SECTION BL

BODY, LOCK & SECURITY SYSTEM

CONTENTS

PRECAUTIONS

PFP:00001

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

EIS001FJ

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

EIS001FK

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

Wiring Diagnosis and Trouble Diagnosis

EIS001FL

When you read wiring diagrams, refer to the following:

- GI-12, "How to Read Wiring Diagrams"
- PG-3, "POWER SUPPLY ROUTING CIRCUIT"

When you perform trouble diagnosis, refer to the following:

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

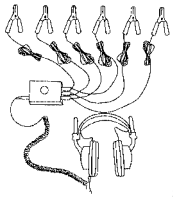
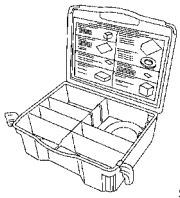
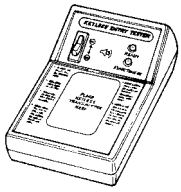
PREPARATION

PFP:00002

Special service tool

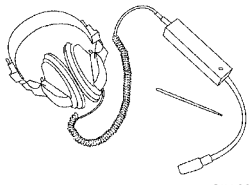
EIS001FM

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

Tool number (Kent-Moore No.) Tool name	Description
— (J-39570) Chassis ear  SIIA0993E	Locating the noise
— (J-43980) NISSAN Squeak and Rattle Kit  SIIA0994E	Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester  LEL946A	Used to test key fobs

Commercial Service Tool

EIS001FN

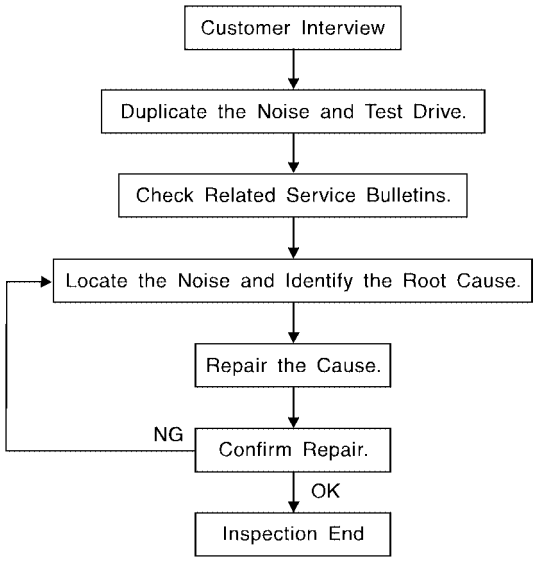
(Kent-Moore No.) Tool name	Description
(J-39565) Engine ear  SIIA0995E	Locating the noise

SQUEAK AND RATTLE TROUBLE DIAGNOSES

PFP:00000

Work Flow

EIS0046U



SBT842

CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to BL-10, "Diagnostic Worksheet" . This information is necessary to duplicate the conditions that exist when the noise occurs.

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

DUPLICATE THE NOISE AND TEST DRIVE

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

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

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

CHECK RELATED SERVICE BULLETINS

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area.To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:

- removing the components in the area that you suspect the noise is coming from.
  Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise.
  Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks.
  Refer to BL-8, "Generic Squeak and Rattle Troubleshooting" .

REPAIR THE CAUSE

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

CAUTION:
Do not use excessive force as many components are constructed of plastic and may be damaged.
Always check with the Parts Department for the latest parts information.
The following materials are contained in the NISSAN Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.
URETHANE PADS [1.5 mm (0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100×135 mm (3.94×5.31 in)/76884-71L01: 60×85 mm (2.36×3.35 in)/76884-71L02: 15×25 mm (0.59×0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact. Can be used to fill space behind a panel.
73982-9E000: 45 mm (1.77 in) thick, 50×50 mm (1.97×1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97×1.97 in)
INSULATOR (Light foam block)

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

CONFIRM THE REPAIR

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

Generic Squeak and Rattle Troubleshooting

EIS0046V

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicone spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

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

CENTER CONSOLE

Components to pay attention to include:

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

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

DOORS

Pay attention to the:

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

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

TRUNK

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

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

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

SUNROOF/HEADLINING

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

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

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

OVERHEAD CONSOLE (FRONT AND REAR)

Overhead console noises are often caused by the console panel clips not being engaged correctly. Most of these incidents are repaired by pushing up on the console at the clip locations until the clips engage.
In addition look for:

1. Loose harness or harness connectors.
2. Front console map/reading lamp lense loose.
3. Loose screws at console attachment points.

SEATS

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

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

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

UNDERHOOD

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

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

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

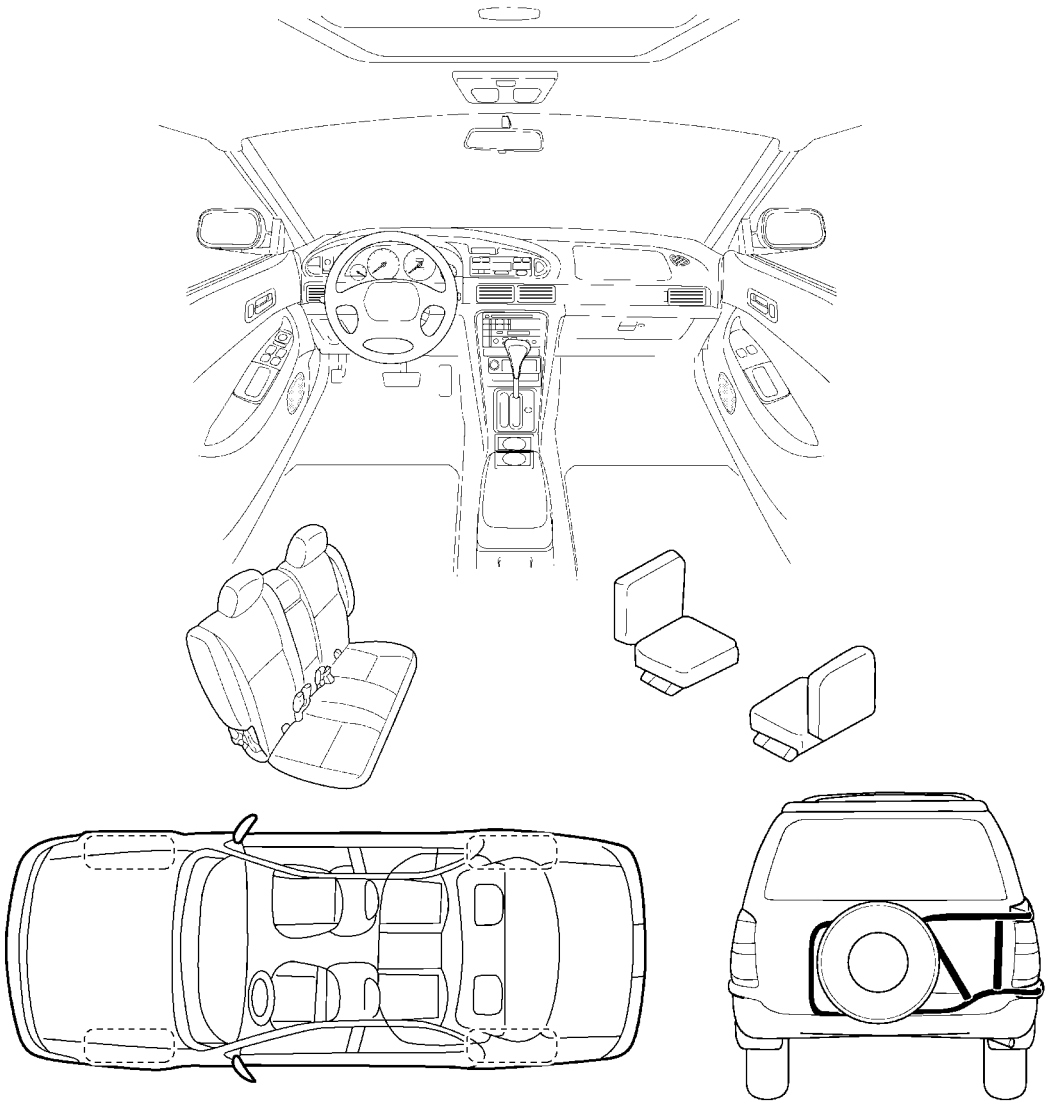
Diagnostic Worksheet

EIS0046W

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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

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



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

LIWA0276E

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET- page 2

Briefly describe the location where the noise occurs:

_____

_____

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

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

III. WHEN DRIVING:

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

IV. WHAT TYPE OF NOISE?

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

TO BE COMPLETED BY DEALERSHIP PERSONNEL
Test Drive Notes:

_____

_____

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

VIN: _____ Customer Name: _____

W.O. #: _____ Date: _____

SBT844

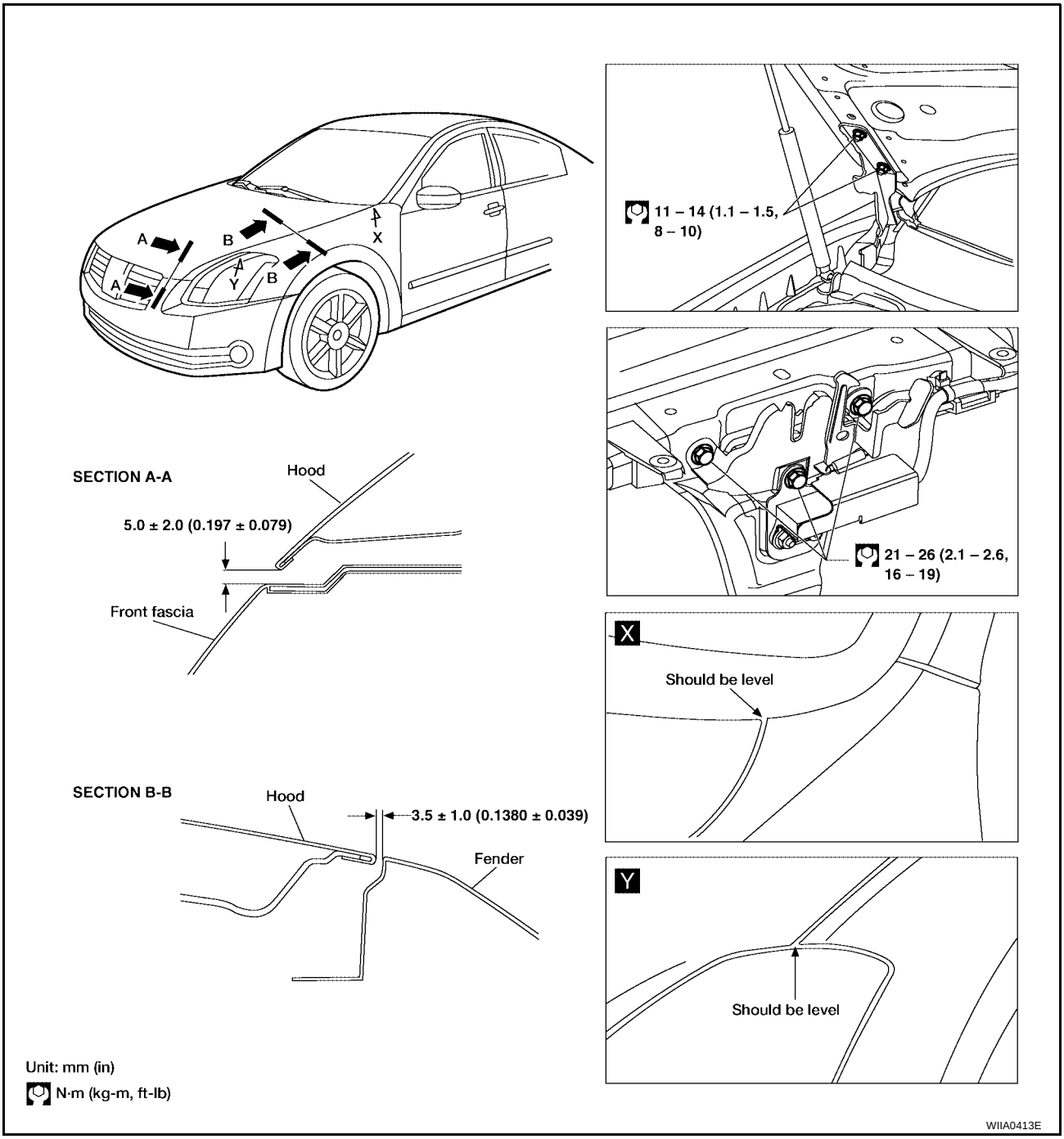
This form must be attached to Work Order

HOOD

PFP:F5100

Fitting Adjustment

EIS001FR



FRONT END HEIGHT ADJUSTMENT AND LATERAL/LONGITUDINAL CLEARANCE ADJUSTMENT.

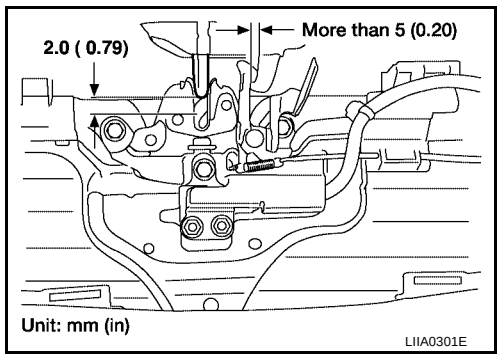
1. Remove the radiator grille. Refer to EI-18, "Removal and Installation" .
2. Install the hood lock temporarily, and align the hood striker and lock so that the centers of striker and lock become vertical viewed from the front, by moving the hood lock laterally.

3. Check that the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N).

   CAUTION:

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

4. Move the hood lock up and down so that the striker and lock are engaged firmly with the hood closed.
5. Tighten the lock mounting bolts to the specified torque.
6. Install the radiator grille. Refer to EI-18, "Removal and Installation" .



Removal and Installation of Hood Assembly

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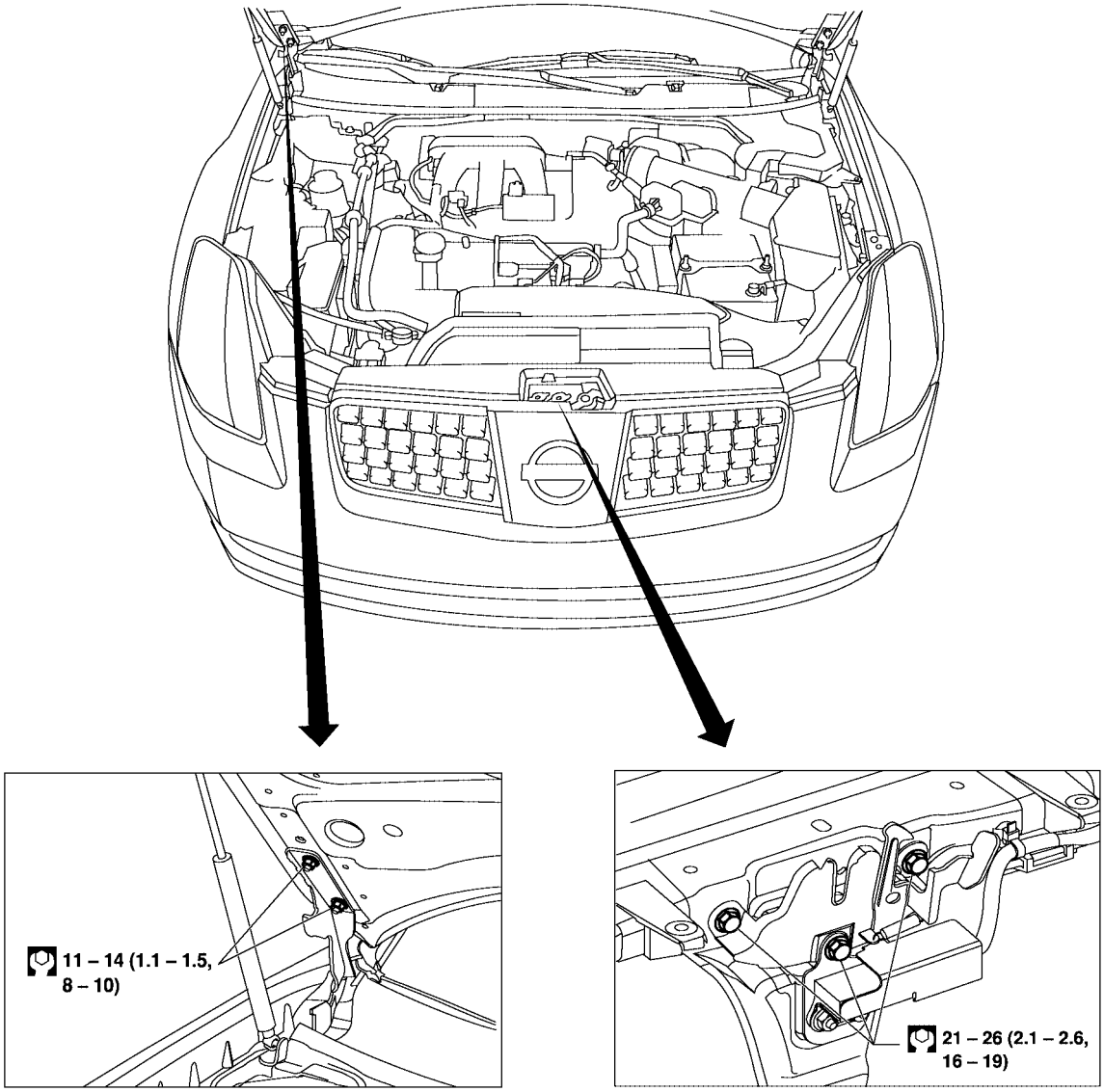


1. Support the hood.

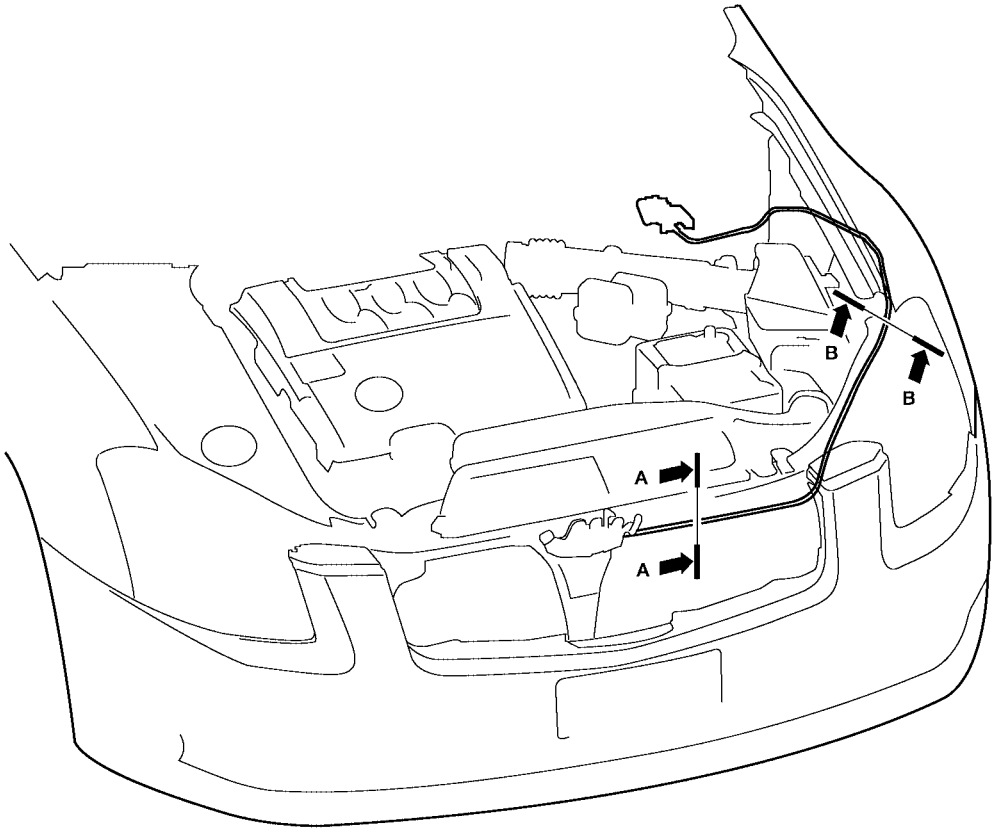
2. Separate the hood stays from the hood.
3. Remove the hood assembly.

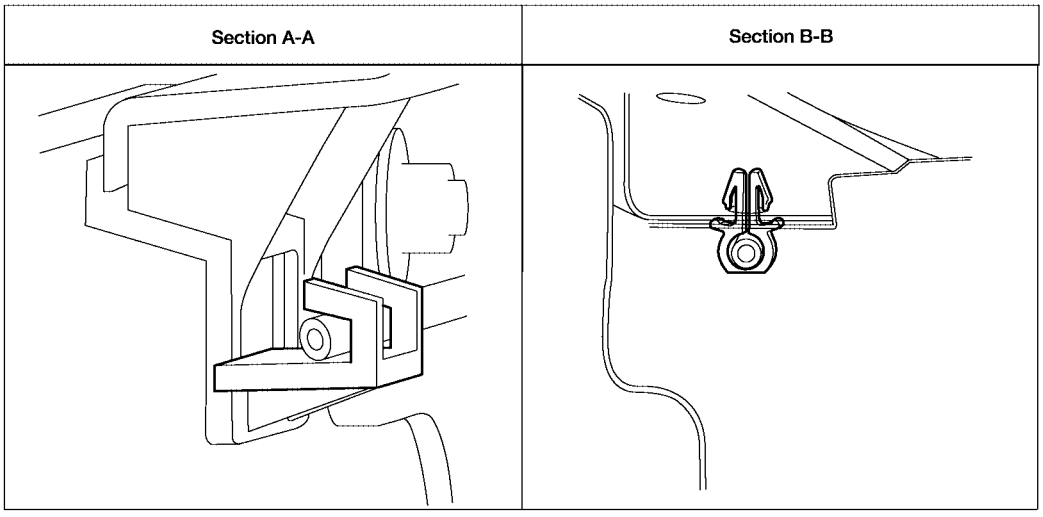
Install in the reverse order of removal.

NOTE:
Align the hood. Refer to BL-12, "Fitting Adjustment" .

Removal and Installation of Hood Lock Control

EIS001FT





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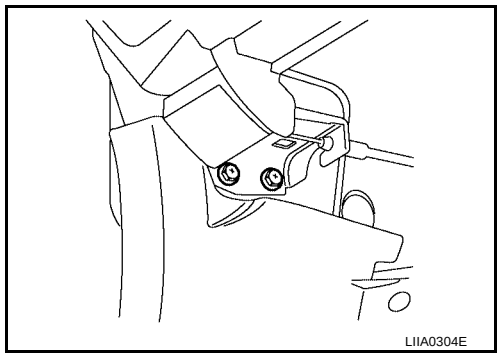
REMOVAL

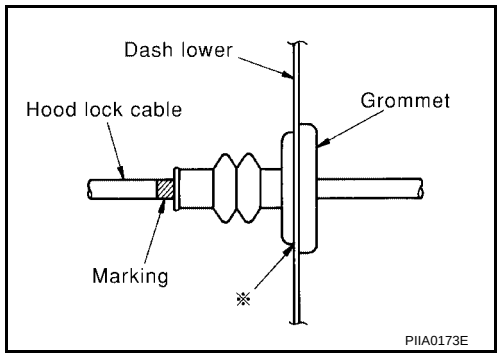
1. Disconnect the hood lock cable from the hood lock, and un-clip it from the radiator core upper support and hoodledge.
2. Remove the mounting screws, and remove the hood opener.
3. Remove the grommet on the instrument panel, and pull the hood lock cable toward the passenger compartment.

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

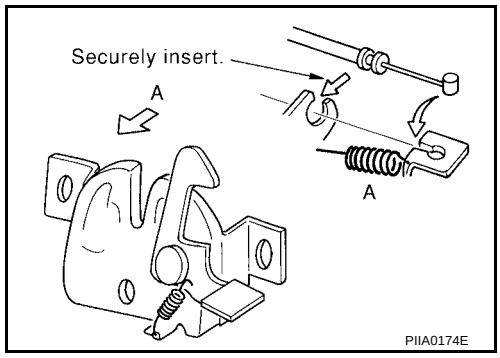


INSTALLATION

1. Pull the hood lock cable through the panel hole to the engine compartment. Be careful not to bend the cable too much, keeping the radius 100 mm (3.94 in) or more.
2. Check that the cable is not offset from the positioning grommet, and push the grommet into the panel hole securely.
3. Apply the sealant to the grommet (at * mark) properly.



