SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

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

AIS002IZ

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

AIS001CV

- 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.

Wiring Diagrams and Trouble Diagnosis

AIS001CW

When you read wiring diagrams, refer to the followings:

- GI-14, "How to Read Wiring Diagrams".
- PG-2, "POWER SUPPLY ROUTING".

When you perform trouble diagnosis, refer to the followings:

- GI-10, "How to Follow Trouble Diagnoses".
- GI-26, "How to Perform Efficient Diagnosis for an Electrical Incident".
  Check for any Service bulletins before servicing the vehicle.

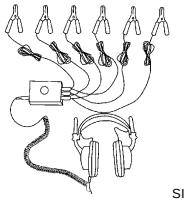
PREPARATION

PFP:00002

Special Service Tools

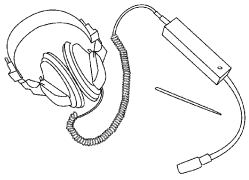
AIS001CX

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	Location the noise
(J-43980) NISSAN Squeak and Rattle Kit  SIIA0994E	Repairing the cause of noise

Commercial Service Tools

AIS001CY

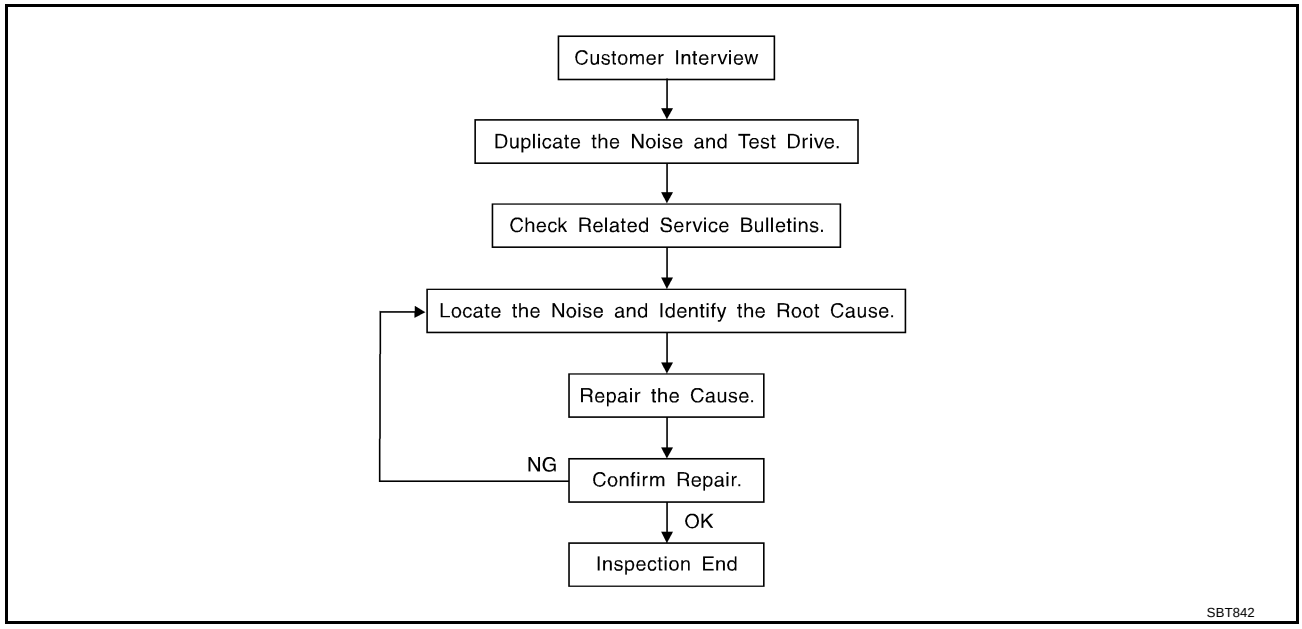
Tool name	Description
Engine ear  SIIA0995E	Location the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

AIS005AV



CUSTOMER INTERVIEW

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

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

DUPLICATE THE NOISE AND TEST DRIVE

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

1) Close a door.
2) Tap or push/pull around the area where the noise appears to be coming from.
3) Rev the engine.
4) Use a floor jack to recreate vehicle “twist”.
5) At idle, apply engine load (electrical load, half-clutch on M/T 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.
Always check with the Parts Department for the latest parts information.
The following materials are contained in the Nissan Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.
URETHANE PADS [1.5 mm (0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60 × 85 mm (2.36 × 3.35 in)/76884-71L02: 15 × 25 mm (0.59 × 0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact. Can be used to fill space behind a panel.
73982-9E000: 45 mm (1.77 in) thick, 50 × 50 mm (1.97 × 1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)

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

CONFIRM THE REPAIR

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

Generic Squeak and Rattle Troubleshooting

AIS005AW

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint
   These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

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

CENTER CONSOLE

Components to pay attention to include:

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

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

DOORS

Pay attention to the:

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

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

TRUNK

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

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

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

SUNROOF/HEADLINING

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

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

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

SEATS

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

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

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

UNDERHOOD

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

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

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

Diagnostic Worksheet

AIS001D1

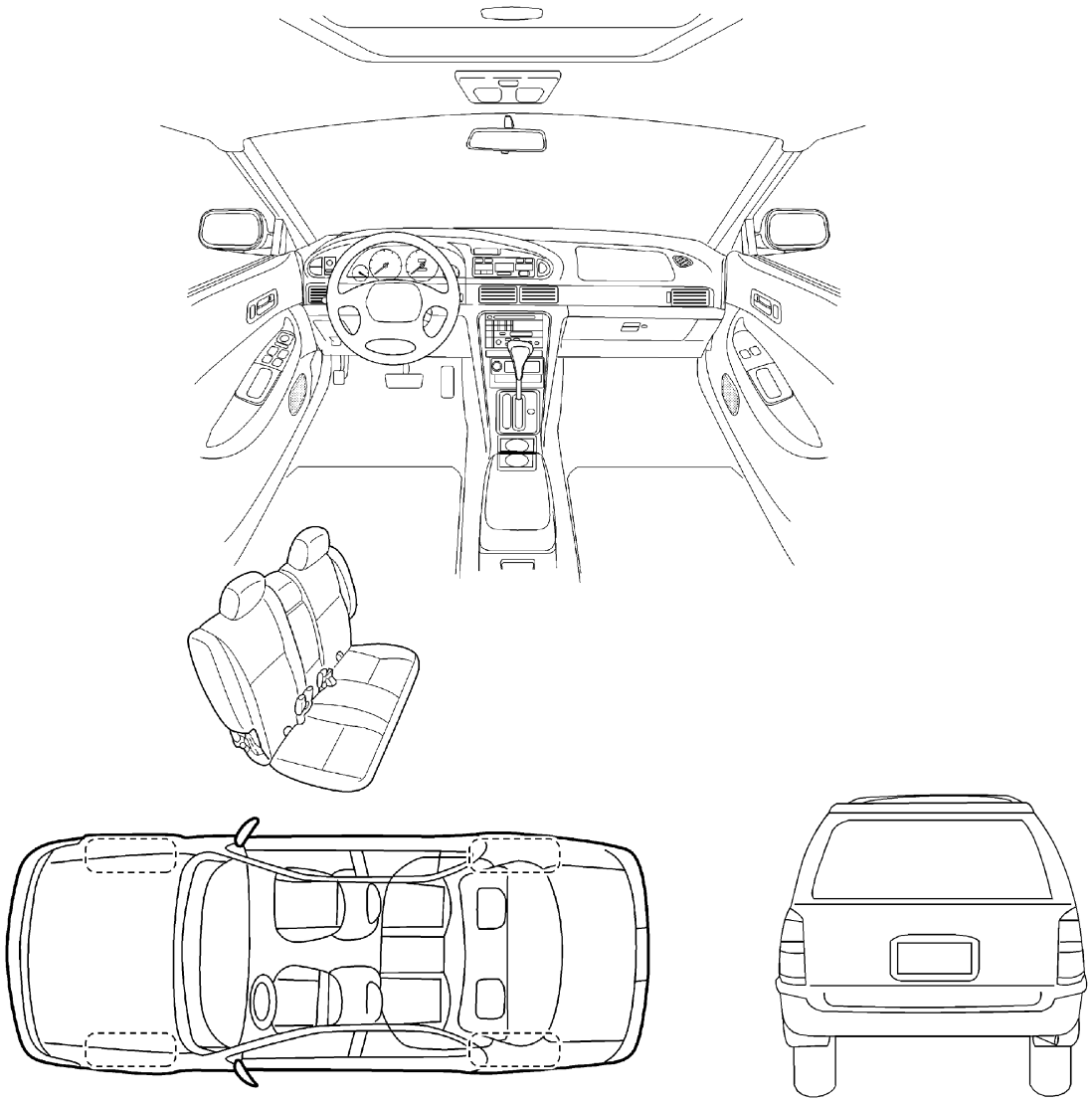
INFINITI

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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

I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.



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

SBT860

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

_____

_____

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

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

III. WHEN DRIVING:

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

IV. WHAT TYPE OF NOISE?

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

TO BE COMPLETED BY DEALERSHIP PERSONNEL
Test Drive Notes:

_____

_____

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

VIN: _____ Customer Name: _____

W.O. #: _____ Date: _____

This form must be attached to Work Order

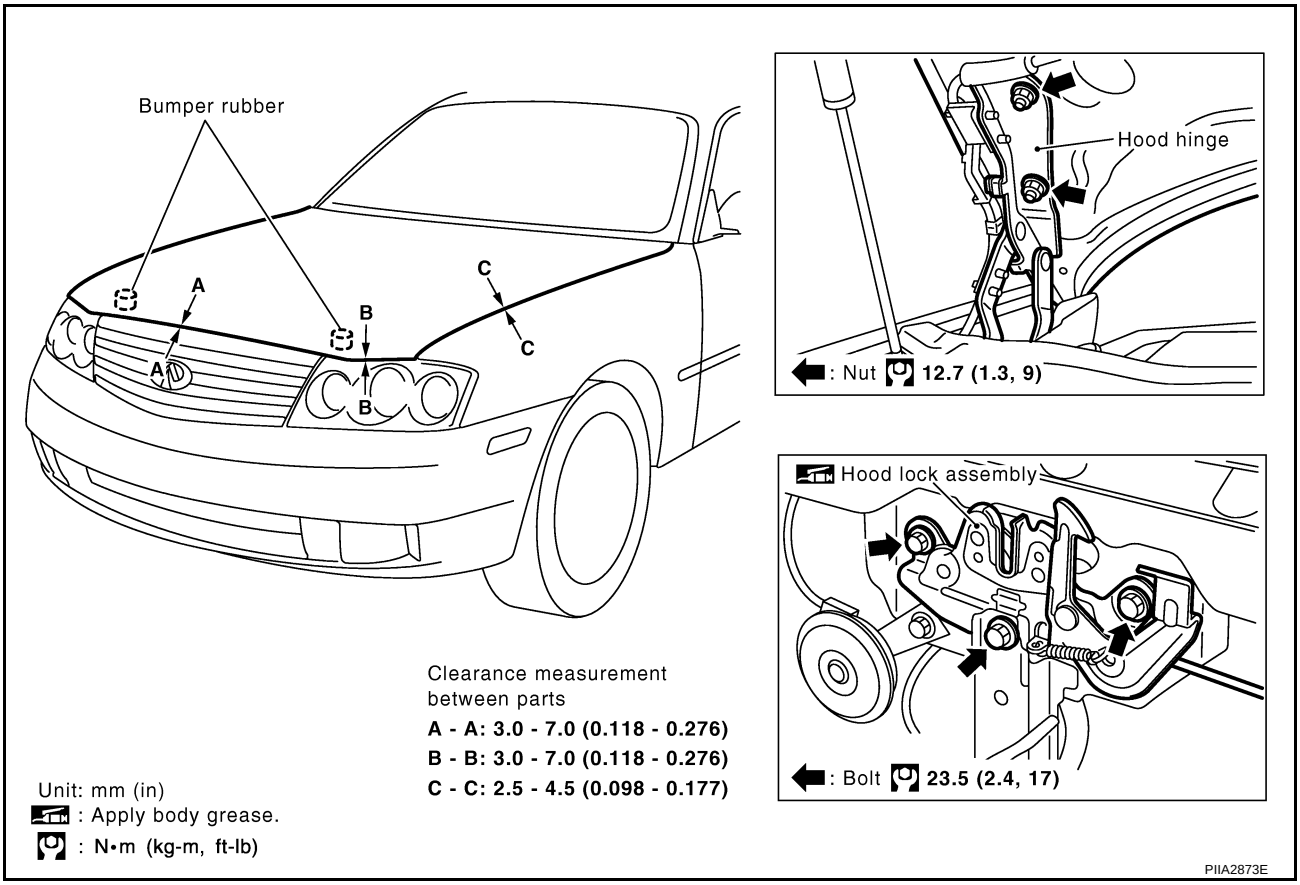
SBT844

HOOD

PFP:F5100

Fitting Adjustment

AIS001D2



LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

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

CAUTION:

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

Hood and headlamp (B–B) : Less than 1.5 mm (0.59 in)

Hood and fender (C–C) : Less than 1.5 mm (0.59 in)

FRONT END HEIGHT ADJUSTMENT

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

SURFACE HEIGHT ADJUSTMENT

1. Remove 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.

Hood and fender (C–C) : 0±1.0 mm (0.04 in)

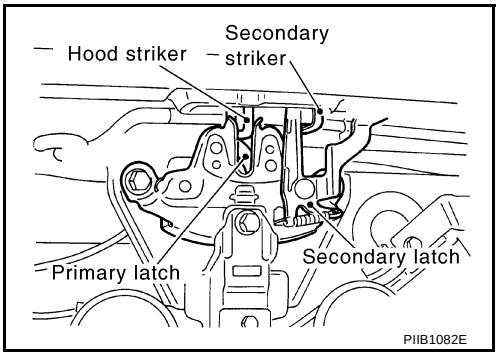
2. Install the hood lock temporarily, and align the food striker and lock so that the centers of striker and lock become vertical viewed from the front, by moving the hood lock laterally.

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:

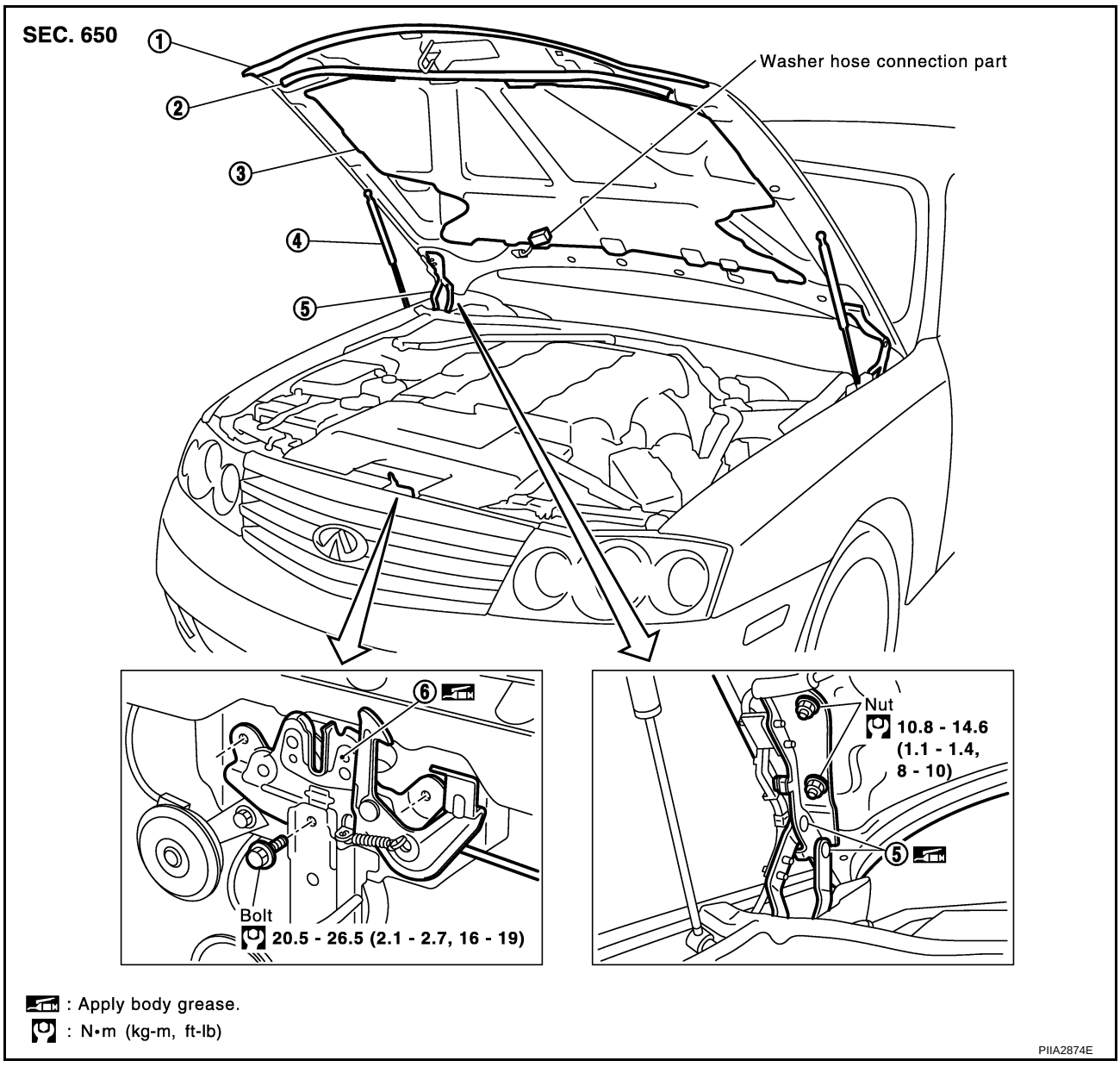
   Do not drop the hood from 300 mm (11.81 in) height or higher.

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.



Removal and Installation of Hood Assembly

AIS001D3

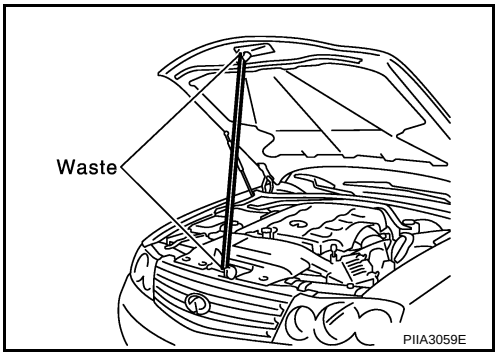


1. Hood assembly
2. Hood front sealing rubber
3. Hood insulator
4. Hood stay
5. Hood hinge
6. Hood lock assembly

REMOVAL

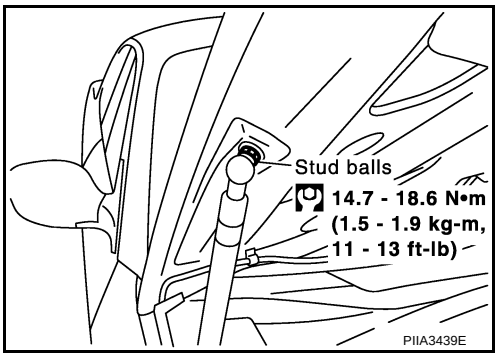
1. Washer hose is separated in the connection part.
2. Support the hood striker with a proper material to prevent it from falling.

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



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

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



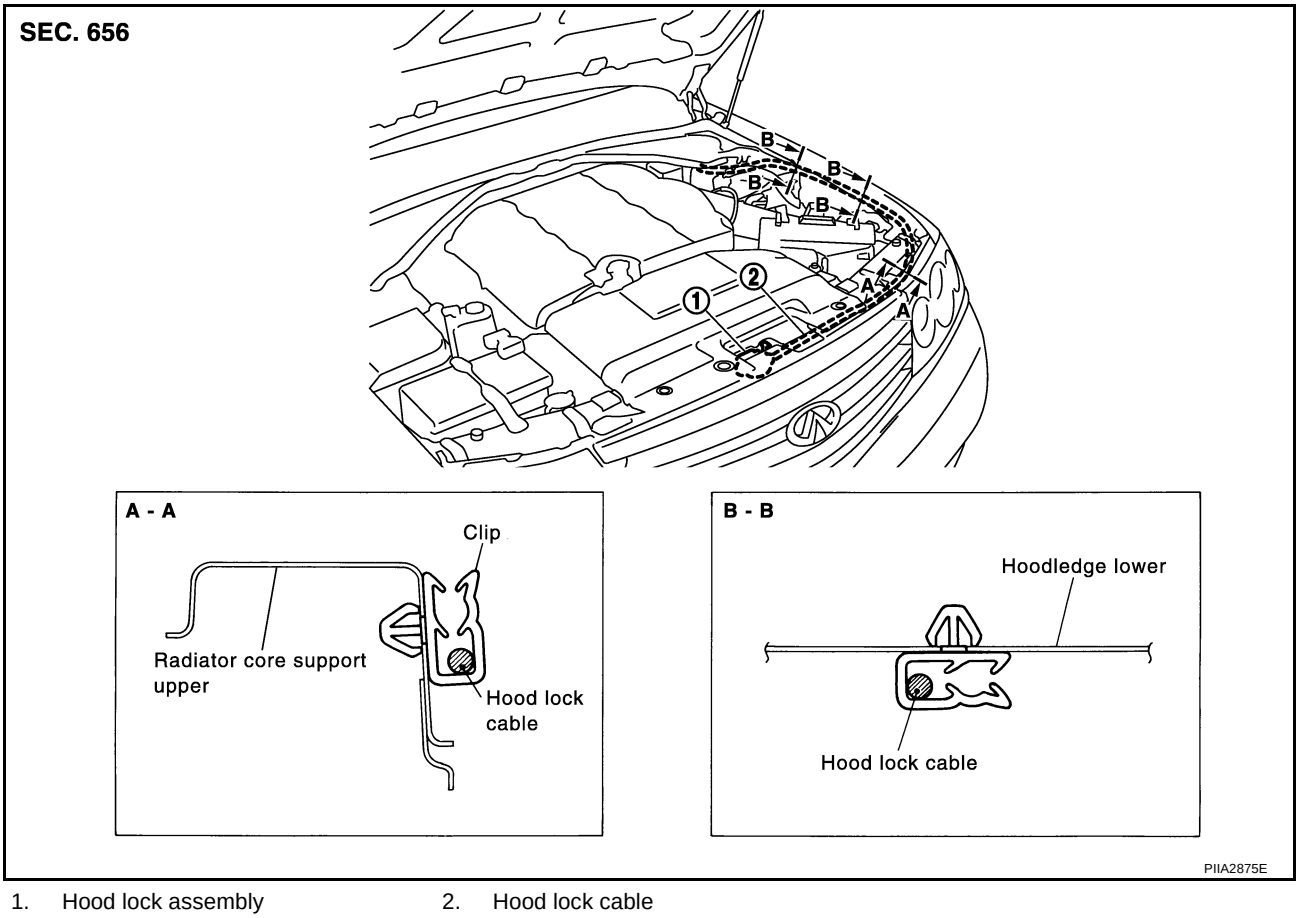
INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Hood Lock Control

AIS001D4

SEC. 656

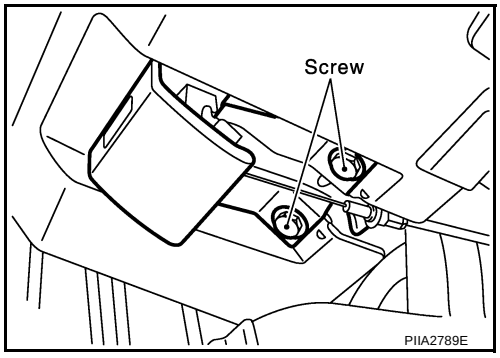


1. Hood lock assembly
2. Hood lock cable

REMOVAL

1. Remove the front grill. Refer to EI-19, "FRONT GRILLE" .
2. Remove the fender protector. Refer to EI-21, "FENDER PROTECTOR" .
3. Remove the hood lock assembly. Refer to BL-15, "Removal and Installation of Hood Lock Control" .
4. Disconnect the hood lock cable from the hood lock, and clip it from the radiator core support upper and hood ledge.
5. Remove the mounting screws, and remove the hood opener.
6. Remove the grommet on the dash lower, and pull the hood lock cable toward the passenger room.

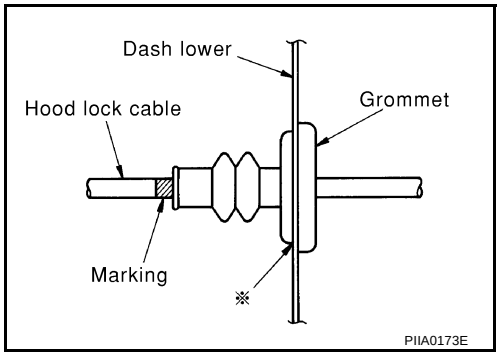
   CAUTION:
   While pulling, be careful not to damage (peeling) the outside of the hood lock cable.



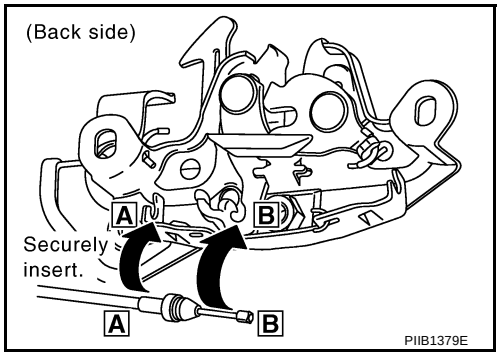
INSTALLATION

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

   CAUTION:
   Be careful not to bend the cable too much, keeping the radius 100 mm (3.94 in) or more.
2. Make sure that the cable is not offset from the positioning grommet, and push the grommet into the panel hole securely.
3. Apply the sealant to the grommet (at * mark) properly.



4. Install the cable securely to the lock.
5. After installing, check the hood lock adjustment and hood opener operation.



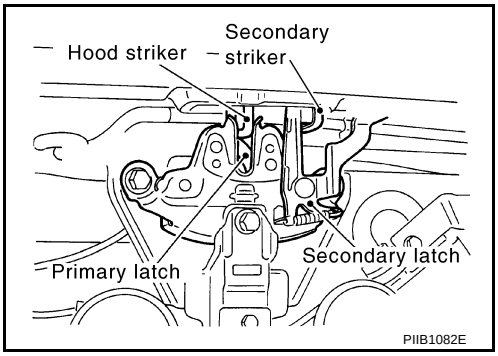
Hood Lock Control Inspection

AIS001D5

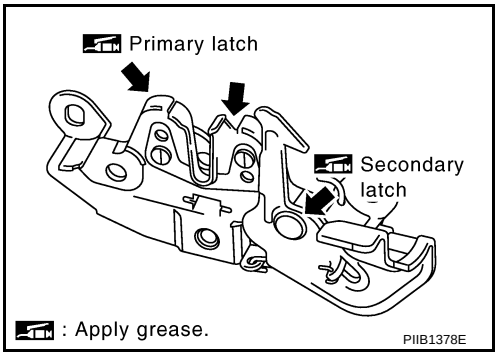
CAUTION:

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

1. Make sure 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 confirm 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.

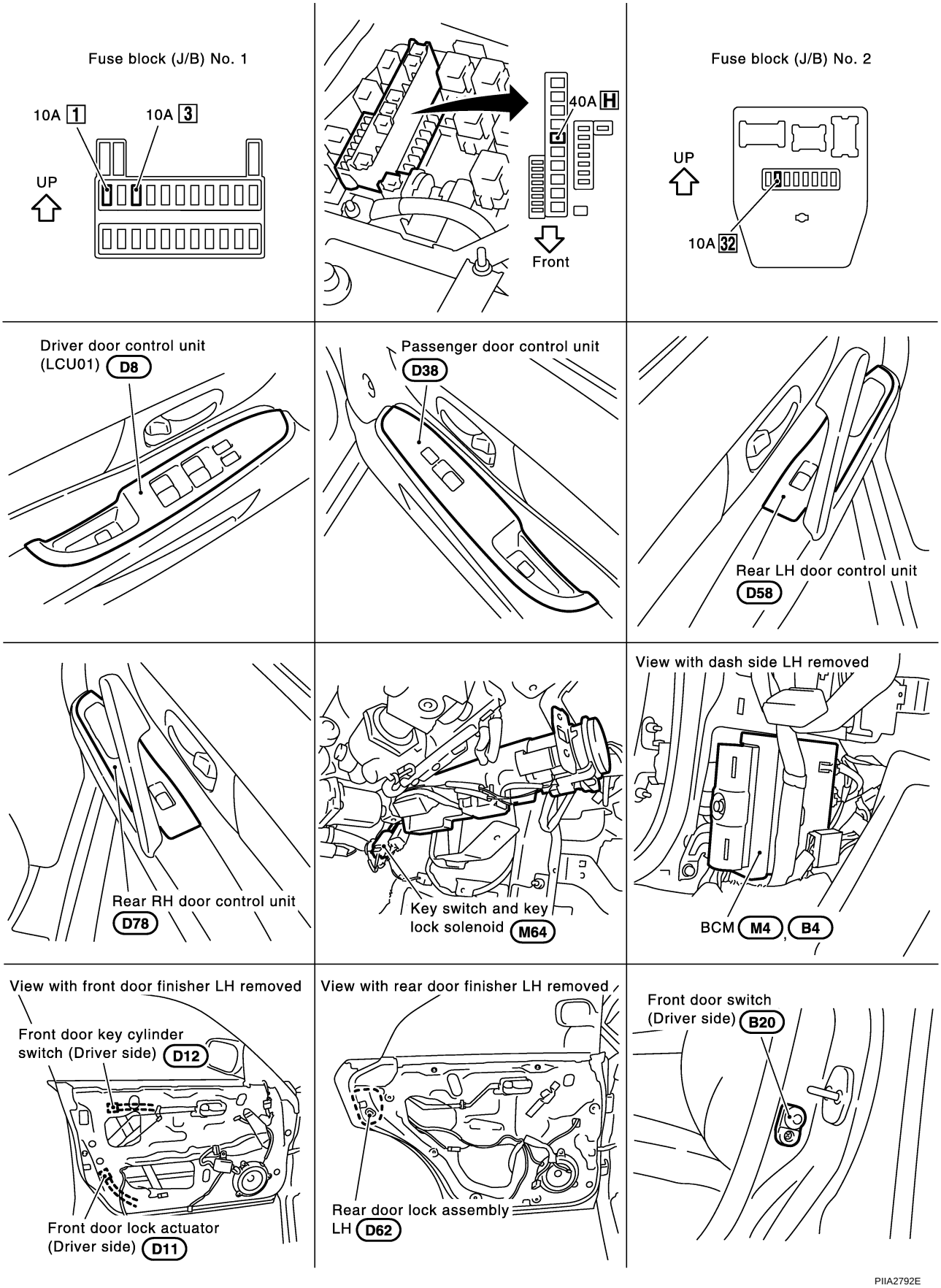


POWER DOOR LOCK SYSTEM

PFP:24814

Component Parts and Harness Connector Location

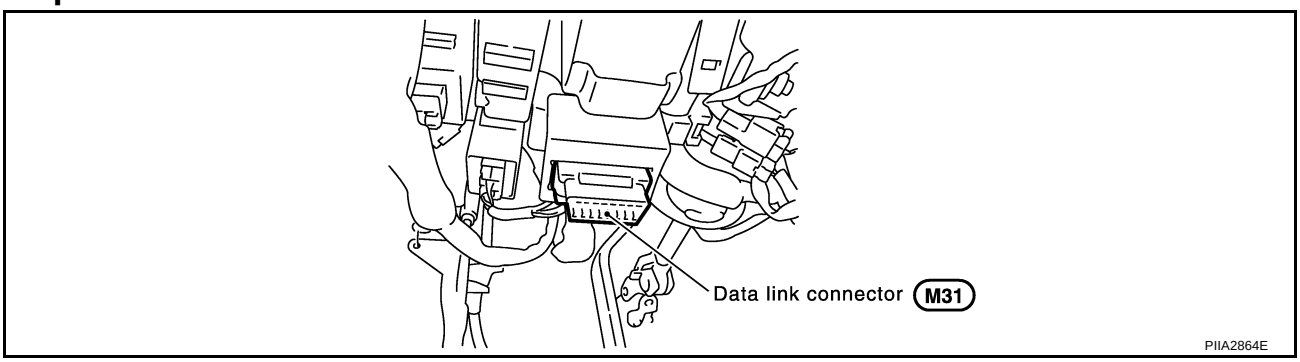
AIS001D6



PIIA2792E

Component Parts and Harness Connector Location

AIS002BR



System Description

AIS001D7

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].

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

- to BCM terminal 69
- through key switch terminal 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) or 37 (passenger side)
- through front door switch terminal 1 and case ground.

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

- to BCM terminals 33 (rear LH) or 143 (rear RH)
- through rear door switch terminal 1 and 2
- through body ground B17 and B57 (rear LH) or 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 2
- through each door unlock sensor terminals 2 and 4.

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 as DATA LINE A-3.

OPERATION

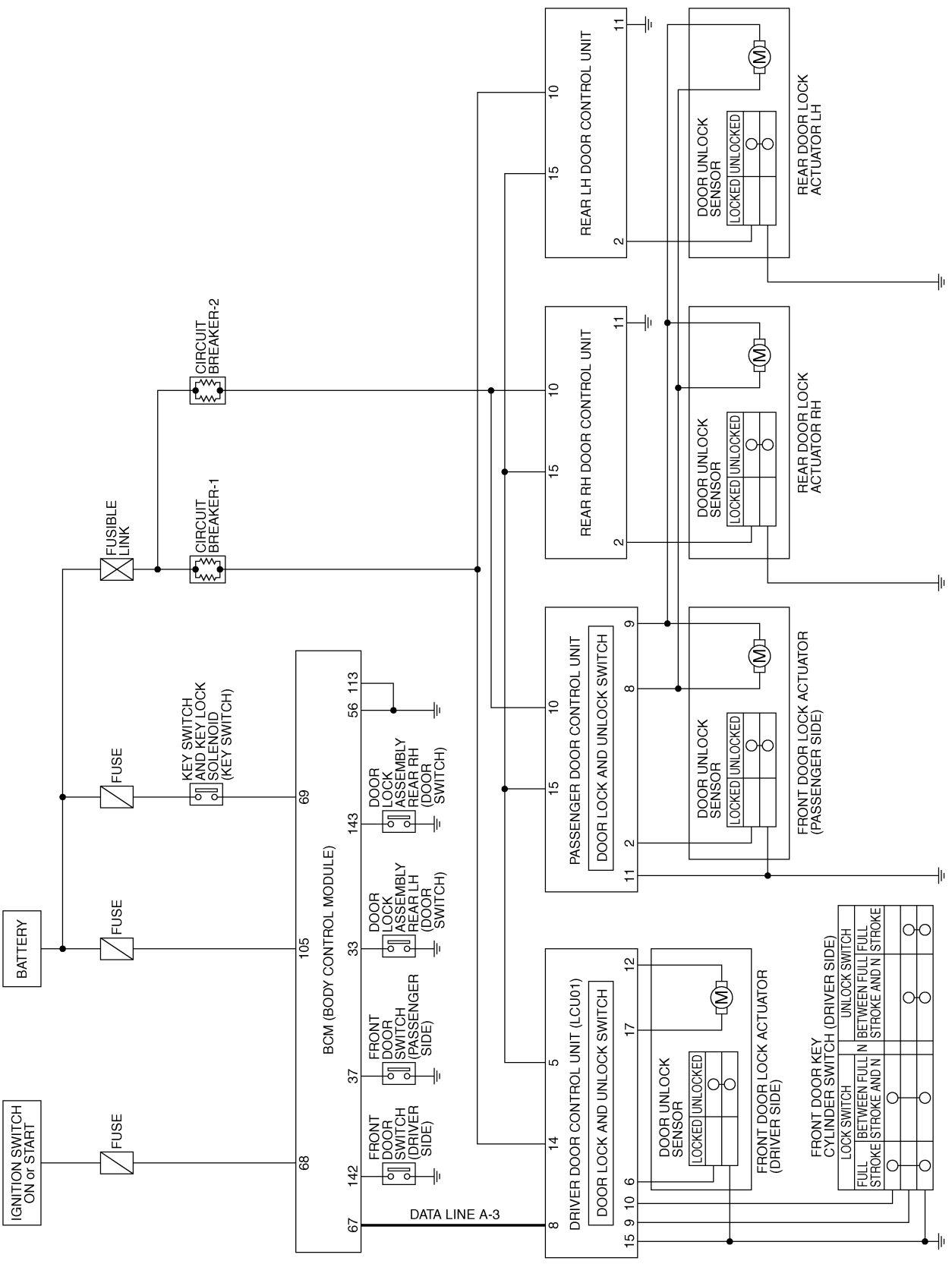
- The lock and unlock switch on driver's door trim and passenger's door trim can lock and unlock all doors.
- With the door key inserted in the key cylinder on front LH door, turning it to "LOCK", will lock all doors; turning it to "UNLOCK" once unlocks the corresponding door; turning it to "UNLOCK"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

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)

Schematic

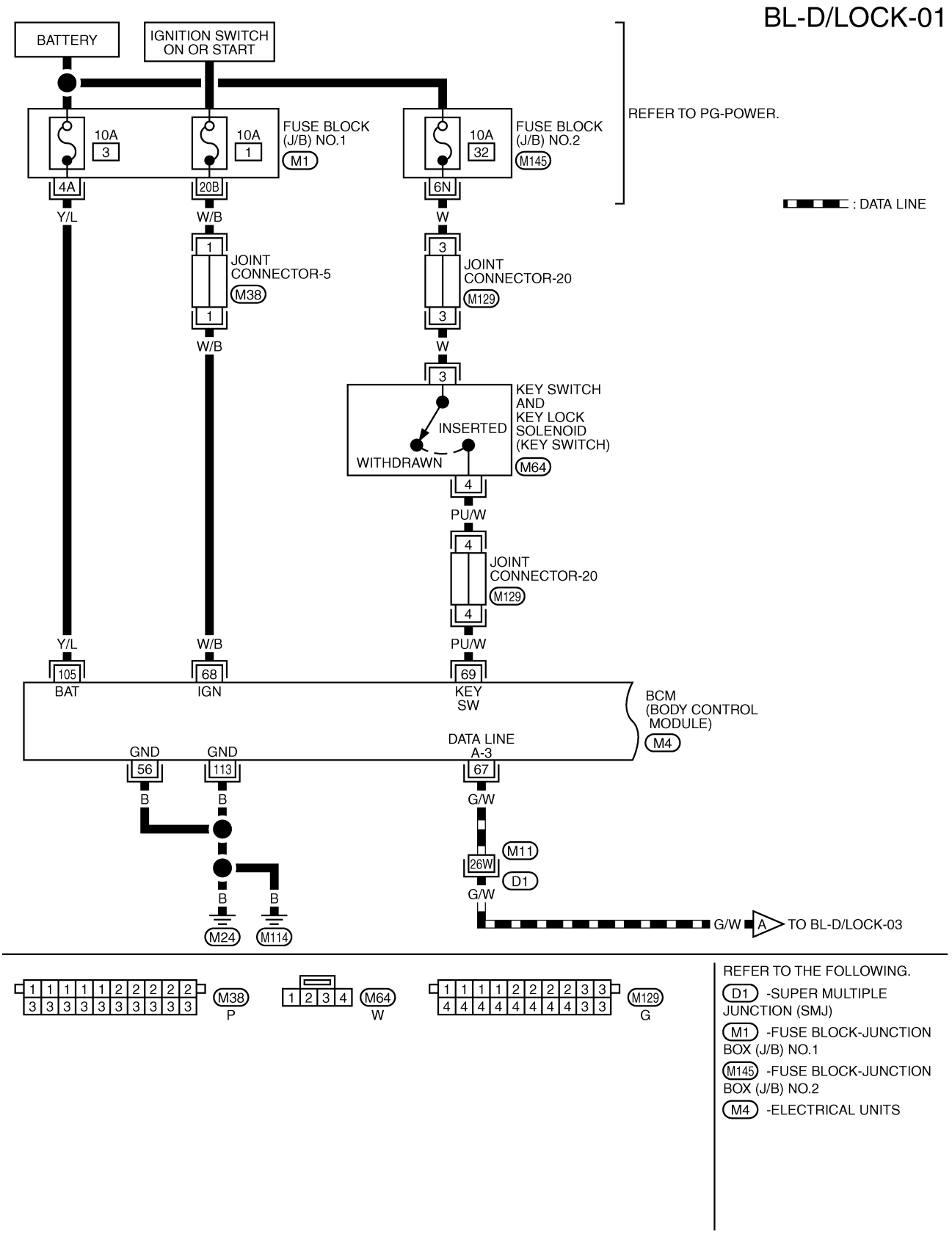
AIS001D8



TIWA0181E

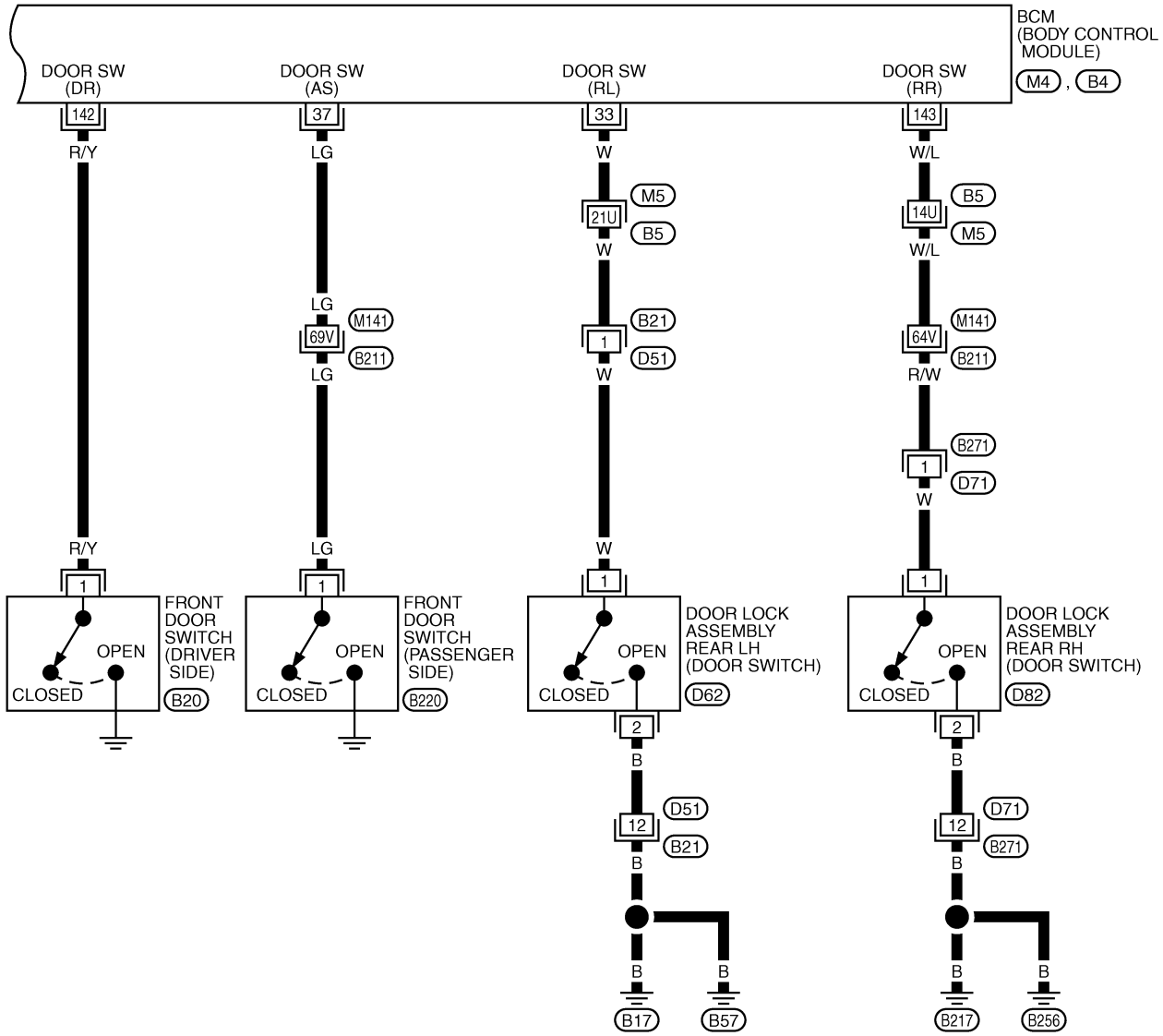
Wiring Diagram – D/LOCK –

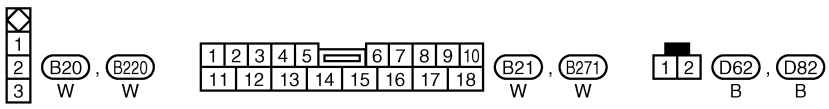
AIS001D9



TIWA0182E

BL-D/LOCK-02





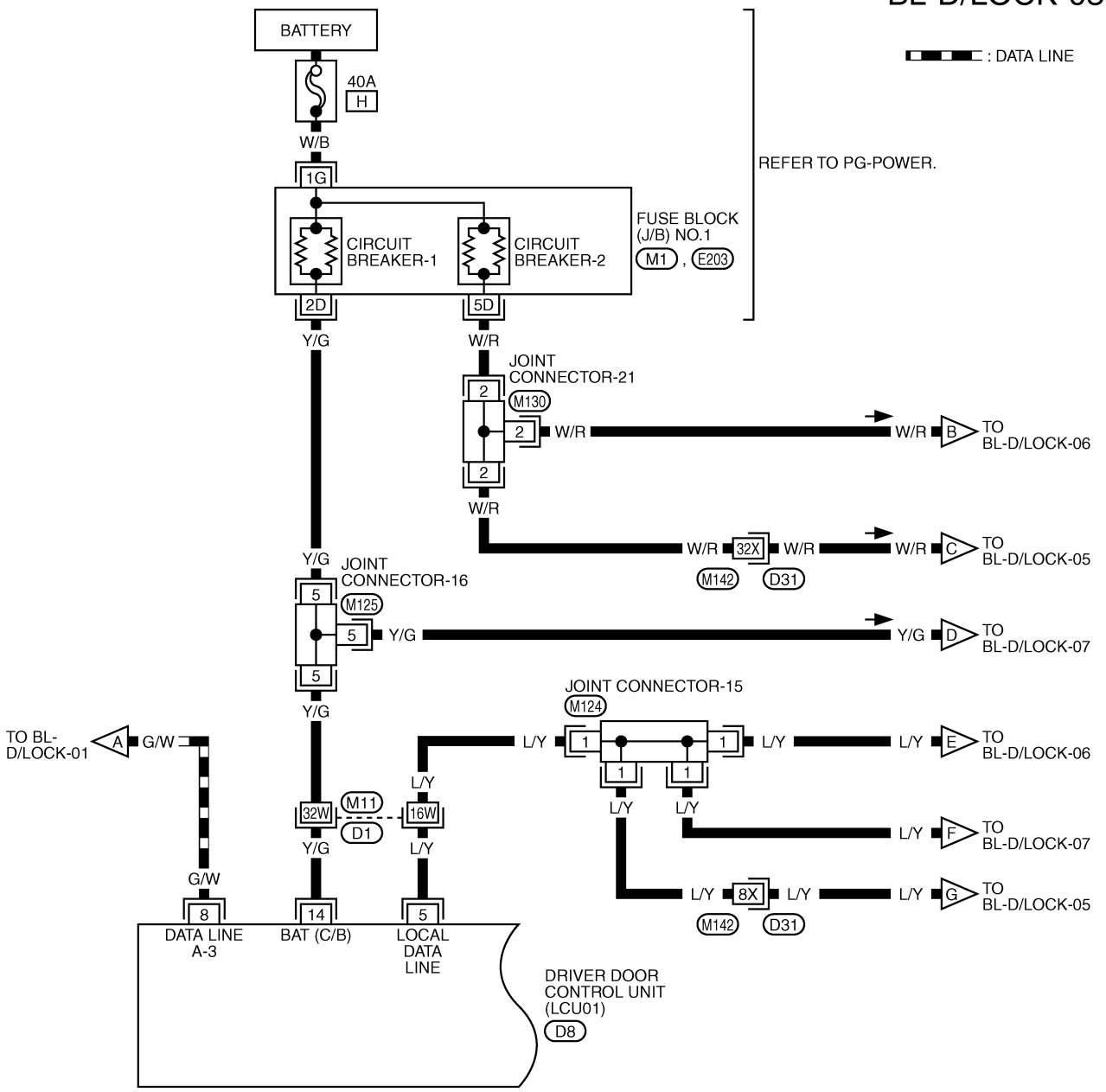
REFER TO THE FOLLOWING.

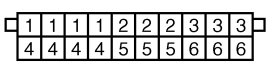
M5 , B211 -SUPER MULTIPLE JUNCTION (SMJ)

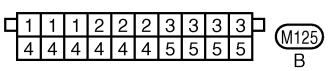
M4 , B4 -ELECTRICAL UNITS

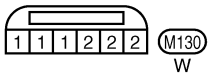
TIWA0183E

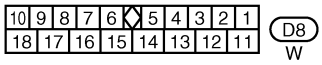
BL-D/LOCK-03











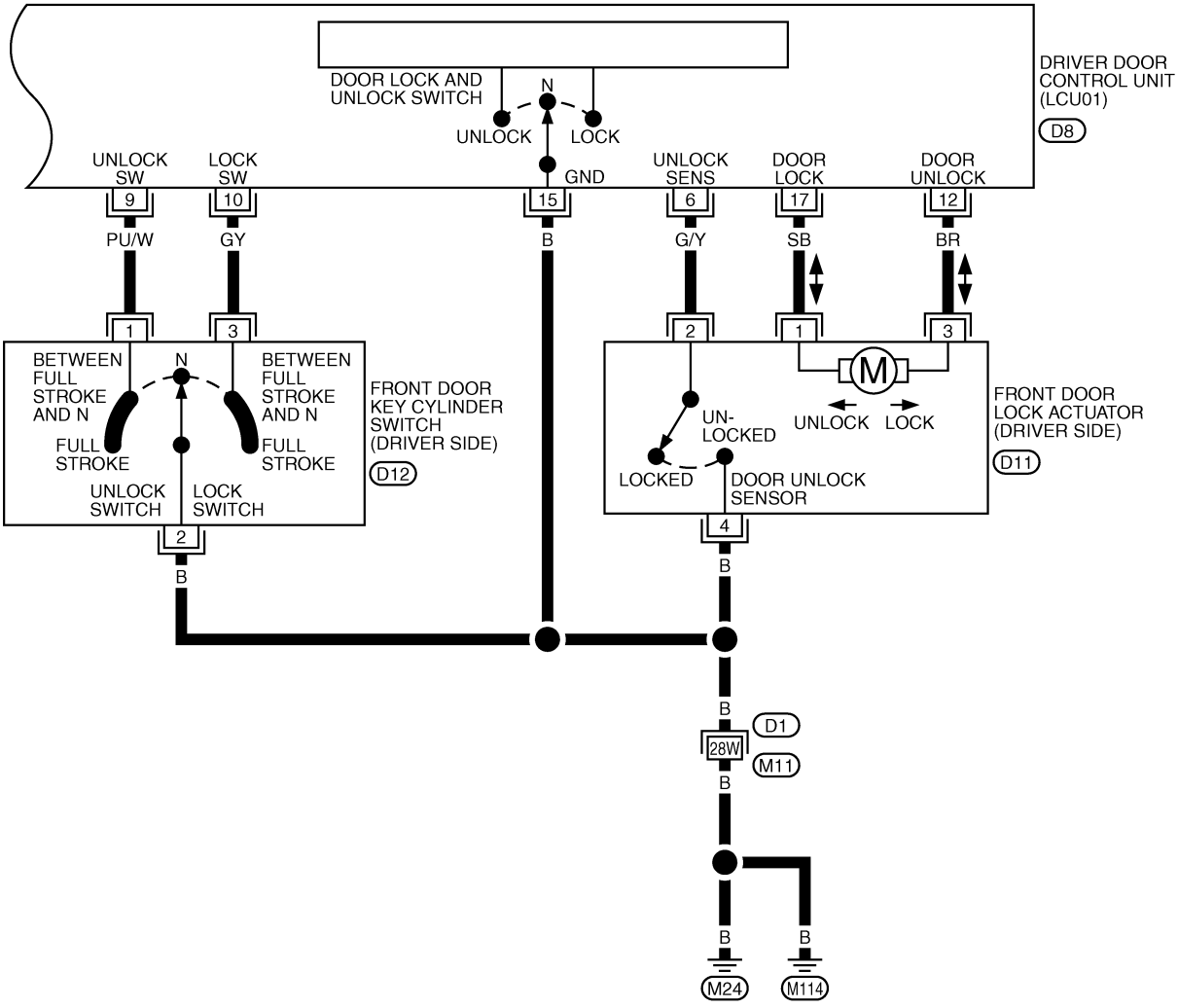
REFER TO THE FOLLOWING.

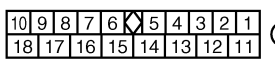
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

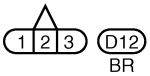
M1 , E203 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWA0184E

BL-D/LOCK-04



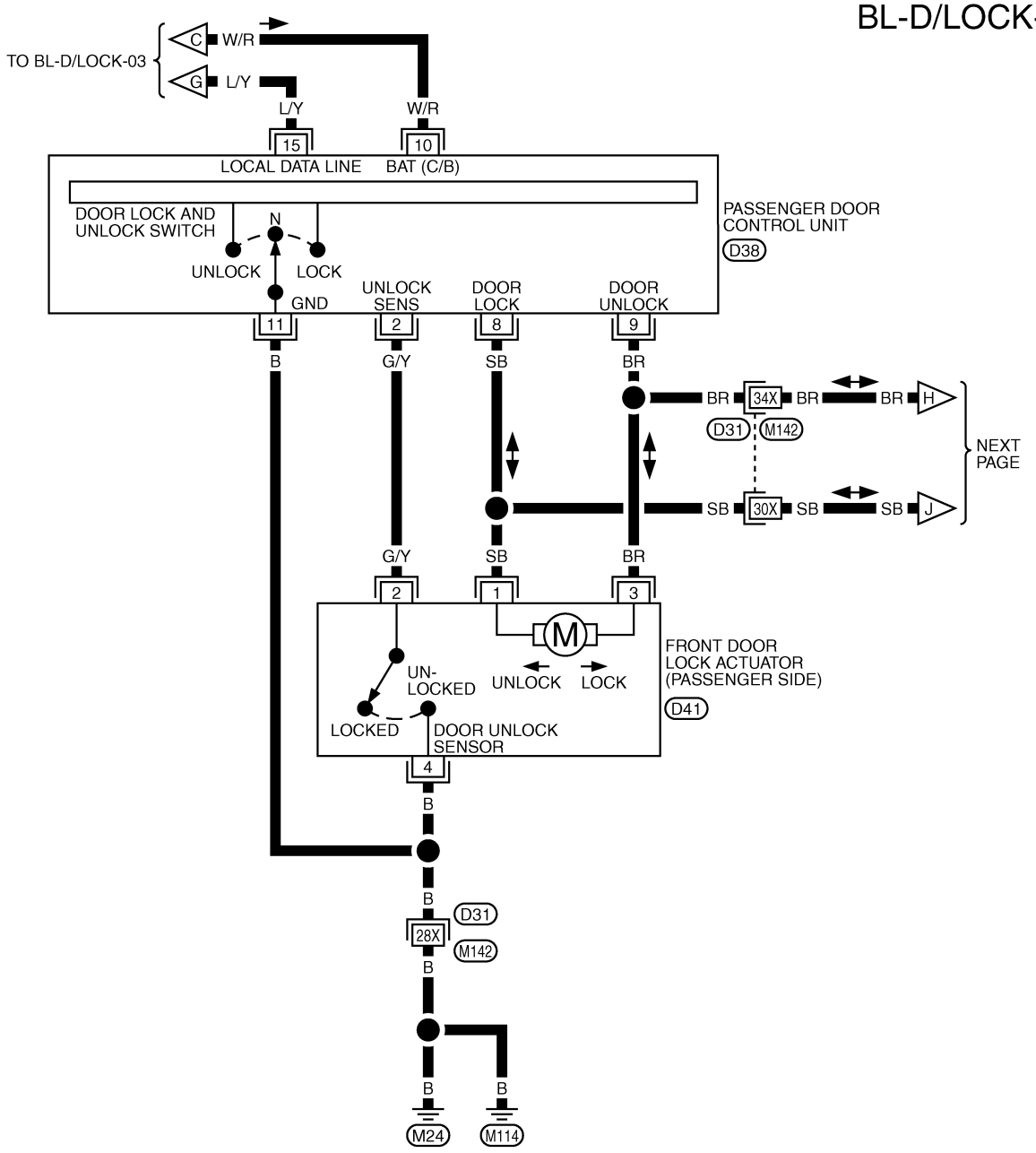


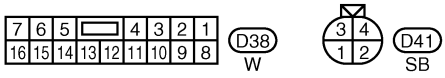


REFER TO THE FOLLOWING.
D1 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0185E

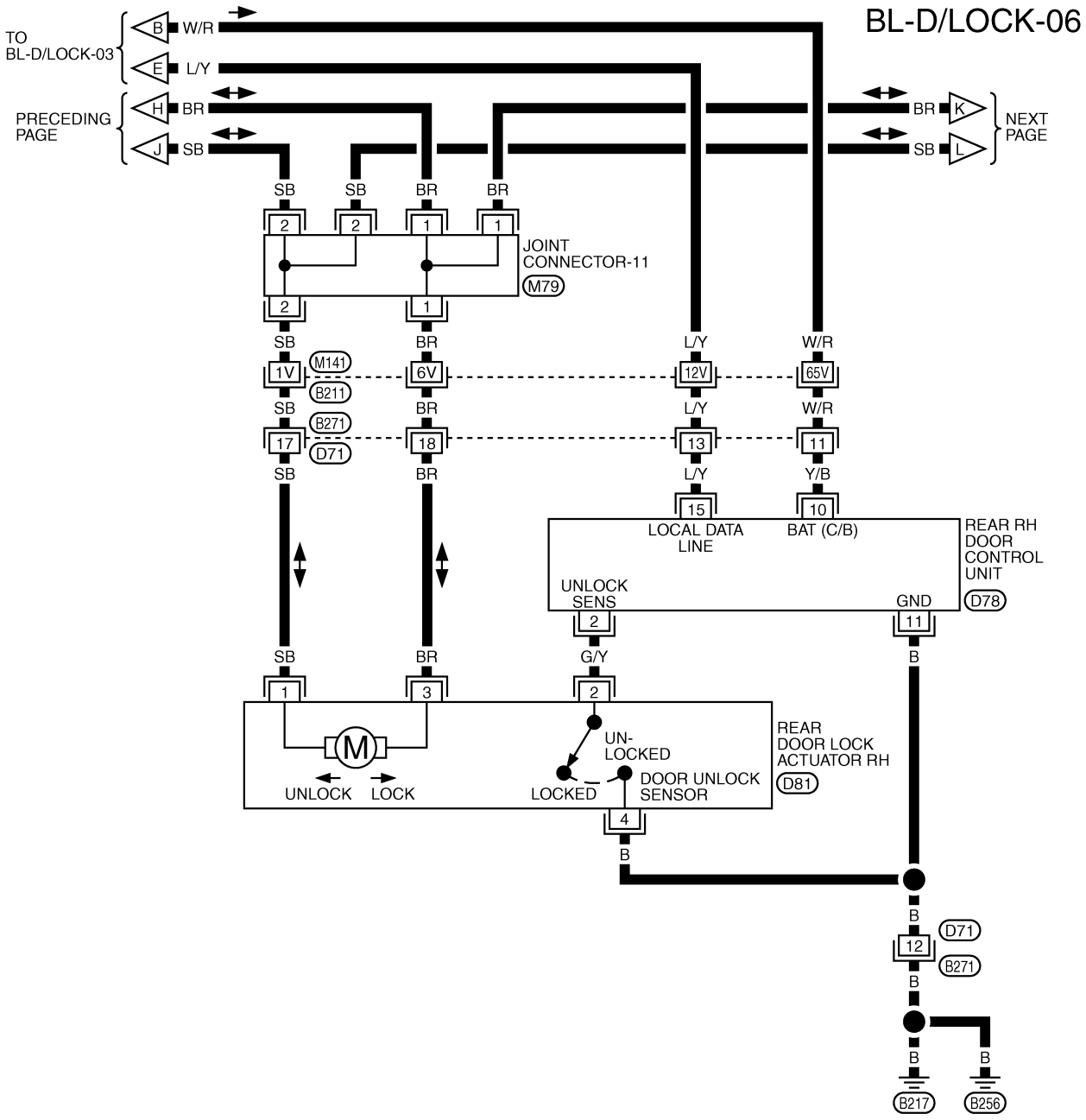
BL-D/LOCK-05

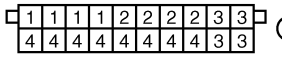


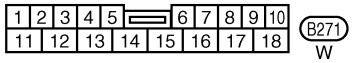


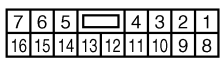
REFER TO THE FOLLOWING.
D31 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0186E





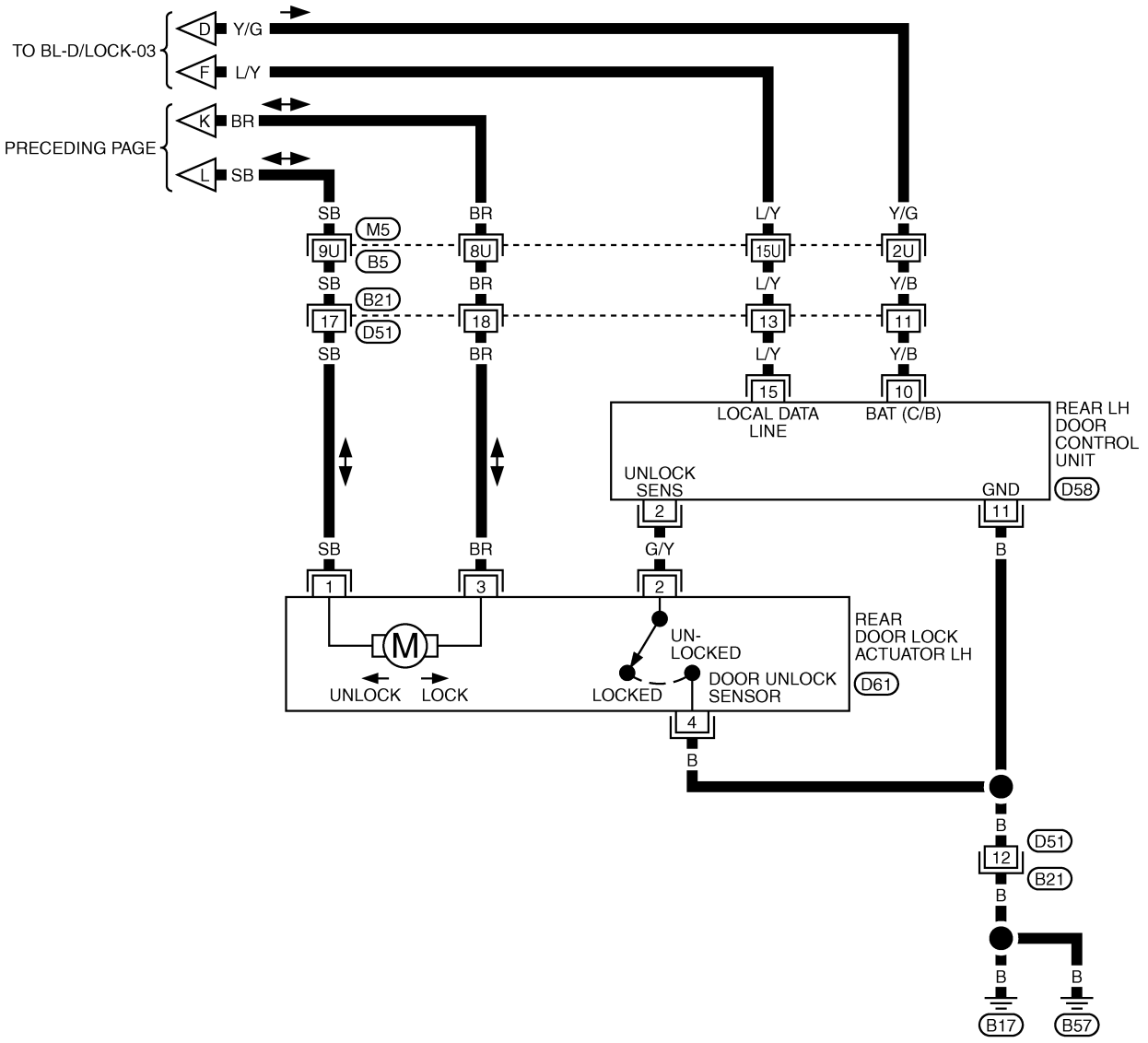


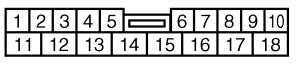


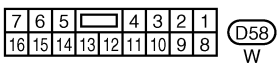
REFER TO THE FOLLOWING.
B211 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0187E

BL-D/LOCK-07







REFER TO THE FOLLOWING.

M5 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0188E

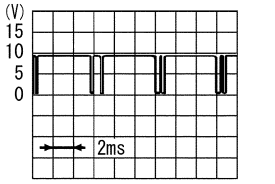
Terminals and Reference Value for BCM

AIS001DA

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
33	W	Rear LH door switch	Door open (ON) → close (OFF)	0 → Battery voltage
37	LG	Passenger door switch	Door open (ON) → close (OFF)	0 → Battery voltage
56	B	Ground	—	0
67	G/W	Data line A-3	—	—
68	W/B	IGN power supply	Ignition switch ON	Battery voltage
69	PU/W	Key switch	Key Inserted (ON) → key removed from IGN key cylinder (OFF)	Battery voltage→0
105	Y/L	Battery power supply	—	Battery voltage
113	B	Ground	—	0
142	R/Y	Driver door switch	Door open (ON) → close (OFF)	0 → Battery voltage
143	W/L	Rear RH door switch	Door open (ON) → close (OFF)	0 → Battery voltage

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

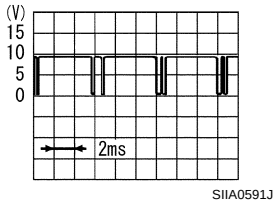
AIS001DB

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
5	L/Y	Local data line	—	 SIIA0591J
6	G/Y	Door unlock sensor	OFF (Locked) → ON (Unlocked)	5 → 0
8	G/W	Data line A-3	—	—
9	PU/W	Door key cylinder unlock switch	OFF (Neutral) → ON (Unlocked)	5 → 0
10	GY	Door key cylinder lock switch	OFF (Neutral) → ON (Locked)	5 → 0
12	BR	Driver door lock actuator (Unlock)	Door lock & unlock switch (Free → Unlocked)	0 → Battery voltage
14	Y/G	Battery power supply (C/B)	—	Battery voltage
15	B	Ground	—	0
17	SB	Driver door lock actuator (Lock)	Door lock & unlock switch (Free → Locked)	0 → Battery voltage

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

AIS001DC

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
2	G/Y	Door unlock sensor	OFF (Locked) → ON (Unlocked)	5 → 0
*8	SB	Door lock actuator (Lock)	Door lock & unlock switch (Free → Locked)	0 → Battery voltage
*9	BR	Door lock actuator (Unlock)	Door lock & unlock switch (Free → Unlocked)	0 → Battery voltage
10	W/R (Y/B)	Battery power supply (C/B)	—	Battery voltage

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
11	B	Ground	—	0
15	L/Y	Local data line	—	

SIIA0591J

*Only for passenger door control unit.

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

Work Flow

AIS001DD

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-19, "System Description" .
3. Perform the preliminary check. Refer to BL-31, "Preliminary Check" .
4. Perform the communication inspection. If CONSULT-II is used, refer to BL-34, "IVMS COMMUNICATION INSPECTION" . If CONSULT-II is not used, refer to BL-37, "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-34, "IVMS COMMUNICATION INSPECTION" . If CONSULT-II is not used, refer to BL-37, "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, "SELF-DIAGNOSIS RESULTS" . If CONSULT-II is not used, refer to BL-41, "POWER DOOR LOCK SYSTEM SELF-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 toBL-36, "SELF-DIAGNOSIS RESULTS" . If CONSULT-II is not used, refer to BL-41, "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-42, "Symptom Chart" .
11. Does power door lock system operate normally? If it operates normally, GO TO step 12. If NG, GO TO step 10.
    YES: GO TO step 12
    NO: GO TO step 10
12. Inspection END.

Preliminary Check

AIS001DE

POWER SUPPLY AND GROUND CIRCUIT INSPECTION

1. FUSE AND FUSIBLE LINK 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-22, "Wiring Diagram – D/LOCK –" .

Unit	Power source	Fusible link location
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-22, "Wiring Diagram – D/LOCK –" .

OK or NG

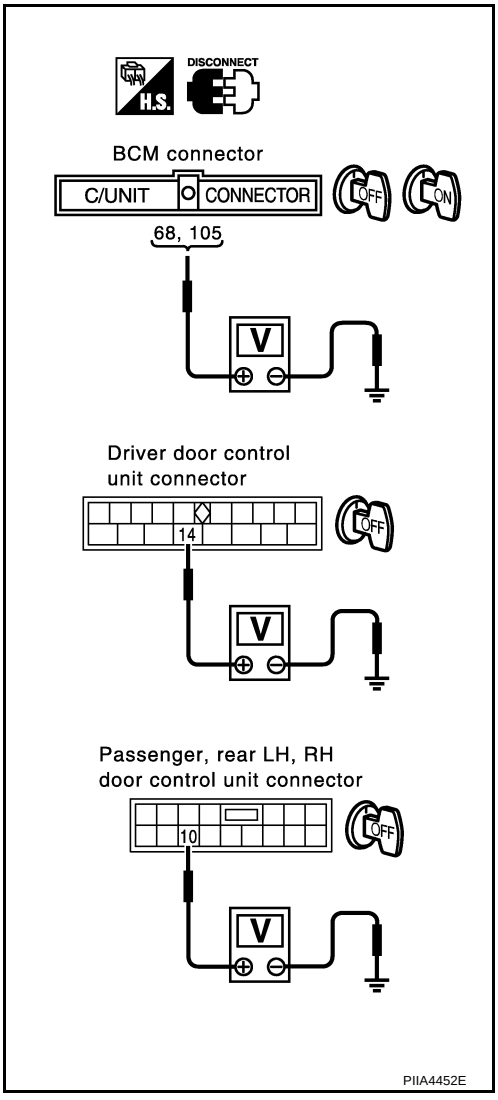
OK >> GO TO 2.

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 for 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	Terminal (wire color)		Ignition switch condition	Voltage (V) Approx.
Connector	(+)	(–)		
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 (D38)	10 (W/R)		OFF	
Rear LH door control unit (D58)	10 (Y/B)			
Rear RH door control unit (D78)	10 (Y/B)			



OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short.

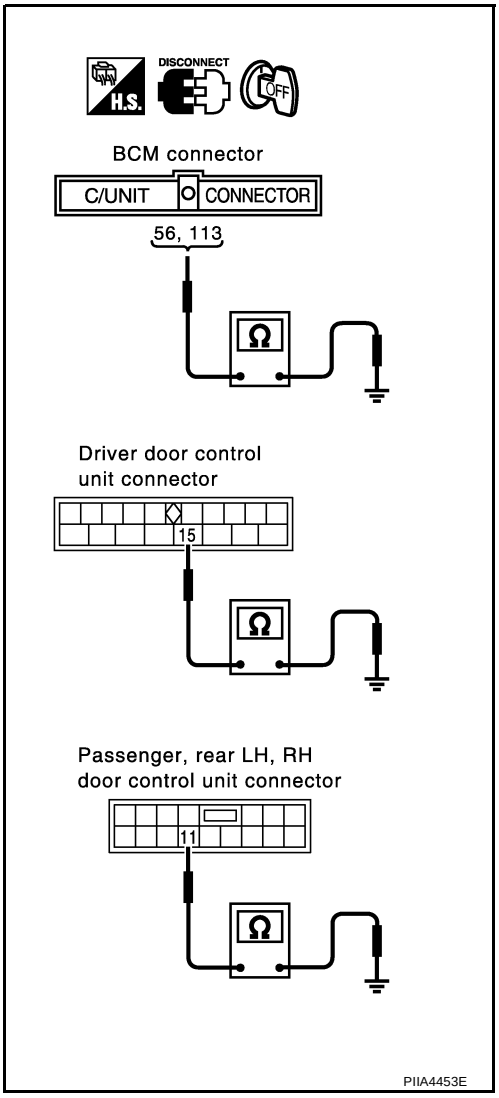
3. GROUND CIRCUIT INSPECTION

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

Unit	Terminal (wire color)		Continuity
Connector	(+)	(–)	
BCM (M4)	56 (B)	Ground	Continuity should exist
	113 (B)		
Driver door control unit (D8)	15 (B)		
Passenger door control unit (D38)	11 (B)		
Rear LH door control unit (D58)			
Rear RH door control unit (D78)			

OK or NG

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



CONSULT-II Function

AIS001DF

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.

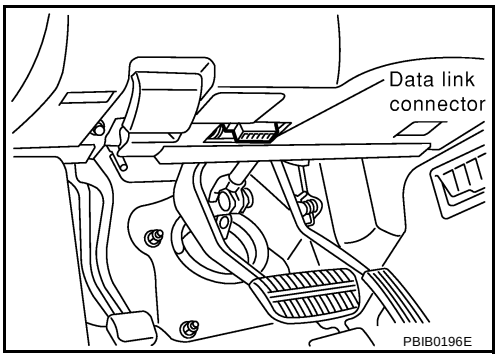
DIAGNOSTIC ITEMS DESCRIPTION

IVMS diagnosis position	Diagnosis mode	Description
IVMS-COMM CHECK	IVMS-COMM DIAGNOSIS	Diagnosis of continuity in the communication line(s), and diagnosis 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.

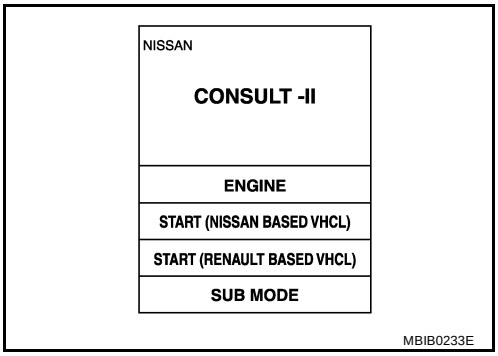
IVMS diagnosis position	Diagnosis mode	Description
Each system inspection	Work support	Changes the setting for each function.
	Self-diagnosis results	Carries out self-diagnosis.
	Data monitor	Displays data relative to the body control module (BCM) input signals and various control related data for each 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

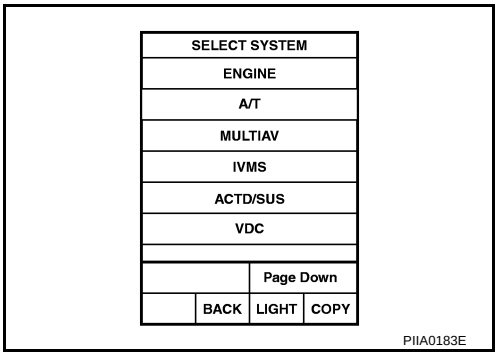
1. With the ignition switch OFF, connect “CONSULT-II” and “CONSULT-II CONVERTER” to the data link connector, and turn the ignition switch ON.



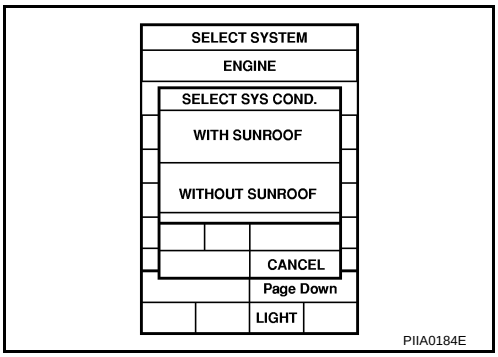
2. Touch “START (NISSAN BASED VHCL)”.



3. Touch “IVMS”.
If “IVMS” is not indicated, go to GI-38, "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-ll 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 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-39, "COMMUNICATION SYSTEM A" .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U-DR “NO RESPONSE”	25	Communication system B: Refer to BL-39, "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-39, "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-39, "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 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 and left 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.

On Board Diagnosis

AIS001DG

ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP
Front map lamps and step lamps (all seats) act as the indicators for the on board diagnosis.

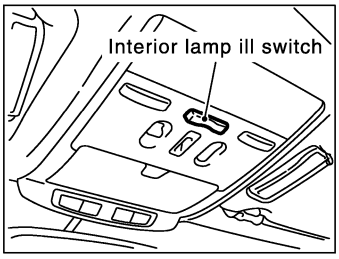
DIAGNOSIS ITEM

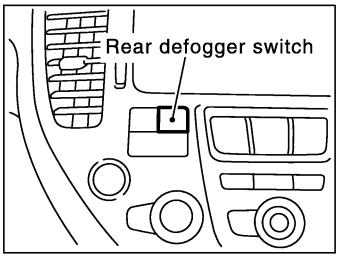
Diagnosis item	Content
IVMS communication diagnosis	Diagnosis any malfunction or inability of communication between BCM and LCU (DATA LINE A-3).
Switch monitor	Monitoring conditions of switches connected to BCM, LCU and Door control unit.
Power door lock system self-diagnosis	Diagnose malfunctions in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

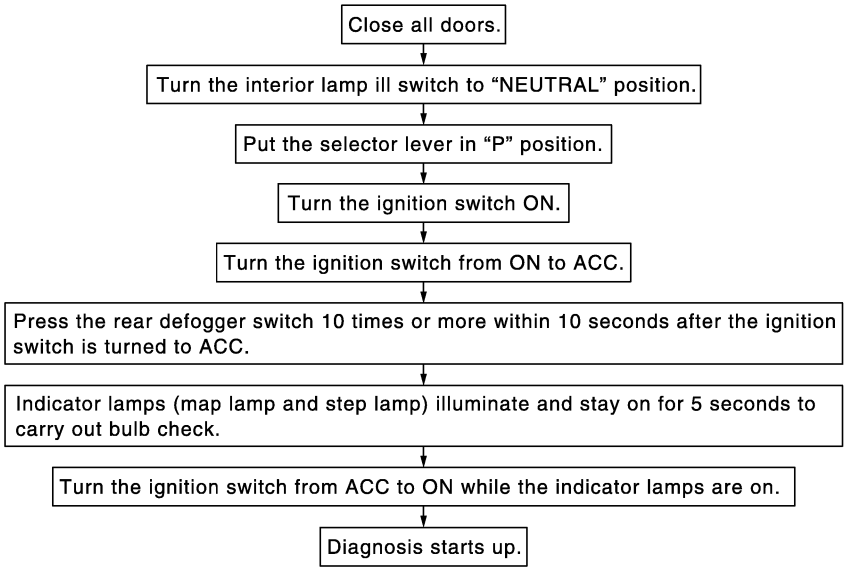
COMMUNICATION DIAGNOSIS

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

How to Perform Communication Diagnosis



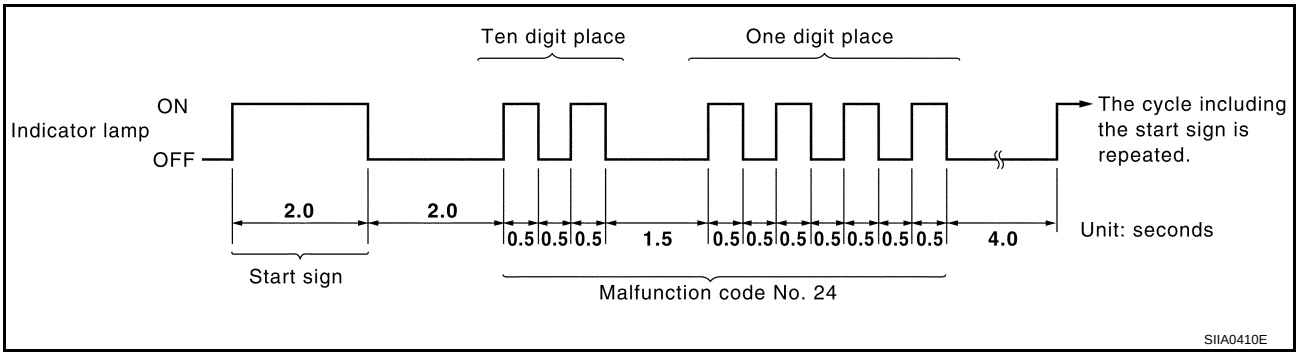




PIIA2871E

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.

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-39, "COMMUNICATION SYSTEM A" .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U-DR “NO RESPONSE”	25	Communication system B: Refer to BL-39, "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-39, "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-39, "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.

COMMUNICATION SYSTEM A

1. BCM INSPECTION

Replace the malfunctioning BCM with a known-good one, and perform the communication diagnosis.
Refer to BL-34, "IVMS COMMUNICATION INSPECTION" (with CONSULT-II), BL-37, "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 carry out the communication diagnosis.
   Refer to BL-34, "IVMS COMMUNICATION INSPECTION" (with CONSULT-II), BL-37, "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 terminals and connectors.

2. LCU INSPECTION

Replace the LCU with a known-good one, and carry out the communication diagnosis.
Refer to BL-34, "IVMS COMMUNICATION INSPECTION" (with CONSULT-II), BL-37, "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

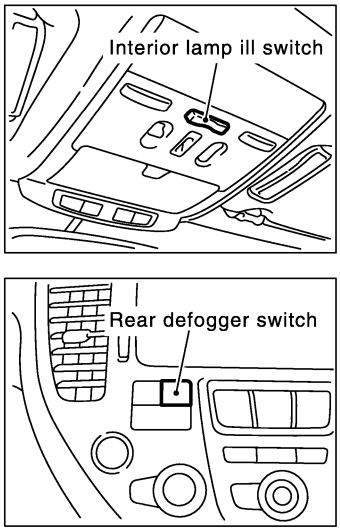
Replace the BCM with a known-good one, and carry out the communication diagnosis.
Refer to BL-34, "IVMS COMMUNICATION INSPECTION" (with CONSULT-II), BL-37, "COMMUNICATION DIAGNOSIS" (without CONSULT-II).

