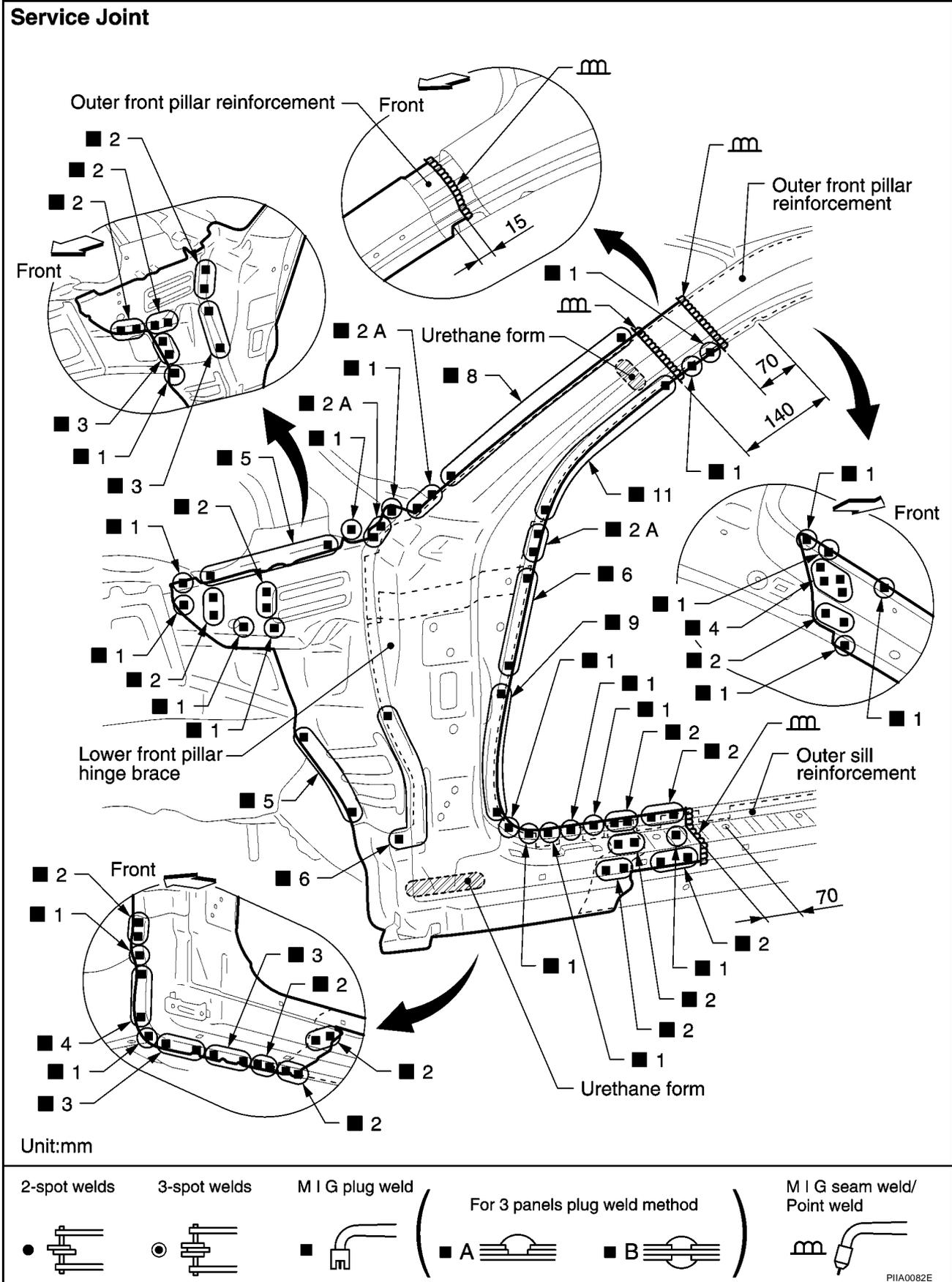


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BODY REPAIR

FRONT PILLAR

- Work after rear hoodledge reinforcement has been removed.