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

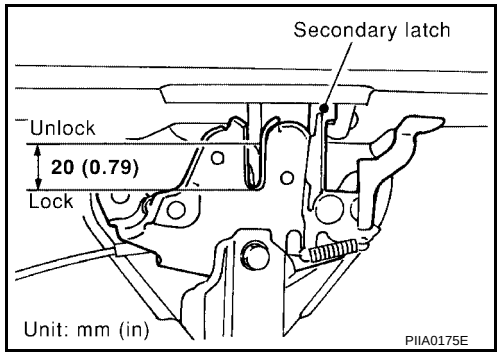


Hood Lock Control Inspection

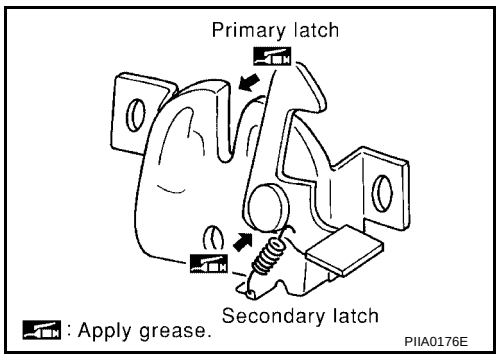
EIS001FU

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

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



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

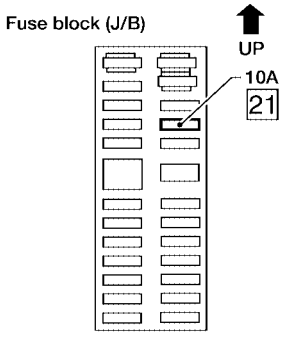


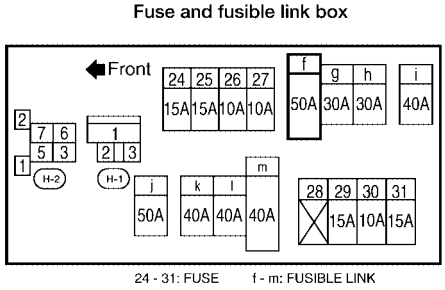
POWER DOOR LOCK SYSTEM

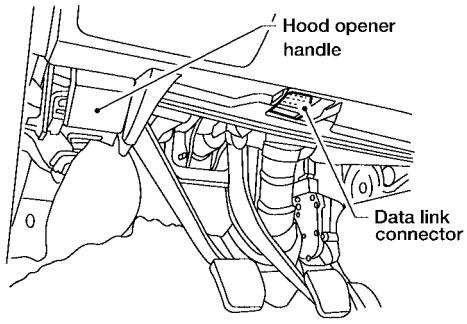
PFP:24814

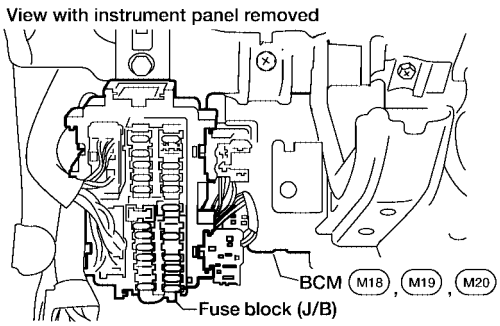
Component Parts and Harness Connector Location

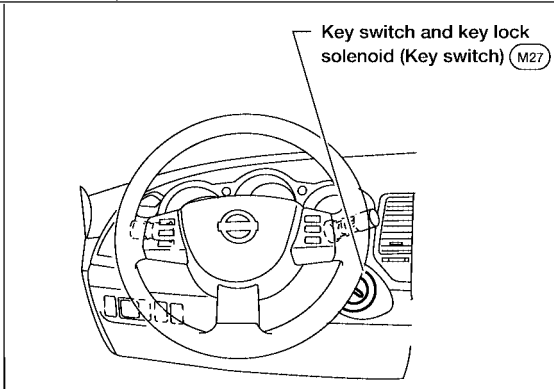
EIS001FV

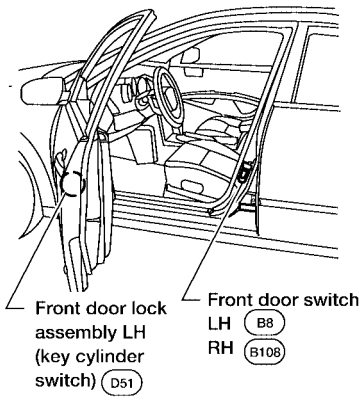


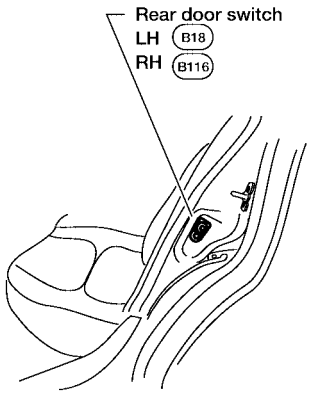


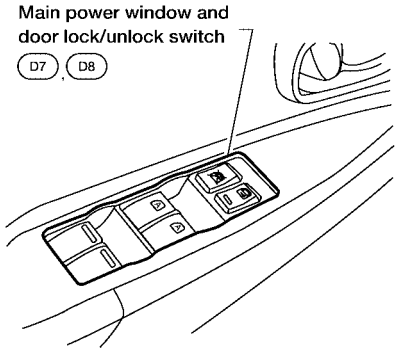


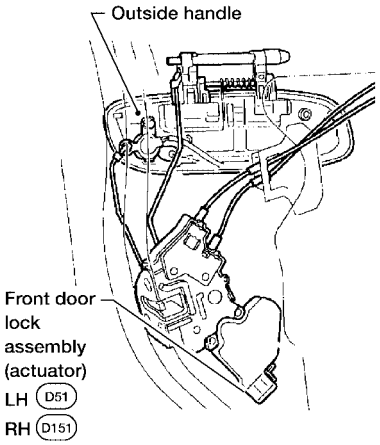


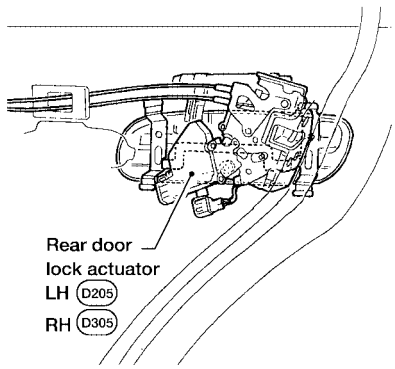












WIIA0686E

System Description

EIS001FW

Power is supplied at all times

- to BCM terminal 55
- through 50A fusible link (letter **f,** located in the fuse and fusible link box)
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to key switch and key lock solenoid terminal 2
- to BCM terminal 42.

With ignition key inserted, power is supplied

- through key switch and key lock solenoid terminal 1
- to BCM terminal 37.

Ground is supplied to terminals 49 (early production) and 52 of BCM through body grounds M57, M61 and M79.

When the door is locked or unlocked with main power window and door lock/unlock switch, ground is supplied

- to CPU of main power window and door lock/unlock switch
- through main power window and door lock/unlock switch terminal 17
- through grounds M57, M61 and M79.

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

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

When the door is locked or unlocked with front power window switch RH, ground is supplied

- to CPU of front power window switch RH
- through front power window switch RH terminal 11
- through grounds M57, M61 and M79.

Then front power window switch RH operation signal is supplied

- to BCM terminal 22
- through front power window switch RH terminal 16.

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

- to main power window and door lock/unlock switch terminal 4
- through key cylider switch terminals 1 and 5
- through grounds M57, M61 and M79.

Then key cylinder switch operation signal is supplied

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

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

- to main power window and door lock/unlock switch terminal 6
- through key cylider switch terminals 6 and 5
- through grounds M57, M61 and M79.

Then key cylinder switch operation signal is supplied

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

BCM is connected to main power window and door lock/unlock switch and front power window switch RH through a serial link.

When the front door switch LH is ON (door is open), ground is supplied

- to BCM terminal 62
- through front door switch LH terminal 2
- through front door switch LH case ground.

When the front door switch RH is ON (door is open), ground is supplied

- to BCM terminal 12
- through front door switch RH terminal 2

- through front door switch RH case ground.

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

- to BCM terminal 63
- through rear door switch LH terminal 1
- through rear door switch LH case ground.

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

- to BCM terminal 13
- through rear door switch RH terminal 1
- through rear door switch RH case ground.

OUTLINE

Functions available by operating the door lock and unlock switches on driver's door and passenger's door

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

Functions available by operating the key cylinder switch on driver's door

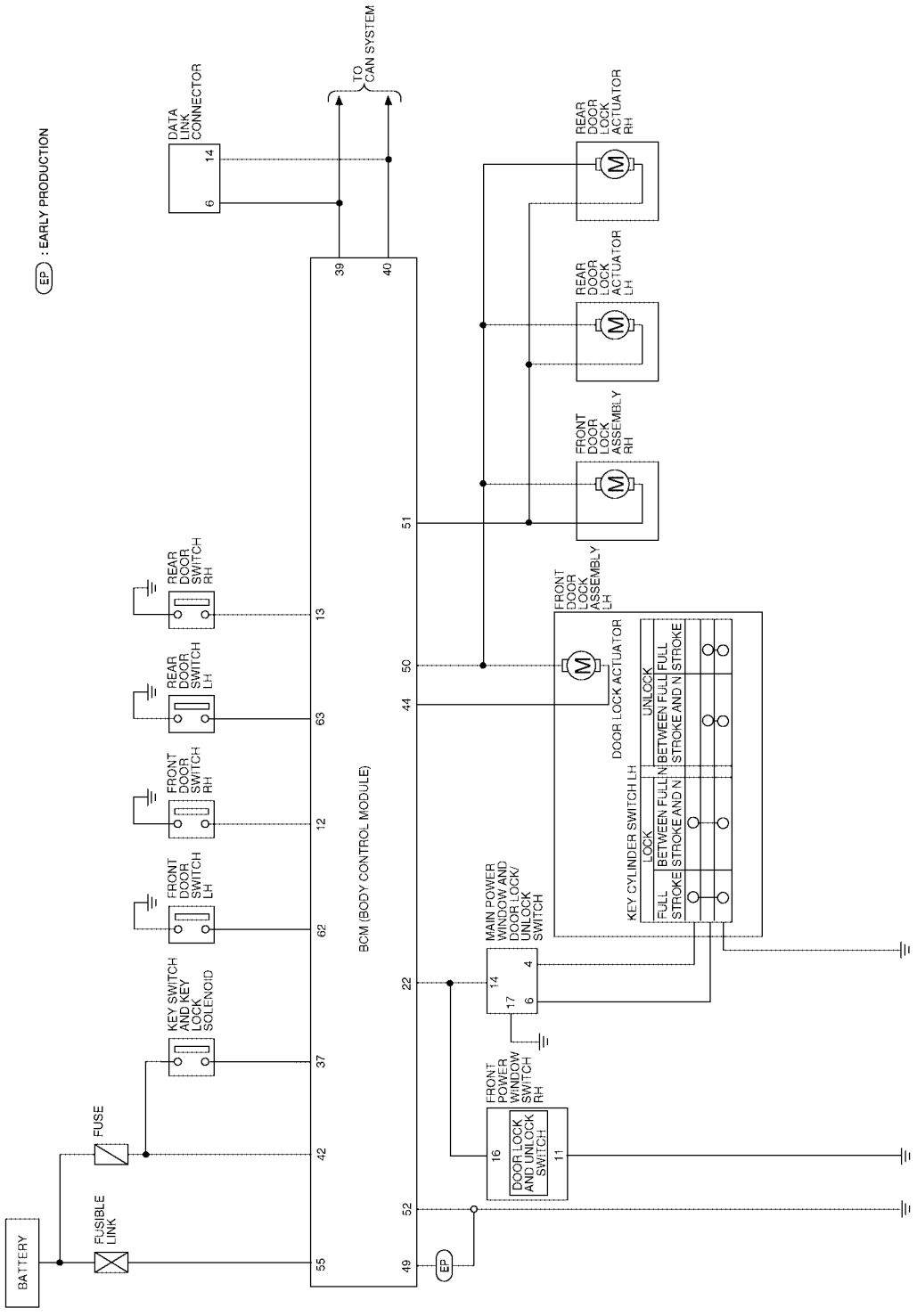
- Interlocked with the locking operation of door key cylinder, door lock actuators of all doors are locked.
- When door key cylinder is unlocked, fron door lock actuator LH is unlocked.
- When door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.

Key reminder door system

When door lock and unlock switch is operated to lock doors with ignition key put in key cylinder and any door open, all door lock actuators are locked and then unlocked.