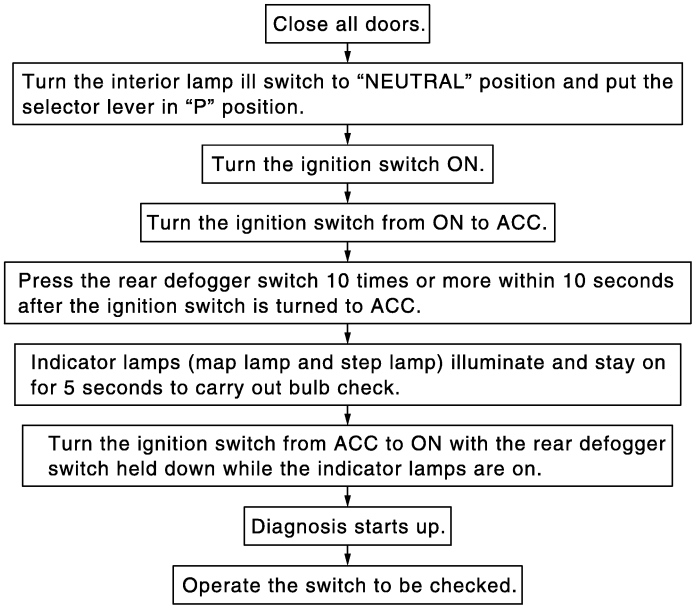
OK or NG

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

SWITCH MONITOR

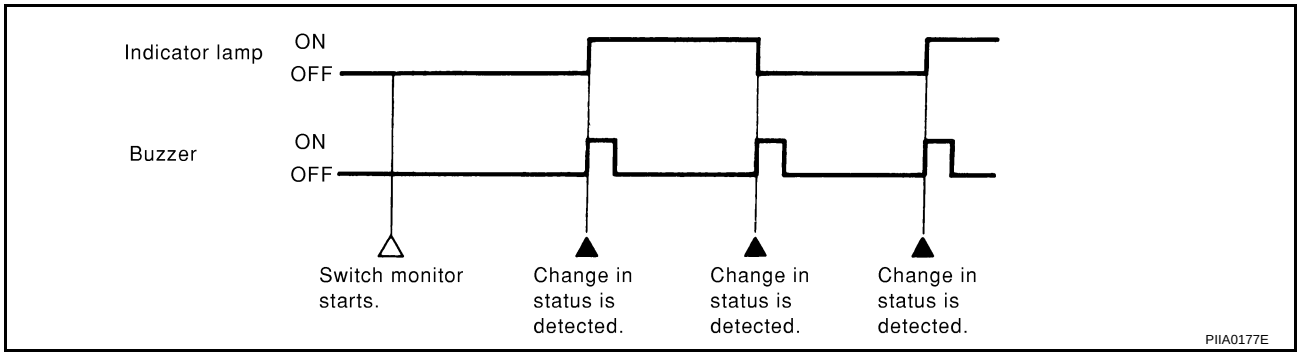
How to Perform Switch Monitor





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.



Switch Monitor Item

The status of the switch (except the ignition switch, interior lamp ill 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

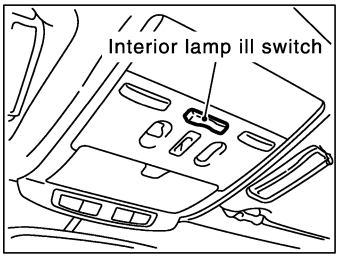
Cancel of Switch Monitor

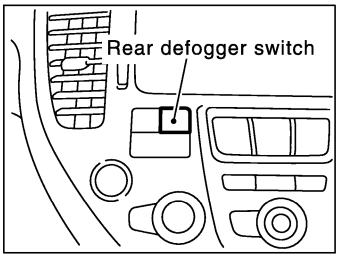
If one of the following conditions is satisfied, the switch monitor is cancelled.

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

POWER DOOR LOCK SYSTEM SELF-DIAGNOSIS

How to Perform Self-Diagnosis



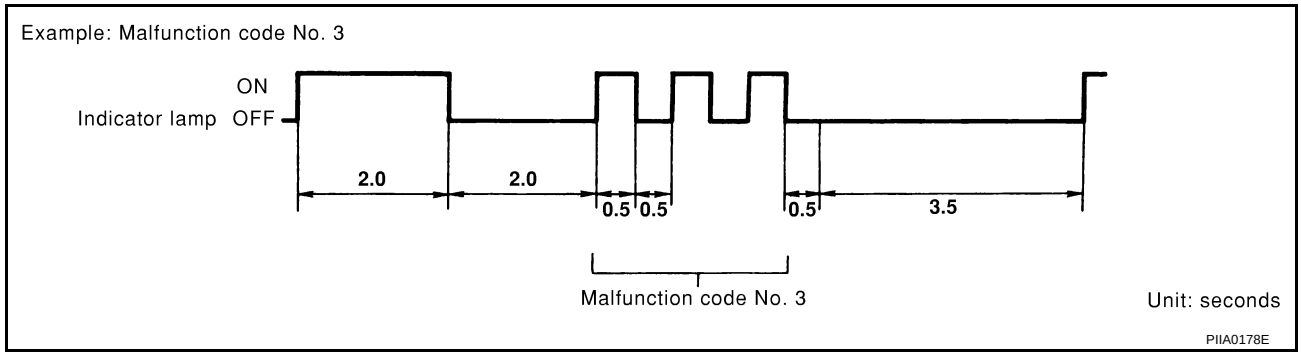


Close all doors.
↓
Turn the interior lamp ill switch to “NEUTRAL” position.
↓
Put the selector lever in “P” position.
↓
Turn the ignition switch to ON.
↓
Turn the lighting switch to ON (1st).
↓
Turn the ignition switch from ON to ACC.
↓
Press the rear defogger switch 10 times or more within 10 seconds after the ignition switch is turned to ACC.
↓
Indicator lamps (map lamp and step lamp) illuminate and stay on for 5 seconds to carry out bulb check.
↓
Turn the ignition switch from ACC to ON while the indicator lamps are on.
↓
Self-diagnosis starts and all door lock actuators are automatically locked and then unlocked.
↓
After the above procedure is completed, run the vehicle at min. 35 km/h.
↓
Diagnosis result indication starts.

PIIA2870E

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-49, "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

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

Symptom Chart

AIS001QC

- Always check the “Work Flow” before troubleshooting. Refer to BL-30, "Work Flow" .
- Before carrying out the inspection on the following table, carry out the preliminary check. Refer to BL-31, "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-43
	2. Check communication line.	BL-42
	3. Replace driver door control unit (LCU01).	–
Specific door lock actuator does not operate.	1. Check door lock actuator.	BL-44 BL-44
	2. Check communication line.	BL-42
	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-45
	2. Check communication line.	BL-42
	3. Replace driver door control unit (LCU01).	–
Key reminder door system does not operate properly.	1. Check front door switch.	BL-47
	2. Check key switch.	BL-46
	3. Replace BCM.	–

Check Communication Line

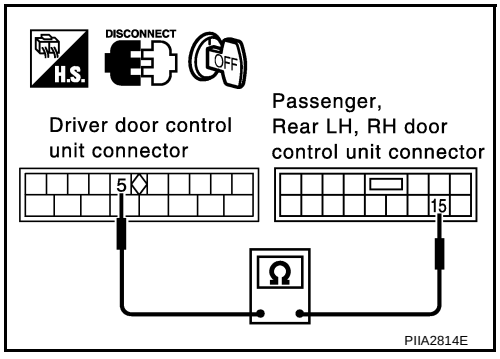
AIS001DJ

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 terminal 5 and malfunctioning door control unit connector terminal 15.

Terminal				Continuity
Driver door control unit (LCU01)		Passenger door control unit		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
D8	5 (L/Y)	D38	15 (L/Y)	Yes

Terminal				Continuity
Driver door control unit (LCU01)		Rear door control unit		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
D8	5 (L/Y)	D58 (LH) D78 (RH)	15 (L/Y)	Yes



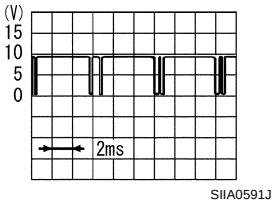
OK or NG

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

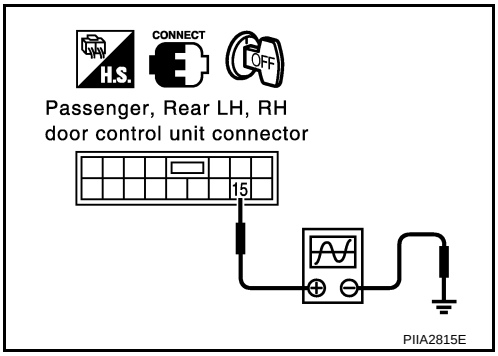
2. CHECK COMMUNICATION SIGNAL

1. Connect driver door control unit (LCU01) and malfunctioning door control unit connector.
2. Check voltage between malfunctioning door control unit connector terminal 15 and ground.

	Terminal			Voltage
	(+)		(–)	
Passenger door control unit	Connector	Terminal (Wire color)	Ground	
	D38	15 (L/Y)		
	Terminal			
	(+)		(–)	
Rear LH, RH door control unit	Connector	Terminal (Wire color)	Ground	
	D58 (LH) D78 (RH)	15 (L/Y)		



SIIA0591J



PIIA2815E

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 & Unlock Switch

AIS001DI

1. CHECK DOOR LOCK AND UNLOCK SWITCH

With CONSULT-II

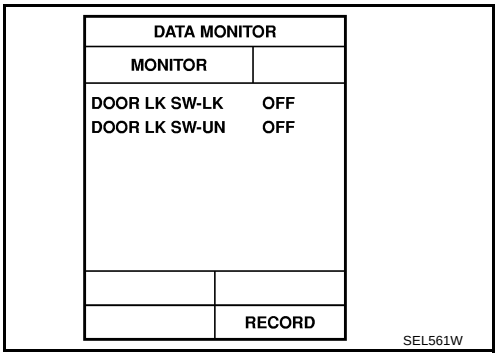
See “DOOR LK SW-LK and UN” in DATA MONITOR mode with CONSULT-II.

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

  DOOK LK SW-LK : OFF → ON

- When lock and unlock switch is turned to unlock:

  DOOK LK SW-UN : OFF → ON



SEL561W

Without CONSULT-II

Check door lock and unlock switch operation in “SWITCH MONITOR” mode. Refer to BL-40, "SWITCH MONITOR" .

OK or NG

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

NG >> Replace door lock and unlock switch.

Check Door Lock Actuator (Driver Side)

AIS001DL

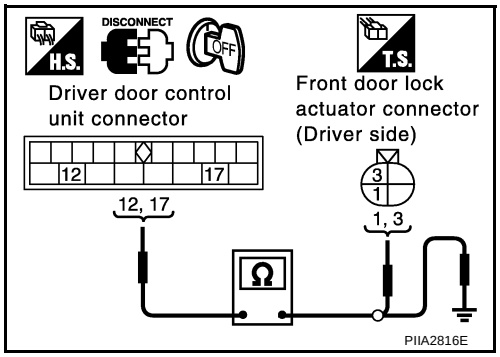
1. CHECK DOOR LOCK ACTUATOR HARNESS

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

12 (BR) – 3 (BR) : Continuity should exist.
17 (SB) – 1 (SB) : Continuity should exist.

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

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



OK or NG

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

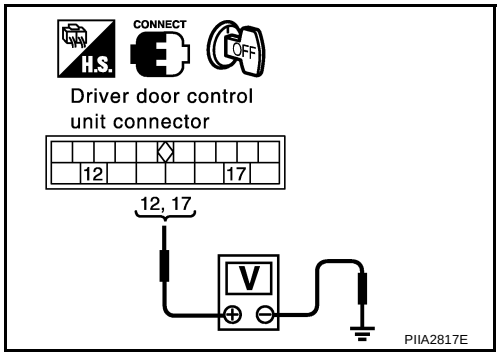
2. CHECK OUTPUT SIGNAL

1. Connect driver door control unit (LCU01) connector.
2. Check voltage between driver door control unit (LCU01) connector D8 terminals 12 (BR), 17 (SB) and ground.

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

OK or NG

OK >> Replace front door lock actuator driver side.
NG >> Replace driver door control unit (LCU01).



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

AIS001DM

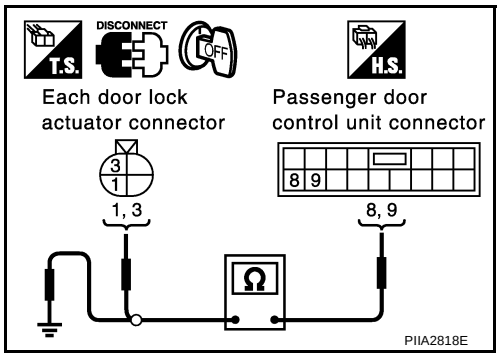
1. CHECK DOOR LOCK ACTUATOR HARNESS

1. Turn the ignition switch OFF.
2. Disconnect passenger door control unit and door lock actuator connector.
3. Check continuity between passenger door control unit connector D38 terminals 8 (SB), 9(BR) and door lock actuator connector D41 (Passenger), D61 (Rear LH) and D81 (Rear RH) terminals 1 (SB), 3 (BR).

1 (SB) – 8 (SB) : Continuity should exist.
3 (BR) – 9 (BR) : Continuity should exist.

4. Check continuity between passenger door control unit connector D38 terminal 8 (SB), 9 (BR) and ground.

8 (SB) – Ground : Continuity should not exist.
9 (BR) – Ground : Continuity should not exist.



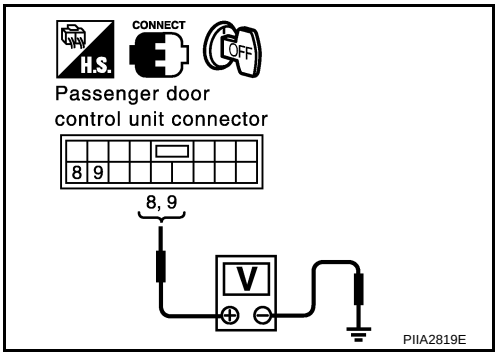
OK or NG

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

2. CHECK OUTPUT SIGNAL

1. Connect passenger door control unit connector.
2. Check voltage between passenger door control unit connector D38 terminals 8 (SB), 9 (BR) and ground.

Door lock operation	Terminal (Wire color)		Voltage (V) (Approx.)
	(+)	(–)	
Free → Lock	8 (SB)	Ground	0 → Battery voltage
Free → Unlock	9 (BR)		0 → Battery voltage



OK or NG

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

Check Front Door Key Cylinder Switch

AIS001OI

1. CHECK DOOR KEY CYLINDER SWITCH SIGNAL

With CONSULT-II

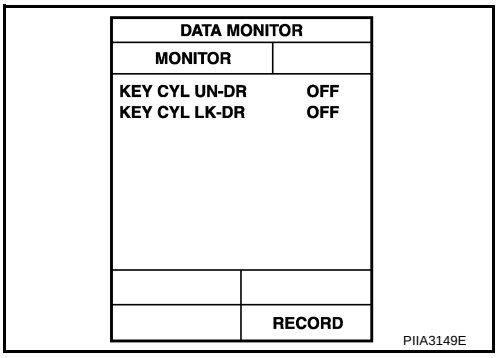
Check front door key cylinder switch (“KEY CYL LK-SW”, “KEY CYL UN-SW”) in DATA MONITOR mode in CONSULT–II.Refer to BL-36, "DATA MONITOR" .

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

  KEY CYL LK-SW : ON

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

  KEY CYL UN-SW : ON



Without CONSULT-II

Check front door key cylinder switch operation in “SWITCH MONITOR” mode. Refer to BL-40, "SWITCH MONITOR" .

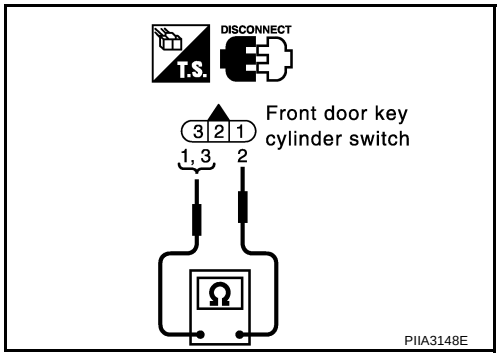
OK or NG

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

2. CHECK DOOR KEY CYLINDER SWITCH

Check continuity between door key cylinder switch connector terminals.

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

AIS001OF

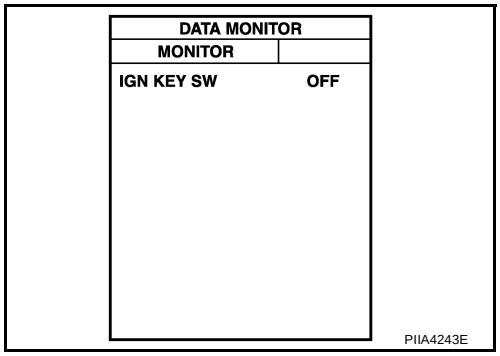
1. CHECK KEY SWITCH

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

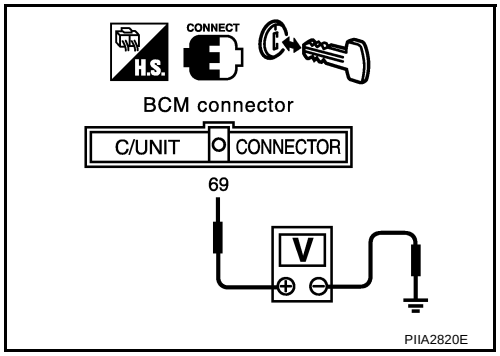
Key is removed from ignition key cylinder : IGN KEY SW OFF



Without CONSULT-II

Check voltage between BCM connector M4 terminal 69 (PU/W) 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.

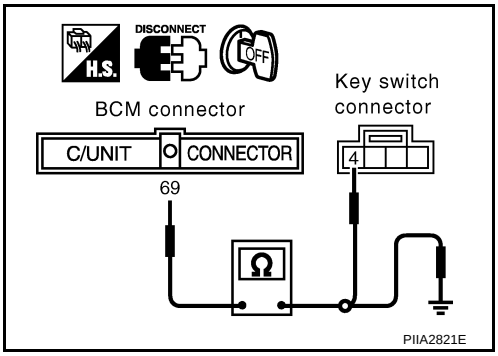
2. CHECK KEY SWITCH CIRCUIT

1. Disconnect key switch connector.
2. Check continuity between BCM connector M4 terminal 69 (PU/W) and key switch connector M64 terminal 4 (PU/W).

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

3. Check continuity between BCM connector M4 terminal 69 (PU/W) and ground.

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



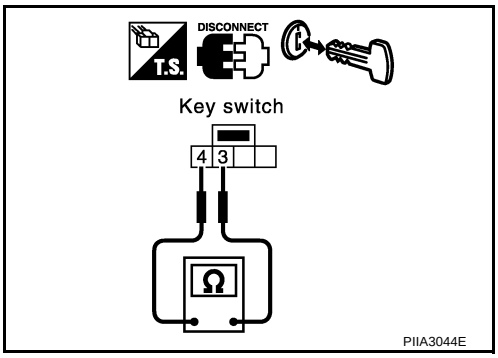
OK or NG

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

3. CHECK KEY SWITCH

Check continuity between key switch terminals.

Connector	Terminal	Condition of key switch	Continuity
M64	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 Front Door Switch

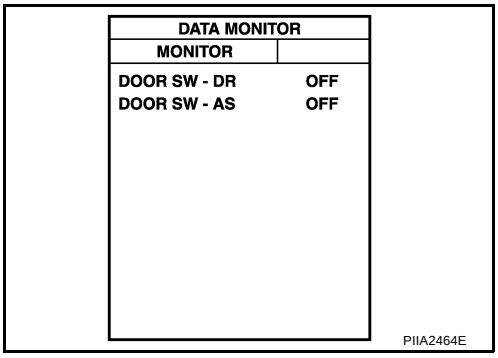
AIS002BW

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-40, "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 side), B220 (passenger side) terminal 1 (R/Y, LG) and BCM connector B4, M4 terminal 142 (R/Y), 37 (LG).

Driver side door switch

1 (R/Y) - 142 (R/Y) : Continuity should exist.

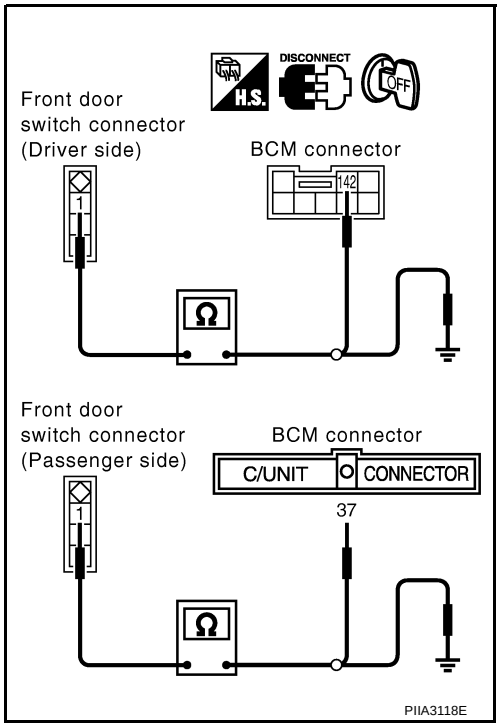
Passenger side door switch

1 (LG) - 37 (LG) : Continuity should exist.

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

Each door switches

1 (LG, R/Y) - Ground : Continuity should not exist.



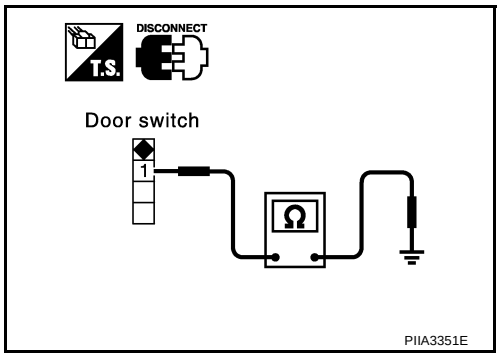
OK or NG

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

3. CHECK FRONT DOOR SWITCH

Check continuity between front door switch connector B20 (driver side), B220 (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.
NG >> Replace malfunction front door switch.

Check Door Unlock Sensor

AIS002ER

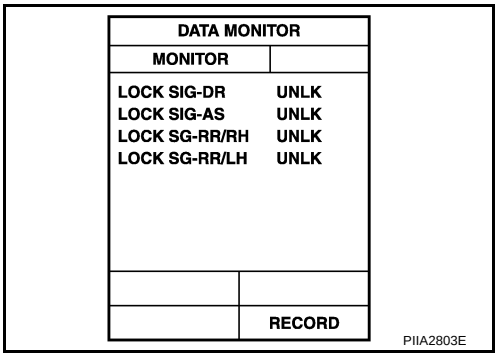
1. CHECK DOOR UNLOCK SENSOR INPUT SIGNAL

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-40, "SWITCH MONITOR"
.

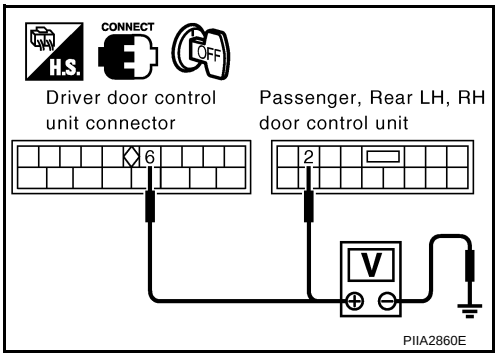
OK or NG?

OK >> Door unlock sensor is OK.
NG >> GO TO 2.

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 and ground.

Door control unit connector		Terminal (Wire color)	Voltage (V)
Front door	Driver side: D8	6 (G/Y) – ground	Approx. 5
	Passenger side: D38	2 (G/Y) – ground	
Rear door	LH: D58		
	RH: D78		



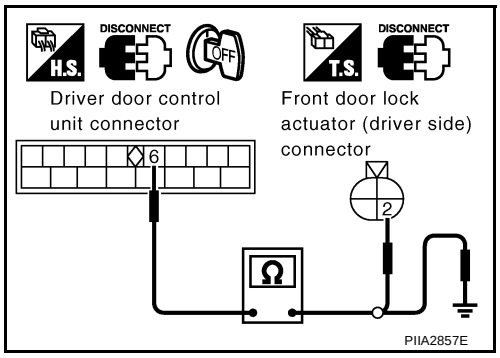
OK or NG?

OK >> GO TO 3.
NG >> Replace malfunctioning door control unit.

3. CHECK DOOR UNLOCK SENSOR SIGNAL CIRCUIT

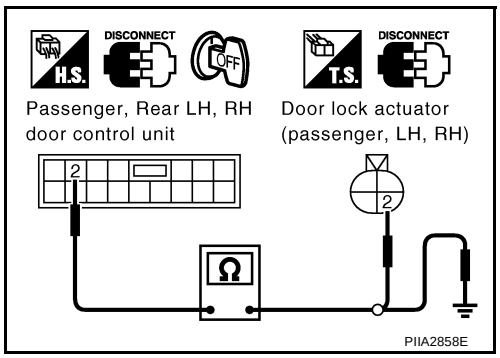
1. Disconnect door control unit connector.
2. Check continuity between door control unit and door lock actuator (door unlock sensor).

Connector	Terminal (wire color)	Connector	Terminal (Wire color)	Continuity
Driver side: D8	6 (G/Y)	D11	2 (G/Y)	Should exist
Passenger side: D38	2 (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) – ground	Should not exist
Passenger side: D38	2 (G/Y) – ground	
Rear LH: D58		
Rear RH: D78		



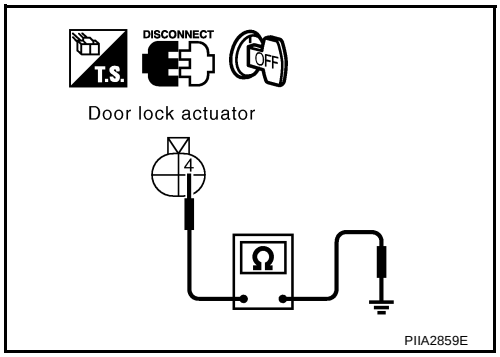
OK or NG?

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

4. CHECK DOOR UNLOCK SENSOR GROUND CIRCUIT

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

Connector	Terminal (wire color)	Continuity
Driver side: D11	4 (B) – ground	Should exist
Passenger side: D41		
Rear LH: D61		
Rear RH: D81		



OK or NG?

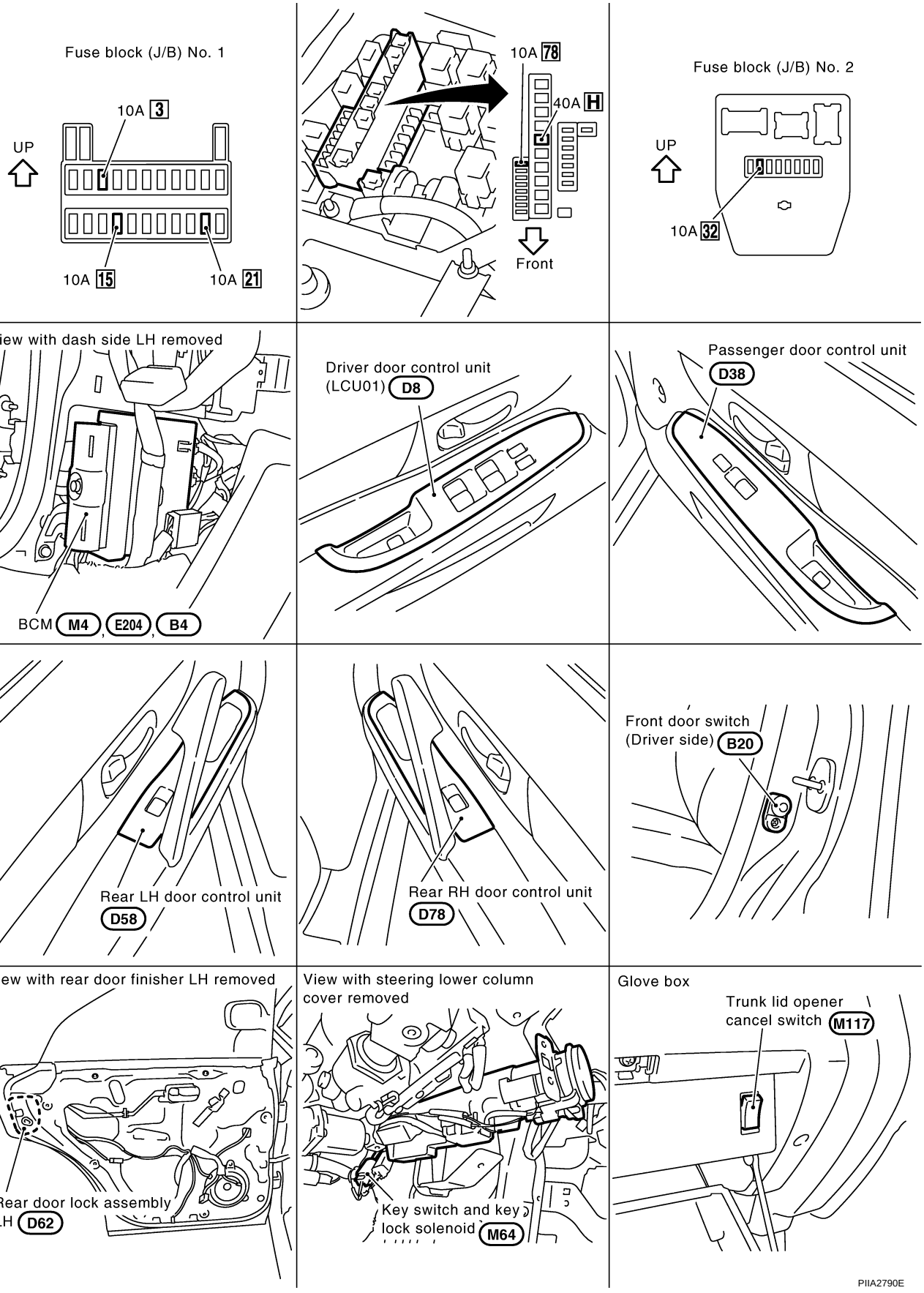
OK >> Replace door lock actuator (door unlock sensor).
NG >> Repair or replace malfunctioning harness.

REMOTE KEYLESS ENTRY SYSTEM

PFP:28596

Component Parts and Harness Connector Location

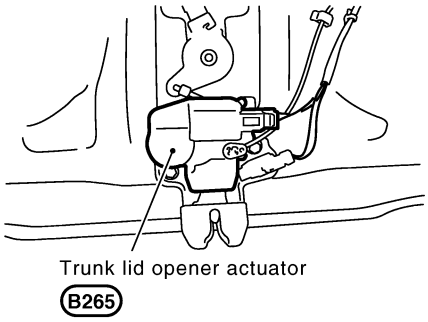
AIS001PT



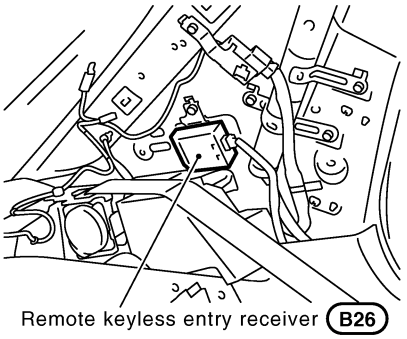
Component Parts and Harness Connector Location

AIS001PU

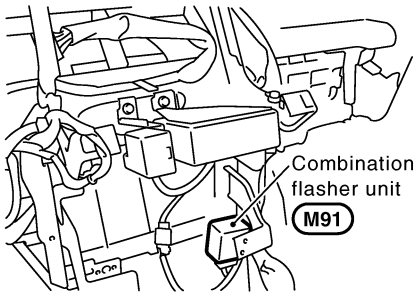
View with trunk lid insulator removed

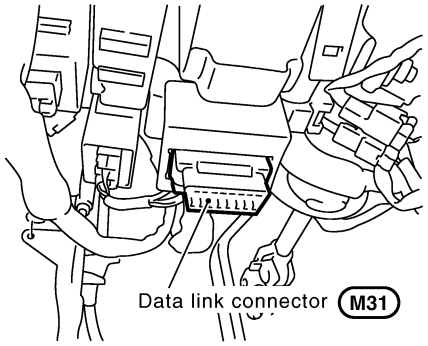


View with rear pillar garnish LH removed

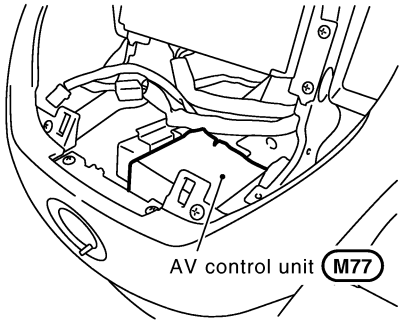


View with instrument panel center removed

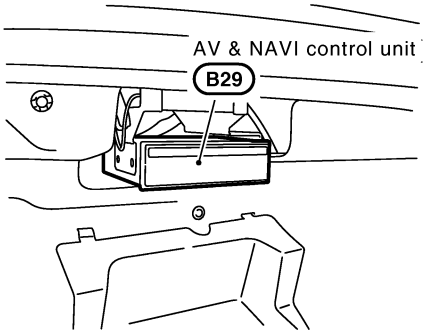


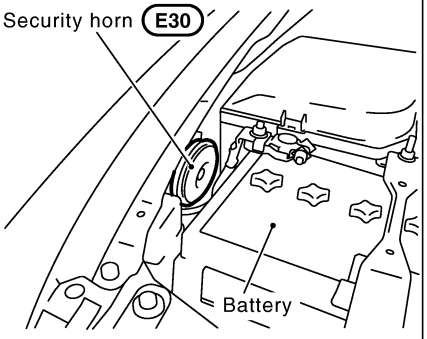


View with cluster lid C removed



Trunk room





PIIA2791E

System Description

AIS001DO

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].

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, power is supplied

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

When door switch is in OPEN position, ground is supplied

- to BCM terminals 142 (driver side), 37 (passenger side), 33 (Rear LH), 143 (Rear RH)
- through door switches terminal 1.

When door is unlocked, ground is supplied

- to driver door control unit (LCU01) terminal 6 or passenger, rear LH, RH door control unit terminal 2
- from terminal 2 of each door unlock sensor.

Electronic key signal input

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

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
- map lamp

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

OPERATING PROCEDURE

BCM can receive signals from electronic key when key switch is in OFF position (key is not in ignition key cylinder).
It then sends the signals to LCU01 as 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 3 seconds, all other doors will be unlocked.
For detailed description, refer to BL-18, "POWER DOOR LOCK SYSTEM" .

HAZARD AND HORN REMINDER

Power is supplied at all times

- to security horn relay terminal 2
- through 10A fuse (No. 78, located in the fuse, fusible link and relay box).

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 security horn relay terminal 1
- through BCM terminal 127.

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

- 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

TRUNK LID OPENER OPERATION

Power is supplied at all times

- to trunk lid opener actuator terminal 1
- through 10A 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 trunk lid opener relay
- through 10A fuse [No. 3, located in the fuse block (J/B) No. 1].
- 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 body grounds E42 and E62.

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-126, "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.

MAP LAMP OPERATION

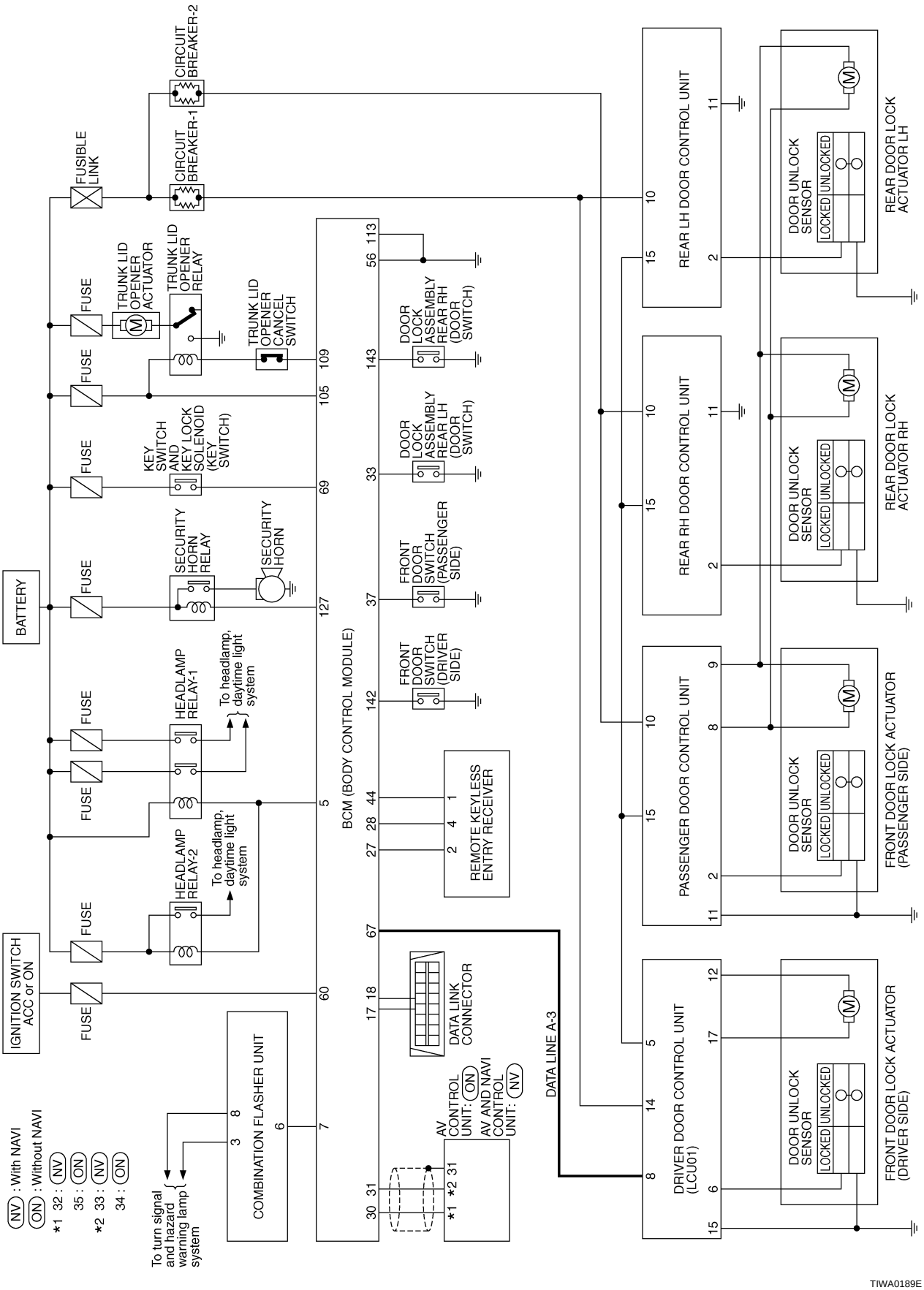
When the following conditions come:

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

Remote keyless entry system turns on map lamp (for 30 seconds) with input of UNLOCK signal from electronic key. For detailed description, refer to LT-128, "INTERIOR ROOM LAMP" .

Schematic

AIS001DP

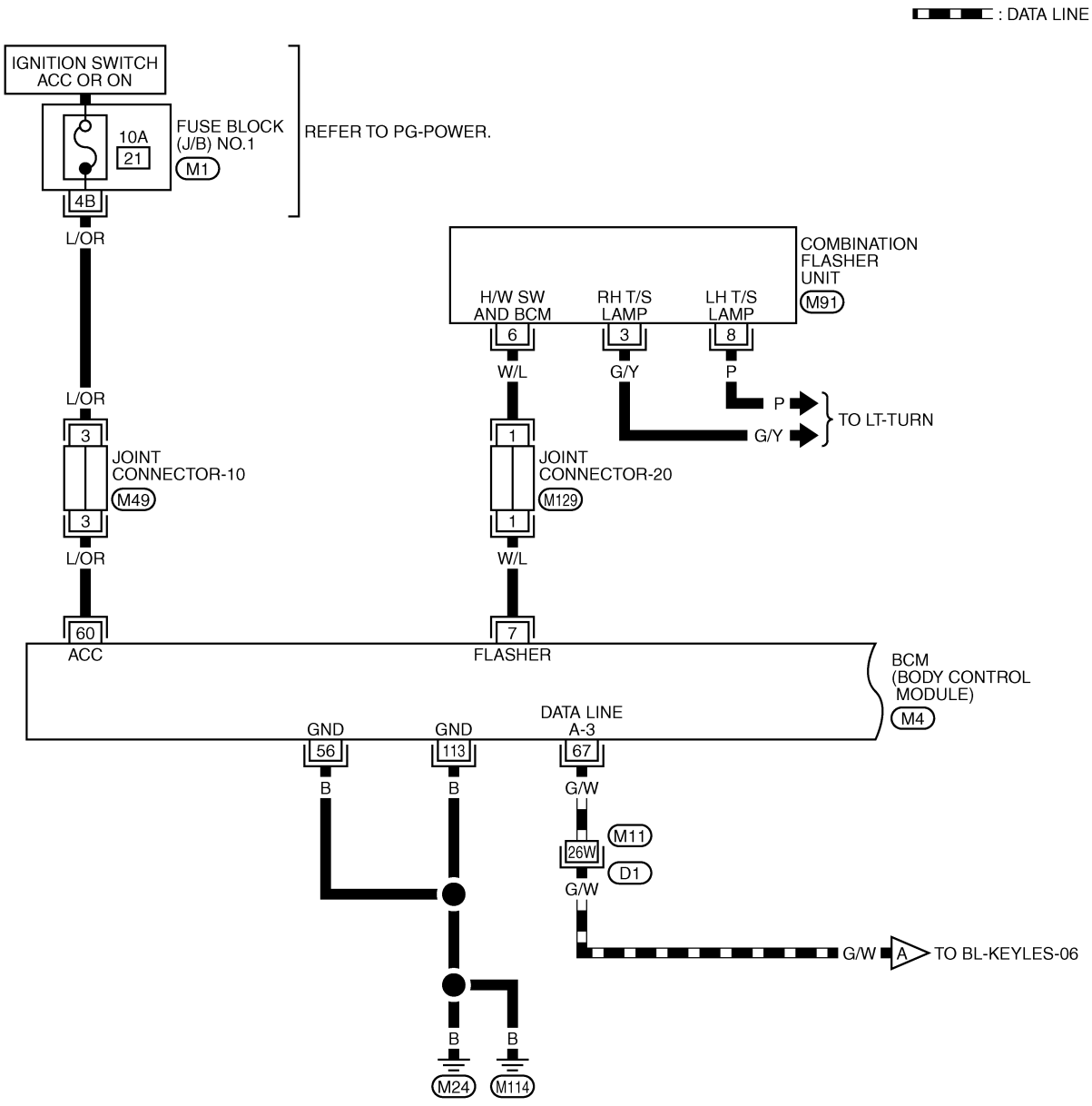


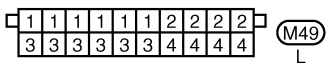
TIWA0189E

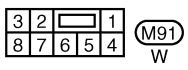
Wiring Diagram – KEYLES –

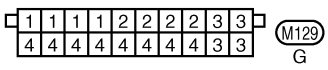
AIS001DQ

BL-KEYLES-01









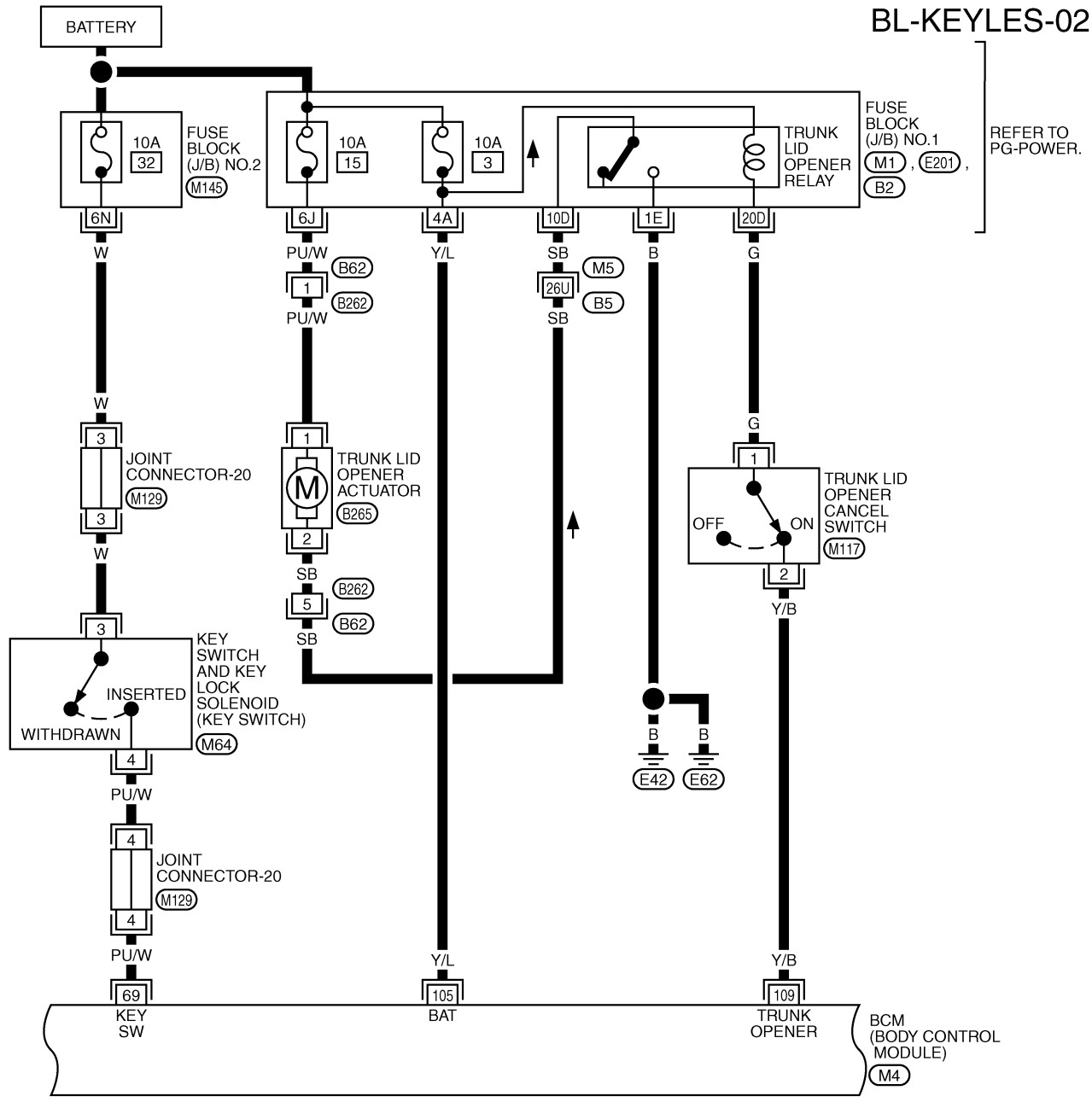
REFER TO THE FOLLOWING.

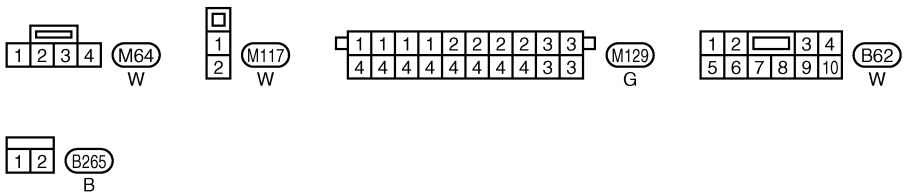
(D1) -SUPER MULTIPLE JUNCTION (SMJ)

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

(M4) -ELECTRICAL UNITS

TIWA0190E





REFER TO THE FOLLOWING.

M5 -SUPER MULTIPLE JUNCTION (SMJ)

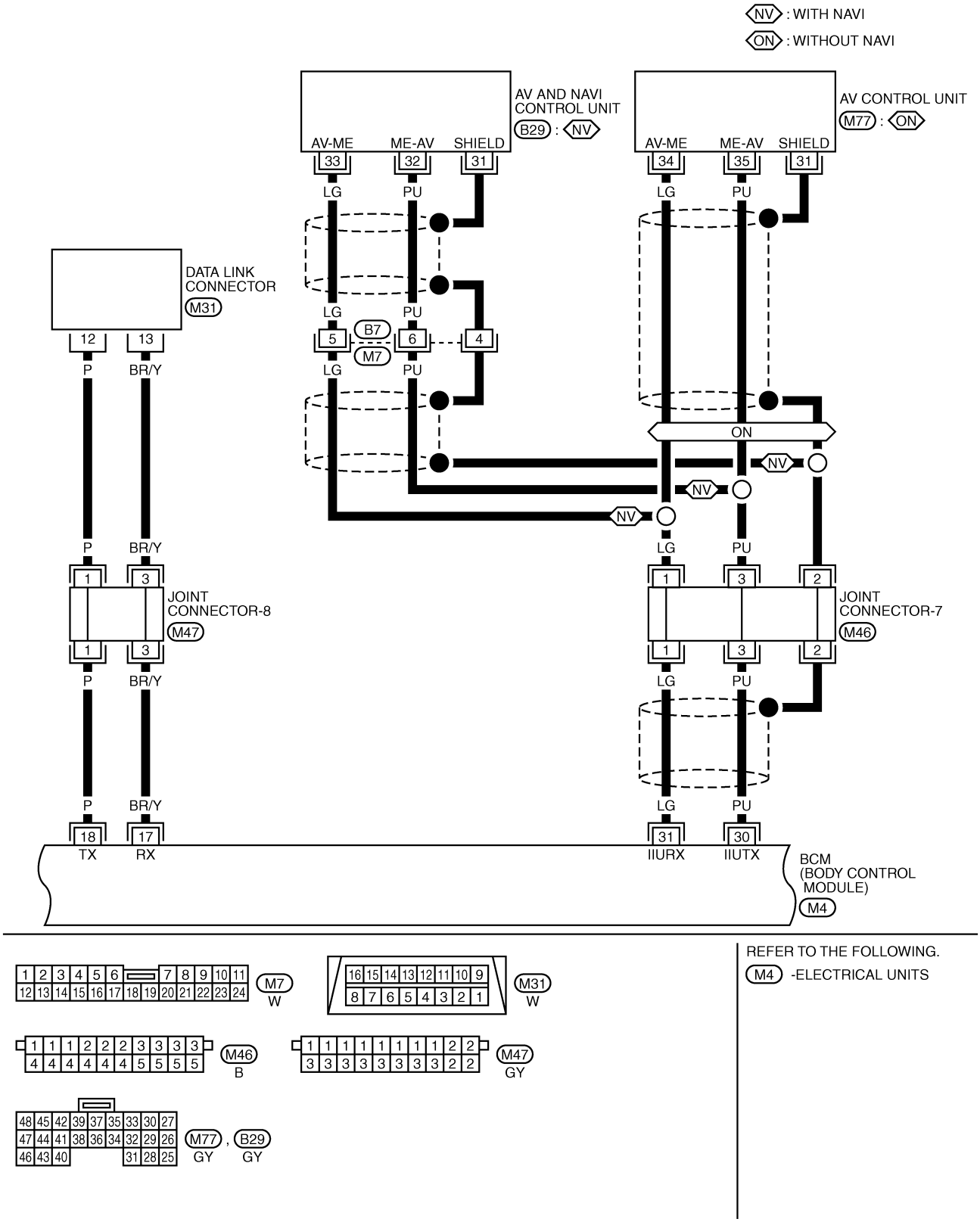
M1 , E201 , B2 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

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

M4 -ELECTRICAL UNITS

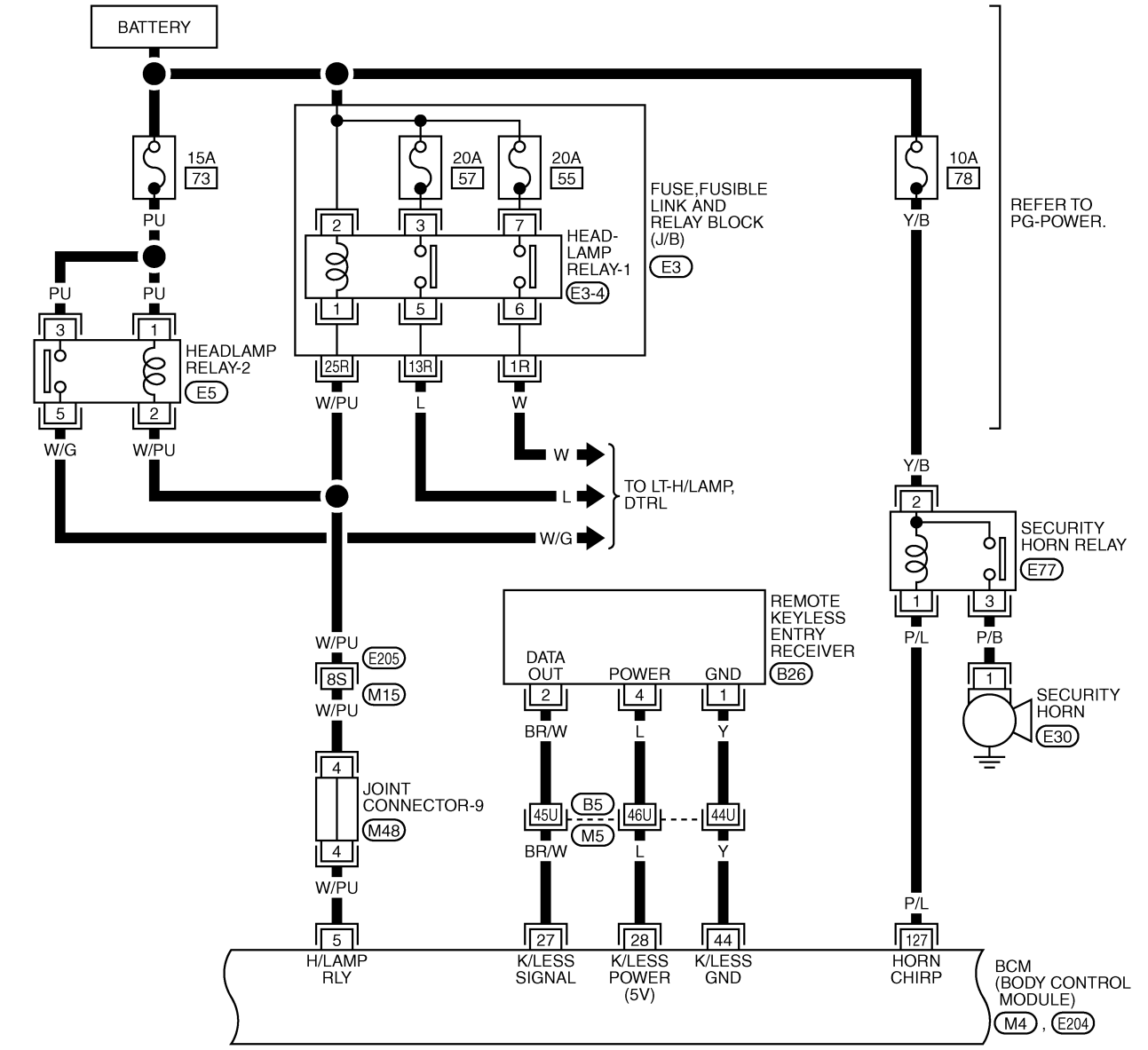
TIWA0191E

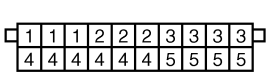
BL-KEYLES-03

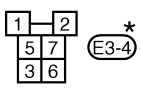


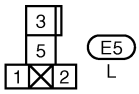
TIWA0192E

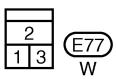
BL-KEYLES-04

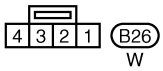












*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.

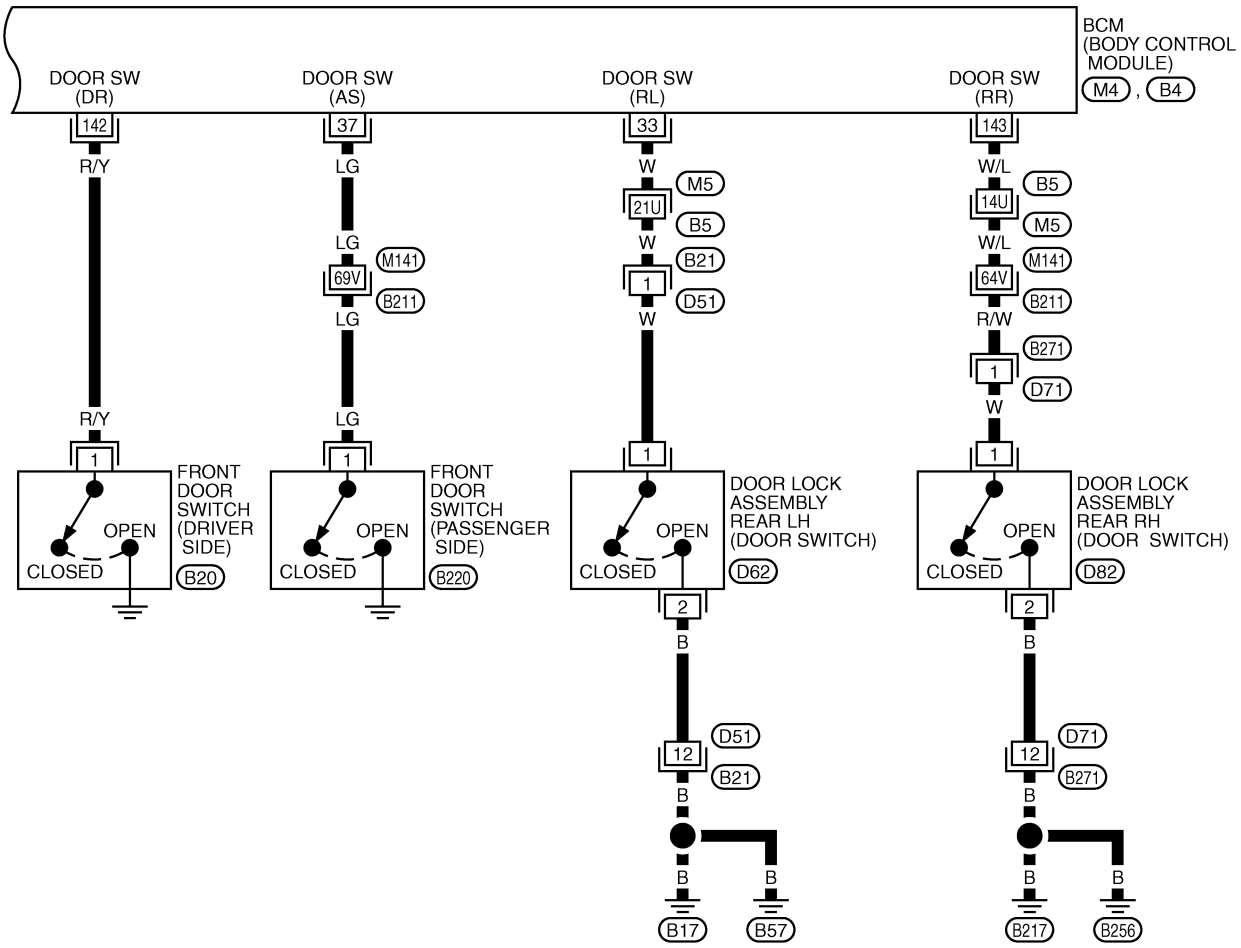
M5 , E205 -SUPER MULTIPLE JUNCTION (SMJ)

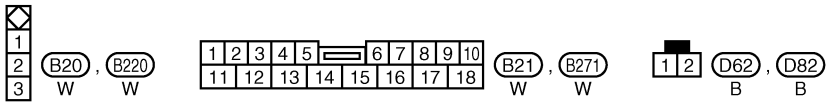
E3 -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)

M4 , E204 -ELECTRICAL UNITS

TIWA0193E

BL-KEYLES-05



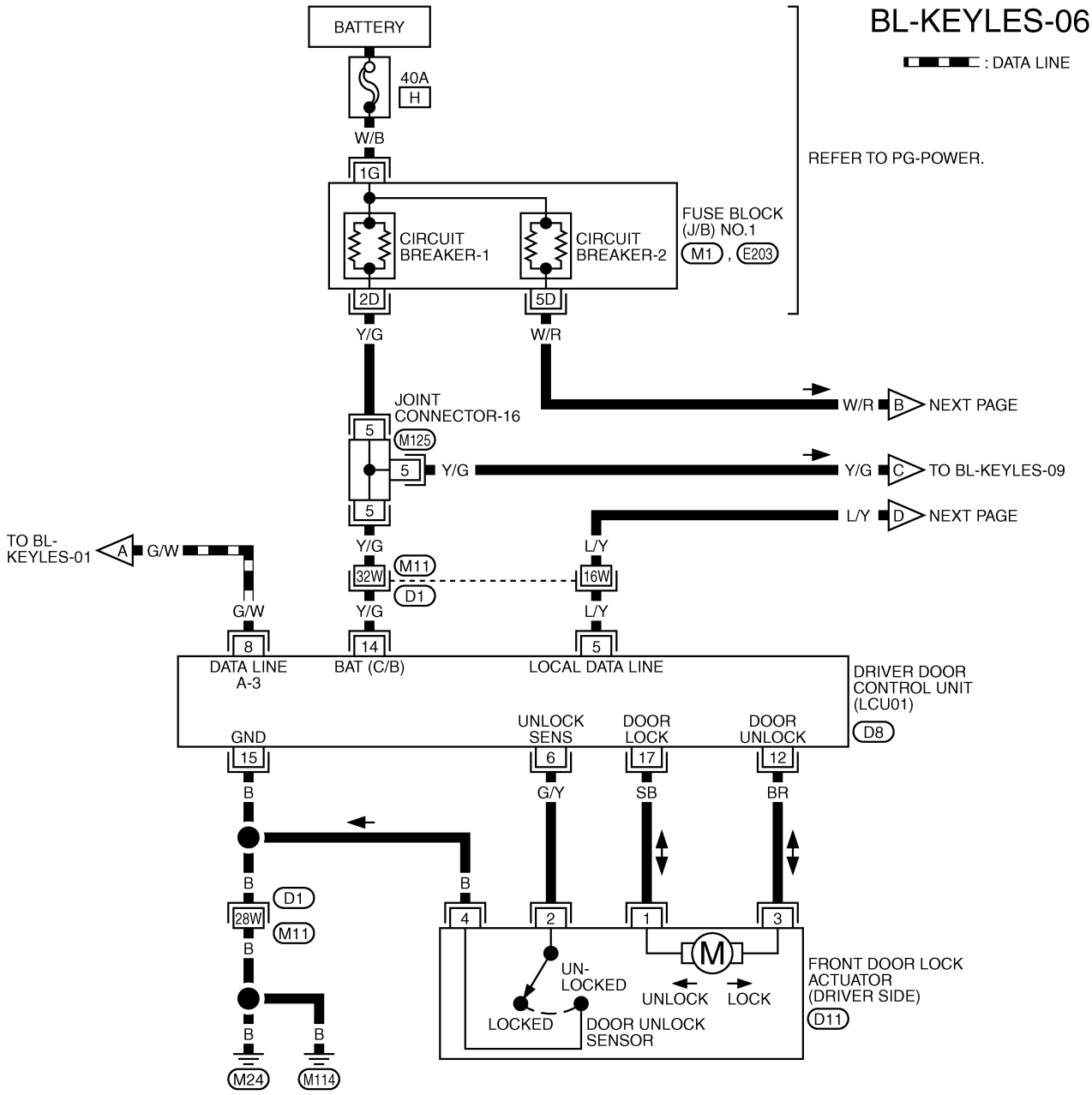


REFER TO THE FOLLOWING.

M5 , B211 -SUPER MULTIPLE JUNCTION (SMJ)

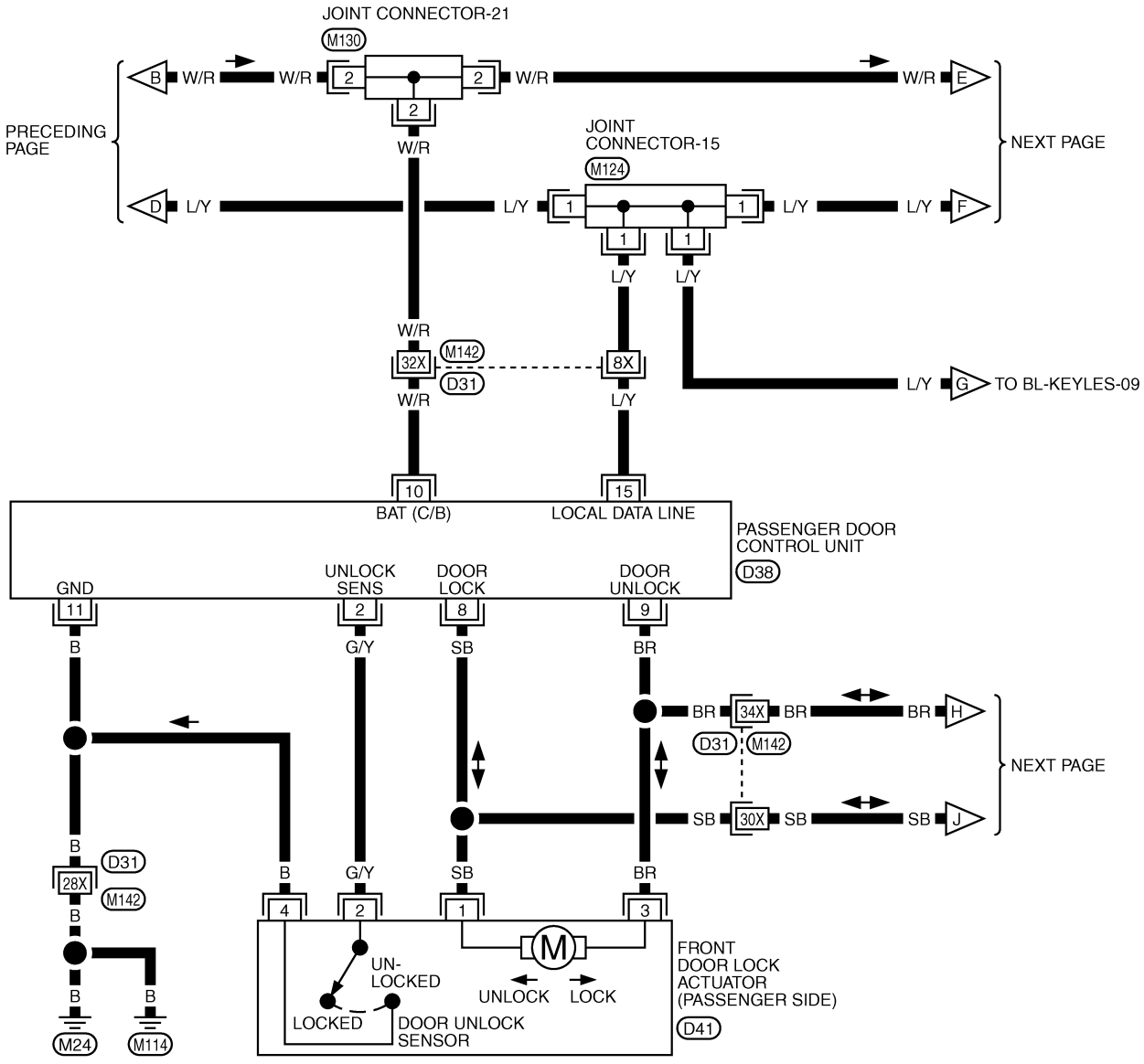
M4 , B4 -ELECTRICAL UNITS

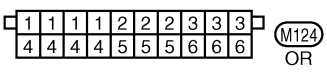
TIWA0194E

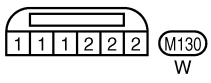

BL-KEYLES-06
: DATA LINE
BATTERY
40A
H
W/B
1G
CIRCUIT BREAKER-1
CIRCUIT BREAKER-2
FUSE BLOCK (J/B) NO.1
M1 , E203
REFER TO PG-POWER.
2D
5D
Y/G
W/R
JOINT CONNECTOR-16
5
M125
W/R B NEXT PAGE
Y/G Y/G C TO BL-KEYLES-09
L/Y D NEXT PAGE
TO BL-KEYLES-01
A G/W
32W
16W
M11
D1
G/W
L/Y
8
14
5
DATA LINE A-3
BAT (C/B)
LOCAL DATA LINE
DRIVER DOOR CONTROL UNIT (LCU01)
D8
GND
UNLOCK SENS
DOOR LOCK
DOOR UNLOCK
15
6
17
12
G/Y
SB
BR
28W
4
2
1
3
UN-LOCKED
LOCKED
UNLOCK
LOCK
DOOR UNLOCK SENSOR
FRONT DOOR LOCK ACTUATOR (DRIVER SIDE)
D11
M24
M114
M125
B
D8
W
D11
SB
REFER TO THE FOLLOWING.
D1 -SUPER MULTIPLE JUNCTION (SMJ)
M1 , E203 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

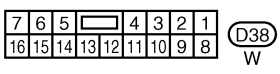
TIWA0195E

BL-KEYLES-07





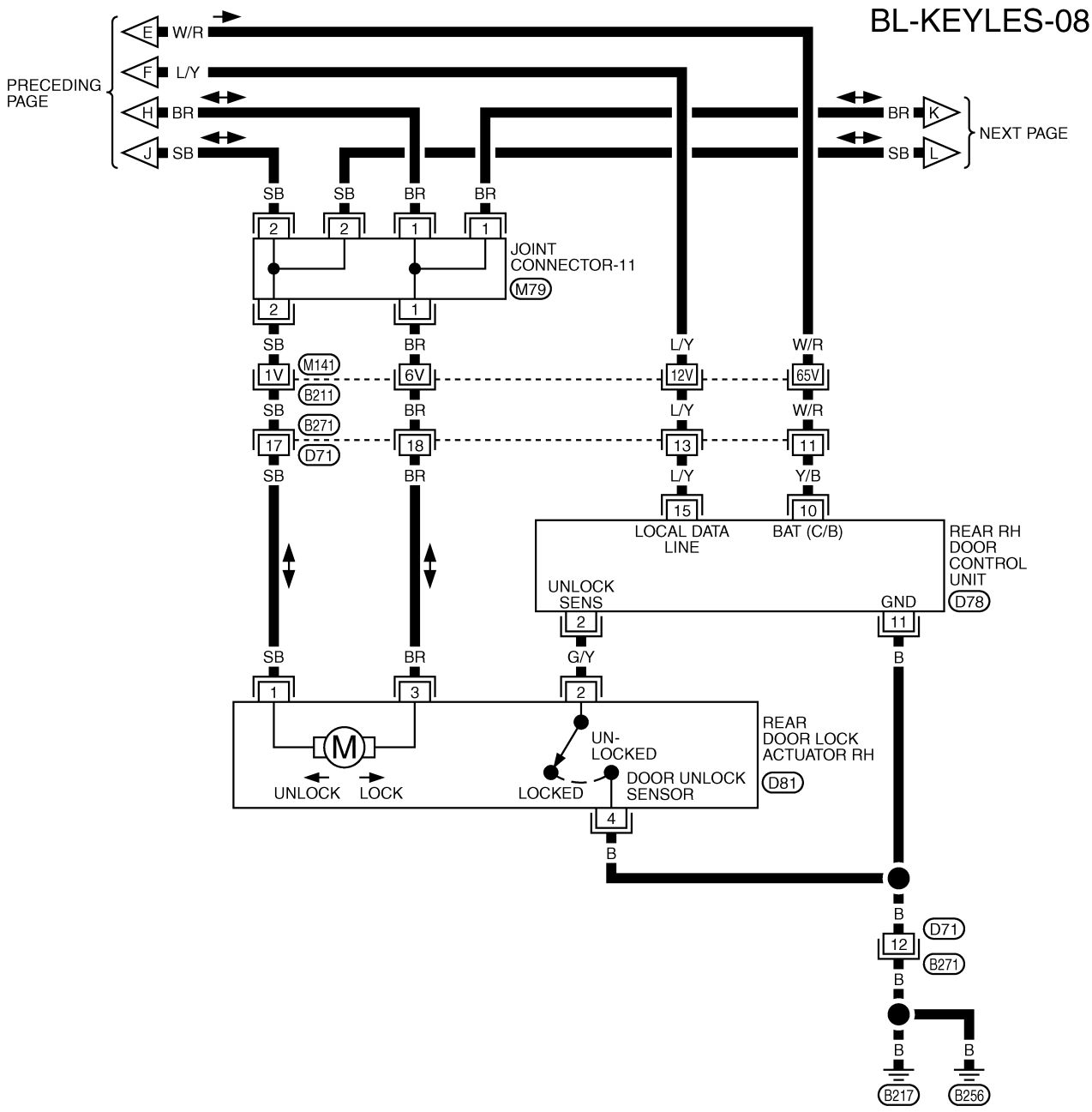


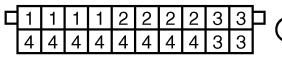


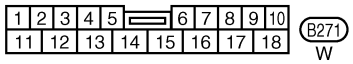
REFER TO THE FOLLOWING.

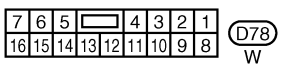
D31 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0196E





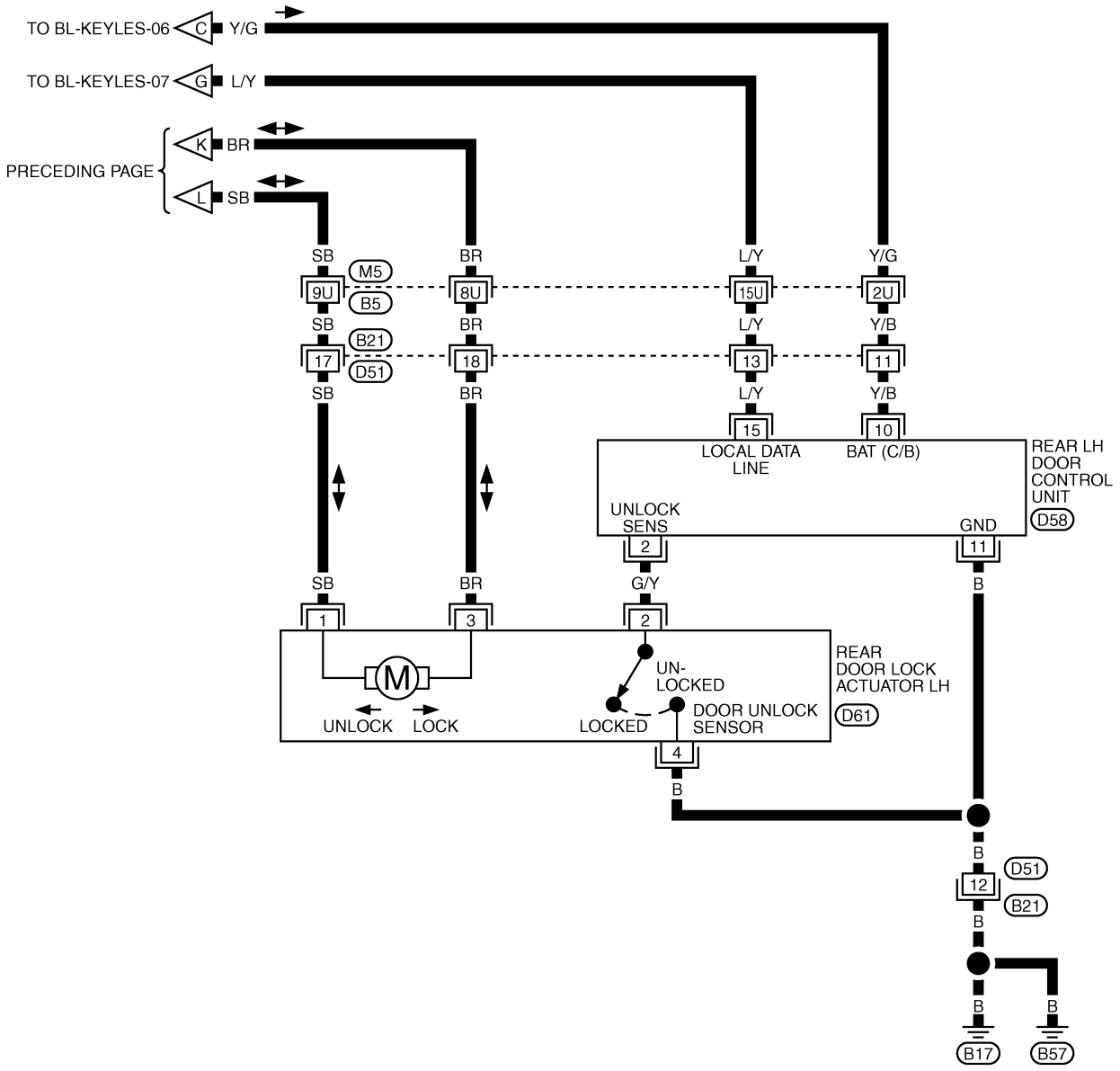


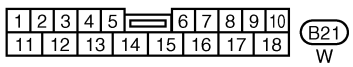


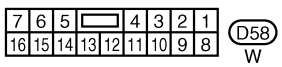
REFER TO THE FOLLOWING.
B211 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0197E

BL-KEYLES-09





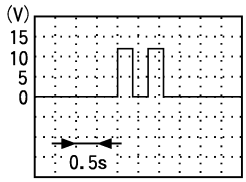
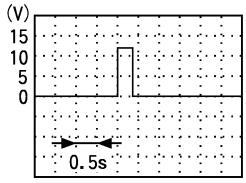
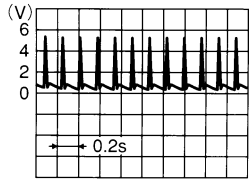
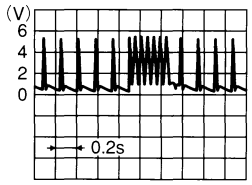
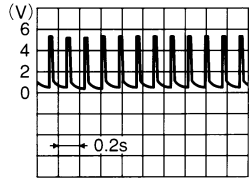
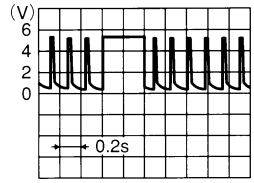


REFER TO THE FOLLOWING.
M5 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0198E

Terminal and Reference Value for BCM

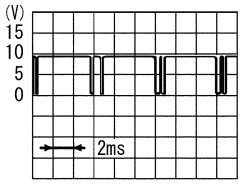
AIS001DR

TER-MINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
5	W/PU	Headlamp	Lighting switch is ON (2nd position)	0
			Lighting switch is 1st or OFF	Battery voltage
7	W/L	Combination flasher unit	Door locking with electronic key (Twice)	 PIIA2487J
			Door unlocking with electronic key (Once)	 PIIA2486J
17	BR/Y	Data line RX	—	—
18	P	Data line TX	—	—
27	BR/W	Remote keyless entry receiver (Pulse)	Stand-by	 OCC3879D
			Press any of the electronic key switches	 OCC3880D
28	L	Remote keyless entry receiver (Power supply)	Stand-by	 OCC3881D
			Press any of the electronic key switches	 OCC3882D
30	PU	IIU TX	—	—
31	LG	IIU RX	—	—
33	W	Rear LH door switch	Door open (ON) → close (OFF)	0 → Battery voltage
37	LG	Passenger door switch	Door open (ON) → close (OFF)	0 → Battery voltage

TER-MINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
44	Y	Remote keyless entry receiver (Ground)	—	0
56	B	Ground	—	0
60	L/OR	Ignition switch	Ignition switch ACC or ON position	Battery voltage
67	G/W	Data line A-3	—	—
69	PU/W	Key switch	Key Inserted in IGN key cylinder (ON) → key removed from IGN key cylinder (OFF)	Battery voltage → 0
105	Y/L	Battery power supply	—	Battery voltage
109	Y/B	Trunk lid opener cancel switch	Trunk lid opener cancel switch ON → OFF	Battery voltage → 0
113	B	Ground	—	0
127	P/L	Security horn relay	When panic alarm is operated using electronic key. (ON → OFF)	0 → Battery voltage
142	R/Y	Driver door switch	Door open (ON) → close (OFF)	0 → Battery voltage
143	W/L	Rear RH door switch	Door open (ON) → close (OFF)	0 → Battery voltage

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

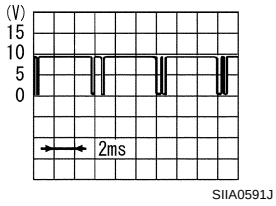
AIS001DS

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
5	L/Y	Local data line	—	 SIIA0591J
6	G/Y	Door unlock sensor	OFF (Locked) → ON (Unlocked)	5 → 0
8	G/W	Data line A-3	—	—
12	BR	Driver door lock actuator (Unlock)	Door lock & unlock switch (Free → Unlock)	0 → Battery voltage
14	Y/G	Battery power supply	—	Battery voltage
15	B	Ground	—	0
17	SB	Driver door lock actuator (Lock)	Door lock & unlock switch (Free → Lock)	0 → Battery voltage

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

AIS001DT

TERMI-NAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
2	G/Y	Door unlock sensor	OFF (Locked) → ON (Unlocked)	5 → 0
*8	SB	Door lock actuator (Lock)	Door lock & unlock switch (Free → Lock)	0 → Battery voltage
*9	BR	Door lock actuator (Unlock)	Door lock & unlock switch (Free → Unlock)	0 → Battery voltage
10	W/R (Y/B)	Battery power supply	—	Battery voltage

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
11	B	Ground	—	0V
15	L/Y	Local data line	—	

SIIA0591J

NOTE:

*Only for passenger door control unit.

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

Work Flow

AIS001DU

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-53, "System Description" .
3. Perform the preliminary check. Refer to BL-68, "Preliminary Check" .
4. Perform the communication inspection. If CONSULT-II is used, refer to BL-73, "IVMS COMMUNICATION INSPECTION" . If CONSULT-II is not used, refer to BL-76, "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-73, "IVMS COMMUNICATION INSPECTION" . If CONSULT-II is not used, refer to BL-76, "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-80, "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.

Preliminary Check

AIS001DV

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)
	ACC power supply	21 (10A)

Unit	Power source	Fusible link location
Driver door control unit	Battery power supply	H (40A)

Refer to BL-57, "Wiring Diagram – KEYLES –" .