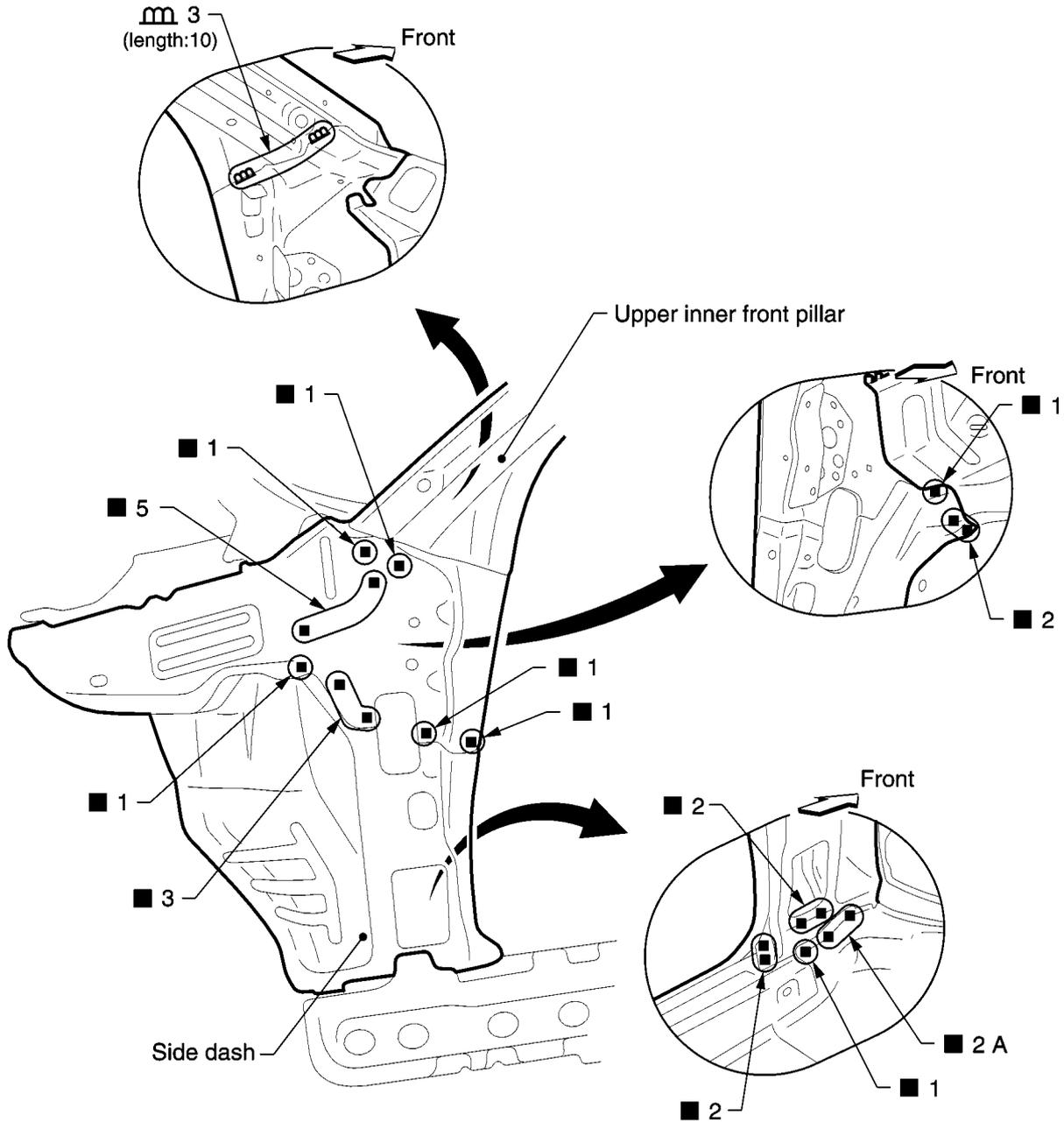


BODY REPAIR

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Service Joint

Before installing outer front pillar.