Schematic

EIS001FX

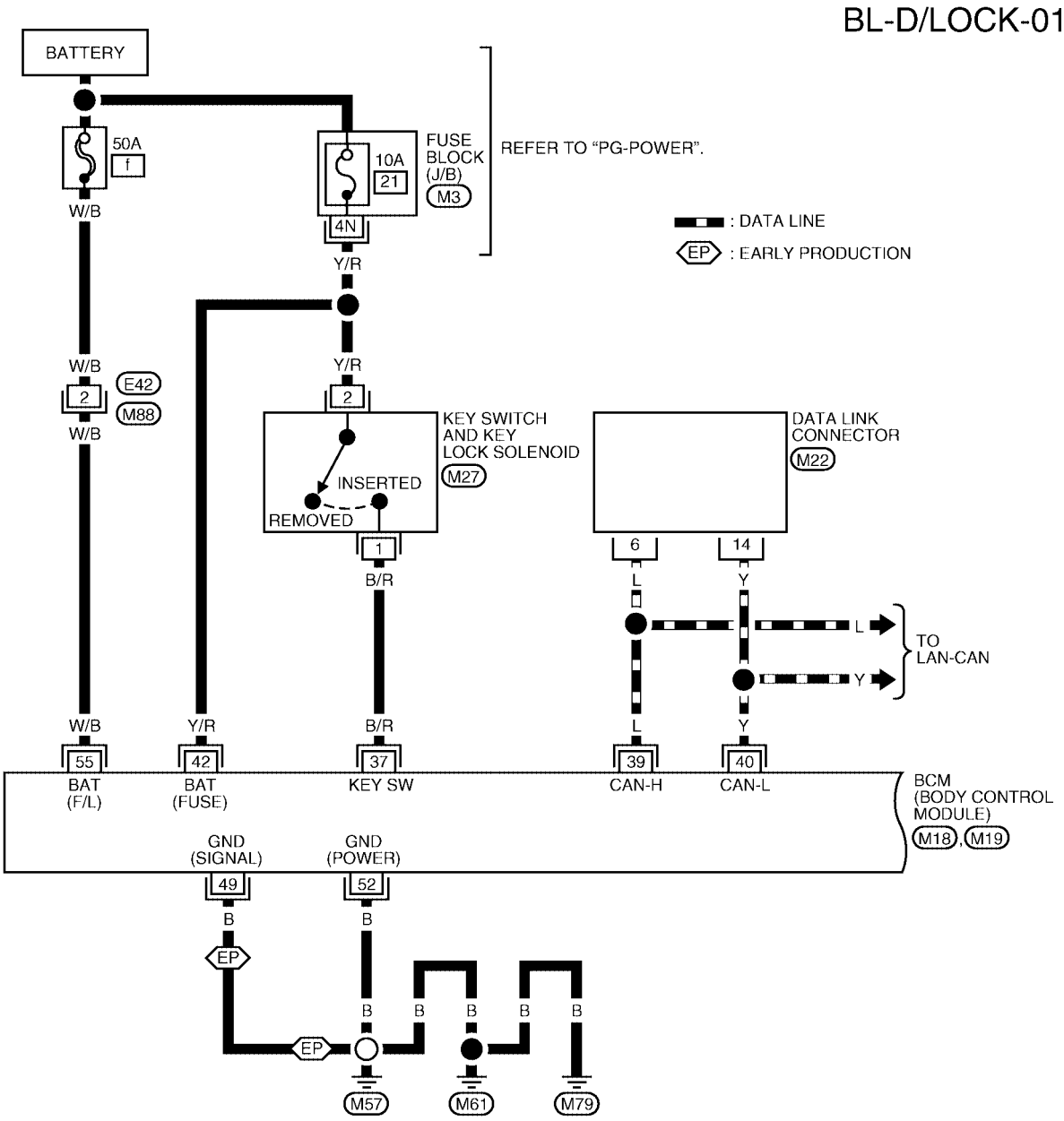


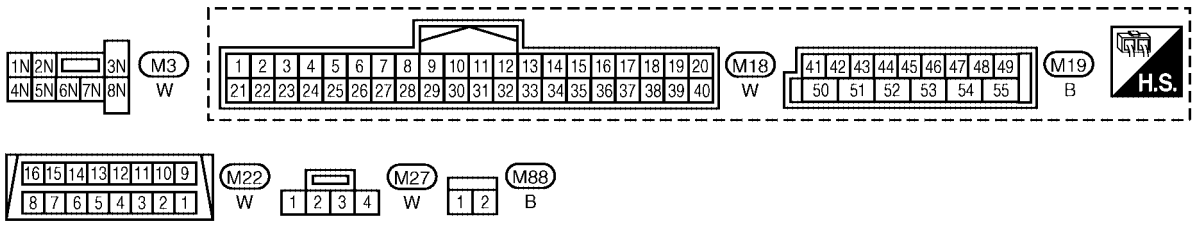
WIWA0396E

Wiring Diagram -D/LOCK-

EIS001FY

FIG. 1

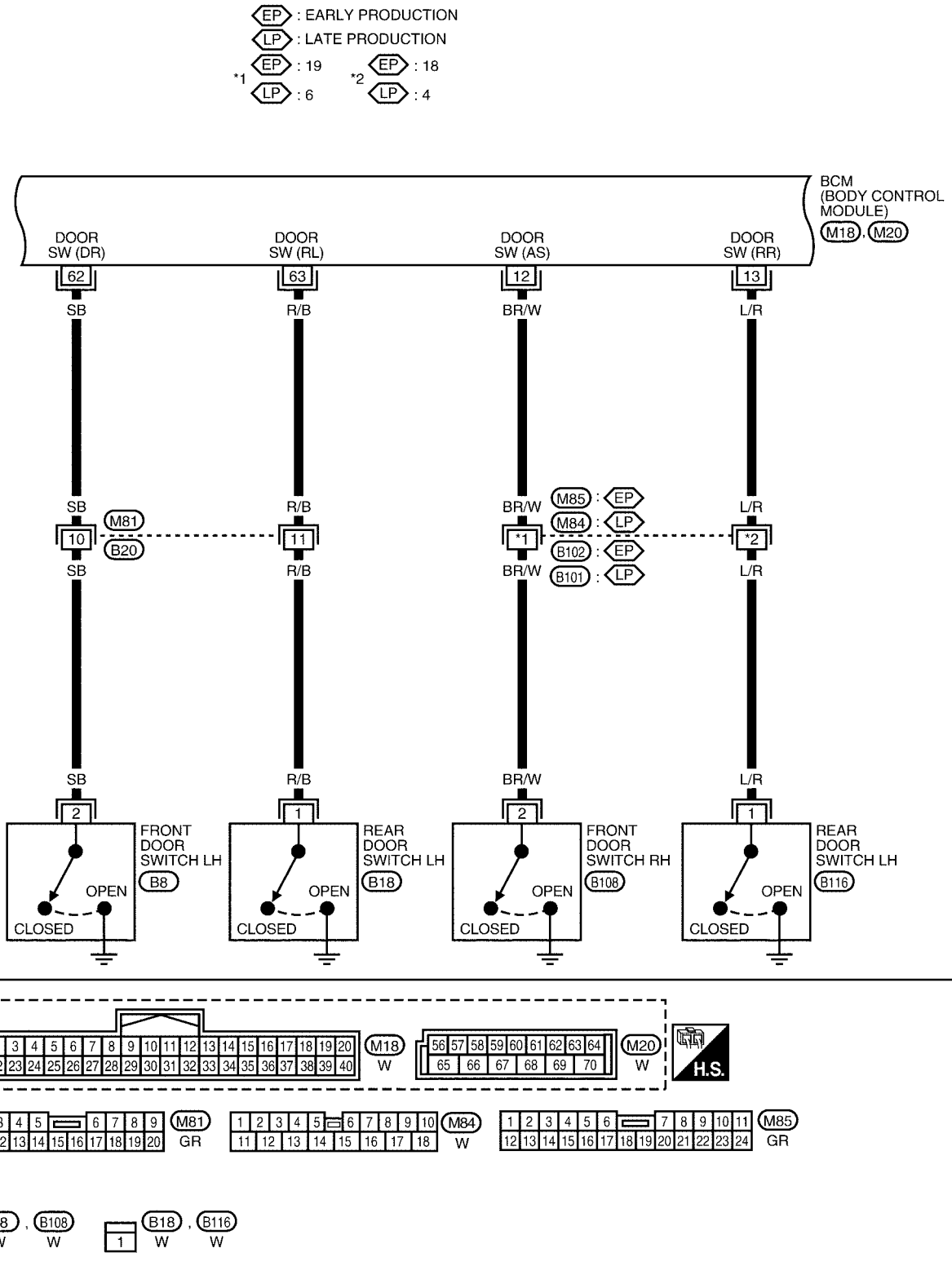




WIWA0397E

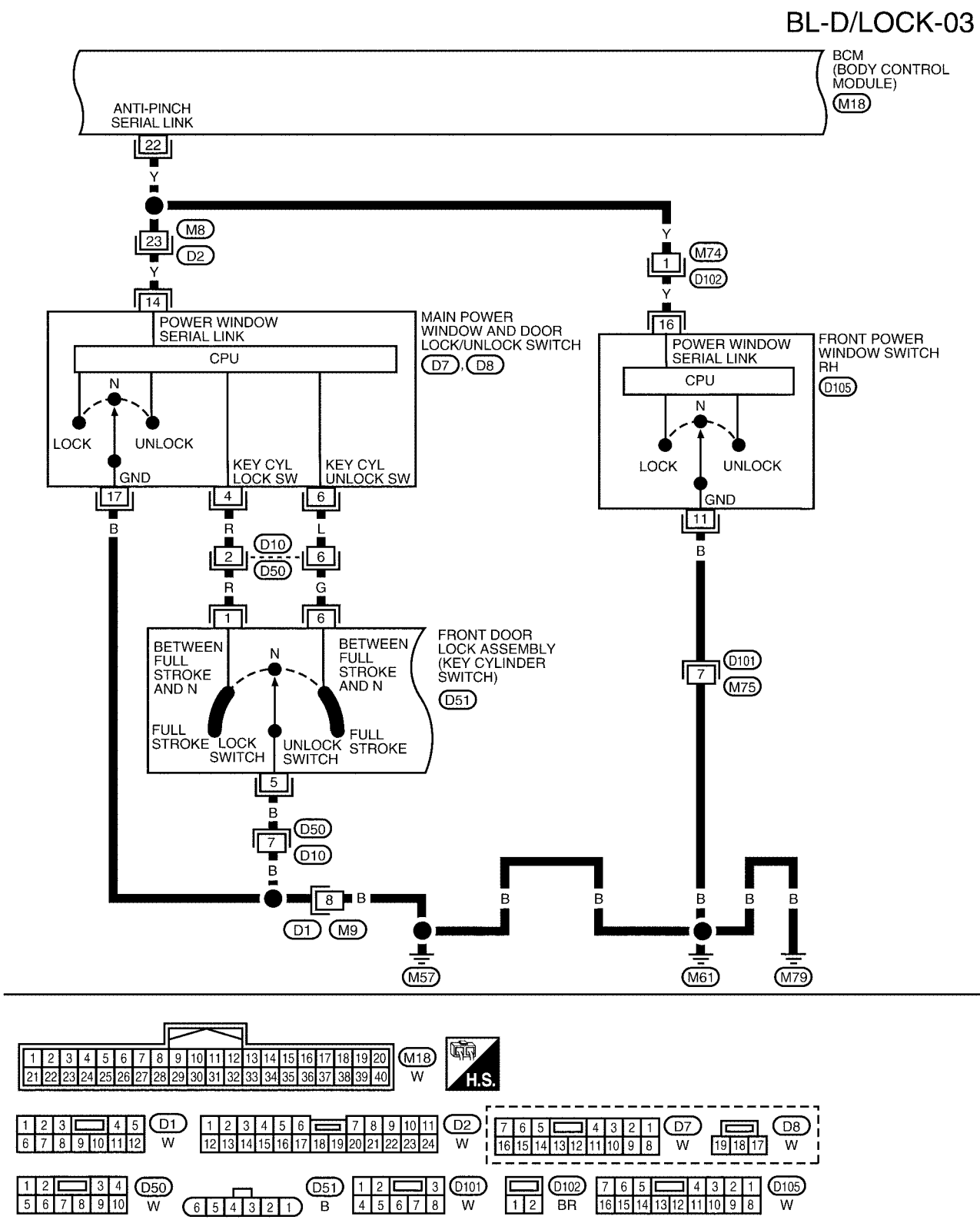
FIG. 2

BL-D/LOCK-02



LIWA0273E

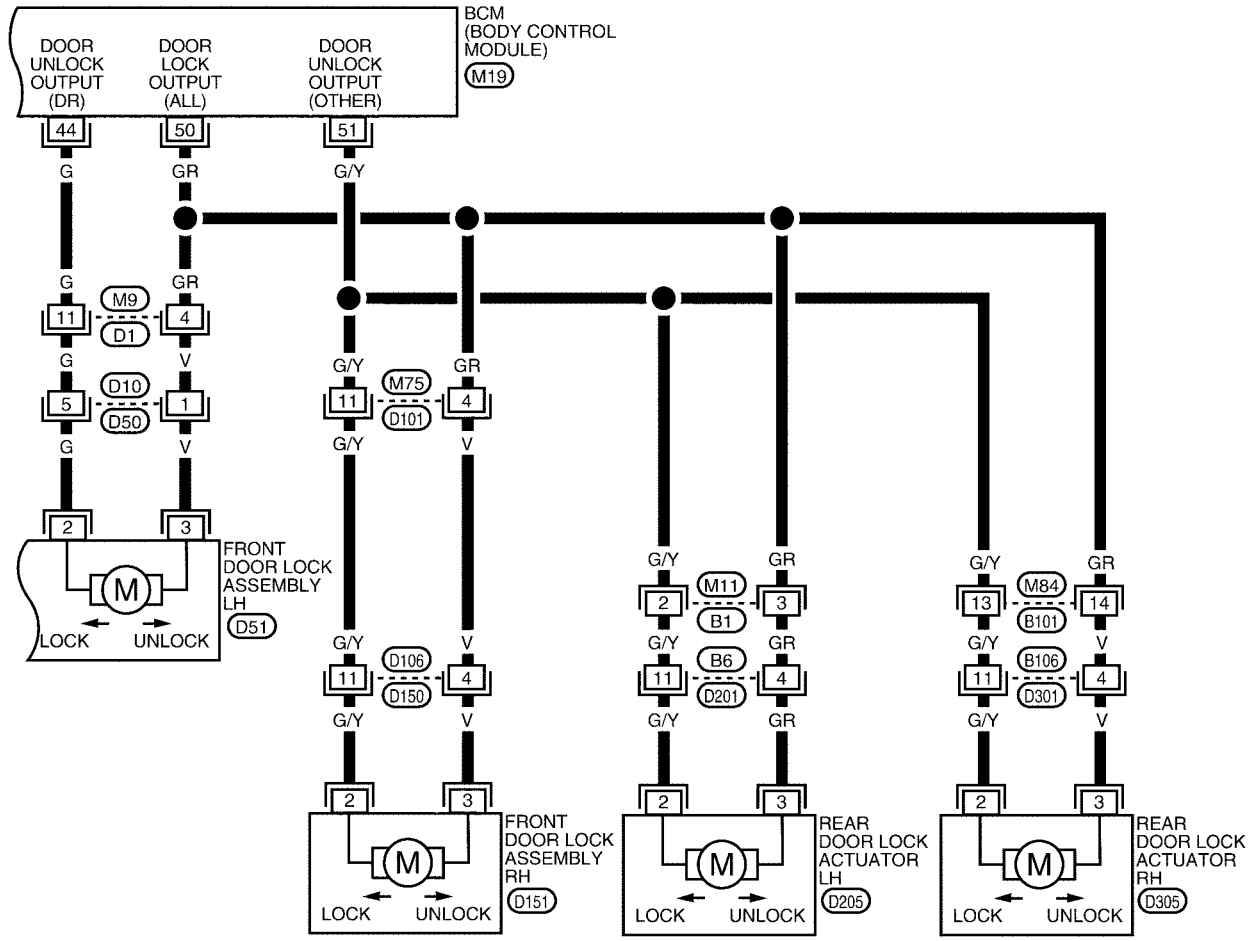
FIG. 3

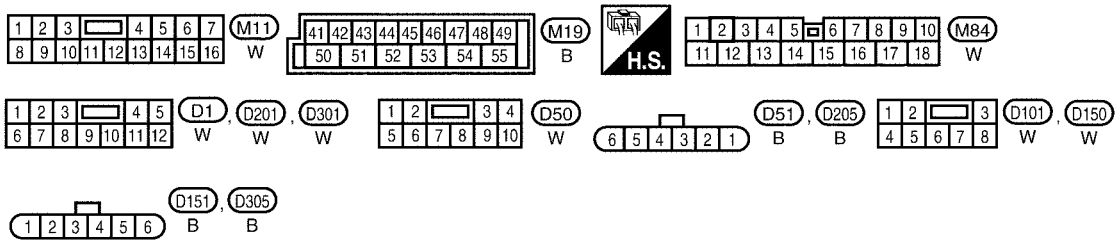


LIWA0101E

FIG. 4

BL-D/LOCK-04

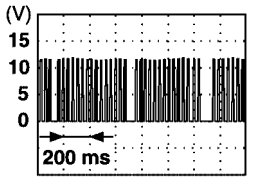




LIWA0102E

Terminals and Reference Value for BCM

EIS001FZ

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
12	BR/W	Front door switch RH	Door open (ON) → Door close (OFF)	0 → Battery voltage
13	L/R	Rear door switch RH	Door open (ON) → Door close (OFF)	0 → Battery voltage
22	Y	Anti–pinch serial link	When ignition switch is ON or power window timer operates	 PIIA2344E
37	B/R	Key switch (insert)	Key inserted in IGN key cylinder (ON) → Key removed from IGN key cylinder (OFF)	Battery voltage → 0
39	L	CAN-H	—	—
40	Y	CAN-L	—	—
42	Y/R	Battery power supply	—	Battery voltage
44	G	Front door lock actuator LH (unlock)	Driver door lock knob (locked → unlocked)	0 → Battery voltage
49*	B	Ground	—	—
50	GR	All door lock actuator (lock)	Driver door lock knob (neutral → lock)	0 → Battery voltage
51	G/Y	Front door lock actuator RH and Rear door lock actuators LH/RH (unlock)	Door lock and unlock switch (locked → unlocked)	0 → Battery voltage
52	B	Ground	—	—
55	W/B	BAT power supply	—	Battery voltage
62	SB	Front door switch LH	Door open (ON) → Door close (OFF)	0 → Battery voltage
63	R/B	Rear door switch LH	Door open (ON) → Door close (OFF)	0 → Battery voltage

*: Early production

Work Flow

EIS001G0

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to BL-18, "System Description" .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to BL-27, "Trouble Diagnoses Symptom Chart" .
4. Does power door lock system operate normally? OK: GO TO 5, NG: GO TO 3.
5. INSPECTION END.

CONSULT–II Function (BCM)

EIS001G2

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

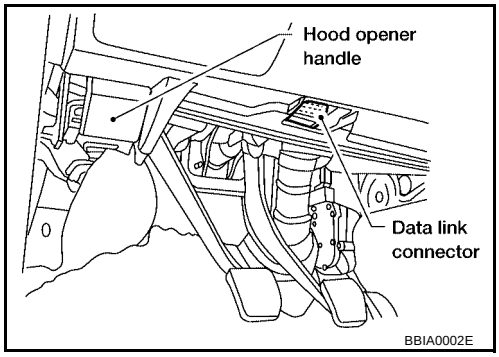
BCM diagnostic test item	Diagnostic mode	Content
Inspection by part	WORK SUPPORT	Changes setting of each function.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis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

CONSULT–II BASIC OPERATION PROCEDURE

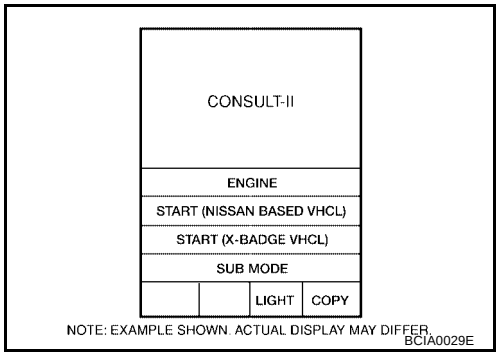
CAUTION:

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

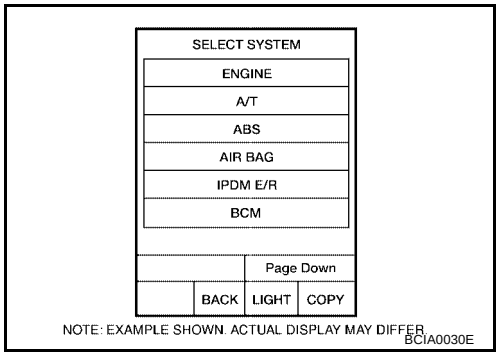
1. With ignition switch OFF, connect CONSULT–II to data link connector on vehicle, and turn ON ignition switch.



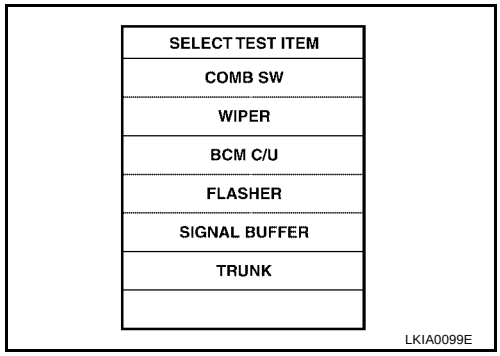
2. Touch “START (NISSAN BASED VHCL)”.



3. Touch “BCM” on “SELECT SYSTEM” screen.



4. Select item to be diagnosed on “SELECT TEST ITEM” screen.



DATA MONITOR

Monitor item "OPERATION"		Content
KEY ON SW	"ON/OFF"	Indicates [ON/OFF] condition of key switch.
LOCK SW DR/AS	"ON/OFF"	Indicates [ON/OFF] condition of lock signal from lock/unlock switch LH and RH.
UNLK SW DR/AS	"ON/OFF"	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch LH and RH.
KEY CYL LK-SW	"ON/OFF"	Indicates [ON/OFF] condition of lock signal from key cylinder.
KEY CYL UN-SW	"ON/OFF"	Indicates [ON/OFF] condition of unlock signal from key cylinder.
LK BUTTON/SIG	"ON/OFF"	Indicates [ON/OFF] condition of lock signal from key fob.
UN BUTTON/SIG	"ON/OFF"	Indicates [ON/OFF] condition of unlock signal from key fob.
IGN ON SW	"ON/OFF"	Indicates [ON/OFF] condition of ignition switch.
DOOR SW–DR	"ON/OFF"	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW–AS	"ON/OFF"	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW–RR	"ON/OFF"	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW–RL	"ON/OFF"	Indicates [ON/OFF] condition of rear door switch LH.

ACTIVE TEST

Test item	Content
ALL D/LK MTR	This test is able to check all door lock actuators lock operation. These actuators lock when "ON" on CONSULT–II screen is touched.
DR D/UN MTR	This test is able to check front door lock actuator LH unlock operation.These actuators lock when "ON" on CONSULT–II screen is touched.
NON DR D/UN	This test is able to check door lock actuators (except front door lock actuator LH) unlock operation.These actuators unlock when "ON" on CONSULT–II screen is touched.

Trouble Diagnoses Symptom Chart

EIS001G3

Symptom	Repair order	Refer to page
Key reminder door system does not operate properly.	1. Door switch check	BL-29, "Door Switch Check"
	2. Key switch (Insert) check	BL-31, "Key Switch (Insert) Check"
	3. Replace BCM.	BCS-19, "Removal and Installation of BCM"
Power door lock does not operate with door lock and unlock switch on main power window and door lock/unlock switch or front power window switch RH	1. Door lock/unlock switch check	BL-32, "Door Lock/ Unlock Switch Check"
Front door lock actuator LH does not operate.	1. Door lock actuator check (Front LH)	BL-34, "Door Lock Actuator Check (Front LH)"
Specific door lock actuator does not operate.	1. Door lock actuator check (Front RH, Rear LH/RH)	BL-35, "Door Lock Actuator Check (Front RH and Rear LH/RH)"

Symptom	Repair order	Refer to page
Power door lock does not operate with front door key cylinder LH operation.	1. Front door key cylinder switch LH check	BL-36, "Front Door Key Cylinder Switch LH Check"
	2. Replace BCM.	BCS-19, "Removal and Installation of BCM"
Power door lock does not operate.	1. BCM power supply and ground circuit check	BL-28, "BCM Power Supply and Ground Circuit Check"
	2. Door lock/unlock switch check	BL-32, "Door Lock/ Unlock Switch Check"

BCM Power Supply and Ground Circuit Check

EIS001G1

1. CHECK FUSE

- Check the following BCM fuse and fusible link.

Component Parts	Terminal No. (SIGNAL)	Ampere	No.	Location
BCM	42 (BAT power supply)	15A	21	Fuse block (J/B)
BCM	55 (BAT power supply)	50A	f	Fuse and fusible link box

NOTE:
Refer to BL-17, "Component Parts and Harness Connector Location" .

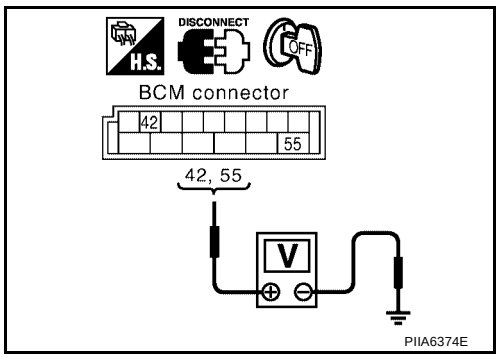
OK or NG

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

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition swtich OFF.
2. Disconnect BCM.
3. Check voltage between BCM connector M19 terminals 42, 55 and ground.

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



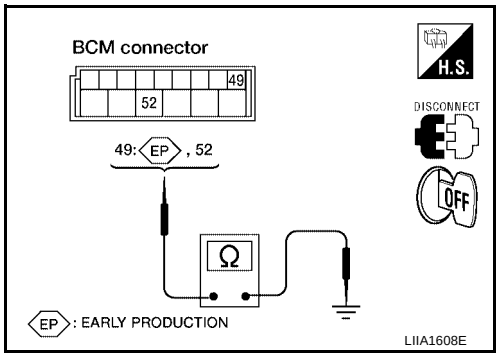
OK or NG

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

3. CHECK GROUND CIRCUIT

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

Connector	Terminals (Wire color)		Continuity
	(+)	(-)	
M19	49 (B)	Ground	YES
	52 (B)		



OK or NG

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

Door Switch Check

EIS001G4

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

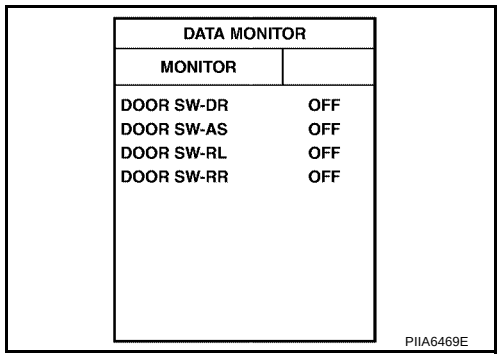
Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR") in DATA MONITOR mode with CONSULT–II.Refer to BL-27, "DATA MONITOR" .

- When any doors are open :

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

- When any doors are closed :

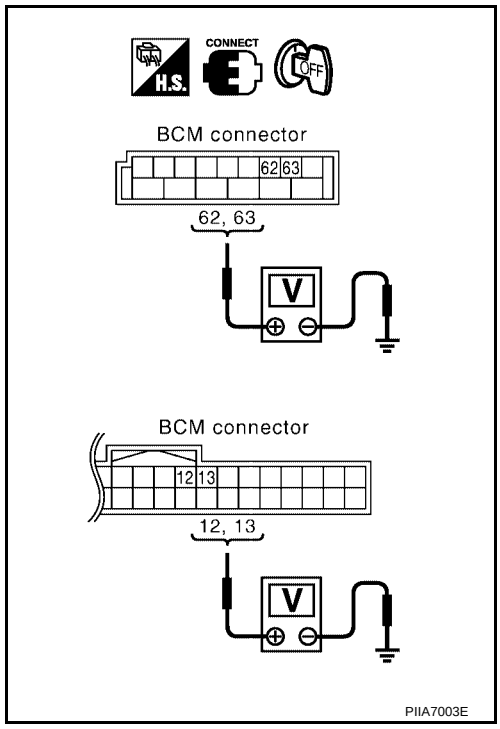
DOOR SW-DR :OFF
DOOR SW-AS :OFF
DOOR SW-RL :OFF
DOOR SW-RR :OFF



Without CONSULT-II

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

Connector	Item	Terminals (Wire color) (+)	Terminals (Wire color) (–)	Condition	Voltage (V) (Approx.)
M20	Front door switch LH	62 (SB)	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Rear door switch LH	63 (R/B)			
M18	Front door switch RH	12 (BR/W)			
	Rear door switch RH	13 (L/R)			



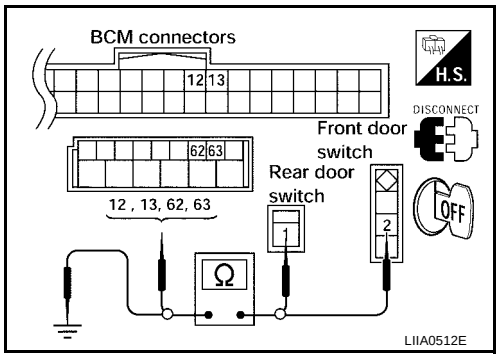
OK or NG

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

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector B8 (Front LH) or B108 (Front RH) terminal 2, B18 (Rear LH) or B116 (Rear RH) terminal 1 and BCM connector M18, M20 terminals 12, 13, 62 and 63

2 (SB) - 62 (SB) :Continuity should exist
2 (BR/W) - 12 (BR/W) :Continuity should exist
1 (R/B) - 63 (R/B) :Continuity should exist
1 (L/R) - 13 (L/R) :Continuity should exist



4. Check continuity between door switch connector B8 (Front LH) or B108 (Front RH) terminal 2, B18 (Rear LH) or B116 (Rear RH) terminal 1 and ground.

2 (SB or BR/W) - Ground :Continuity should not exist
1 (R/B or L/R) - Ground :Continuity should not exist

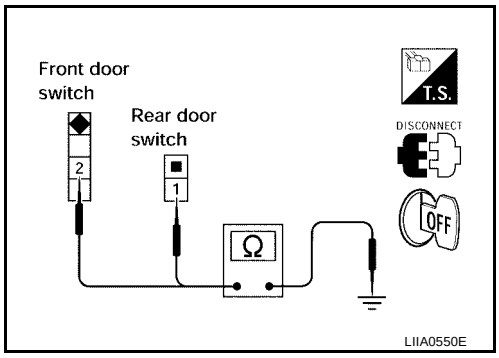
OK or NG

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

3. CHECK DOOR SWITCHES

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

	Terminals (Wire color)	Condition	Continuity
Front door switch LH/RH	2 – Ground	Open	Yes
		Closed	No
Rear door switch LH/RH	1 – Ground	Open	Yes
		Closed	No



OK or NG

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

Key Switch (Insert) Check

EIS001G5

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

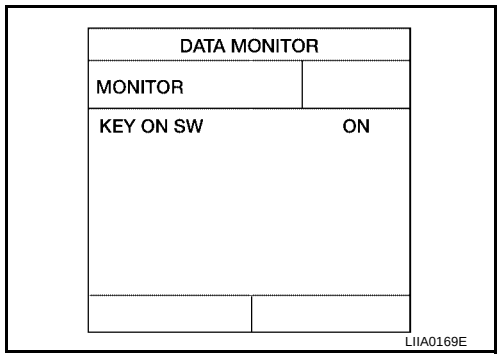
Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT–II.Refer to BL-27, "DATA MONITOR" .

- When key is inserted to ignition key cylinder :

  KEY ON SW :ON

- When key is removed from ignition key cylinder :

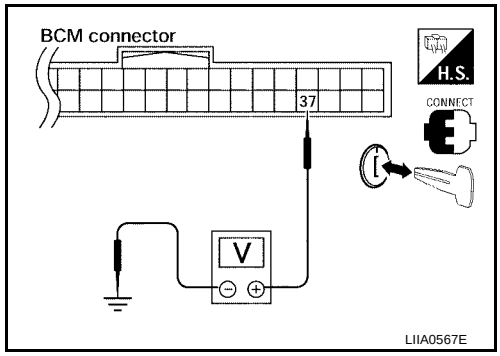
  KEY ON SW :OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 37 and ground.

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



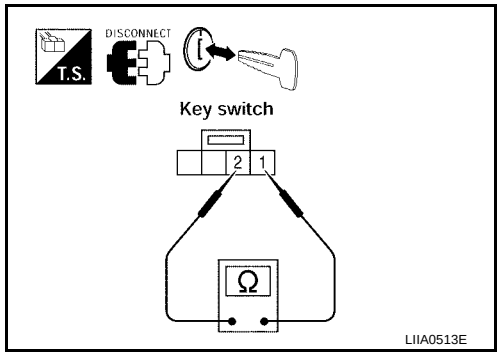
OK or NG

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

2. CHECK KEY SWITCH (INSERT)

Check continuity between key switch connector terminals.

Terminals	Condition	Continuity
1 – 2	Key is inserted.	Yes
	Key is removed.	No



OK or NG

OK >> Repair or replace harness.
NG >> Replace key switch.

Door Lock/Unlock Switch Check

EIS001G6

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-II

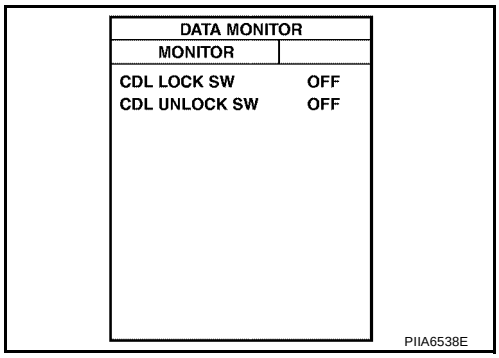
Check door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT–II. Refer to BL-27, "DATA MONITOR"

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

  CDL LOCK SW :ON

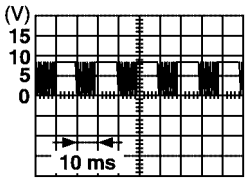
- When door lock/unlock switch is turned to UNLOCK :

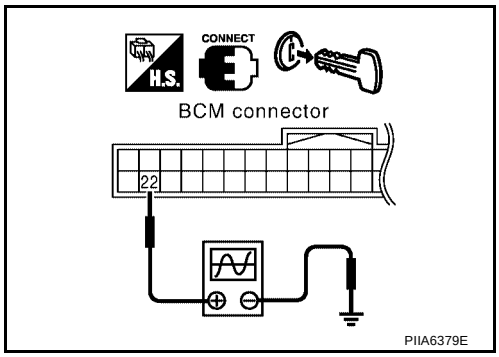
  CDL UNLOCK SW :ON



Without CONSULT-II

1. Remove key from ignition key cylinder.
2. Check the signal between BCM connector M18 terminal 22 and ground with oscilloscope when door lock/unlock switch is turned to LOCK or UNLOCK.
3. Make sure the signals which are shown in the figure below can be detected during 10 seconds just after the door lock/unlock switch is turned to LOCK or UNLOCK.

Connector	Terminal (Wire color)		Voltage (V)
	(+)	(–)	
M18	22 (Y)	Ground	



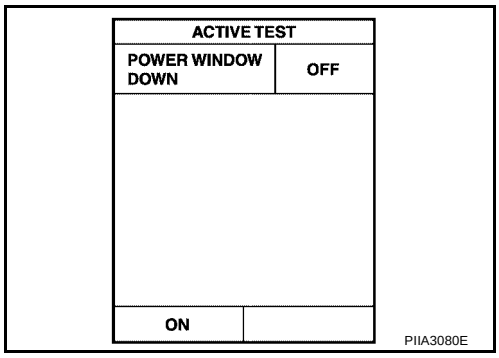
OK or NG

OK >> Door lock and unlock switch circuit is OK.
NG >> GO TO 2

2. CHECK BCM OUTPUT SIGNAL

Check ("POWER WINDOW DOWN") in ACTIVE TEST mode for "REMOTE KEYLESS ENTRY SYSTEM" with CONSULT–II. Refer to BL-48, "Active Test" .

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



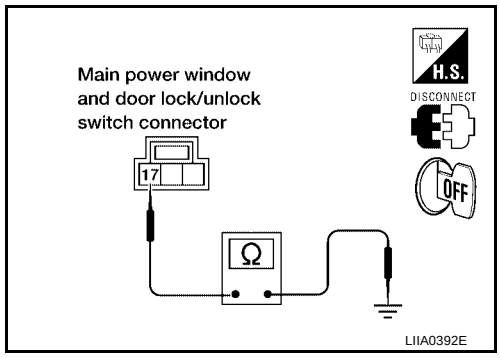
OK or NG

OK >> GO TO 3
NG >> Replace BCM.