OK or NG

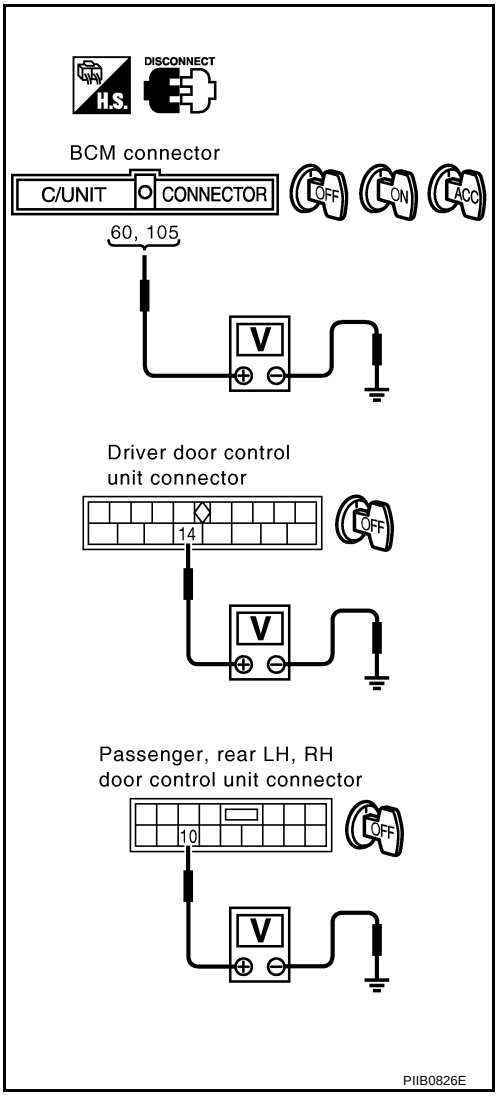
OK >> GO TO 2.

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

2. POWER SUPPLY CIRCUIT INSPECTION

Disconnect the connectors of BCM and driver door control unit (LCU) or passenger, rear LH, RH door control units, measure the voltage between the following terminal No. of the connector and ground.

(+)		(–)	Ignition switch position	Voltage (V) Approx.
Unit	Terminal (wire color)			
BCM (M4)	105 (Y/L)	Ground	OFF	Battery voltage
	60 (L/OR)		ACC	
Driver door control unit (D8)	14 (Y/G)		OFF	
Passenger door control unit (D38)	10 (W/R)		OFF	
Rear LH door control unit (D58)	10 (Y/B)			
Rear RH door control unit (D78)	10 (Y/B)			



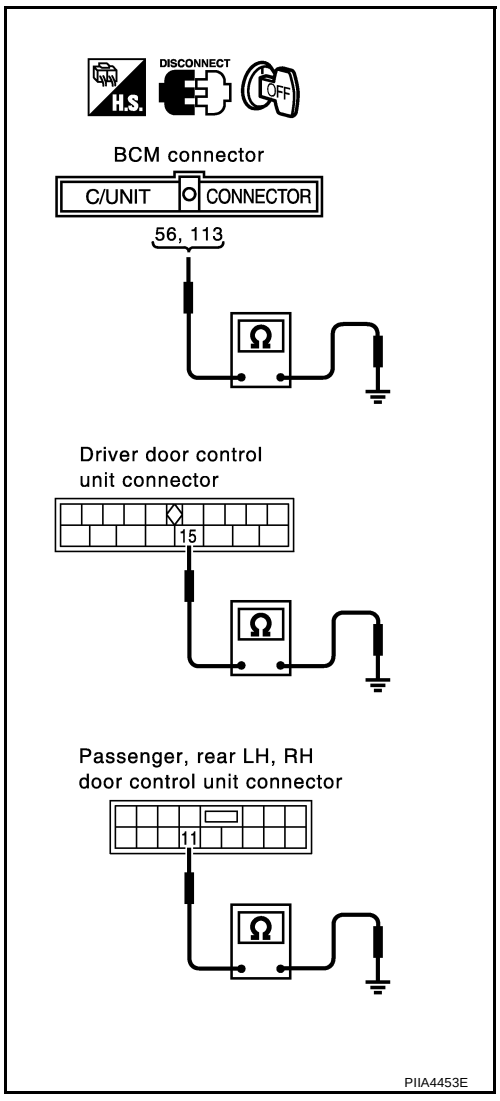
OK or NG

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

3. GROUND CIRCUIT INSPECTION

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

(+)		(–)	Continuity
Unit	Terminal (wire color)		
BCM (M4)	56 (B)	Ground	Continuity should exist
	113 (B)		
Driver door control unit (D8)	15 (B)		
Passenger door control unit (D38)	11 (B)		
Rear LH door control unit (D58)			
Rear RH door control unit (D78)			



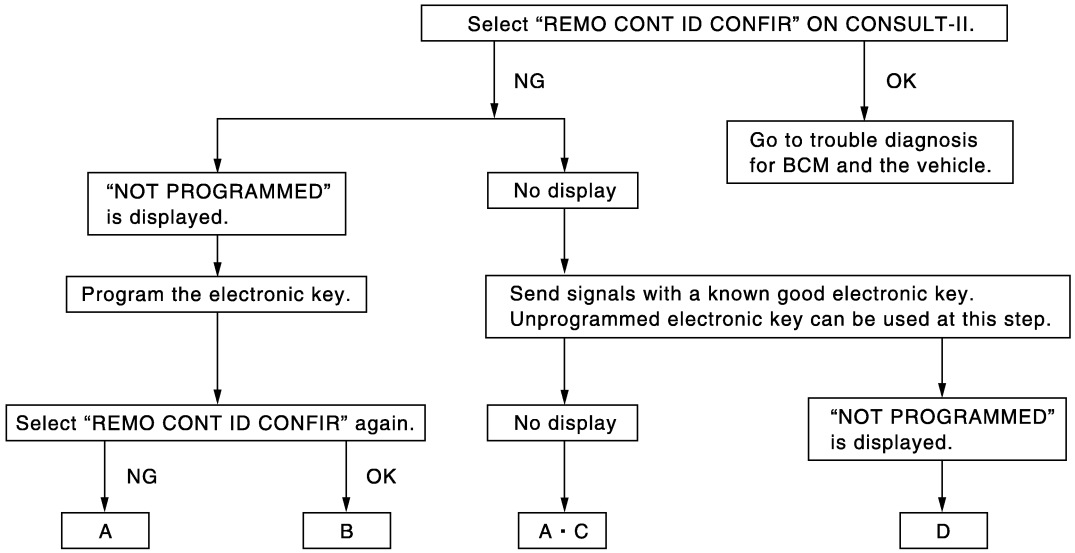
OK or NG

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 flowchart, 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.

Inspection with CONSULT-II



PIIA2842E

A : Replace BCM
B : Electronic key not registered
C : Remote keyless entry receiver inspection Refer to BL-94, "Check Remote Keyless Entry Receiver" .
D : Electronic key inspection Refer to BL-82, "Check Electronic Key" .

CONSULT–II Function

AIS001DW

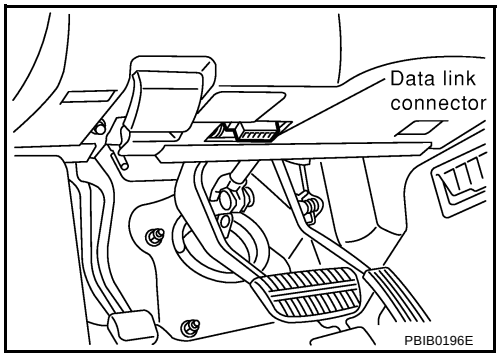
CONSULT-II executes the following functions by combining data received and command transmitted via the communication line from BCM. IVMS communication inspection, work support (only function setting of seats and steering wheel), self-diagnosis, data monitor, and active test display.

DIAGNOSTIC ITEMS DESCRIPTION

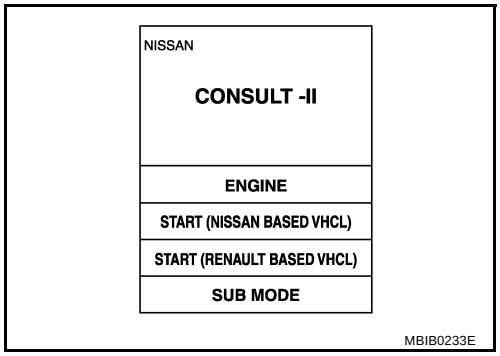
IVMS diagnosis position	Diagnosis mode	Description
IVMS-COMM CHECK	IVMS-COMM DIAGNOSIS	Diagnosis of continuity in the communication line(s), and of the function of the IVMS-communication interface between the body control module and the local control units, accomplished by transmitting a signal from 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.

CONSULT-II BASIC OPERATION PROCEDURE

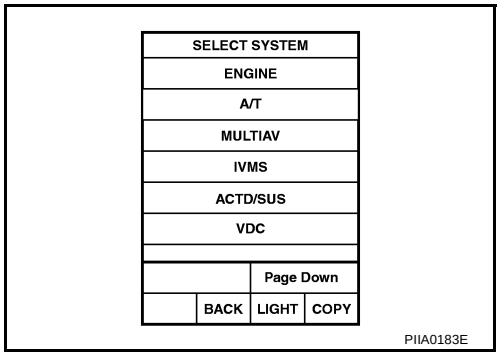
1. With the ignition switch OFF, connect “CONSULT–II” and “CONSULT-II CONVERTER” to the data link connector on vehicle side, and turn the ignition switch ON.



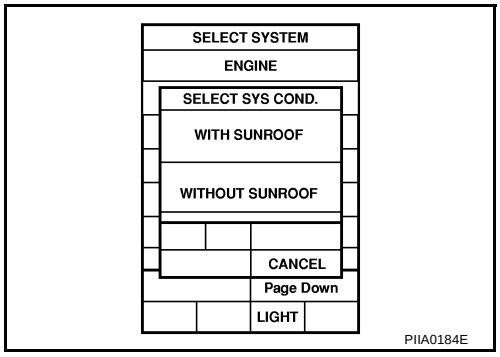
2. Touch “START (NISSAN BASED VHCL)”.



3. Touch “IVMS”.
If “IVMS” is not indicated, go to GI-38, "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.

  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. Preform 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-78, "COMMUNICATION SYSTEM A" .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U-DR “NO RESPONSE”	25	Communication system B: Refer to BL-78, "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-78, "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-78, "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.
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.

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 ERASUR	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.

On Board Diagnosis

AIS001DX

ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP

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

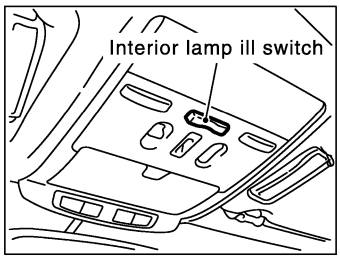
DIAGNOSIS ITEM

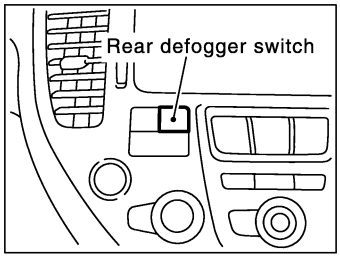
Diagnosis item.	Content
IVMS communication diagnosis	Diagnosing any abnormality or inability of communication between BCM and LCU (DATA LINE A-3).
Switch monitor	Monitoring conditions of switches connected to BCM, LCU and Door control unit.

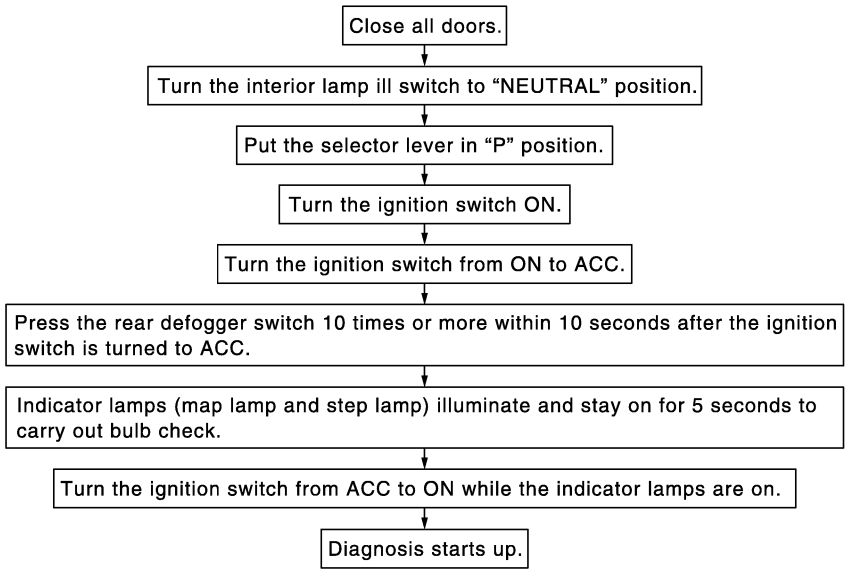
COMMUNICATION DIAGNOSIS

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

How to Perform Communication Diagnosis



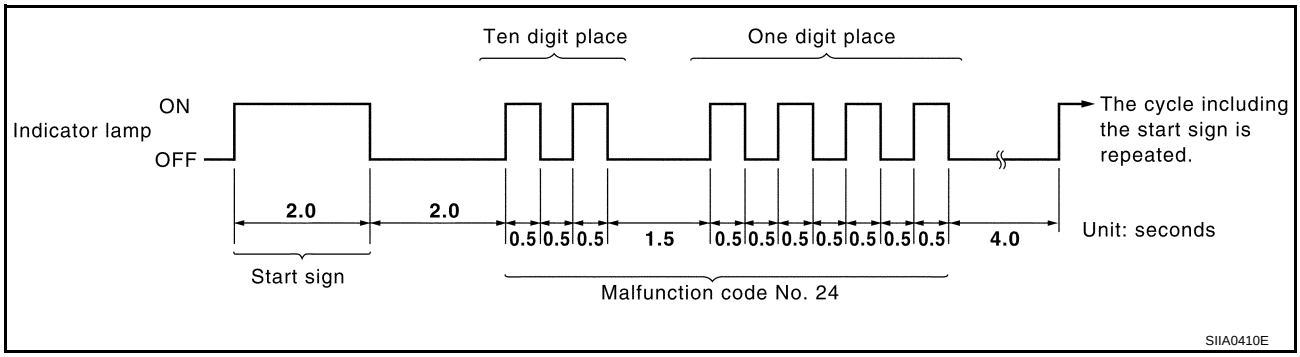




PIIA2871E

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 seconds 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 control unit communication.

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-78, "COMMUNICATION SYSTEM A" .
NO RESPONSE	One LCU is displayed.	POWER WINDOW C/U-DR “NO RESPONSE”	25	Communication system B: Refer to BL-78, "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-78, "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-78, "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.

COMMUNICATION SYSTEM A

1. BCM INSPECTION

Replace the malfunctioning BCM with a known-good one, and perform the communication diagnosis.
Refer to BL-73, "IVMS COMMUNICATION INSPECTION" (with CONSULT-II) or BL-76, "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-73, "IVMS COMMUNICATION INSPECTION" (with CONSULT-II) or BL-76, "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-73, "IVMS COMMUNICATION INSPECTION" (with CONSULT-II) or BL-76, "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

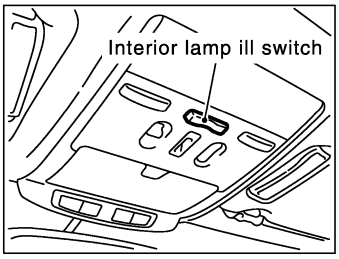
Replace the BCM with a known-good one, and perform the communication diagnosis.
Refer to BL-73, "IVMS COMMUNICATION INSPECTION" (with CONSULT-II) or BL-76, "COMMUNICATION DIAGNOSIS" (without CONSULT-II).

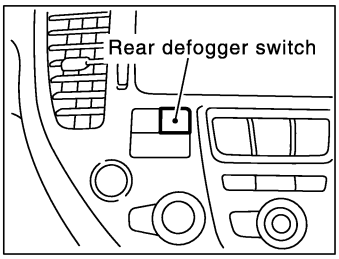
OK or NG

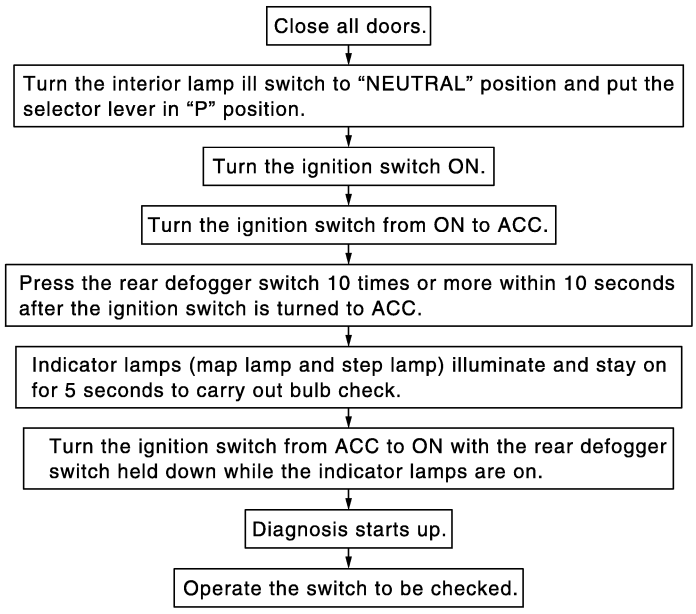
OK >> Replace BCM
NG >> Repair communication harness between LCU and BCM.

SWITCH MONITOR

How to Perform Switch Monitor

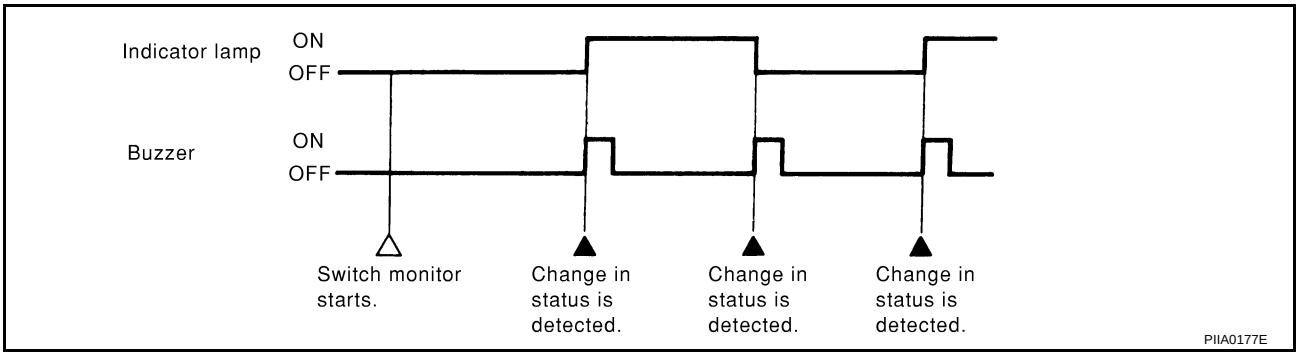






Description

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.



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

Control unit	Item
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).

Trouble Diagnosis Chart by Symptom

AIS001QB

- Always check the “Work Flow” before troubleshooting. Refer to BL-68, "Work Flow" .
- Before carrying out the inspection on the following table, perform the preliminary check. Refer to BL-68, "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-97
	2. Check electronic key.	BL-82
	3. Check remote keyless entry receiver.	BL-94
	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-82 .	BL-99
	5. Replace BCM.	–
The new ID of electronic key cannot be entered without CONSULT-II.	1. Check electronic key battery.	BL-97
	2. Check electronic key.	BL-82
	3. Check key switch.	BL-84
	4. Check door switch.	BL-85
	5. Check ACC power.	BL-83
	6. Check driver side door lock and unlock switch.	BL-96
	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-82 .	BL-99
	8. Replace BCM.	–
Door lock or unlock does not function with electronic key. (Power door lock system is “OK”.)	1. Check electronic key.	BL-82
	2. Check door switch.	BL-85
	3. Check remote keyless entry receiver.	BL-94
	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-82 .	BL-99
	5. Replace BCM.	–

Symptom	malfunctioning system and reference	Reference page
Trunk lid does not open when electronic key trunk opener button is continuously pressed.	1.First check the trunk opener cancel switch position is “ON”.	–
	2. Check electronic key.	BL-82
	3. Check trunk lid opener cancel switch.	BL-88
	4. Check trunk open signal.	BL-90
	5. Check trunk lid opener actuator.	BL-89
	6. Check key switch.	BL-84
	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-82 .	BL-99
	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 mode can be changed. First check the hazard reminder setting.	BL-75
	2. Check hazard function with hazard switch.	BL-96
	3. Check hazard reminder operation.	BL-93
	4. Replace BCM.	–
Horn reminder does not activate properly when pressing lock button of electronic key. (Hazard reminder is OK.)	1. Check horn reminder mode* *: Horn reminder mode can be changed. First check the horn chirp setting.	BL-75
	2. Check security horn operation.	BL-91
	3. Replace BCM.	–
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed. (All other remote keyless entry system function is OK.)	1. Check electronic key.	BL-82
	2. Check headlamp function.	BL-96
	3. Check key switch.	BL-84
	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-82 .	BL-99
	5. 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 mode can be changed. First check the power window down setting.	BL-75
	2. Check power window function.	BL-96
	3. Replace BCM.	–
Auto door lock operation does not activate properly. (All other remote keyless entry system function is OK.)	1. Replace BCM.	–
Map lamp operation does not activate properly.	1. Check map lamp function.	BL-97
	2. Check door switch.	BL-85
	3. Replace BCM.	–

Check Electronic Key

AIS001DZ

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-79, "SWITCH MONITOR" .

OK or NG

OK >> Electronic key is OK.
NG >> GO TO 2.

2. CHECK ELECTRONIC KEY ID

With CONSULT-II

Check electronic key “ID Code” in “WORK SUPPORT” mode with CONSULT-II.
Refer to BL-100, "PROCEDURE 2 (WITH CONSULT-II)" .

Without CONSULT-II

Check electronic key “ID Code” in “REMOTE CONTROLLER ID SET UP” mode.
Refer to BL-99, "PROCEDURE 1 (WITHOUT CONSULT-II)" .

OK or NG

OK >> Electronic key was not registered.
NG >>
- Check multi remote control receiver.
  Refer to BL-94, "Check Remote Keyless Entry Receiver" .
- Check electronic key battery.
  Refer to BL-97, "Electronic Key Battery Replacement" .

Check ACC Power

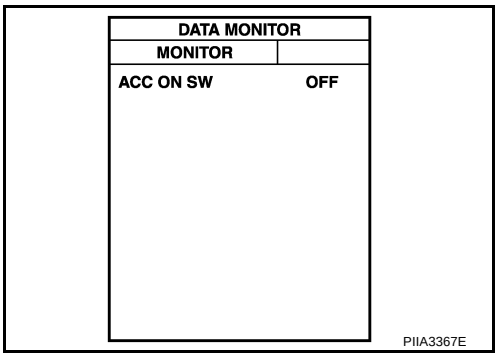
AIS001PY

1. CHECK ACC POWER

With CONSULT-II

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

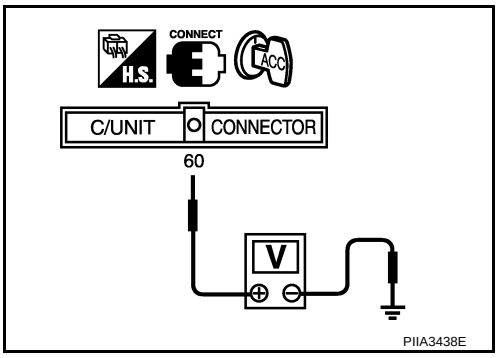
Monitor item	Condition	
ACC ON SW	Ignition switch ACC or ON position	: ON
	Ignition switch OFF position	: OFF



Without CONSULT-II

Check voltage between BCM connector and ground.

Item	Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
		(+)	(–)		
BCM	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)]
- Harness for open or short between BCM and fuse.

Check Key Switch

AIS001OD

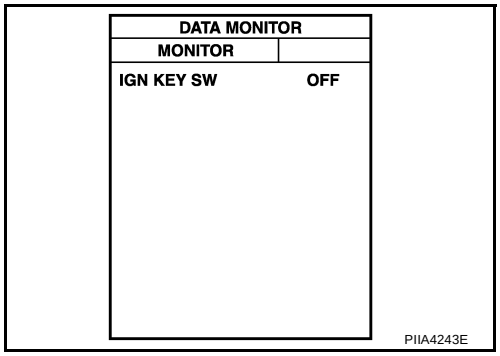
1. CHECK KEY SWITCH

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

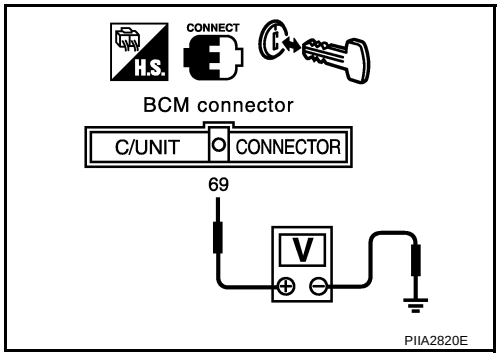
Key is removed from ignition key cylinder : IGN KEY SW OFF



Without CONSULT-II

Check voltage between BCM connector and ground.

Item	Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
		(+)	(–)		
BCM	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 key switch connector.
2. Check continuity between BCM connector M4 terminal 69 (PU/W) and key switch connector M64 terminal 4 (PU/W).

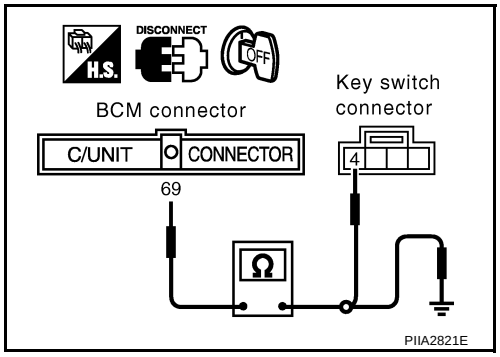
69 (PU/W) – 4 (PU/W) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 69 (PU/W) and ground.

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

OK or NG

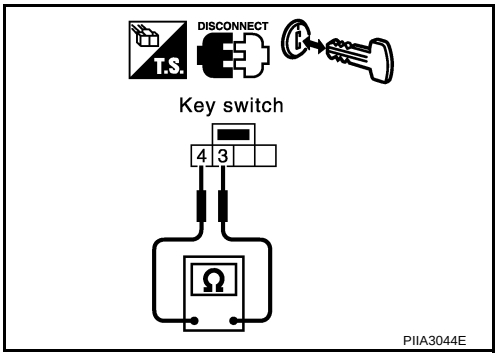
OK >> GO TO 3.
NG >> Repair or replace harness.



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.	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

AIS002CK

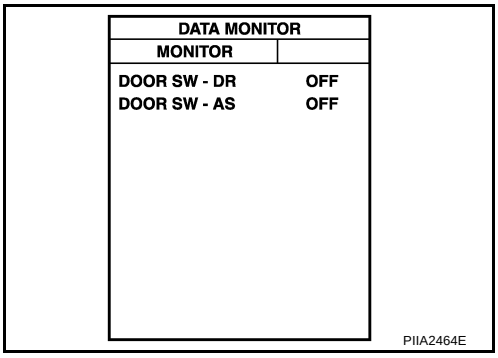
CHECK FRONT DOOR SWITCH

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-79, "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 side), B220 (passenger side) terminal 1 (R/Y, LG) and BCM connector B4, M4 terminal 142 (R/Y), 37 (LG).

Driver side door switch

1 (R/Y) - 142 (R/Y) : Continuity should exist.

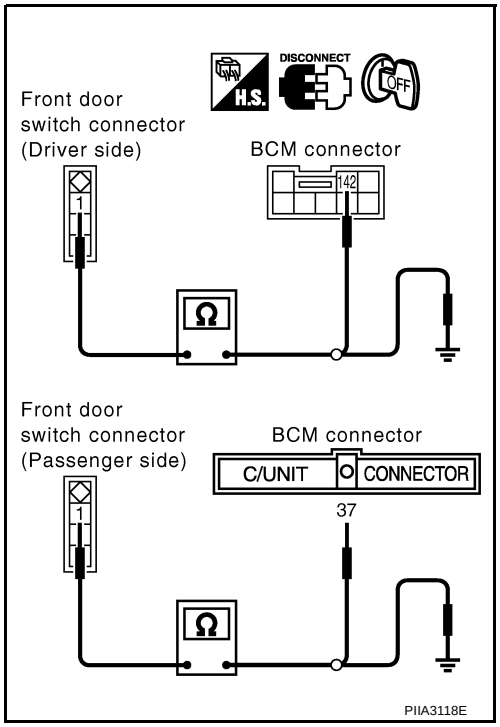
Passenger side door switch

1 (LG) - 37 (LG) : Continuity should exist.

4. Check continuity between front door switch connector B20, B220 terminal 1(R/Y, LG) and ground.

Each door switches

1 (R/Y, LG) - Ground : Continuity should not exist.



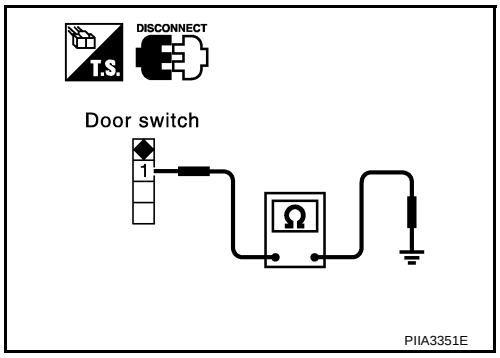
OK or NG

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

3. CHECK FRONT DOOR SWITCH

Check continuity between front door switch connector B20 (driver side), B220 (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.
NG >> Replace malfunction front door switch.

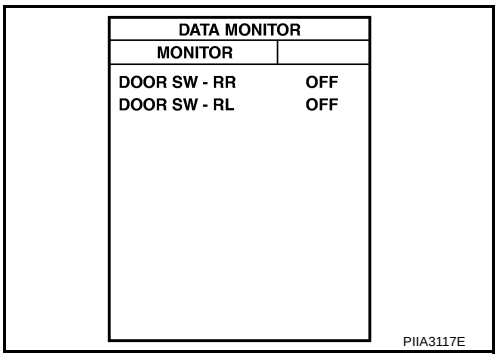
CHECK REAR DOOR SWITCH

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-79, "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 B4, M4 terminal 33 (W), 143 (W/L).

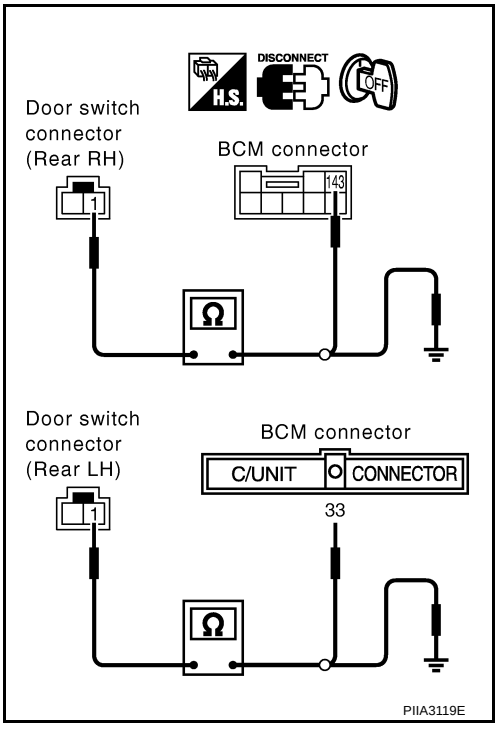
Rear door switch LH
1 (W) - 33 (W) : Continuity should exist.
Rear door switch RH
1 (W) - 143 (W/L) : Continuity should exist.

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

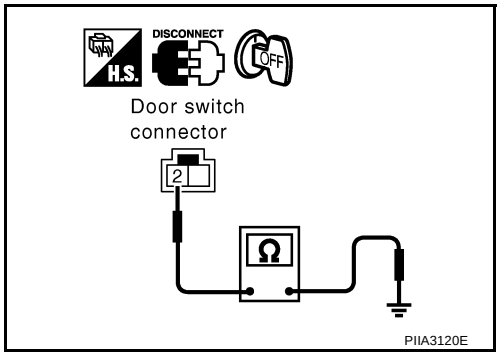
OK >> GO TO 3.
NG >> Repair or replace harness.



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 (B) and ground.

2 (B) - Ground : Continuity should exist.



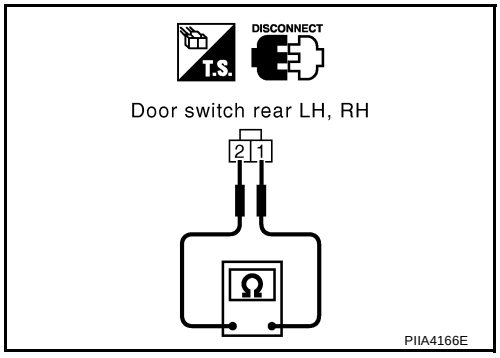
OK or NG

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

4. CHECK REAR DOOR SWITCH

Check continuity between rear door switch connector D62 (rear LH), D82 (rear RH) terminals 1 and 2.

Terminal	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).

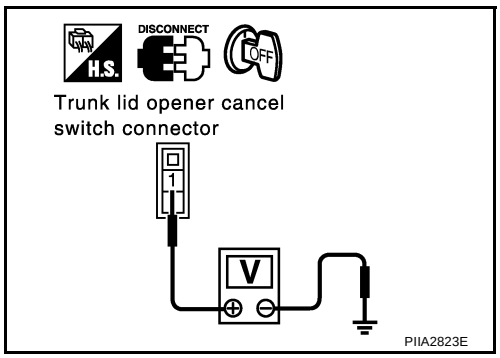
Check Trunk Lid Opener Cancel Switch

AIS001E1

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 (G) and ground.

1 (G) – Ground : Battery voltage



OK or NG

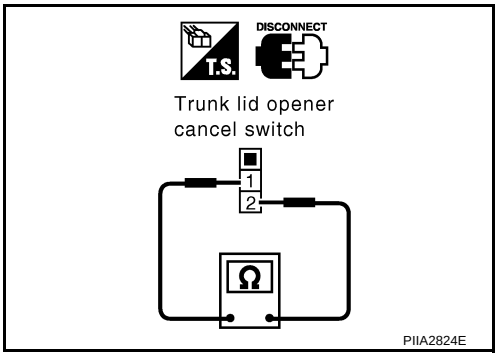
OK >> GO TO 2.
NG >> Check the following.

- Trunk lid opener relay
- Harness for open or short between trunk lid opener cancel switch and trunk lid opener relay

2. CANCEL SWITCH INSPECTION

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

Connector	Terminal	Condition	Continuity
M117	1 – 2	Switch: ON	Yes
		Switch: OFF	No



OK or NG

OK >> GO TO 3.
NG >> Replace trunk lid opener cancel switch.

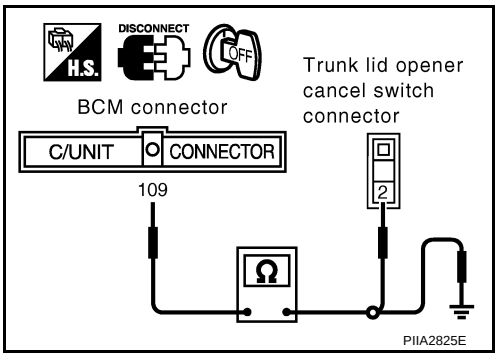
3. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M4 terminal 109 (Y/B) and trunk lid opener cancel switch connector M117 terminal 2 (Y/B).

109 (Y/B) – 2 (Y/B) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 109 (Y/B) and ground.

109 (Y/B) – 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

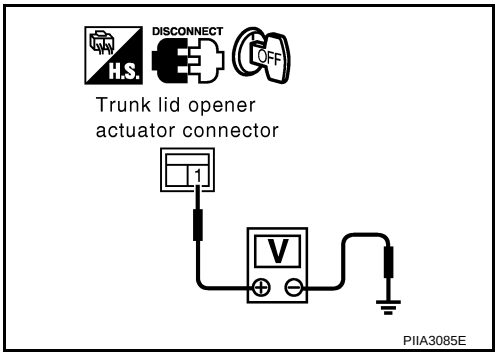
AIS001E2

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 B265 terminal 1 (PU/W) and ground.

1 (PU/W) – Ground : Battery voltage



OK or NG

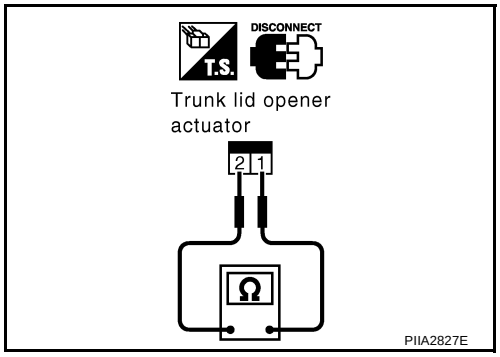
OK >> GO TO 2.
NG >> Check the following.

- 10A fuse [No.15, located in the fuse block (J/B) No. 1]
- Harness for open and short between trunk lid opener actuator and fuse

2. CHECK TRUNK LID OPENER ACTUATOR

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

1 – 2 : Continuity should exist.



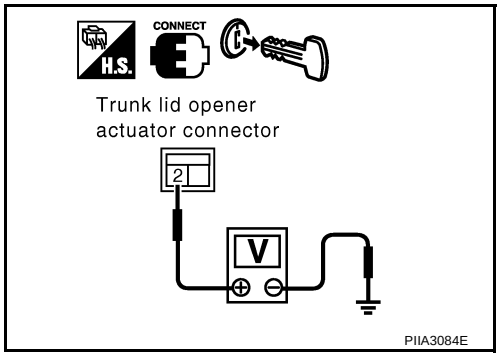
OK or NG

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 B265 terminal 2 (SB) and ground.

Terminal (Wire color)	Condition	Voltage (V) (Approx.)
2 (SB) – 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

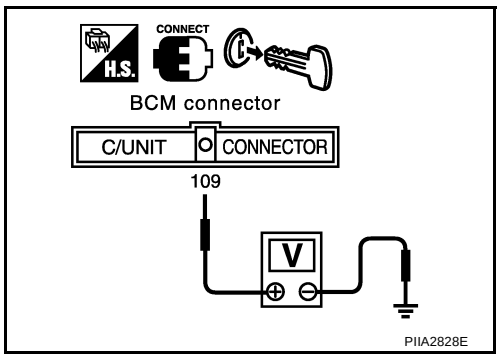
Check Trunk Open Signal

AIS001E3

1. CHECK BCM OUTPUT SIGNAL

1. Remove electronic key from ignition key cylinder.
2. Check voltage between BCM connector M4 terminal 109 (Y/B) and ground.

Terminal (Wire color)	Condition	Voltage (V) (Approx.)
109 (Y/B) – Ground	Electronic key: Trunk open switch ON	0V (0.7 seconds)
	Electronic key: Trunk open switch OFF	Battery voltage



OK or NG

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

Check Security Horn Operation

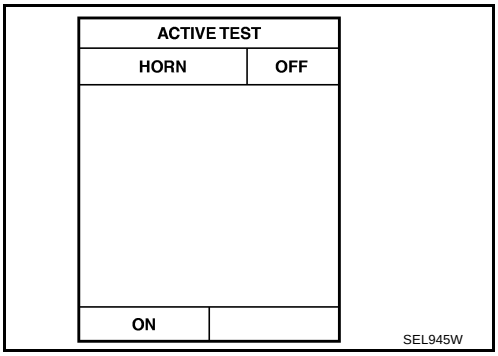
AIS001E4

1. CHECK SECURITY HORN CHIRP OPERATION

With CONSULT–II

1. Check security horn chirp “HORN” in “ACTIVE TEST” mode with CONSULT–II.
2. Perform operation shown on display.

Security horn should sound.



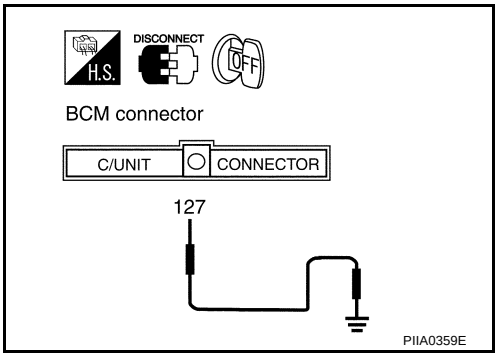
Without CONSULT–II

1. Disconnect BCM connector.
2. Apply ground to BCM connector E204 terminal 127 (P/L).

Security horn should sound.

OK or NG

OK >> Security horn alarm is OK.
NG >> GO TO 2.



2. CHECK SECURITY HORN RELAY

Check security horn relay condition.

OK or NG

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

3. CHECK POWER SUPPLY FOR SECURITY HORN RELAY

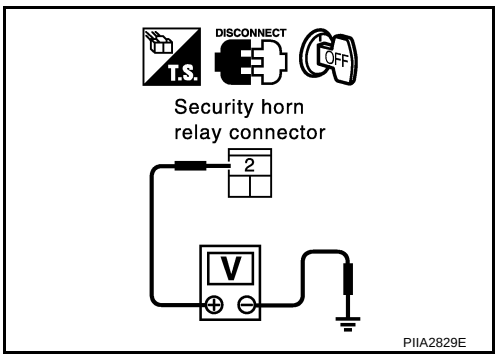
1. Disconnect security horn relay connector.
2. Check voltage between security horn relay connector E77 terminal 2 (Y/B) and ground.

2 (Y/B) – Ground : Battery voltage

OK or NG

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

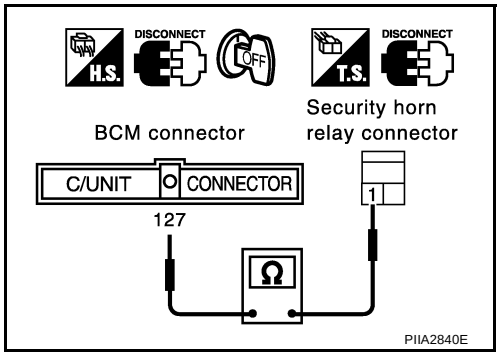
- 10A fuse [No. 78, located in the fuse, fusible link and relay block (J/B)]
- Harness for open or short between security horn relay and fuse.



4. CHECK SECURITY HORN RELAY CIRCUIT

1. Disconnect BCM and security horn relay connector.
2. Check continuity between BCM connector E204 terminal 127 (P/L) and security horn relay connector E77 terminal 1 (P/L).

127 (P/L) – 1 (P/L) : Continuity should exist.



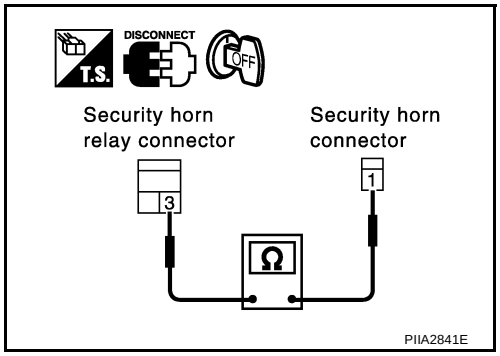
OK or NG

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

5. CHECK SECURITY HORN RELAY CIRCUIT

1. Disconnect security horn relay and security horn connector.
2. Check continuity between security horn relay connector E77 terminal 3 (P/B) and security horn connector E30 terminal 1 (P/B).

3 (P/B) – 1 (P/B) : Continuity should exist.



OK or NG

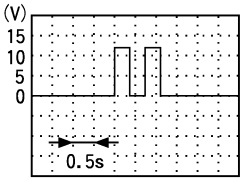
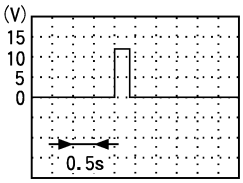
OK >> Replace security horn.
NG >> Repair or replace harness.

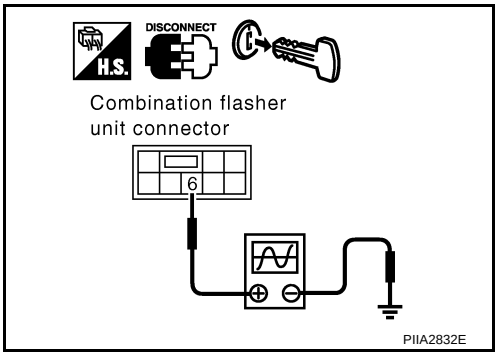
Check Hazard Reminder Operation

AIS001E5

1. CHECK BCM OUTPUT SIGNAL

1. Remove electronic key from ignition key cylinder.
2. Disconnect flasher unit connector.
3. Check voltage between flasher unit connector M91 terminal 6 (W/L) and ground.

Terminal (Wire color)	Condition	Voltage
6 (W/L) – Ground	LOCK switch ON with electronic key	 PIIA2487J
	UNLOCK switch ON with electronic key* *: In the state that hazard reminder operates.	 PIIA2486J



PIIA2832E

OK or NG

OK >> Check flasher unit. Refer to LT-89, "TURN SIGNAL AND HAZARD WARNING LAMPS" .
NG >> GO TO 2.

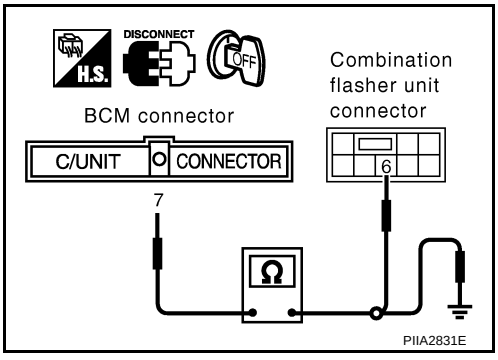
2. CHECK COMBINATION FLASHER UNIT CIRCUIT

1. Disconnect BCM and combination flasher unit connector.
2. Check continuity between BCM connector M4 terminal 7 (W/L) and combination flasher unit connector M91 terminal 6 (W/L).

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

3. Check continuity between BCM connector M4 terminal 7 (W/L) and ground.

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



PIIA2831E

OK or NG

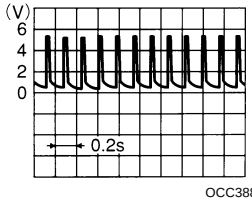
OK >> Replace BCM.
NG >> Repair or replace harness.

Check Remote Keyless Entry Receiver

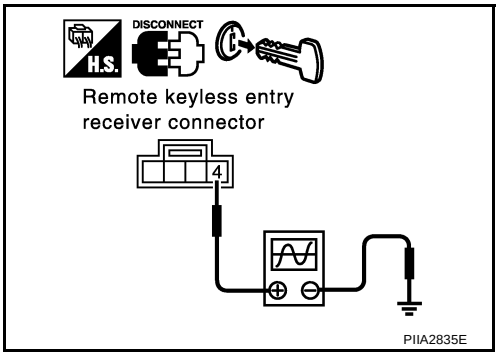
AIS001E6

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 voltage between remote keyless entry receiver connector B26 terminal 4 (L) and ground.

Terminal (Wire color)	Condition	Voltage
4 (L) – Ground	Stand–by	

OCC3881D



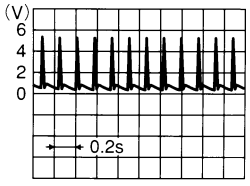
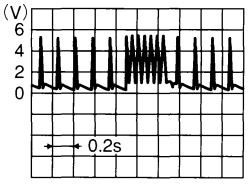
PIIA2835E

OK or NG

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

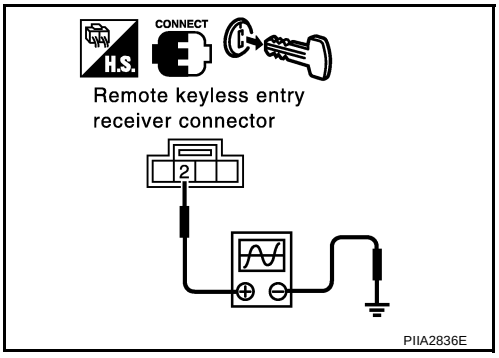
2. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

1. Connect remote keyless entry receiver connector.
2. Check the voltage between remote keyless entry receiver connector B26 terminal 2 (BR/W) and ground.

Terminal (Wire color)	Condition	Voltage
2 (BR/W) – Ground	Stand–by	
	Press any of the electronic key switches	

OCC3879D

OCC3880D



PIIA2836E

OK or NG

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

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 (Y) and remote keyless entry receiver connector B26 terminal 1 (Y).

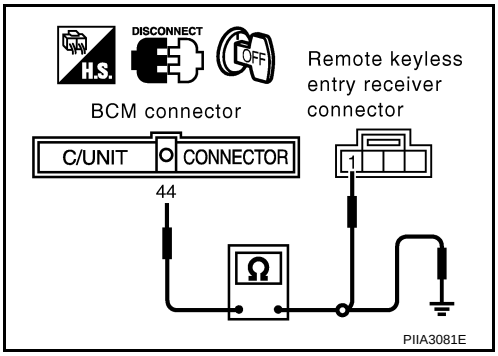
44 (Y) – 1 (Y) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 44 (Y) 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 BCM connector M4 terminal 27 (BR/W) and remote keyless entry receiver connector B26 terminal 2 (BR/W).

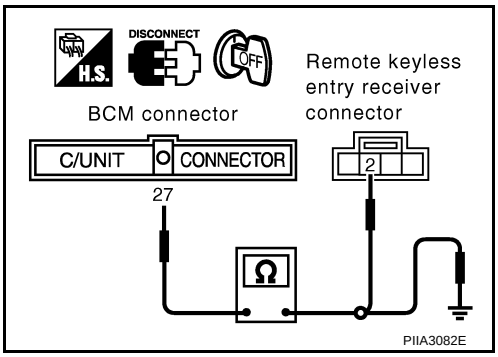
27 (BR/W) – 2 (BR/W) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 27 (BR/W) 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 (L) and remote keyless entry receiver connector B26 terminal 4 (L).

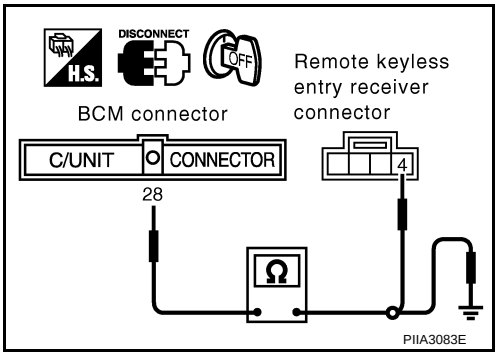
28 (L) – 4 (L) : Continuity should exist.

3. Check continuity between BCM connector M4 terminal 28 (L) and ground.

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

OK or NG

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



Check Door Lock and Unlock Switch

AIS002J5

1. CHECK DOOR LOCK AND UNLOCK SWITCH

With CONSULT-II

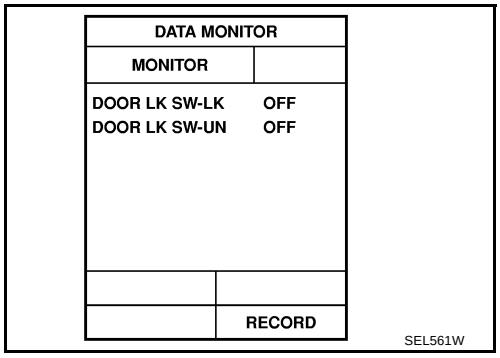
See “DOOR LK SW-LK and UN” in DATA MONITOR mode with CONSULT-II.

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

  DOOK LK SW-LK : OFF → ON

- When lock and unlock switch is turned to unlock:

  DOOK LK SW-UN : OFF → ON



Without CONSULT-II

Check door lock and unlock switch operation in “SWITCH MONITOR” mode. Refer to BL-79, "SWITCH MONITOR" .

OK or NG

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

Check Hazard Function

AIS002BT

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-89, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

Check Headlamp Function

AIS001PZ

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-6, "HEADLAMP (FOR USA)" or LT-44, "HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -" .

Check Power Window Function

AIS002EQ

1. CHECK POWER WINDOW FUNCTION

Does power window operate with power window switch?

YES or NO

Yes >> Power window function circuit is OK.
No >> Check power window system. Refer to GW-15, "POWER WINDOW SYSTEM" .

Check Map Lamp Function

AIS002BV

1. CHECK MAP LAMP FUNCTION

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

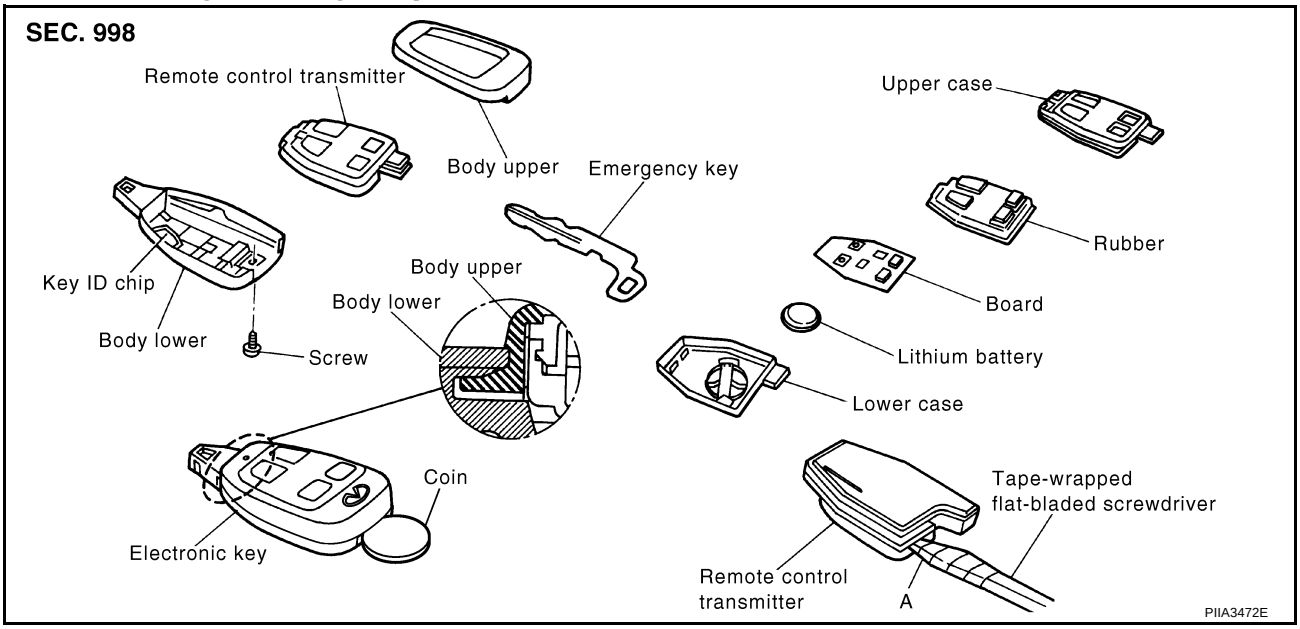
Map lamp should illuminate.

OK or NG

OK >> Map lamp function circuit is OK.
NG >> Check map lamp circuit. Refer to LT-128, "INTERIOR ROOM LAMP" .

Electronic Key Battery Replacement

AIS001E7



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.

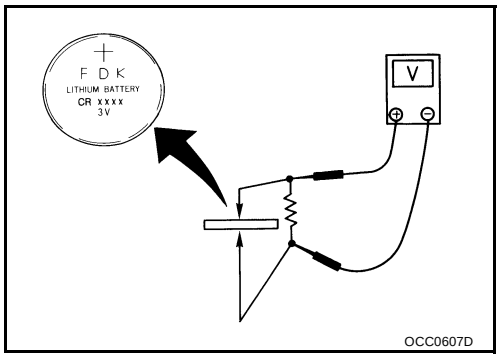
   CAUTION:
   - **During disassembly, be careful not to touch the board surface. Visually check the board for color change (bluish) and deposit.**
   - **When replacing the battery, keep the electrode off foreign materials such as dust and grease.**
4. After replacing the battery, engage the tab on the 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.

CHECK ELECTRONIC KEY BATTERY

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

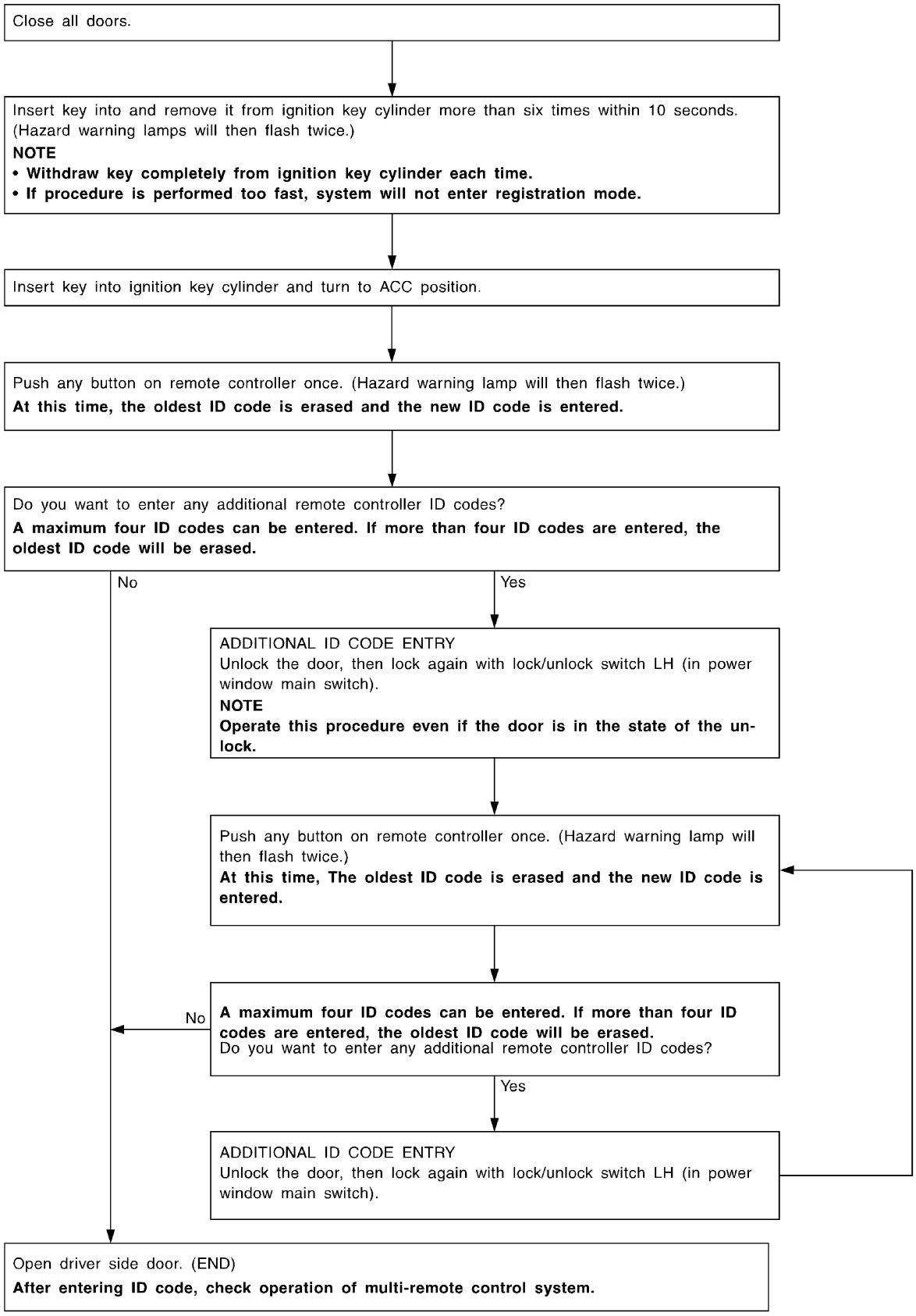
Voltage : 2.5V – 3.0V



ID Code Entry Procedure

AIS001E8

PROCEDURE 1 (WITHOUT CONSULT-II)



SEL170Y

NOTE:

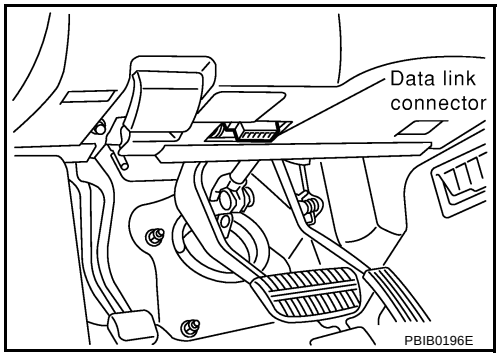
- If a electronic key is lost, the ID code of the lost electronic key must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-II. However, when the ID code of a lost electronic key is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers 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)

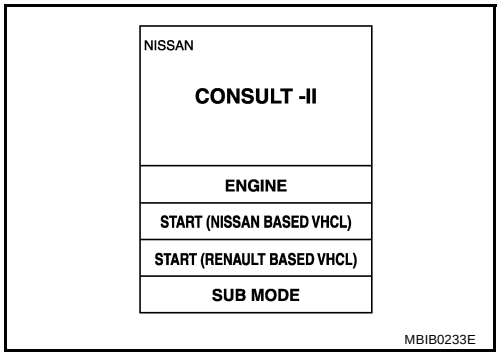
NOTE:

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 remote controllers must be re-registered.

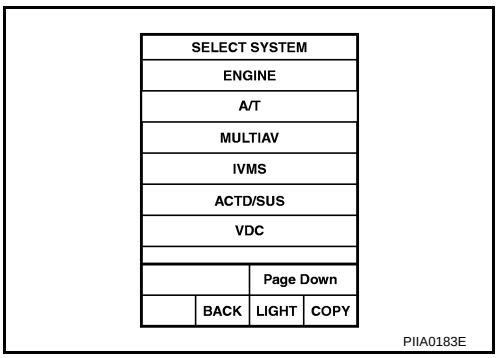
1. Turn ignition switch OFF.
2. Connect “CONSULT-II” and “CONSULT-II CONVERTER” to the data link connector.



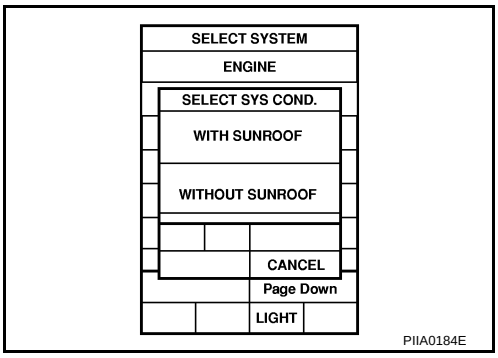
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



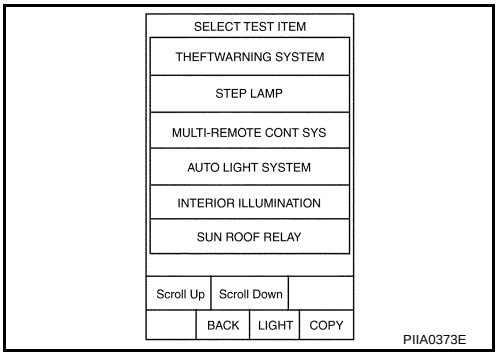
5. Touch “IVMS”.
If “IVMS” is not indicated, go to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



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



8. Touch “MULTI-REMOTE CONT SYS”.

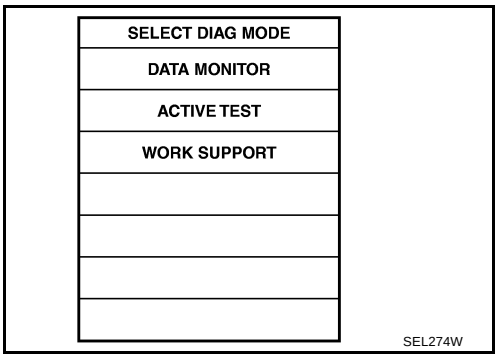


9. Touch “WORK SUPPORT”.
10. The item shown on the figure at right can be set up.

- “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.

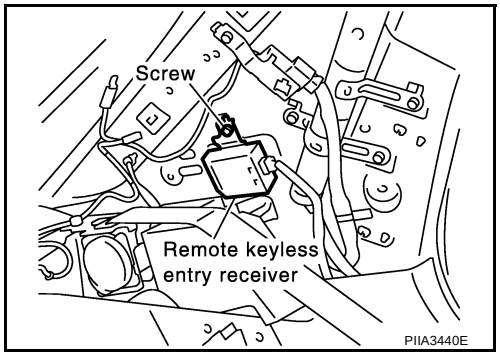


Removal and Installation of Remote Keyless Entry Receiver

AIS001Q7

REMOVAL

1. Remove the rear pillar finisher upper (LH). Refer to EI-34, "BODY SIDE TRIM" .
2. Disconnect the remote keyless entry receiver connector, mounting screw and remove the remote keyless entry receiver.



INSTALLATION

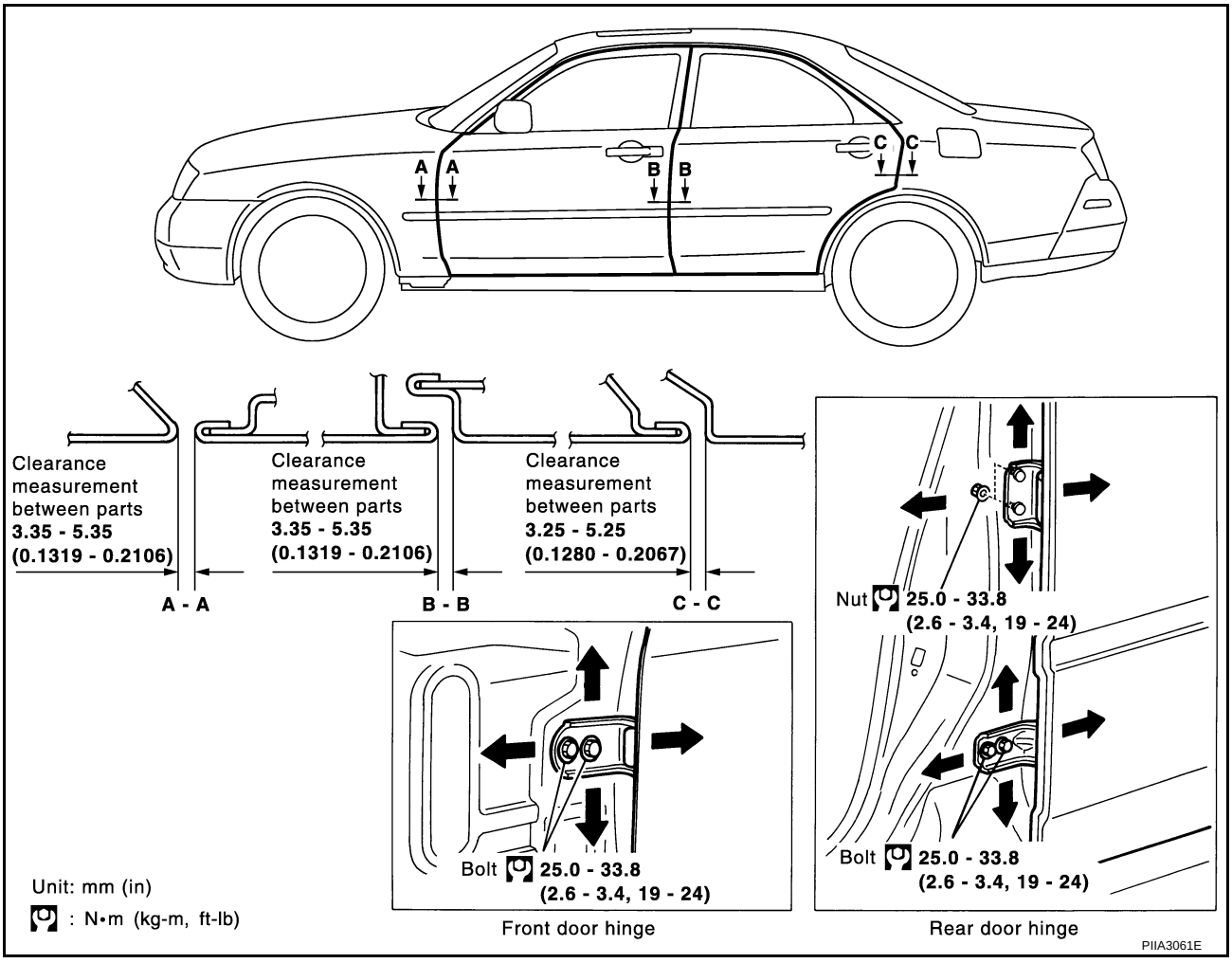
Install in the reverse order of removal.

DOOR

PFP:80100

Fitting Adjustment

AIS001E9



FRONT DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

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

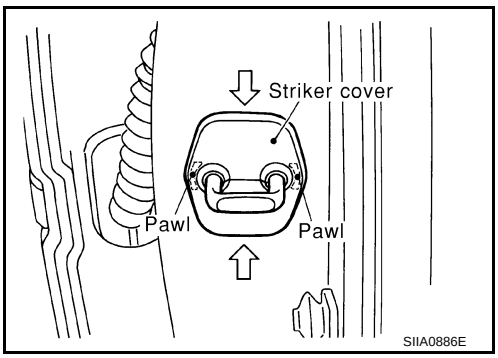
REAR DOOR

Longitudinal Clearance and Surface Height Adjustment at Front End

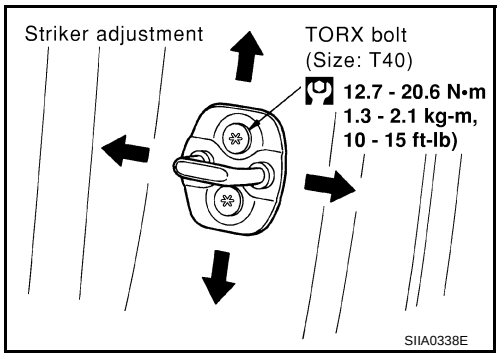
1. Remove the center pillar upper garnish and center pillar lower garnish. Refer to EI-34, "BODY SIDE TRIM" .
2. Accessing from inside the vehicle, loosen the mounting bolts and nuts. Open the rear door, and raise the rear door at rear end to adjust.

STRIKER ADJUSTMENT

1. Remove the striker cover.



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



Removal and Installation of Front Door

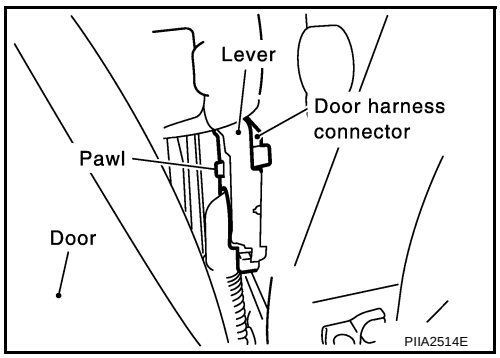
AIS001EA

REMOVAL

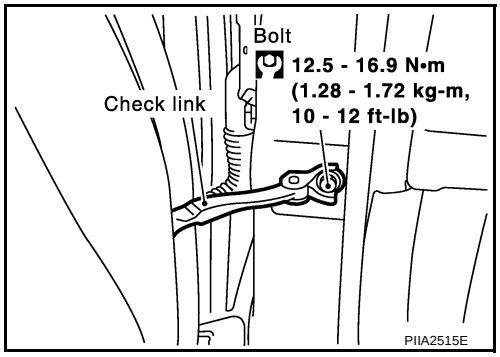
CAUTION:

- **When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.**
- **When removing and installing front door assembly, be sure to carry out the fitting adjustment Refer to BL-103, "Fitting Adjustment" .**
- **Operate with two workers, because of its heavy weight.**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **After installing, check operation.**

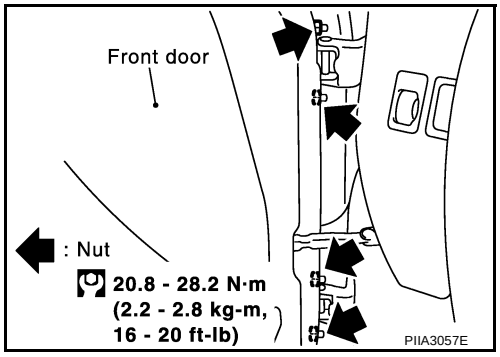
1. Pull the lever and remove the front door harness connector while removing tabs of door harness connector.



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



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



INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Rear Door

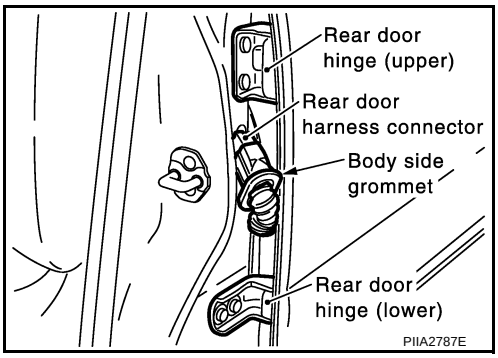
AIS001ON

REMOVAL

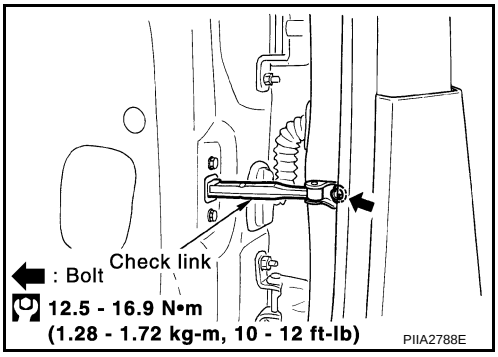
CAUTION:

- **When removing and installing the rear door assembly, support the door with a jack and cloth to protect the door and body.**
- **When removing and installing rear door assembly, be sure to carry out the fitting adjustment Refer to BL-103, "Fitting Adjustment" .**
- **Operate with two workers, because of its heavy weight.**
- **Check the hinge rotating part for poor lubrication. If necessary, apply “body grease”.**
- **After installing, check operation.**

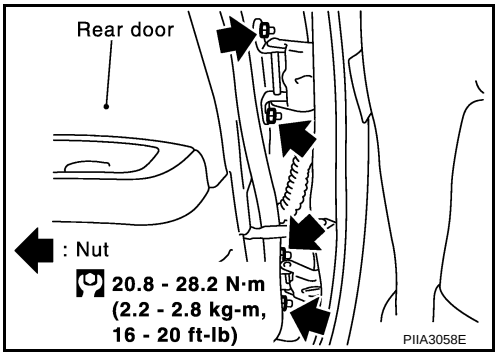
1. Grommet is pulled out, and the Rear door harness connector is detached.



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



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

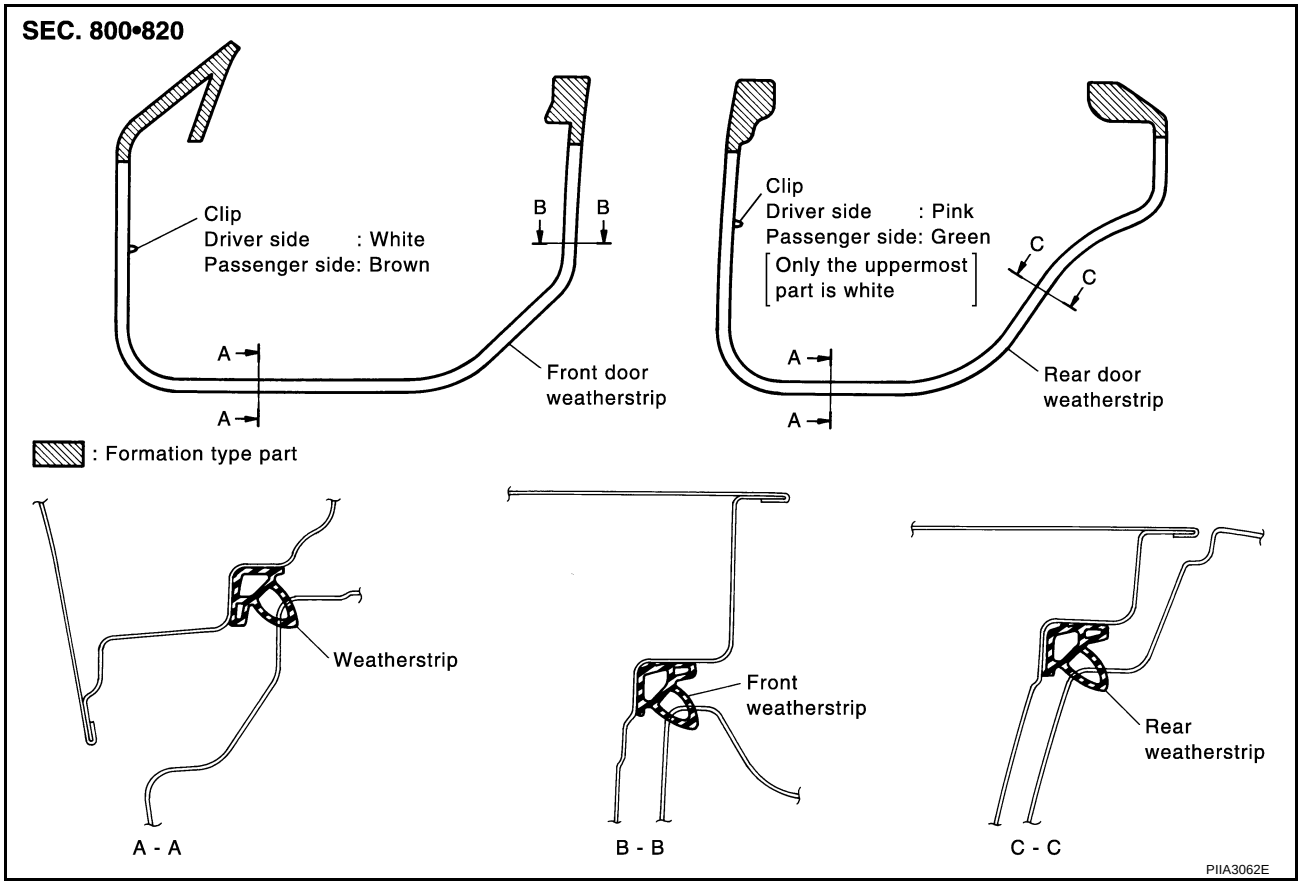


INSTALLATION

Install in the reverse order of assembly.

Door Weatherstrip

AIS001EB



REMOVAL

Remove the weatherstrip clips and remove weatherstrip.

CAUTION:

After removal, do not pull strongly on the weatherstrip.

INSTALLATION

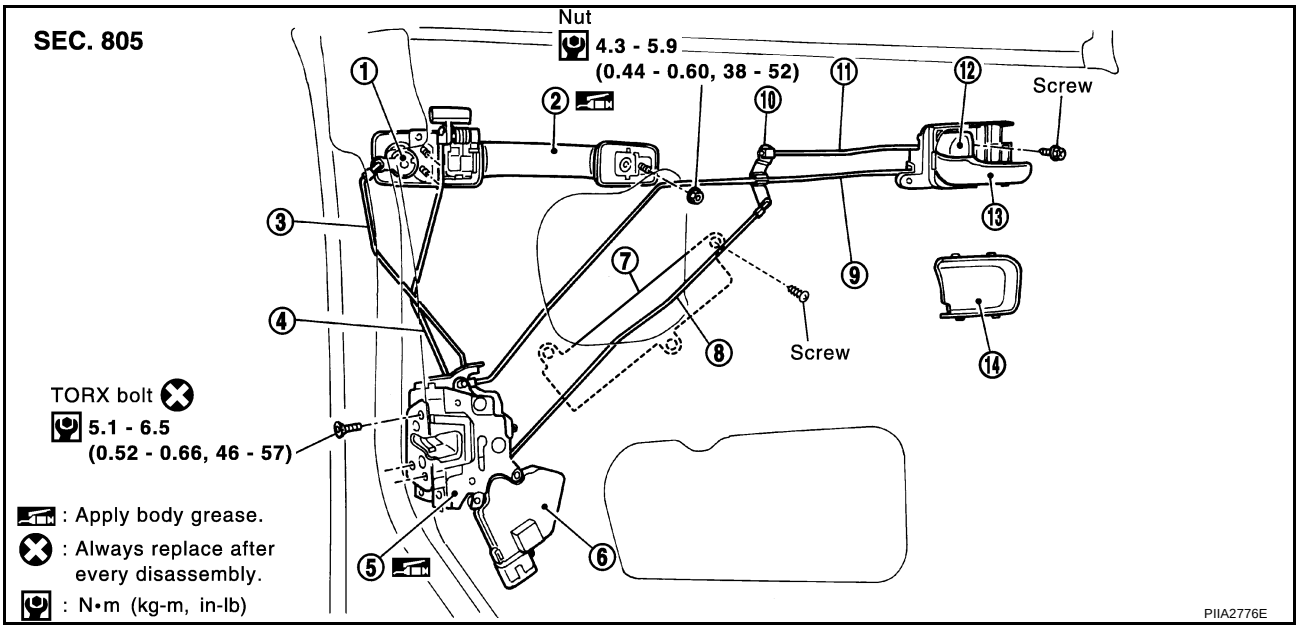
Install in the reverse order of removal.

FRONT DOOR LOCK

PFP:80502

Component Structure

AIS001EC



1. Key cylinder (driver side only)	2. Outside handle	3. Key lock rod (driver side only)
4. Outside handle rod	5. Door lock assembly	6. Door lock actuator
7. Knob rod protector	8. Lock knob rod	9. Inside handle rod
10. Bell crank	11. Lock knob rod	12. Lock knob
13. Inside handle	14. Inside handle escutcheon A	

Inspection and Adjustment

AIS001ED

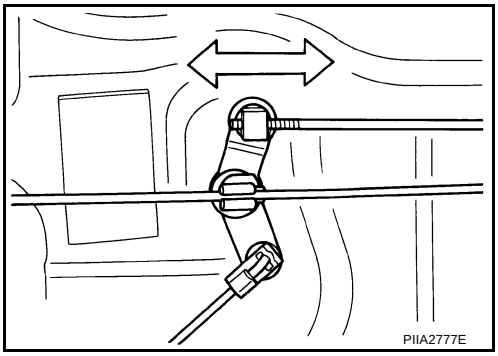
1. Remove the front door finisher. Refer to EI-31, "Removal and Installation" .
2. Remove the sealing screen assembly.
3. Remove the front door window. Refer to GW-47, "Removal and Installation" .

BELL CRANK ADJUSTMENT

CAUTION:

Before adjusting bell crank, make sure that rod is installed to inside handle.