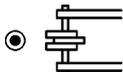


Unit:mm

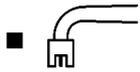
2-spot welds



3-spot welds



M I G plug weld



For 3 panels plug weld method



M I G seam weld/
Point weld



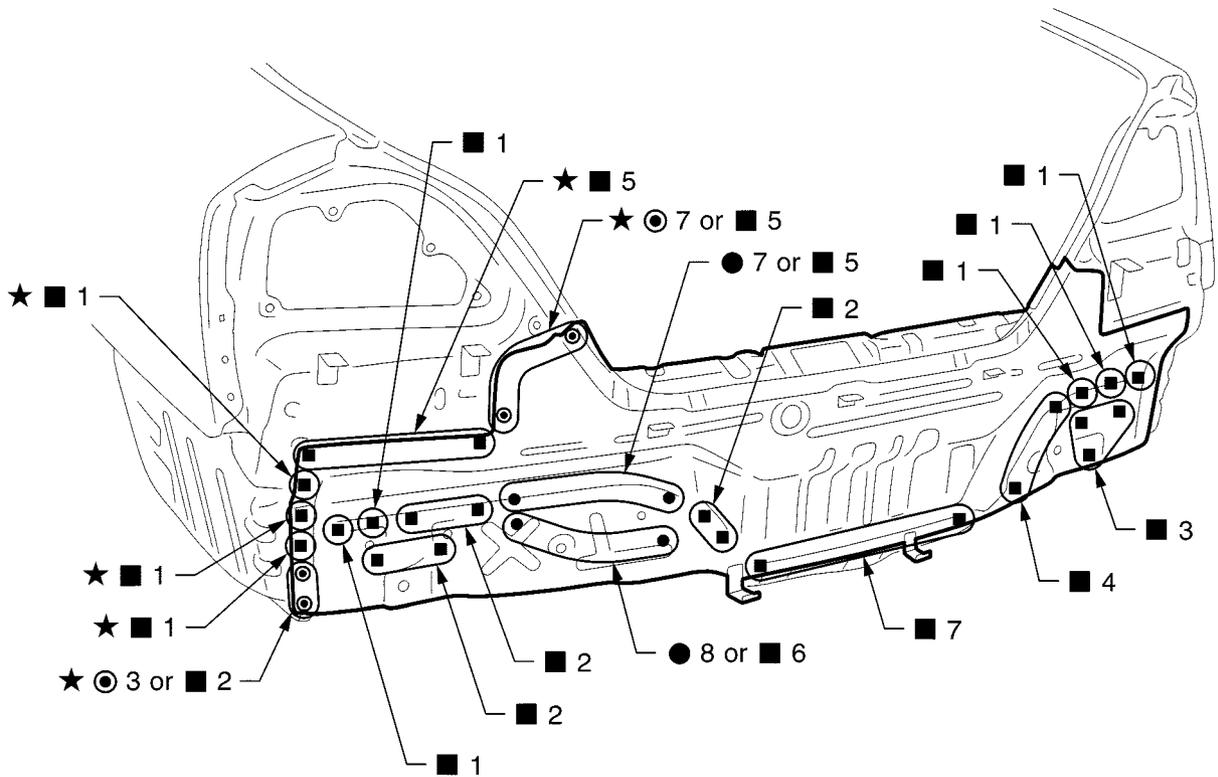
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BODY REPAIR