3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

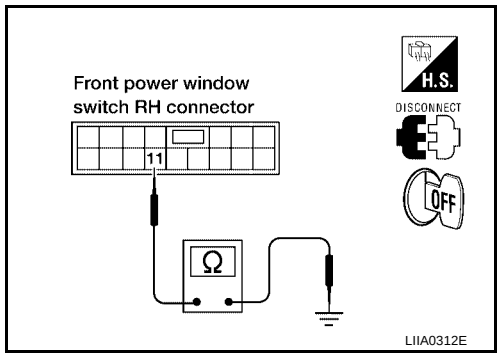
1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch or front power window switch RH
3. Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and ground.

17 (B) - Ground : Continuity should exist.



4. Check continuity between front power window switch RH connector D105 terminal 11 and ground

11 (B) - Ground : Continuity should exist.



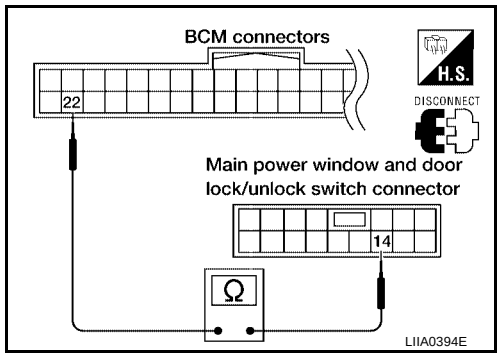
OK or NG

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

4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 14.

22 (Y) - 14 (Y) : Continuity should exist.

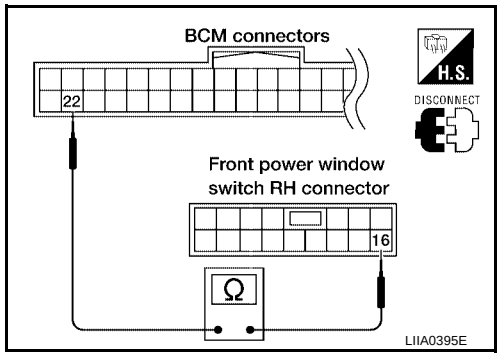


3. Check continuity between BCM connector M18 terminal 22 and front power window switch RH connector D105 terminal 16.

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

OK or NG

OK >> Replace main power window and door lock/unlock switch or front power window switch RH
NG >> Repair or replace harness.



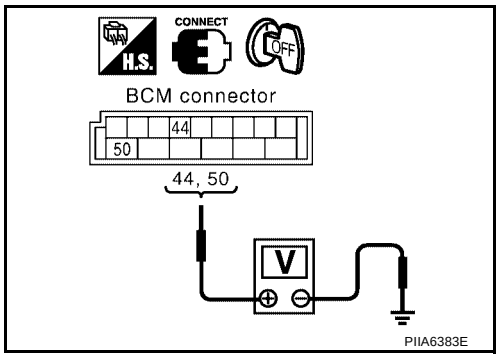
Door Lock Actuator Check (Front LH)

EIS001G8

1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



OK or NG

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

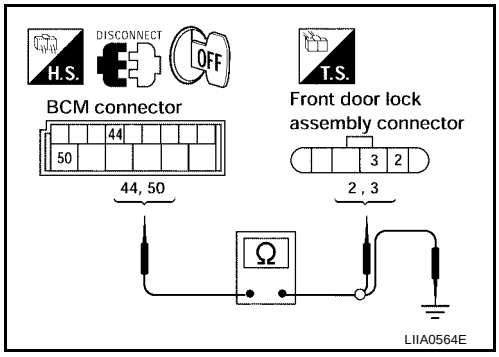
2. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock actuator LH.
2. Check continuity between BCM connector M19 terminals 44, 50 and front door lock actuator LH connector D51 terminals 2, 3.

Connector	Terminals (Wire color)	Connector	Terminals (wire color)	Continuity
M19	44 (G)	D51	2 (G)	Yes
	50 (GR)		3 (GR)	Yes

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

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



OK or NG

OK >> Replace front door lock assembly LH.
NG >> Repair or replace harness.

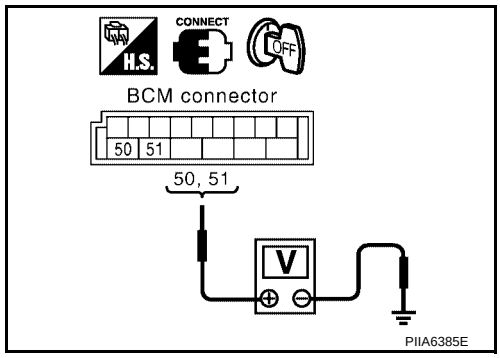
Door Lock Actuator Check (Front RH and Rear LH/RH)

EIS001G9

1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



OK or NG

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

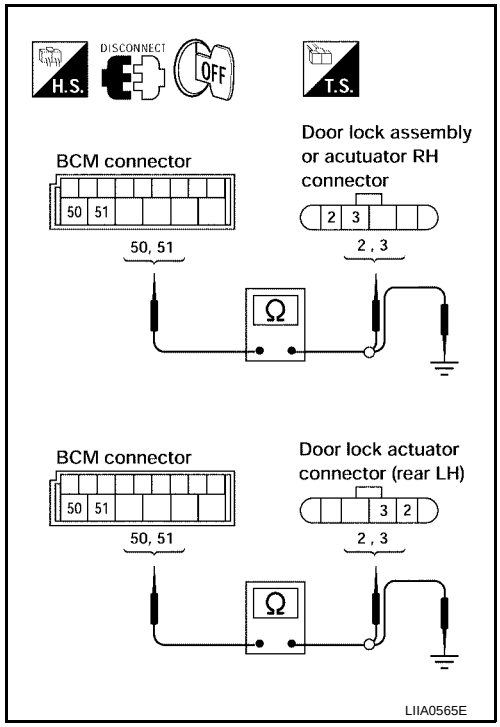
2. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and each door lock actuator .
2. Check continuity between BCM connector M19 terminals 50, 51 and front door lock assembly RH, rear door lock actuator LH/RH connector D151, D205, D305 terminals 2, 3.

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

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

Terminals (Wire color)		Continuity
50 (GR)	Ground	NO
51 (G/Y)		NO



OK or NG

OK >> Replace front door lock actuator RH or rear door lock actuator LH/RH.
NG >> Repair or replace harness.

Front Door Key Cylinder Switch LH Check

EIS001GA

1. CHECK DOOR KEY CYLINDER SWITCH LH

With CONSULT-II

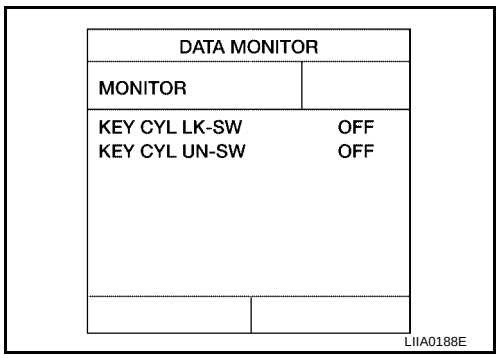
Check front door key cylinder switch LH ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode in CONSULT–II.Refer to BL-27, "DATA MONITOR" .

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

  KEY CYL LK-SW : ON

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

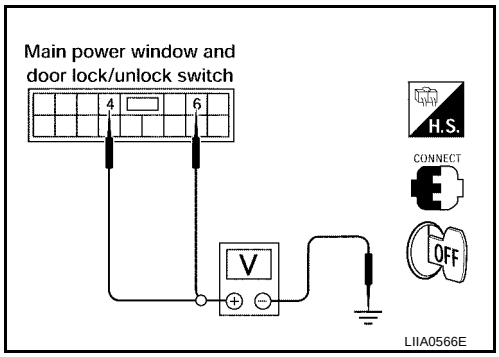
  KEY CYL UN-SW : ON



Without CONSULT-II

Check voltage between main power window and door lock/unlock switch connector D7 terminals 4 and ground.

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



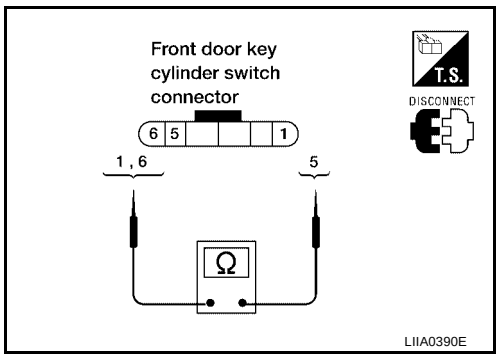
OK or NG

OK >> Front door key cylinder switch LH signal is OK.
NG >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH LH

1. Turn ignition switch off.
2. Disconnect front door key cylinder switch LH.
3. Check continuity between door key cylinder switch LH connector terminals 1, 5 and 6.

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



OK or NG

OK >> Check the following.
- Front door key cylinder switch LH ground circuit.
- Harness for open or short between main power window and door lock/unlock switch and front door key cylinder switch LH.

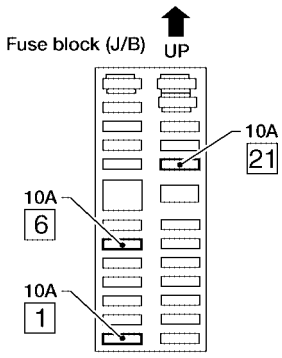
NG >> Replace front door key cylinder switch LH.

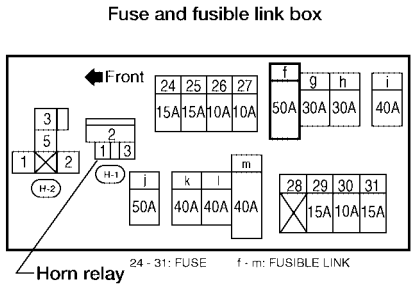
REMOTE KEYLESS ENTRY SYSTEM

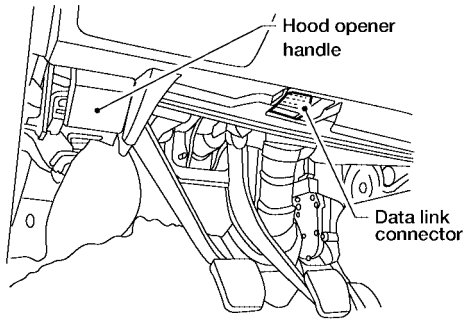
PFP:28596

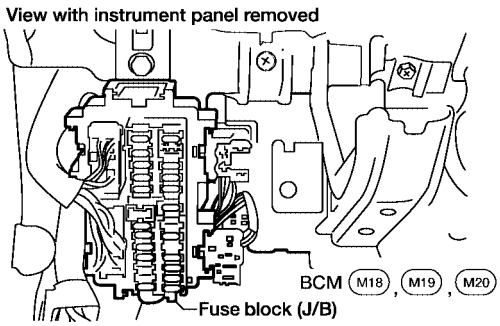
Component Parts and Harness Connector Location

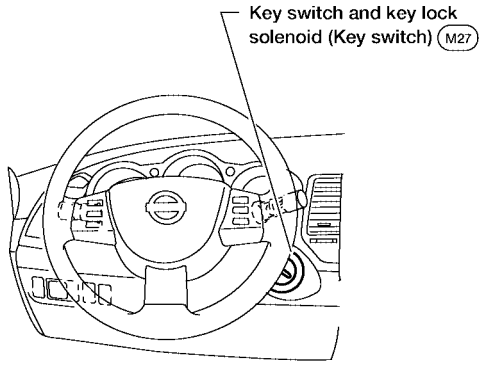
EIS001GD

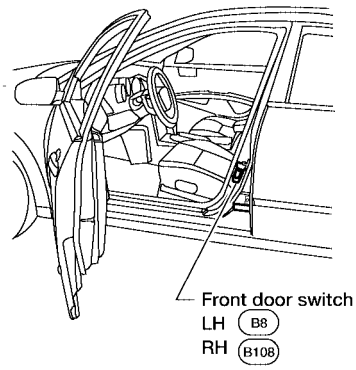


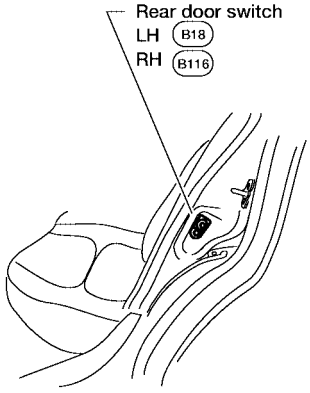


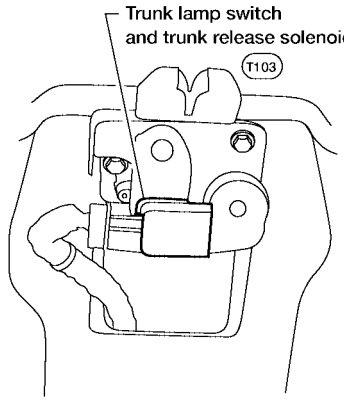


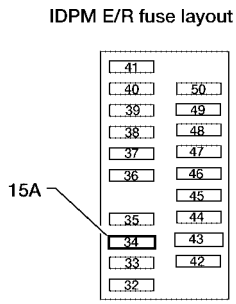












WIIA0394E

System Description

EIS001GE

INPUTS

Power is supplied at all times

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

When the key switch is ON, power is supplied

- to BCM terminal 37
- through key switch terminals 1 and 2
- through 10A fuse [No. 21, located in the fuse block (J/B)].

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

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

When the key switch is ON or START, power is supplied

- to BCM terminal 38
- through 10A fuse [No. 12, located in the fuse block (J/B)].

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

- to BCM terminal 62
- through front door switch LH terminal 2
- to front door switch LH case ground.

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

- to BCM terminal 12
- through front door switch RH terminal 2
- to front door switch RH case ground.

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

- to BCM terminal 63
- through rear door switch LH terminal 1
- to rear door switch LH case ground.

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

- to BCM terminal 13
- through rear door switch RH terminal 1
- to rear door switch RH case ground.

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

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

OPERATED PROCEDURE

Power Door Lock Operation

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

Hazard and Horn Reminder

BCM output to IPDM E/R for horn reminder signal as DATA LINE (CAN H line and CAN L line).

The hazard and horn reminder has C mode (horn chirp mode) and S mode (non-horn chirp mode).

Operating function of hazard and horn reminder

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

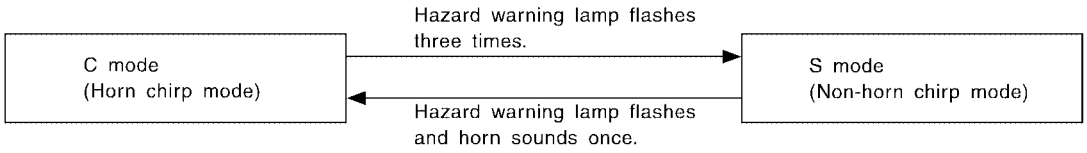
How to change hazard and horn reminder mode

With CONSULT-II

Hazard and horn reminder can be changed using “WORK SUPPORT” mode in “MULTI ANSWER BACK SET".

Without CONSULT-II

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



SEL153WA

Interior Lamp Operation

When the following input signals are both supplied:

- door switch CLOSED (when all the doors are closed);
- interior lamp switch is in DOOR position.

Remote keyless entry system turns on interior lamp and ignition illumination (for 30 seconds) with input of UNLOCK signal from key fob.
For detailed description, refer to LT-153, "ROOM LAMP TIMER OPERATION" .

Panic Alarm Operation

When key switch is OFF (when ignition key is not inserted in key cylinder), remote keyless entry system turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from key fob.
The alarm automatically turns off after 25 seconds or when BCM receives any signal from key fob.
For detailed description, refer to BL-78, "VEHICLE SECURITY (THEFT WARNING) SYSTEM" .

Trunk Lid Opener Operation

When a TRUNK OPEN signal is sent with key OFF (ignition key removed from key cylinder) from key fob, power is supplied

- through BCM terminal 57
- to trunk lamp switch and trunk release solenoid terminal 1.

When power and ground are supplied, trunk lamp switch and trunk release solenoid opens trunk lid.

Keyless Power Window Down (open) Operation

When key fob unlock switch is turned ON with ignition switch OFF, and the switch is detected to be on continuously for 3 seconds, the driver's door and passenger's door power windows are simultaneously opened.
Power window is operated to open and the operation continues as long as the key fob unlock switch is pressed.

Auto Door Lock Operation

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

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

Auto door lock mode can be changed using "WORK SUPPORT" mode in "AUTO LOCK SET". Refer to BL-48, "Work Support" .

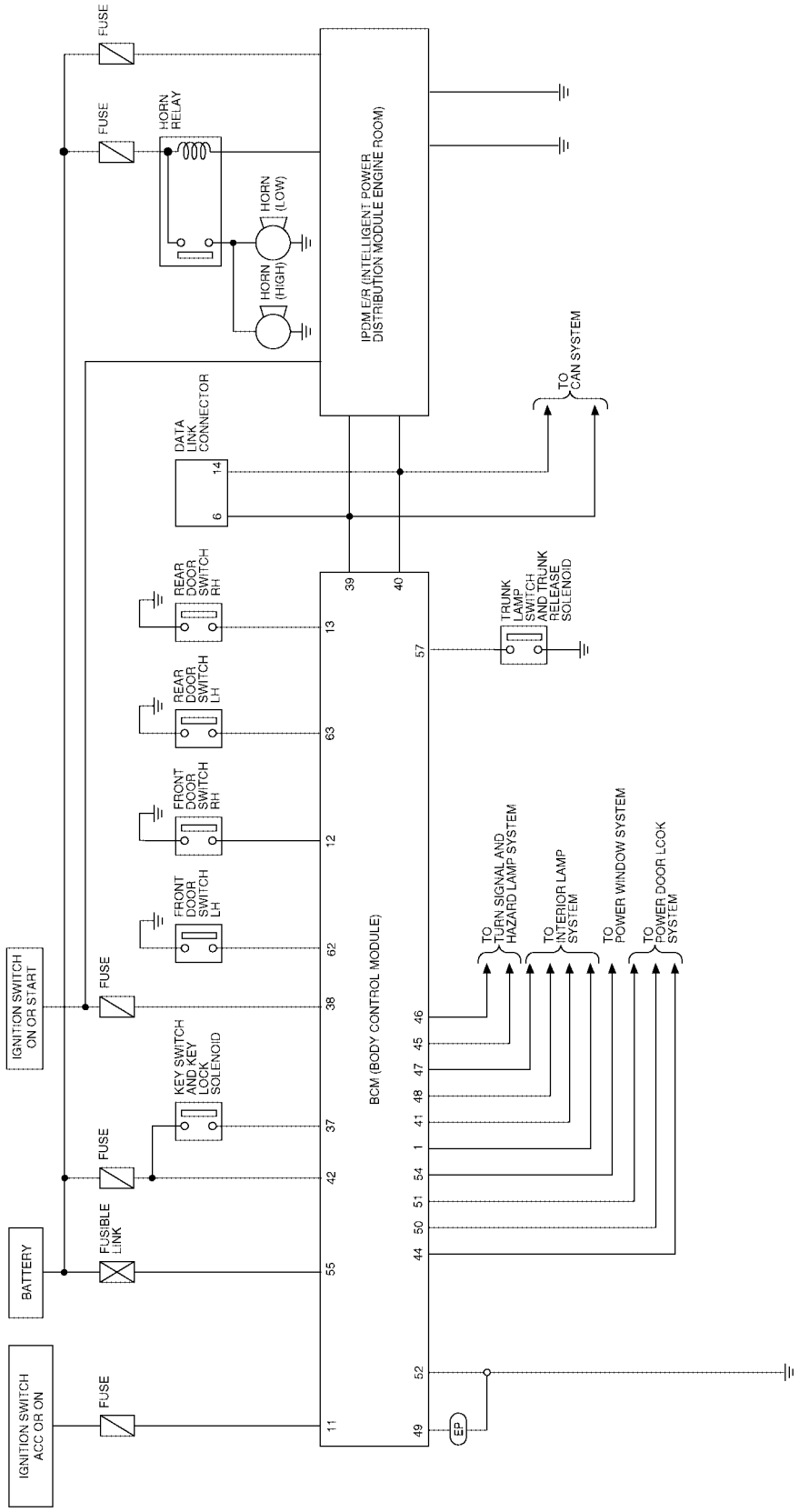
CAN Communication System Description

EIS001GF

Refer to LAN-8, "CAN COMMUNICATION" .