- After installing door lock and inside handle, set them in the lock position.
- Using a flat-bladed screwdriver, expand rod holder.
- Remove rod free play at joining area and set rod in position.
- After adjusting bell crank adjustment have been made, operate door lock knob, door lock switch and door key to make sure that they lock and unlock properly.

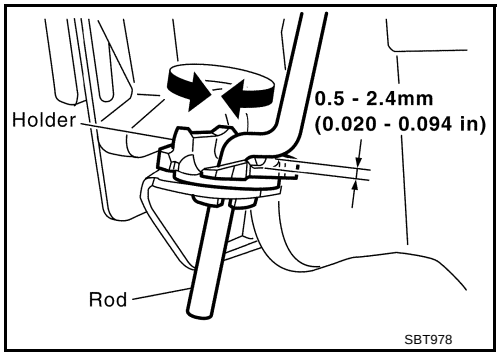


EXTERIOR HANDLE ROD ADJUSTMENT

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.

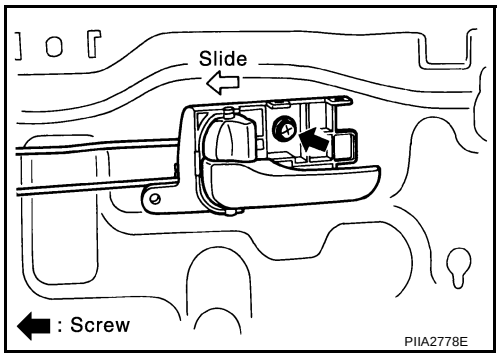


Removal and Installation

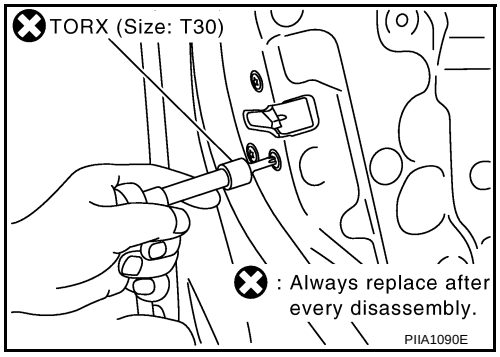
AIS001EE

REMOVAL

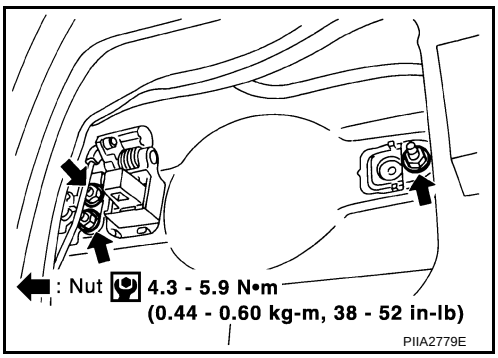
1. Remove the front door finisher. Refer to EI-31, "Removal and Installation" .
2. Remove the sealing screen assembly.
3. Remove the front door window. Refer to GW-47, "Removal and Installation" .
4. Remove the inside handle escutcheon A.
5. Remove the mounting screw, and remove the inside handle.
6. Disconnect bell crank lock knob rod at the joints.
7. Disconnect inside handle rod door lock assembly side.
8. Slide inside handle rearward and remove it.



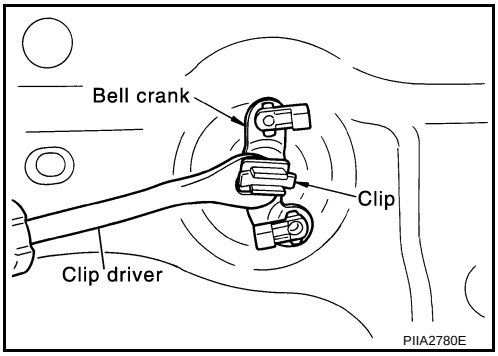
9. Remove the mounting screws, remove the knob rod protector.
10. Reach to separate the key cylinder rod (driver side only) and exterior handle rod connection (on the handle).
11. Disconnect the door lock actuator connector.
12. Remove the mounting bolts (TORX T30), remove the door lock assembly.



13. 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.



14. Using a screwdriver or similar tool, remove the door key cylinder status switch from the key cylinder (driver side only).
15. Using a clip driver or similar tool, remove the bell crank's plastic clip.



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-103, "Fitting Adjustment" .**

Disassembly and Assembly

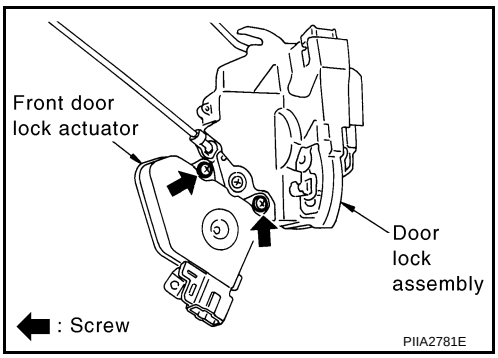
AIS001EF

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.



ASSEMBLY

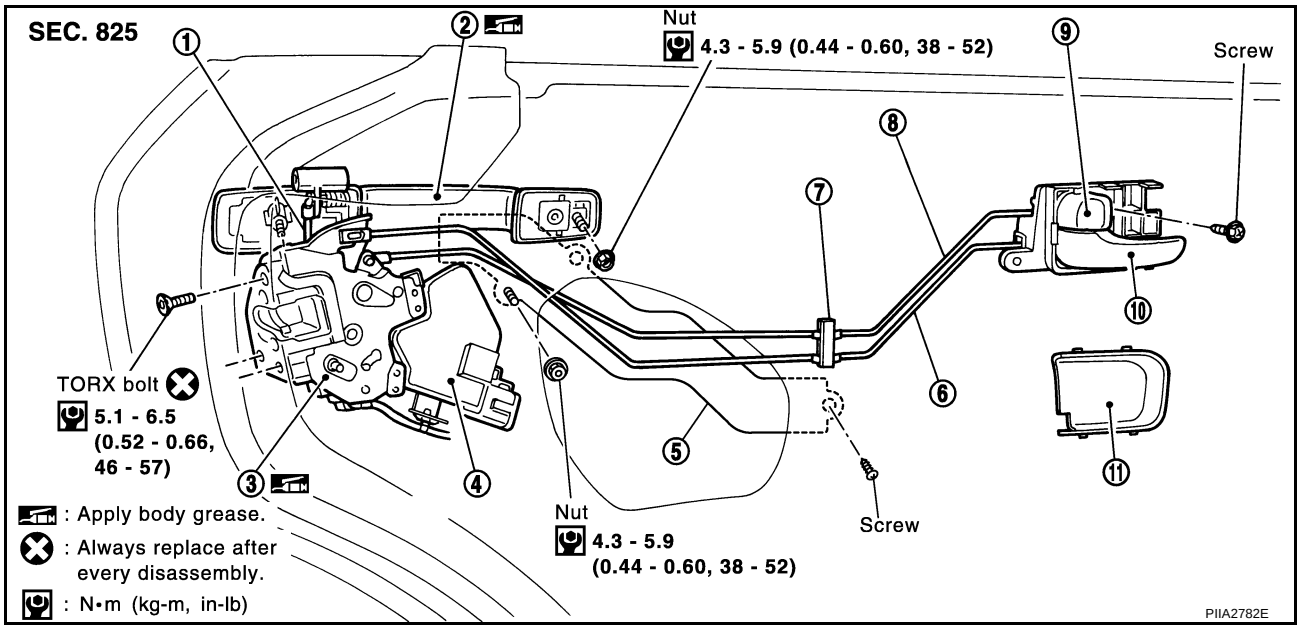
1. Align the actuator pivot with the cutout on the knob lever of the door lock assembly, then assemble the actuator.
2. Move the knob lever and the actuator pivot toward the lock-on direction, and check that it engages securely.

REAR DOOR LOCK

PFP:82502

Components

AIS001EG



1. Outside handle rod	2. Outside handle	3. Door lock assembly
4. Door lock actuator	5. Knob rod protector	6. Inside handle rod
7. Rod holder	8. Lock knob rod	9. Lock knob
10. Inside handle	11. Inside handle escutcheon A	

Inspection and Adjustment

AIS001EH

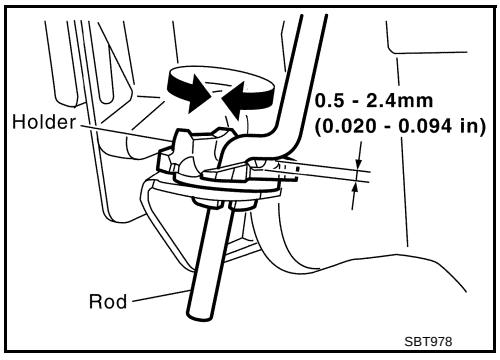
1. Remove the rear door finisher. Refer to EI-31, "Removal and Installation" .
2. Remove the sealing screen assembly.
3. Remove the rear window. Refer to GW-53, "Removal and Installation" .

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.



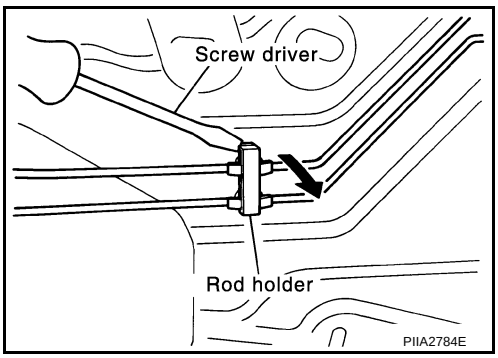
Removal and Installation

AIS001Q4

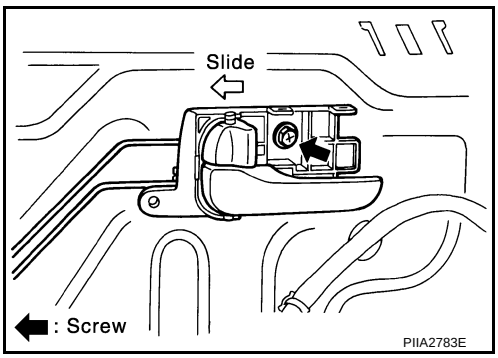
REMOVAL

1. Remove the rear door finisher. Refer to EI-31, "Removal and Installation" .
2. Remove the sealing screen assembly
3. Remove the rear door window. Refer to GW-53, "Removal and Installation" .
4. Remove the inside handle escutcheon A.
5. Remove the mounting screw, and remove the inside handle.

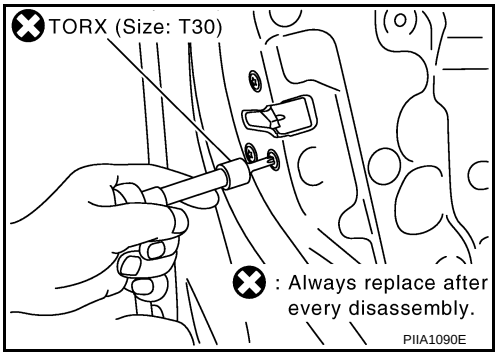
6. Using a screwdriver or similar tool, open the rod holder and remove the rod.



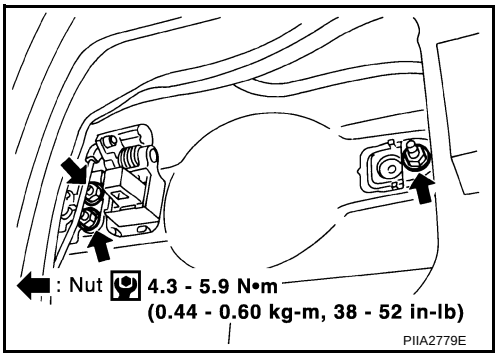
7. Remove the mounting screws and nut, remove the knob rod protector.
8. Disconnect inside handle rod door lock assembly side.
9. Slide inside handle rearward and remove it.



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



12. 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-103, "Fitting Adjustment" .**

Disassembly and Assembly

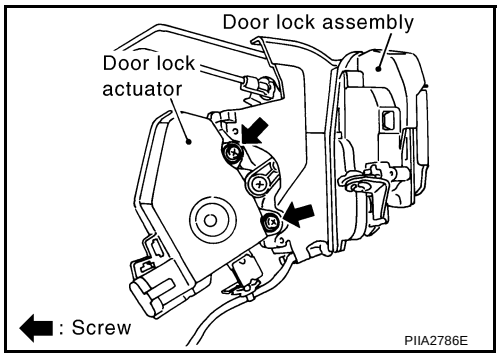
AIS001EJ

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.



ASSEMBLY

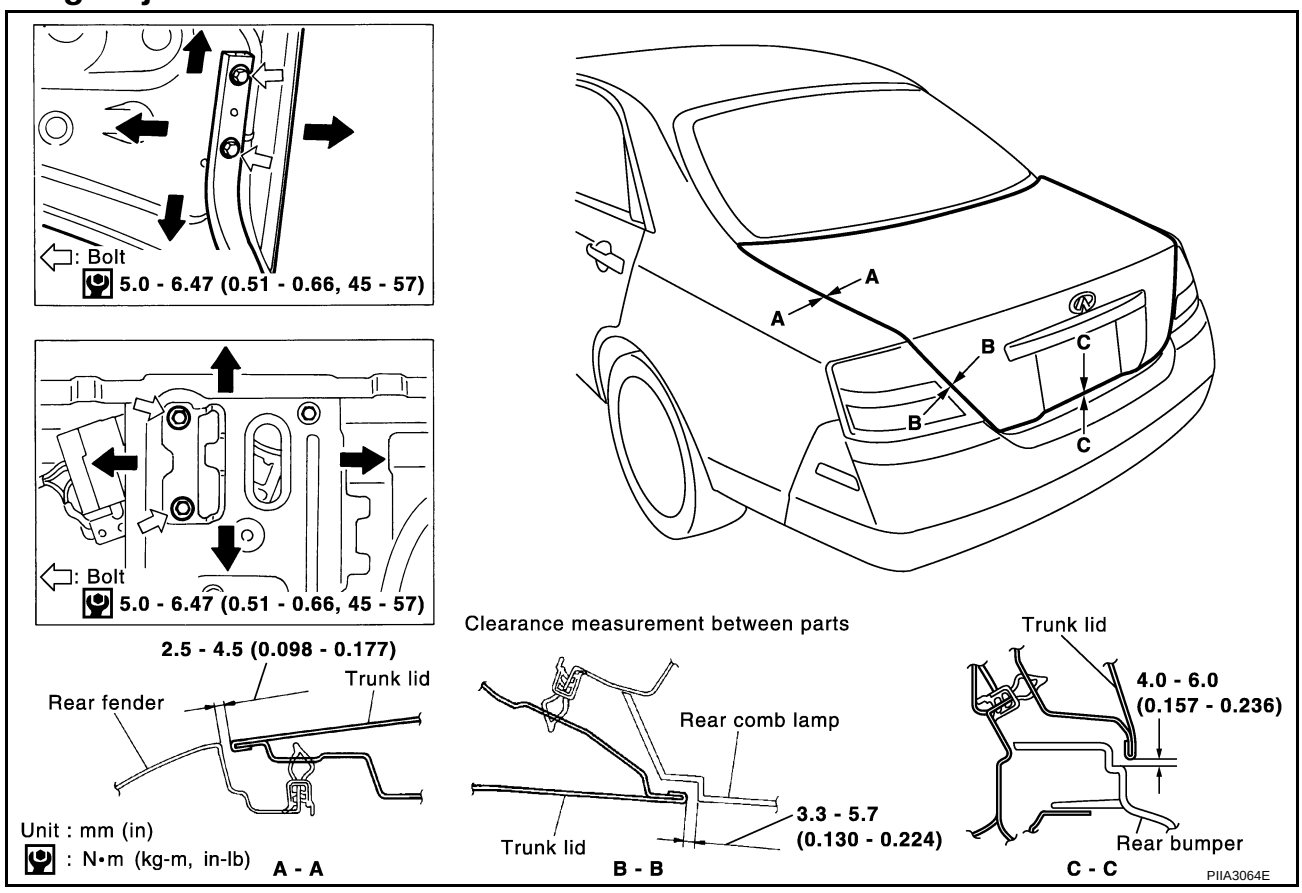
1. Align the actuator pivot with the cutout on the knob lever of the door lock assembly, then assemble the actuator.
2. Move the knob lever and the actuator pivot toward the lock-on direction, and check that it engages securely.

TRUNK LID

PFP:H4300

Fitting Adjustment

AIS001EK



LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

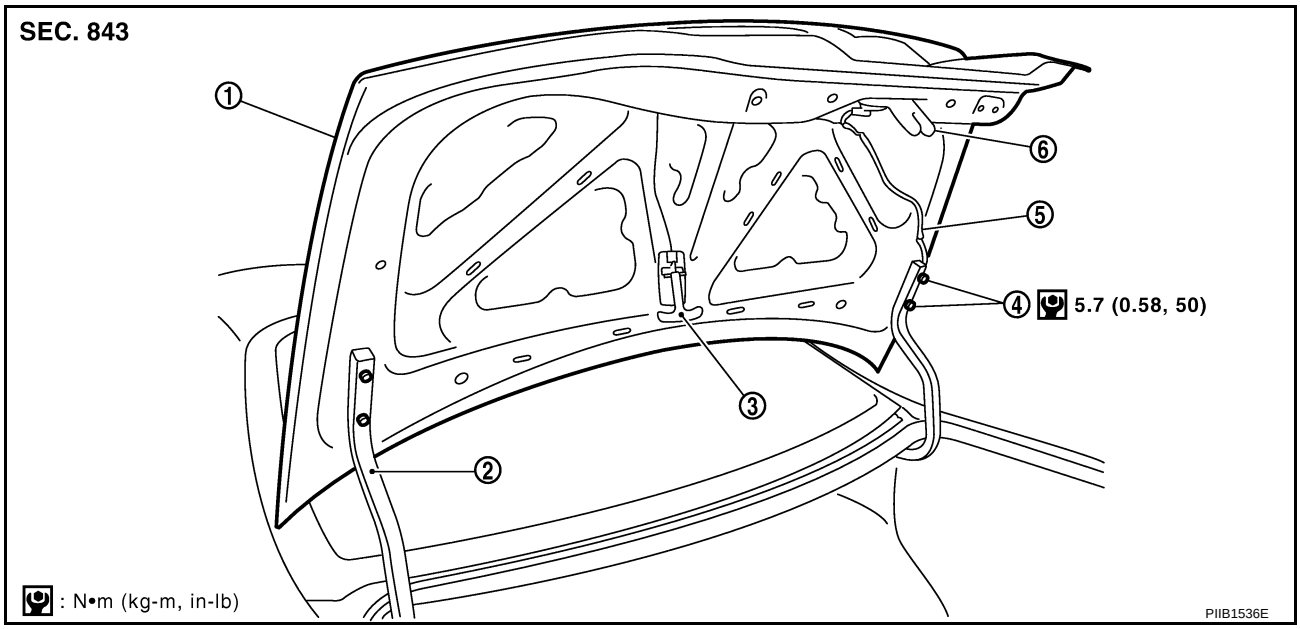
1. With the striker released, loosen the trunk lid hinge mounting bolts to close the trunk lid.
2. Make the lateral clearance and the clearance to the rear window glass equal, and open the trunk lid to tighten the mounting bolts to the specified torque.

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.

Removal and Installation of Trunk Lid Assembly

AIS001EL



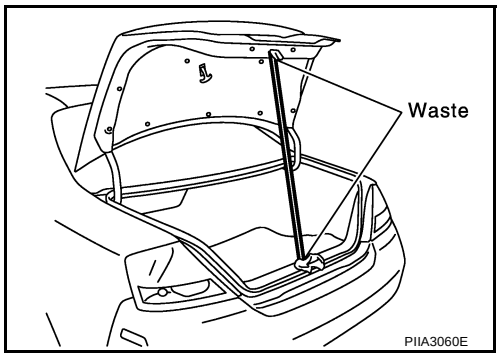
1. Trunk lid assembly
2. Trunk lid hinge
3. Trunk lid emergency opener lever
4. Bolt
5. Trunk lid harness
6. Trunk lid lock

REMOVAL

1. Remove the trunk lid finisher. Refer to EI-42, "TRUNK ROOM TRIM & TRUNK LID FINISHER" .
2. Disconnect the connectors in the trunk lid, and remove the harness clamps to pull the harness out of the trunk lid.
3. Support the trunk lid 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.



4. Remove the mounting bolts, and remove the trunk lid assembly.

CAUTION:

Operate with two workers, because of its heavy weight.

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-113, "Fitting Adjustment" .**

Removal and Installation of Trunk Lid Stay

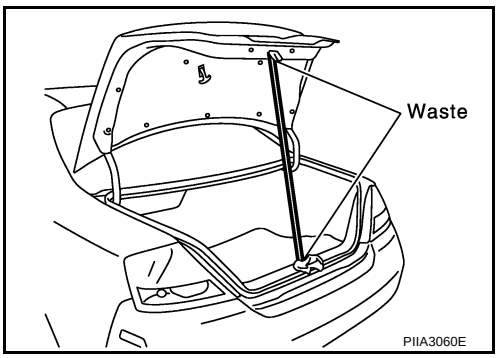
AIS0026W

REMOVAL

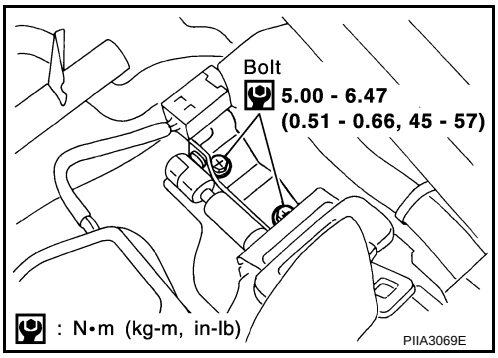
1. Remove the rear seat cushion. Refer to SE-133, "Removal and Installation" .
2. Remove the rear seat back. Refer to SE-133, "Removal and Installation" .
3. Remove the rear parcel shelf finisher. Refer to EI-37, "Removal and Installation" .
4. Remove the trunk front finisher. Refer to EI-42, "TRUNK ROOM TRIM & TRUNK LID FINISHER" .

5. Support the trunk lid closure & striker with a proper material to prevent it from falling.

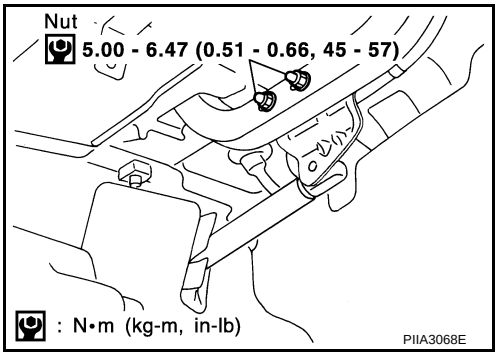
WARNING:
Body injury may occur if no supporting rod is holding the trunk lid open when removing the damper stay.



6. Remove the mounting bolts on rear parcel shelf.



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



INSTALLTION

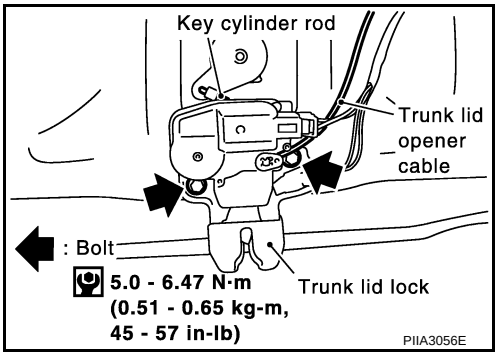
Install in the reverse order of removal.

Removal and Installation of Trunk Lid Lock

AIS001Q8

REMOVAL

1. Remove the trunk lid finisher. Refer to EI-42, "TRUNK ROOM TRIM & TRUNK LID FINISHER" .
2. Separate the key cylinder rod.
3. After removing the harness connector, remove the mounting bolts, and remove the trunk lid lock.



INSTALLTION

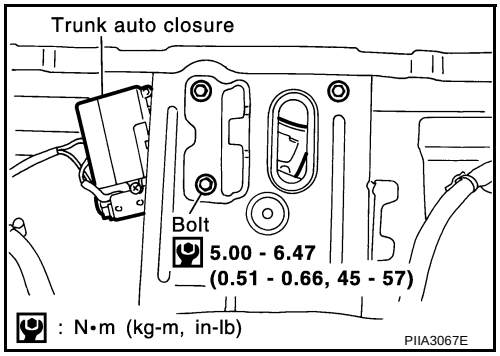
Install in the reverse order of removal.

Removal and Installation of Trunk Closure Control Unit

AIS001Q9

REMOVAL

1. Remove the trunk rear finisher. Refer to EI-42, "TRUNK ROOM TRIM & TRUNK LID FINISHER" .
2. After removing trunk lid closure control unit, remove the harness connector, remove the mounting bolts, and remove the trunk closure control unit.



CAUTION:

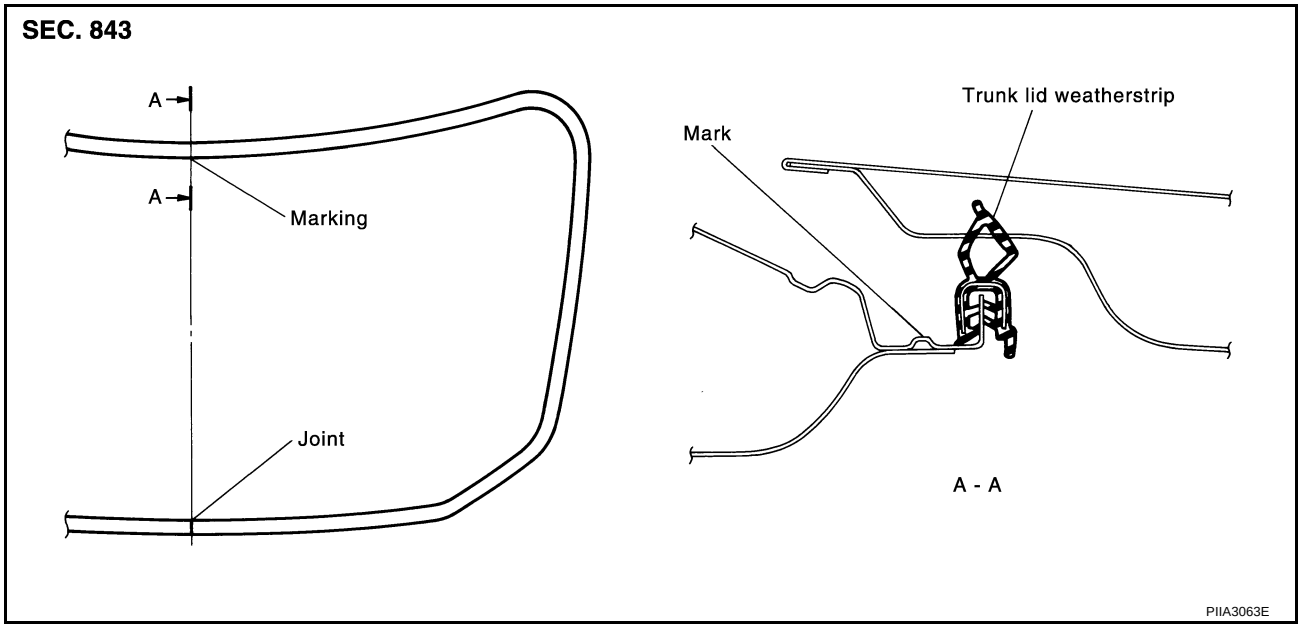
- **After installing, check operation.**
- **After installing, perform fitting adjustment. Refer to BL-113, "Fitting Adjustment" .**

INSTALLATION

Install in the reverse order of removal.

Removal and Installation of Trunk Lid Weatherstrip

AIS001EN



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.

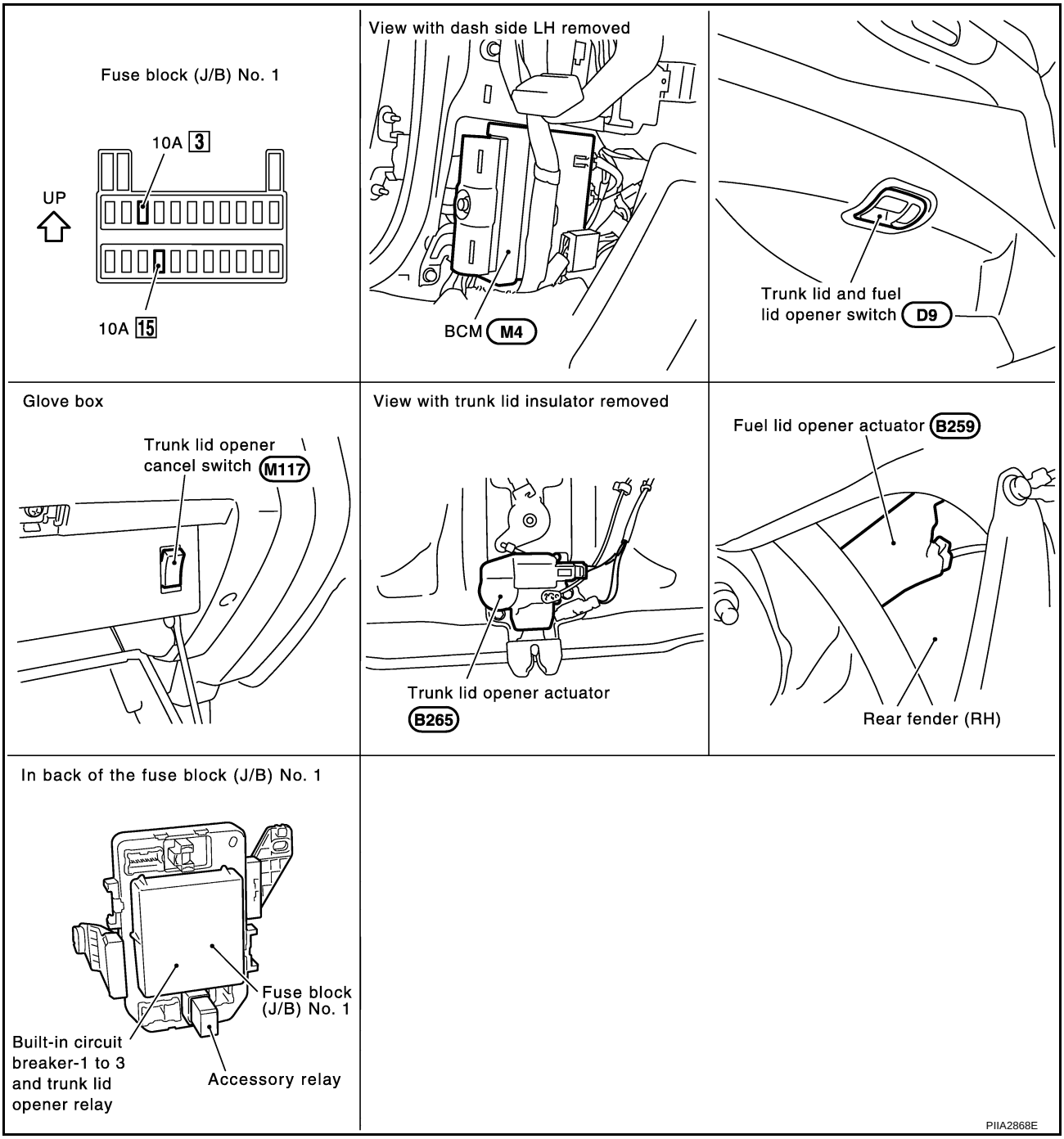
   NOTE:
   Make sure the weatherstrip is fit tightly at each corner and back door rear plate.

TRUNK LID AND FUEL FILLER LID OPENER

PFP:84640

Component Part and Harness Connector Location

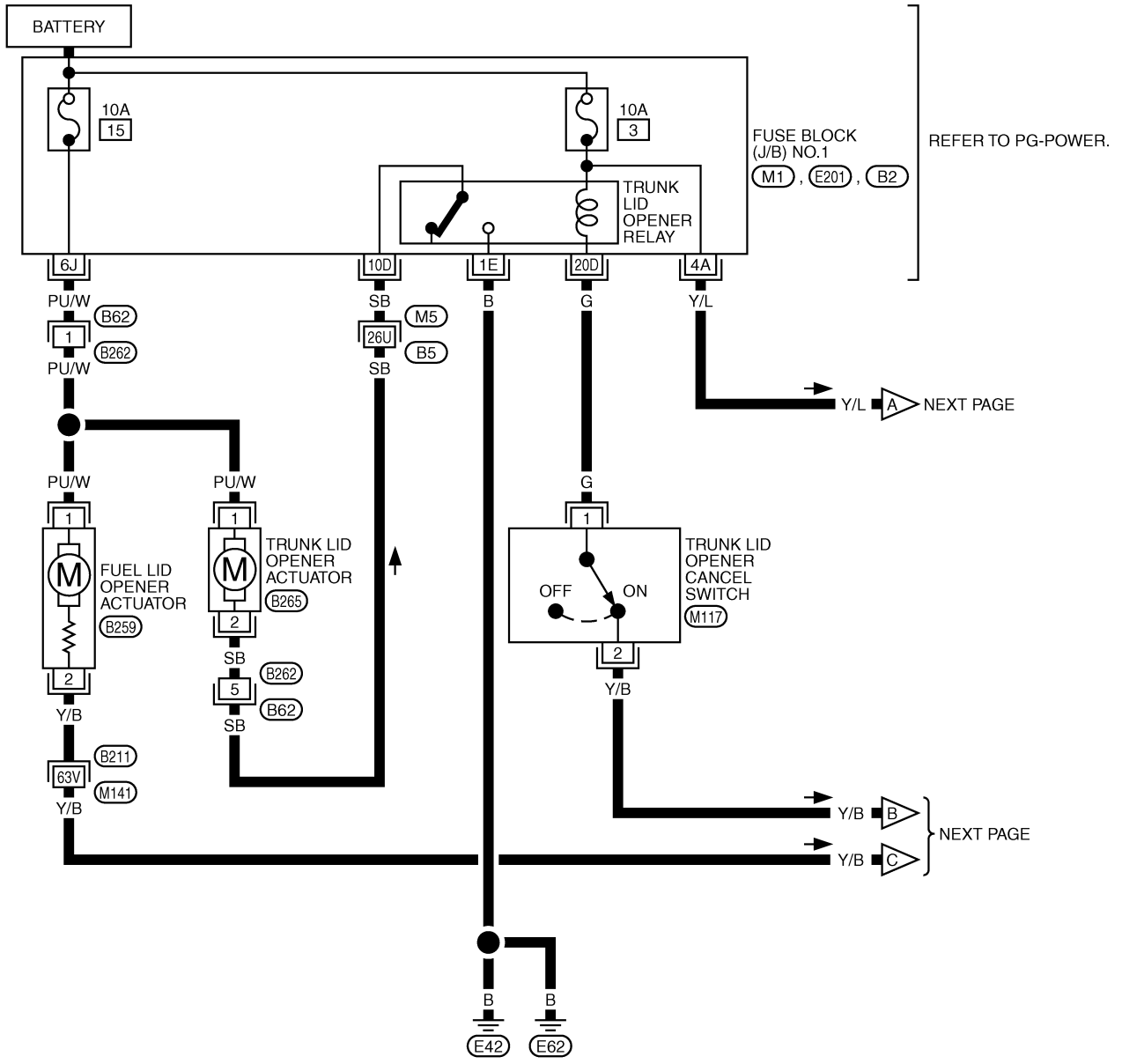
AIS001EO

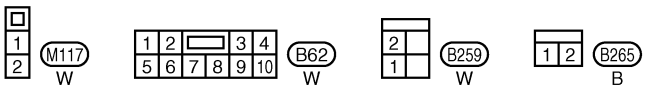


Wiring Diagram — T&FLID —

AIS001EP

BL-T&FLID-01





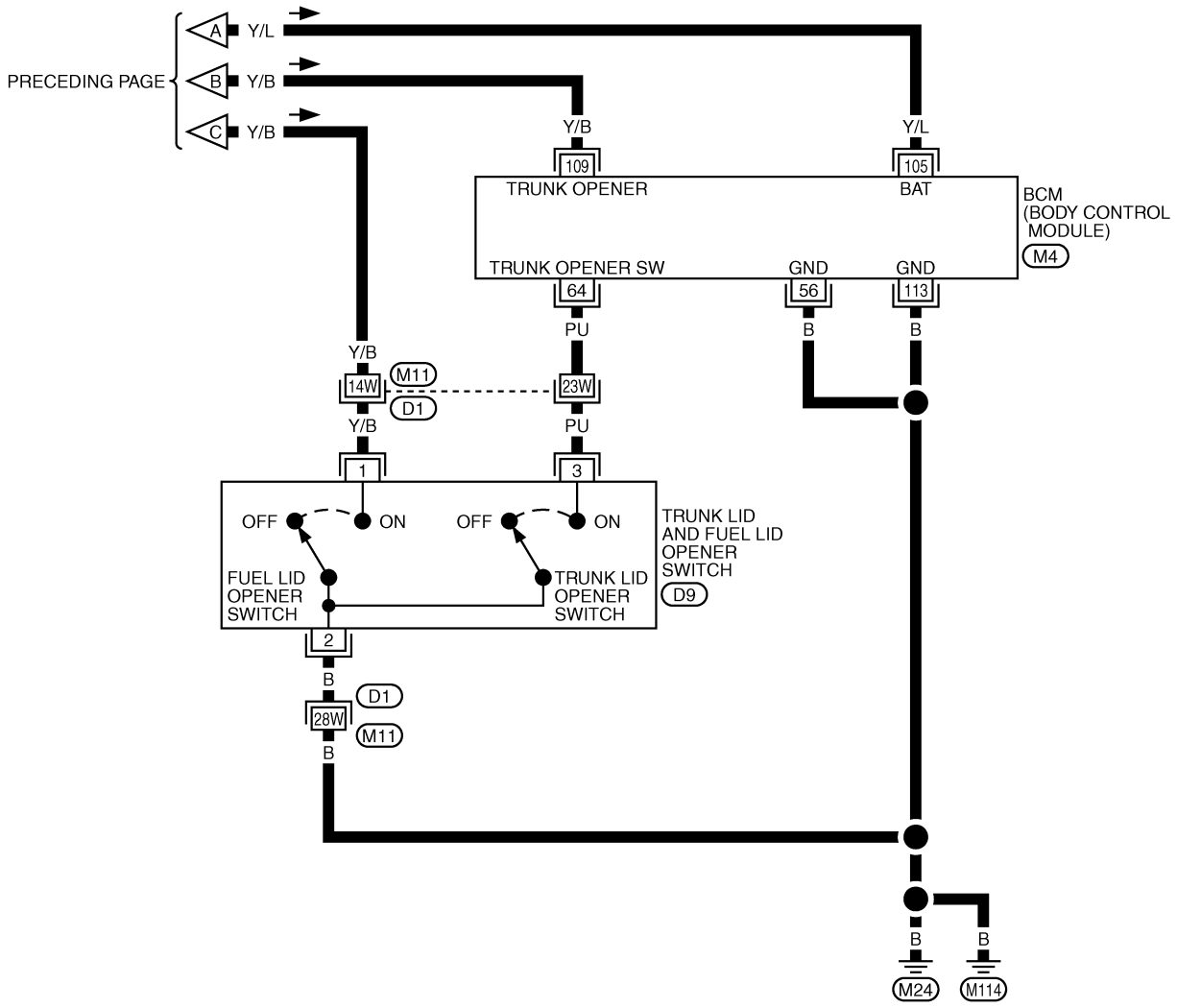
REFER TO THE FOLLOWING.

M5 , B211 -SUPER MULTIPLE JUNCTION (SMJ)

M1 , E201 , B2 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWA0179E

BL-T&FLID-02



REFER TO THE FOLLOWING.

D1 -SUPER MULTIPLE JUNCTION (SMJ)

M4 -ELECTRICAL UNITS

TIWA0180E

Terminals and Reference Value for BCM

AIS001EQ

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE(V) (Approx.)
56	B	Ground	—	0
64	PU	Trunk lid opener switch	Trunk lid opener switch OFF→ON	5→0
105	Y/L	BAT power supply	—	Battery voltage
109	Y/B	Trunk lid opener relay	Trunk lid opener switch OFF→ON (trunk opener switch cancel ON)	Battery voltage → 0
113	B	Ground	—	0

NOTE:
For Trouble diagnosis of trunk lid opener, refer to BL-54, "TRUNK LID OPENER OPERATION" .

TRUNK CLOSURE SYSTEM

PFP:84622

System Description

AIS001OK

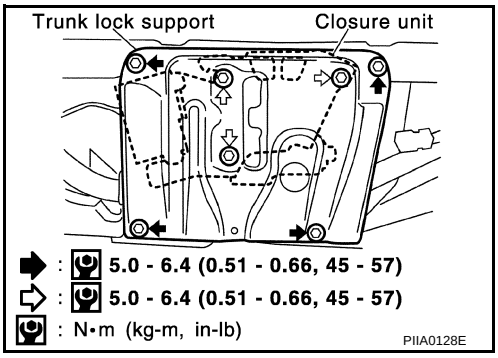
- When the trunk lid lock latch engaged with striker, trunk room lamp switch turned OFF. Striker is lowered by means of a motor the trunk lid fully closed.

Removal and Installation of Auto Closure Unit

AIS001OL

REMOVAL

1. Remove trunk rear finisher. Refer to EI-42, "TRUNK ROOM TRIM & TRUNK LID FINISHER" .
2. Disconnect the harness connector.
3. Remove the mounting bolt, and remove auto closure unit.



INSTALLATION

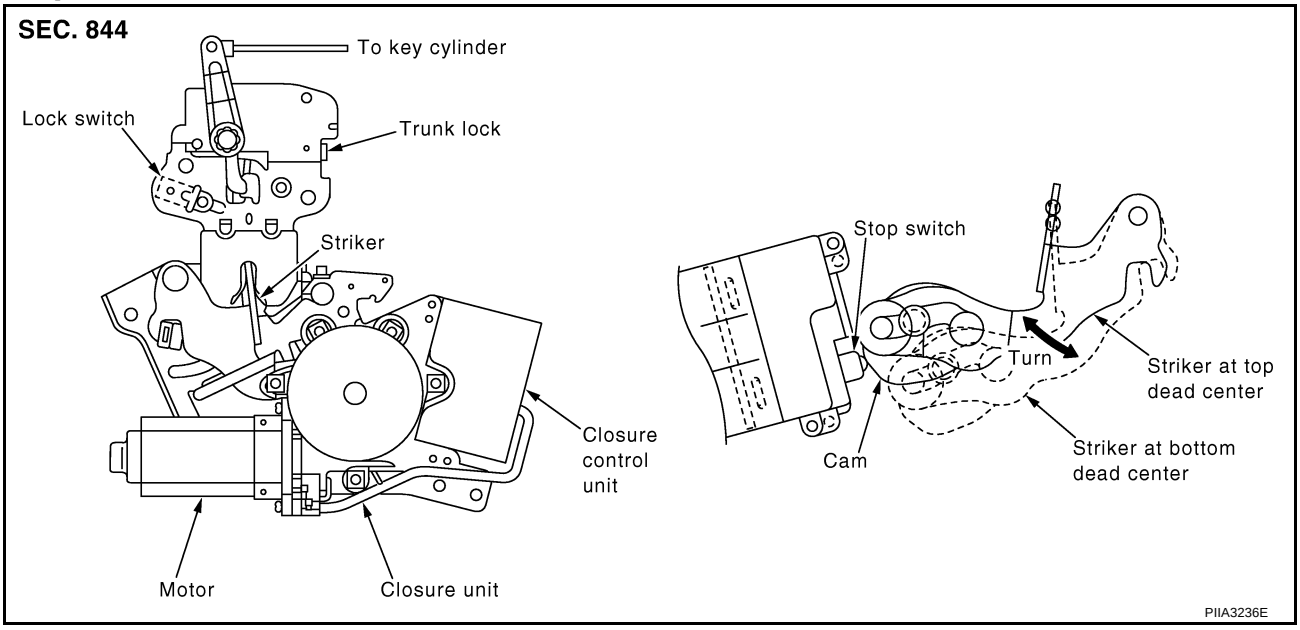
Install in the reverse order of removal.

NOTE:

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

Component Installation Location

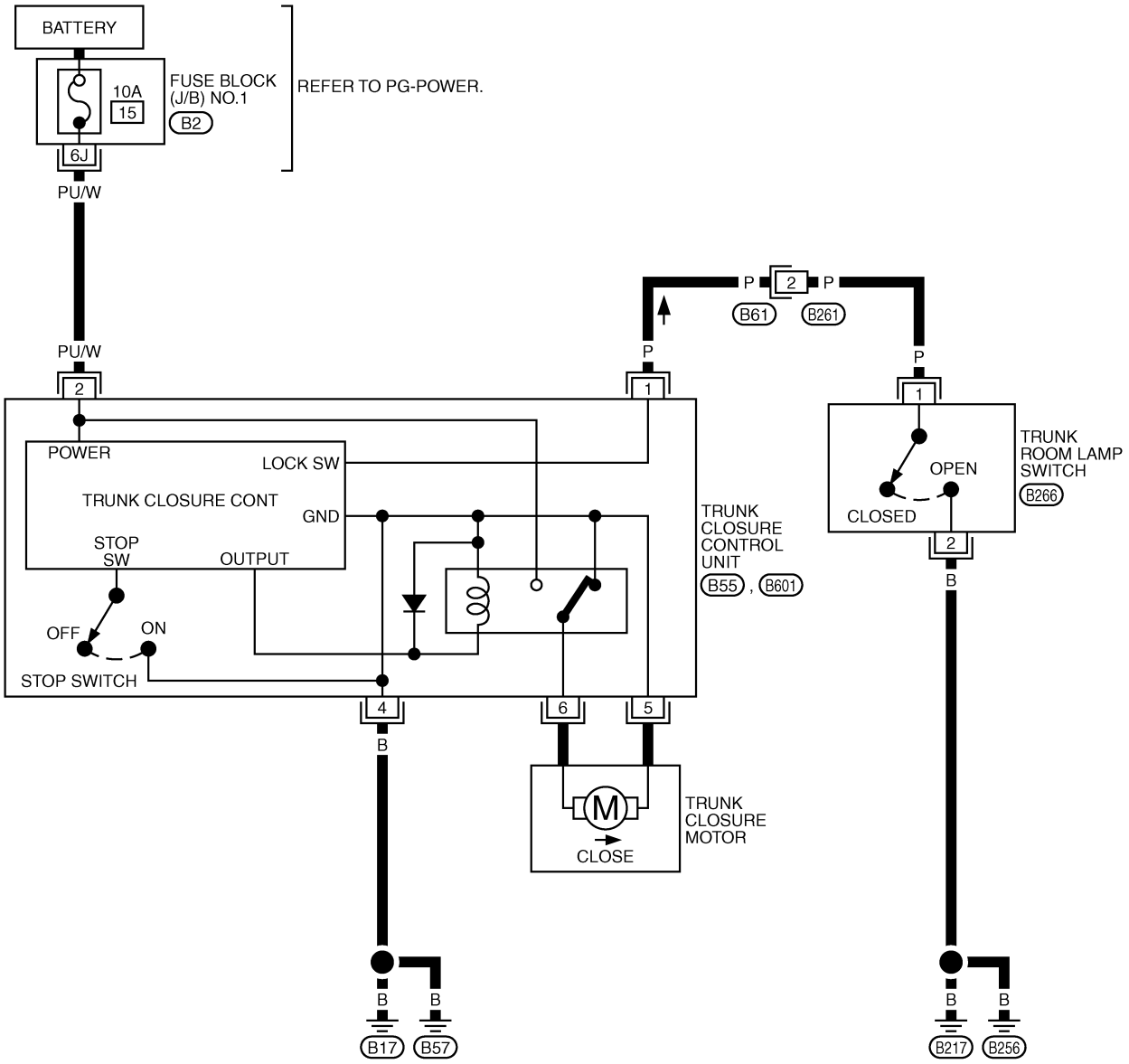
AIS001OM

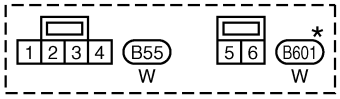


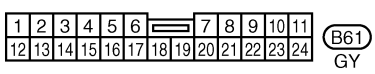
Wiring Diagram — CLOS —

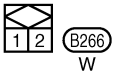
AIS001MM

BL-T/CLOS-01









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

REFER TO THE FOLLOWING.

B2 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWA0212E

Terminals and Reference Value for Trunk Closure Control Unit

AIS001MN

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE(V) (Approx.)
1	P	Lock switch signal	Engage the trunk lock (OFF)	Battery voltage
			Other than the above (ON)	0
2	PU/W	Battery power supply	—	Battery voltage
4	B	Ground	—	0
5	—	Trunk closure motor ground	—	0
6	—	Trunk closure motor output signal	Trunk closure motor is operation.	Battery voltage
			Other than the above.	0

Trouble Diagnosis System Chart

AIS001MO

Symptom	Diagnostic procedure	Refer to page
Auto closure does not operate	1. Check trunk closure control unit circuit	BL-123
	2. Check trunk room lamp switch	BL-124
	3. Check trunk closure motor	BL-125
	4. Replace trunk closure control unit	—
Auto closure does not operating or stops at improper position	Replace trunk closure control unit	—

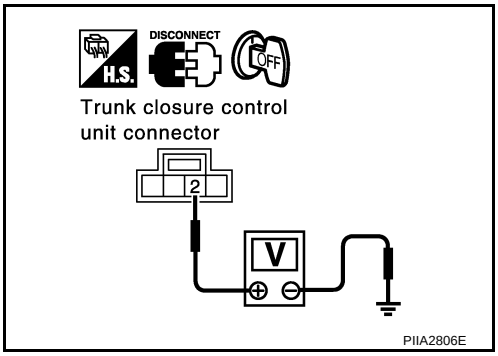
Check Trunk Closure Control Unit

AIS001MP

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect trunk closure control unit connector.
3. Check voltage between trunk closure control unit connector B55 terminal 2 and ground.

2 (PU/W) – Ground : Battery voltage



OK or NG

OK >> GO TO 2

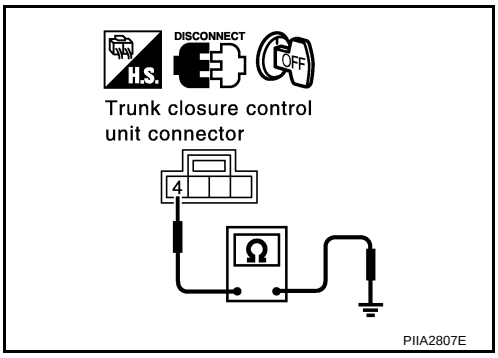
NG >> Check the following.

- 10A fuse [No.15, located in the fuse block (J/B) No.1]
- Harness for open or short between trunk closure control unit and fuse.

2. CHECK GROUND CIRCUIT

Check continuity between trunk closure control unit connector B55 terminal 4 and ground.

4 (B) – Ground : Continuity should exist.



OK or NG

OK >> Power supply and ground circuit is OK.

NG >> Repair or replace harness.

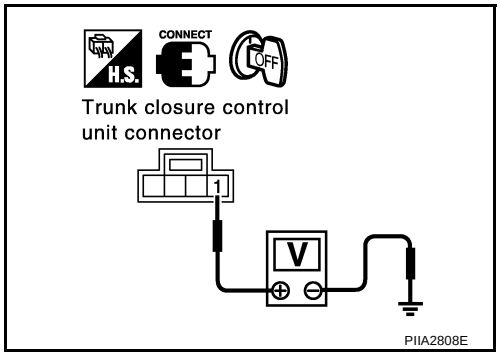
Check Trunk Room Lamp Switch

AIS001MQ

1. CHECK TRUNK ROOM LAMP SWITCH SIGNAL

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		
B55	1 (P)		Engage the latch of trunk lock	Battery voltage
			Other than the above	0



OK or NG

OK >> Trunk room lamp sw is OK.
NG >> GO TO 2.

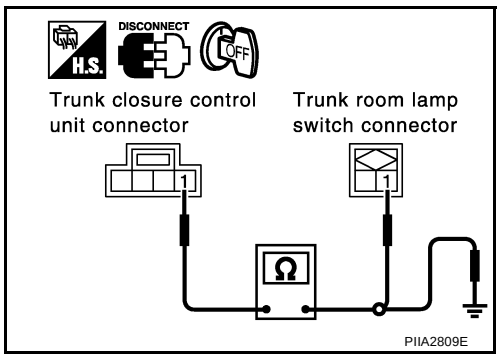
2. CHECK TRUNK ROOM LAMP SWITCH CIRCUIT

1. Disconnect trunk closure control unit and trunk room lamp switch connector.
2. Check continuity between trunk closure control unit connector B55 terminal 1 and trunk room lamp switch connector B266 terminal 1.

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

3. Check continuity between trunk closure control unit connector B55 terminal 1 and ground.

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



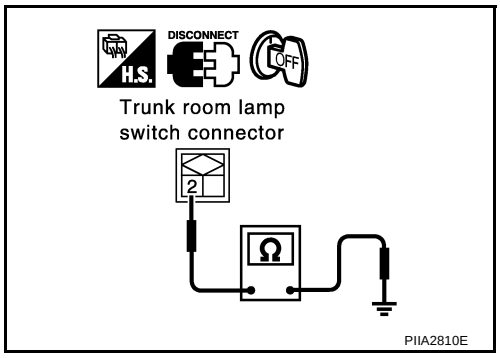
OK or NG

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

3. CHECK TRUNK ROOM LAMP SWITCH GROUND

Check continuity between trunk room lamp switch connector B266 terminal 2 and ground.

2 (B) – Ground : Continuity should exist.



OK or NG

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

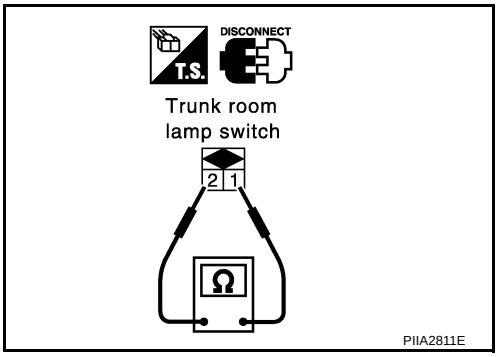
4. CHECK TRUNK ROOM LAMP SWITCH

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

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

OK or NG

OK >> Trunk room lamp switch is OK.
NG >> Replace trunk room lamp switch.



Check Trunk Closure Motor

AIS001MR

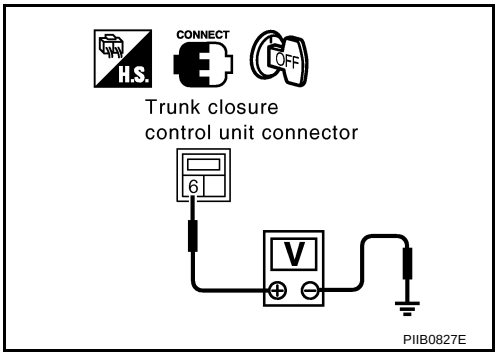
1. CHECK TRUNK CLOSURE CONTROL UNIT OUTPUT SIGNAL

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

Terminals			Condition	Voltage (V) (Approx.)
(+)		(–)		
Connector	Terminal			
B601	6	Ground	Closure motor is in operation	Battery voltage
			Other than the above	0

OK or NG

OK >> GO TO 2.
NG >> Replace trunk closure control unit.



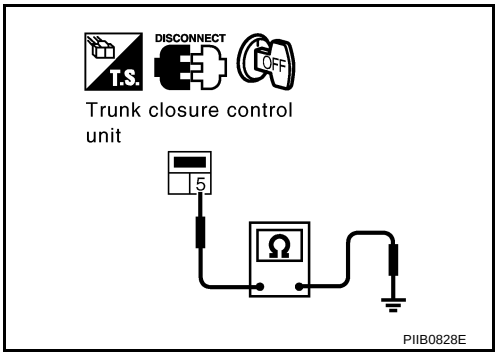
2. CHECK TRUNK CLOSURE MOTOR GROUND CIRCUIT

Check continuity between trunk closure control unit connector B601 terminal 5 and ground.

5 – Ground : Continuity should exist.

OK or NG

OK >> Replace trunk closure motor.
NG >> Replace trunk closure control unit.

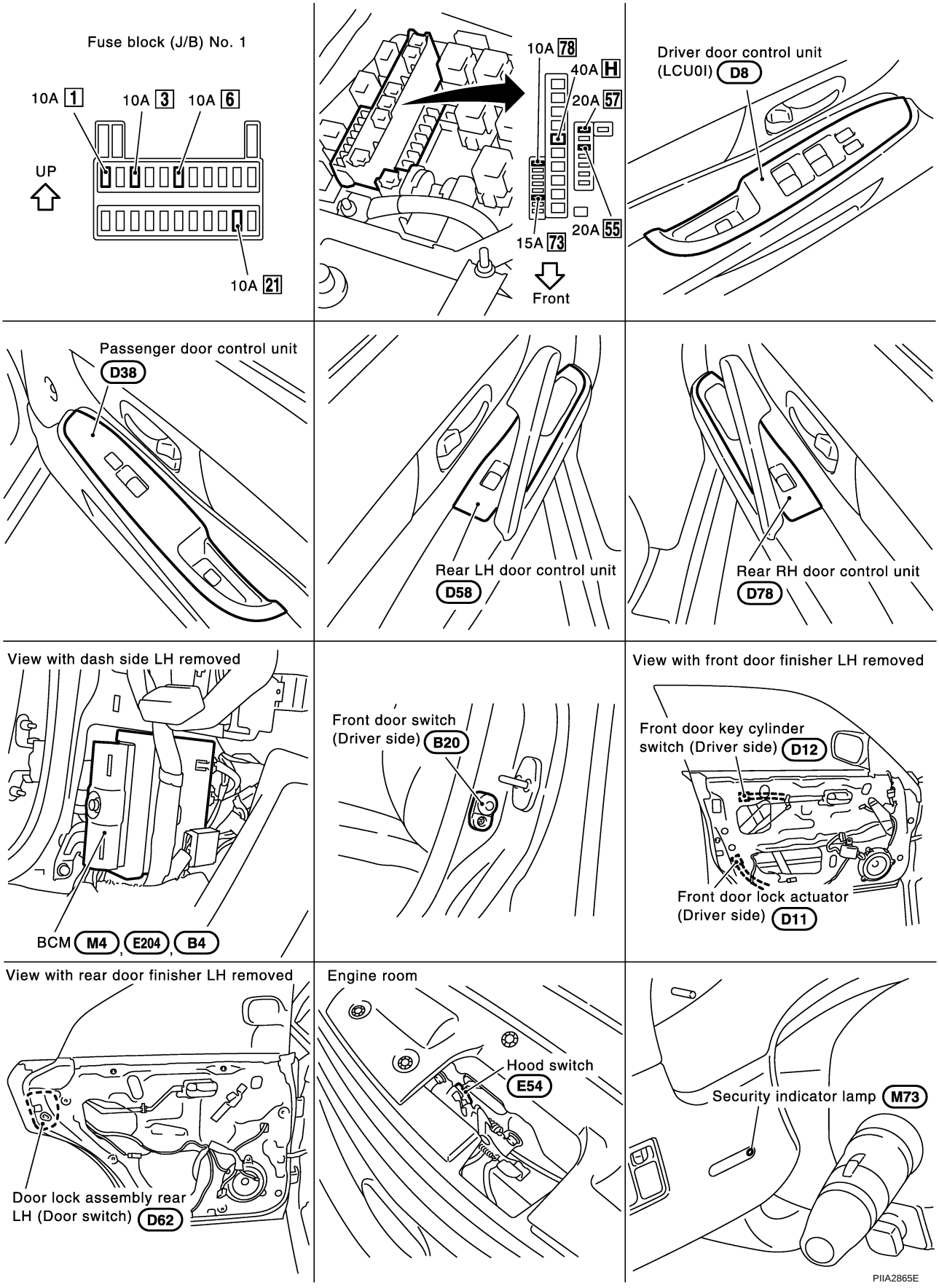


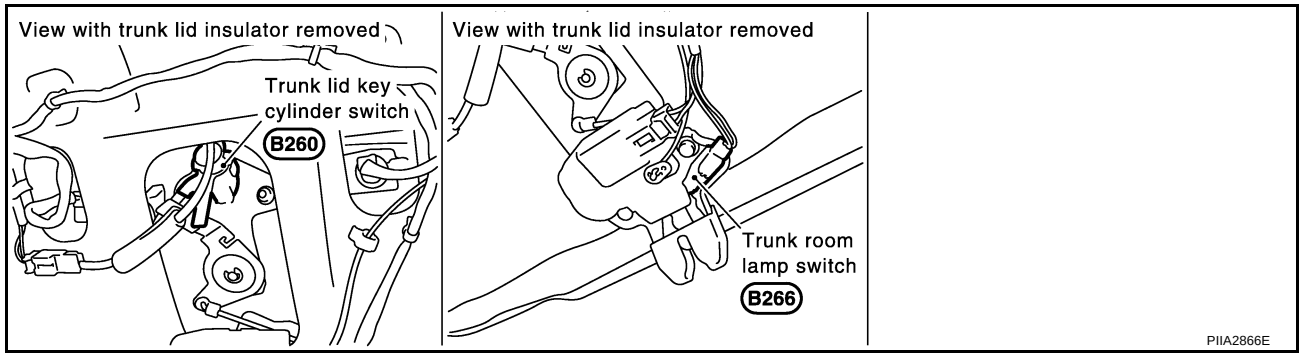
VEHICLE SECURITY (THEFT WARNING) SYSTEM

PFP:28491

Component Parts Harness Connector Location

AIS001ER





System Description

AIS001ES

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 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 2.

Power is Supplied at All Times

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

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.

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.

BCM is connected to LCU01 as 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 the 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 a 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 2 receives a ground signal from terminal 2 of each door unlock sensor.
When the hood is open, BCM terminal 122 receives a ground signal

- from terminals 1 and 2 of the hood switch
- through body grounds E42 and E62.

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

- from terminals 1 and 2 of the trunk room lamp switch
- through body grounds B217, B256.

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.

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

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

If this signal or 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 1 of the security indicator lamp.
The security indicator lamp will illuminate for approximately 30 seconds and then blink.
Now the vehicle security system is in armed phase.

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.

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 switch), 146 (trunk room lamp 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 2 (each door unlock sensor)

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 1 and
- through 10A fuse [No. 78, located in the fuse, fusible link and relay block (J/B)]
- to security horn relay terminal 2.

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 2 and
- to security horn relay terminal 1.

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

VEHICLE SECURITY SYSTEM DEACTIVATION

To deactivate the vehicle security system, a door 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 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 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)

PANIC ALARM OPERATION

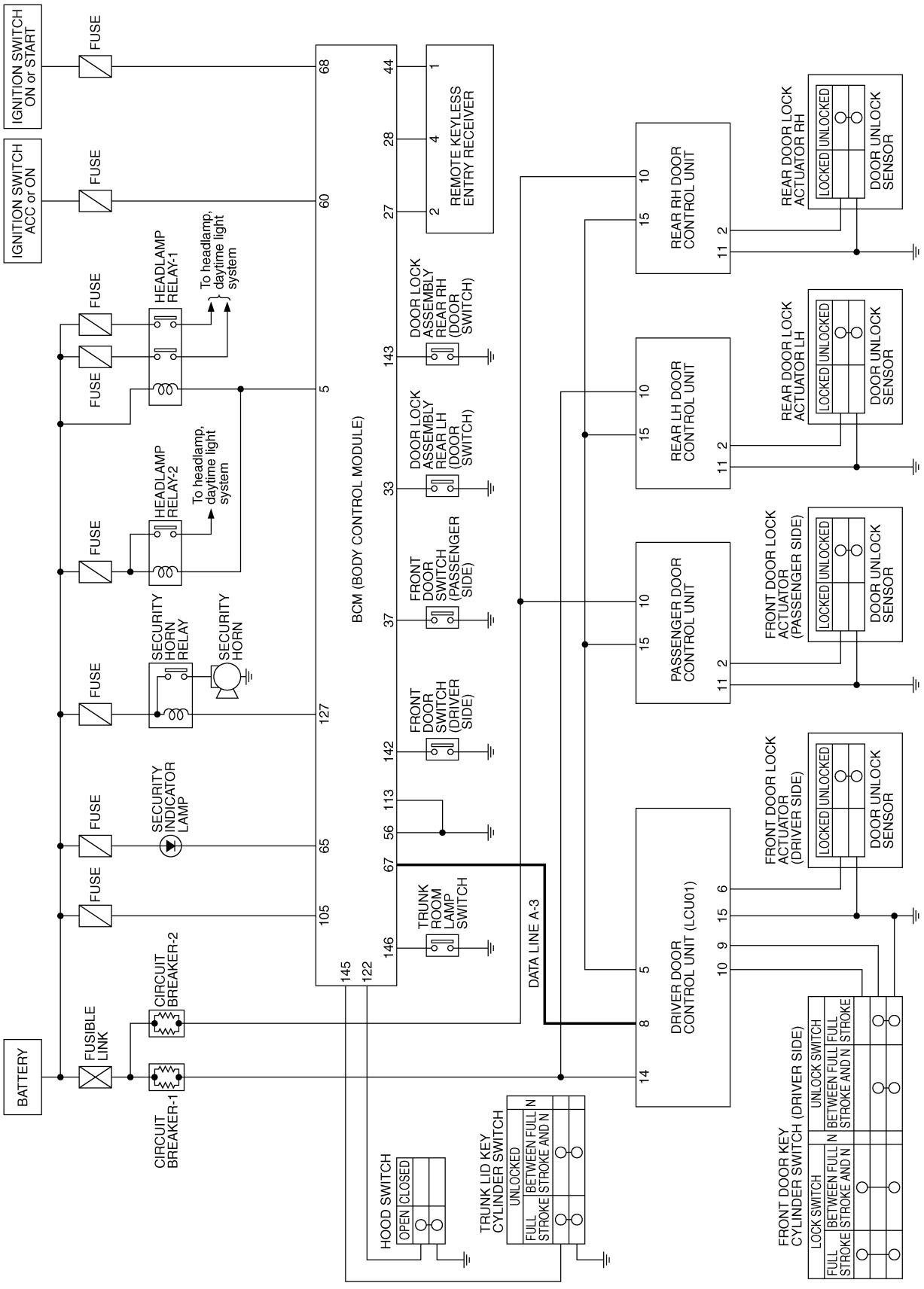
Remote keyless entry system may or may not operate vehicle security system (horn and headlamps) as required.
When the Remote keyless entry system is triggered, ground is supplied intermittently.

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

The headlamp flashes and the security horn sounds intermittently.
The alarm automatically turns off after 30 seconds or when BCM receives any signal from electronic key or emergency key.

Schematic

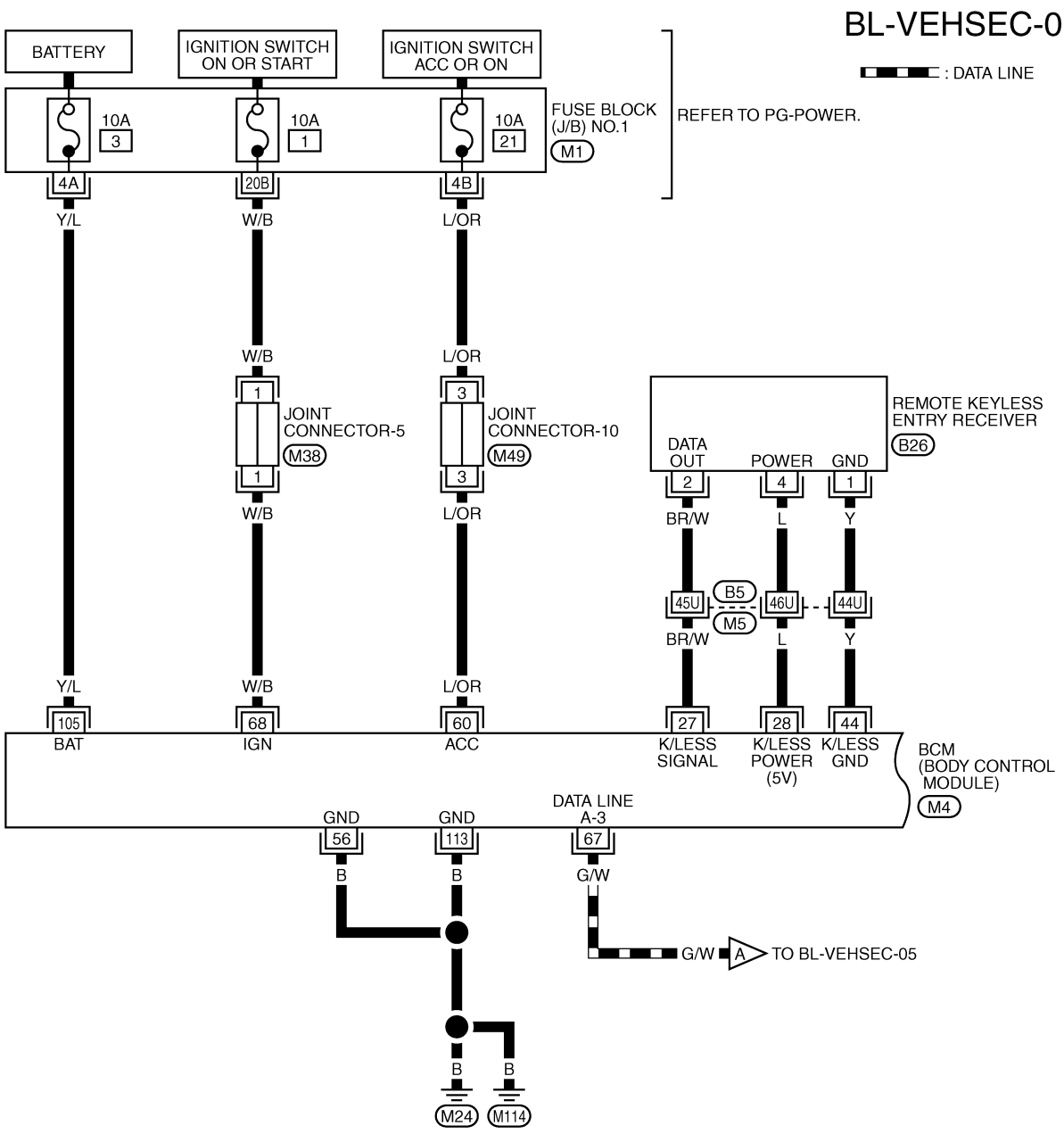
AIS001ET

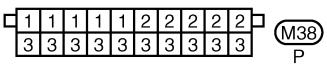


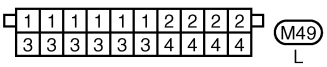
TIWA0199E

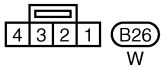
Wiring Diagram — VEHSEC —

AIS001EU









REFER TO THE FOLLOWING.

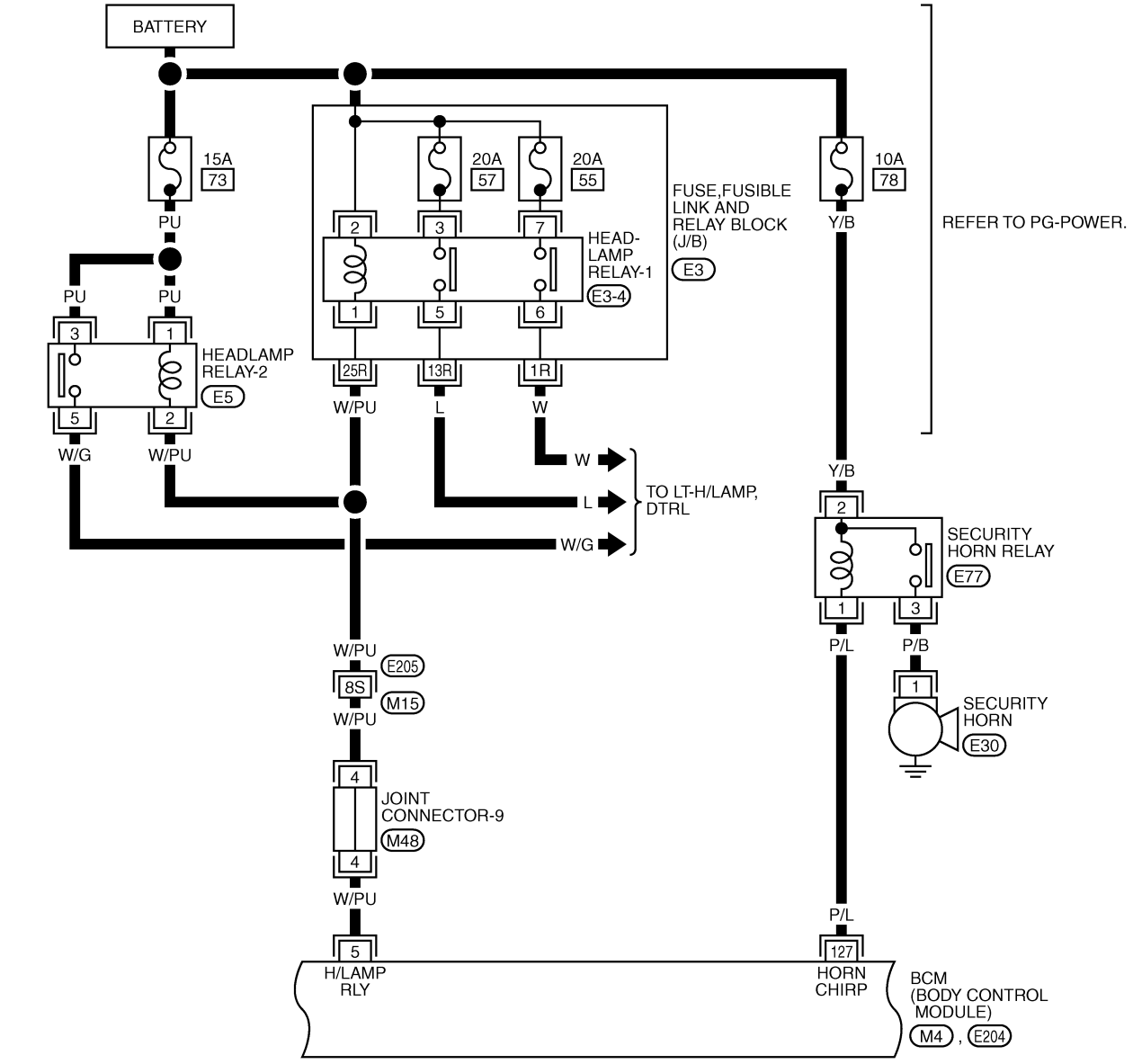
M5 -SUPER MULTIPLE JUNCTION (SMJ)

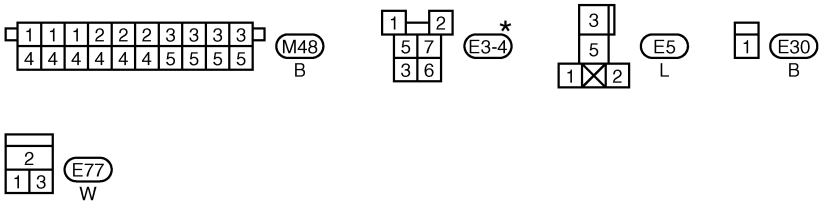
M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

M4 -ELECTRICAL UNITS

TIWA0200E

BL-VEHSEC-02





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

REFER TO THE FOLLOWING.

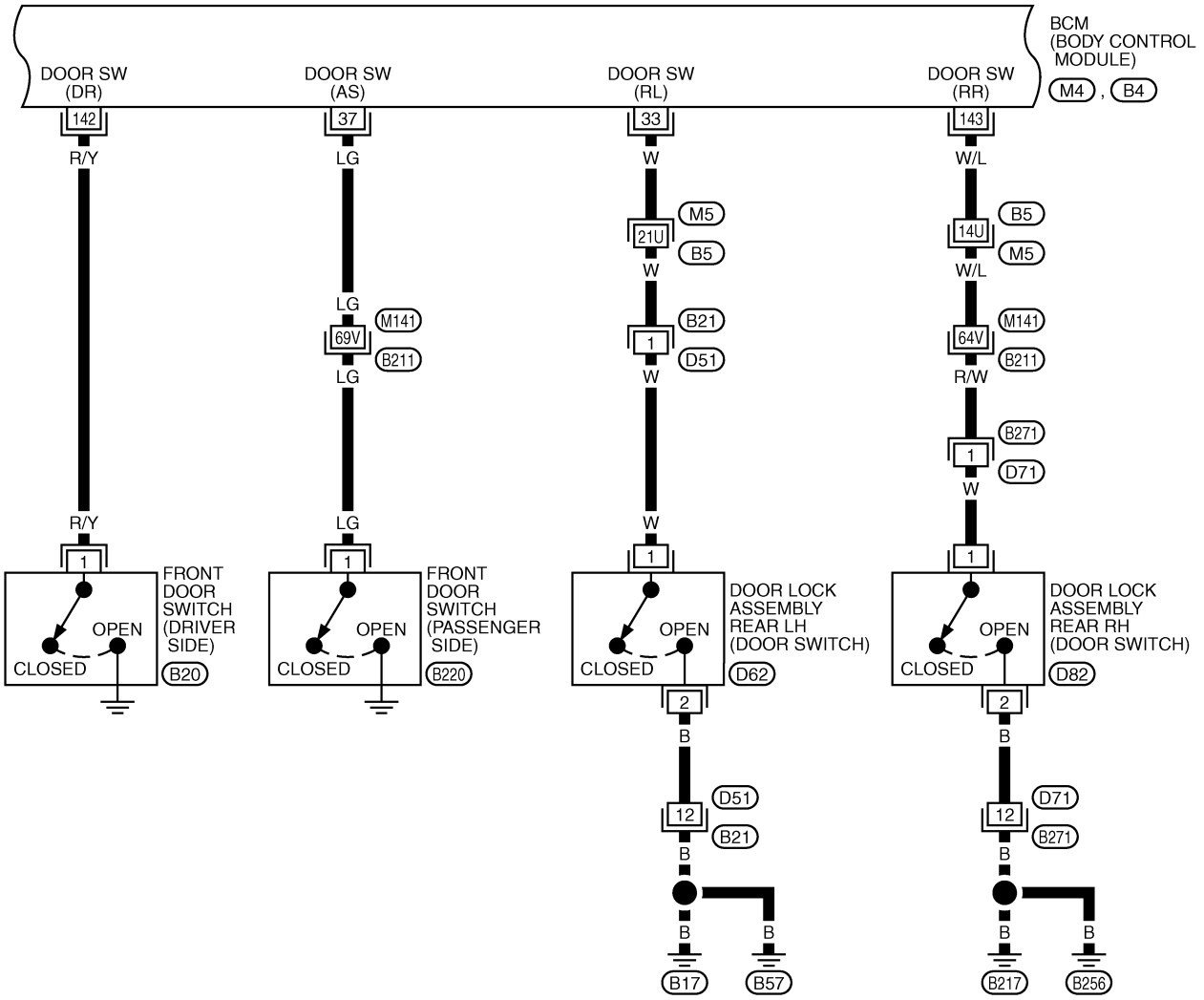
E205 -SUPER MULTIPLE JUNCTION (SMJ)

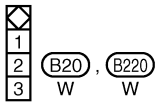
E3 -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)

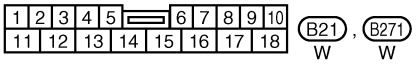
M4 , E204 -ELECTRICAL UNITS

TIWA0201E

BL-VEHSEC-03







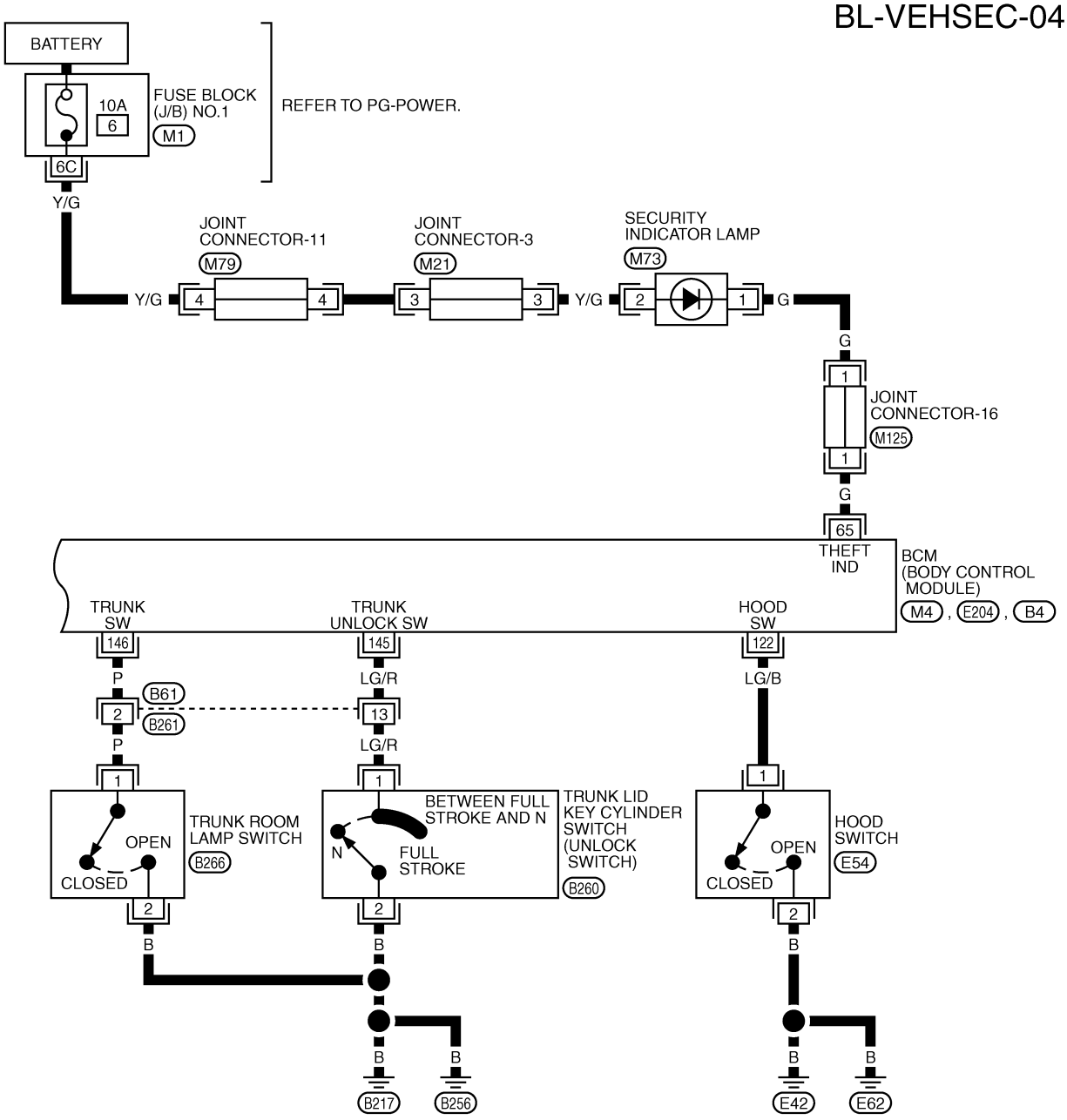
REFER TO THE FOLLOWING.