REAR PANEL

Service Joint

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



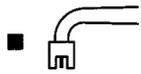
2-spot welds



3-spot welds



M I G plug weld



For 3 panels plug weld method



M I G seam weld/
Point weld



PIIA0087E

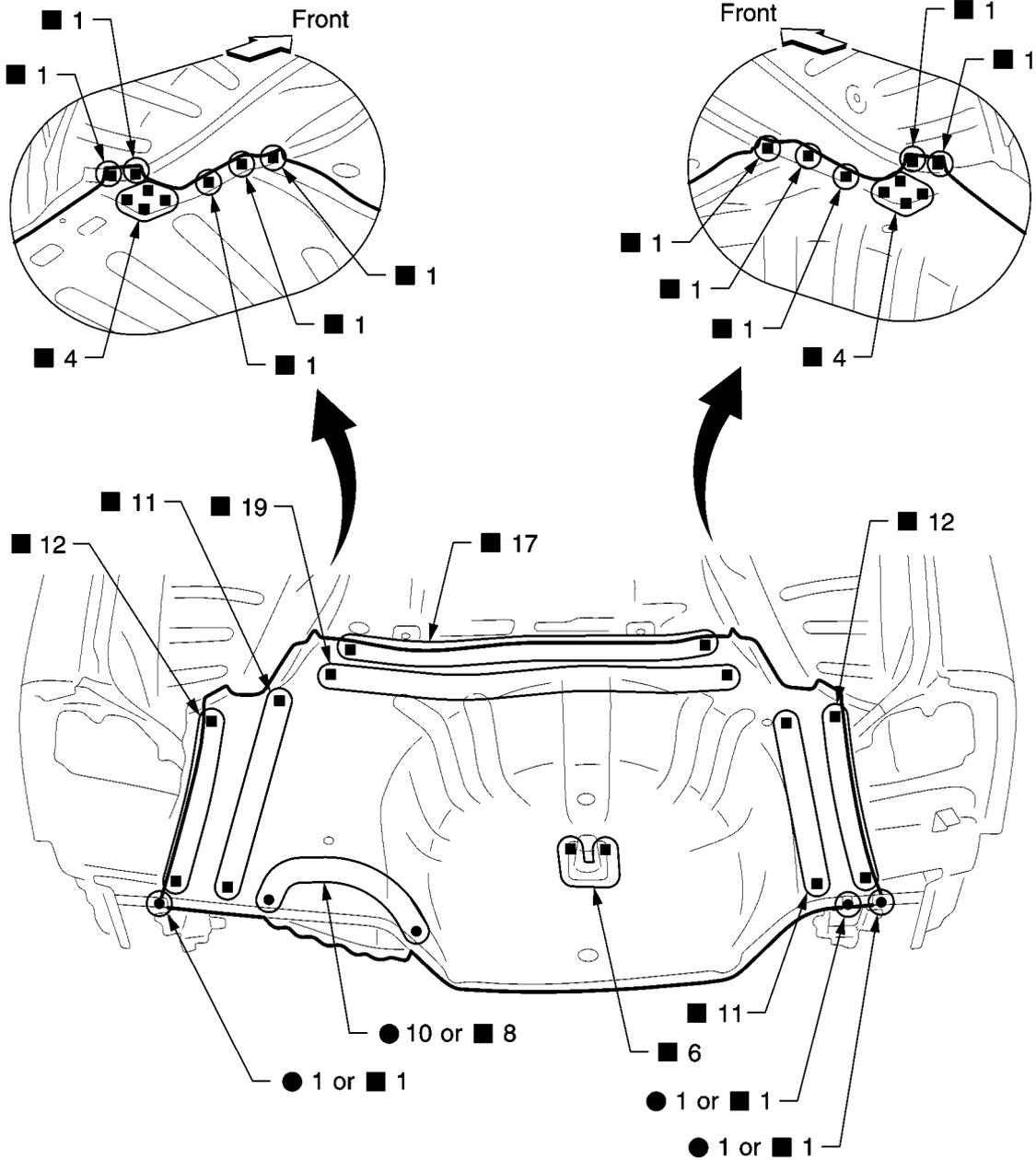
A
B
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M

BODY REPAIR

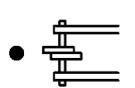
REAR FLOOR REAR

- Work after rear panel has been removed.