Schematic

EIS001GG

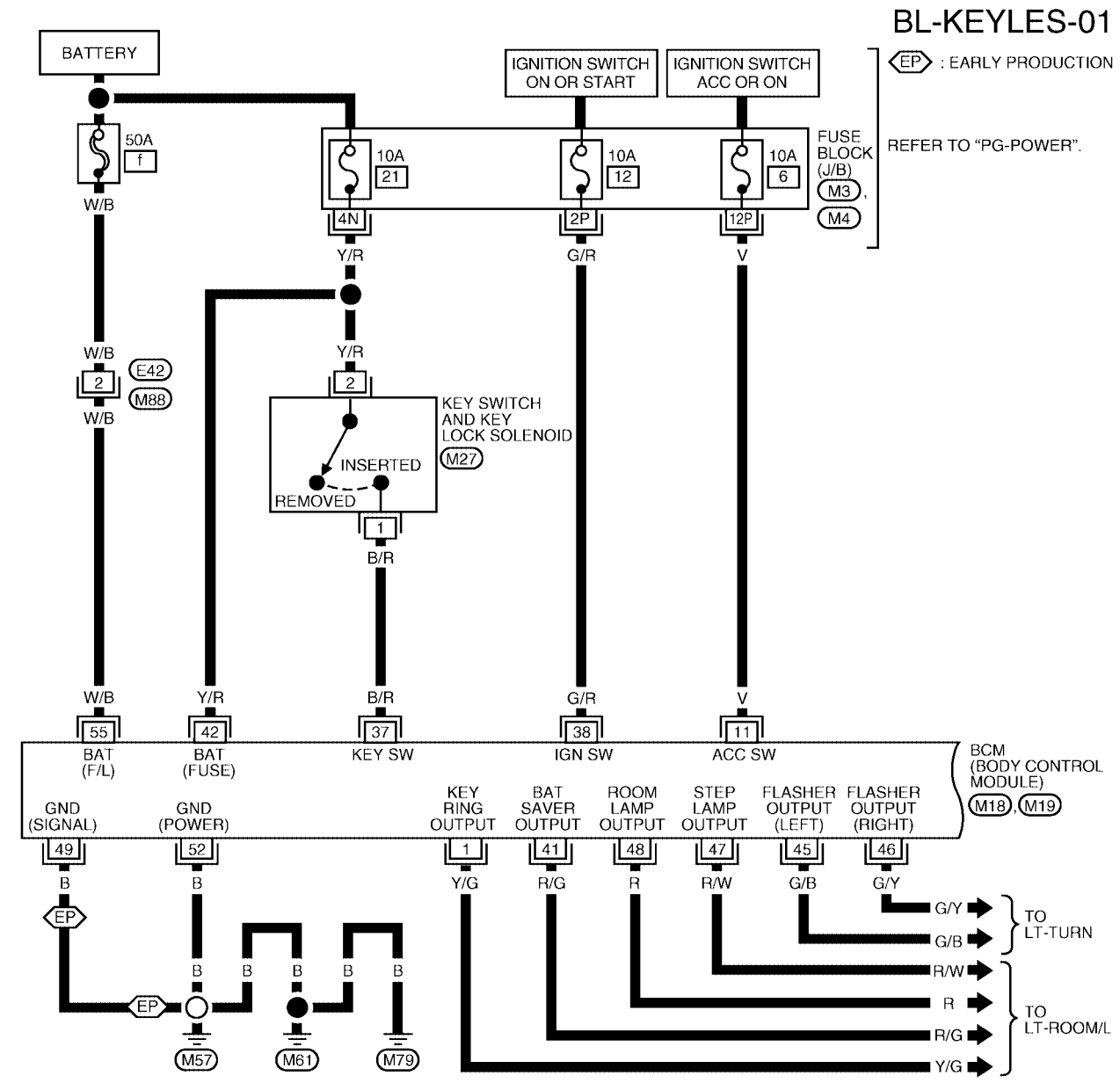


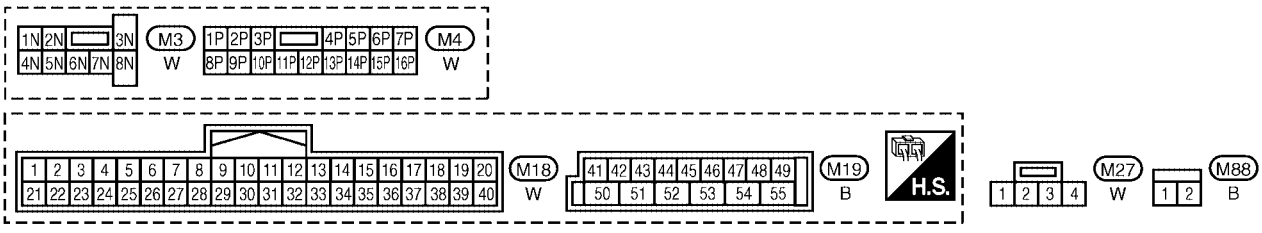
WIWA0398E

Wiring Diagram — KEYLES—

EIS001GH

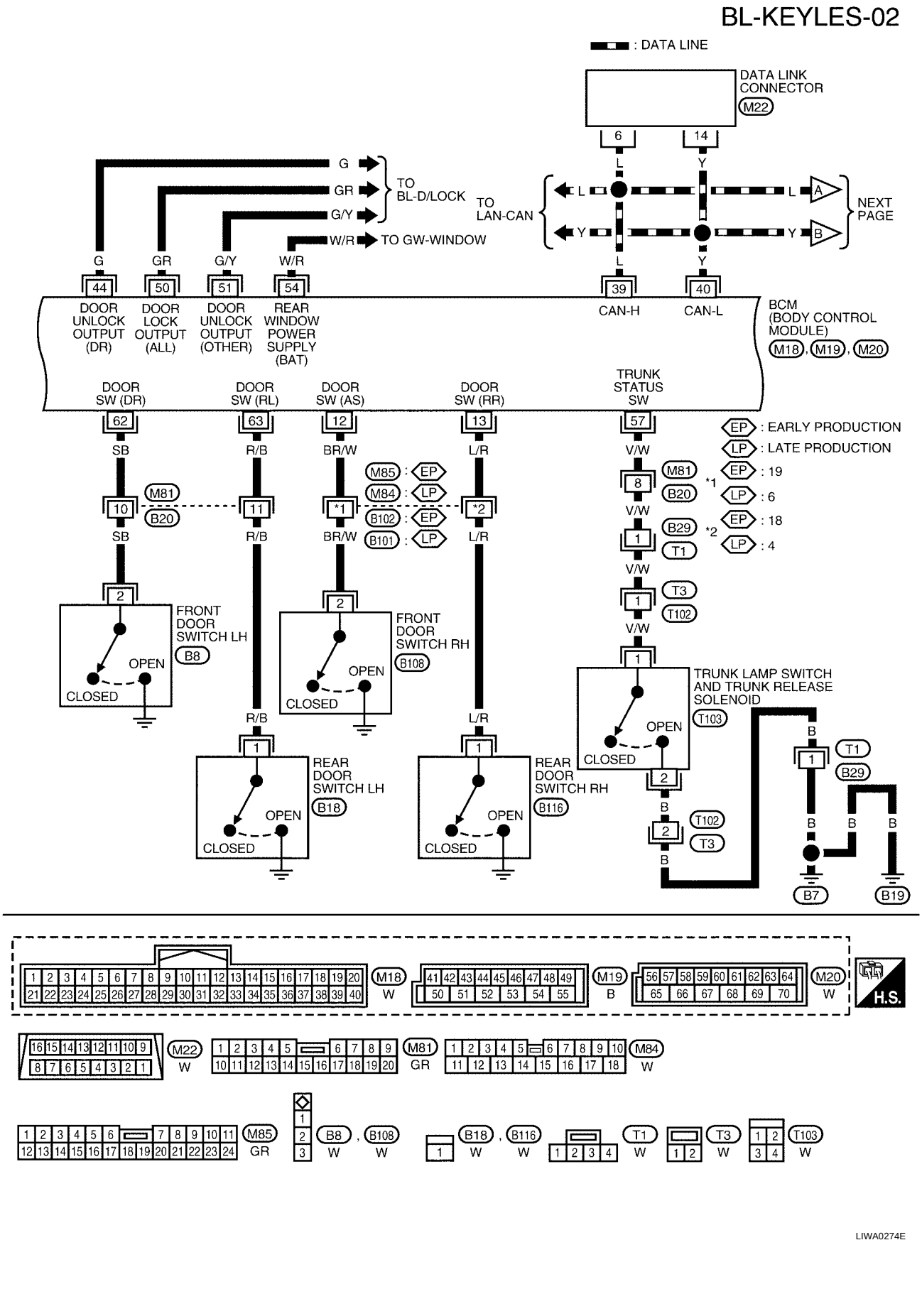
FIG. 1





WIWA0399E

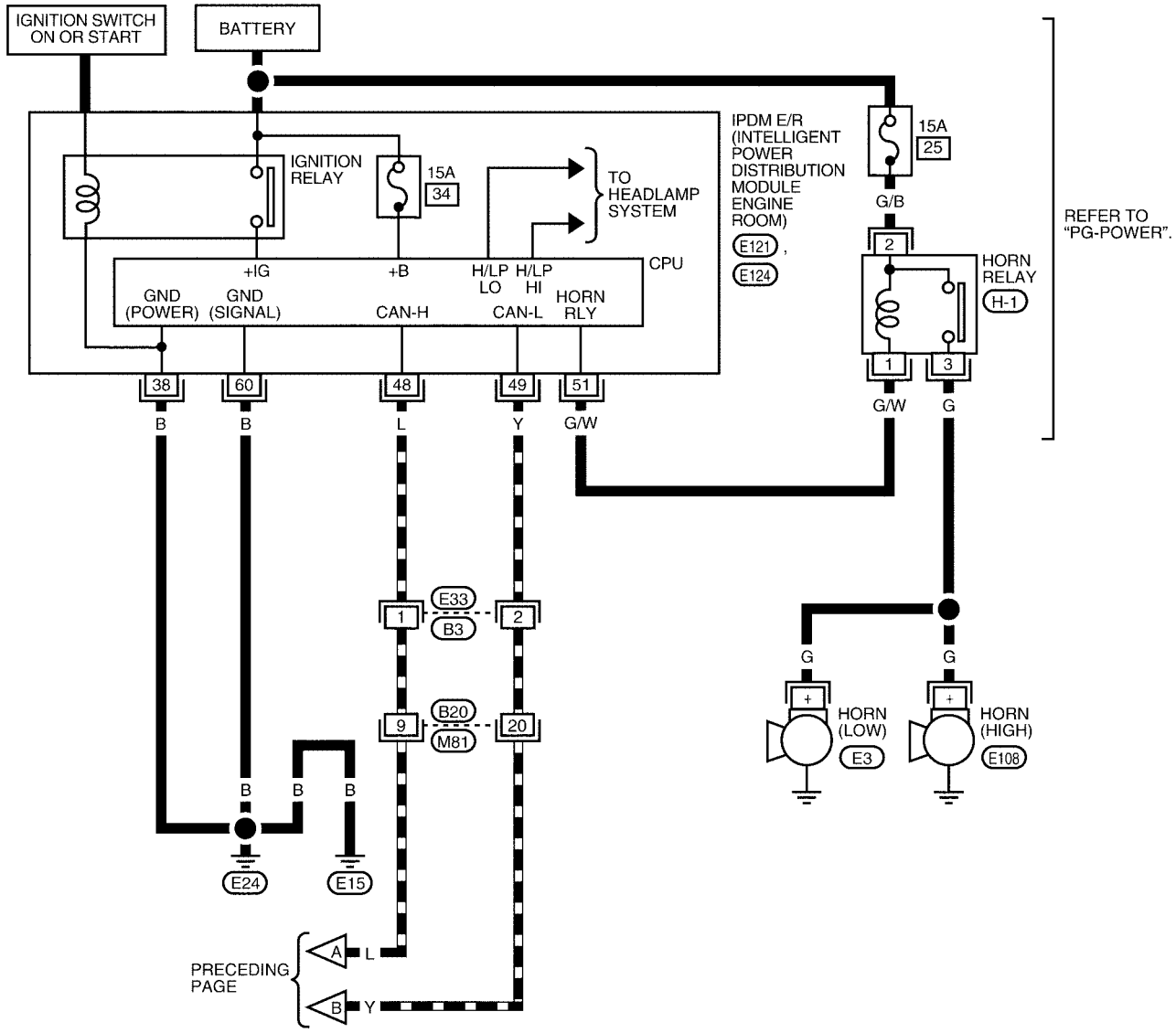
FIG. 2

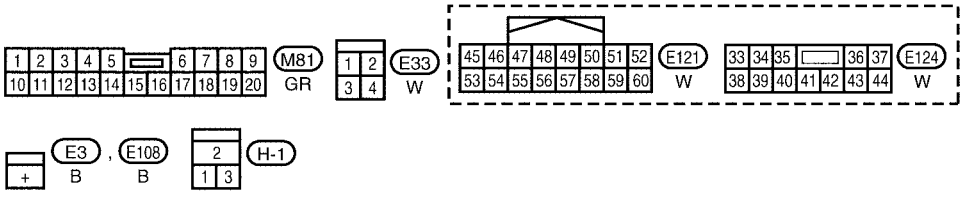


LIWA0274E

FIG. 3

BL-KEYLES-03





LIWA0106E

Terminals and Reference Value for BCM

EIS001GI

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	Y/G	Ignition key illumination	Key ring illumination ON	0
			Key ring illumination OFF	Battery voltage
11	V	Ignition switch (ACC)	Ignition switch in ACC	Battery voltage
12	BR/W	Front door switch RH	Door Close (OFF) → Open (ON)	Battery voltage → 0
13	L/R	Rear door switch RH	Door Close (OFF) → Open (ON)	Battery voltage → 0
37	B/R	Key switch	Key inserted in IGN key cylinder → Key removed from IGN key cylinder	Battery voltage → 0
38	G/R	Ignition switch (ON)	Ignition switch ON	Battery voltage
39	L	CAN-H	—	—
40	Y	CAN-L	—	—
41	R/G	Battery saver (Interior lamp)	Battery saver does operated → Does not operated (ON → OFF)	Battery voltage → 0
42	Y/R	Power source (BAT)	—	Battery voltage
44	G	Driver door lock actuator	Door lock & unlock switch (Neutral → Unlock)	0 → Battery voltage
45	G/B	Turn signal LH	When doors are locked or unlocked using key fob (OFF → ON) *2	0 → Battery voltage
46	G/Y	Turn signal RH	When doors are locked or unlocked using key fob (OFF → ON) *2	0 → Battery voltage
47	R/W	Step lamp LH and RH	Step lamp ON	0
			Step lamp OFF	Battery voltage
48	R	Room lamp	Room lamp ON *1	Battery voltage
			Room Lamp OFF *1	0
49 *3	B	Ground	—	0
50	G/R	Door lock actuators	Door lock & unlock switch (Neutral → Lock)	0 → Battery voltage
51	G/Y	Passenger and rear doors lock actuator	Door lock & unlock switch (Neutral → Unlock)	0 → Battery voltage
52	B	Ground	—	0
54	W/R	Power window power source	—	Battery voltage
55	W/B	Power source (BAT)	—	Battery voltage
57	V/W	Trunk switch	Trunk Close (OFF) → Open (ON)	Battery voltage → 0
62	SB	Front door switch LH	Door Close (OFF) → Open (ON)	Battery voltage → 0
63	R/B	Rear door switch LH	Door Close (OFF) → Open (ON)	Battery voltage → 0

- *1: When room lamp switch is in "DOOR" position.
- *2: When hazard reminder is ON.
- *3: Early production.

Terminals and Reference Value for IPDM E/R

EIS001PA

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

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
51	G/W	Horn relay	When doors locks are operated using key fob (OFF → ON) *	Battery voltage → 0
60	B	Ground	—	0

*: When horn reminder is ON.

CONSULT-II Function (BCM)

EIS001GJ

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

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

CONSULT-II Inspection Procedure

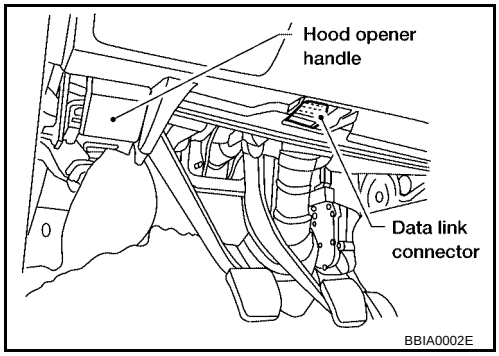
EIS001GK

“MULTI REMOTE ENT”

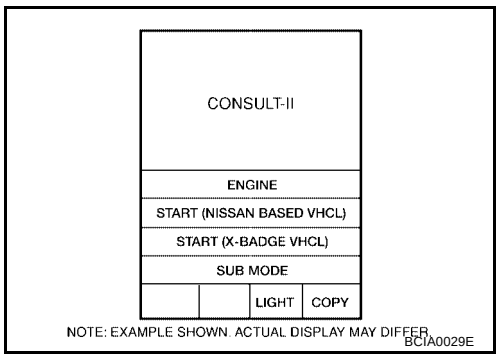
CAUTION:

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

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

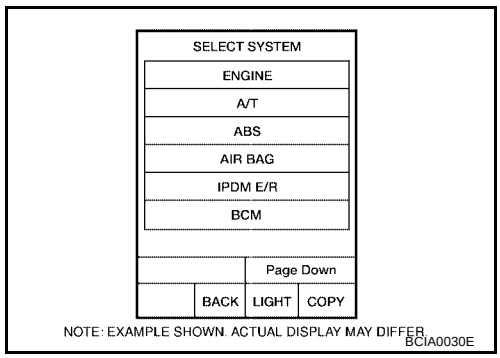


3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.

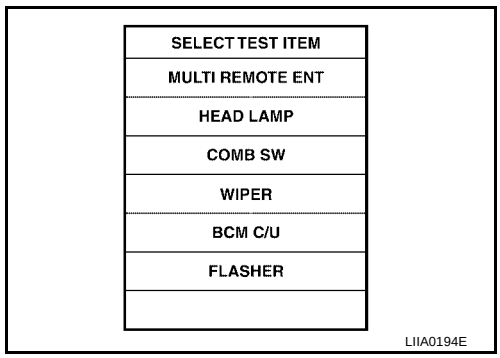


5. Touch “BCM”.

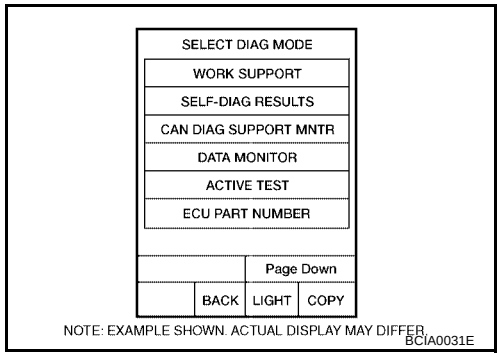
If "BCM" is not indicated, refer to GI-36, "CONSULT-II Data Link Connector (DLC) Circuit" .



6. Touch “MULTI REMOTE ENT”.



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



CONSULT-II Application Items

EIS001GL

“MULTI REMOTE CONT SYS”

Data Monitor

Monitored Item	Description
DOOR SW-AS	Indicates [ON/OFF] condition of door switch RH.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
PANIC BTN	Indicates [ON/OFF] condition of panic signal from key fob.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from key fob.
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from key fob.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder switch.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch.
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.

Monitored Item	Description
LK/UN BTN ON	Indicates [ON/OFF] condition of lock/unlock signal at the same time from key fob.
TRUNK BTN/SIG	Indicates [ON/OFF] condition of trunk open signal from key fob.
UN BUTTON ON	Indicates [ON/OFF] condition of unlock signal from key fob.

Active Test

Test Item	Description
INT ILLUM	This test is able to check interior lamp illumination operation. The interior lamp illumination is turned on when “ON” on CONSULT-II screen is touched.
IGN ILLUM	This test is able to check ignition illumination operation. The ignition illumination is turned on when “ON” on CONSULT-II screen is touched.
FLASHER RIGHT(CAN)	This test is able to check right hazard reminder operation. The right hazard lamp turns on when “ON” on CONSULT-II screen is touched.
FLASHER LEFT(CAN)	This test is able to check left hazard reminder operation. The left hazard lamp turns on when “ON” on CONSULT-II screen is touched.
HORN	This test is able to check panic alarm and horn reminder operations. The alarm activate for 0.5 seconds after “ON” on CONSULT-II screen is touched.
HEAD LAMP (HI)	This test is able to check headlamps panic alarm operation. The headlamp illuminates for 0.5 seconds after “ON” on CONSULT-II screen is touched.
TRUNK/BACK DOOR	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

Test Item	Description
REMO CONT ID CONFIR	It can be checked whether key fob ID code is registered or not in this mode.
REMO CONT ID REGIST	Key fob ID code can be registered.
REMO CONT ID ERASUR	Key fob ID code can be erased.
MULTI ANSWER BACK SET	Hazard and horn reminder mode can be changed in this mode. The reminder mode will be changed when “CHANG SETT” on CONSULT-II screen is touched.
AUTO LOCK SET	Auto locking function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.
PANIC ALRM SET	Panic alarm operation mode can be changed in this mode. The operaition mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.
TRUNK OPEN SET	Trunk lid opener operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.
PW DOWN SET	Keyless power window down (open) operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-II screen is touched.

Hazard and horn reminder mode

	MODE 1 (C mode)		MODE 2 (S mode)		MODE 3		MODE 4		MODE 5		MODE 6	
Key fob operation	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—	—	—	Twice	Once	Twice	—	—	Once
Horn sound	Once	—	—	—	—	—	—	—	Once	—	Once	—

Auto locking function mode

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

Panic alarm operation mode

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

Trunk lid open operation mode

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

Keyless power window down operation mode

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

Trouble Diagnosis Procedure

EIS001GM

1. Check the trouble symptom and customer's requests.
2. Understand outline of system. Refer to BL-38, "System Description" .
3. Confirm that power door lock system operates normally. Refer to BL-17, "POWER DOOR LOCK SYSTEM" .
4. Perform pre-diagnosis inspection. Refer to BL-49, "Pre-Diagnosis Inspection" .
5. Refer to trouble diagnosis chart by symptom, repair or replace any malfunctioning parts. Refer to BL-50, "Trouble Diagnoses" .
6. **Inspection End.**

Pre-Diagnosis Inspection

EIS001GN

BCM POWER SUPPLY AND GROUND CIRCUIT INSPECTION

1. FUSE INSPECTION

- Check the following fuses and fusible link in the fuse block (J/B) and fuse and fusible link box.

Unit	Terminal No.	Signal name	No.	Location
BCM	55	Battery power supply	f	Fuse and fuslible link box
	11	ACC power supply	6	Fuse block (J/B)
	38	IGN power supply	12	Fuse block (J/B)
	42	Battery power supply	21	Fuse block (J/B)

OK or NG

OK >> GO TO 2
NG >> Replace the fuse or fusible link.

2. POWER SUPPLY CIRCUIT INSPECTION

Disconnect BCM connector, and connect vehicle-side connector terminals shown below to positive probe and body ground to negative probe. Measure voltage.

Unit	Terminal No.	Signal name	Ignition switch	Voltage
BCM	55	Battery power supply	OFF	Battery voltage
	11	ACC power supply	ACC	Battery voltage
	38	IGN power supply	ON	Battery voltage
	42	Battery power supply	OFF	Battery voltage

OK or NG

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

3. GROUND CIRCUIT INSPECTION

Check continuity between BCM vehicle-side connector and body ground.

Unit	Terminal No.	Signal name	Ignition switch	Continuity
BCM	49*, 52	Ground	OFF	Yes

*: Early production

OK or NG

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

Trouble Diagnoses

EIS001GO

SYMPTOM CHART

NOTE:

- Always check the "Trouble Diagnosis Procedure" before troubleshooting. Refer to BL-49, "Trouble Diagnosis Procedure" .
- Always check key fob battery before replacing key fob. Refer to BL-53, "Key Fob Battery and Function Check" .
- The panic alarm operation and trunk lid opener operation of remote keyless entry system do not activate with the ignition key inserted in the ignition key cylinder.
- Use Remote Keyless Entry Tester J-43241 (follow instructions on tester) to check operation of key fob before replacing key fob.

Symptom	Diagnoses/service procedure	Reference page
All function of remote keyless entry system do not operate.	1. Key fob battery and function check (use Remote Keyless Entry Tester J-43241)	BL-53
	2. Replace key fob (use Remote Keyless Entry Tester J-43241). Refer to ID Code Entry Procedure. **NOTE:** If the result of key fob function check with CONSULT-II is OK, Key fob is not malfunctioning.	BL-61
	3. Replace BCM.	BCS-19

Symptom	Diagnoses/service procedure	Reference page
The new ID of key fob cannot be entered.	1. Key fob battery and function check (use Remote Keyless Entry Tester J-43241)	BL-53
	2. Key switch (insert) check	BL-58
	3. Door switch check	BL-56
	4. ACC power check	BL-54
	5. Replace key fob (use Remote Keyless Entry Tester J-43241). Refer to ID Code Entry Procedure. **NOTE:** If the result of key fob function check with CONSULT-II is OK, Key fob is not malfunctioning.	BL-61
	6. Replace BCM.	BCS-19
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system. Refer to BL-17, "POWER DOOR LOCK SYSTEM")	1. Key fob battery and function check (use Remote Keyless Entry Tester J-43241)	BL-53
	2. Replace key fob (use Remote Keyless Entry Tester J-43241). Refer to ID Code Entry Procedure . **NOTE:** If the result of key fob function check with CONSULT-II is OK, Key fob is not malfunctioning.	BL-61
	3. Replace BCM.	BCS-19
Hazard and horn reminder does not activate properly when pressing lock or unlock button of key fob.	1. Check hazard and horn reminder mode **NOTE:** Hazard and horn reminder mode can be changed. First check the hazard and horn reminder mode setting.	BL-48
	2. Door switch check	BL-56
	3. Trunk switch check	BL-58
	4. Replace BCM.	BCS-19
Hazard reminder does not activate properlywhen-pressing lock or unlock button of key fob. (Horn reminder OK)	1. Check hazard reminder mode **NOTE:** Hazard reminder mode can be changed. First check the hazard reminder mode setting.	BL-48
	2. Check hazard function with hazard switch	—
	3. Replace BCM.	BCS-19
Horn reminder does not activate properlywhen-pressing lock or unlock button of key fob. (Hazard reminder OK)	1. Check horn reminder mode **NOTE:** Horn reminder mode can be changed. First check the horn reminder mode setting.	BL-48
	2. Check horn function with horn switch	—
	3. IPDM E/R operation check	BL-54
	4. Replace BCM.	BCS-19
Room lamp, ignition key illumination and step lamp operation do not activate properly.	1. Room lamp operation check	BL-60
	2. Ignition key illumination operation check	BL-60
	3.Step lamp operation check	LT-151
	4. Door switch check	BL-56
	5. Replace BCM.	BCS-19

Symptom	Diagnoses/service procedure	Reference page
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Key fob battery and function check (use Remote Keyless Entry Tester J-43241)	BL-53
	2. Vehicle security operation check. Refer to Vehicle security system.	BL-78
	3. Key switch (insert) check	BL-58
	4. Replace key fob (use Remote Keyless Entry Tester J-43241). Refer to ID Code Entry Procedure. **NOTE:** If the result of key fob function check with CONSULT-II is OK, Key fob is not malfunctioning.	BL-61
	5. Replace BCM.	BCS-19
Trunk lid does not open when trunk opener button is continuously pressed.	1. Check trunk open operation mode **NOTE:** Trunk open operation mode can be changed. First check the trunk open operation mode setting.	BL-48, "Active Test"
	2. Key fob battery and function check (use Remote Keyless Entry Tester J-43241)	BL-53
	3. Trunk release solenoid check	BL-58
	4. Key switch (insert) check	BL-58
	5. Replace BCM.	BCS-19, "Removal and Installation of BCM"
Auto door lock operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check auto door lock operation mode **NOTE:** Auto door lock operation mode can be changed. First check the auto door lock operation mode setting.	BL-48, "Work Support"
	2. Replace BCM.	BCS-19, "Removal and Installation of BCM"
Keyless power window down (open) operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check power window down operation mode **NOTE:** Power window down operation mode can be changed. First check the power window down operation mode setting.	BL-48, "Work Support"
	2. Check power window function with switch	—
	3. Replace BCM.	BCS-19, "Removal and Installation of BCM"

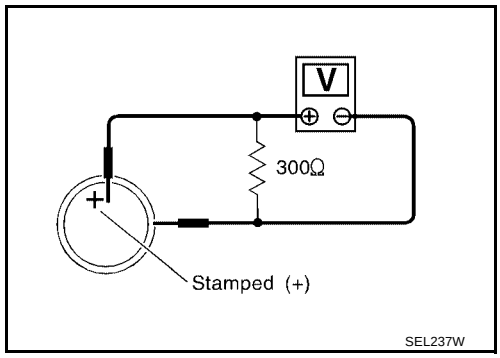
Key Fob Battery and Function Check

EIS001GP

1. CHECK KEY FOB BATTERY

Remove battery and measure voltage across battery positive and negative terminals, (+) and (–).