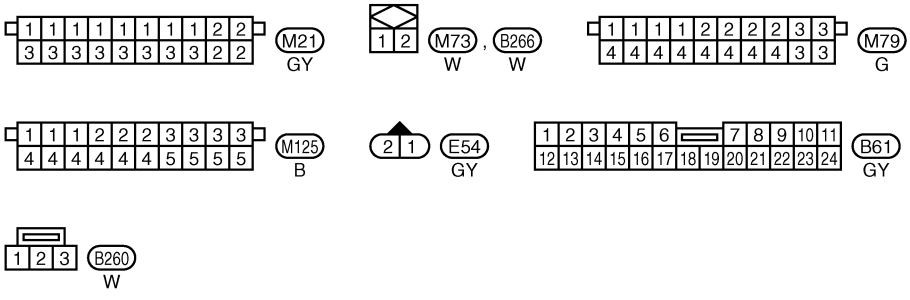
M5 , B211 -SUPER MULTIPLE JUNCTION (SMJ)

M4 , B4 -ELECTRICAL UNITS

TIWA0202E

BL-VEHSEC-04



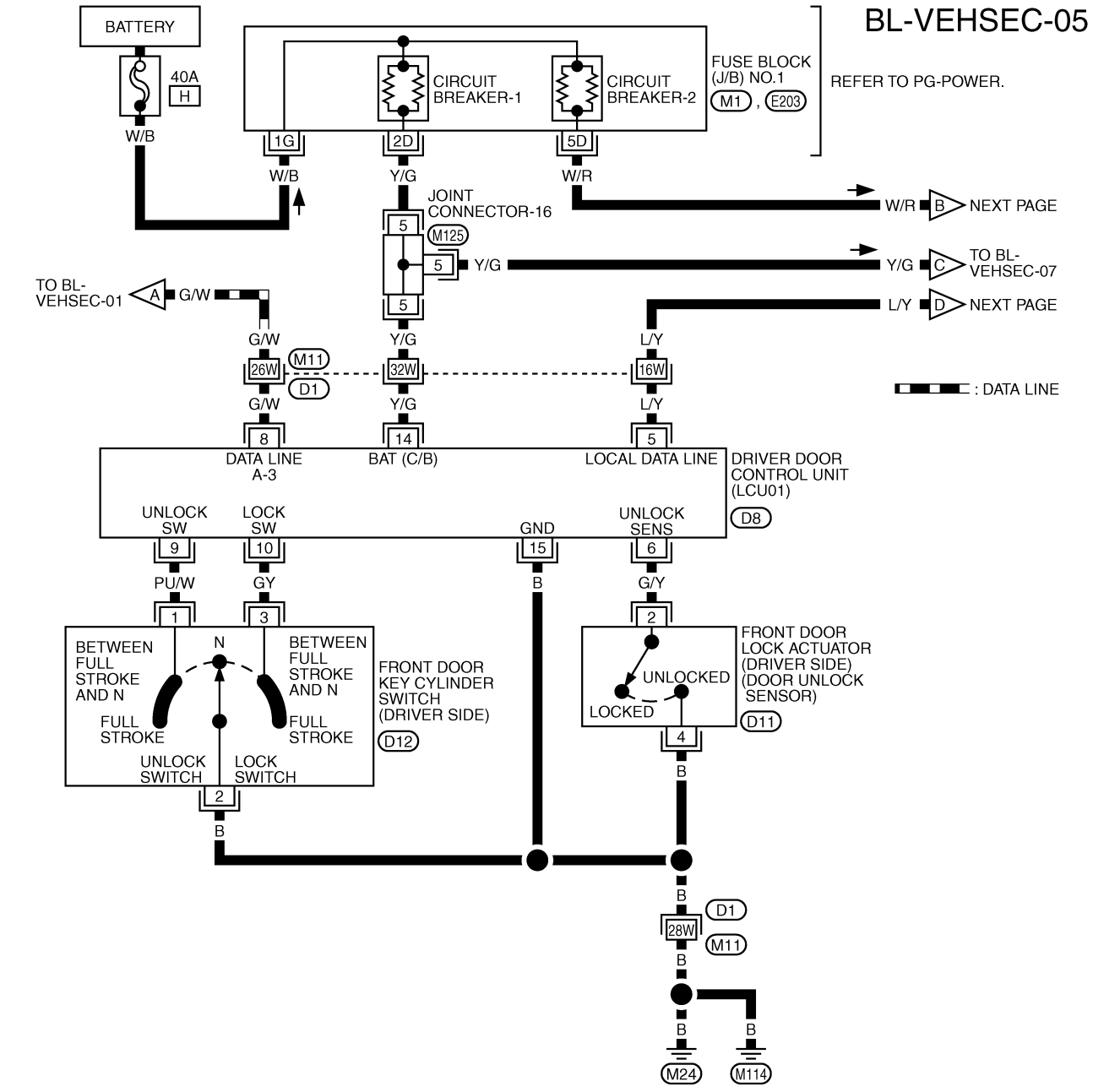


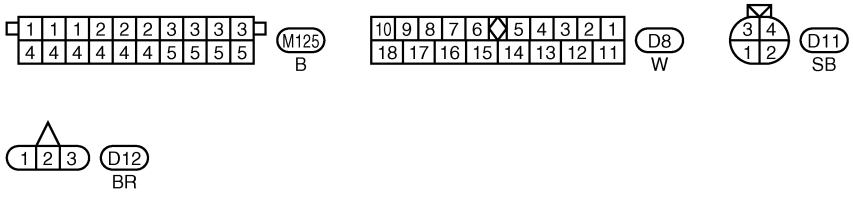
REFER TO THE FOLLOWING.

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

M4 , E204 , B4 -ELECTRICAL UNITS

TIWA0203E





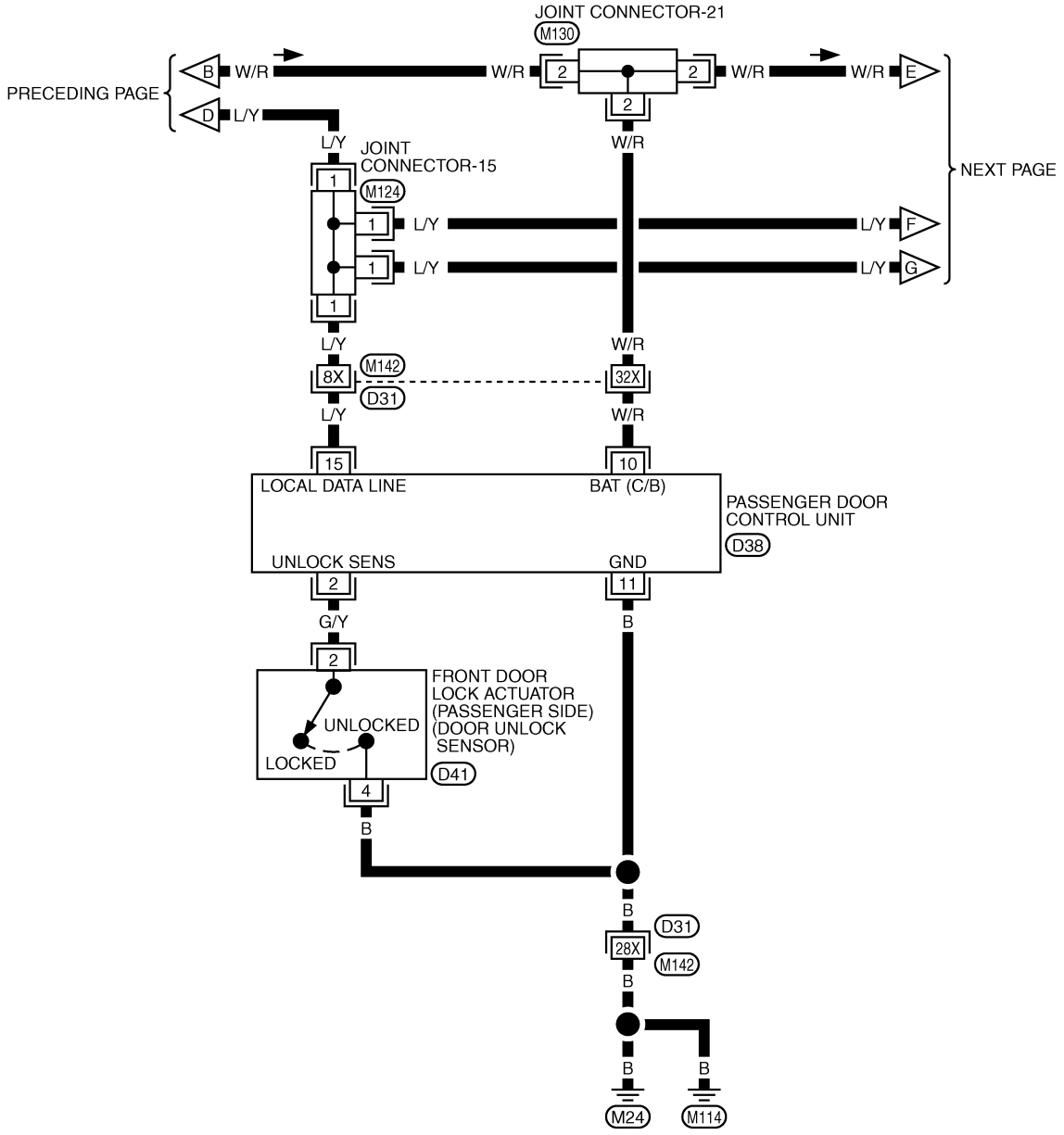
REFER TO THE FOLLOWING.

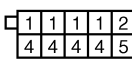
D1 -SUPER MULTIPLE JUNCTION (SMJ)

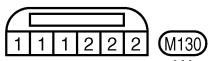
M1 , E203 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

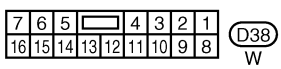
TIWA0204E

BL-VEHSEC-06







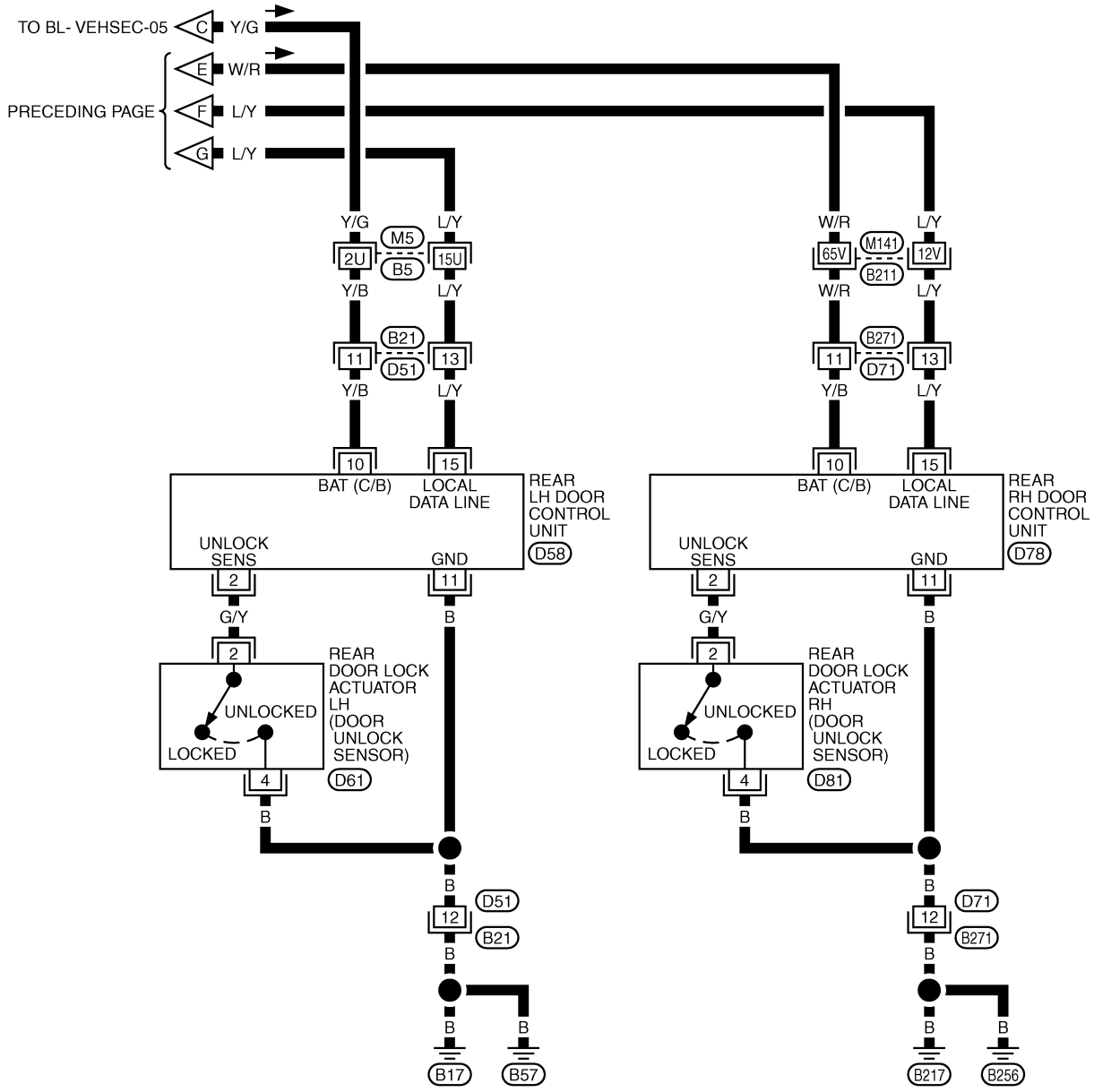


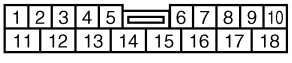
REFER TO THE FOLLOWING.

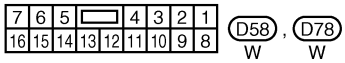
D31 -SUPER MULTIPLE JUNCTION (SMJ)

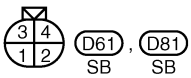
TIWA0205E

BL-VEHSEC-07







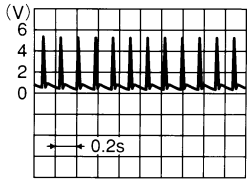
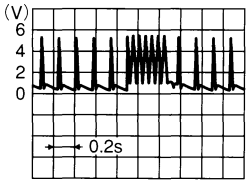
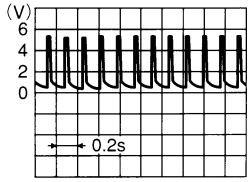
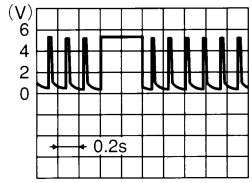


REFER TO THE FOLLOWING.
M5 , B211 -SUPER MULTIPLE JUNCTION (SMJ)

TIWA0206E

Terminals and Reference Value for BCM

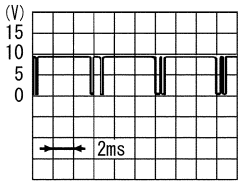
AIS002ES

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
5	W/PU	Headlamp relay control signal	When panic alarm is operated using electronic key. (ON → OFF)	0 → Battery voltage
27	BR/W	Remote keyless entry receiver (Pulse)	Stand-by	 OCC3879D
			Press any of the electronic key switches	 OCC3880D
28	L	Remote keyless entry receiver (Power supply)	Stand-by	 OCC3881D
			Press any of the electronic key switches	 OCC3882D
33	W	Rear LH door switch	Door open (ON) → close (OFF)	0 → Battery voltage
37	LG	Passenger door switch	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	Ignition switch ACC or ON position	Battery voltage
65	G	Multifunction switch (security indicator lamp)	Goes OFF → Illuminates (every 2.4 seconds)	Battery voltage → 0
67	G/W	Data line A-3	—	—
68	W/B	IGN power supply	Ignition switch ON	Battery voltage
105	Y/L	Battery power supply	—	Battery voltage
113	B	Ground	—	0
122	LG/B	Hood switch	Hood open (ON) → close (OFF)	0 → Battery voltage
127	P/L	Security horn relay	When panic alarm is operated using electronic key. (ON → OFF)	0 → Battery voltage
142	R/Y	Driver door switch	Door open (ON) → close (OFF)	0 → Battery voltage
143	W/L	Rear RH door switch	Door open (ON) → close (OFF)	0 → Battery voltage

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
145	LG/R	Trunk lid key cylinder switch (unlock switch)	Trunk lid switch “N” position → between full stroke and “N” position	5 → 0
146	P	Trunk room lamp switch	Trunk lid open (ON) → close (OFF)	0 → Battery voltage

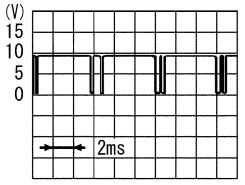
Terminals and Reference Value for Driver Door Control Unit (LCU01)

AIS002ET

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
5	L/Y	Local data line	—	 SIIA0591J
6	G/Y	Door unlock sensor	OFF (Locked) → ON (Unlocked)	5 → 0
8	G/W	Data line A-3	—	—
9	PU/W	Door key cylinder unlock switch	OFF (Neutral) → ON (Unlocked)	5 → 0
10	GY	Door key cylinder lock switch	OFF (Neutral) → ON (Locked)	5 → 0
14	Y/G	Battery power supply (C/B)	—	Battery voltage
15	B	Ground	—	0

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

AIS002EU

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
2	G/Y	Door unlock sensor	OFF (Locked) → ON (Unlocked)	5 → 0
10	W/R (Y/B)	Battery power supply (C/B)	—	Battery voltage
11	B	Ground	—	0
15	L/Y	Local data line	—	 SIIA0591J

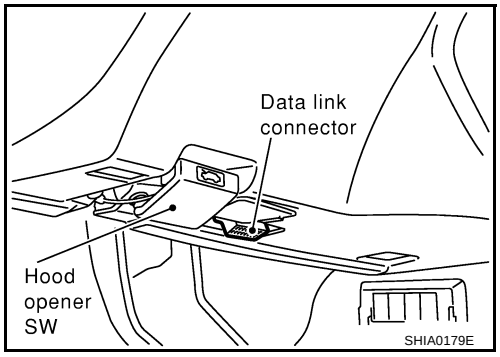
( ): Wire color for rear LH, RH door control unit.

CONSULT-II Function

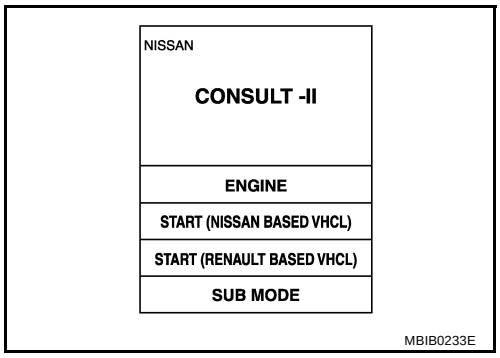
AIS001EV

CONSULT-II INSPECTION PROCEDURE

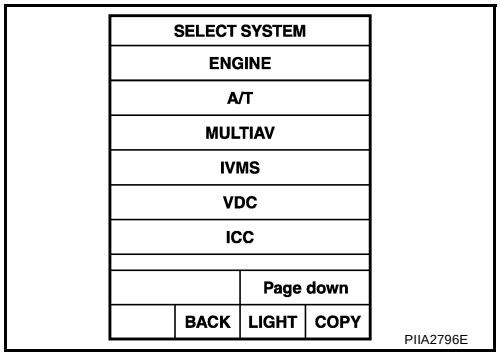
1. Turn ignition switch OFF.
2. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.



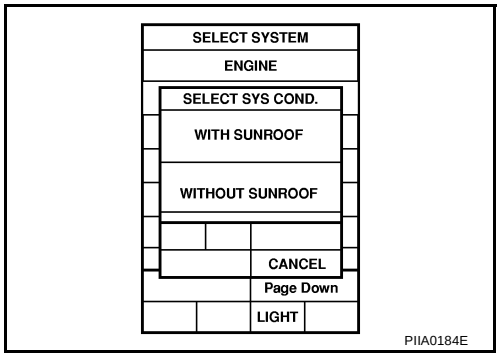
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



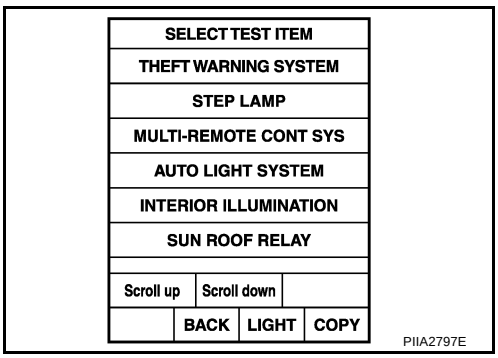
5. Touch “IVMS” on the “SELECT SYSTEM” screen.
   If “IVMS” is not indicated, go to GI-38, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Check the model specification, touch either “WITH SUNROOF” or “WITH OUT SUNROOF”.
7. Touch “OK”. If the selection is wrong, touch “CANCEL”.



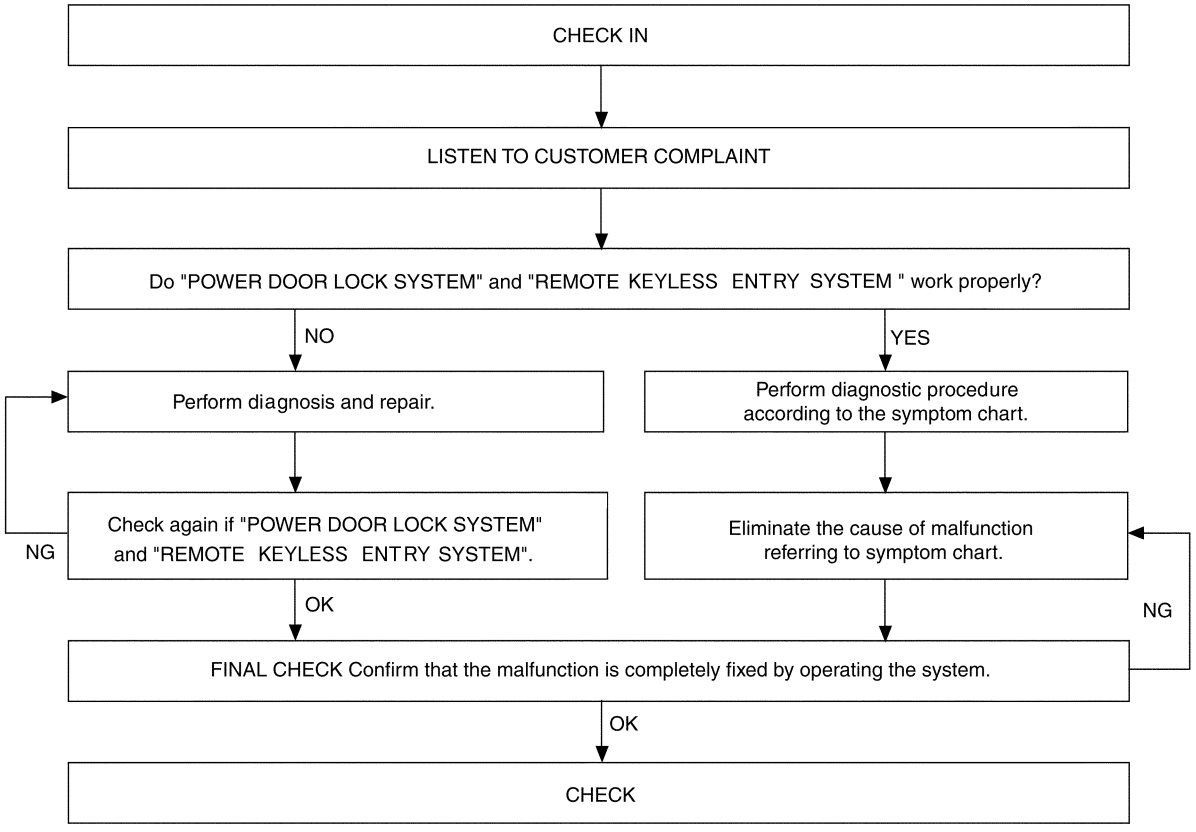
8. Touch “THEFT WARNING SYSTEM” on the “SELECT TEST ITEM” screen.
   - WORK SUPPORT, DATA MONITOR and ACTIVE TEST are available for the vehicle security system.



Trouble Diagnosis

AIS001EW

WORK FLOW



LIIA0123E

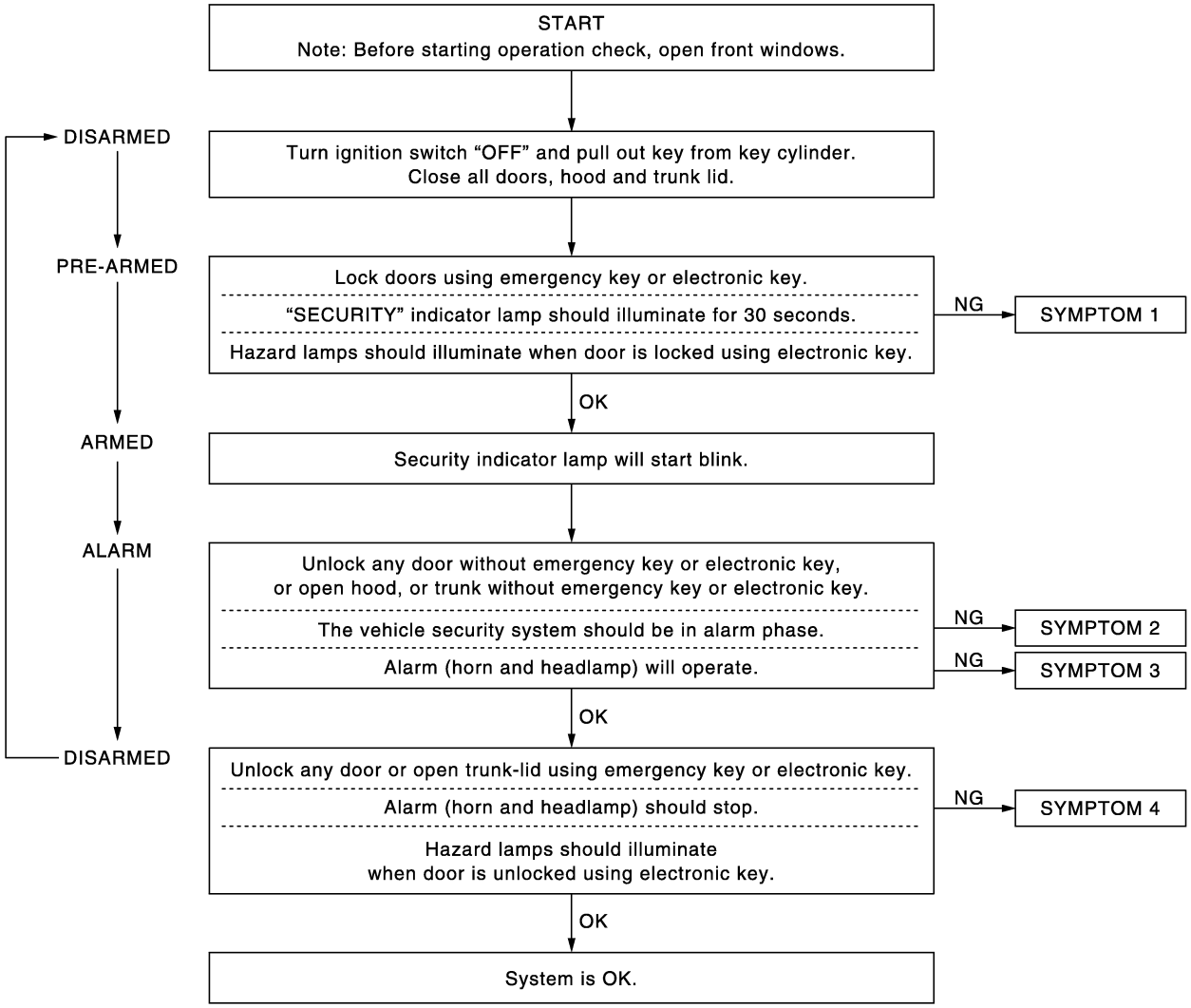
- “POWER DOOR LOCK SYSTEM” Diagnosis, refer to BL-18, "POWER DOOR LOCK SYSTEM" .
- “REMOTE KEYLESS ENTRY SYSTEM” Diagnosis, refer to BL-51, "REMOTE KEYLESS ENTRY SYSTEM" .

Preliminary Check

AIS001EX

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.

Symptom Chart

AIS001EY

PROCEDURE / SYMPTOM			Diagnostic procedure
1	Vehicle security system cannot be set by ····	All items ● Door out side key, ● Electronic key	Diagnostic Procedure 1 (Door, hood and trunk room lamp switch check) Refer to BL-144, "Diagnostic Procedure 1" .
			Diagnostic Procedure 3 (Door unlock sensor check) Refer to BL-147, "Diagnostic Procedure 3" .
			Diagnostic Procedure 5 (Trunk lid key unlock signal check) Refer to BL-153, "Diagnostic Procedure 5" .
			Diagnostic Procedure 8 (ACC power supply check) Refer to BL-157, "Diagnostic Procedure 8" .
			If the above systems are “OK”, replace BCM.
		Door outside key	Diagnostic Procedure 4 (Door key cylinder switch check) Refer to BL-150, "Diagnostic Procedure 4" .
			If the above systems are “OK”, check driver door control unit (LCU01).
	Security indicator does not turn ON.		Diagnostic Procedure 2 (Security indicator lamp check) Refer to BL-146, "Diagnostic Procedure 2" .
			If the above systems are “OK”, replace BCM.
2	*1 Vehicle security system does not alarm when ····	Any door is opened.	Diagnostic Procedure 1 (Door, hood and trunk room lamp switch check) Refer to BL-144, "Diagnostic Procedure 1" .
			If the above systems are “OK”, replace BCM.
		Any door is unlocked without using electronic key	Diagnostic Procedure 3 (Door unlock sensor check) Refer to BL-147, "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.	Horn alarm	Diagnostic Procedure 6 (Theft warning horn alarm check) Refer to BL-154, "Diagnostic Procedure 6" .
			Check horn system. Refer to WW-31, "HORN" .
			If the above systems are “OK”, replace BCM.
		Headlamp alarm	Diagnostic Procedure 7 (Headlamp alarm check) Refer to BL-156, "Diagnostic Procedure 7" .
			If the above systems are “OK”, replace BCM.
4	Vehicle security system cannot be canceled by ····	Door outside key	Diagnostic Procedure 4 (Door key cylinder switch check) Refer to BL-150, "Diagnostic Procedure 4" .
			If the above systems are “OK”, check driver door control unit (LCU01).
		Trunk lid key	Diagnostic Procedure 5 (Trunk lid key cylinder switch check) Refer to BL-153, "Diagnostic Procedure 5" .
			If the above systems are “OK”, replace BCM.

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

Diagnostic Procedure 1

AIS001EZ

1 – 1 CHECK DOOR SWITCH

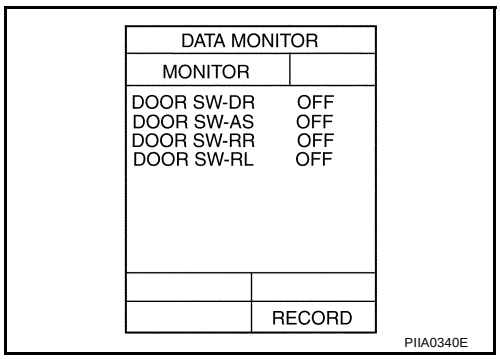
1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

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

When door is open : DOOR SW ON

When door is closed : DOOR SW OFF



Without CONSULT-II

Check all door switches in Switch monitor mode.

Refer to Remote keyless entry system, BL-79, "SWITCH MONITOR"

.

OK or NG

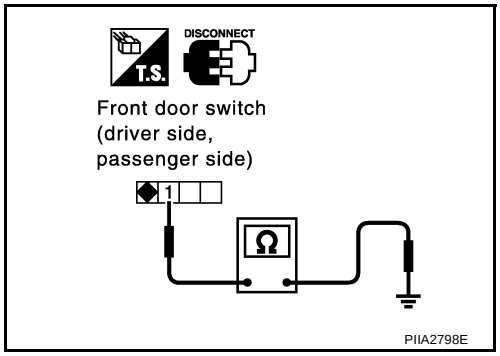
OK >> Door switch is OK.

NG >> GO TO 2.

2. CHECK DOOR SWITCH

1. Turn ignition switch OFF.
2. Disconnect door switch connector.
3. Check continuity between following terminals and ground.

Door switch connector		Terminal	Condition	Continuity
Front door switch	driver side: B20	1 – Case ground	Pressed	No
	passenger side: B220		Repressed	Yes
Rear door switch	LH: D62	1 – 2	Pressed	No
	RH: D82		Repressed	Yes

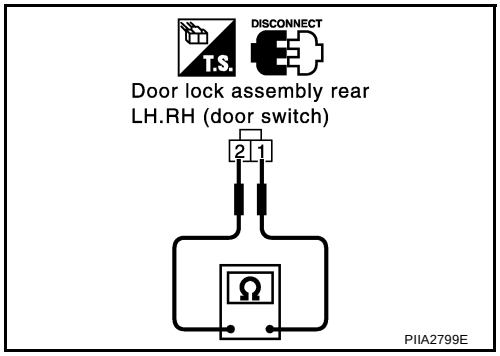


OK or NG

OK >> Check the following. Repair or replace following item, when there is a malfunction.

- Door switch ground condition (front door) or door switch ground circuit (rear door)
- Harness for open or short between door switch and BCM

NG >> Replace door switch.



1 – 2 CHECK HOOD SWITCH

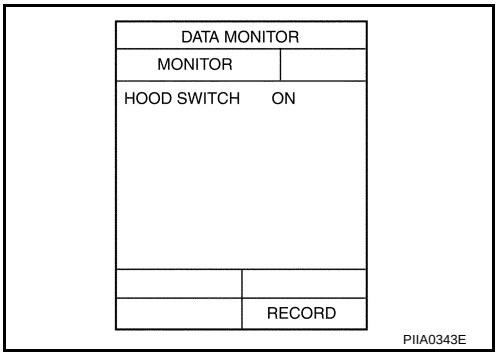
1. CHECK HOOD SWITCH INPUT SIGNAL

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-79, "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

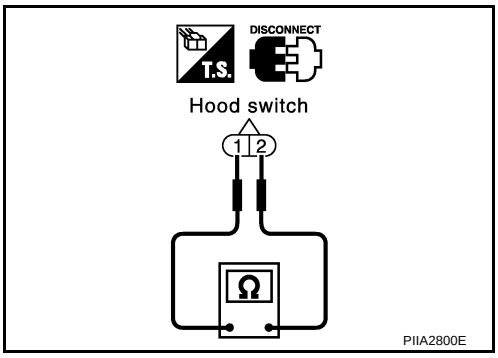
OK >> GO TO 3.

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.

Connector	Terminal	Condition	Continuity
E54	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.

1 – 3 CHECK TRUNK ROOM LAMP SWITCH

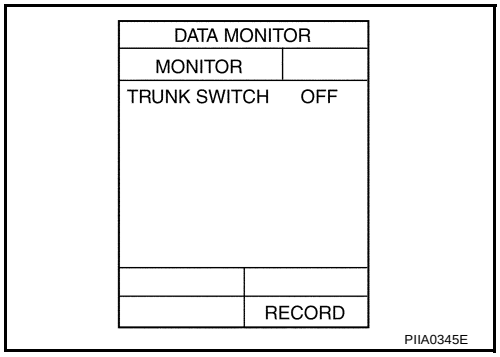
1. CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL

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 room lamp switch in Switch monitor mode.

Refer to Remote keyless entry system, BL-79, "SWITCH MONITOR"

.

OK or NG

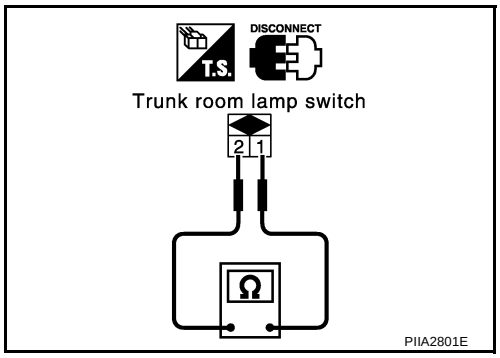
OK >> Trunk room lamp switch is OK.

NG >> GO TO 2.

2. CHECK TRUNK ROOM LAMP SWITCH

1. Turn ignition switch OFF.
2. Disconnect trunk room lamp switch connector.
3. Check continuity between trunk room lamp switch terminals.

Connector	Terminal	Condition	Continuity
B266	1 – 2	Closed	No
		Open	Yes



OK or NG

OK >> Check the following. Repair or replace following item, when there is a malfunction.

- Trunk room lamp switch ground circuit
- Harness for open or short between trunk room lamp switch and BCM

NG >> Replace trunk room lamp switch.

Diagnostic Procedure 2

AIS001F0

CHECK SECURITY INDICATOR LAMP

1. INDICATOR LAMP ACTIVE TEST

With CONSULT–II

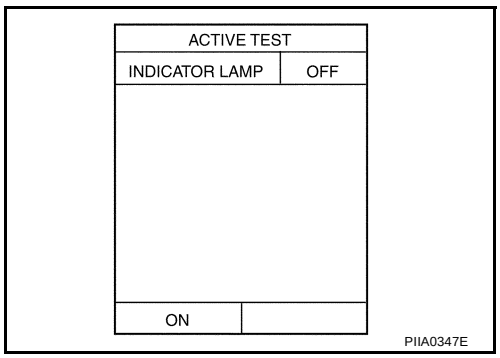
Check “INDICATOR LAMP” in “ACTIVE TEST” mode with CONSULT–II.

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.

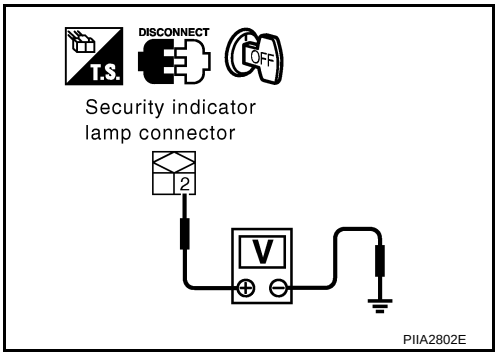
OK or NG

OK >> GO TO 3.
NG >> Replace indicator lamp.

3. CHECK POWER SUPPLY CIRCUIT FOR INDICATOR LAMP

1. Disconnect security indicator lamp connector.
2. Check voltage between indicator lamp connector M73 terminal 2 (Y/G) and ground.

2 (Y/G) – Ground : Battery voltage



OK or NG

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

Diagnostic Procedure 3

AIS001F1

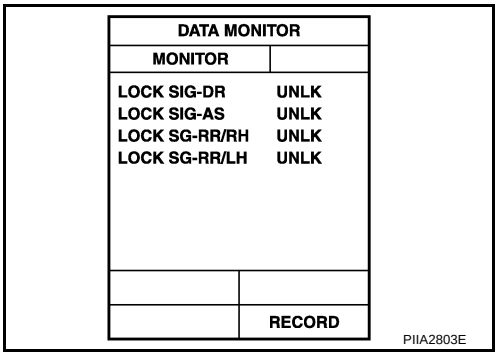
CHECK DOOR UNLOCK SENSOR

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-79, "SWITCH MONITOR"
.

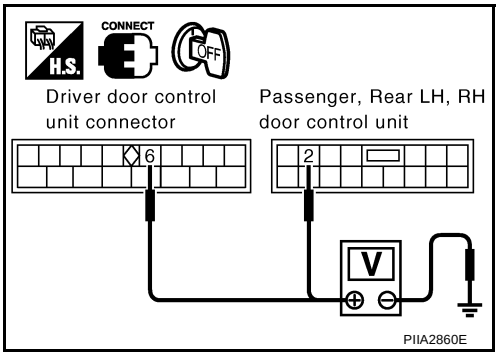
OK or NG

OK >> Door unlock sensor is OK.
NG >> GO TO 2. (Diagnose the malfunctioning door parts in accordance with the following charts.)

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 and ground.

Door control unit connector		Terminal (Wire color)	Voltage (V)
Front door	Driver side: D8	6 (G/Y) – ground	Approx. 5
	Passenger side: D38	2 (G/Y) – ground	
Rear door	LH: D58		
	RH: D78		



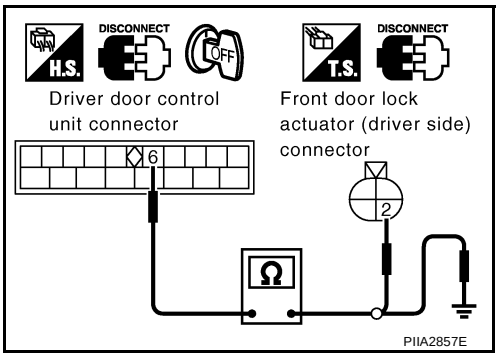
OK or NG

OK >> GO TO 3.
NG >> Replace malfunctioning door control unit.

3. CHECK DOOR UNLOCK SENSOR SIGNAL CIRCUIT

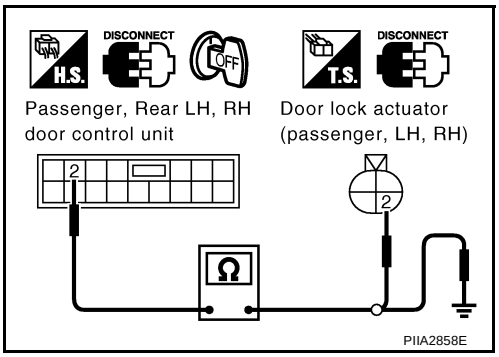
1. Disconnect door control unit connector.
2. Check continuity between door control unit and door lock actuator (door unlock sensor).

Connector	Terminal (wire color)	Connector	Terminal (Wire color)	Continuity
Driver side: D8	6 (G/Y)	D11	2 (G/Y)	Should exist
Passenger side: D38	2 (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) – ground	Should not exist
Passenger side: D38	2 (G/Y) – ground	
Rear LH: D58		
Rear RH: D78		



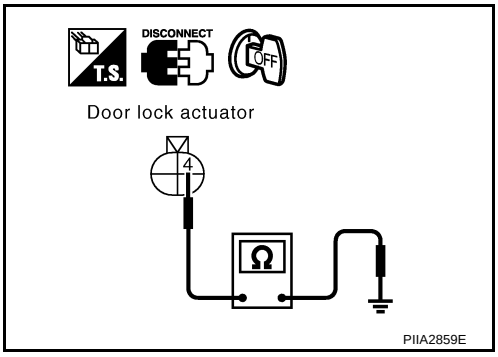
OK or NG

OK >> GO TO 4.
NG >> Repair or replace malfunctioning 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) – ground	Should exist
Passenger side: D41		
Rear LH: D61		
Rear RH: D81		



OK or NG

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

Diagnostic Procedure 4

AIS001F2

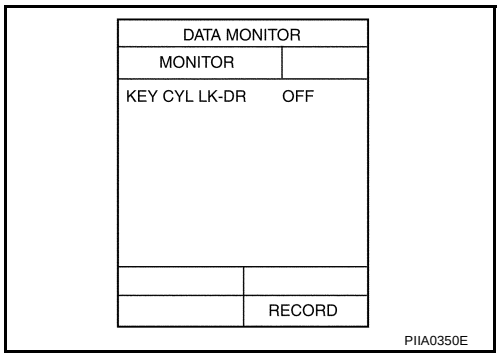
4–1 CHECK DOOR KEY CYLINDER LOCK SWITCH

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.

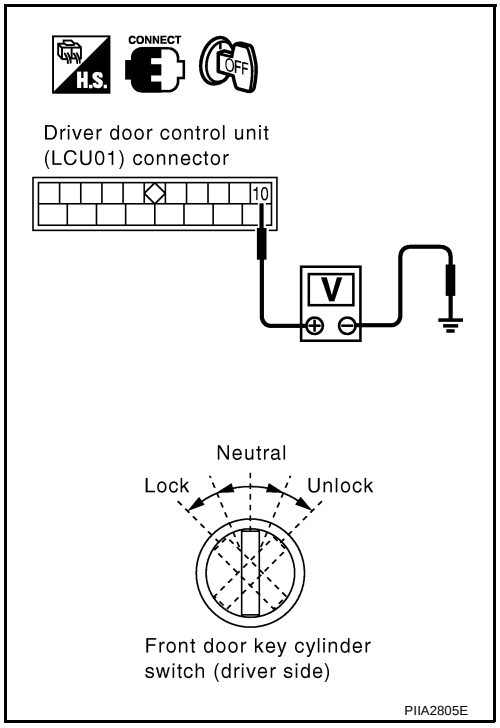
“KEY CYL LK-DR” should be ON when key inserted in door key cylinder was turned to lock.



Without CONSULT–II

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

Connector	Terminal (wire color)		Key position	Voltage (V)
	(+)	(–)		
D8	10(GY)	Ground	Neutral/Unlock	Approx.5
			Lock	0



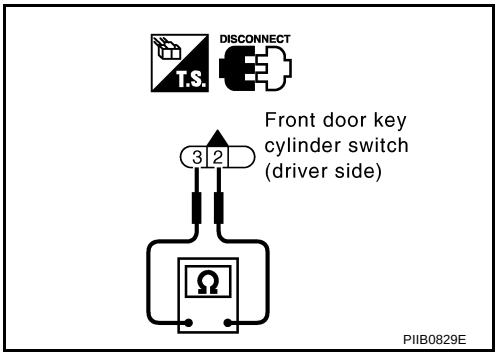
OK or NG

OK >> Front door key cylinder switch (driver side) (lock) is OK.
NG >> GO TO 2.

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.

Connector	Terminal	Condition	Continuity
D12	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).

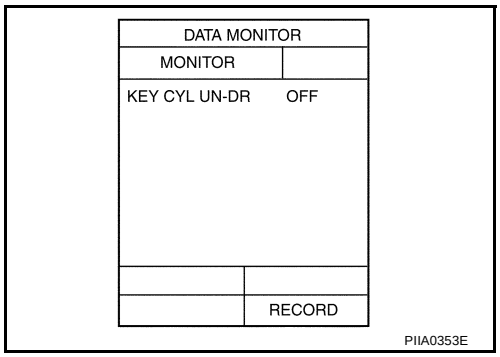
4–2 CHECK DOOR KEY CYLINDER UNLOCK SWITCH

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.

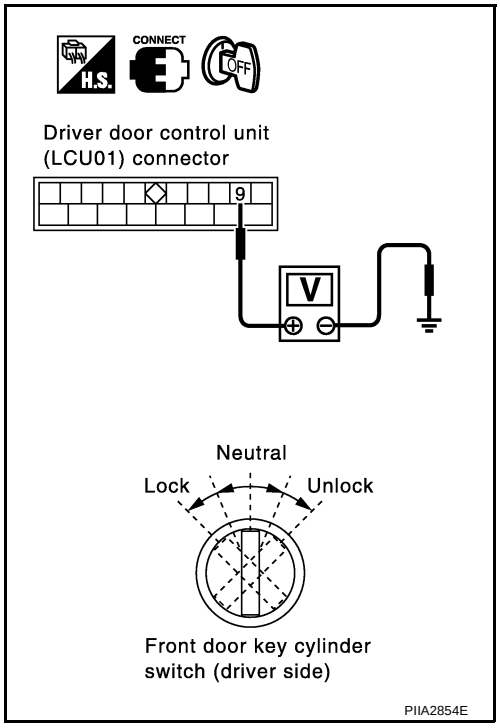
“KEY CYL UN–DR” should be ON when key inserted in driver door key cylinder was turned to unlock.



Without CONSULT–II

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

Connector	Terminal (wire color)		Key position	Voltage (V)
	(+)	(–)		
D8	9(PU/W)	Ground	Neutral/Lock	Approx.5
			Unlock	0



OK or NG

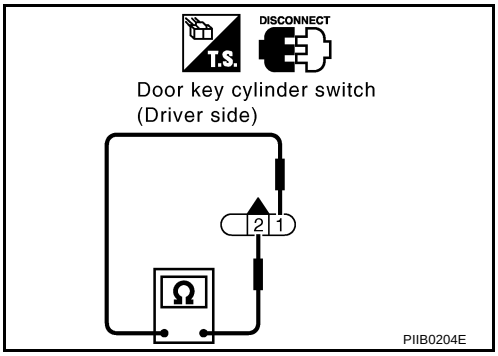
OK >> Front door key cylinder switch (driver side) (unlock) is OK.

NG >> GO TO 2.

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.

Connector	Terminal	Condition	Continuity
D12	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

AIS001F3

CHECK TRUNK LID KEY UNLOCK SIGNAL

1. CHECK TRUNK KEY CYLINDER SWITCH INPUT SIGNAL (UNLOCK SIGNAL)

With CONSULT–II

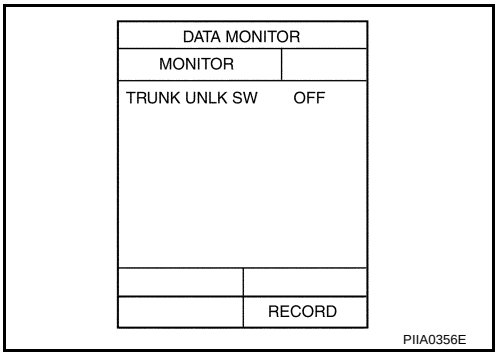
Check trunk lid key cylinder switch “TRUNK UNLK SW” in “DATA MONITOR” mode with CONSULT–II.

- 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-79, "SWITCH MONITOR"
.

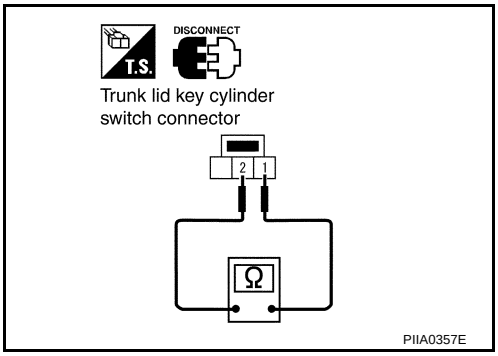
OK or NG

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.

Connector	Terminals	Condition	Continuity
B260	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.

Diagnostic Procedure 6

AIS001F4

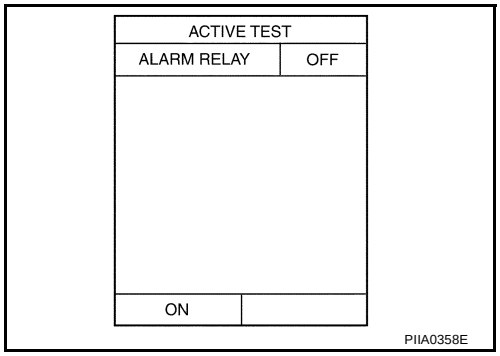
CHECK THEFT WARNING HORN ALARM

1. CHECK VEHICLE SECURITY HORN ALARM OPERATION

With CONSULT–II

- Check security horn relay “ALARM RELAY” in “ACTIVE TEST” mode with CONSULT–II.
- Perform operation shown on display.

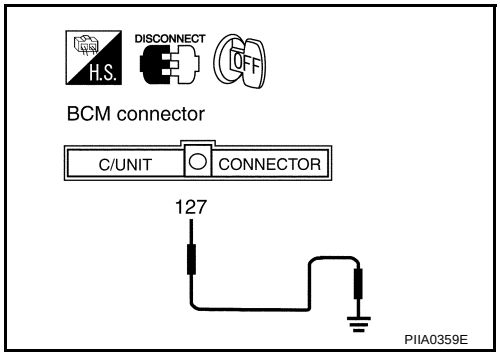
Theft warning horn alarm should operate.



Without CONSULT–II

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Apply ground to BCM connector E204 terminal 127 (P/L).

Does security horn alarm activate?



OK or NG

OK >> Security horn alarm is OK.
NG >> GO TO 2.

2. CHECK SECURITY HORN RELAY

Check security horn relay condition.

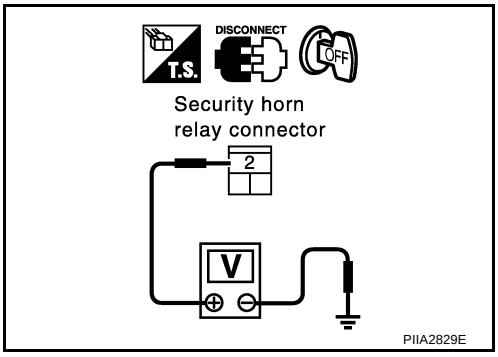
OK or NG

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

3. CHECK POWER SUPPLY FOR SECURITY HORN RELAY

1. Turn ignition switch OFF.
2. Disconnect security horn relay connector.
3. Check voltage between security horn relay connector E77 terminal 2 (Y/B) and ground.

2 (Y/B) – Ground : Battery voltage



OK or NG

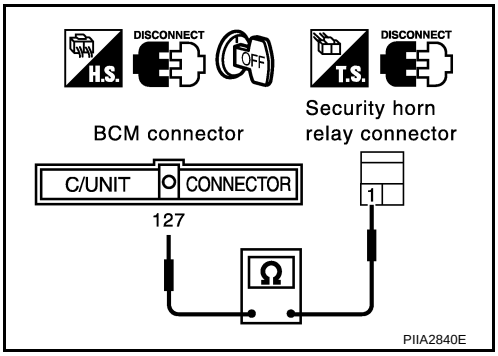
OK >> GO TO 4.
NG >> Check the following.

- 10A fuse [No. 78, located in the fuse, fusible link and relay block (J/B)]
- Harness for open or short between security horn relay and fuse

4. CHECK SECURITY HORN RELAY CIRCUIT

1. Disconnect BCM and security horn relay connector.
2. Check continuity between BCM connector E204 terminal 127 (P/L) and security horn relay connector E77 terminal 1 (P/L).

127 (P/L) – 1 (P/L) : Continuity should exist.



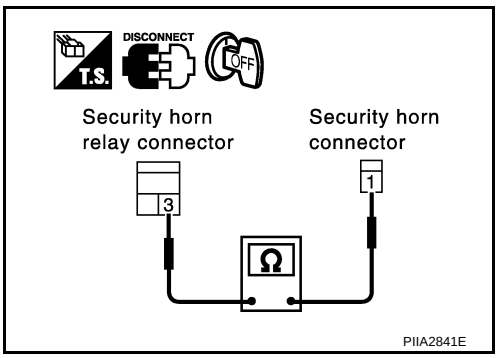
OK or NG

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

5. CHECK SECURITY HORN RELAY CIRCUIT

1. Disconnect security horn connector.
2. Check continuity between security horn relay connector E77 terminal 3 (P/B) and security horn connector E30 terminal 1 (P/B).

3 (P/B) – 1 (P/B) : Continuity should exist.



OK or NG

OK >> Replace security horn.
NG >> Repair or replace harness.

Diagnostic Procedure 7

AIS001F5

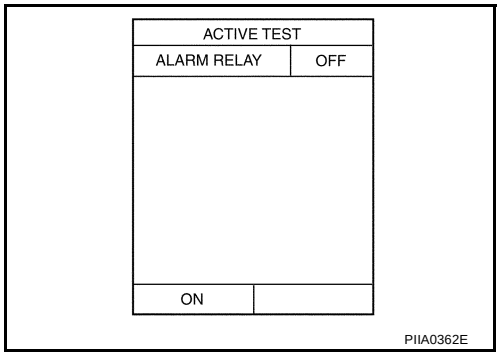
CHECK THEFT WARNING HEADLAMP ALARM

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.

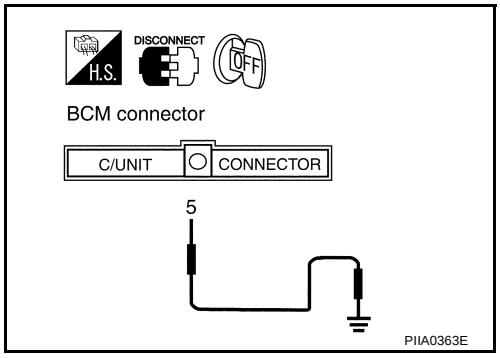
Theft warning headlamp alarm should operate.



Without CONSULT–II

1. Disconnect BCM connector.
2. Apply ground to BCM connector M4 terminal 5 (W/PU).

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-6, "HEADLAMP (FOR USA)" or LT-44, "HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -" .

Diagnostic Procedure 8

AIS002J3

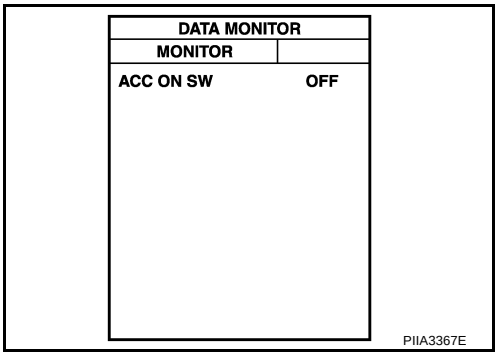
CHECK ACC POWER SUPPLY

1. CHECK ACC POWER

With CONSULT-II

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

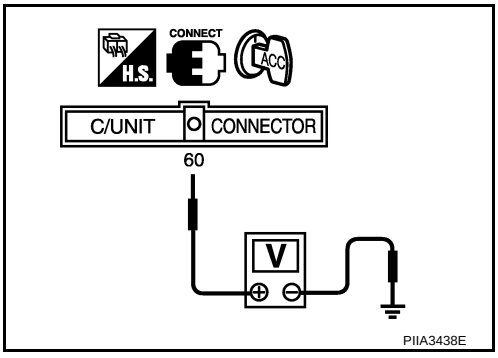
Monitor item	Condition	
ACC ON SW	Ignition switch ACC or ON position	: ON
	Ignition switch OFF position	: OFF



Without CONSULT-II

Check voltage between BCM connector and ground.

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



OK or NG

OK >> ACC power is OK.

NG >> Check the following.

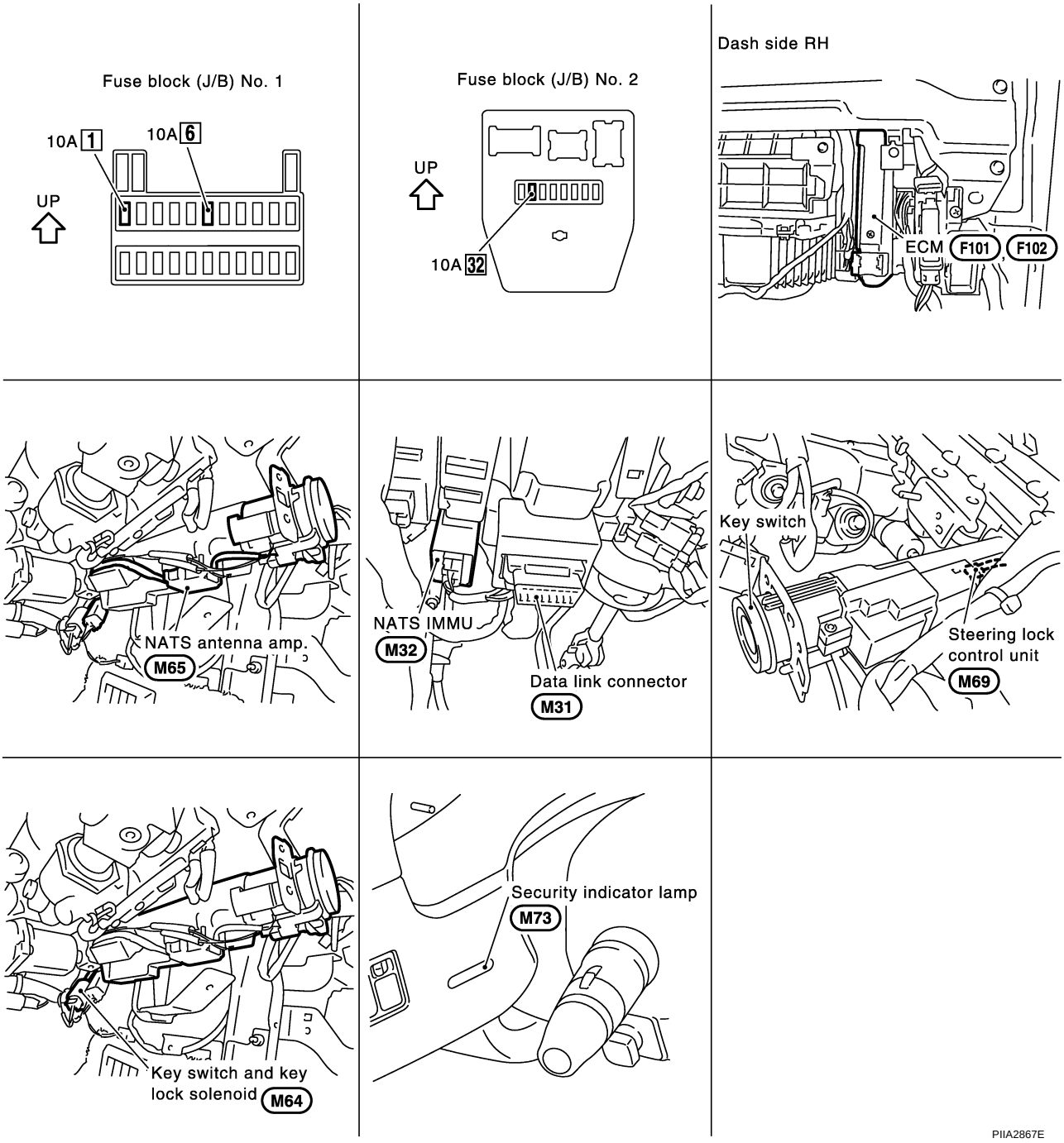
- 10A fuse [No. 21, located in fuse block (J/B)No.1]
- Harness for open or short between BCM and fuse.

ELECTRONIC KEY SYSTEM

PFP:80561

Component Parts and Connector Location

AIS001QD



System Description

AIS0029H

- Every electronic key (including transponder) has its own key ID No. However, only an electronic key with the key ID registered in the NATS IMMU 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 for 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 IMMU, 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) shall be 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 and remote controller ID code for the key equipped on the vehicle have already been registered at factory.
- When conducting registration of key ID at repair, part replacement, and electronic key addition, even the registered ignition (standard) key shall be registered again. Therefore, collect all the keys from the vehicle owner.

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

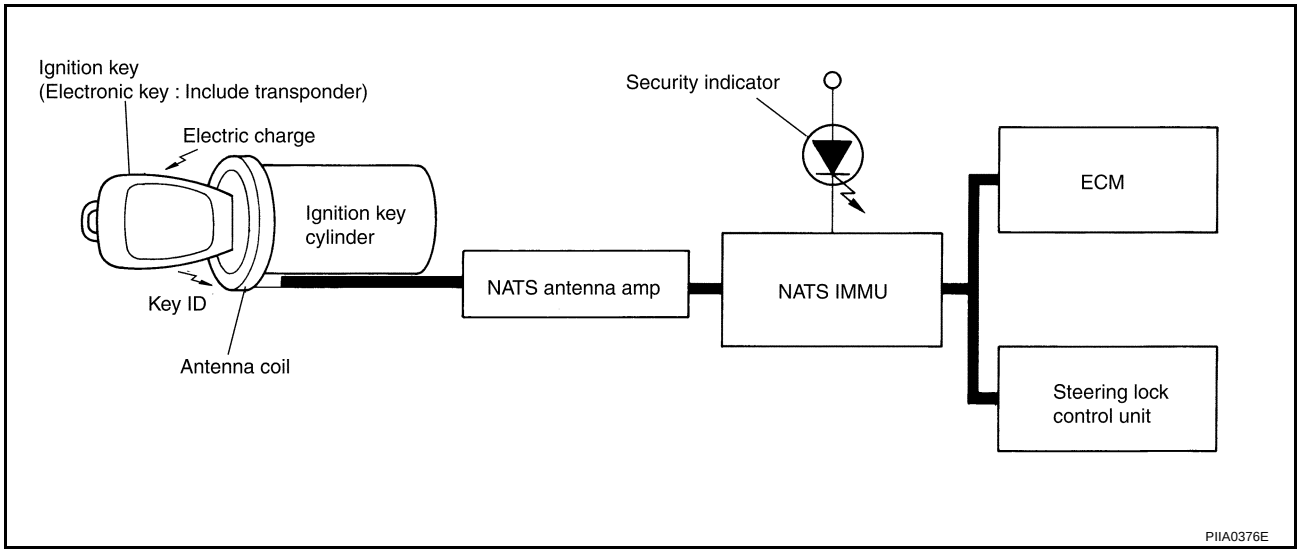
Operation 1 (Insert the Key into the Ignition Key Cylinder)

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)

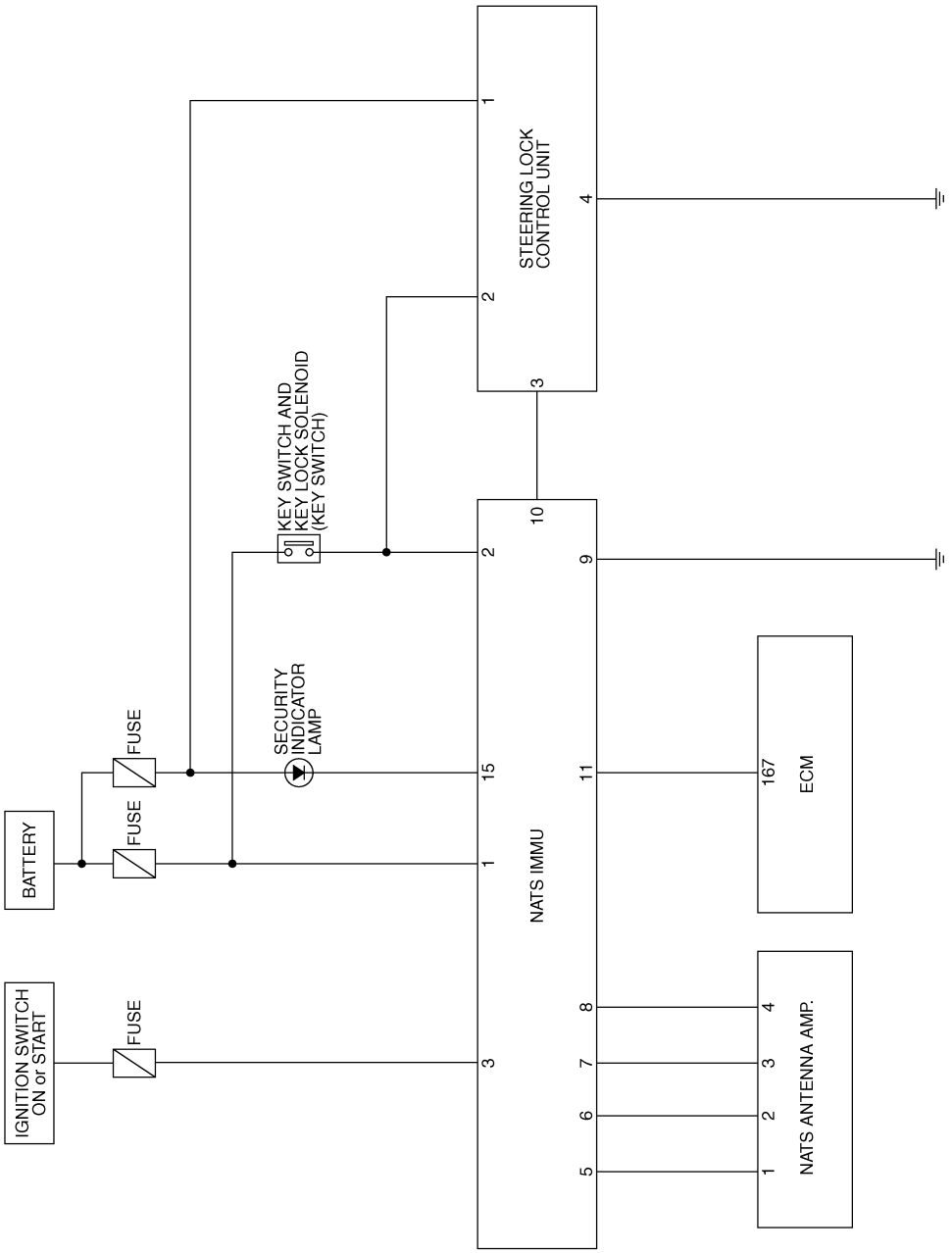
1. Return the electronic key to the LOCK position of the steering system lock.
2. When the key is removed, the electronic key solenoid valve in the key cylinder returns to inhibit the key from turning. In this case, the steering lock control unit processes the key switch ON → OFF signal by itself to 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.



Schematic

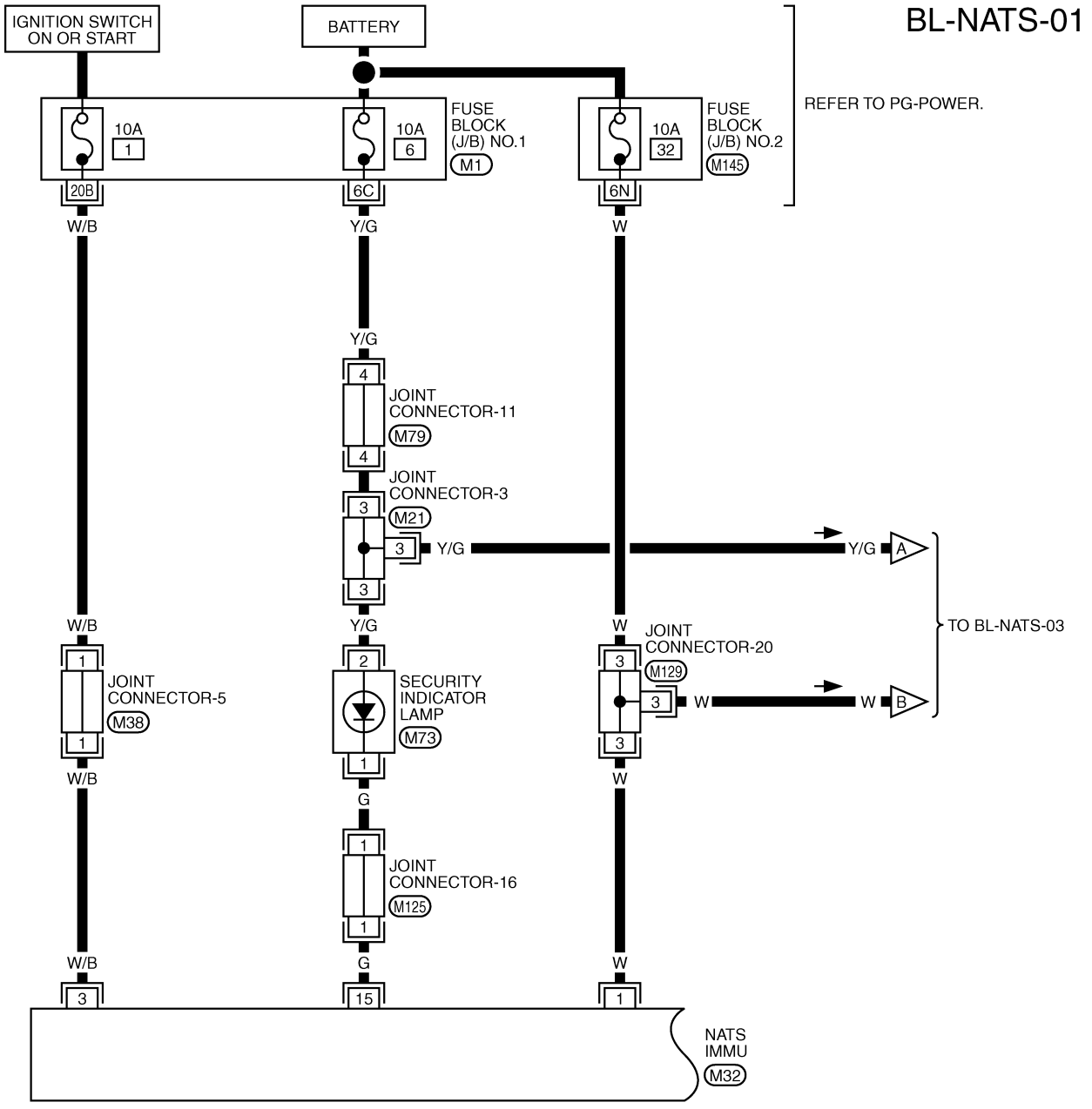
AIS001QF

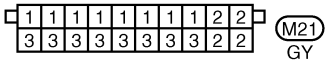


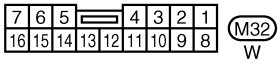
TIWA0207E

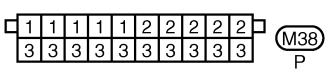
Wiring Diagram — NATS —

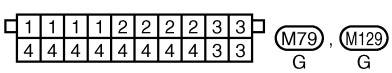
AIS001QG

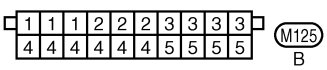












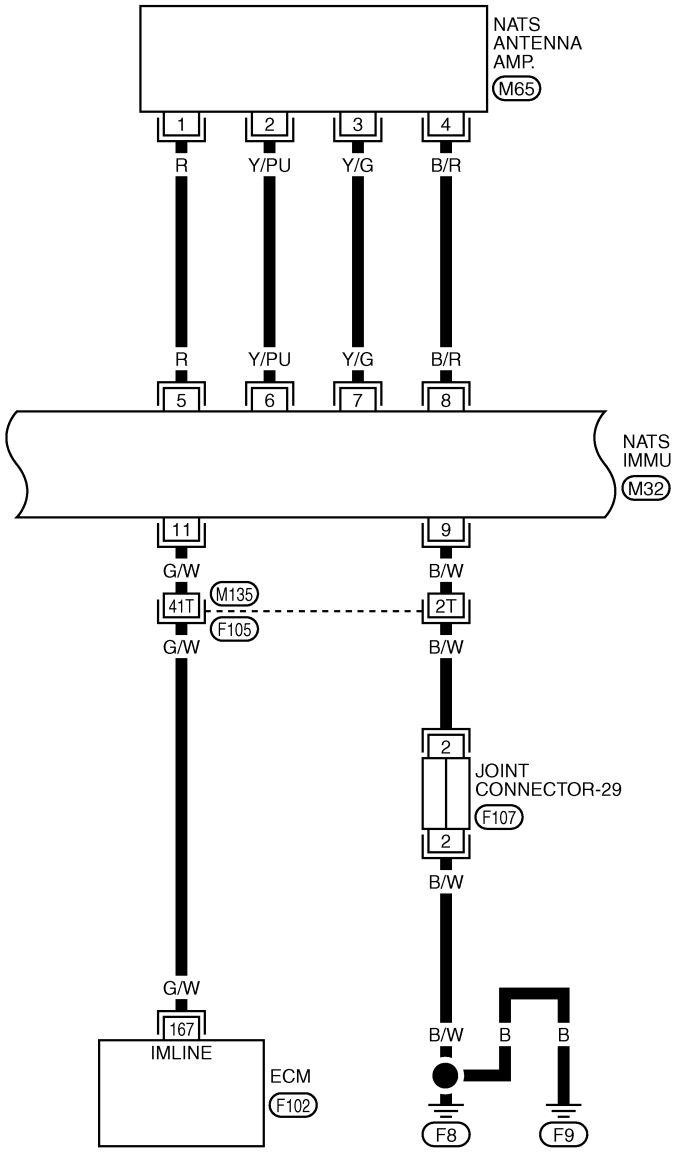
REFER TO THE FOLLOWING.

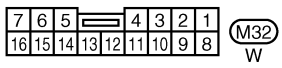
M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

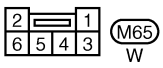
M145 -FUSE BLOCK-JUNCTION BOX (J/B) NO.2

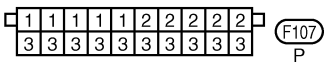
TIWA0208E

BL-NATS-02









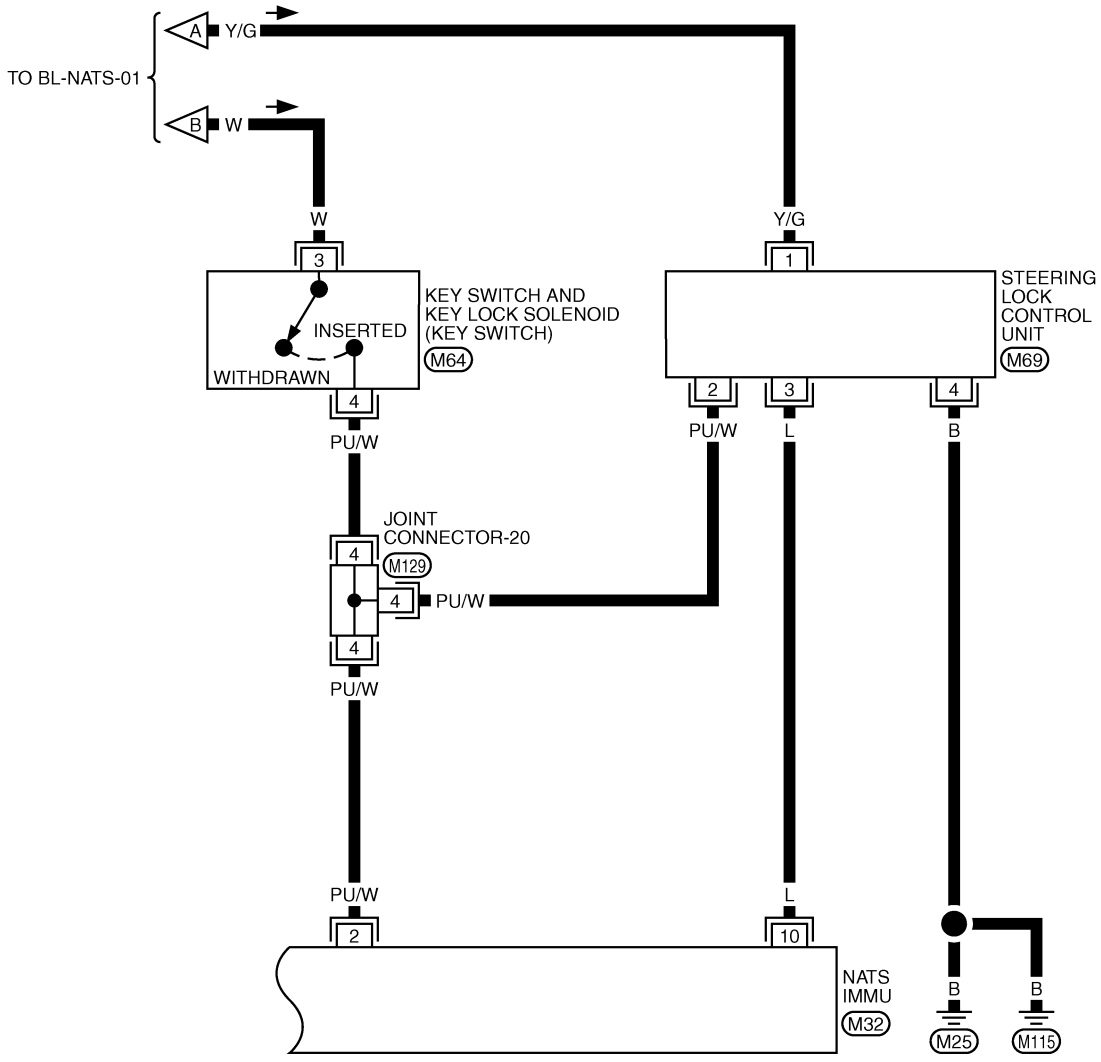
REFER TO THE FOLLOWING.