Service Joint



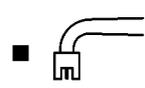
2-spot welds



3-spot welds



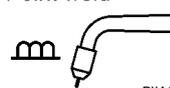
M I G plug weld



For 3 panels plug weld method



M I G seam weld/
Point weld



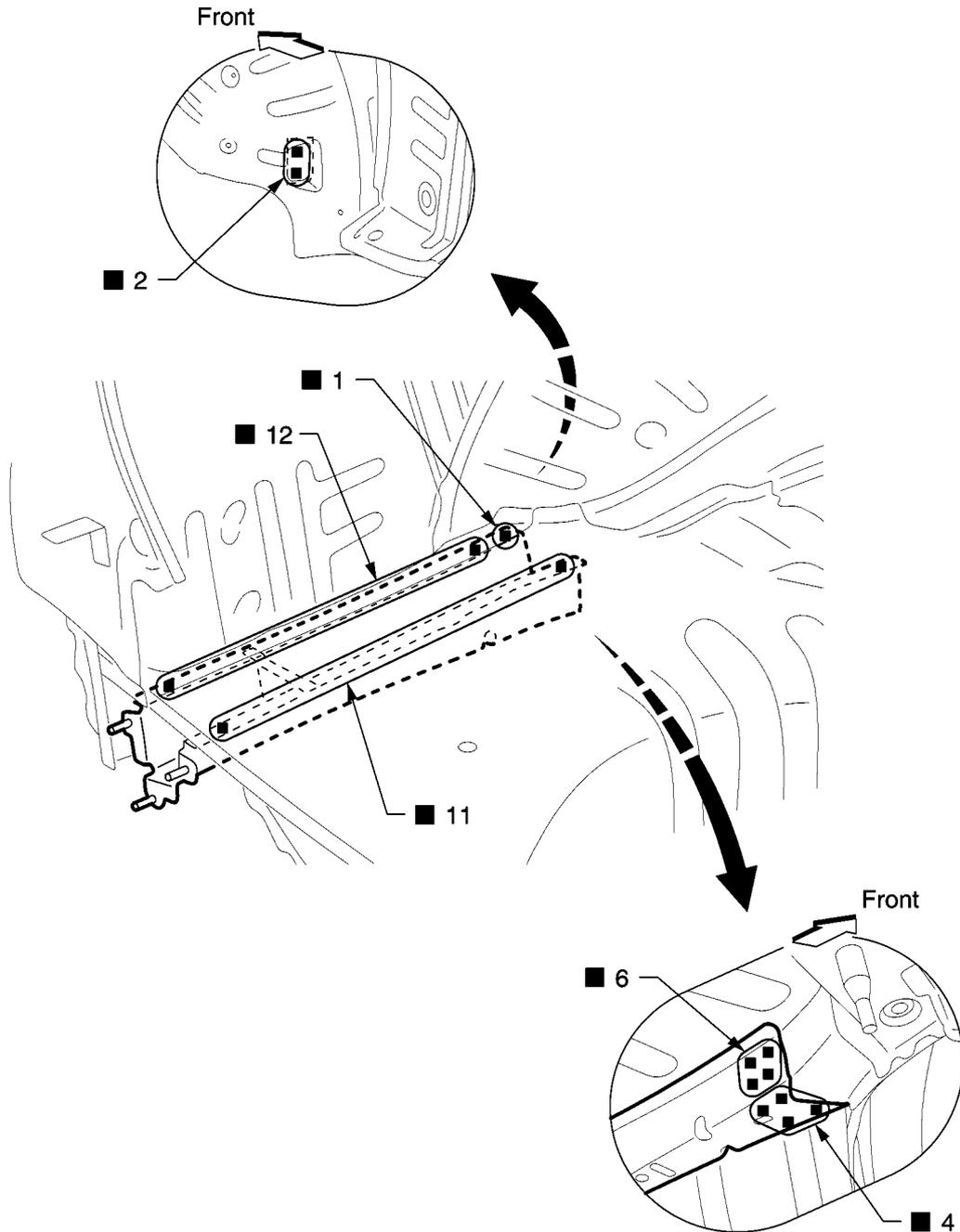
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BODY REPAIR

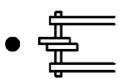
REAR SIDE MEMBER EXTENSION

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

Service Joint



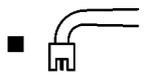
2-spot welds



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