Voltage : 2.5V - 3.0V



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

OK or NG

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

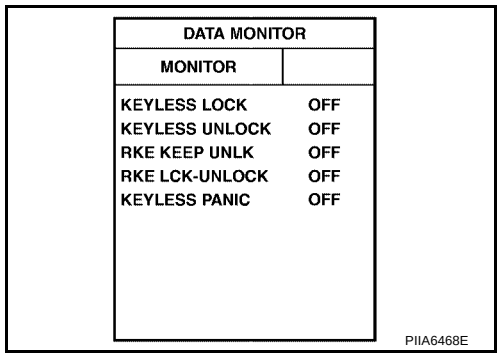
2. CHECK KEY FOB FUNCTION

With CONSULT-II

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

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

Condition	Monitor item	
Pushing LOCK	KEYLESS LOCK	: ON
Pushing UNLOCK	KEYLESS UNLOCK	: ON
Keep pushing UNLOCK	RKE KEEP UNLK	: ON
	UN BUTTON ON turns to ON 3 seconds after UNLOCK button is pushed.	
Pushing TRUNK	KEYLESS TRUNK	: ON
Pushing PANIC	KEYLESS PANIC	: ON
Pushing LOCK and UNLOCK at the same time	RKE LCK-UNLCK	: ON



OK or NG

OK >> Key fob is OK. Further inspection is necessary. Refer to BL-50, "SYMPTOM CHART" .
NG >> Replace key fob.

ACC Power Check

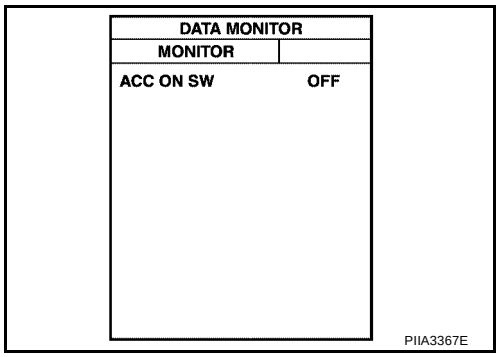
EIS001PB

1. CHECK ACC POWER

With CONSULT-II

Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT–II.Refer to BL-27, "DATA MONITOR" .

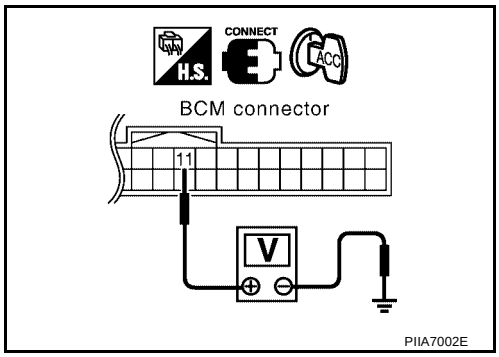
Monitor Item	Condition	
ACC ON SW	Ignition switch position is ACC	: ON
	Ignition switch position is OFF	: OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 11 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M18	11 (B/R)	Ground	ACC	Battery voltage
			OFF	0



OK or NG

OK >> ACC power circuit is OK.

NG >> Check the following.

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

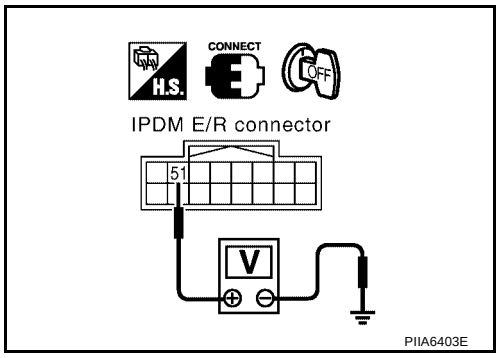
IPDM E/R Operation Check

EIS001PC

1. CHECK IPDM E/R INPUT VOLTAGE

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

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



OK or NG

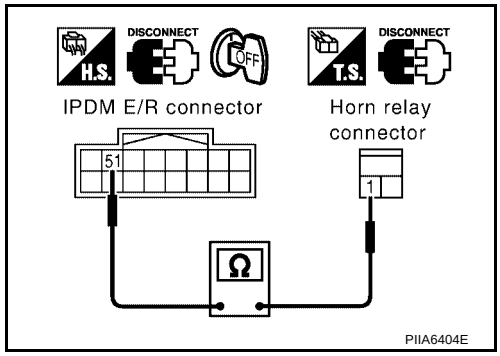
OK >> Replace IPDM E/R.

NG >> GO TO 2

2. CHECK IPDM E/R INPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay.
3. Check continuity between IPDM E/R connector E121 terminal 51 and horn relay connector H-1 terminal 1.

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



OK or NG

OK >> Further inspection is necessary. Refer to BL-50, "SYMPTOM CHART" .

NG >> Repair or replace harness

Door Switch Check

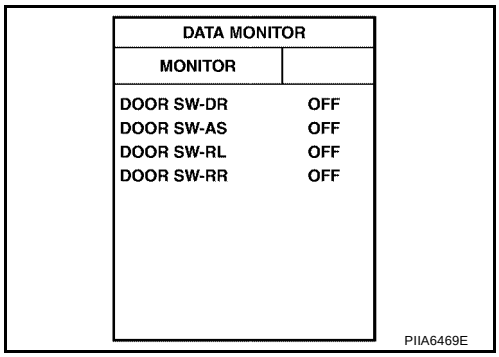
EIS001GQ

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

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

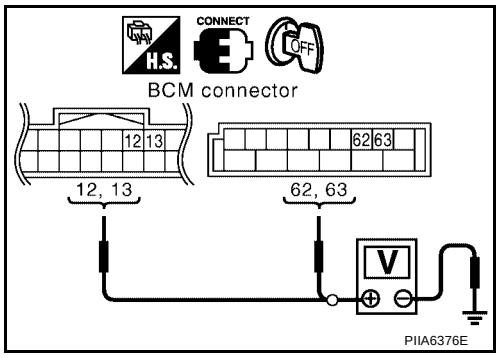
Monitor item	Condition	
DOOR SW-RL	OPEN	: ON
	CLOSE	: OFF
DOOR SW-RR	OPEN	: ON
	CLOSE	: OFF
DOOR SW-DR	OPEN	: ON
	CLOSE	: OFF
DOOR SW-AS	OPEN	: ON
	CLOSE	: OFF



Without CONSULT-II

Check voltage between BCM harness connector terminals 12, 13, 62 and 63 and ground.

	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
Front door switch RH	12 (BR/W)	Ground	OPEN	0
			CLOSE	Battery voltage
Rear door switch RH	13 (L/R)	Ground	OPEN	0V
			CLOSE	Battery voltage
Front door switch LH	62 (SB)	Ground	OPEN	0V
			CLOSE	Battery voltage
Rear door switch LH	63 (R/B)	Ground	OPEN	0V
			CLOSE	Battery voltage



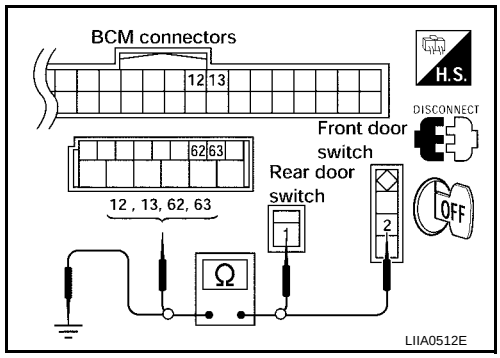
OK or NG

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

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. Check continuity between door switch connector B8 (front LH) or B108 (front RH) terminal 2, B18 (rear LH) or B116 (rear RH) terminal 1 and BCM connector M18, M20 terminals 12, 13, 62 and 63

2 (SB) - 62 (SB) :Continuity should exist
2 (BR/W) - 12 (BR/W) :Continuity should exist
1 (R/B) - 63 (R/B) :Continuity should exist
1 (L/R) - 13 (L/R) :Continuity should exist



4. Check continuity between door switch connector B8 (front LH) or B108 (front RH) terminal 2, B18 (rear LH) or B116 (rear RH) terminal 1 and ground.

2 (SB or BR/W) - Ground :Continuity should not exist
1 (R/B or L/R) - Ground :Continuity should not exist

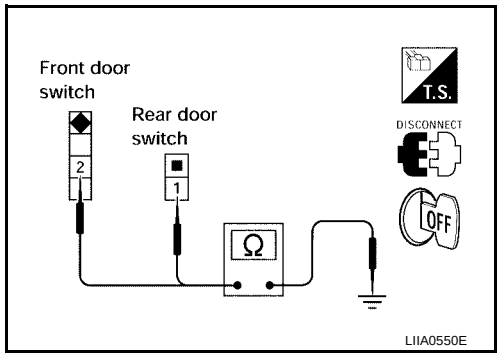
OK or NG

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

3. CHECK DOOR SWITCHES

Check continuity between door switch connector terminals 1, 2 and ground part of door switch.

	Terminals	Condition	Continuity
Front door switch LH/RH	2 – Ground part of door switch	Released	Yes
		Pushed	No
Rear door switch LH/RH	1 – Ground part of door switch	Released	Yes
		Pushed	No



OK or NG

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

Key Switch Check

EIS001GR

1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-II

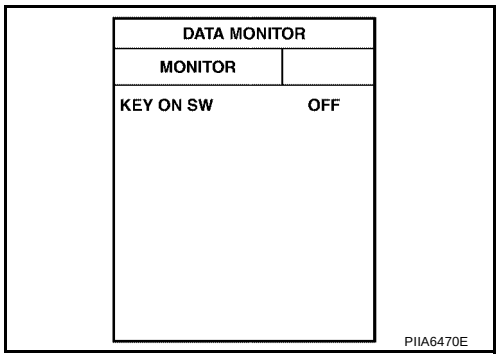
Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT–II.Refer to BL-27, "DATA MONITOR" .

- When key is inserted to ignition key cylinder :

  KEY ON SW :ON

- When key is removed from ignition key cylinder :

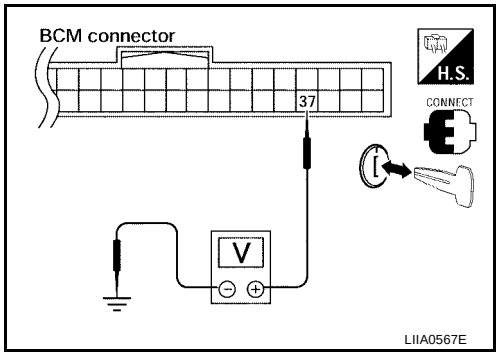
  KEY ON SW :OFF



Without CONSULT-II

Check voltage between BCM connector M18 terminal 37 and ground.

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



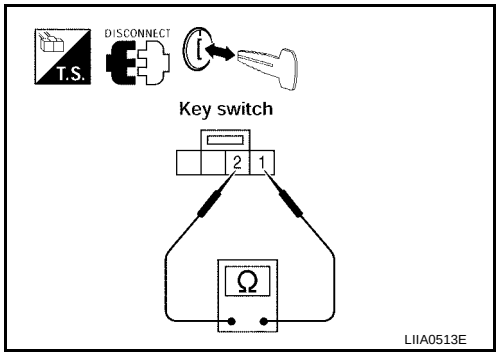
OK or NG

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

2. CHECK KEY SWITCH

Check continuity between key switch terminals.

Terminals	Condition	Continuity
1 – 2	Key is inserted.	Yes
	Key is removed.	No



OK or NG ?

OK >> Repair or replace harness.
NG >> Replace key switch.

Trunk Lamp Switch and Trunk Release Solenoid Check

EIS001GS

1. CHECK TRUNK LID OPENER

Check trunk release operation with trunk lid opener switch.

NOTE:

First check trunk lid opener cancel switch position. Refer to BL-74, "TRUNK LID AND FUEL FILLER LID OPENER"

Does trunk lid open?

Yes >> Trunk lamp switch and trunk release solenoid circuit is OK.
No >> GO TO 2

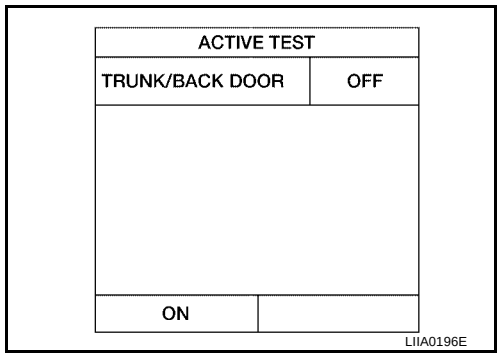
2. CHECK TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID OPERATION

With CONSULT-II

1. Select “ACTIVE TEST” in “MULTI REMOTE ENT” with CONSULT-II.
2. Select “TRUNK/BACK DOOR” and touch “ON”.

Trunk release solenoid should operate.

NOTE:
If CONSULT-II is not available, GO TO 3.



OK or NG

OK >> Trunk lamp switch and trunk release solenoid circuit is OK.
NG >> Repair or replace harness.

3. CHECK TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID CIRCUIT

Without CONSULT-II

1. Disconnect trunk lamp switch and trunk release solenoid.
2. Check voltage between trunk lamp switch and trunk release solenoid harness connector T103 terminal 3 and ground.

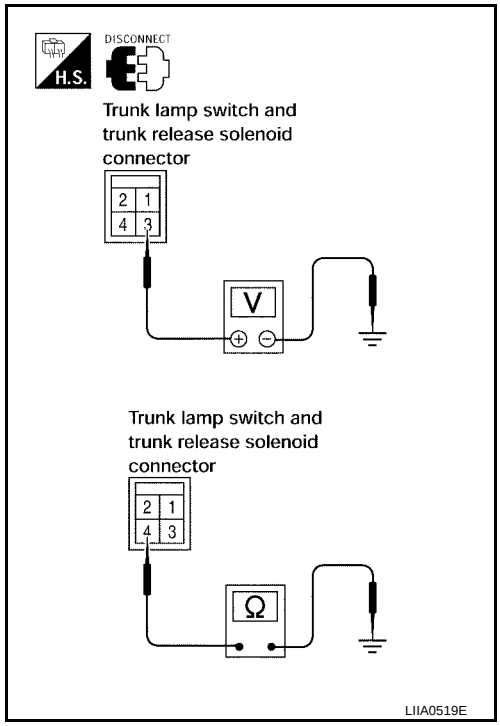
3 (R) - Ground : Battery voltage should exist.

3. Check continuity between trunk lamp switch and trunk release solenoid harness connector T103 terminal 4 and ground.

4 (B) - Ground : Continuity should exist.

OK or NG

OK >> Replace trunk lamp switch and trunk release solenoid.
NG >> Repair or replace harness.



Check Hazard Function

EIS001GT

1. CHECK HAZARD WARNING LAMP

Does hazard indicator flash with hazard switch?

Yes or No

Yes >> Hazard warning lamp circuit is OK.
No >> Check “hazard indicator” Refer toLT-90, "TURN SIGNAL AND HAZARD WARNING LAMPS" .

Check Horn Function

EIS001GU

First, perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, then perform the trouble diagnosis of malfunction system indicated in "SELF-DIAG RESULTS" of "BCM".

1. CHECK HORN FUNCTION

Does horn sound with horn switch?

Yes or No

Yes >> Horn circuit is OK.
No >> Check horn circuit. Refer to WW-31, "HORN" .

Check Headlamp Function

EIS001GV

First, perform the "SELF-DIAG RESULTS" in "BCM" with CONSULT-II, then perform the trouble diagnosis of malfunction system indicated in "SELF-DIAG RESULTS" of "BCM".

1. CHECK HEADLAMP OPERATION

Does headlamp come on when turning lighting switch ON?

Yes or No

Yes >> Headlamp operation circuit is OK.
No >> Check headlamp circuit. Refer to LT-6, "HEADLAMP (FOR USA)" .

Check Map Lamp and Ignition Key Illumination Function

EIS001GW

1. CHECK MAP LAMP AND IGNITION KEY ILLUMINATION FUNCTION

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

Map lamp and ignition key illumination should illuminate.

OK or NG

OK >> System is OK.
NG >> Check ignition illumination circuit. Refer to LT-176, "ILLUMINATION" .

ID Code Entry Procedure

EIS001GY

KEY FOB ID SET UP WITH CONSULT-II

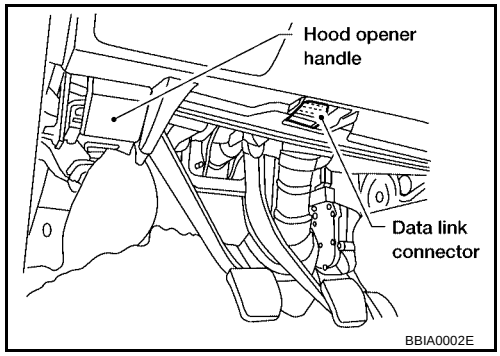
NOTE:

- **If a key fob is lost, the ID code of the lost key fob must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-II. However, when the ID code of a lost key fob is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new key fobs must be re-registered.**
- **When registering an additional key fob, the existing ID codes in memory may or may not be erased. If five ID codes are stored in medmory when an additional code is registered, only the oldest code is erased. If less than five codes are stored in memory when an additional code is registered, the new ID code is added and no ID codes are erased.**
- **Entry of a maximum of five ID codes is allowed. When more than five codes are entered, the oldest ID code will be erased.**
- **Even if the same ID code that is already in memory is input, the same ID code can be entered. The code is counted as an additionaly code.**

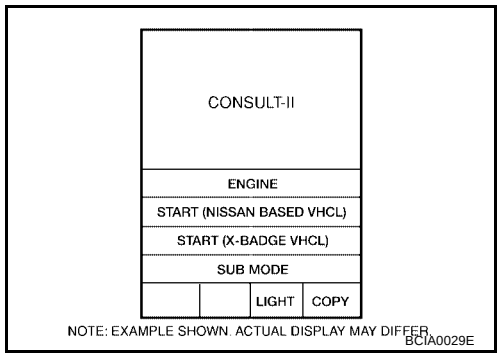
CAUTION:

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

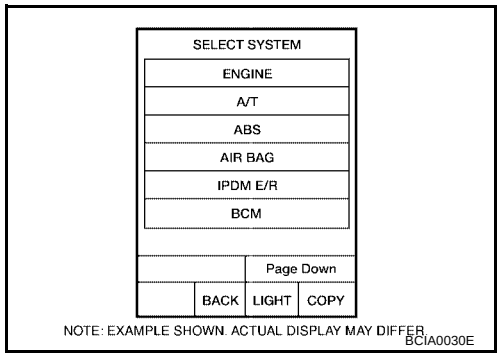
1. Turn ignition switch OFF.
2. Connect CONSULT-II to the data link connector.



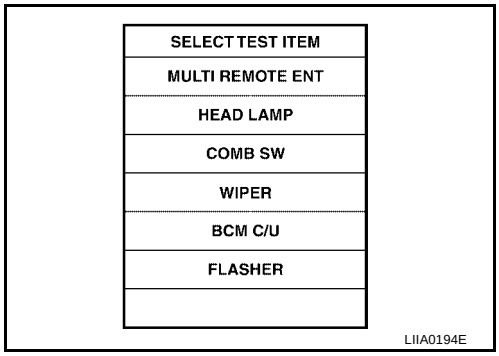
3. Turn ignition switch ON.
4. Touch “START (NISSAN BASED VHCL)”.



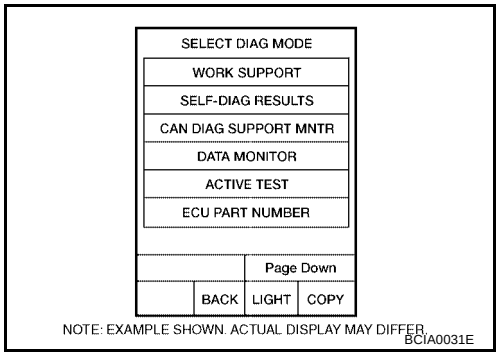
5. Touch “BCM”.
   If "BCM" is not indicated, refer to GI-36, "CONSULT-II Data Link Connector (DLC) Circuit" .



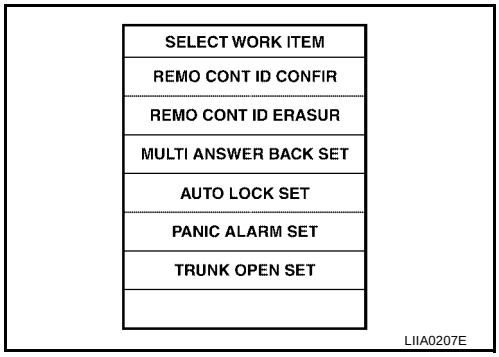
6. Touch “MULTI REMOTE ENT”.



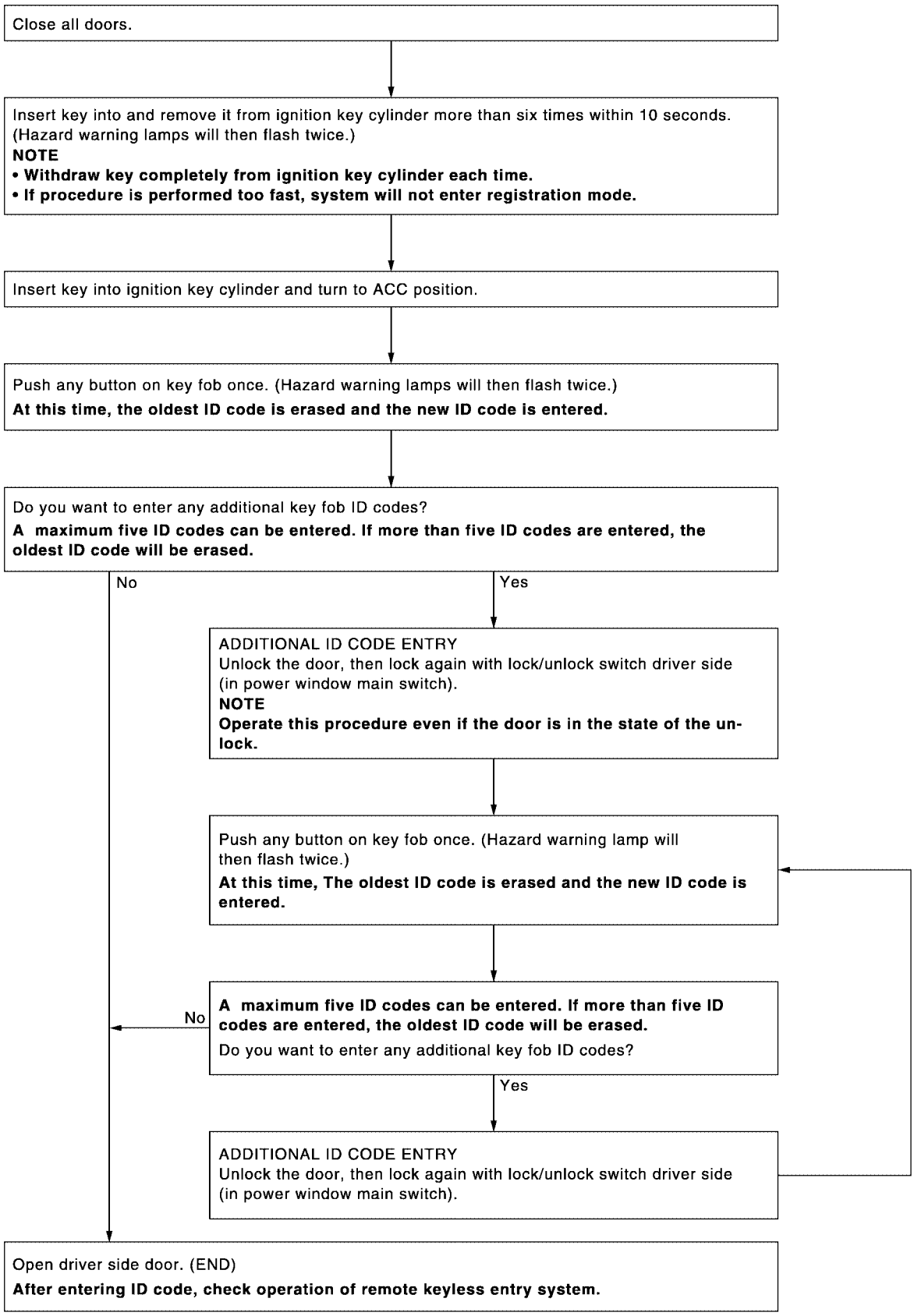
7. Touch “WORK SUPPORT”.