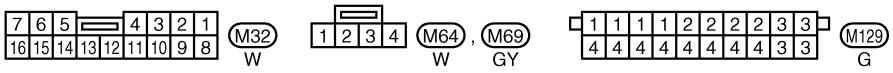
F105 -SUPER MULTIPLE JUNCTION (SMJ)

F102 -ELECTRICAL UNITS

TIWA0209E

BL-NATS-03





TIWA0210E

Terminals and Reference Value for Steering Lock Control Unit

AIS0029I

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
1	Y/G	Battery power supply	—	Battery voltage
2	PU/W	Key switch	Key inserted (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
3	L	NATS IMMU	Key inserted	Just after inserting electronic key to key cylinder: Point of tester should move
4	B	Ground	—	0

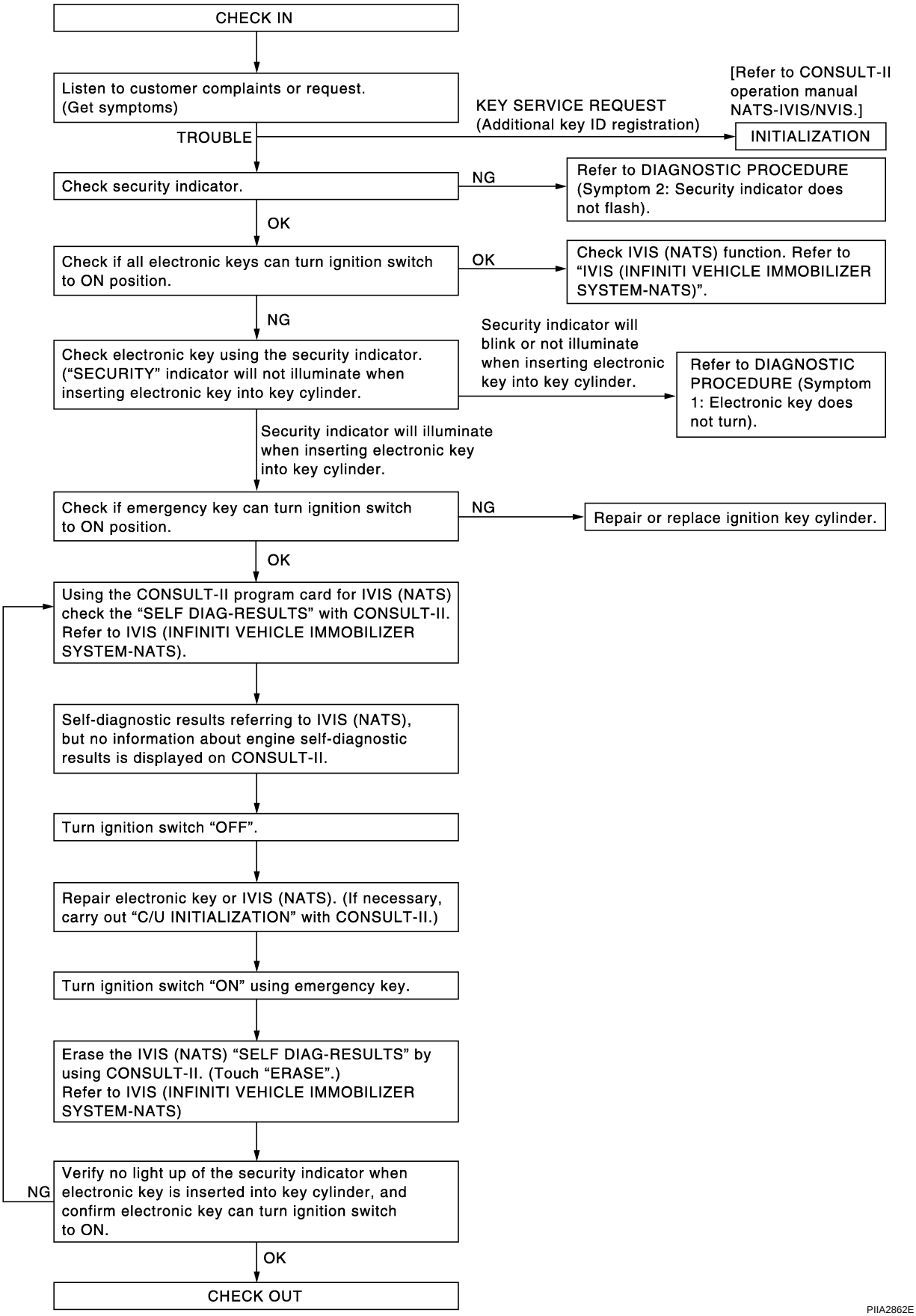
Terminals and Reference Value for NATS IMMU

AIS0029J

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
1	W	Battery power supply	—	Battery voltage
2	PU/W	Key switch	Key inserted (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
3	W/B	Ignition switch	Ignition switch ON or START position	Battery voltage
5	R	NATS antenna amp.	key inserted (key switch OFF → ON)	0 → 5 (for 3 seconds)
6	Y/PU	NATS antenna amp.	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.	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/W	Ground	—	0
10	L	Steering lock control unit	Key inserted	Just after inserting electronic key to key cylinder: Point of tester should move
11	G/W	ECM	—	—
15	G	Security indicator lamp	Goes OFF → illuminates (every 2.4 seconds)	Battery voltage → 0

Work Flow

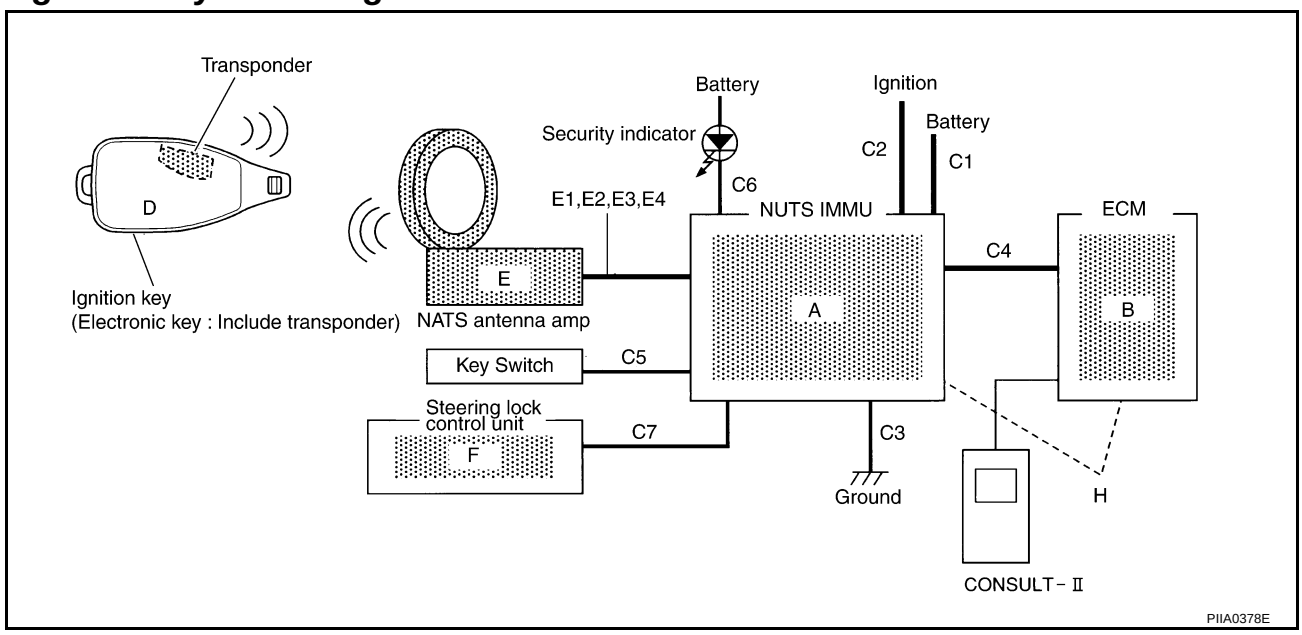
AIS0029K



PIIA2862E

Diagnostic System Diagram

AIS0029L



Symptom Chart

AIS0029M

SYMPTOM 1: ELECTRONIC KEY DOES NOT TURN

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-168
Security indicator turns OFF with Electronic key inserted.	Diagnostic Procedure 2	NATS IMMU	A	BL-169
		Steering lock control unit	F	
		Harness system	C7	
	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-170
		Open circuit in the battery power supply line to the security indicator	—	
		NATS IMMU	A	
		Harness system	C6	

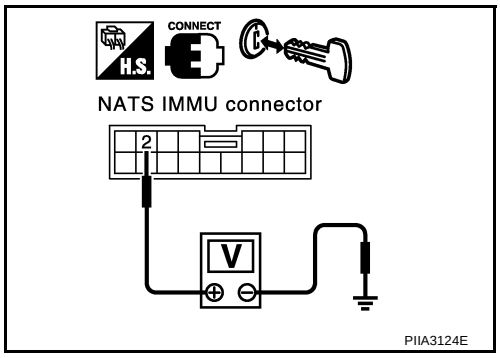
Diagnostic Procedure 1

AIS0029N

1. CHECK ELECTRONIC KEY INSERT SIGNAL

Check voltage between NATS IMMU connector M32 terminal 2 (PU/W) and ground.

Terminals	Condition	Voltage
2 (PU/W) – ground	Electronic key removed from ignition key cylinder	0V
	Electronic key inserted in ignition key cylinder	Battery voltage



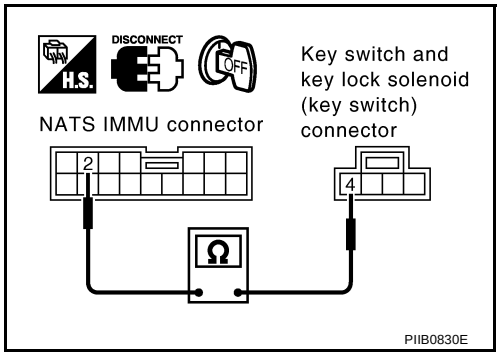
OK or NG

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 (PU/W) and key switch and key lock solenoid (key switch) connector M64 terminal 4 (PU/W).

Continuity should exist.



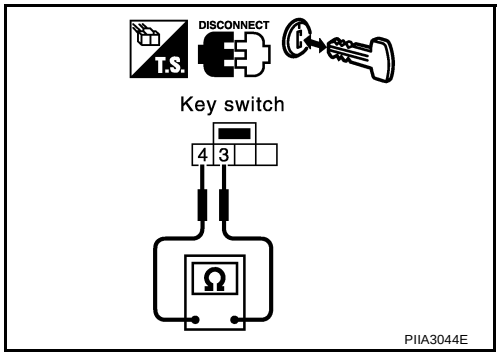
OK or NG

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

3. CHECK KEY SWITCH

Check continuity between key switch terminals.

Connector	Terminal	Condition of key switch	Continuity
M64	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.

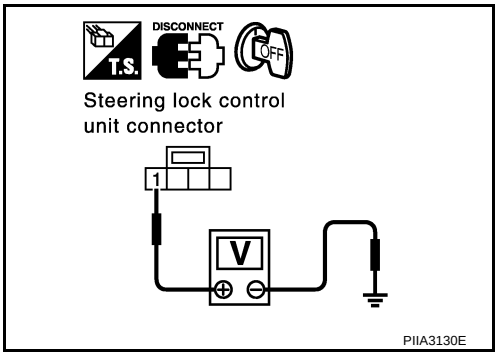
Diagnostic Procedure 2

AIS0029O

1. CHECK POWER SUPPLY CIRCUIT FOR STEERING LOCK CONTROL UNIT

- Turn ignition switch OFF.
- Disconnect steering lock control unit connector.
- Check voltage between steering lock control unit connector M69 terminal 1 (Y/G) and ground.

1 (Y/G) – Ground : Battery voltage



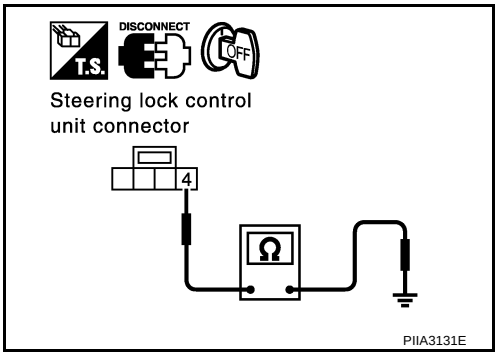
OK or NG

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 (B) and ground.

4 (B) – Ground : Continuity should exist.



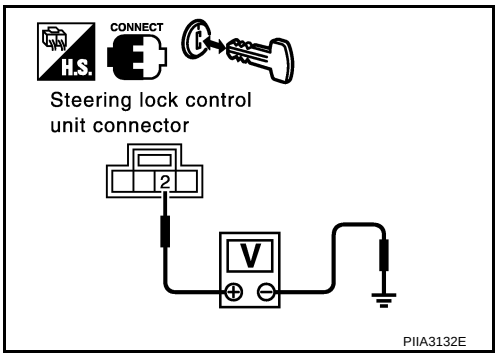
OK or NG

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

3. CHECK ELECTRONIC KEY INSERT SIGNAL

1. Connect steering lock control unit connector.
2. Check voltage between steering lock control unit connector M69 terminal 2 (PU/W) and ground.

Terminals	Condition	Voltage
2 (PU/W) – ground	Electronic key removed from ignition key cylinder	0V
	Electronic key inserted in ignition key cylinder	Battery voltage



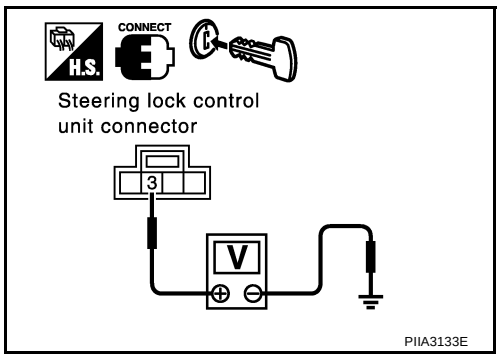
OK or NG

OK >> GO TO 4.
NG >> Check the following.
- Check harness for open or short between key switch and steering lock control unit.

4. CHECK STEERING LOCK CONTROL UNIT

Insert the electronic key into the ignition key cylinder, and immediately check voltage between steering control unit connector M69 terminal 3 (L) and ground.

Terminals	Condition	Voltage
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.

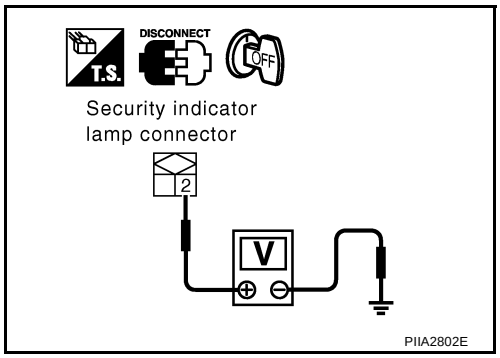
Diagnostic Procedure 3

AIS0029P

1. CHECK SECURITY INDICATOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the security indicator lamp connector.
3. Check voltage between security indicator lamp connector M73 terminal 2 (Y/G) and ground.

2 (Y/G) – Ground : Battery voltage



OK or NG

OK >> GO TO 2.
NG >> Check harness for open or short between fuel block and security indicator lamp.

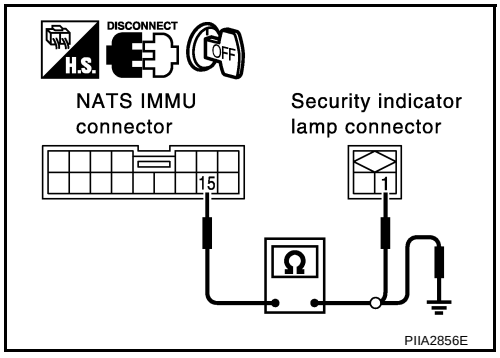
2. CHECK SECURITY INDICATOR GROUND CIRCUIT

1. Disconnect the NATS IMMU connector.
2. Check continuity between security indicator lamp connector M73 terminal 1 (G) and NATS IMMU connector M32 terminal 15 (G).

1 (G) – 15 (G) : Continuity should exist.

3. Check continuity between NATS IMMU connector M32 terminal 15 (G) and ground.

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



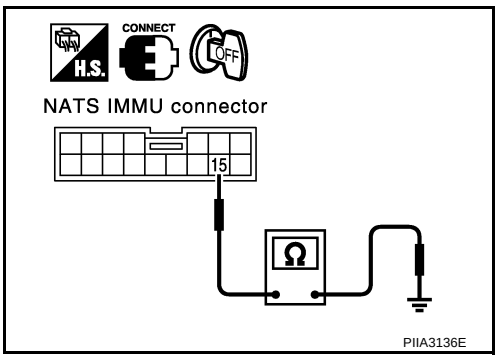
OK or NG

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

3. CHECK SECURITY INDICATOR GROUND SIGNAL

1. Connect NATS IMMU connector.
2. Check continuity between NATS IMMU connector M32 terminal 15 (G) and ground.

15 (G) – Ground : Continuity should exist intermittently.



OK or NG

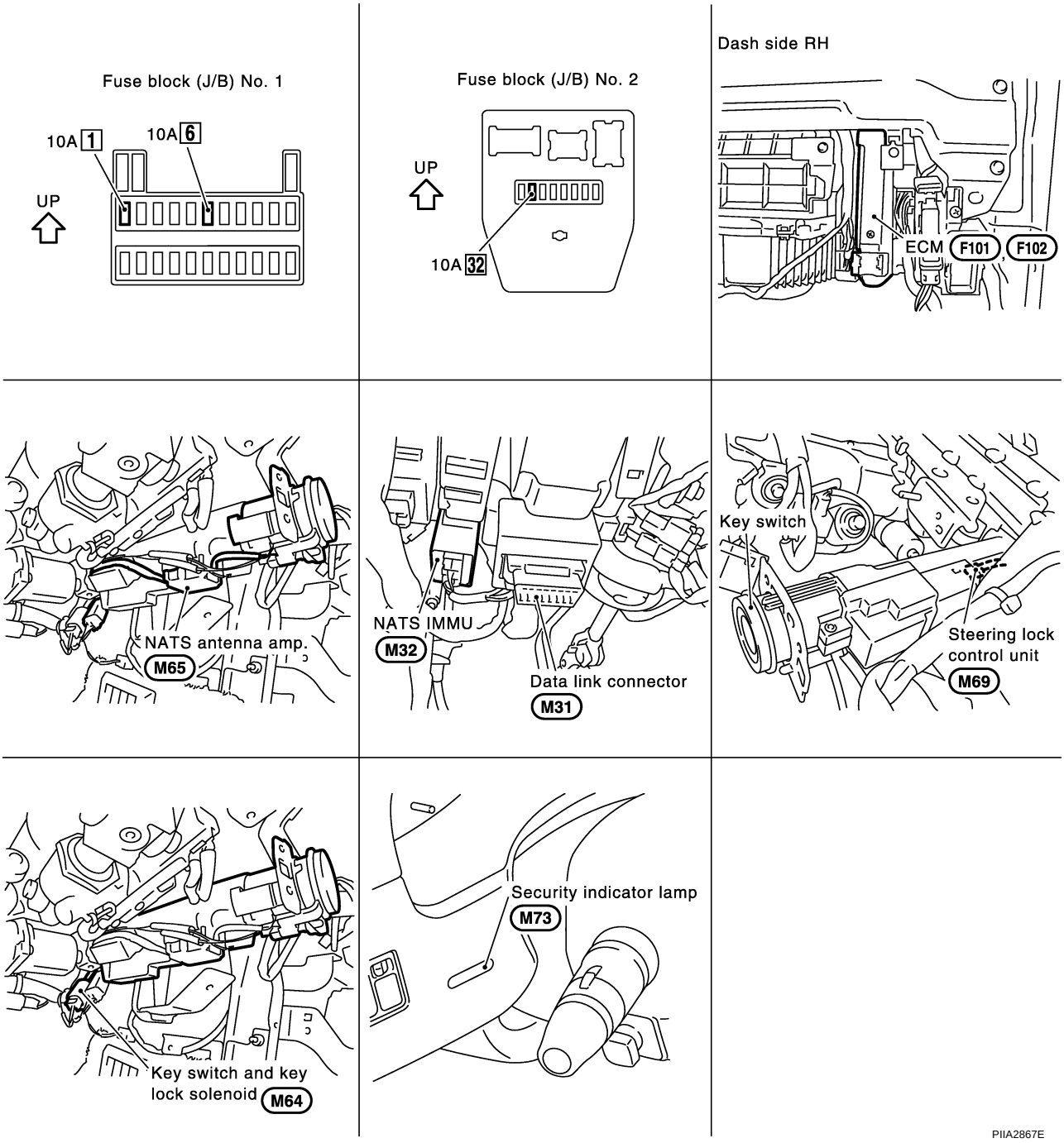
OK >> Replace security indicator lamp.
NG >> Replace NATS IMMU.

IVIS (INFINITI VEHICLE IMMOBILIZER SYSTEM-NATS)

PFP:28591

Component Parts and Harness Connector Location

AIS002AN



NOTE:
If customer reports a “No start” condition, request ALL ELECTRONIC KEY to be brought to the Dealer is case of a NATS malfunction.

System Description

AIS002AO

IVIS (Infinity Vehicle Immobilizer System – NATS) has the following immobilizer functions:

- Since only IVIS (NATS) electronic keys, whose ID nos. 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 pre-vented by IVIS (NATS).
  That is to say, 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 other 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.

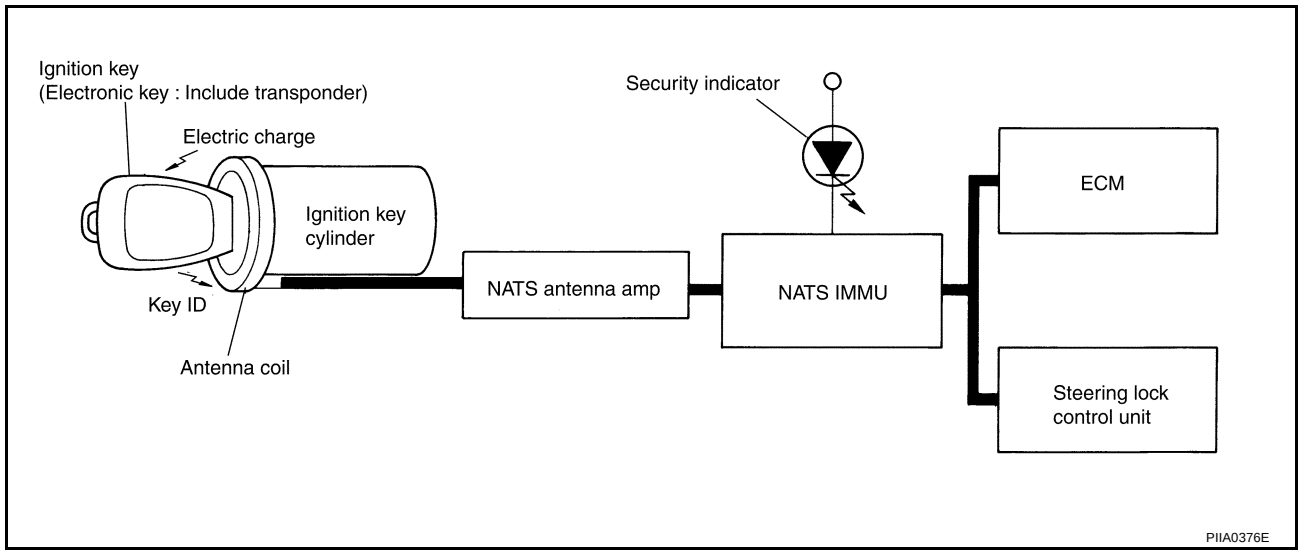
NOTE:
When servicing a malfunction of the IVIS (NATS) indicated by lighting up of Security Indicator Lamp or registering another IVIS (NATS) electronic key ID no., it is necessary to re-register original key identification. Therefore, be sure to receive ALL ELECTRONIC KEYS from vehicle owner.

System Composition

AIS002AP

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 $\rightarrow$ 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.

ECM Re-Communicating Function

AIS002AQ

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)

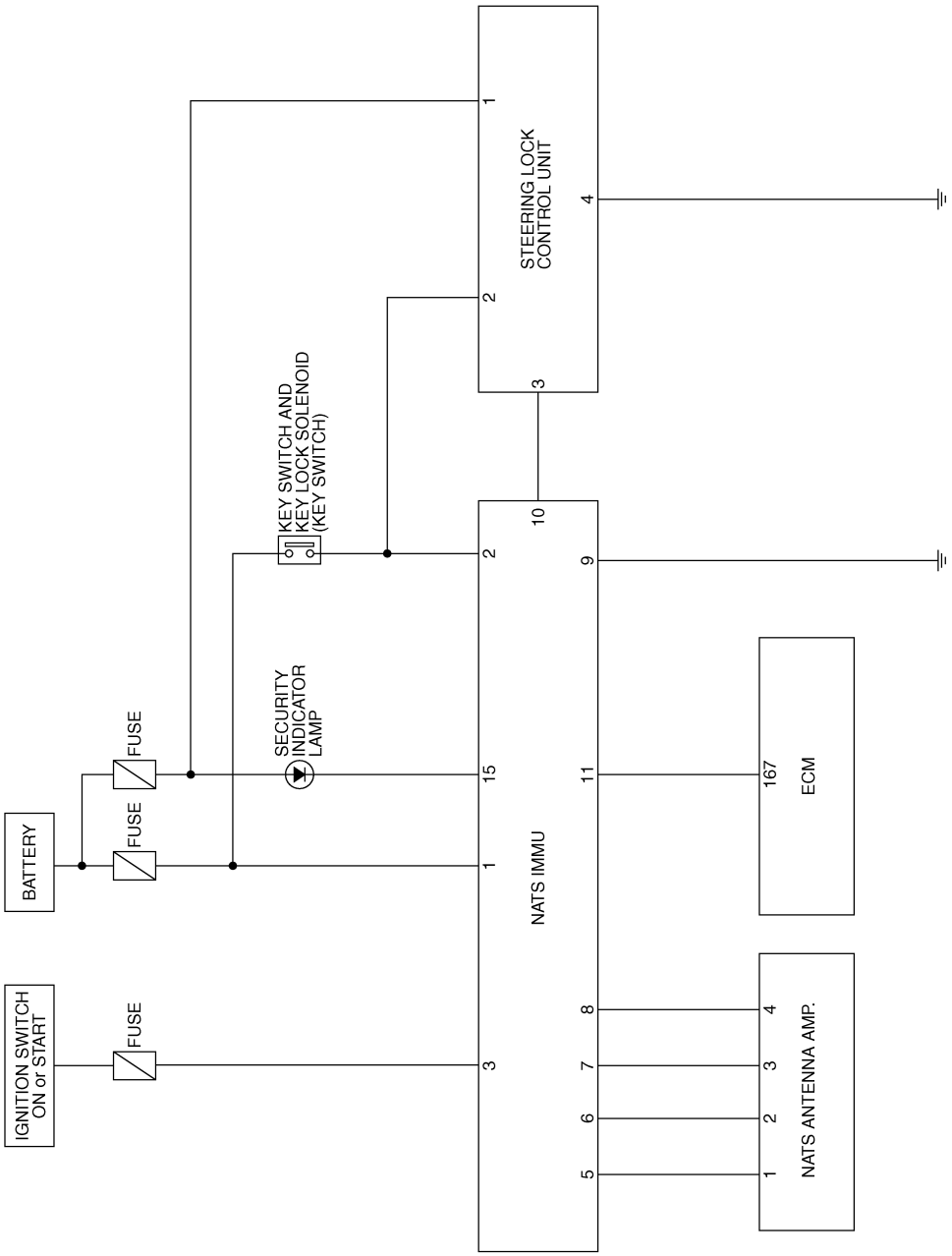
NOTE:

- **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.

Schematic

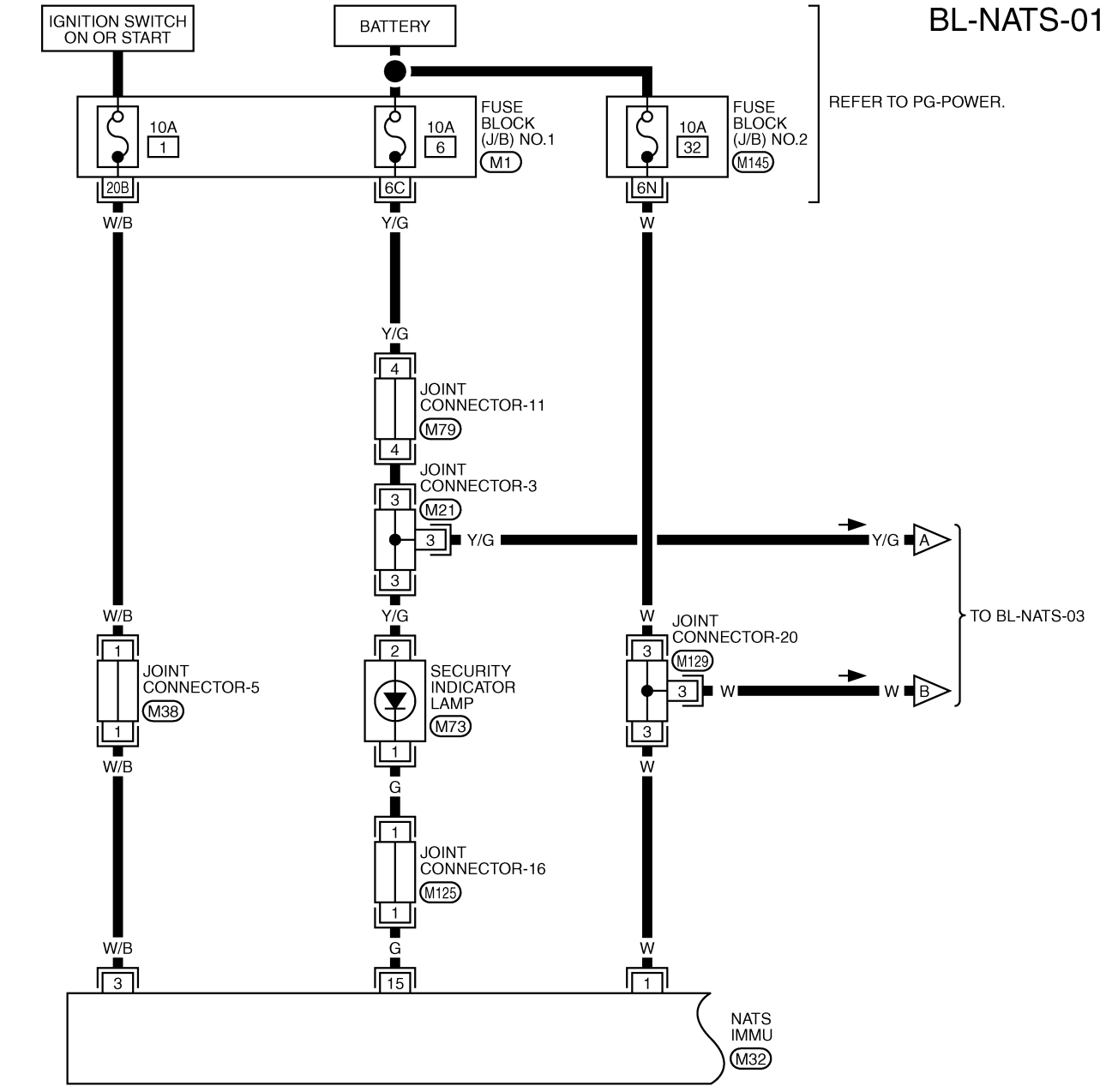
AIS002AR

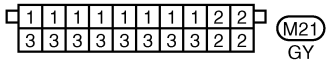


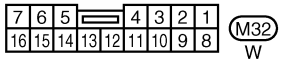
TIWA0207E

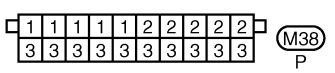
Wiring Diagram – NATS –

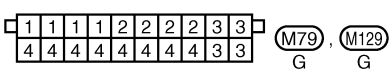
AIS002AS

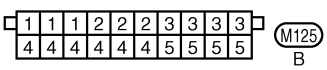












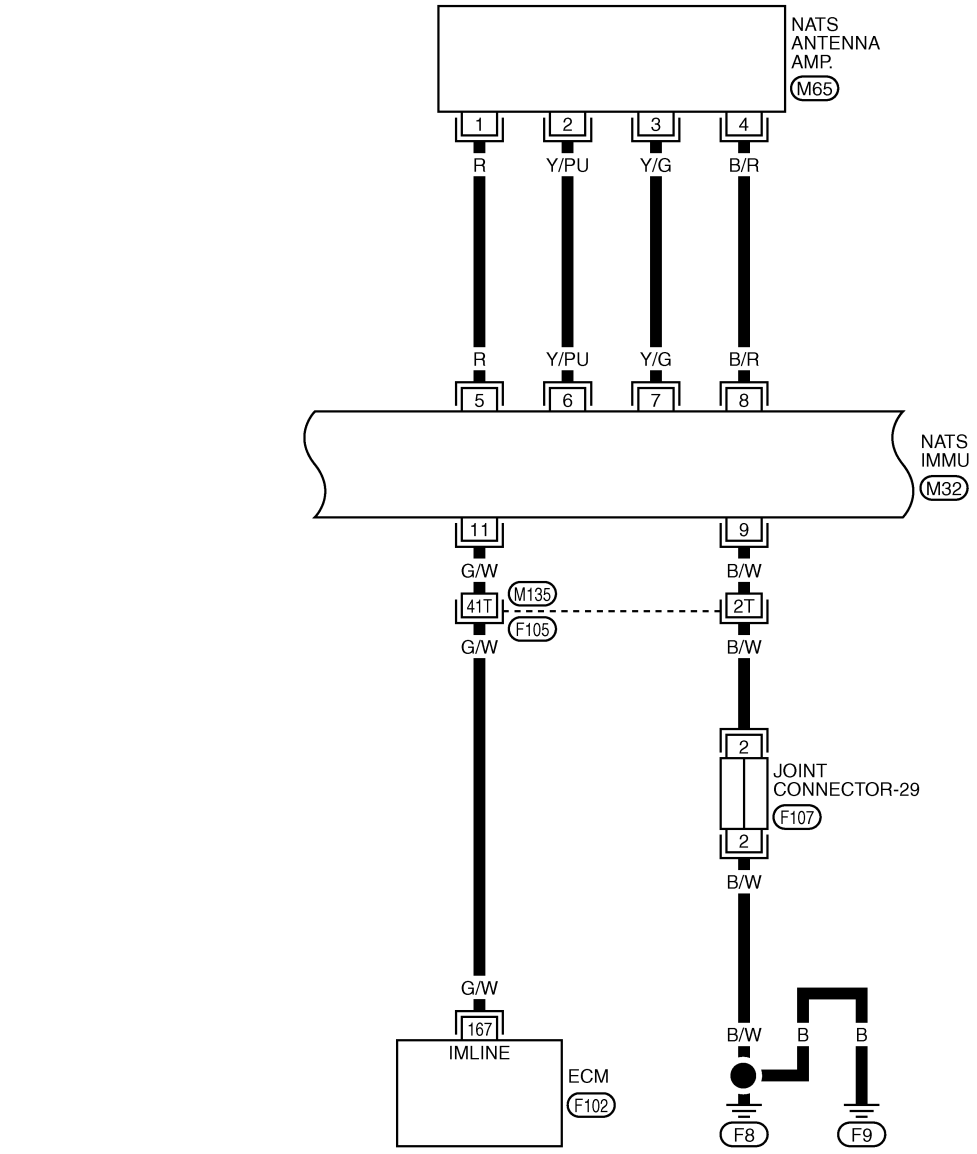
REFER TO THE FOLLOWING.

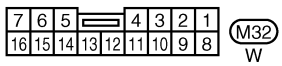
M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

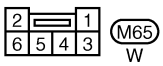
M145 -FUSE BLOCK-JUNCTION BOX (J/B) NO.2

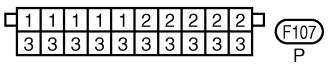
TIWA0208E

BL-NATS-02









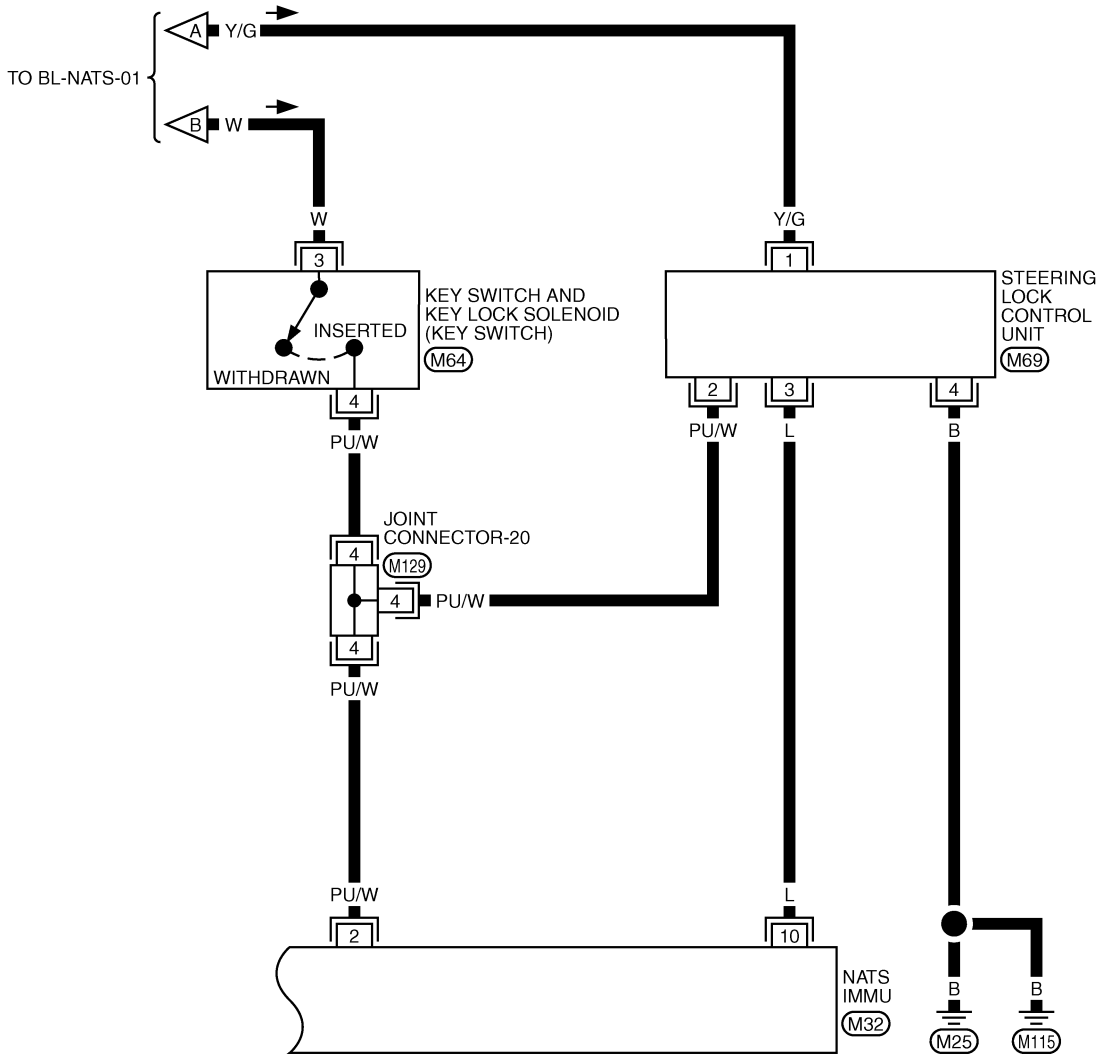
REFER TO THE FOLLOWING.

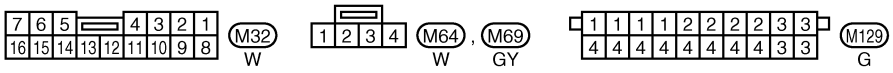
F105 -SUPER MULTIPLE JUNCTION (SMJ)

F102 -ELECTRICAL UNITS

TIWA0209E

BL-NATS-03





TIWA0210E

Terminals and Reference Value for Steering Lock Control Unit

AIS002AT

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
1	Y/G	Battery power supply	—	Battery voltage
2	PU/W	Key switch	Key inserted (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
3	L	NATS IMMU	Key inserted	Just after inserting electronic key to key cylinder: Point of tester should move
4	B	Ground	—	0

Terminals and Reference Value for NATS IMMU

AIS002AU

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V) (Approx.)
1	W	Battery power supply	—	battery voltage
2	PU/W	Key switch	Key inserted (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
3	W/B	Ignition switch	Ignition switch ON or START position	Battery voltage
5	R	NATS antenna amp.	key inserted (key switch OFF → ON)	0 → 5 (for 3 seconds)
6	Y/PU	NATS antenna amp.	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.	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/W	Ground	—	0
10	L	Steering lock control unit	Key inserted	Just after inserting electronic key to key cylinder: Point of tester should move
11	G/W	ECM	—	—
15	G	Security indicator lamp	Goes OFF → illuminates (every 2.4 seconds)	Battery voltage → 0

CONSULT-II

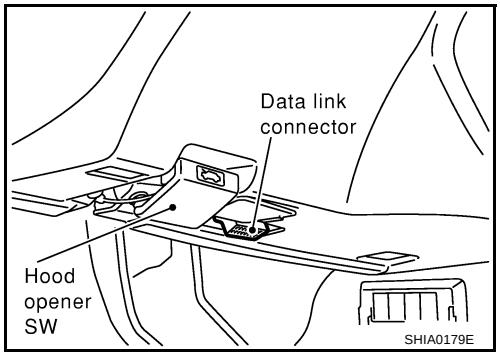
AIS002AV

CONSULT-II INSPECTION PROCEDURE

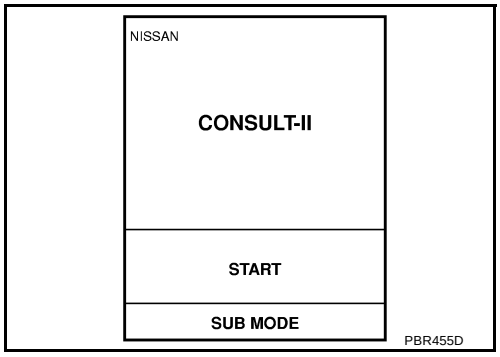
1. Turn ignition switch OFF.
2. Insert IVIS (NATS) program card into CONSULT-II.

Program card : NATS (AEN02B)

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

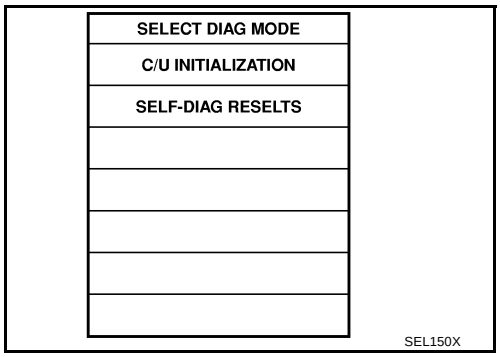


4. Turn ignition switch ON.
5. Touch “START”.



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

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



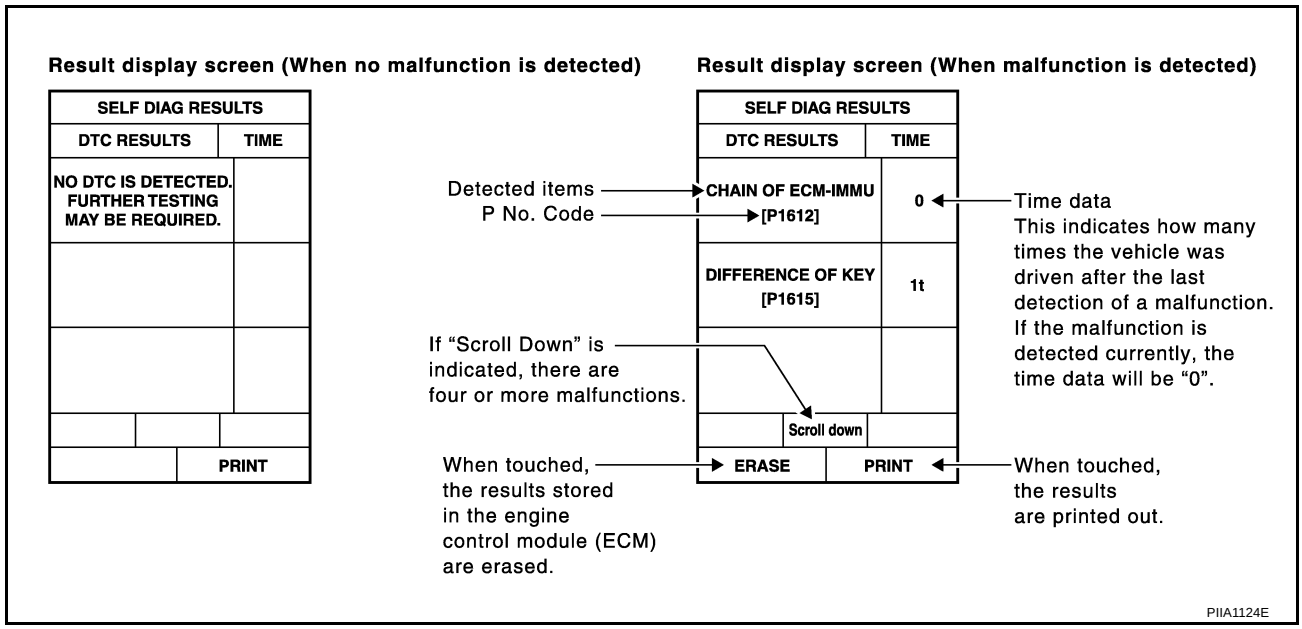
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

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.

NOTE:

When any initialization is performed, all ID numbers previously registered will be erased and all IVIS (NATS) electronic keys must be registered again. The engine cannot be started with an unregistered key. The system will show “DIFFERENCE OF KEY” or “LOCK MODE” as a self-diagnostic result on the CONSULT-II screen.

HOW TO READ SELF-DIAGNOSTIC RESULTS

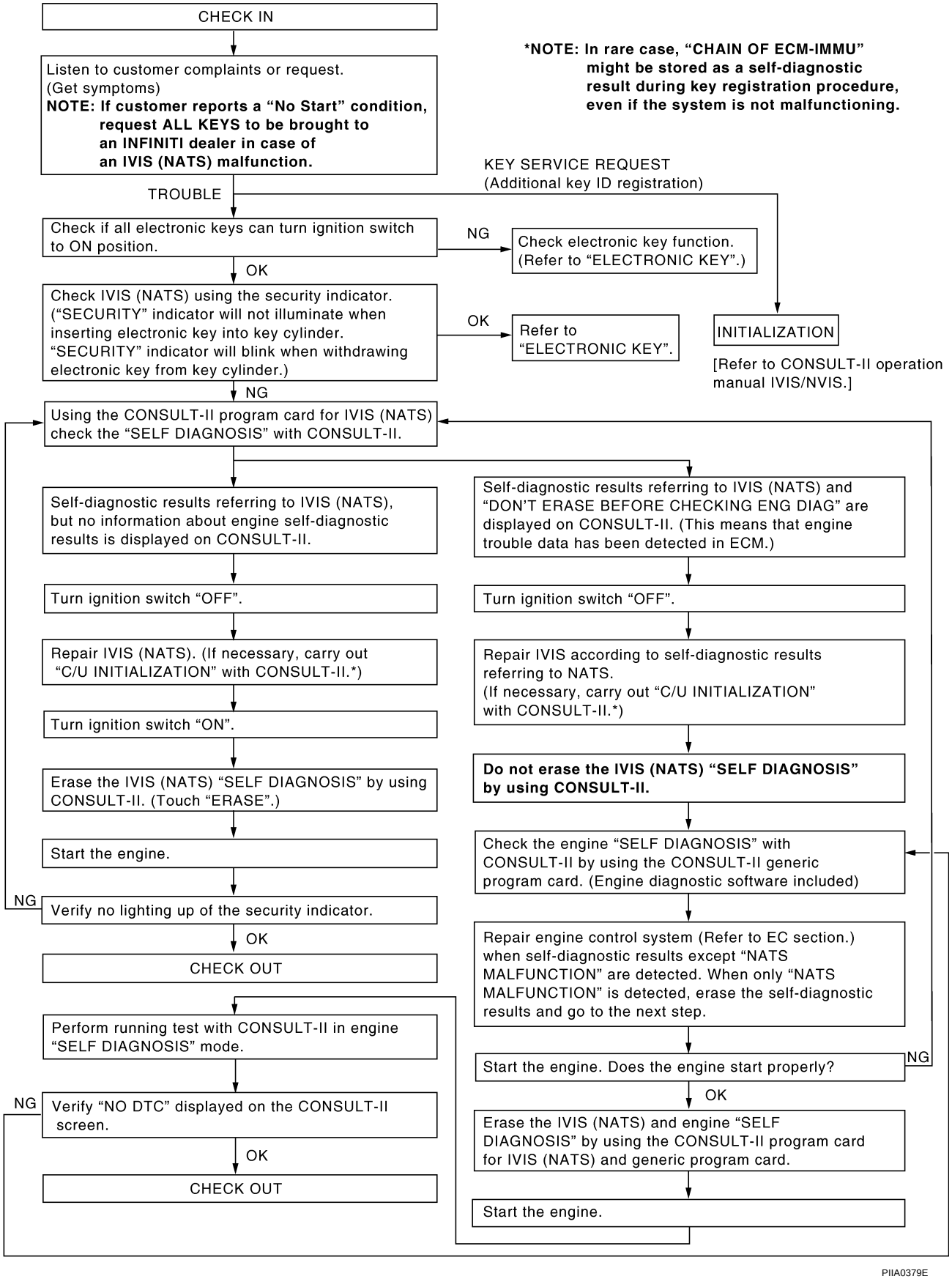


NATS SELF-DIAGNOSTIC RESULT ITEM CHART

Detected items (Screen terms)	P No.Code (Self-diagnostic result of “ENGINE”)	Description	Diagnostic procedure
ECM INT CIRC-IMMU	P1613	The malfunction of ECM internal circuit of NATS IMMU communication line is detected.	Refer to BL-184, "Diagnostic Procedure 1" .
CHAIN OF ECM-IMMU	P1612	Communication impossible between ECM and NATS IMMU.	Refer to BL-185, "Diagnostic Procedure 2" .
DIFFERENCE OF KEY	P1615	NATS IMMU can receive the key ID signal but the result of ID verification between key ID and NATS IMMU is NG.	Refer to BL-187, "Diagnostic Procedure 3" .
CHAIN OF IMMU-KEY	P1614	NATS IMMU cannot receive the key ID signal.	Refer to BL-189, "Diagnostic Procedure 6" .
ID DISCORD, IMM-ECM	P1611	The result of ID verification between NATS IMMU and ECM is NG. System initialization is required.	Refer to BL-187, "Diagnostic Procedure 4" .
LOCK MODE	P1610	When the starting operation is carried out 5 or more times consecutively under the following conditions, IVIS(NATS) will shift the mode to one which prevents the engine from being started. ● unregistered electronic key is used ● NATS IMMU or ECM malfunctioning	Refer to BL-188, "Diagnostic Procedure 5" .
DON'T ERASE BEFORE CHECKING ENG DIAG	—	Engine trouble data and IVIS (NATS) trouble data have been detected in ECM.	Refer to BL-182, "Work Flow" .

Work Flow

AIS002AW



Symptom Chart 1

AIS002AX

SYMPTOM	Displayed “SELF-DIAG RESULTS” on CONSULT-II screen.	DIAGNOSTIC PROCEDURE	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION
● Security indicator lighting up* ● Engine hard to start	ECM INT CIRC-IMMU [P1613]	Refer to BL-184, "Diagnostic Procedure 1" .	ECM	B
	CHAIN OF ECM-IMMU [P1612]	Refer to BL-185, "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-187, "Diagnostic Procedure 3" .	Unregistered key	D
			NATS IMMU	A
	CHAIN OF IMMU-KEY [P1614]	Refer to BL-189, "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-187, "Diagnostic Procedure 4"	System initialization has not yet been completed.	F
			ECM	B
	LOCK MODE [P1610]	Refer to BL-188, "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 one which prevents the engine from being started. ● unregistered electronic key is used ● NATS IMMU or ECM malfunctioning
● MIL staying ON ● Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	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.

Symptom Chart 2

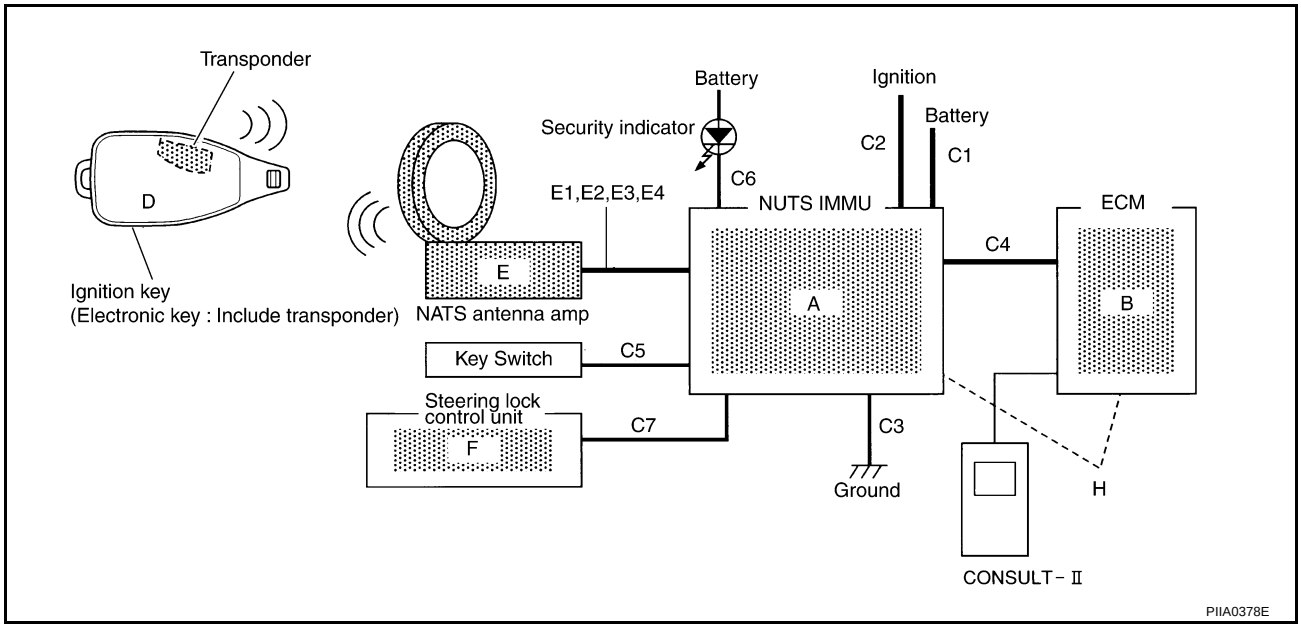
AIS002AY

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

AIS002AZ



Diagnostic Procedure 1

AIS002B0

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-174, "ECM Re-Communicating Function" .

NO >> GO TO BL-183, "Symptom Chart 1" .

SELF DIAGNOSIS	
DTC RESULTS	TIME
ECM INT CIRC-IMMU	0

SEL314W

Diagnostic Procedure 2

AIS002B1

Self-diagnostic results:
“CHAIN OF ECM-IMMU” display on CONSULT-II screen

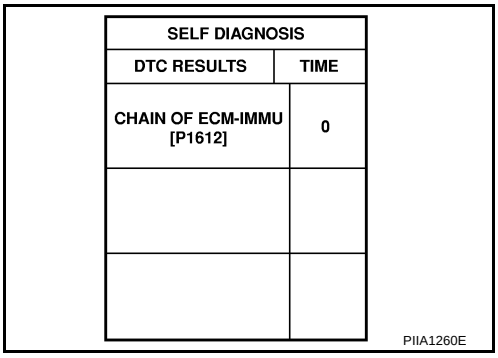
1. CONFIRM SELF-DIAGNOSTIC RESULTS

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-183, "Symptom Chart 1" .



2. CHECK POWER SUPPLY CIRCUIT FOR NATS IMMU

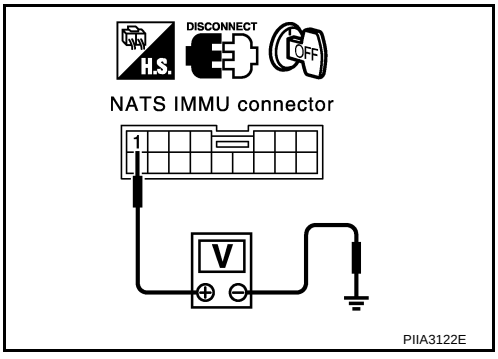
1. Turn ignition switch OFF.
2. Disconnect NATS IMMU connector M32.
3. Check voltage between NATS IMMU connector M32 terminal 1 (W) and ground.

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

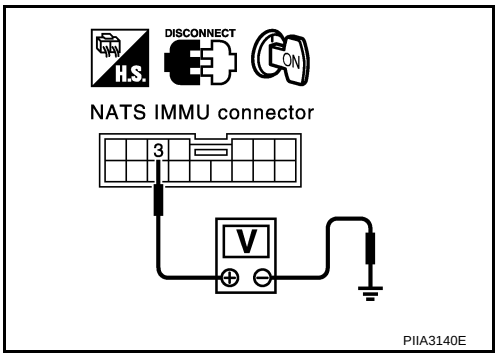
1. Turn ignition switch ON.
2. Check voltage between NATS IMMU connector M32 terminal 3 (W/B) and ground.

3 (W/B) – Ground : Battery voltage

OK or NG

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

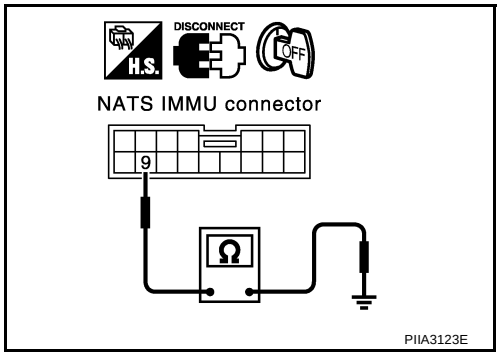
- 10A fuse [No.1, located in fuse block (J/B) No. 1]
- Harness for open or short between fuse and NATS IMMU. **Ref. part No. C2.**



4. CHECK GROUND CIRCUIT FOR NATS IMMU

1. Turn ignition switch OFF.
2. Check continuity between NATS IMMU connector M32 terminal 9 (B/W) and ground.

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



OK or NG

OK >> GO TO 5.
NG >> Repair or replace harness between NATS IMMU and ground. **Ref. part No. C3.**

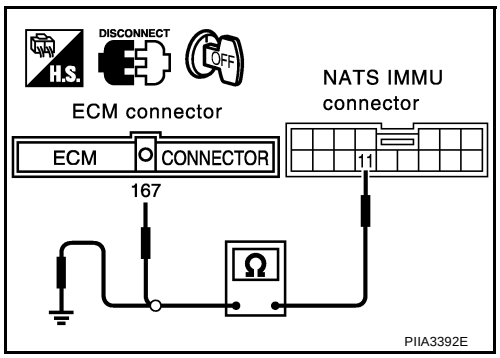
5. CHECK COMMUNICATION LINE CIRCUIT

1. Disconnect ECM connector.
2. Check continuity between NATS IMMU connector M32 terminal 11 (G/W) and ECM connector F102 terminal 167 (G/W).

11 (G/W) – 167 (G/W) : Continuity should exist.

3. Check continuity between NATS IMMU connector M32 terminal 11 (G/W) and ground.

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



OK or NG

OK >> GO TO 6.
NG >> Repair or replace harness between NATS IMMU and ECM.

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-174, "ECM Re-Communicating Function" .

Diagnostic Procedure 3

AIS002B2

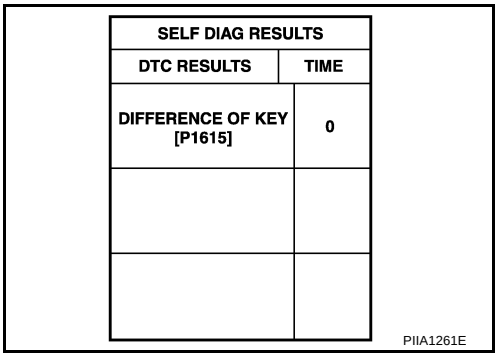
Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

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-183, "Symptom Chart 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

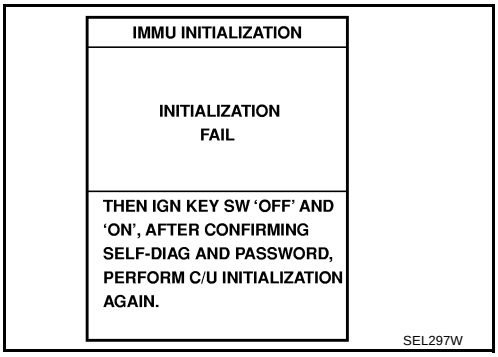
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization and registration of NATS ignition key IDs, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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

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

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



Diagnostic Procedure 4

AIS002B3

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

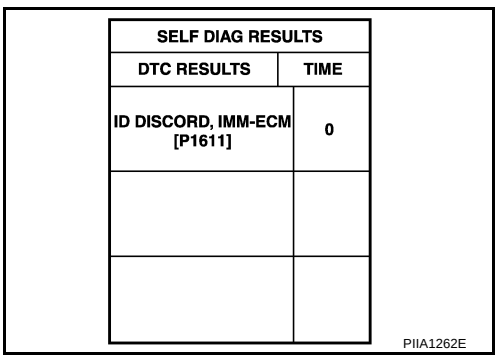
1. CONFIRM SELF-DIAGNOSTIC RESULTS

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.

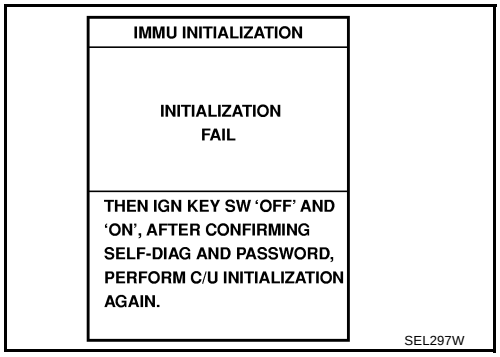
Is CONSULT-II screen displayed as above?

YES >> GO TO 2.
NO >> GO TO BL-183, "Symptom Chart 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

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



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

Can the system be initialized?

YES >> Start engine. (END)
- (System initialization had not been completed. **Ref. part No. F**)

NO >> ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
- Perform initialization or re-communicating function.
  - For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.
  - For re-communicating function, refer to BL-174, "ECM Re-Communicating Function" .

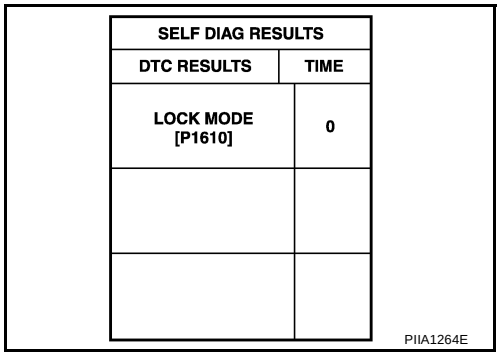
Diagnostic Procedure 5

AIS002B4

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-183, "Symptom Chart 1" .

2. ESCAPE FROM LOCK MODE

1. Turn ignition switch OFF.
2. Turn ignition switch ON with registered key. (Do not start engine.) Wait 5 seconds.
3. Return the key to OFF position. Wait 5 seconds.
4. Repeat steps 2 and 3 twice (total of three cycles).
5. Start the engine.

Does engine start?

YES >> System is OK (Now system is escaped from “LOCK MODE”).
NO >> GO TO 3.

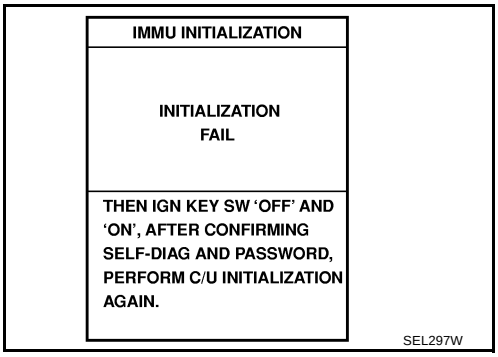
3. PERFORM INITIALIZATION WITH CONSULT-II

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

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

Can the system be initialized?

YES >> System is OK.
NO >> GO TO 4



4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

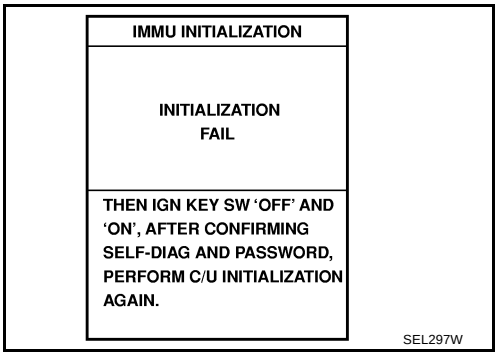
1. Replace NATS IMMU.
2. Perform initialization with CONSULT-II.
   For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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-174, "ECM Re-Communicating Function" .



Diagnostic Procedure 6

AIS002J4

Self-diagnostic results:
“CAIN 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.**

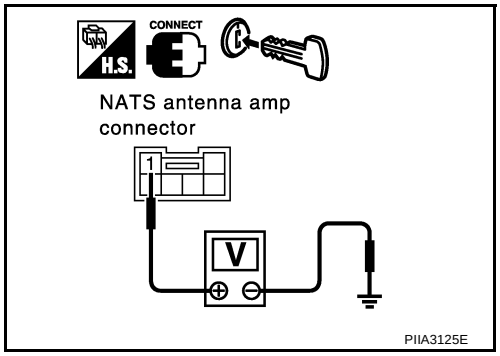
3. CHECK NATS ANTENNA AMP. CIRCUIT 1

Insert electronic key into ignition key cylinder, and immediately check voltage between NATS antenna amp. connector M65 terminal 1 (R) and ground.

Terminals	Condition	Voltage
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.



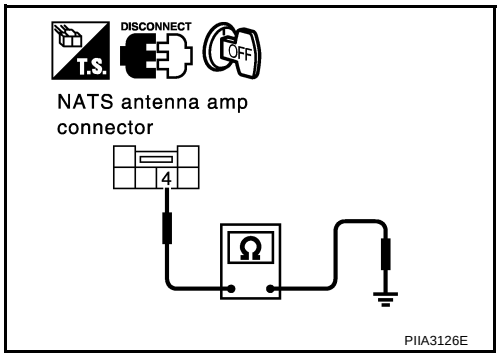
4. CHECK NATS ANTENNA AMP. CIRCUIT 2

1. Disconnect NATS antenna amp. connector.
2. Check continuity between NATS antenna amp. connector M65 terminal 4 (B/R) and ground.

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

OK or NG

OK >> GO TO 5.
NG >> GO TO 7.



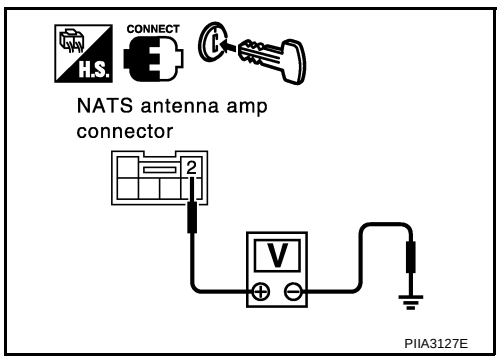
5. CHECK NATS ANTENNA AMP. CIRCUIT 3

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 M65 terminal 2 (Y/PU) and ground.

Terminals	Condition	Voltage
2 (Y/PU) – Ground	Insert electronic key into ignition key cylinder.	Pointer of tester should move.

OK or NG

OK >> GO TO 6.
NG >> GO TO 7.



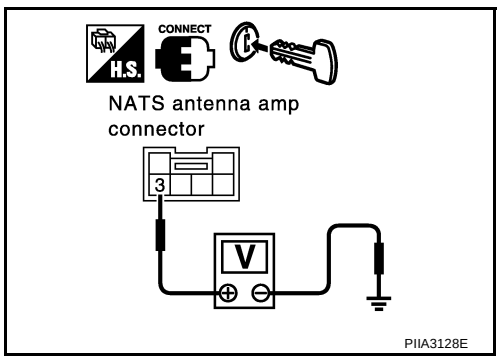
6. CHECK NATS ANTENNA AMP. CIRCUIT 4

Insert the electronic key into the ignition key cylinder, and immediately check voltage between NATS antenna amp. connector M65 terminal 3 (Y/G) and ground.

Terminals	Condition	Voltage
3 (Y/G) – Ground	Insert electronic key into electronic key cylinder.	Pointer of tester should move.

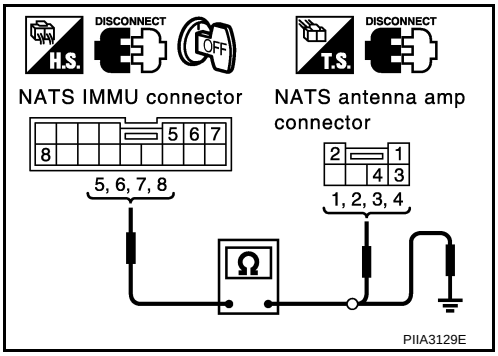
OK or NG

OK >> Replace NATS antenna amp.: Reference part E.
NG >> GO TO 7.



7. CHECK NATS ANTENNA AMP. CIRCUIT 5

1. Turn ignition switch OFF.
2. Disconnect NATS IMMU and NATS antenna amp. connector.
3. Check continuity between NATS IMMU connector M32 terminals 5 (R), 6 (Y/PU), 7 (Y/G), 8 (B/R) and NATS antenna amp. connector M65 terminals 1 (R), 2 (Y/PU), 3 (Y/G), 4 (B/R).



5(R) - 1(R) : Continuity should exist.
6(Y/PU) - 2(Y/PU) : Continuity should exist.
7(Y/G) - 3(Y/G) : Continuity should exist.
8(B/R) - 4(B/R) : Continuity should exist.

4. Check continuity between NATS IMMU connector M32 terminals 5 (R), 6 (Y/PU), 7 (Y/G), 8 (B/R) and ground.

5(R) - Ground : Continuity should not exist.
6(Y/PU) - Ground : Continuity should not exist.
7(Y/G) - Ground : Continuity should not exist.
8(B/R) - Ground : Continuity should not exist.

OK or NG

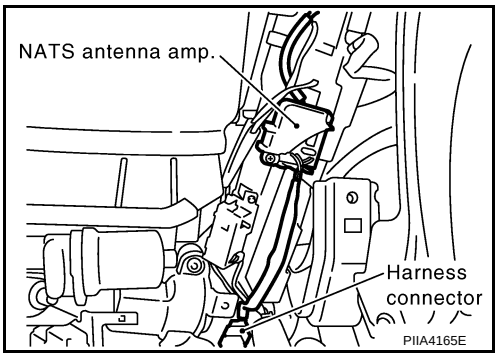
OK >> Replace NATS IMMU: Reference part A.
NG >> Check harness for open or short between NATS IMMU and NATS antenna amp.: Reference parts E1, 2, 3, 4

Removal and Installation NATS Antenna Amp.

AIS002BS

REMOVAL

1. Remove the Instrument lower driver panel. Refer to IP-10, "Component Parts Drawing" .
2. Remove the steering lock escutcheon. Refer to IP-10, "Component Parts Drawing" .
3. Remove the Instrument panel bracket. Refer to IP-10, "Component Parts Drawing" .
4. Remove the mounting screw, harness connector and remove NATS antenna amp.



INSTALLATION

Install in the reverse order of removal.

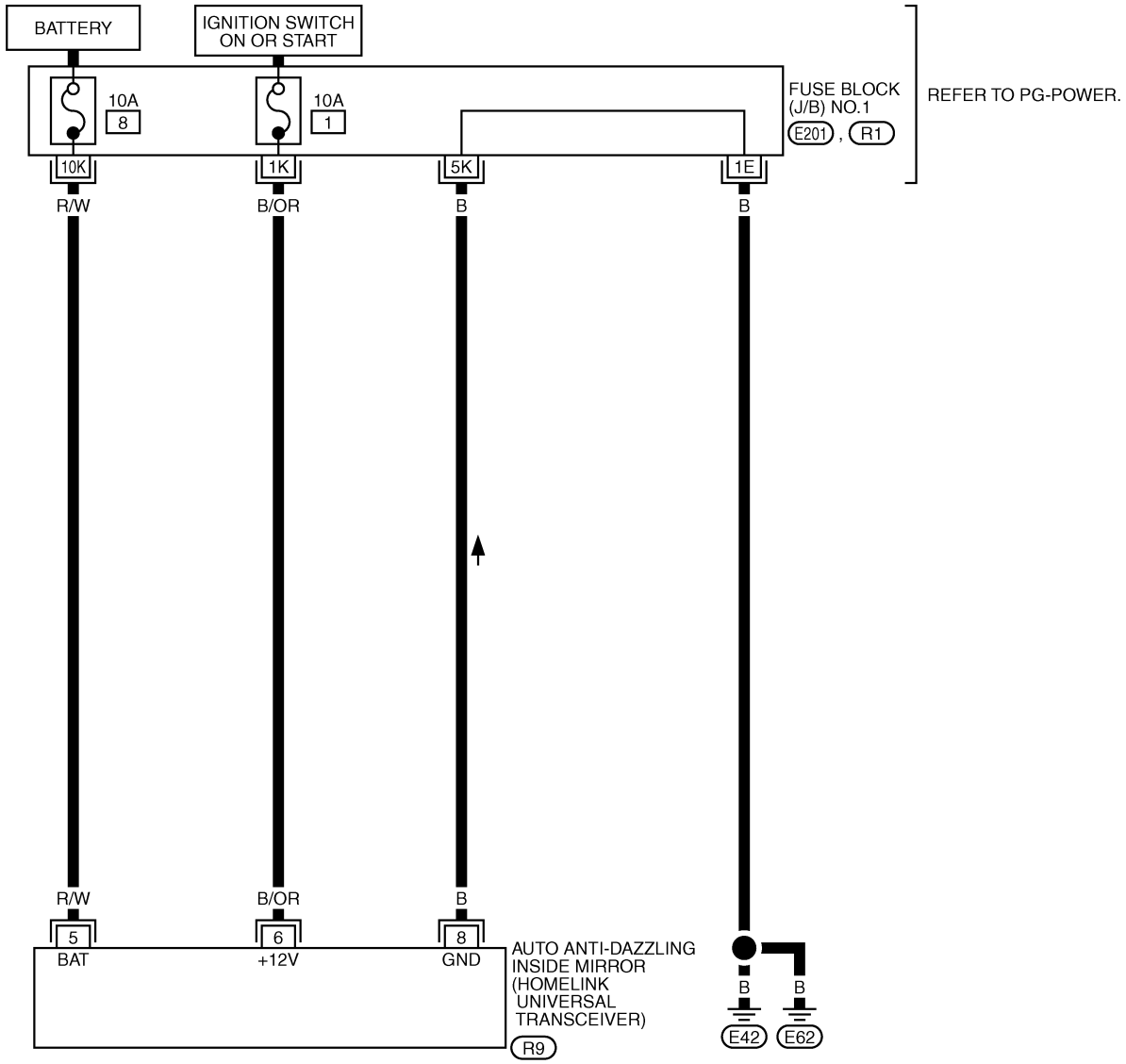
HOMELINK UNIVERSAL TRANSCEIVER

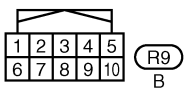
PFP:96401

Wiring Diagram – TRNSCV –

AIS001FY

BL-TRNSCV-01





REFER TO THE FOLLOWING.
E201 , R1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TIWA0211E

Trouble Diagnosis

AIS001FZ

DIAGNOSTIC PROCEDURE

SYMPTOM: Transmitter Does Not Activate Receiver

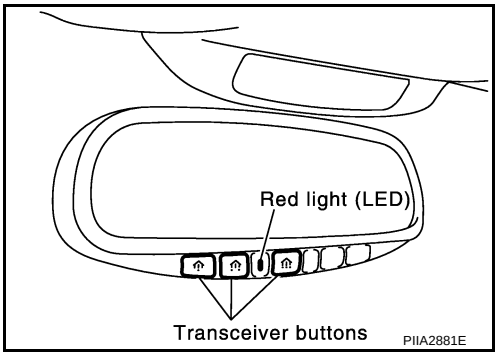
Before conducting the procedure given below, make sure that system receiver (garage door opener, etc.) operates with original, hand-held transmitter. If NG, receiver or hand-held transmitter is malfunctioning, not vehicle related.

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.



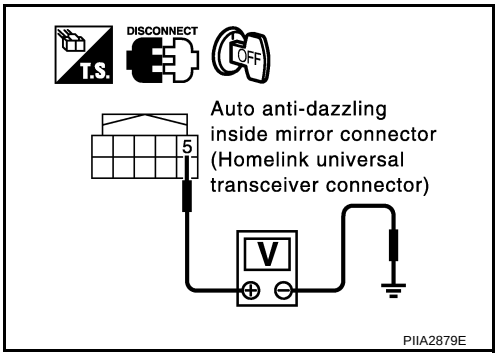
2. CHECK BATTERY POWER SUPPLY

1. Disconnect transmitter connector.
2. Check voltage between auto anti-dazzling mirror (homelink universal transceiver) harness connector R9 terminal 5(R/W) and body ground.

5 (R/W) – Ground : Battery voltage

OK or NG

OK >> GO TO 3.
NG >> ● Check 10A fuse [No.8 located in the fuse block (J/B) No.1].
● Repair or replace harness between fuse block (J/B) and auto anti-dazzling mirror (home link universal transceiver).



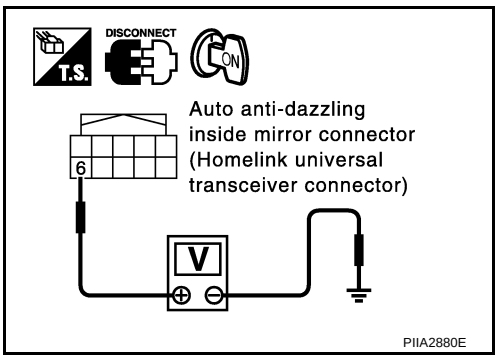
3. CHECK IGNITION POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between auto anti-dazzling mirror (homelink universal transceiver) harness connector and body ground.

Connector	Terminal (Wire color)		Condition	Voltage (V)
	(+)	(–)		
R9	6 (B/OR)	Ground	Turn ignition switch ON.	Battery voltage
			Turn ignition switch OFF.	0

OK or NG

OK >> GO TO 4.
NG >> ● Check 10A fuse [No. 1 located in the fuse block (J/B) No. 1].
● Repair or replace harness between fuse block (J/B) and auto anti-dazzling mirror (homelink universal transceiver).



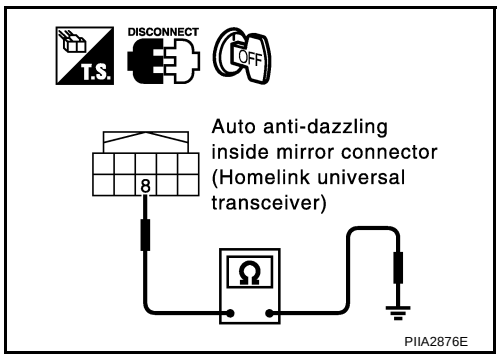
4. CHECK 1: GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between transceiver harness connector R9 terminal 8(B) and body ground.

8 (B) – Ground : Continuity should exist.

OK or NG

OK >> Replace auto anti-dazzling inside mirror assembly.
NG >> GO TO 5.



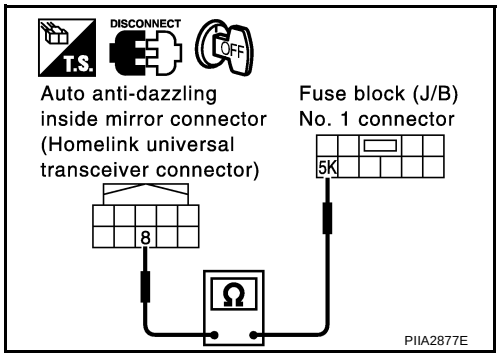
5. CHECK 2: GROUND CIRCUIT

1. Disconnect fuse block (J/B) connector.
2. Check continuity between auto anti-dazzling mirror (homelink universal transceiver) harness connector R9 terminal 8(B)and fuse block (J/B) harness connector E201 terminal 5K (B).

8 (B) – 5K (B) : Continuity should exist.

OK or NG

OK >> GO TO 6.
NG >> Repair or replace harness between auto anti-dazzling mirror (home link universal transceiver) and fuse block (J/B).



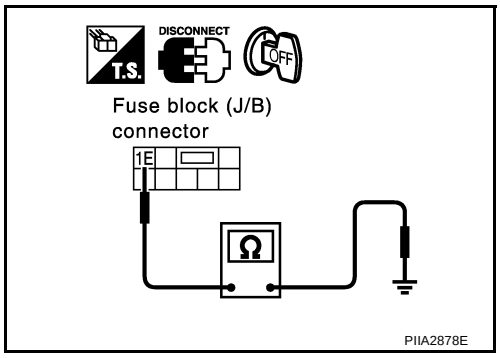
6. CHECK 3: GROUND CIRCUIT

Check continuity between transceiver harness connector E201 terminal 1E (B) and body ground.

1E (B) – Ground : Continuity should exist.

OK or NG

OK >> Replace fuse block (J/B).
NG >> Repair or replace harness between fuse block (J/B) and Ground.

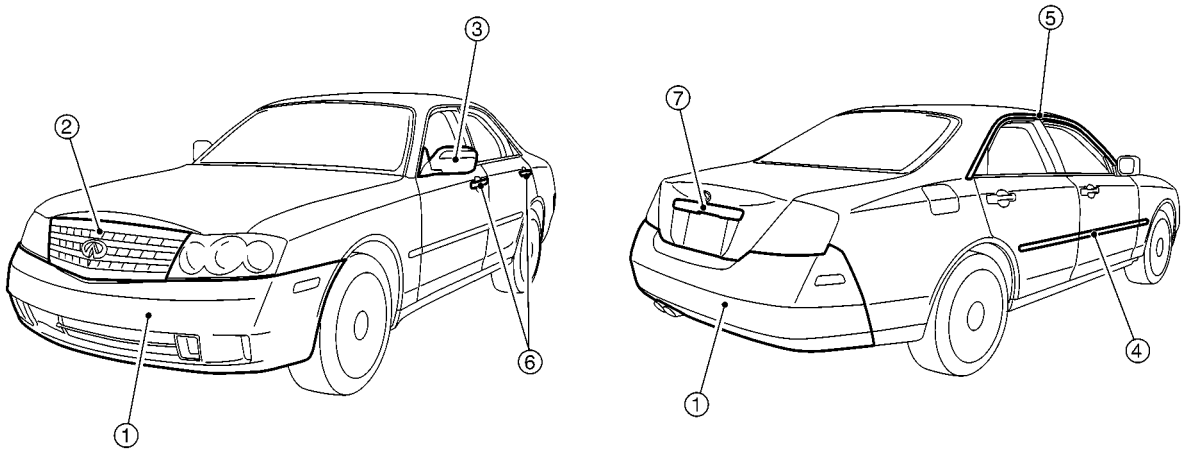


BODY REPAIR

PFP:60100

Body Exterior Paint Color

AIS0000A



SIIA1906E

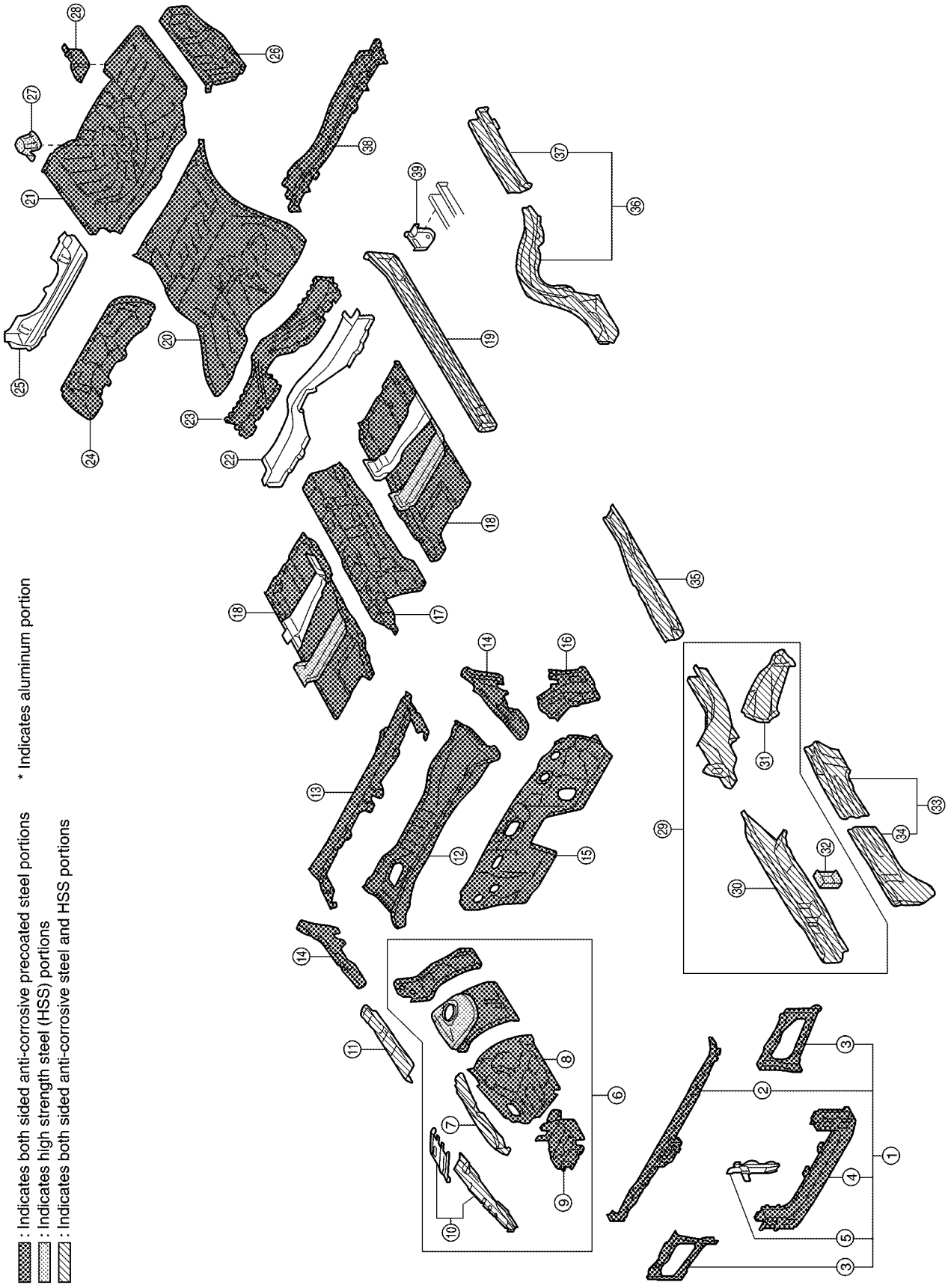
Component			Color code	BAY2	BD10	BEY0	BKH3	BKY0	BQX1	BWV2
			Description	Red	Dark Green	Light Gold	Black	Silver	White	Silver
			Paint type	2PM	2M	2PM	2S	2M	3P	2M
			Hard clear coat	X	X	X	X	X	X	X
1	Bumper fascia		Body color	BAY2	BD10	BEY0	BKH3	BKY0	BQX1	BWV2
2	Front grille		Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr
3	Door outside mirror	Case	Body color	BAY2	BD10	BEY0	BKH3	BKY0	BQX1	BWV2
		Base	Body color	BAY2	BD10	BEY0	BKH3	BKY0	BQX1	BWV2
4	Side guard molding		Body color	BAY2	BD10	BEY0	BKH3	BKY0	BQX1	BWV2
5	Roof drip molding		Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr
6	Door outside handle		Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr
7	Trunk lid finisher		Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr

2S:2-Coat solid, 2M:2-Coat metallic, 3P:3-Coat pearl, 2PM:2-Coat pearl metallic

Body Component Parts

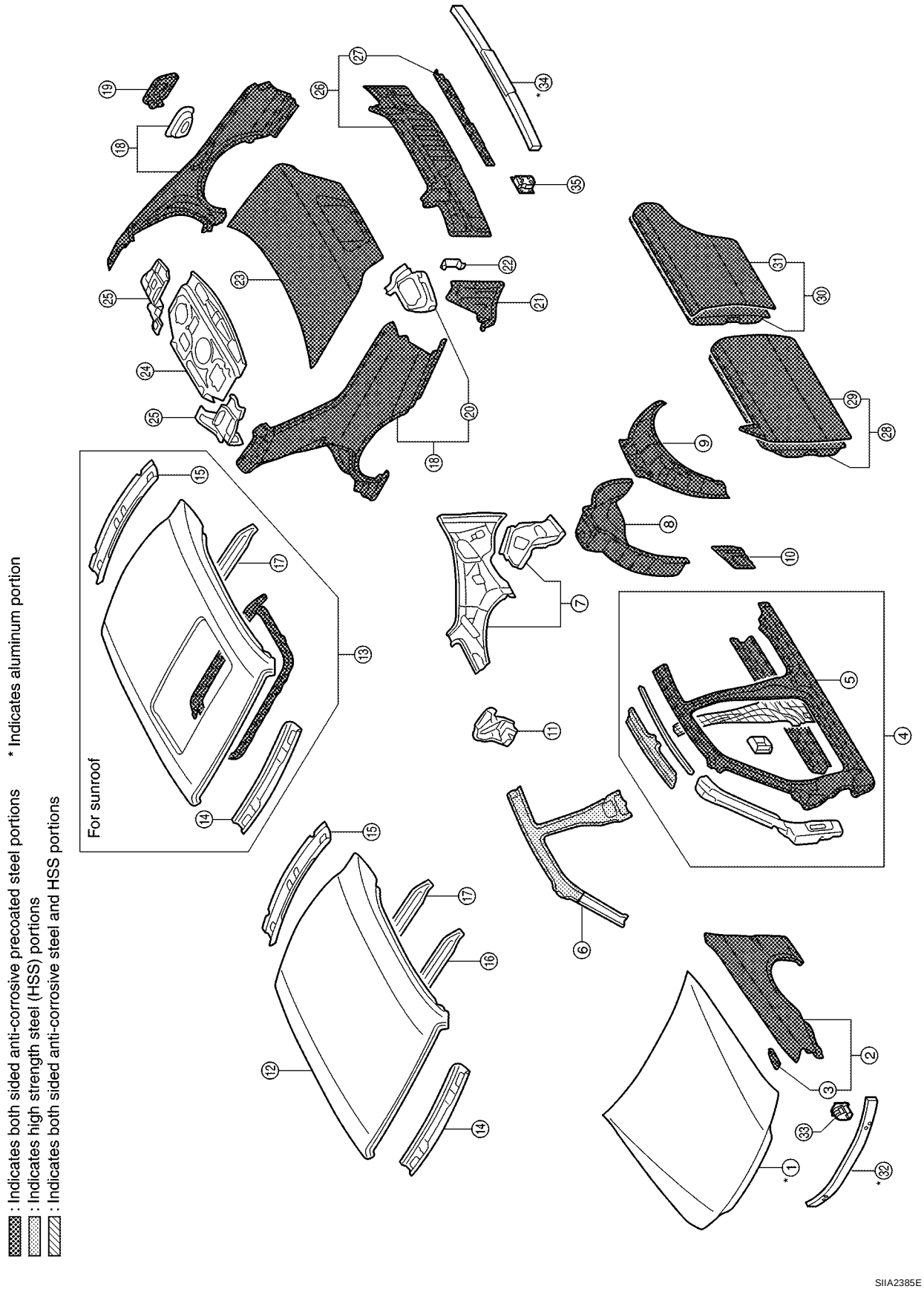
AIS0000B

UNDERBODY COMPONENT PARTS



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. Upper hoodledge (RH&LH)
8. Lower front hoodledge (RH&LH)
9. Battery support bracket (RH)
10. Hoodledge reinforcement assembly (RH&LH)
11. Rear hoodledge reinforcement (RH&LH)
12. Upper dash assembly
13. Upper dash crossmember assembly
14. Side cowl top
15. Lower dash
16. Side dash (RH&LH)
17. Front floor center
18. Front floor
19. Inner sill (RH&LH)
20. Rear floor front
21. Rear floor rear
22. Rear seat crossmember reinforcement
23. Rear seat crossmember assembly
24. Rear floor seat belt anchor reinforcement
25. Rear seat back support assembly
26. Rear floor side (RH&LH)
27. Spare tire clamp bracket
28. Muffler mounting bracket
29. Front side member assembly (RH&LH)
30. Front side member (RH&LH)
31. Front side member outrigger assembly (RH&LH)
32. Front suspension mounting bracket (RH&LH)
33. Front side member closing plate assembly (RH&LH)
34. Front side member front closing plate (RH&LH)
35. Front side member rear extension (RH&LH)
36. Rear side member assembly (RH&LH)
37. Rear side member extension (RH&LH)
38. Center Rear crossmember

BODY COMPONENT PARTS



1. Hood
2. Front fender assembly (RH&LH)
3. Front fender bracket (RH&LH)
4. Side body assembly (RH&LH)
5. Outer side body (RH&LH)
6. Inner side roof rail assembly (RH&LH)
7. Inner rear pillar assembly (RH&LH)
8. Inner rear wheelhouse (RH&LH)
9. Outer rear wheelhouse (RH&LH)
10. Outer rear wheelhouse extension (RH&LH)
11. Seat back support (RH&LH)
12. Roof
13. Roof assembly
14. Front roof rail
15. Rear roof rail
16. Front roof bow
17. Rear roof bow
18. Rear fender assembly
19. Fuel filler lid (RH)
20. Rear combination lamp base (RH&LH)
21. Rear fender extension (RH&LH)
22. Harness clip bracket (LH)
23. Trunk lid
24. Parcel shelf with rear waist
25. Side parcel shelf
26. Rear panel assembly
27. Upper rear bumper retainer
28. Front door assembly (RH&LH)
29. Outer front door panel (RH&LH)
30. Rear door assembly (RH&LH)
31. Outer rear door panel (RH&LH)
32. Front bumper reinforcement
33. Front bumper stay (RH&LH)
34. Rear bumper reinforcement
35. Rear bumper stay (RH&LH)

Corrosion Protection

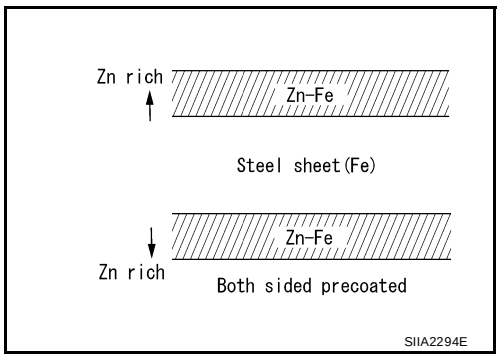
AIS004UN

DESCRIPTION

To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

Anti-Corrosive Precoated Steel (Galvannealed Steel)

To improve repairability and corrosion resistance, a new type of anti-corrosive precoated steel sheet has been adopted replacing conventional zinc-coated steel sheet.
Galvannealed steel is electroplated and heated to form Zinc-iron alloy, which provides excellent and long term corrosion resistance with cationic electrodeposition primer.



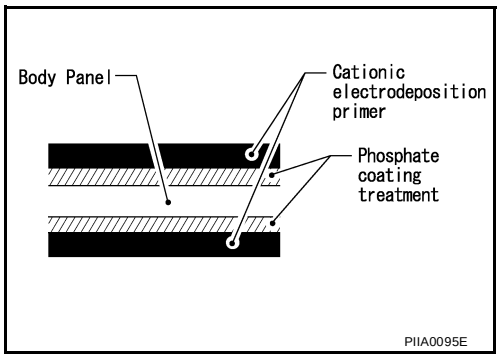
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

Phosphate Coating Treatment and Cationic Electrodeposition Primer

A phosphate coating treatment and a cationic electrodeposition primer, which provide excellent corrosion protection, are employed on all body components.

CAUTION:

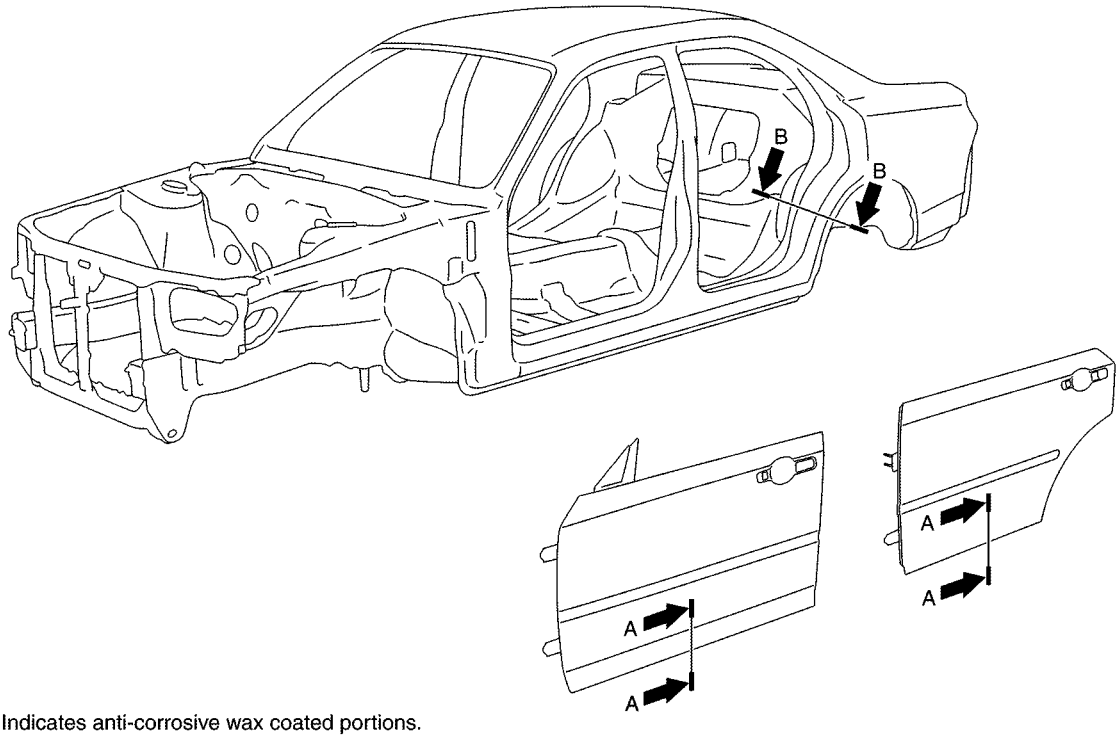
Confine paint removal during welding operations to an absolute minimum.



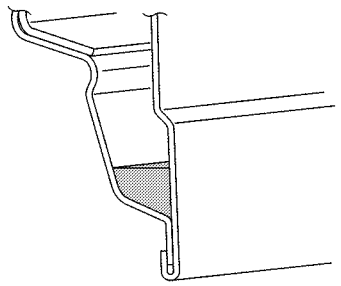
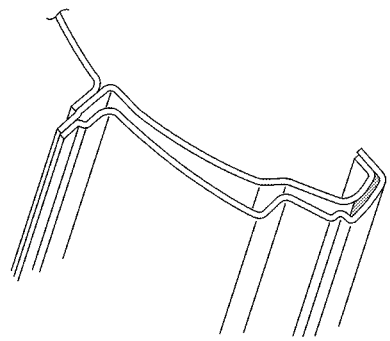
Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

ANTI-CORROSIVE WAX

To improve corrosion resistance, anti-corrosive wax is applied inside the body sill and inside other closed sections. Accordingly, when replacing these parts, be sure to apply anti-corrosive wax to the appropriate areas of the new parts. Select an excellent anti-corrosive wax which will penetrate after application and has a long shelf life.



: Indicates anti-corrosive wax coated portions.

Section A-A	Section B-B
	

SIIA1905E

UNDERCOATING

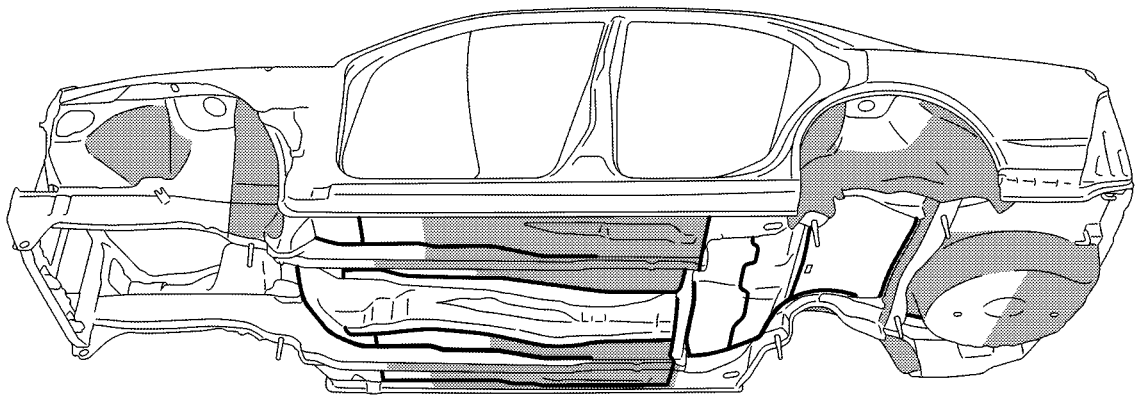
The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust preventive, soundproof, vibration-proof, shock-resistant, adhesive,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

Precautions in Undercoating

1. Do not apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst which are subjected to heat).
2. Do not undercoat the exhaust pipe or other parts which become hot.
3. Do not undercoat rotating parts.
4. Apply bitumen wax after applying undercoating.
5. After putting seal on the vehicle, put undercoating on it.

: Indicates undercoated portions.

: Indicates sealed portions.

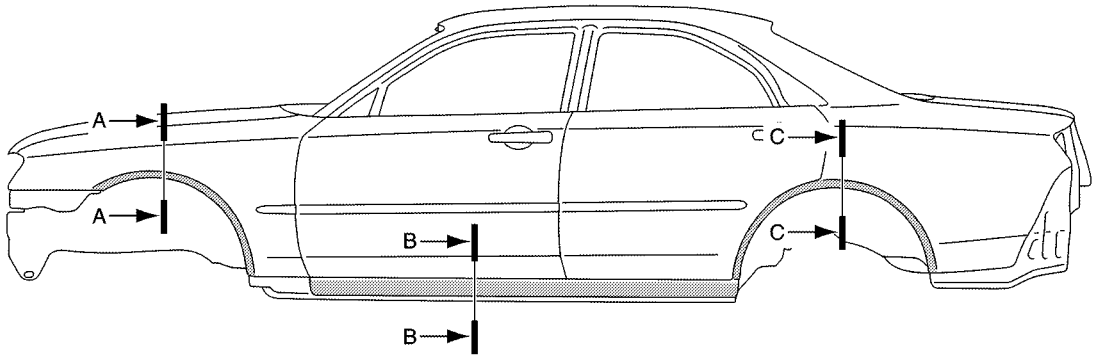


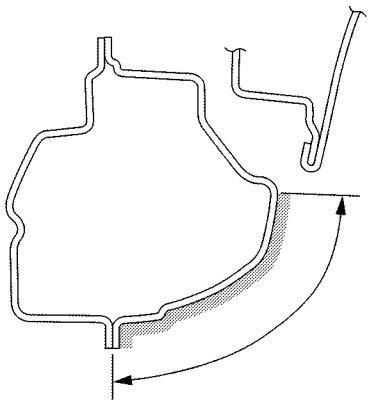
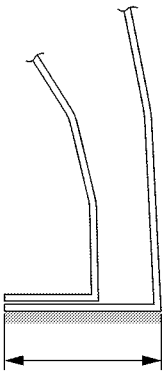
PIIA0769E

STONE GUARD COAT

To prevent damage caused by stones, the lower outer body panel (fender, door, etc.) have an additional layer of Stone Guard Coating over the ED primer coating. When replacing or repairing these panels, apply Stone Guard coating to the same portions as before. Use a coating which is rust preventive, durable, shock-resistant and has a long shelf life.

: Indicates stone guard coated portions.



Section A-A	Section B-B	Section C-C
		

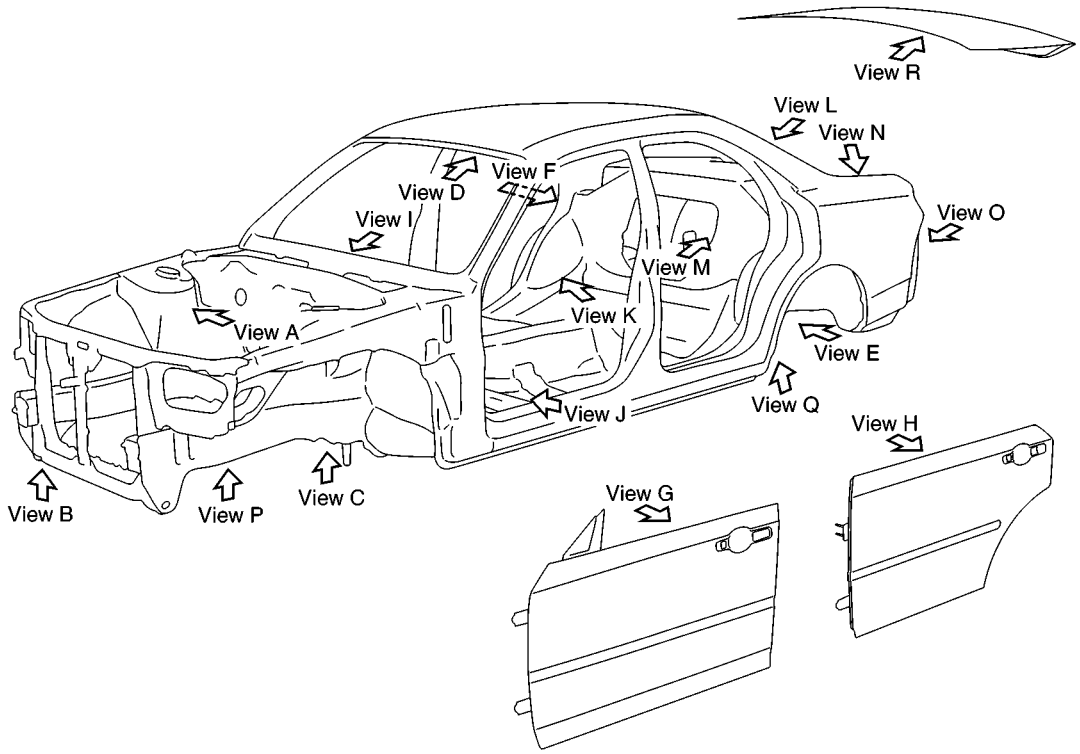
PIIA0770E

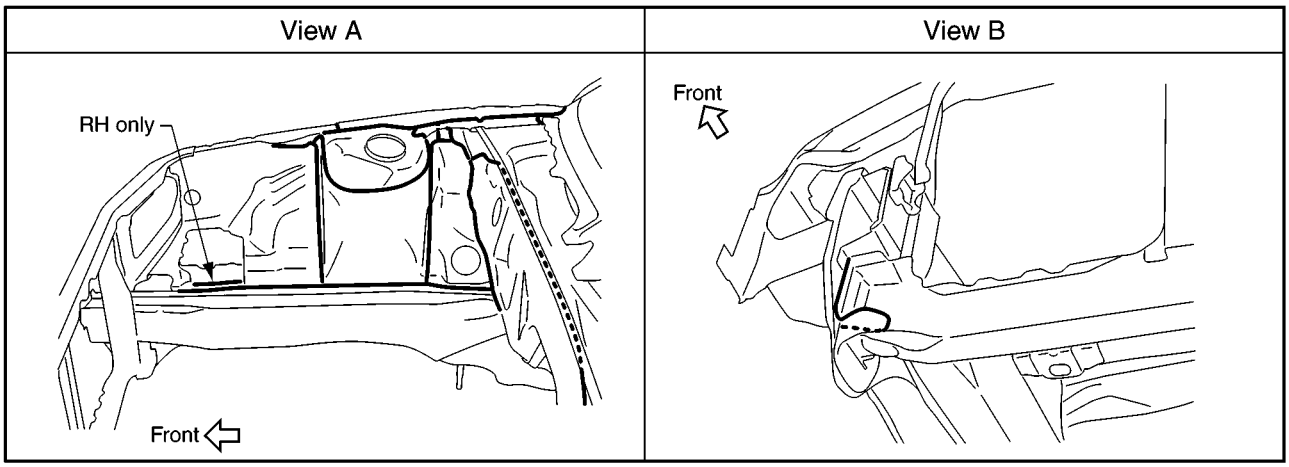
Body Sealing

AIS0000D

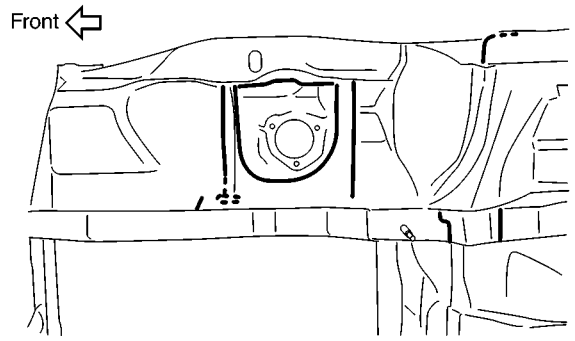
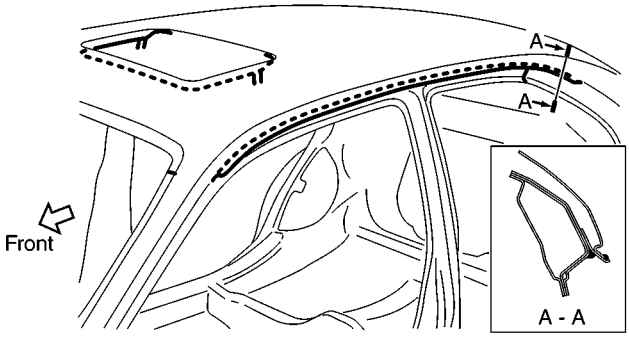
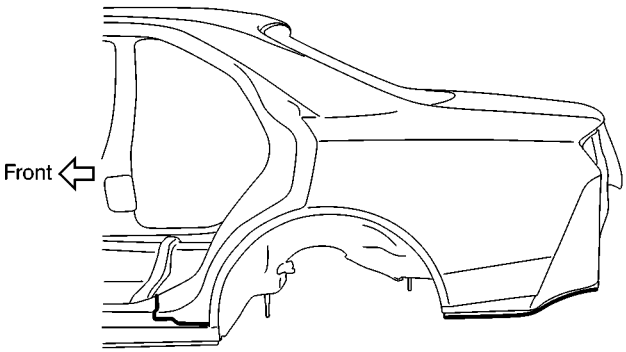
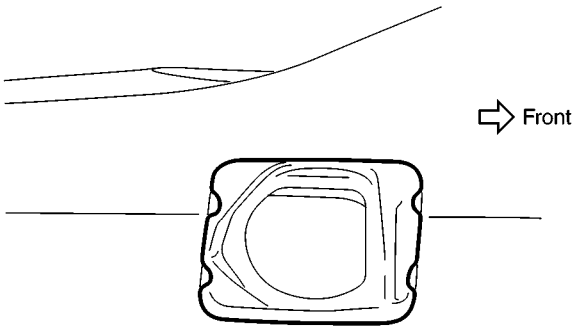
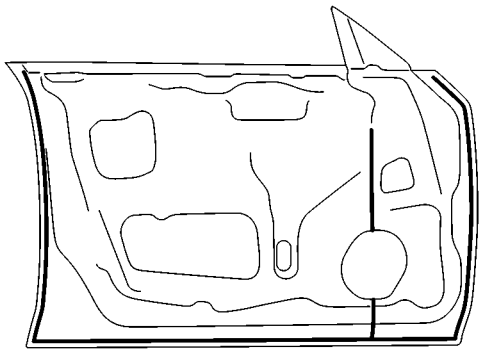
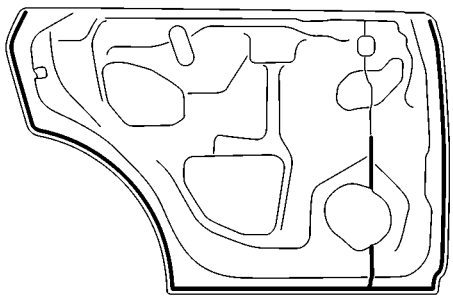
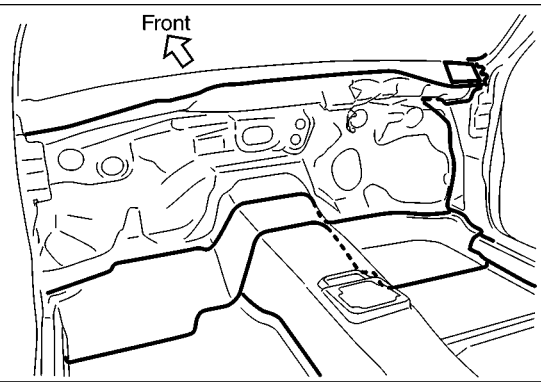
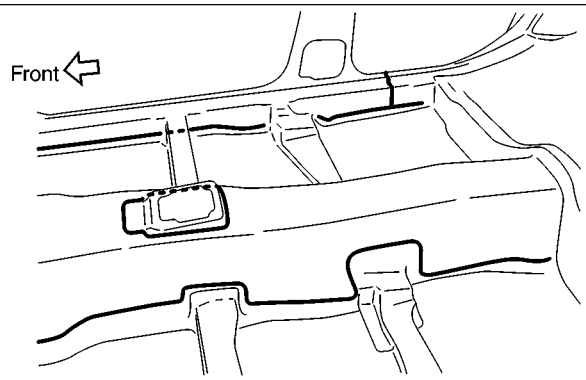
DESCRIPTION

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.





PIIA0766E

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

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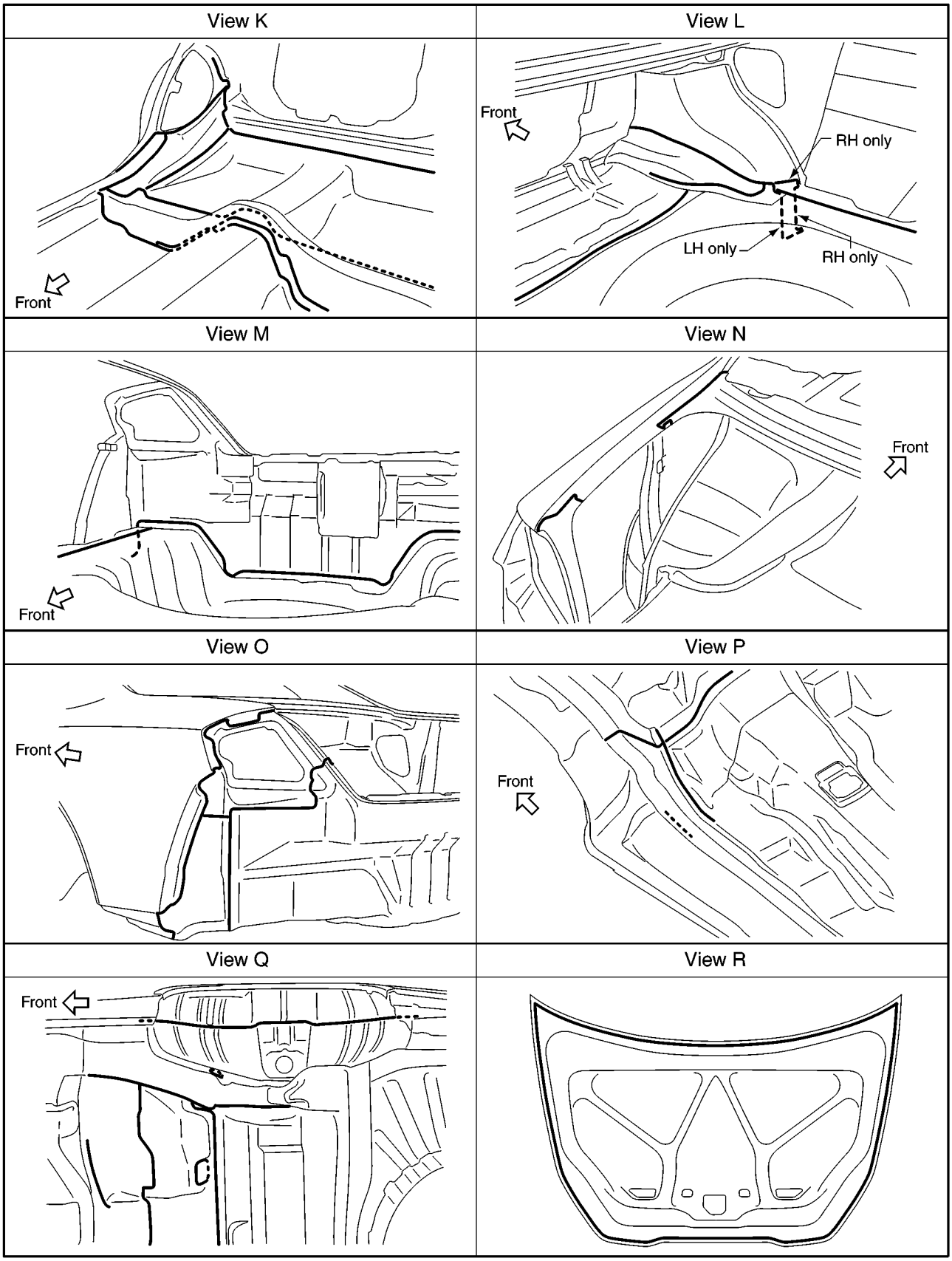
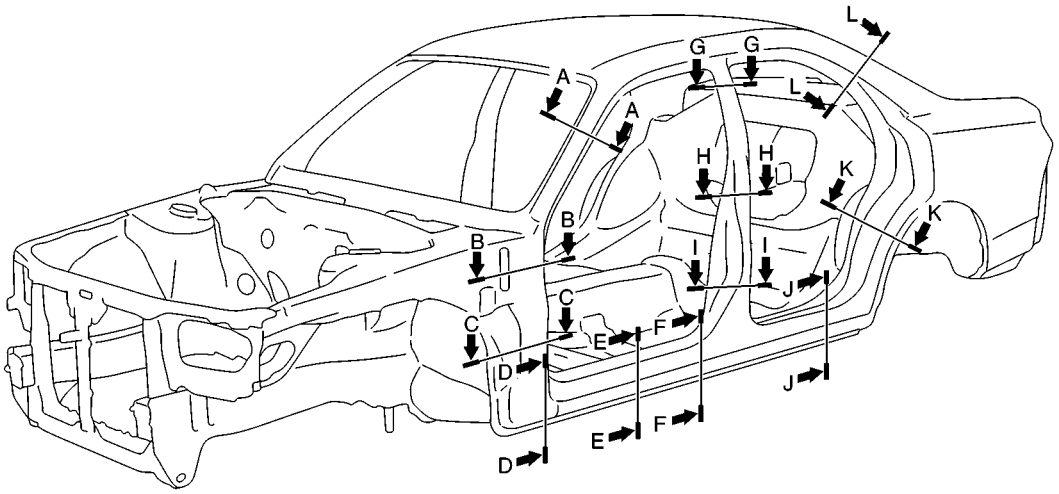
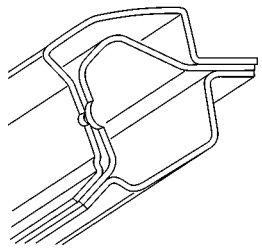
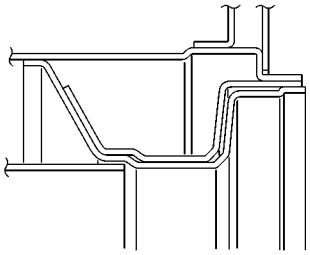
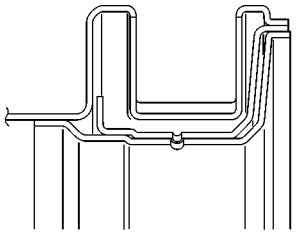
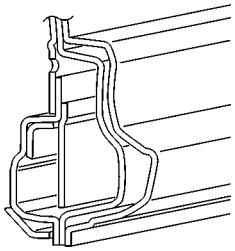
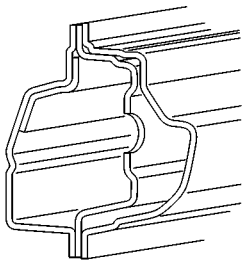
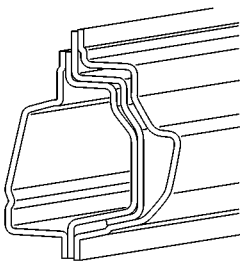
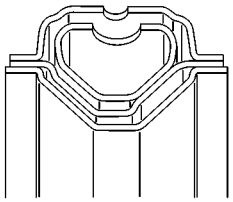
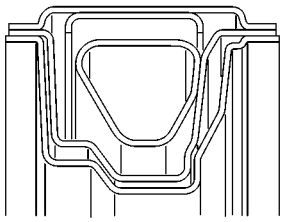
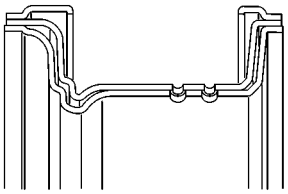
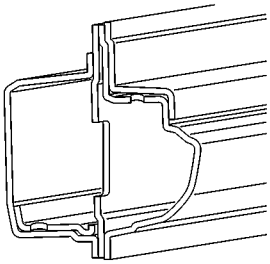
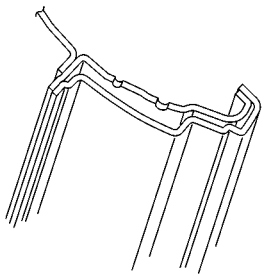
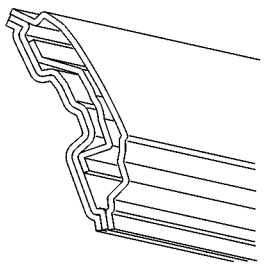

View K
Front
View L
Front
RH only
LH only
RH only
View M
Front
View N
Front
View O
Front
View P
Front
View Q
Front
View R

PIIA0768E

Body Construction
BODY CONSTRUCTION

AIS0000E



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**
			

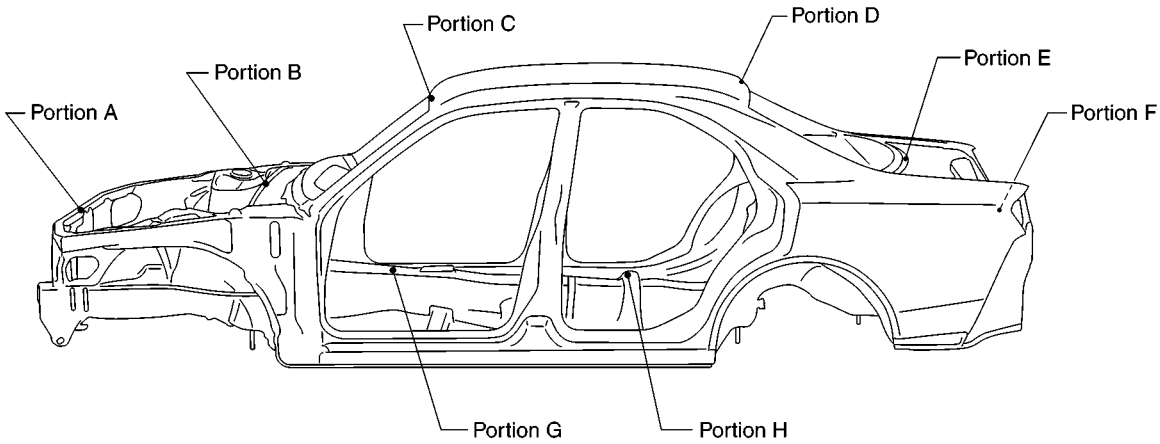
SIIA1902E

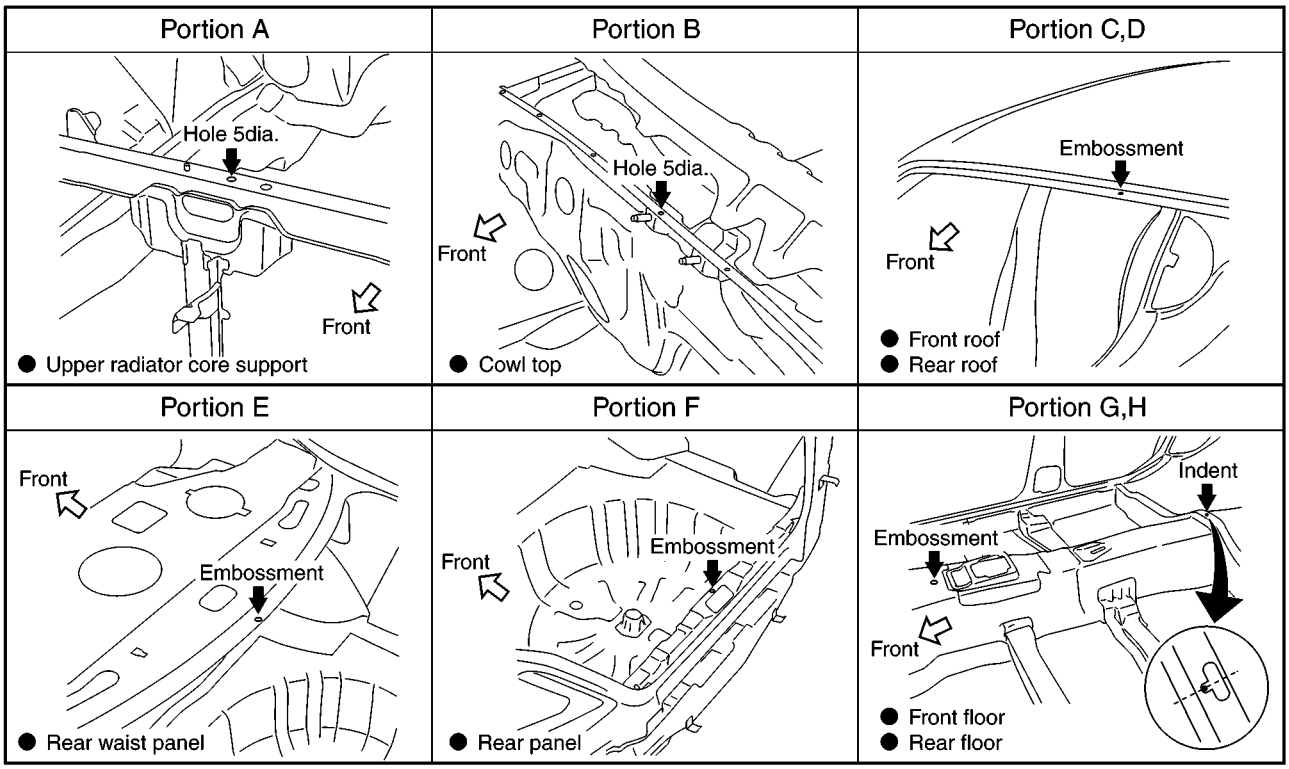
Body Alignment

AIS0000F

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.

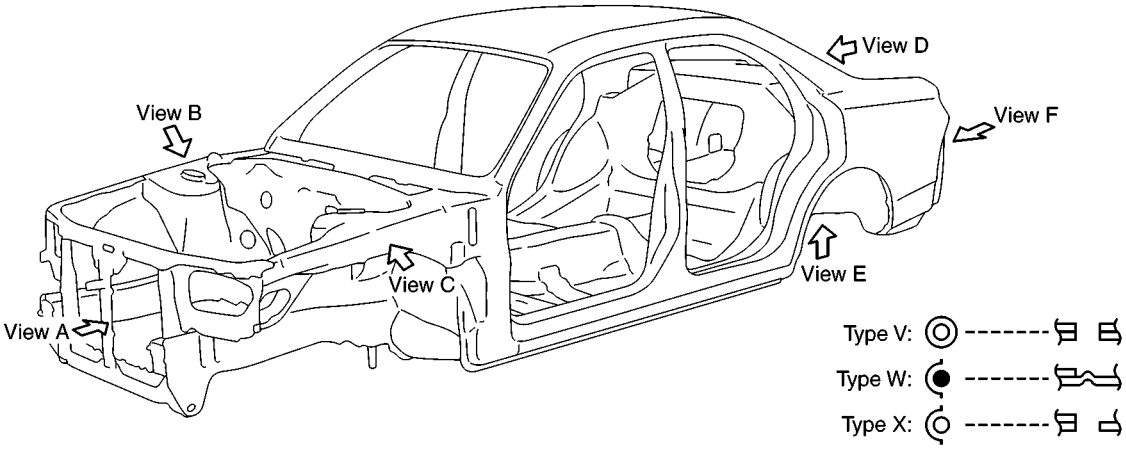


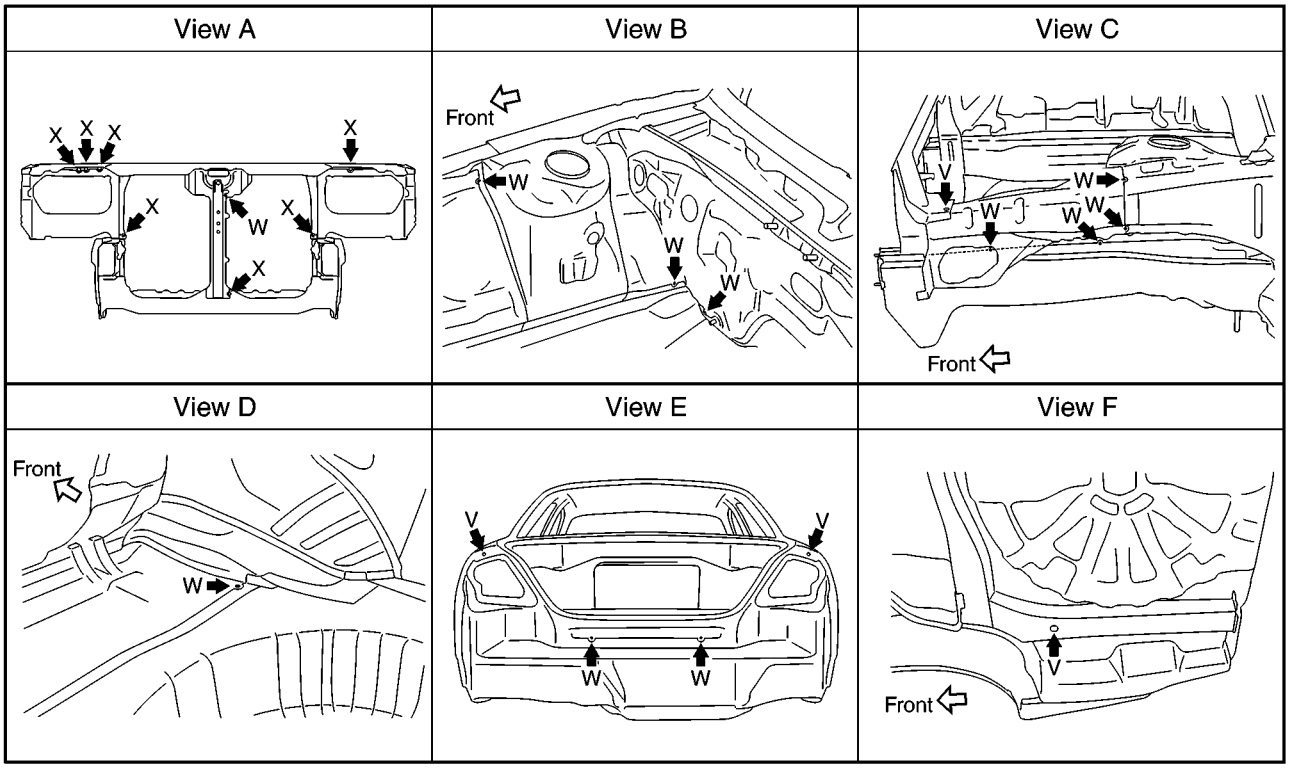


PIIA0764E

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.

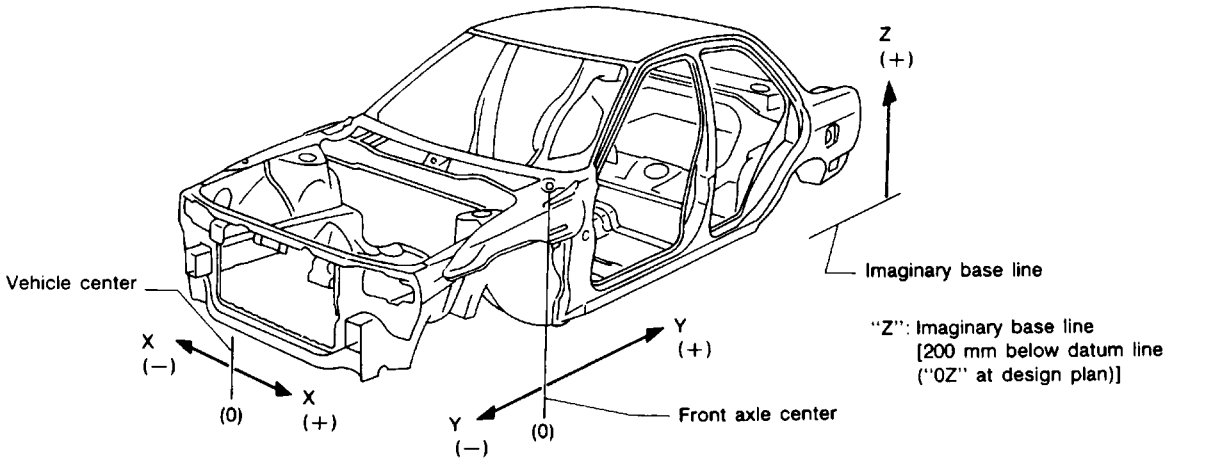




PIIA0765E

DESCRIPTION

- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements should be taken at the center of the mounting holes.
- An asterisk (*) following the value at the measuring point indicates that the measuring point on the other side is symmetrically the same value.
- The coordinates of the measurement points are the distances measured from the standard line of "X", "Y" and "Z".

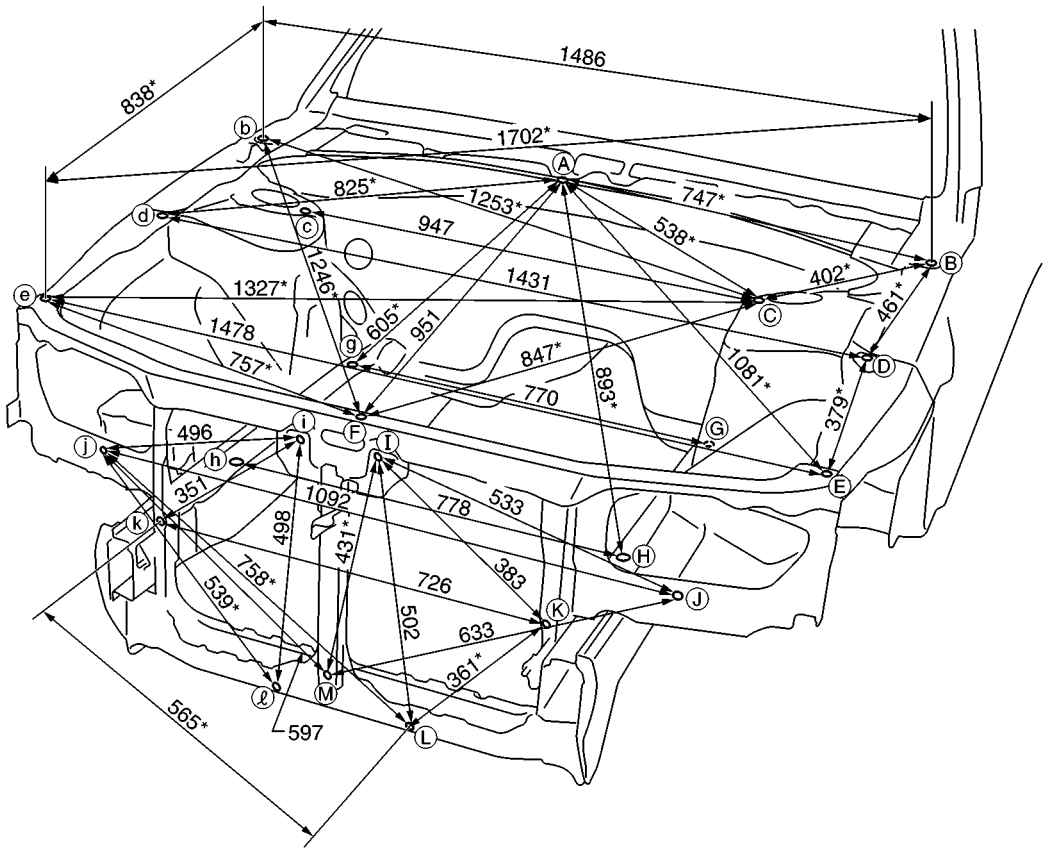


ENGINE COMPARTMENT

Measurement

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

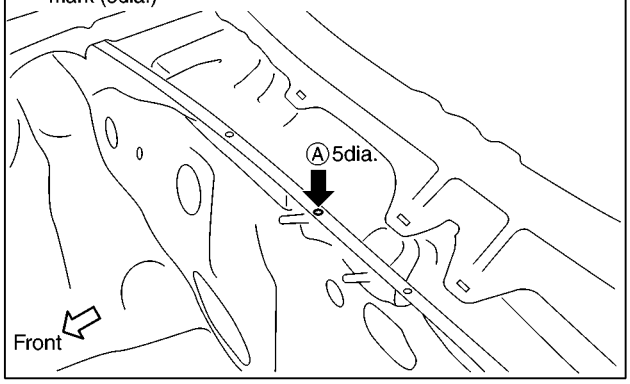
Unit : mm



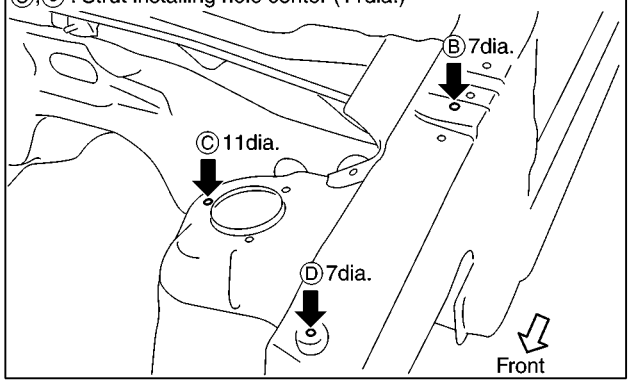
SIIA1907E

Measurement Points

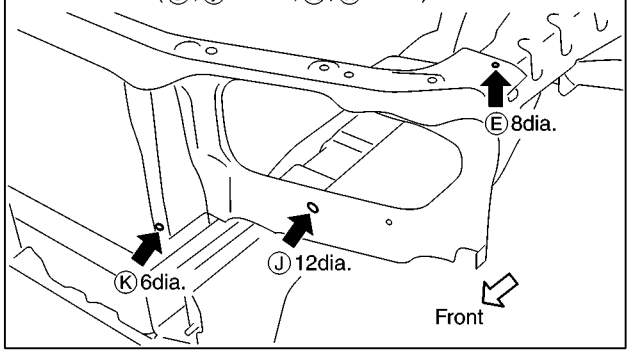
Ⓐ : Cowl top seal rubber installing hole center of center positioning mark (5dia.)



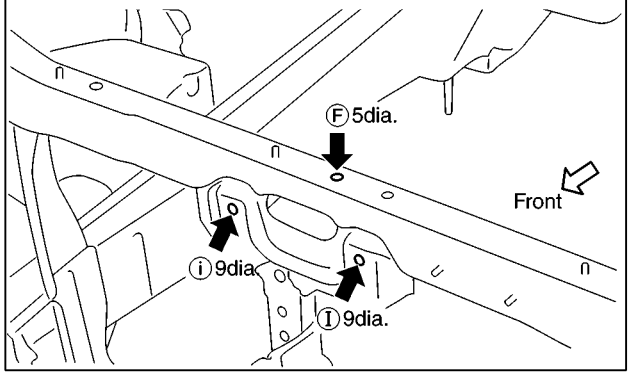
Ⓑ,ⓑ,Ⓓ,ⓓ : Front fender installing hole center (7dia.)
Ⓒ,ⓒ : Strut installing hole center (11dia.)



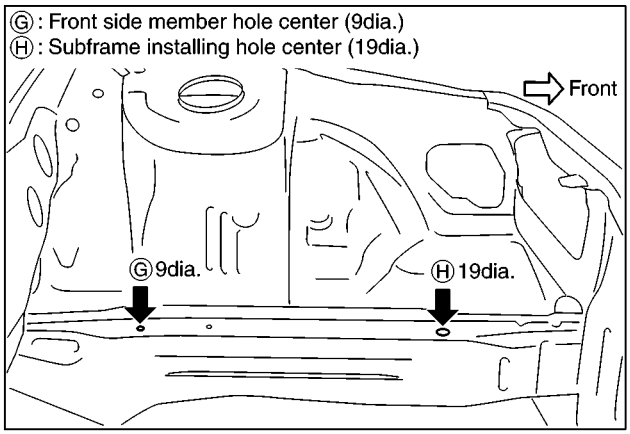
Ⓔ,ⓔ : Upper radiator core support hole center (8dia.)
Ⓙ,ⓙ,Ⓚ,ⓚ : Side radiator core support hole center (Ⓙ,ⓙ:12dia., Ⓚ,ⓚ: 6dia.)



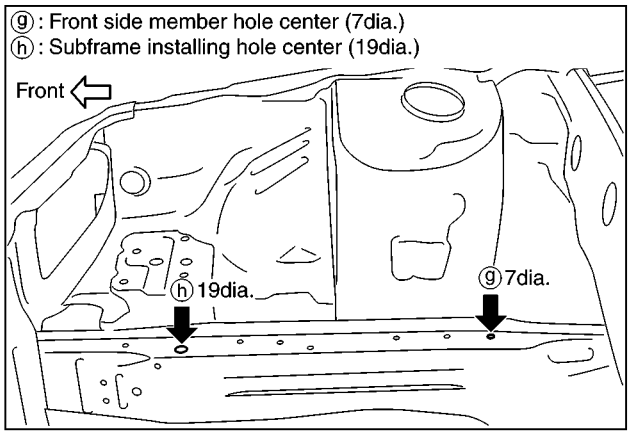
Ⓕ : Upper radiator core support hole center of center positioning mark (5dia.)
Ⓘ,ⓘ : Hood lock installing hole center (9dia.)



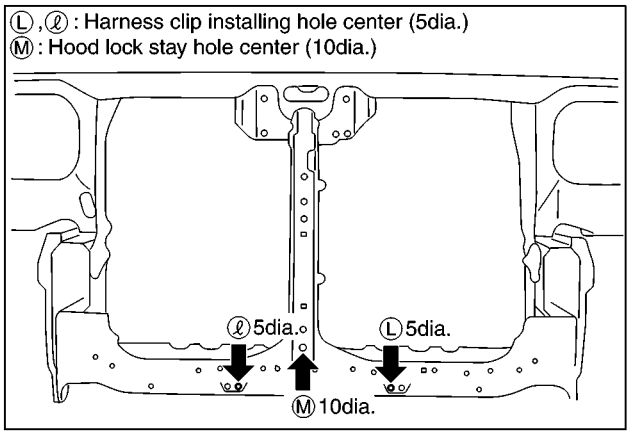
Ⓖ : Front side member hole center (9dia.)
Ⓗ : Subframe installing hole center (19dia.)



ⓖ : Front side member hole center (7dia.)
ⓗ : Subframe installing hole center (19dia.)



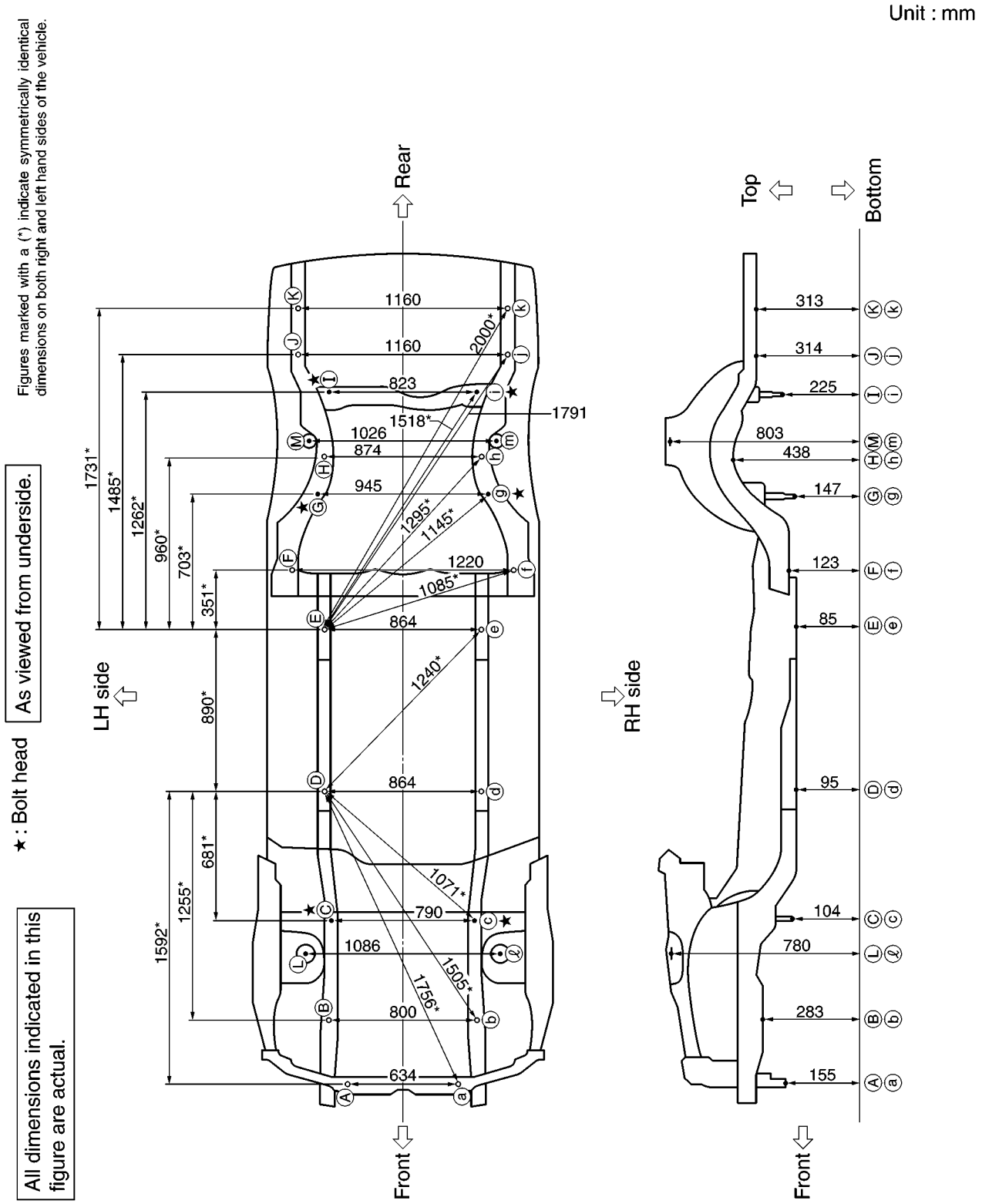
Ⓛ,ⓛ : Harness clip installing hole center (5dia.)
Ⓜ : Hood lock stay hole center (10dia.)



PIIA0772E

UNDERBODY
Measurement

Unit : mm

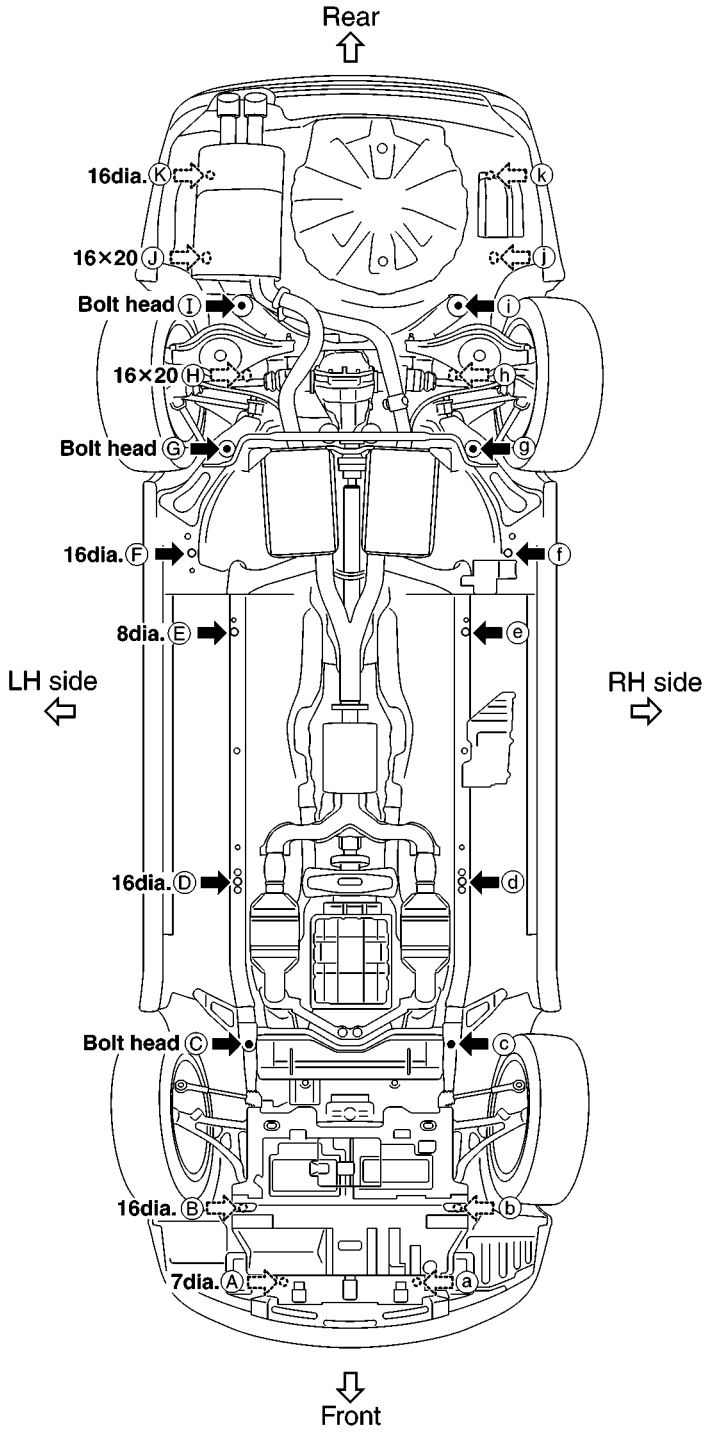


PIIA0771E

Measurement Points

Unit : mm

As viewed from underside.



Coordinates:

Ⓐ,ⓐ	Ⓘ,ⓘ
X:317	**X:412**
Y:-637	**Y:3094**
Z:155	**Z:225**
Ⓑ,ⓑ	Ⓙ,ⓙ
X:400	**X:580**
Y:-290	**Y:3300**
Z:283	**Z:314**
Ⓒ,ⓒ	Ⓚ,ⓚ
X:395	**X:580**
Y:270	**Y:3550**
Z:104	**Z:313**
Ⓓ,ⓓ	
X:432	
Y:950	
Z:95	
Ⓔ,ⓔ	
X:432	
Y:1840	
Z:85	
Ⓕ,ⓕ	
X:610	
Y:2140	
Z:123	
Ⓖ,ⓖ	
X:473	
Y:2539	
Z:147	
Ⓗ,ⓗ	
X:437	
Y:2733	
Z:438	

Front and rear strut tower centers

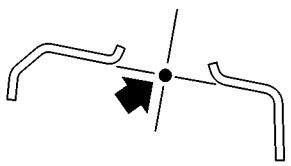
Coordinates:

Ⓛ,ⓛ

X:543

Y:72

Z:780



Ⓜ,ⓜ

X:513

Y:2830

Z:803

Front: Ⓛ,ⓛ **106dia.**

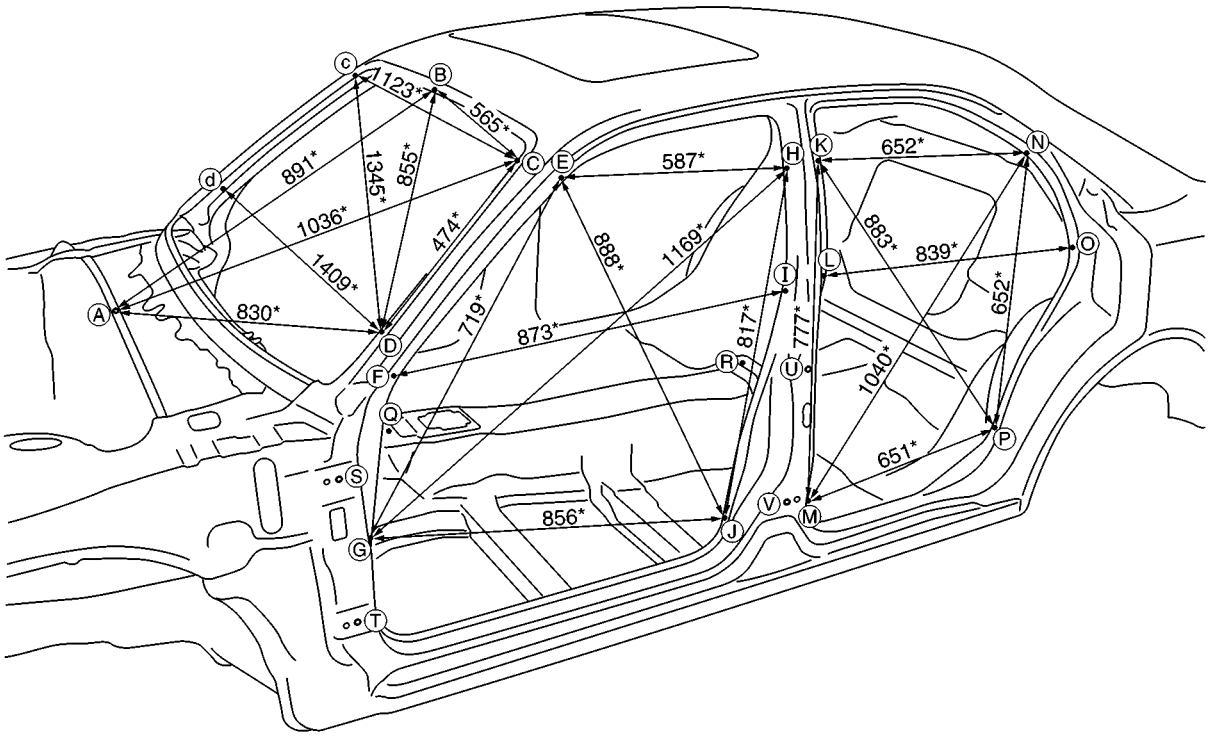
Rear: Ⓜ,ⓜ **76dia.**

SIIA1908E

PASSENGER COMPARTMENT
Measurement

Unit : mm

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

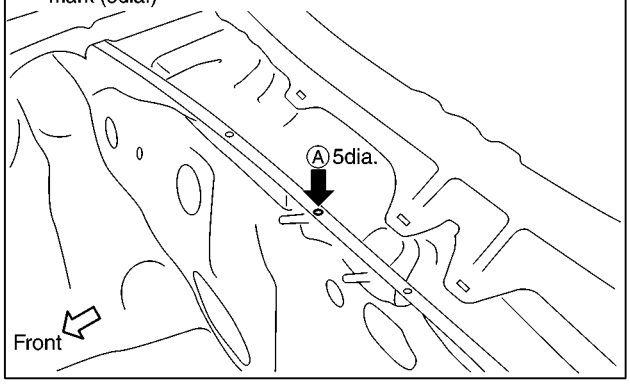


Point	Dimension	Point	Dimension	Point	Dimension
Ⓔ~ⓔ	1,258	Ⓚ~ⓝ	1,438*	Ⓠ~Ⓘ	1,139*
Ⓔ~ⓖ	1,531*	Ⓛ~ⓛ	1,442	Ⓠ~Ⓙ	949*
Ⓔ~ⓗ	1,399*	Ⓜ~ⓜ	1,480	Ⓡ~Ⓚ	1,027*
Ⓕ~ⓕ	1,441	Ⓜ~Ⓟ	1,612*	Ⓡ~Ⓛ	926*
Ⓖ~ⓖ	1,453	Ⓝ~ⓝ	1,283	Ⓡ~Ⓜ	810*
Ⓖ~ⓗ	1,797*	Ⓝ~Ⓟ	1,520*	Ⓡ~Ⓝ	1,052*
Ⓖ~ⓙ	1,700*	Ⓞ~ⓞ	1,391	Ⓡ~Ⓞ	1,000*
Ⓗ~ⓗ	1,282	Ⓟ~Ⓟ	1470	Ⓡ~Ⓟ	805*
Ⓗ~ⓙ	1,604*	Ⓟ~ⓚ	1,632*	Ⓡ~Ⓦ	1,046*
Ⓘ~ⓘ	1,441	Ⓠ~Ⓔ	993*	Ⓢ~Ⓤ	1,086*
Ⓙ~ⓙ	1,485	Ⓠ~Ⓕ	882*	Ⓢ~Ⓥ	1,093*
Ⓚ~ⓚ	1,281	Ⓠ~Ⓖ	785*	Ⓣ~Ⓤ	1,131*
Ⓚ~ⓜ	1,581*	Ⓠ~Ⓗ	1,255*	Ⓣ~Ⓥ	1,046*

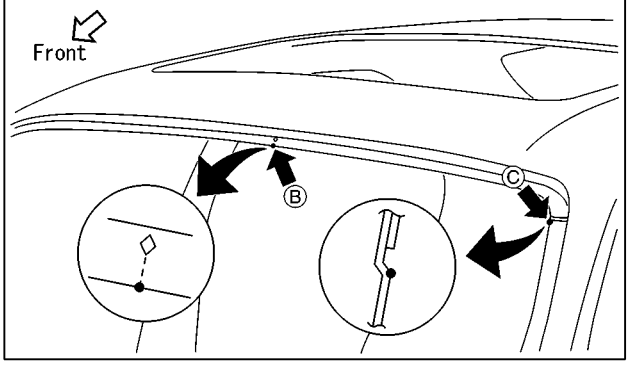
SIIA1909E

Measurement Points

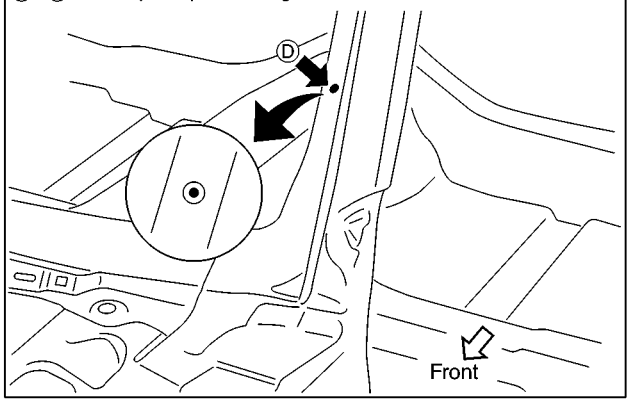
Ⓐ : Cowl top seal rubber installing hole center of center positioning mark (5dia.)



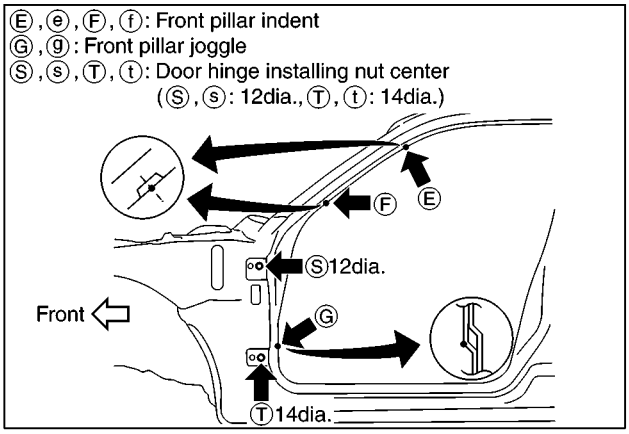
Ⓑ : Front roof flange end of center positioning mark
Ⓒ,ⓒ : Front pillar joggle



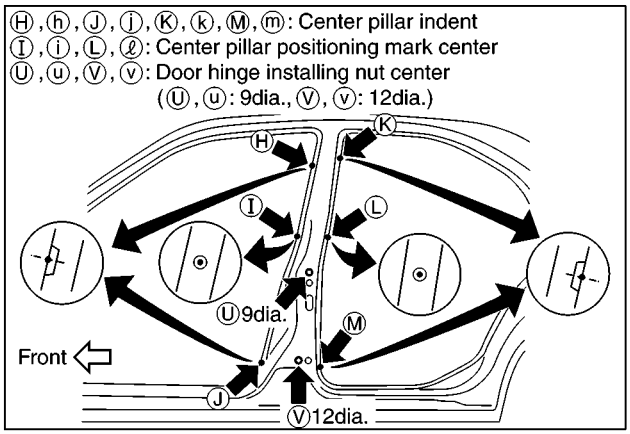
Ⓓ,ⓓ : Front pillar positioning mark center



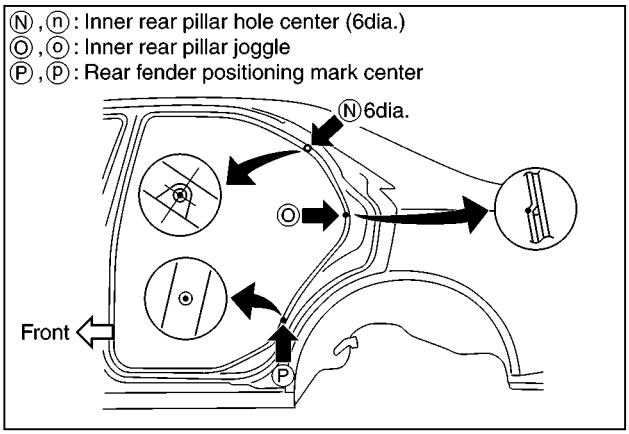
Ⓔ,ⓔ,Ⓕ,ⓕ : Front pillar indent
Ⓖ,ⓖ : Front pillar joggle
Ⓢ,ⓢ,Ⓣ,ⓣ : Door hinge installing nut center
(Ⓢ,ⓢ : 12dia., Ⓣ,ⓣ : 14dia.)



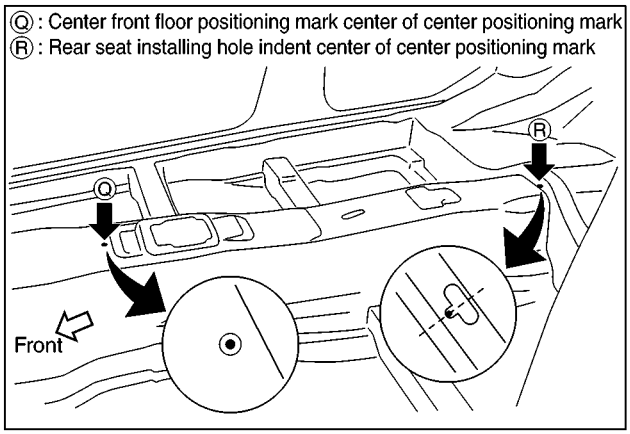
Ⓗ,ⓗ,Ⓙ,ⓙ,Ⓚ,ⓚ,Ⓜ,ⓜ : Center pillar indent
Ⓘ,ⓘ,Ⓛ,ⓛ : Center pillar positioning mark center
Ⓤ,ⓤ,Ⓥ,ⓥ : Door hinge installing nut center
(Ⓤ,ⓤ : 9dia., Ⓥ,ⓥ : 12dia.)



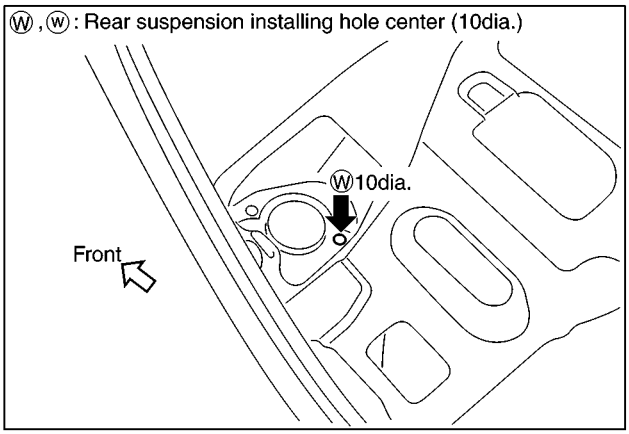
Ⓝ,ⓝ : Inner rear pillar hole center (6dia.)
Ⓞ,ⓞ : Inner rear pillar joggle
Ⓟ,ⓟ : Rear fender positioning mark center



Ⓠ : Center front floor positioning mark center of center positioning mark
Ⓡ : Rear seat installing hole indent center of center positioning mark



Ⓦ,ⓦ : Rear suspension installing hole center (10dia.)