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



KEY FOB ID SET UP WITHOUT CONSULT-II



PIIA2839E

NOTE:

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

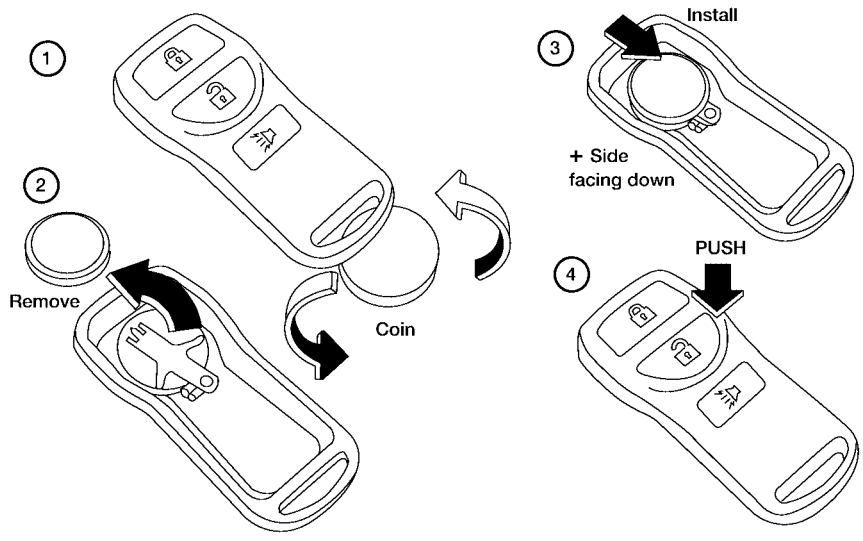
Key Fob Battery Replacement

EIS001GZ

NOTE:

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

1. Open the lid using a coin.
2. Remove the battery.
3. Install the new battery, positive side down.
4. Close the lid securely. Push the key fob buttons two or three times to check operation.



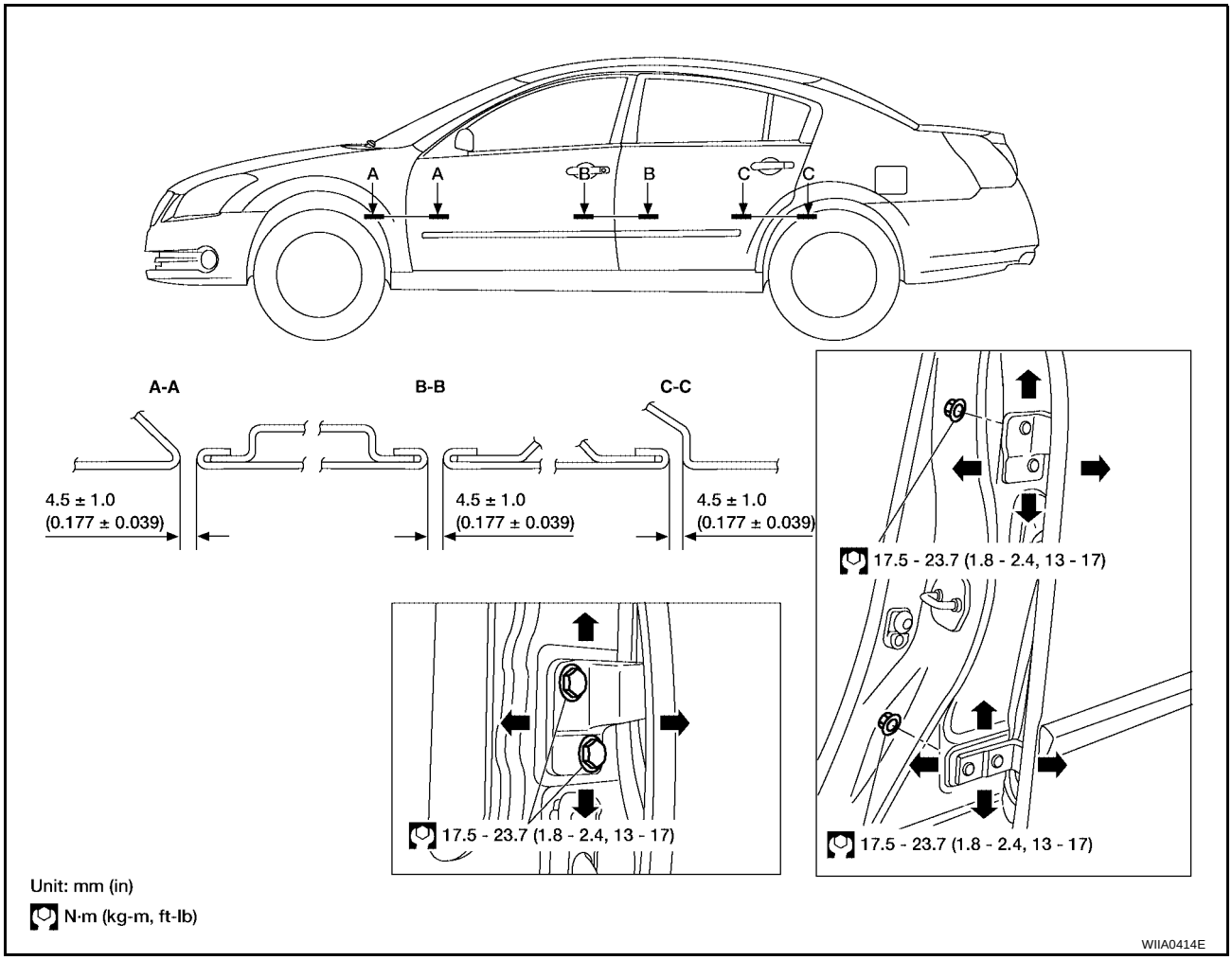
UIA0203E

DOOR

PFP:80100

Fitting Adjustment

EIS001H0



FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the front fender. Refer to EI-20, "FRONT FENDER" .
2. Loosen the hinge bolts. Raise the front door at rear end to adjust.

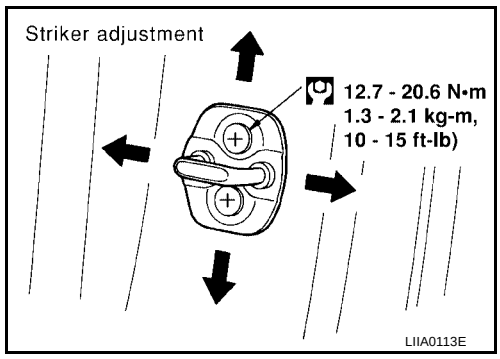
REAR DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the center pillar upper garnish and center pillar lower garnish. Refer to EI-33, "Removal and Installation" .
2. Accessing from inside the vehicle, loosen the nuts. Open the rear door, and raise the rear door at rear end to adjust.

STRIKER ADJUSTMENT

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



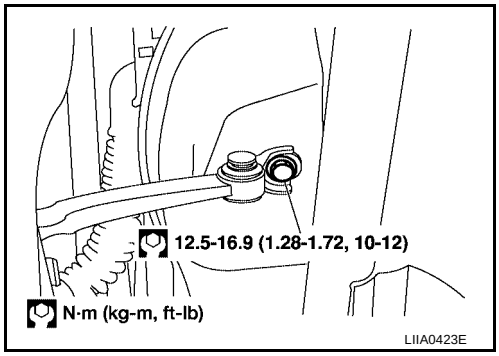
Removal and Installation

EIS001H1

CAUTION:

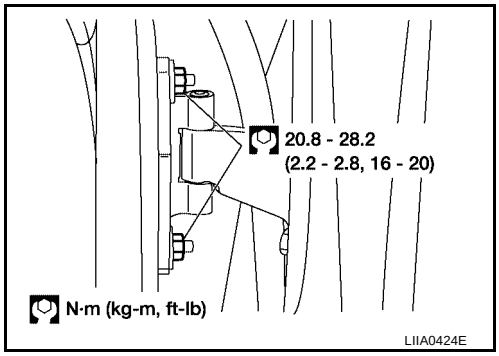
- **When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.**
- **When removing and installing door assembly, be sure to carry out the fitting adjustment.**
- **Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".**

1. Remove the door finisher. Refer to EI-30, "DOOR FINISHER" .
2. Remove the inner seal.
3. Remove the door window and module assembly. Refer to GW-87, "Removal and Installation" .
4. Remove the door harness.
5. Remove the check link cover.
6. Remove the bolt from the check link on the vehicle.



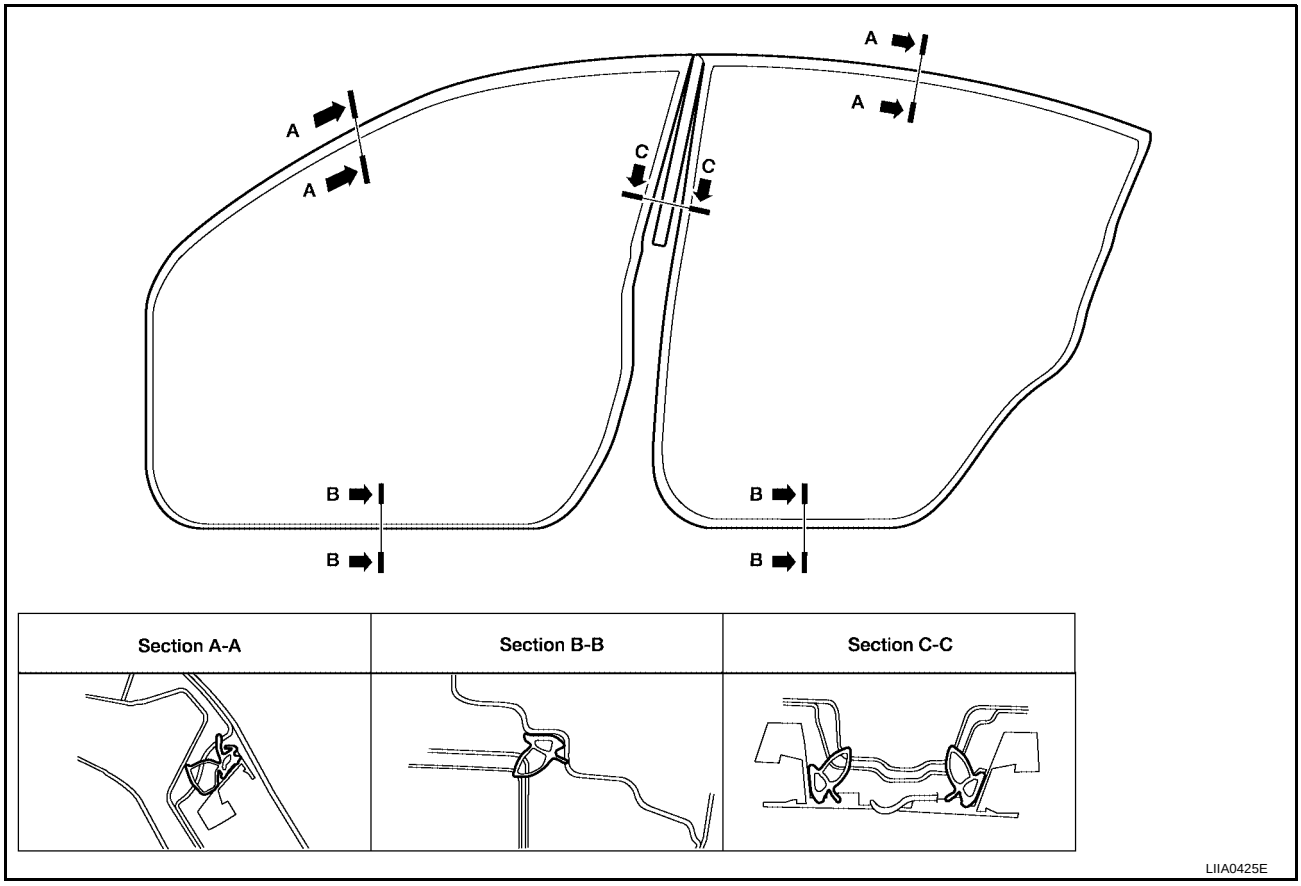
7. Remove the door-side hinge nuts and bolts, and remove the door assembly.

Install in the reverse order of removal.



Door Weatherstrip

EIS001H2

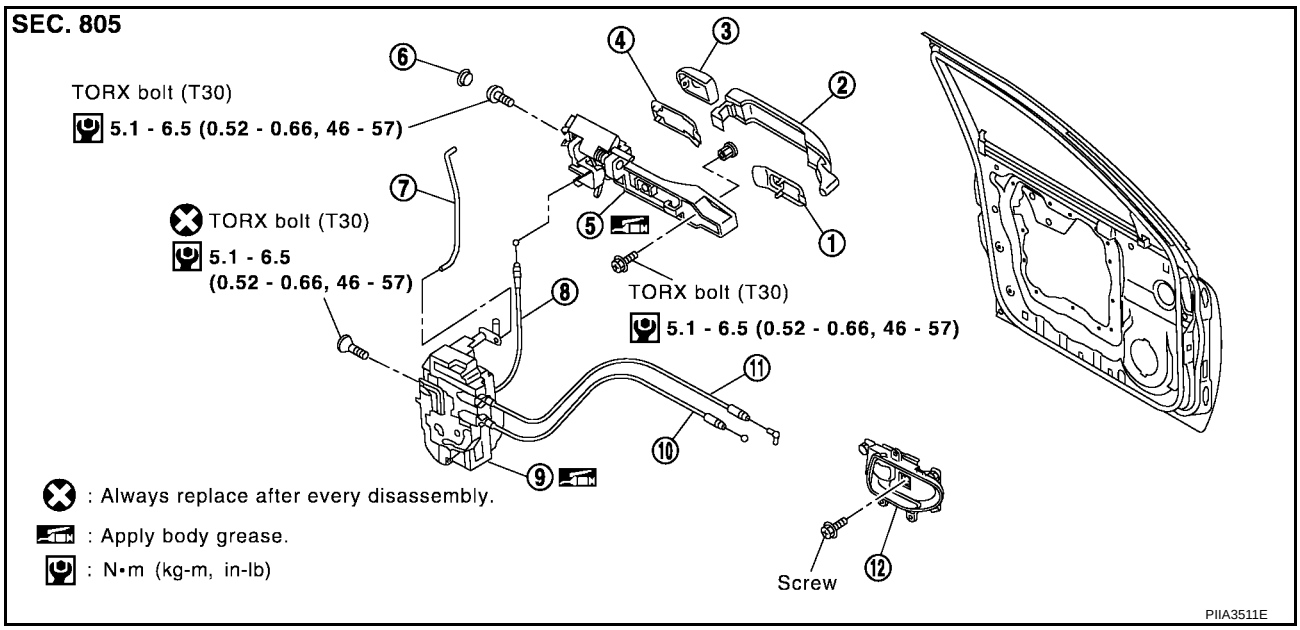


FRONT DOOR LOCK

PFP:80502

Component Structure

EIS001NK



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

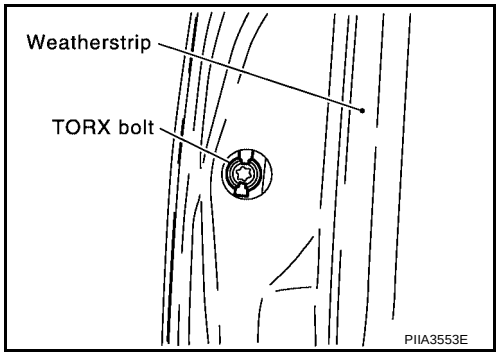
Removal and Installation

EIS001NL

REMOVAL

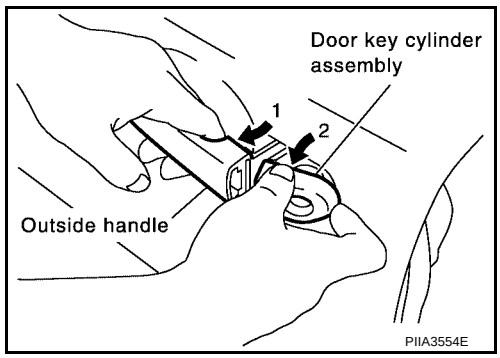
1. Remove the front door finisher. Refer to EI-30, "Removal and Installation"
2. Remove the front door window and front door module assembly. Refer to GW-87, "Removal and Installation" .
3. Remove door side grommet, and remove door key cylinder assembly (driver side) and outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.

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

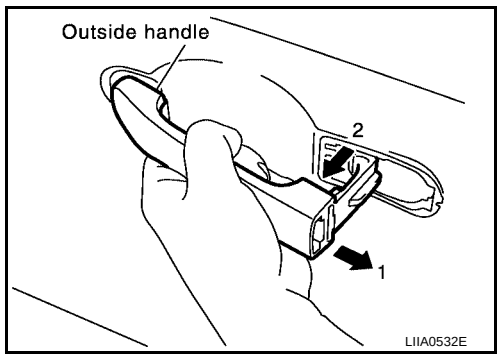


4. Reach to separate the key cylinder rod and outside handle rod connection (on the handle). If no door key cylinder is found, GO TO 6.

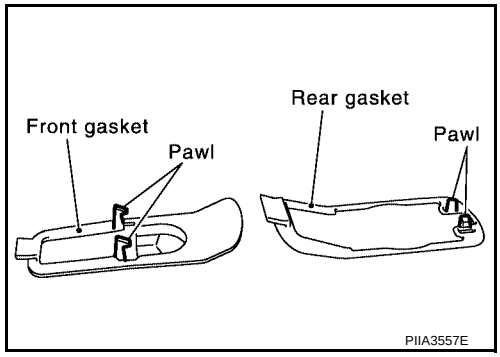
5. While pulling the outside handle, remove door key cylinder assembly.



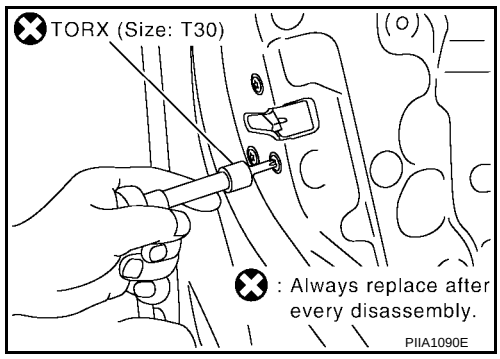
6. While pulling outside handle, slide toward rear of vehicle to remove outside handle.



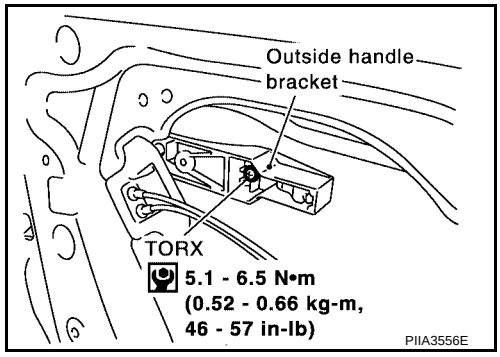
7. Remove the front gasket and rear gasket.



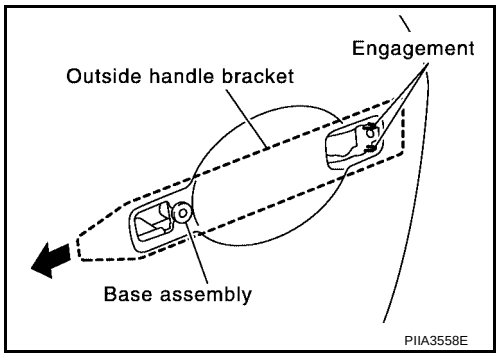
8. Remove the TORX bolts (T30), remove the door lock assembly.



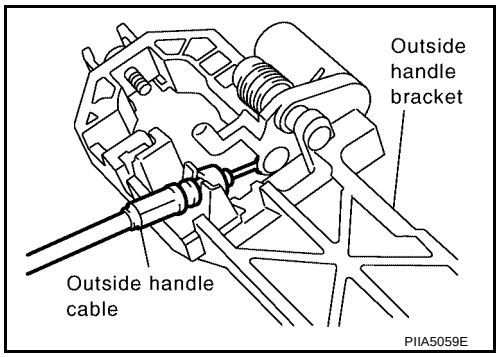
9. Remove the TORX bolt (T30) of the outside handle bracket.



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



11. Disconnect the door lock actuator connector.
12. Reach to separate the key cylinder rod and outside handle rod connection.



INSTALLATION

Install in the reverse order of removal.

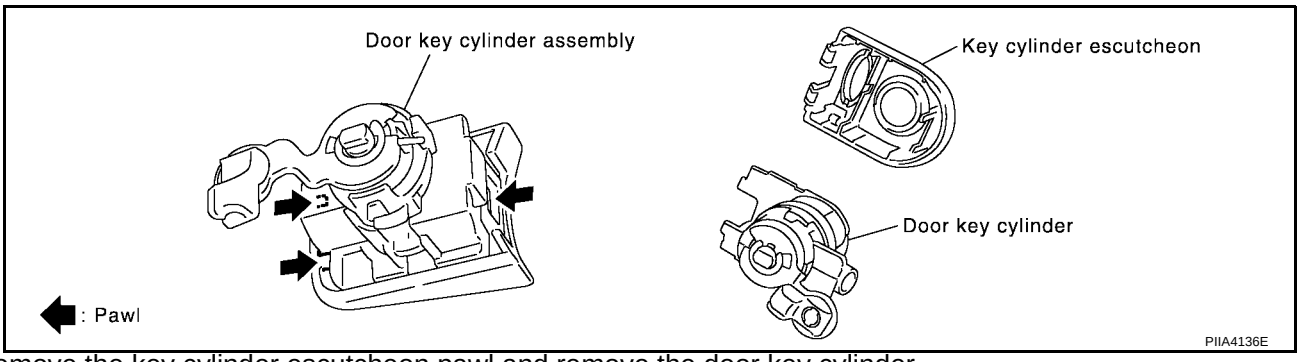
CAUTION:

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

Disassembly and Assembly

EIS001NM

DOOR KEY CYLINDER ASSEMBLY



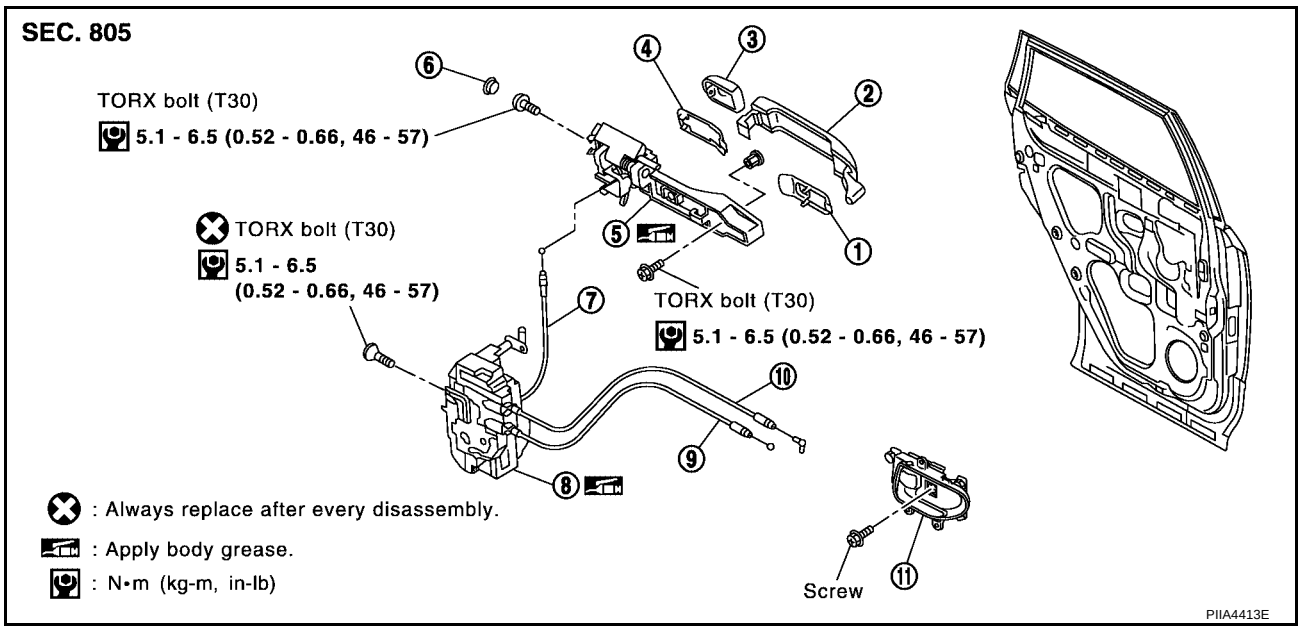
Remove the key cylinder escutcheon pawl and remove the door key cylinder.