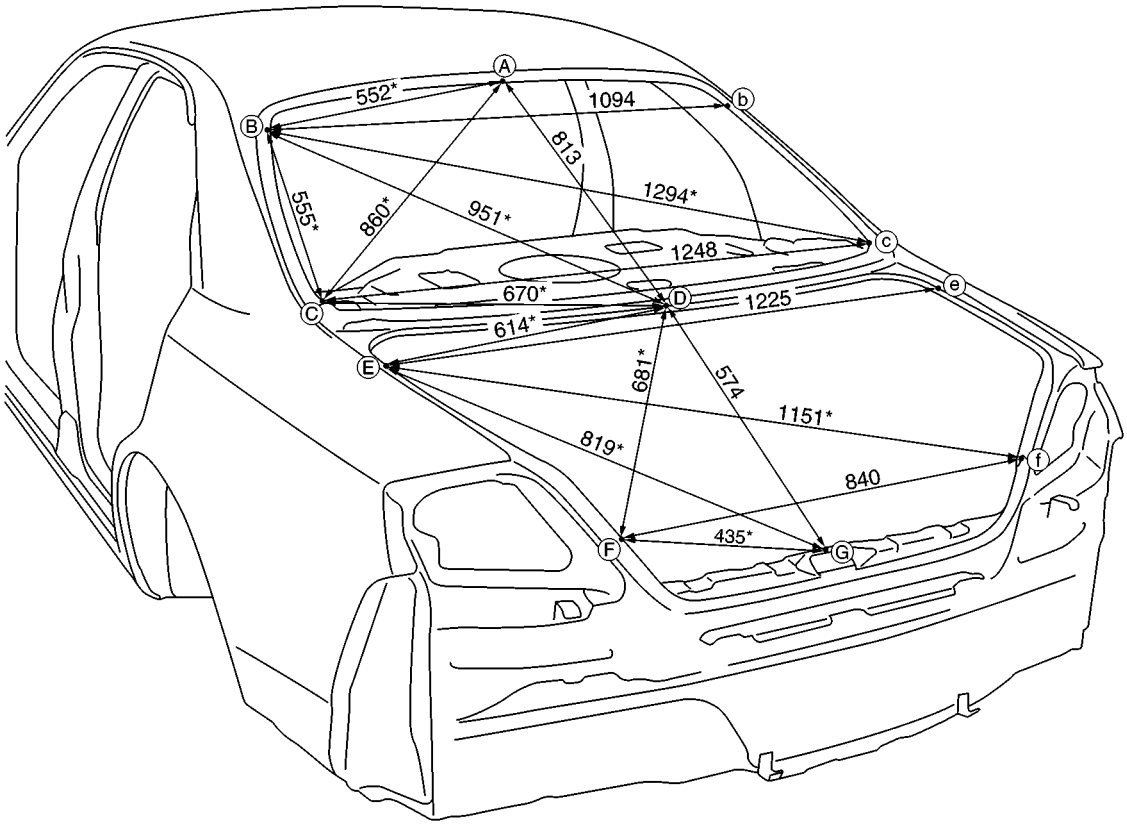


SIIA1912E

REAR BODY
Measurement

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

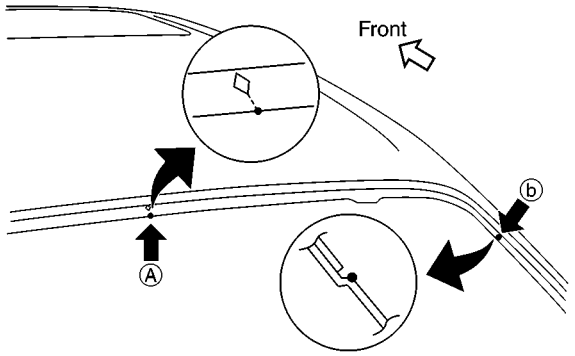
Unit : mm



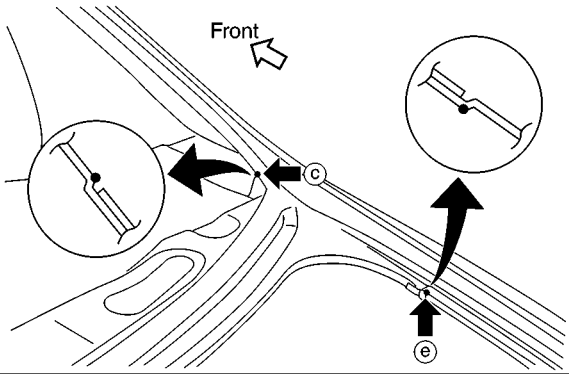
SIIA1913E

Measurement Points

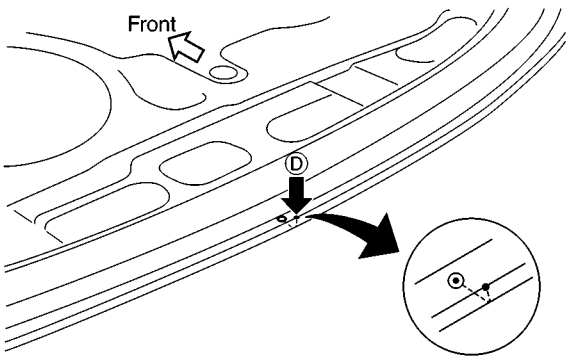
Ⓐ : Rear roof flange end of center positioning mark
Ⓑ, ⓑ: Rear fender joggle



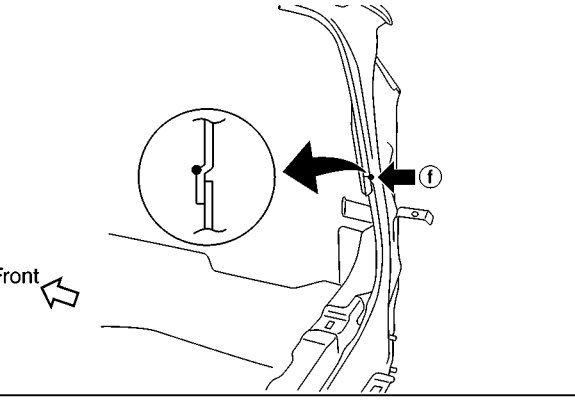
Ⓒ, ⓒ, Ⓔ, ⓔ: Rear fender joggle



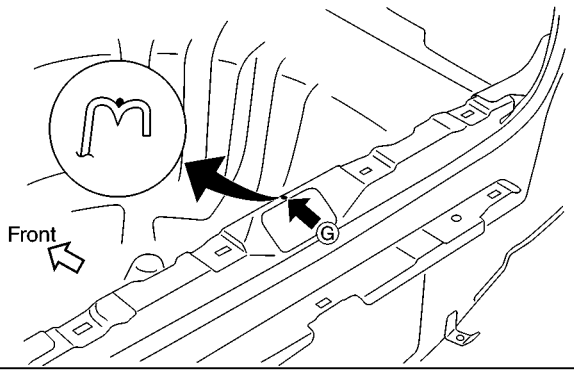
Ⓓ: Rear west flange end of center positioning mark



Ⓕ, ⓕ: Rear combination lamp base joggle



Ⓖ: Rear panel reinforcement positioning mark center of center positioning mark



SIIA1914E

Handling Precautions for Plastics

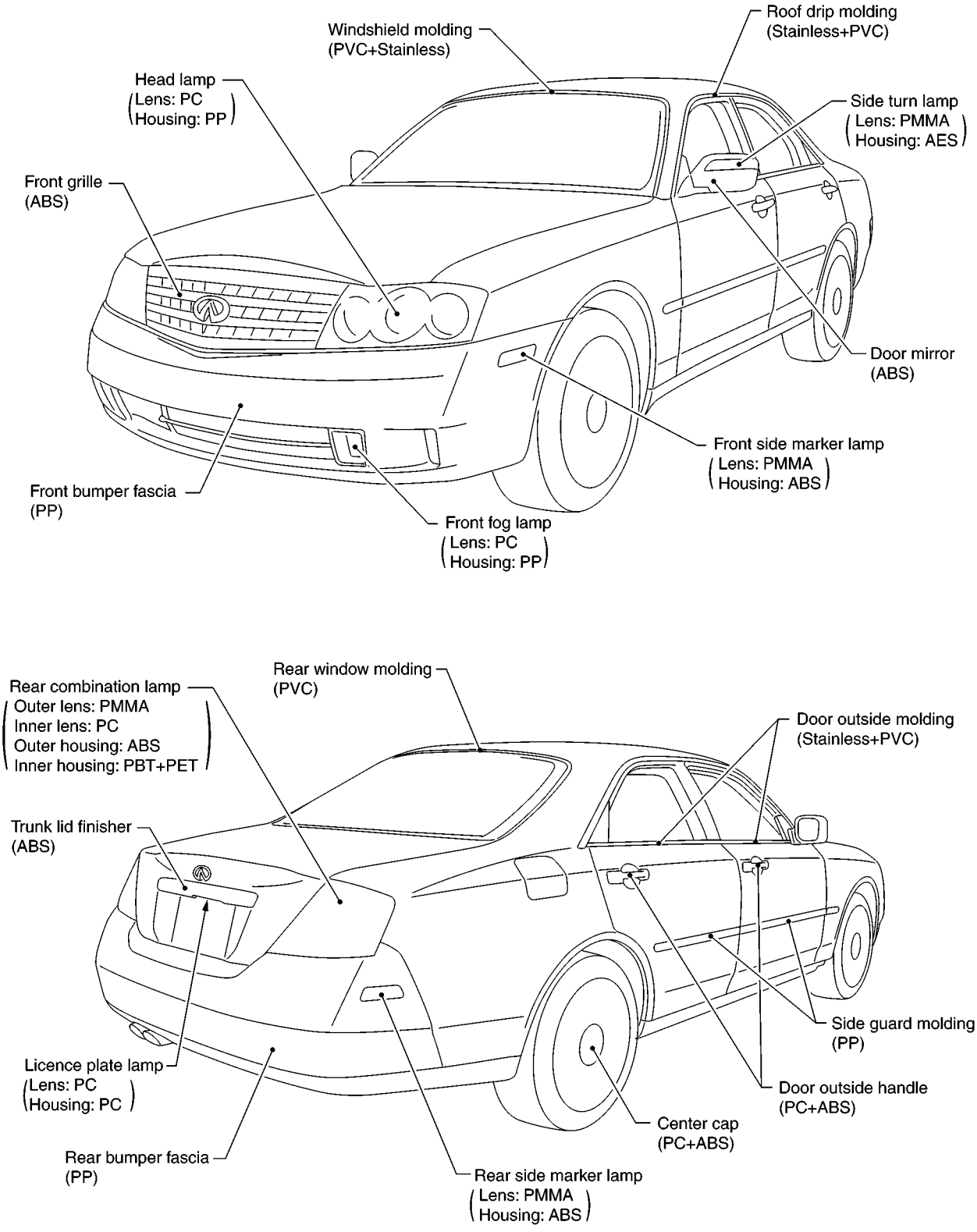
AIS0000G

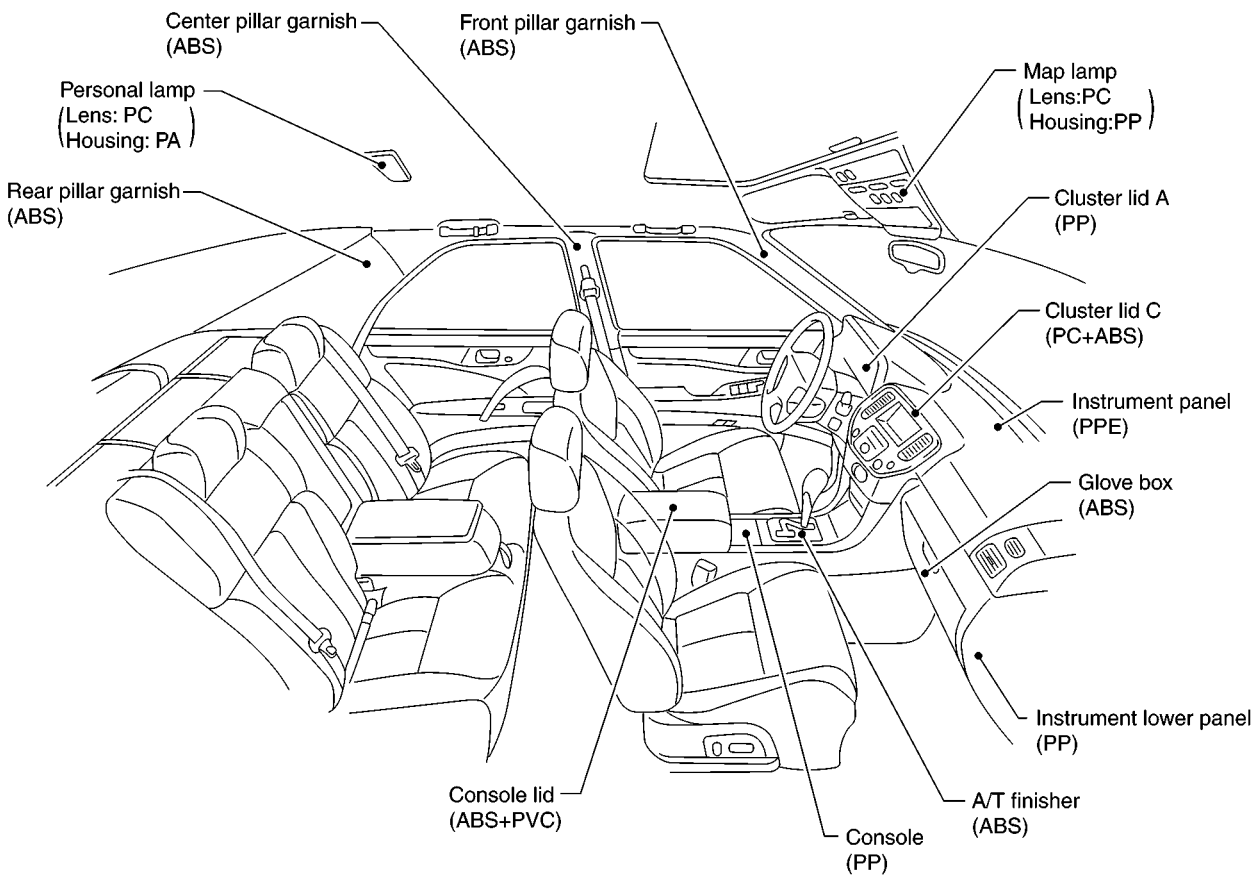
HANDLING PRECAUTIONS FOR PLASTICS

Abbre-viation	Material name	Heat resisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Poly vinyl Chloride	80(176)	Same as above.	Poison gas is emitted when burned.
EPM/ EPDM	Ethylene Propylene (Diene) copolymer	80(176)	Same as above.	Flammable
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.	
AES	Acrylonitrile Ethylene Styrene	80(176)	Same as above.	
PMMA	Poly methyl Methacrylate	85(185)	Same as above.	
EVAC	Ethy 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	Poly Carbonate	120(248)	Same as above.	
PAR	Poly Acrylate	180(356)	Same as above.	
PUR	Poly Urethane	90(194)	Same as above.	
POM	Poly Oxymethylent	120(248)	Same as above.	Avoid battery acid.
PBT+ PC	Poly Butylene Terephthalate + Poly Carbonate	120(248)	Same as above.	Flammable
PA	Poly Amide (Nylon)	140(284)	Same as above.	Avoid immersing in water.
PBT	Poly Butylene Terephthalate	140(284)	Same as above.	
PET	Poly Ethylene Terephthalate	180(356)	Same as above.	
PEI	Poly Etherimide	200(392)	Same as above.	

1. When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.
2. Plastic parts should be repaired and painted using methods suiting the materials' characteristics.

LOCATION OF PLASTIC PARTS




Center pillar garnish
(ABS)
Front pillar garnish
(ABS)
Personal lamp
(Lens: PC
Housing: PA)
Map lamp
(Lens:PC
Housing:PP)
Rear pillar garnish
(ABS)
Cluster lid A
(PP)
Cluster lid C
(PC+ABS)
Instrument panel
(PPE)
Glove box
(ABS)
Instrument lower panel
(PP)
Console lid
(ABS+PVC)
A/T finisher
(ABS)
Console
(PP)

SIIA1916E

Precautions in Repairing High Strength Steel

AIS0000H

High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

HIGH STRENGTH STEEL (HSS) USED IN NISSAN VEHICLES

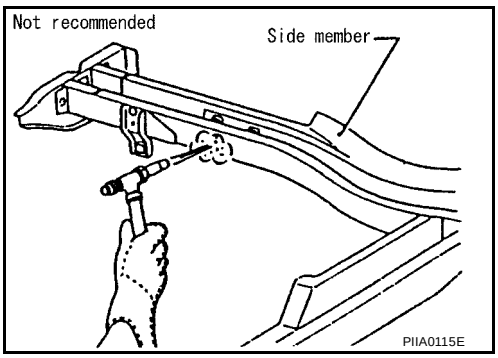
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm^2 (38kg/mm^2 ,54klb/sq in)	SP130	● Front side member assembly ● Upper hoodledge ● Upper pillar hinge brace assembly ● Rear side member extension ● Other reinforcements
785-981 N/mm^2 (80-100kg/mm^2 114-142klb/sq in)	SP150	●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

SP130 is the most commonly used HSS.
SP150 HSS is used only on parts that require much more strength.

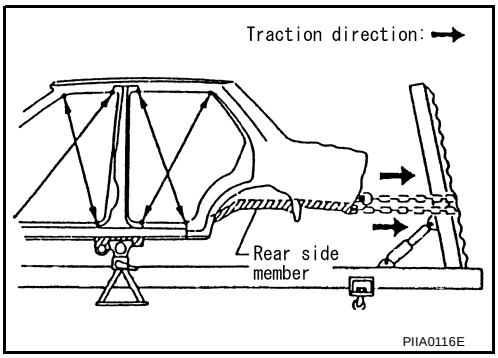
Read the Following Precautions when Repairing HSS:

1. Additional points to consider

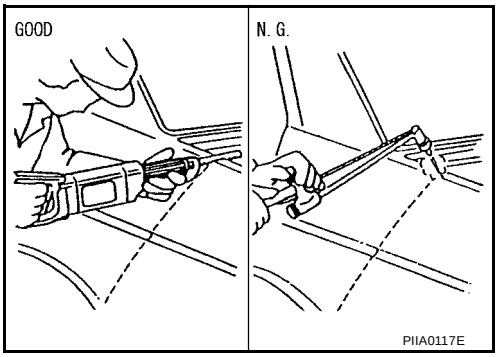
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).
  Verify heating temperature with a thermometer.
  (Crayon-type and other similar type thermometer are appropriate.)



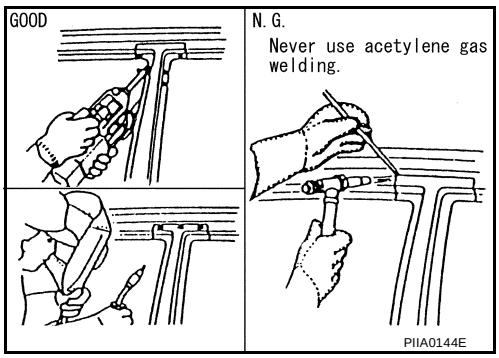
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



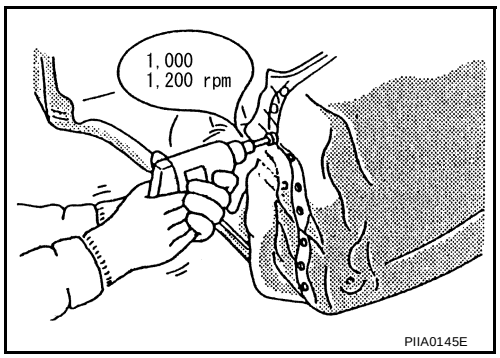
- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



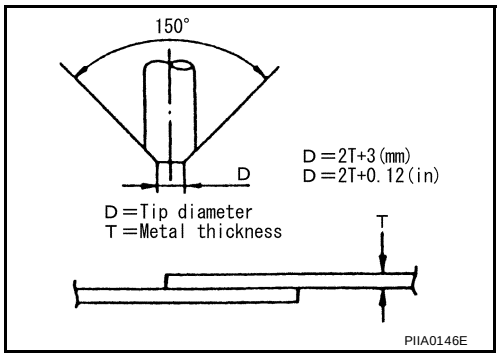
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



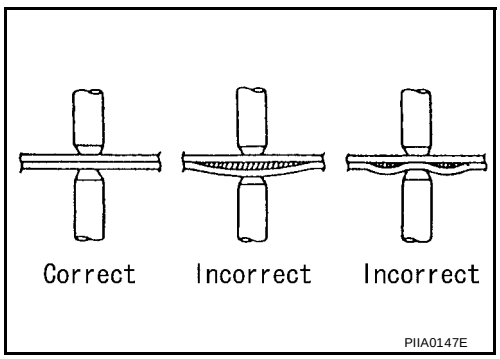
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.
- SP150 HSS panels with a tensile strength of 785 to 981 N/mm^2 (80 to 100 kg/mm^2, 114 to 142 klb/sq in), used as reinforcement in the door guard beams, is too strong to repair. When these HSS parts are damaged, the outer panels also sustain substantial damage; therefore, the assembly parts must be replaced.



2. Precautions in spot welding HSS
   This work should be performed under standard working conditions. Always note the following when spot welding HSS:
   - The electrode tip diameter must be sized properly according to the metal thickness.



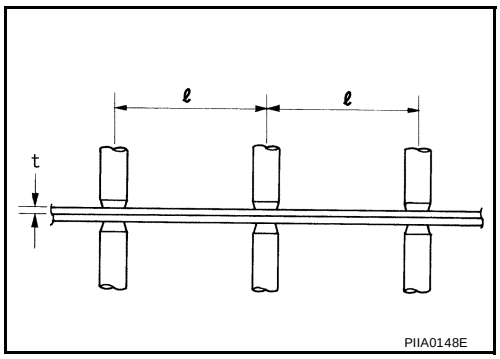
   - The panel surfaces must fit flush to each other, leaving no gaps.



   - Follow the specifications for the proper welding pitch.

Unit:mm

Thickness (t)	Minimum pitch (l)
0.6 (0.024)	10 (0.39) or over
0.8 (0.031)	12 (0.47) or over
1.0 (0.039)	18 (0.71) or over
1.2 (0.047)	20 (0.79) or over
1.6 (0.063)	27 (1.06) or over
1.8 (0.071)	31 (1.22) or over



Replacement Operations

AIS0000I

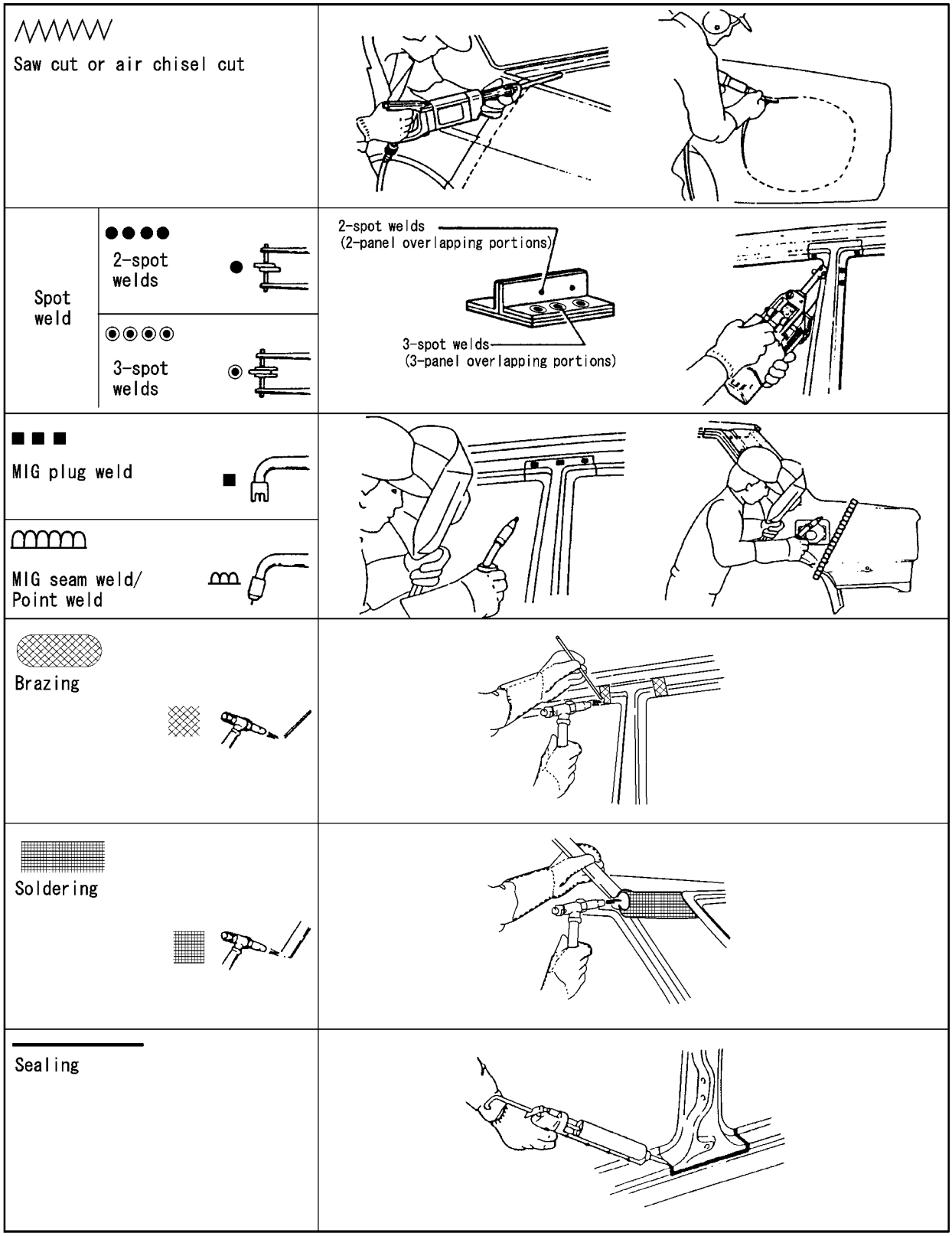
DESCRIPTION

This section is prepared for technicians who have attained a high level of skill and experience in repairing collision-damaged vehicles and also use modern service tools and equipment. Persons unfamiliar with body repair techniques should not attempt to repair collision-damaged vehicles by using this section.

Technicians are also encouraged to read Body Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle can be maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warning, that are not including in this manual. Technicians should refer to both manuals to ensure proper repairs.

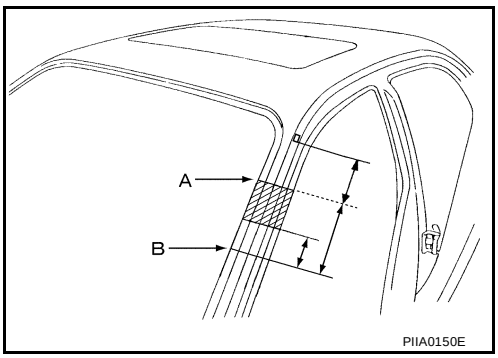
Please note that these information are prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

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

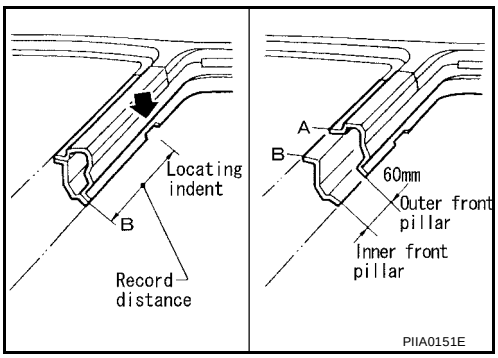


PIIA0149E

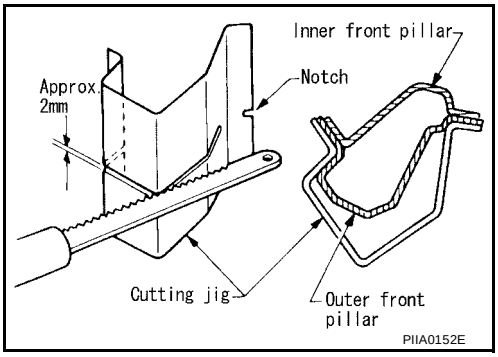
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- Determine cutting position and record distance from the locating indent. Use this distance when cutting the service part. Cut outer front pillar over 60 mm above inner front pillar cut position.

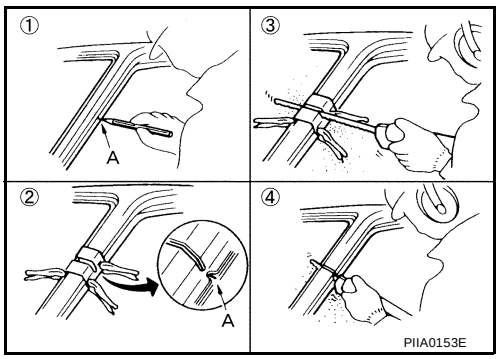


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



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

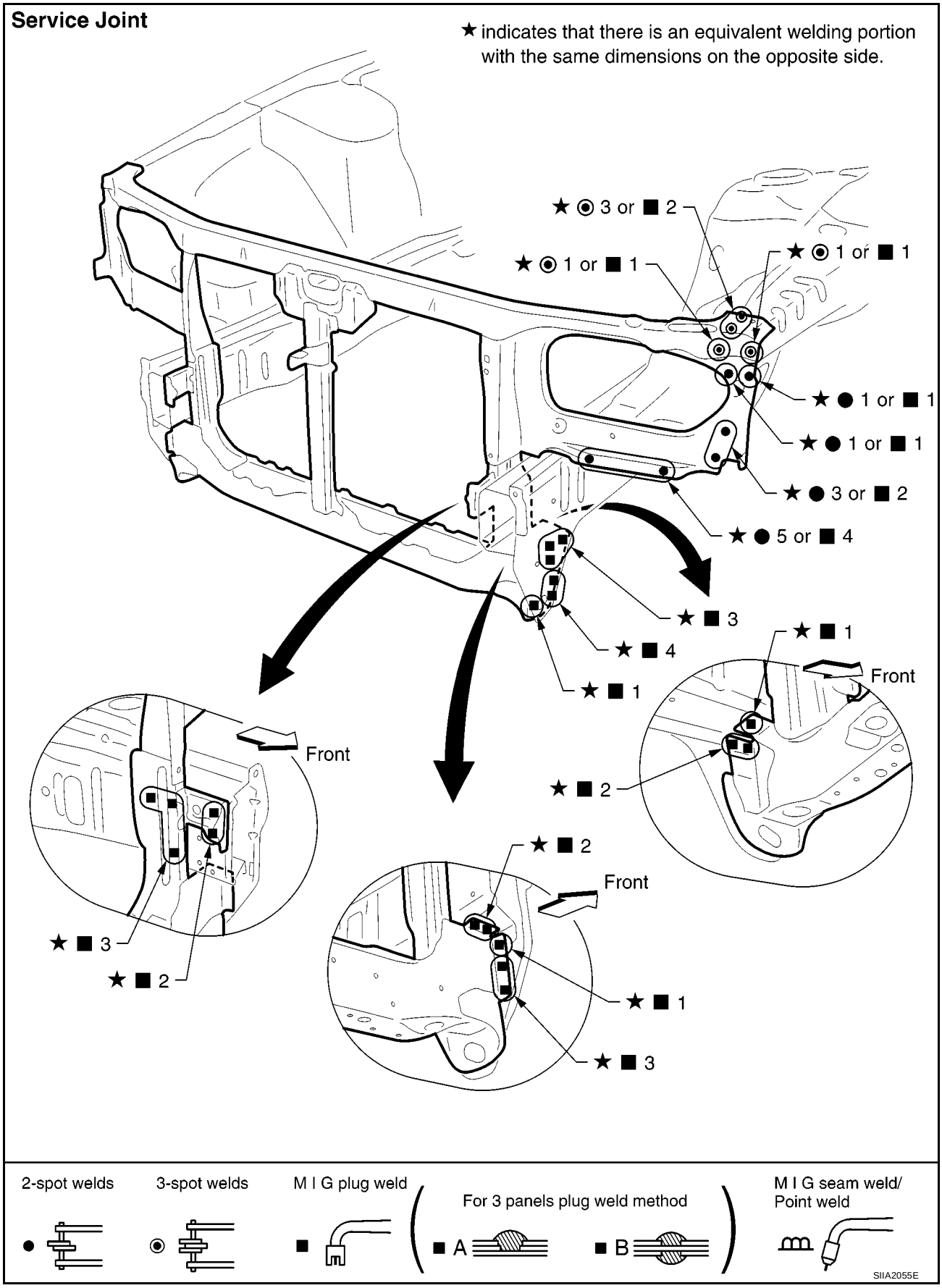
1. Mark cutting lines.
   A: Cut position of outer pillar
   B: Cut position of inner pillar
2. Align cutting line with notch on jig. Clamp jig to pillar.
3. Cut outer pillar along groove of jig. (At position A)
4. Remove jig and cut remaining portions.
5. Cut inner pillar at position B in same manner.



RADIATOR CORE SUPPORT

Service Joint

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

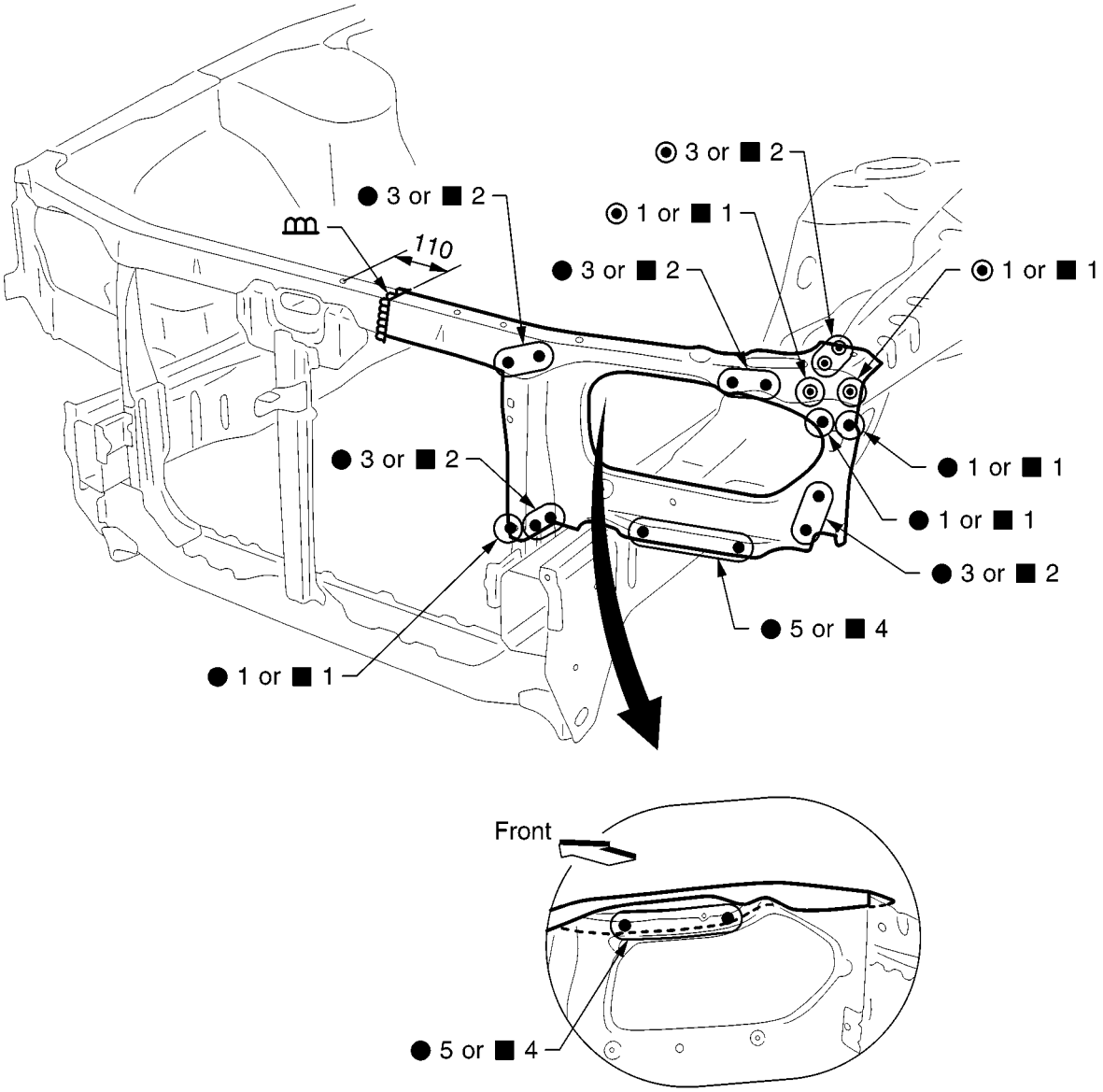


Change parts

- Radiator core support assembly

RADIATOR CORE SUPPORT (PARTIAL REPLACEMENT)

Service Joint



Unit:mm

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

SIIA2056E

Change parts

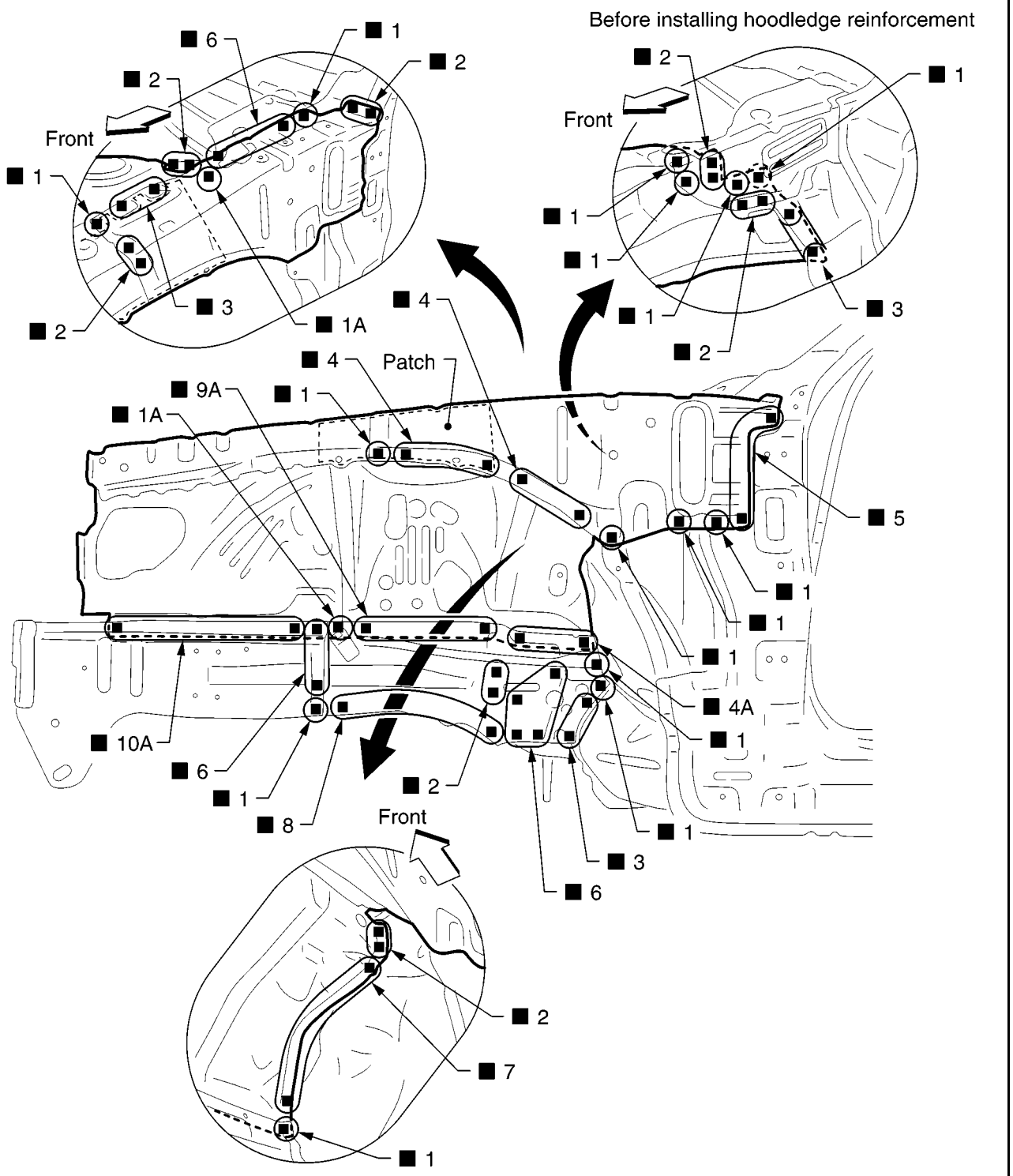
- Upper radiator core support
- Side radiator core support (LH)

HOODLEDGE

- Work after radiator core support has been removed.

Service Joint

Remove front side member rear closing plate for easier installation.

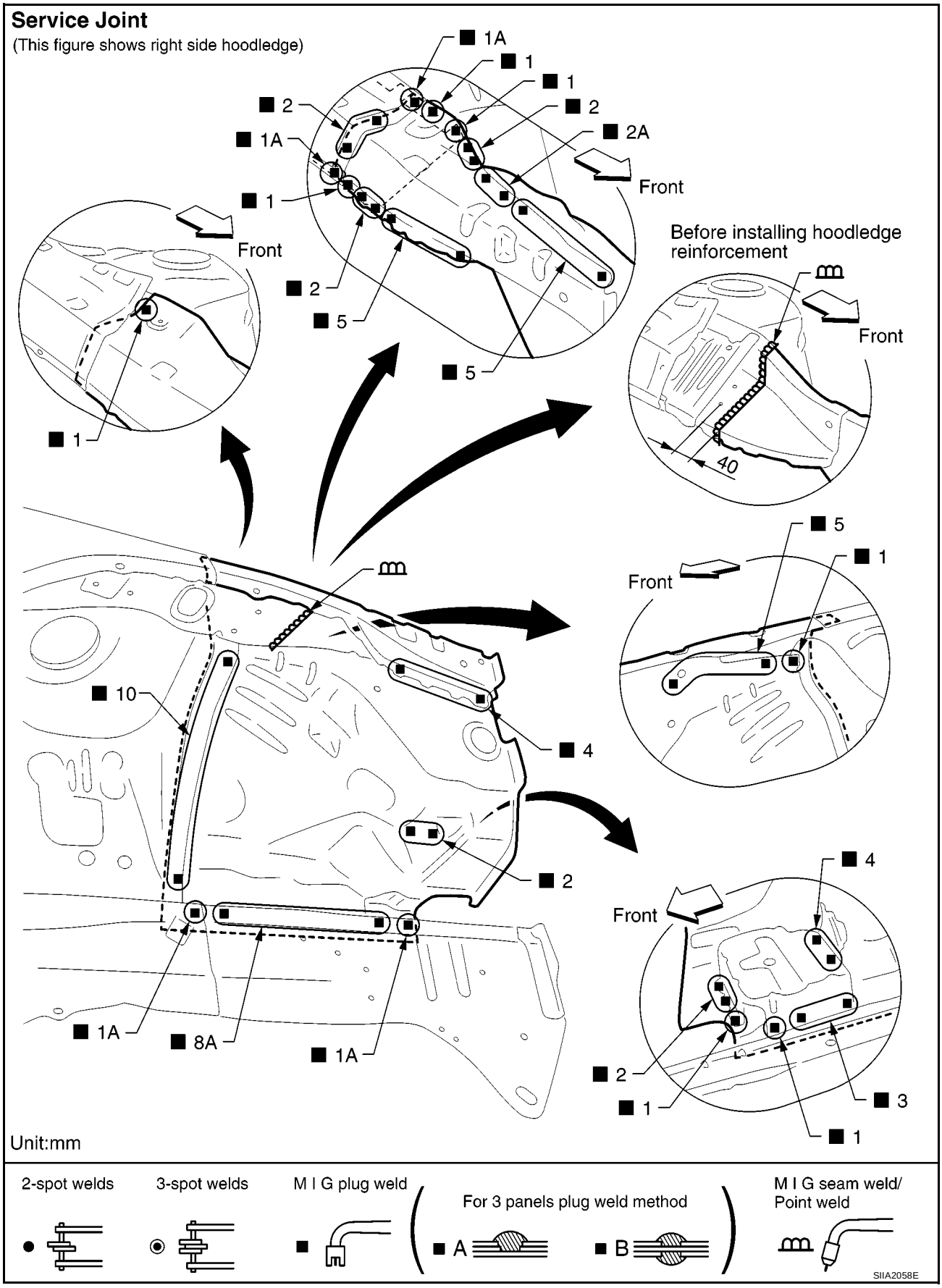


Change parts

- Hoodledge assembly (LH)
- Rear hoodledge reinforcement (LH)

HOODLEDGE (PARTIAL REPLACEMENT)

- Work after radiator core support has been removed.



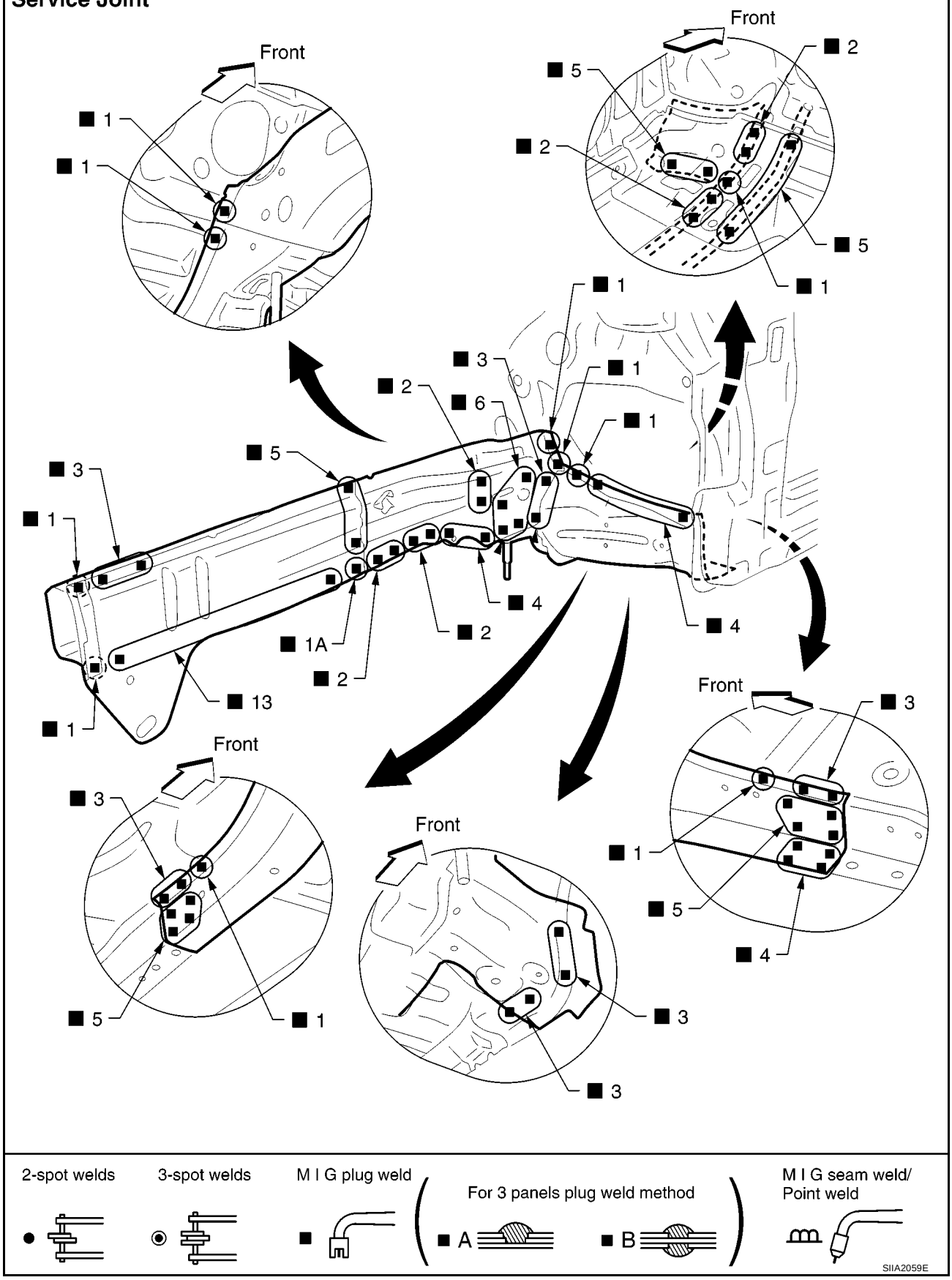
Change parts

- Upper hoodledge (RH)
- Lower front hoodledge (RH)
- Hoodledge reinforcement assembly (RH)

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 (A | B) | M I G seam weld/ Point weld

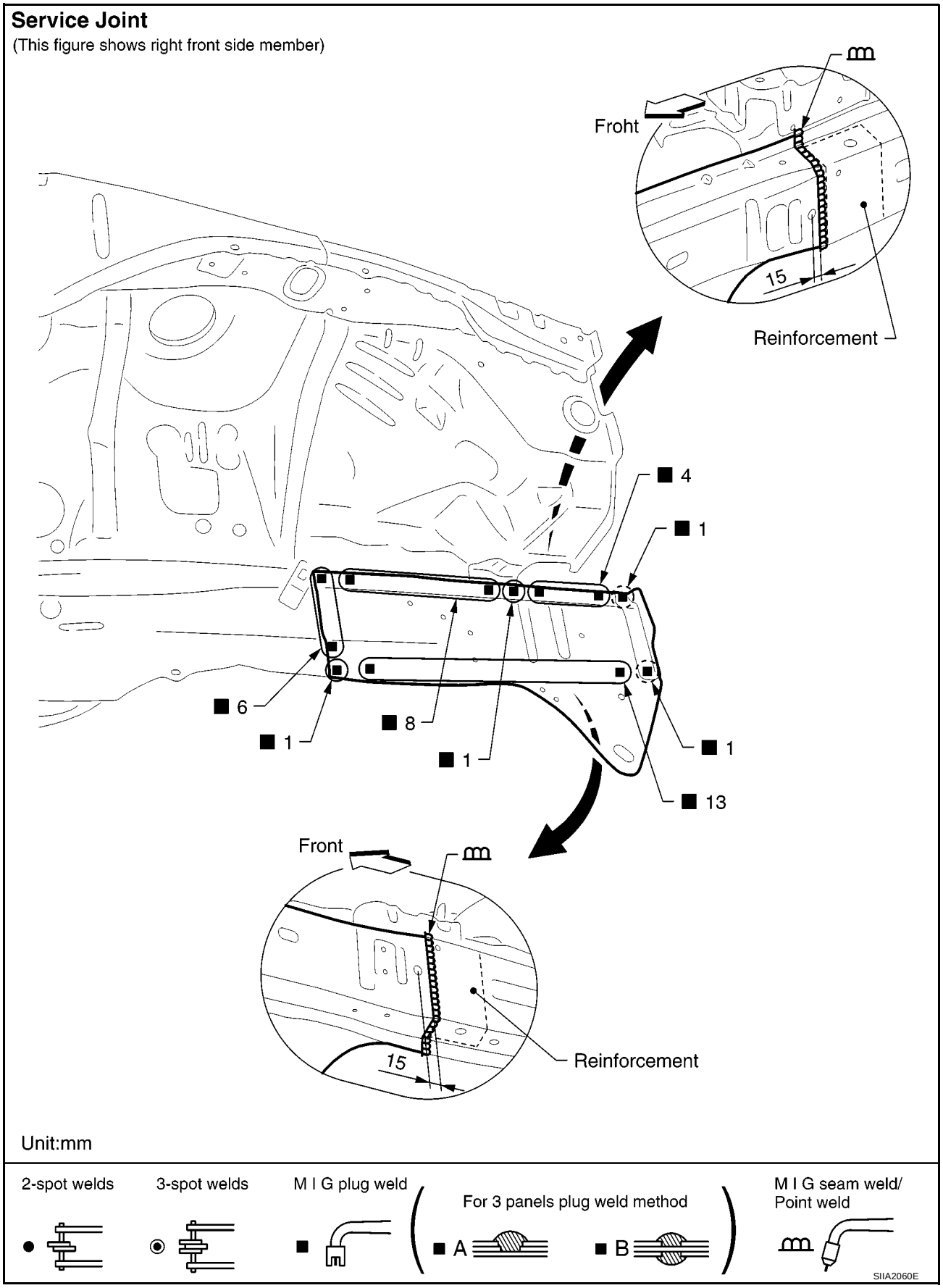
SIIA2059E

Change parts

- Front side member assembly (LH)
- Front side member closing plate assembly (LH)

FRONT SIDE MEMBER (PARTIAL REPLACEMENT)

- Work after radiator core support has been removed.

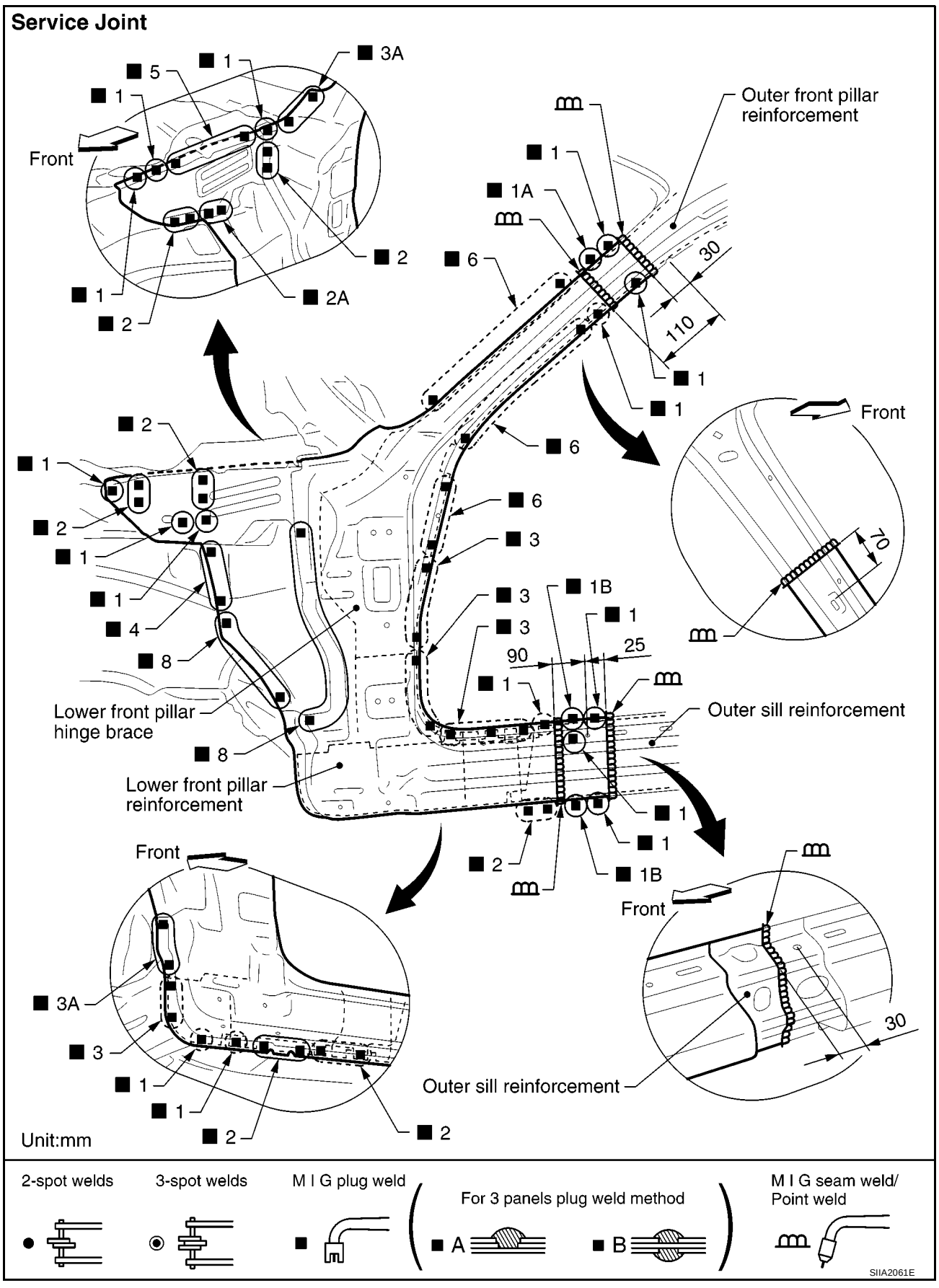


Change parts

- Front side member (RH)
- Front side member front closing plate (RH)

FRONT PILLAR

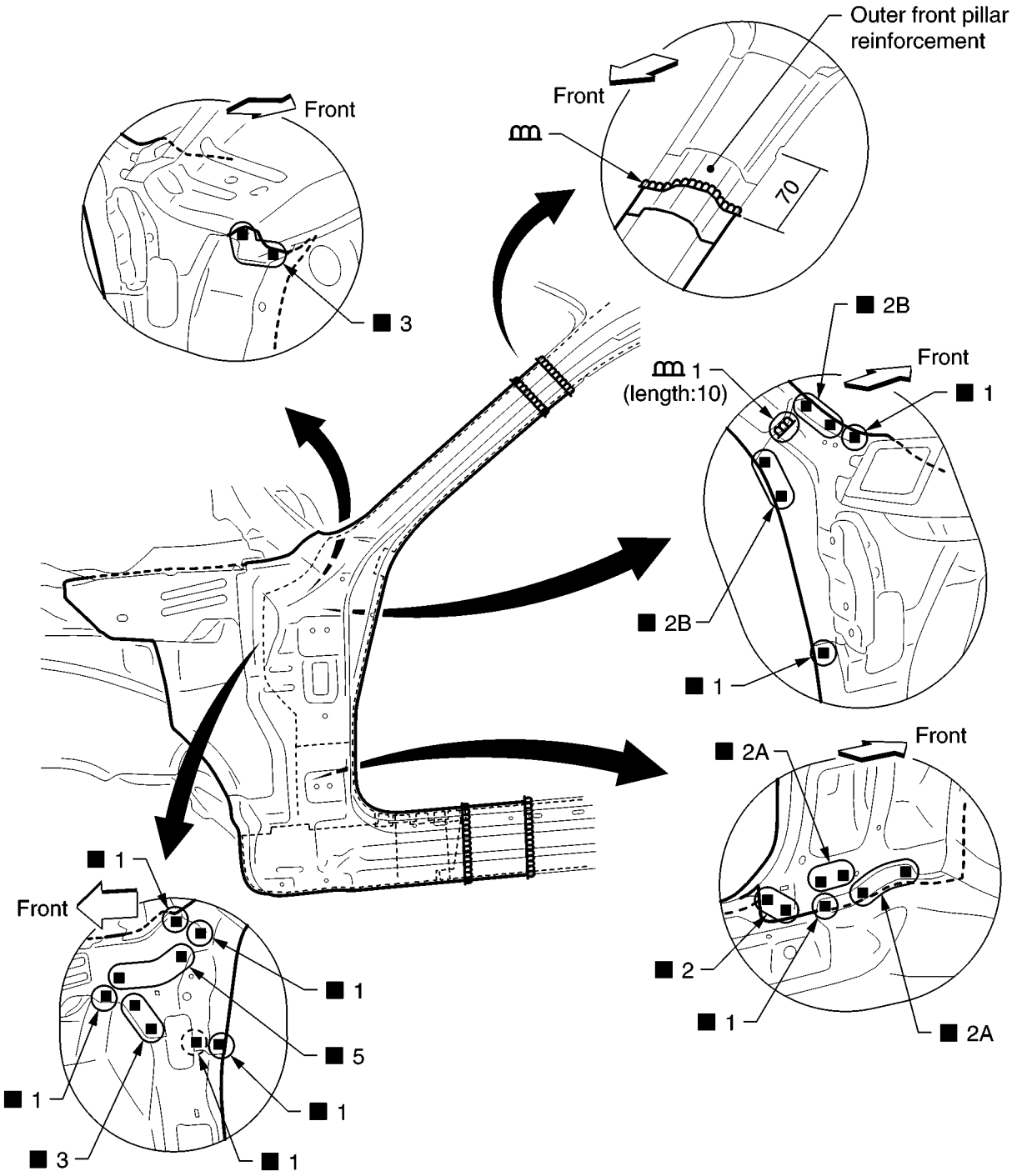
- Work after rear hoodledge reinforcement has been removed.



Change parts

- Side body assembly (LH)
- Inner side roof rail assembly (LH)
- Side cowl top (LH)
- Side dash (LH)

Service Joint

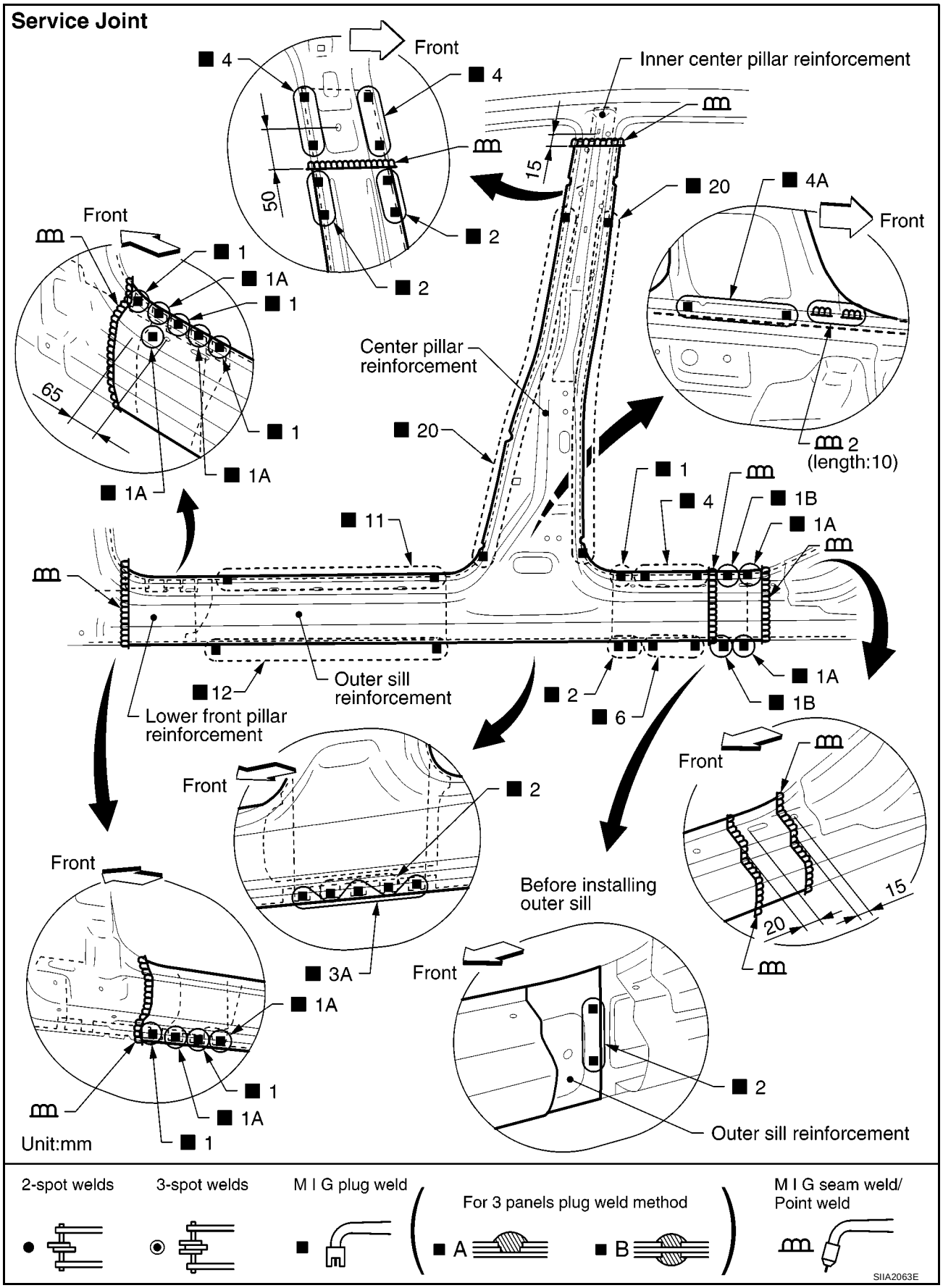


Unit:mm

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

SIIA2062E

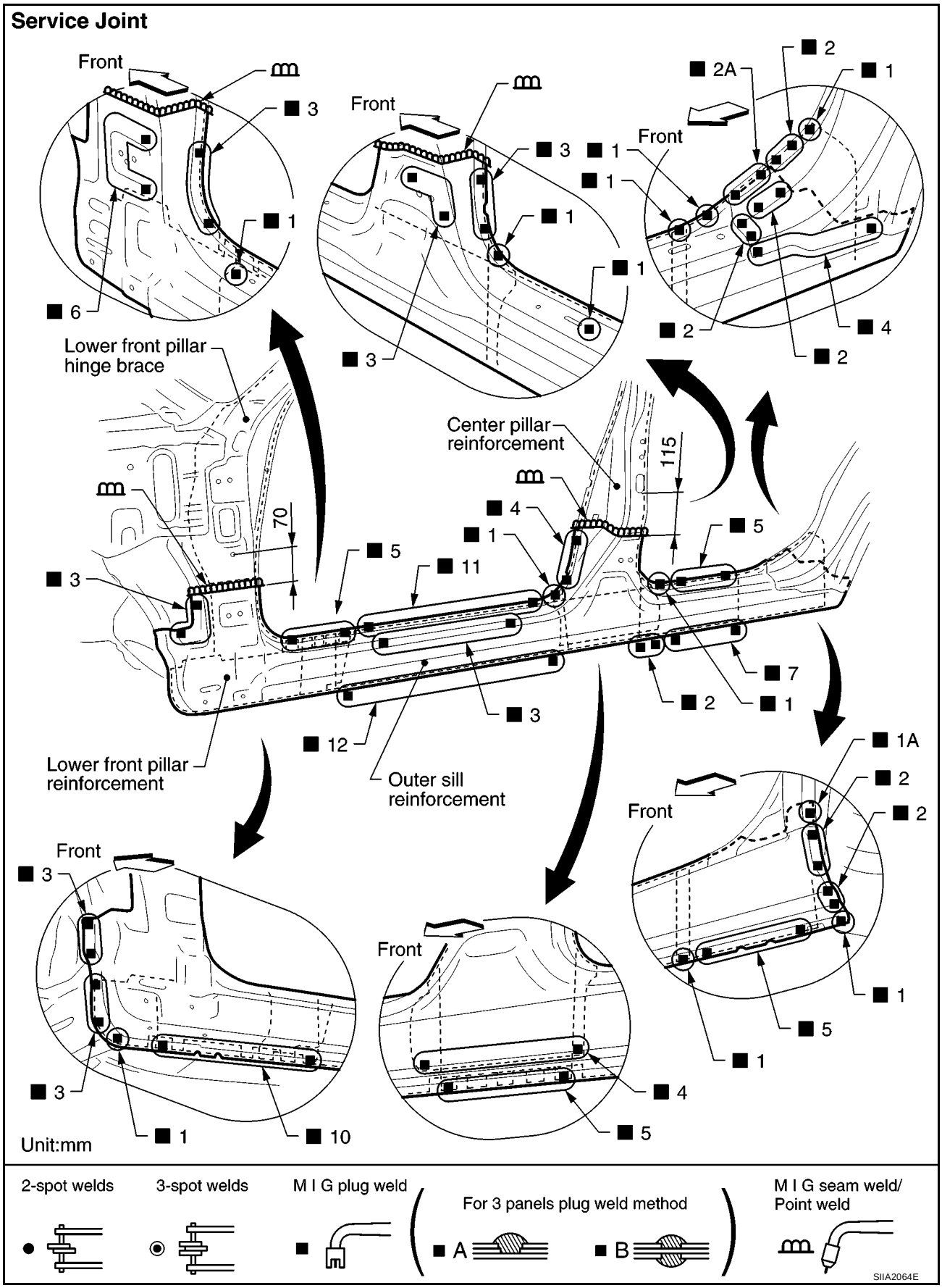
CENTER PILLAR



Change parts

- Side body assembly (LH)
- Inner side roof rail assembly (LH)

OUTER SILL

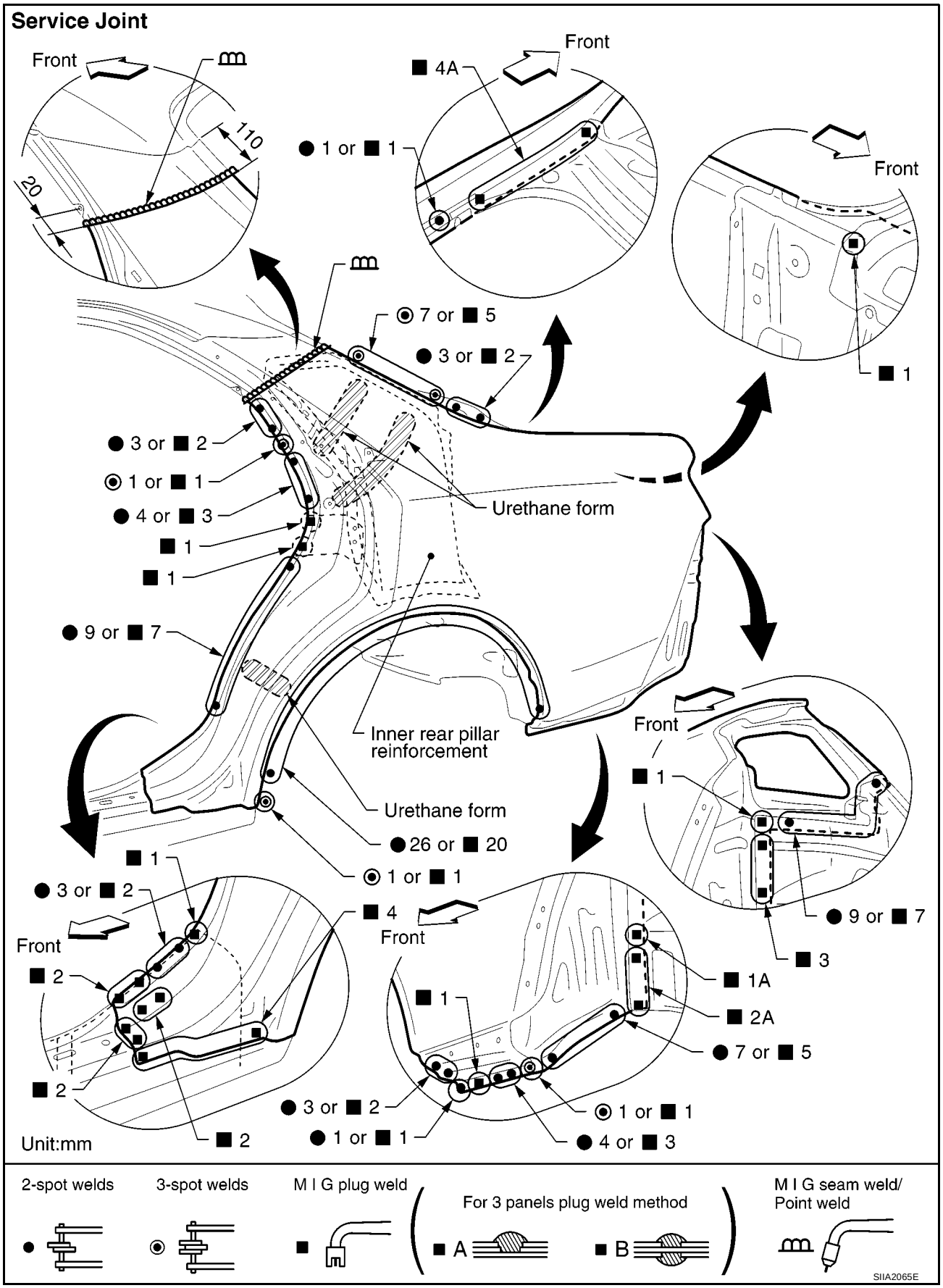


Unit:mm

Change parts

- Outer side body (LH)

REAR FENDER



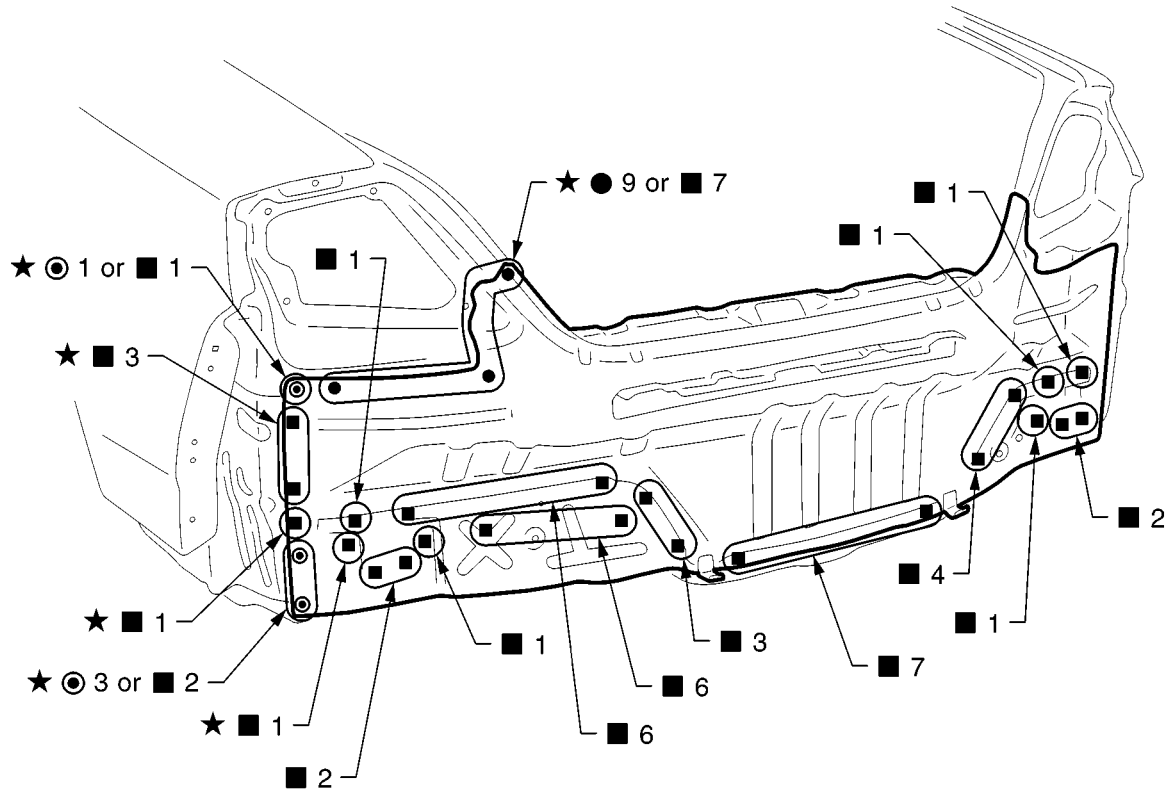
Change parts

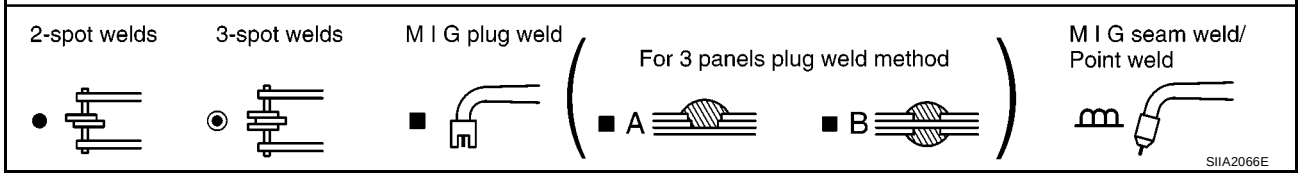
- Rear fender assembly (LH)
- Rear fender extension (LH)
- Harness clip bracket (LH)

REAR PANEL

Service Joint

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





Change parts

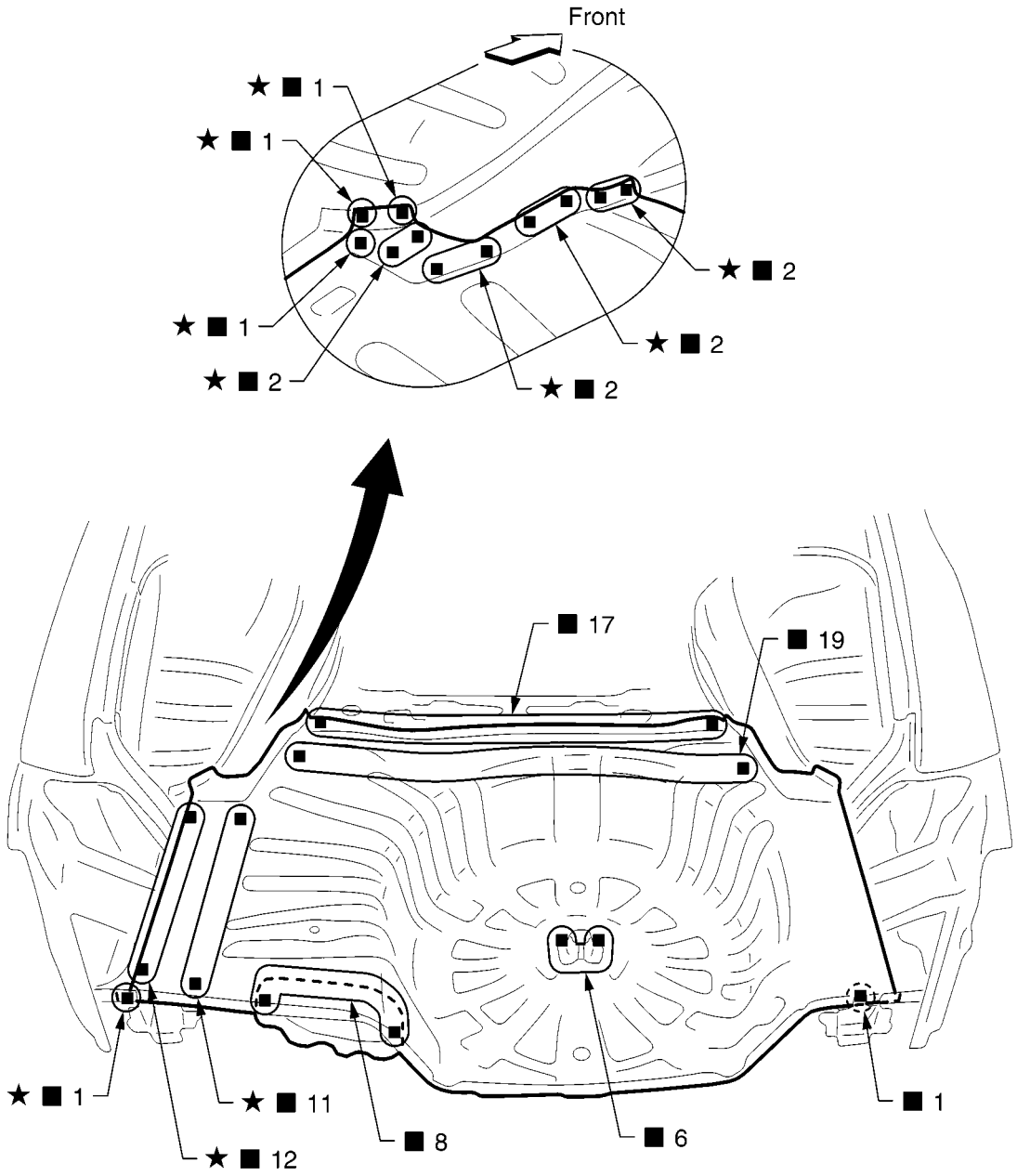
- ● Upper rear panel assembly

REAR FLOOR REAR

- Work after rear panel has been removed.

Service Joint

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



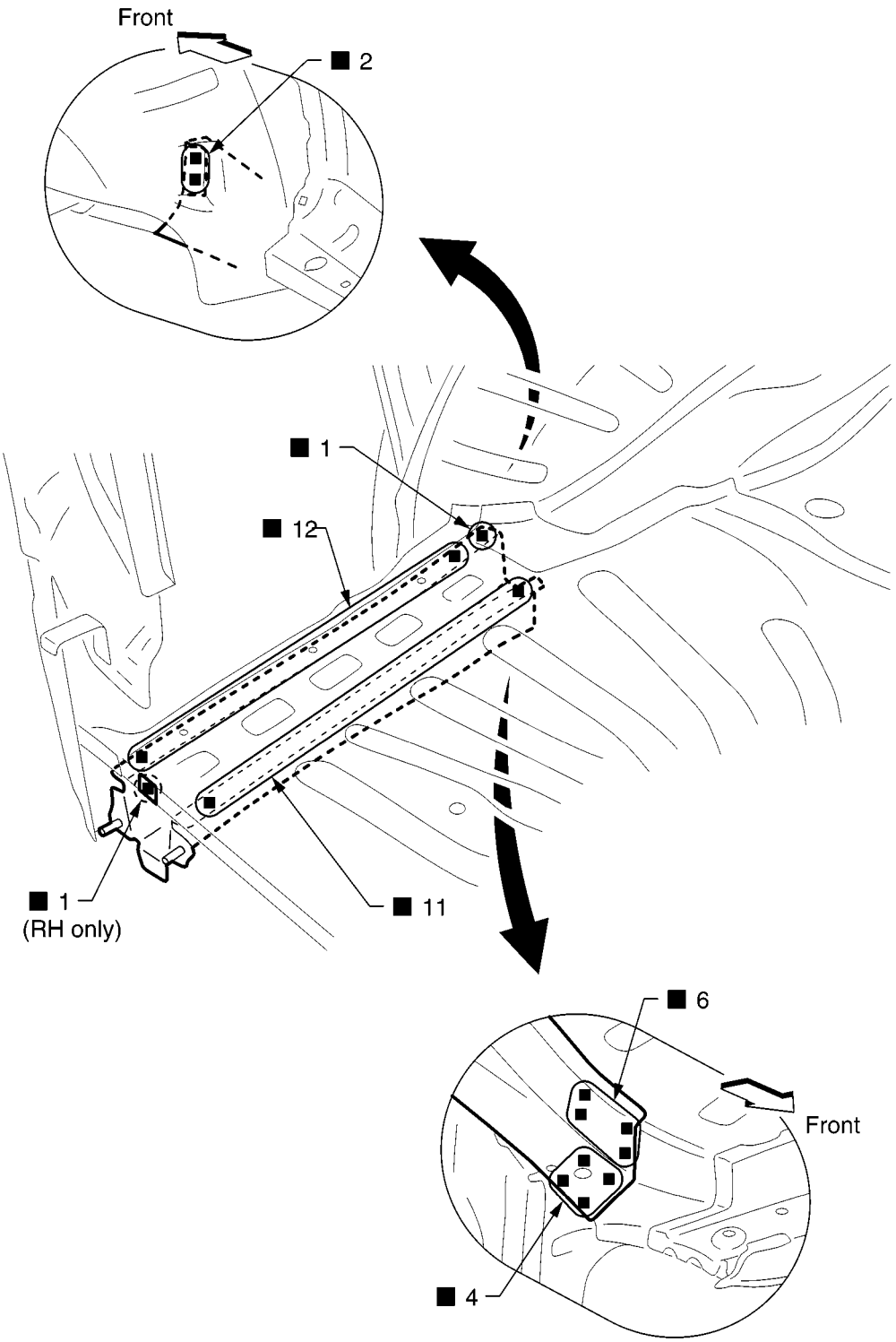
Change parts

- Rear floor rear
- Spare tire clamp bracket
- Muffler mounting bracket

REAR SIDE MEMBER EXTENSION

- Work after rear panel has been removed.

Service Joint



Change parts

- Rear side member extension (LH)