REAR DOOR LOCK

PFP:82502

Component Structure

EIS001NN



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

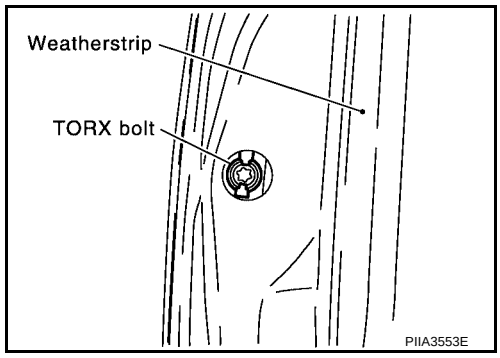
Removal and Installation

EIS001NO

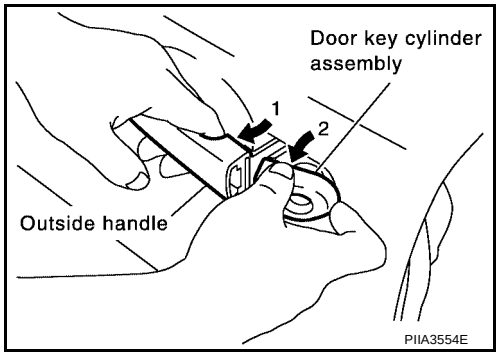
REMOVAL

1. Remove the rear door finisher. Refer to EI-30, "Removal and Installation" .
2. Remove the rear door window and rear door module assembly. Refer to GW-90, "Removal and Installation" .
3. Remove door side grommet, and remove outside handle escutcheon bolt (TORX T30) from grommet hole.

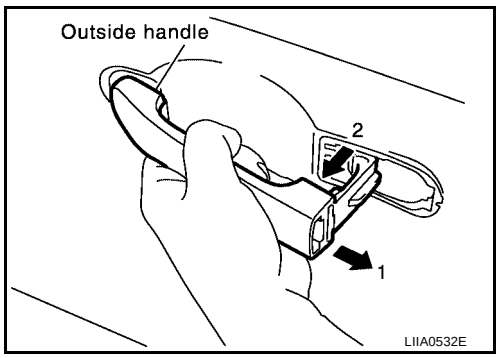
CAUTION:
Do not forcibly remove the TORX bolts (T30).



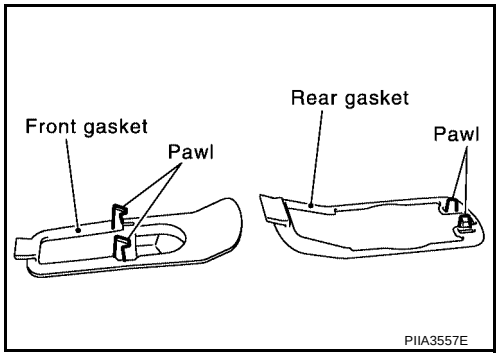
4. While pulling the outside handle, remove outside handle escutcheon.



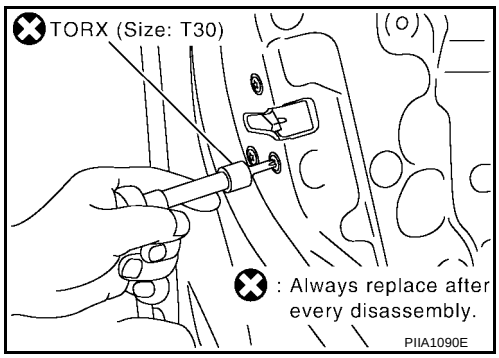
5. While pulling outside handle, slide toward rear of vehicle to remove outside handle.



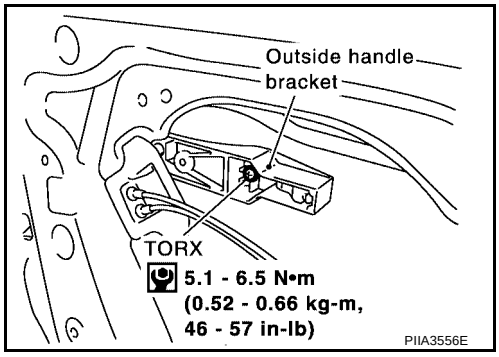
6. Remove the front gasket and rear gasket.



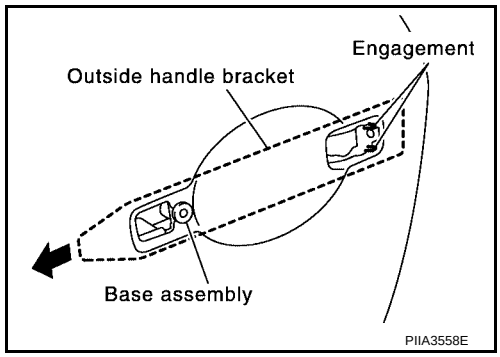
7. Remove the TORX bolts (T30), remove the door lock assembly.



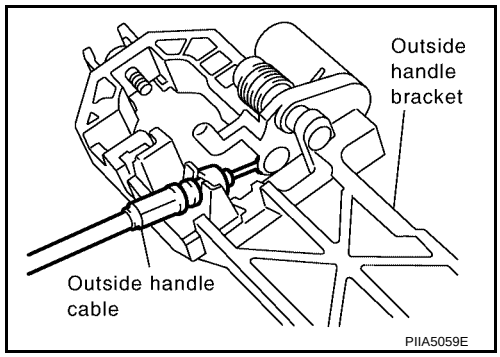
8. Remove the TORX bolt (T30), and remove the outside handle bracket.



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



10. Disconnect the door lock actuator connector.
11. Reach to separate outside handle rod connection.



INSTALLATION

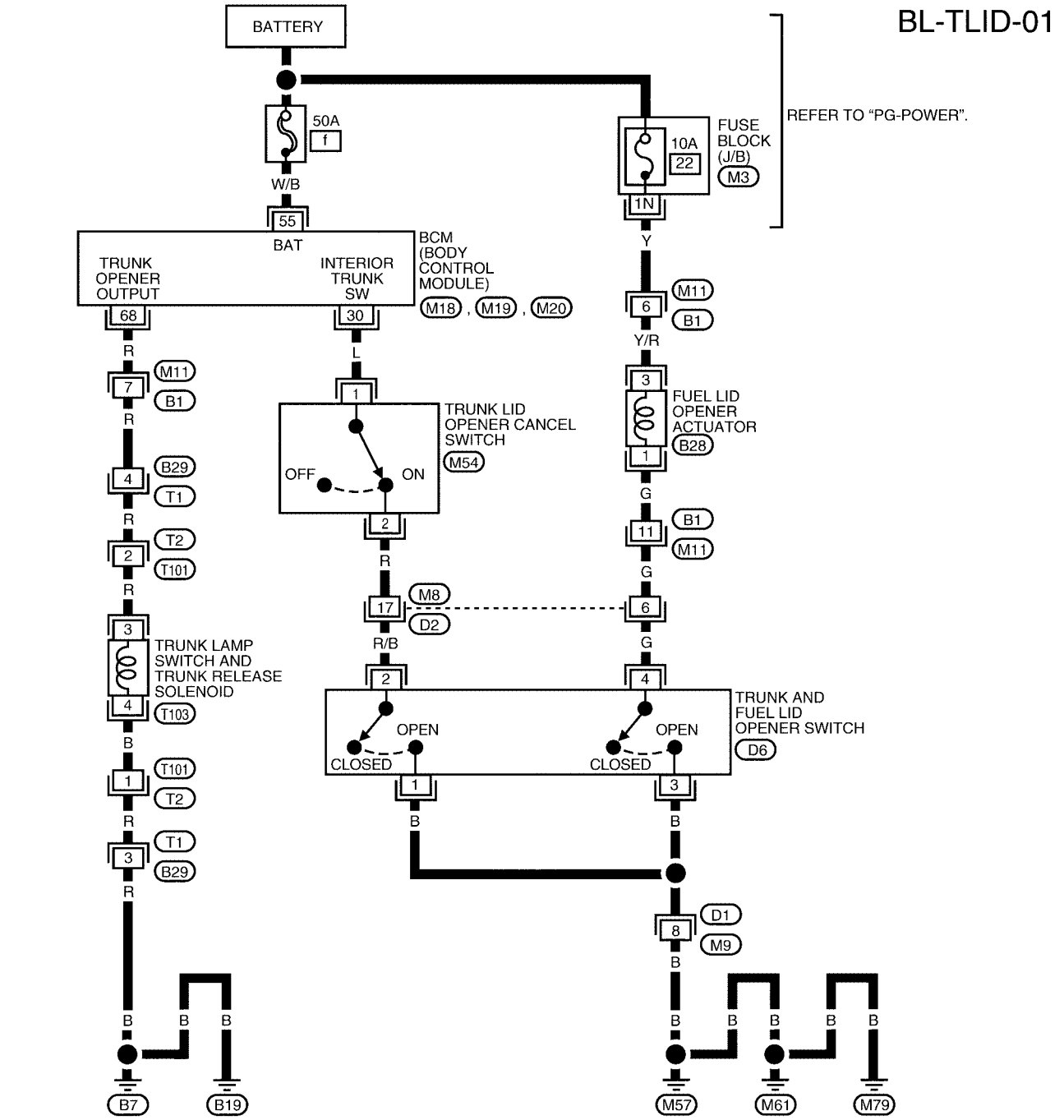
Install in the reverse order of removal.

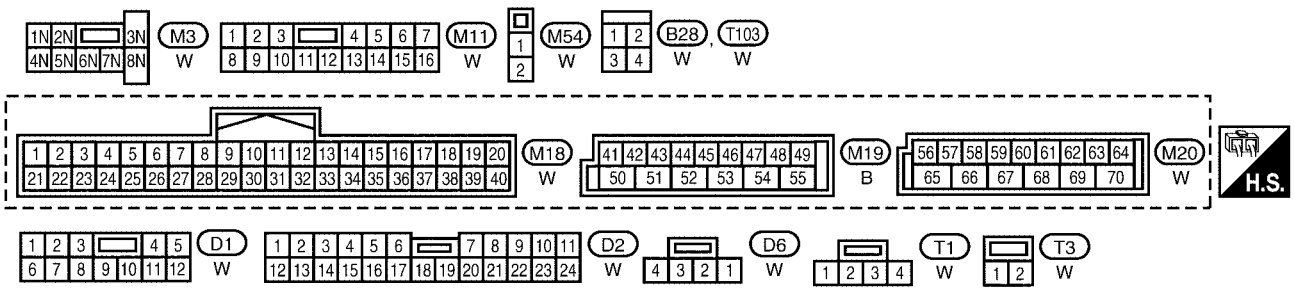
TRUNK LID AND FUEL FILLER LID OPENER

PFP:84640

Wiring Diagram -TLID-

EIS001O6





LIWA0107E

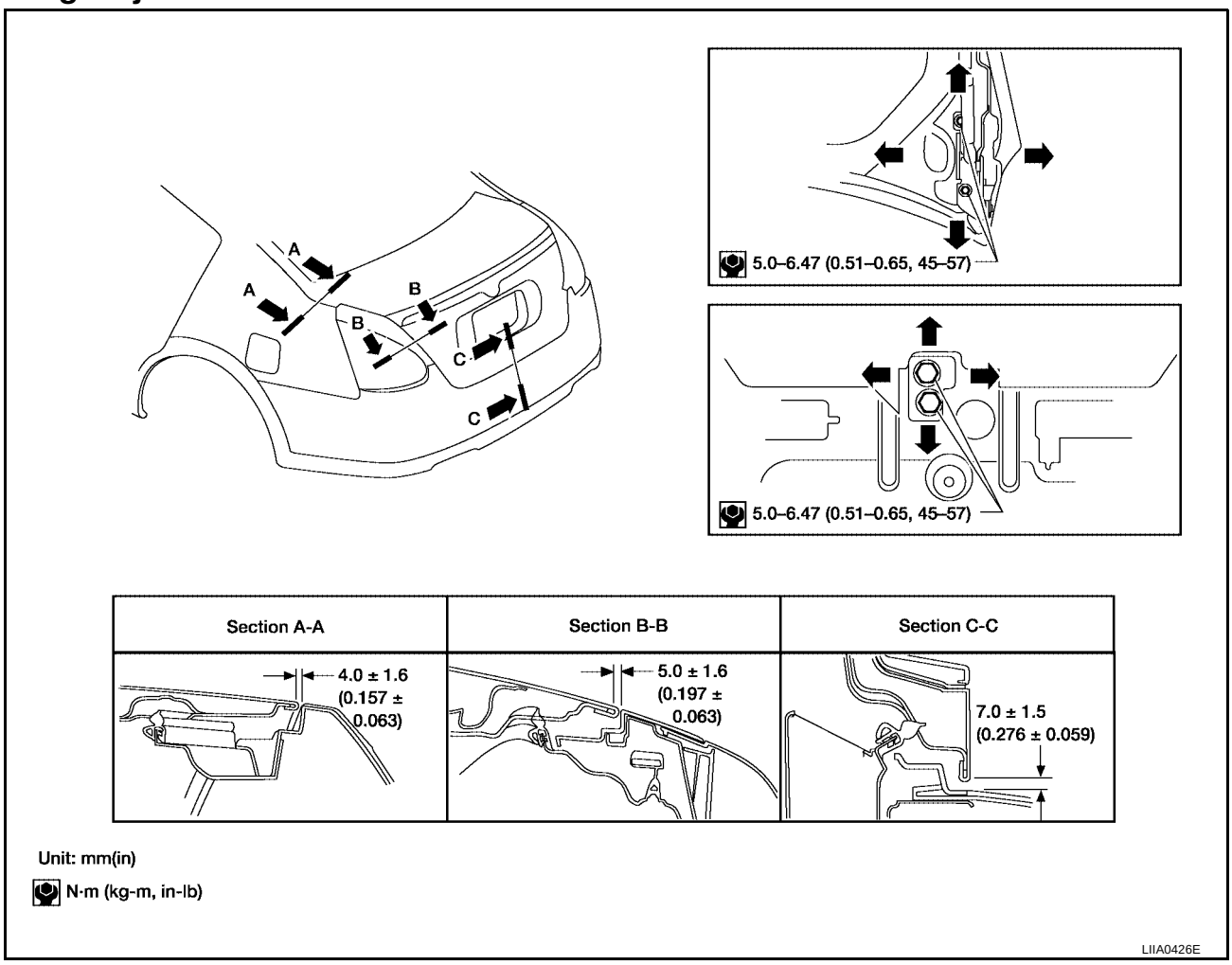
Terminals and Reference Value for BCM

EIS001O7

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
55	W/B	BAT power supply	—	Battery voltage
68	R	Trunk lid opener release solenoid	When trunk lid opener release solenoid is operated using key fob (ON → OFF)	0 → Battery voltage
30	L	Trunk lid opener switch	OFF → ON	Battery voltage → 0

Fitting Adjustment

EIS001O8



LONGITUDINAL AND LATERAL CLEARANCE ADJUSTMENT

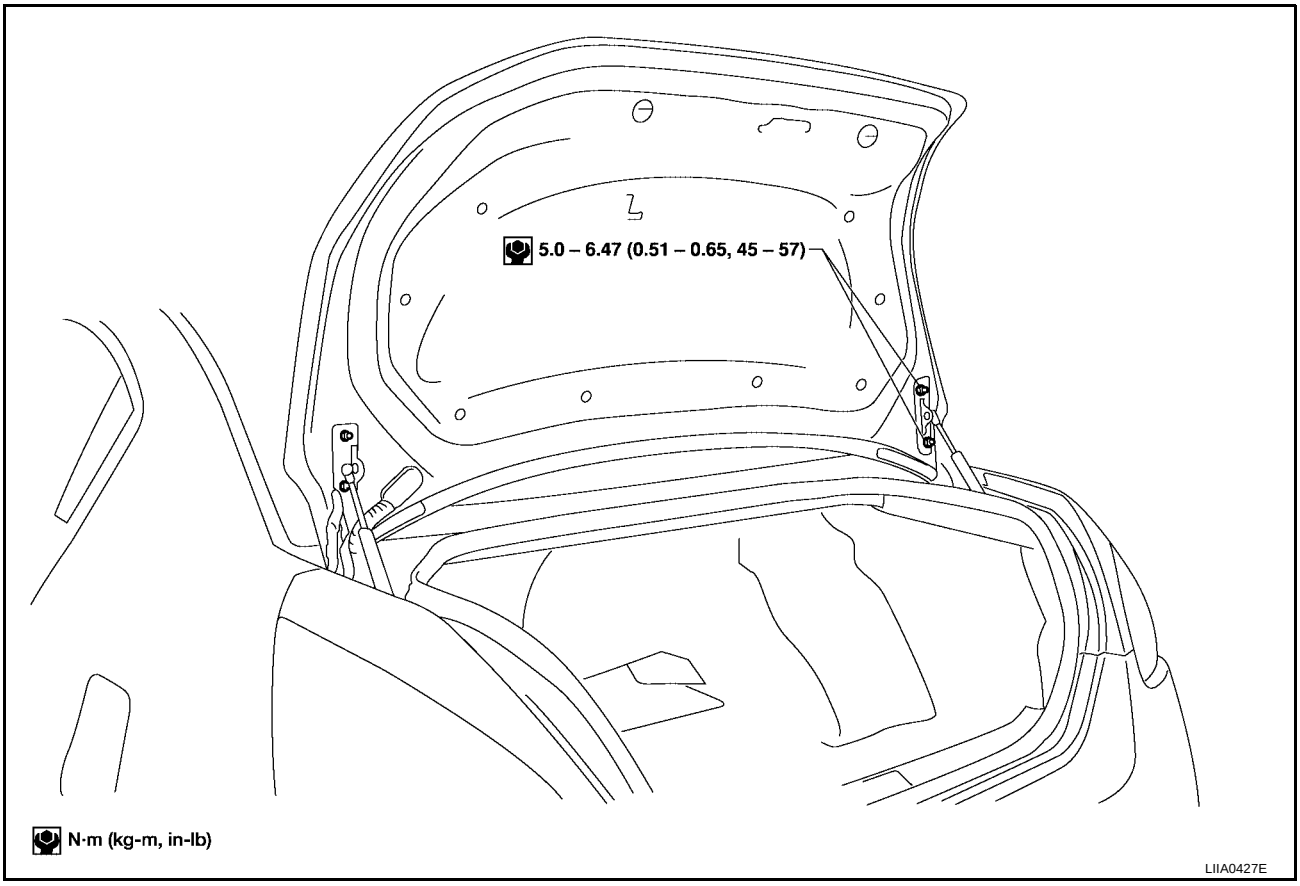
1. With the striker released, loosen the trunk lid hinge mounting bolts to close the trunk lid.
2. Make the lateral clearance and the clearance to the rear window glass equal, and open the trunk lid to tighten the mounting bolts to the specified torque.

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

EIS001O9



1. Remove the trunk lid finisher. Refer to EI-43, "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. Remove the mounting bolts, and remove the trunk lid assembly.

CAUTION:

After installing, apply touch-up paint (the body color) onto the head of the hinge mounting bolts.

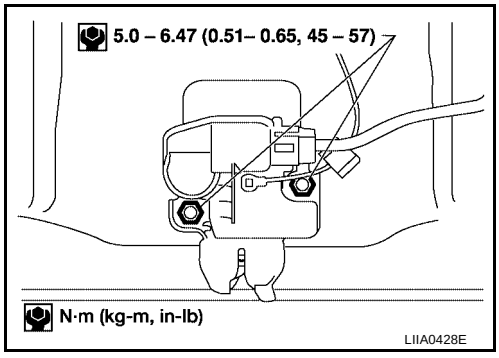
Install in the reverse order of removal.

Removal and Installation of Trunk Lid Lock

EIS001OA

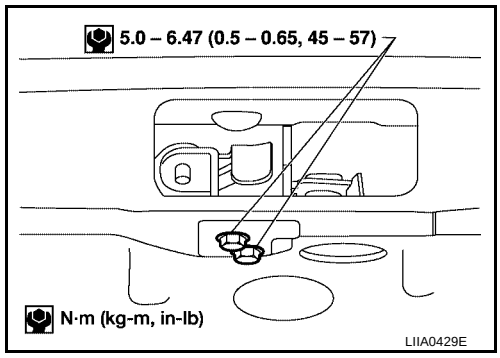
LOCK REMOVAL

1. Remove the trunk lid finisher. Refer to EI-43, "TRUNK ROOM TRIM & TRUNK LID FINISHER" .
2. Disconnect the release cable.
3. After removing the harness connector, remove the mounting bolts, and remove the trunk lid lock.



STRIKER REMOVAL

1. Remove the trunk rear plate and trunk rear finisher. Refer to EI-43, "TRUNK ROOM TRIM & TRUNK LID FINISHER" .
2. After removing the cable connection, remove the mounting bolts, disconnect the release cable, and remove the striker from the trunk lock support.

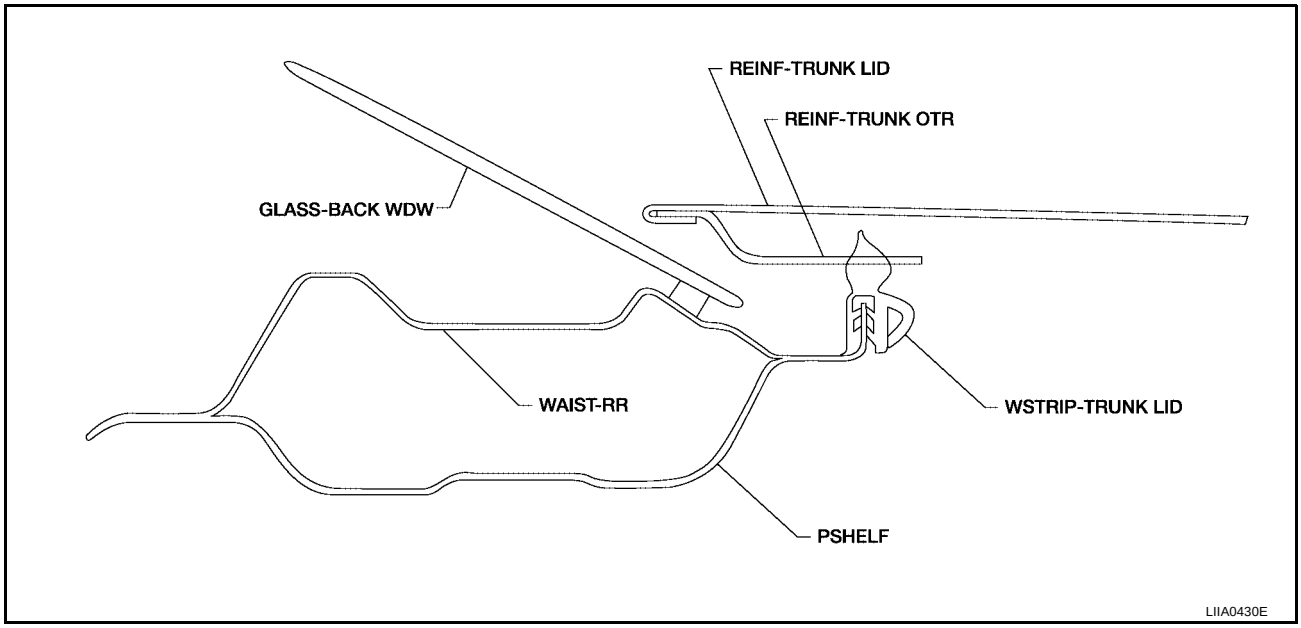


LOCK AND STRIKER INSTALLATION

1. Install in the reverse order of removal.
2. After installing, close the trunk lid lightly. Perform the lock and surface height adjustment. Refer to BL-75, "Fitting Adjustment" .
3. After installing, check the operation.

Removal and Installation of Trunk Lid Weatherstrip

EIS001OB



1. At rear side, align the weatherstrip seam to the center of the striker.
2. After installing, pull the weatherstrip lightly to check for looseness.

CAUTION:

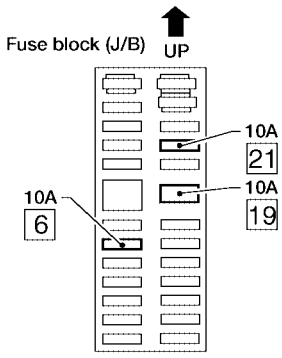
The weatherstrip should fit tightly onto the corners and trunk lid rear plate.

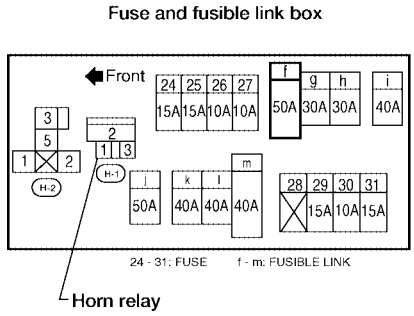
VEHICLE SECURITY (THEFT WARNING) SYSTEM

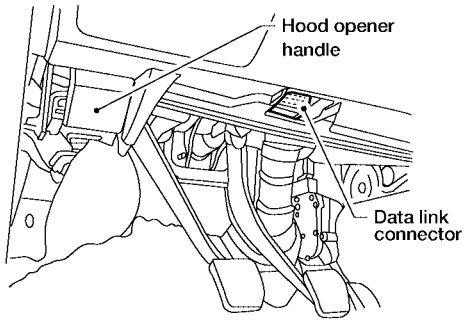
PFP:28491

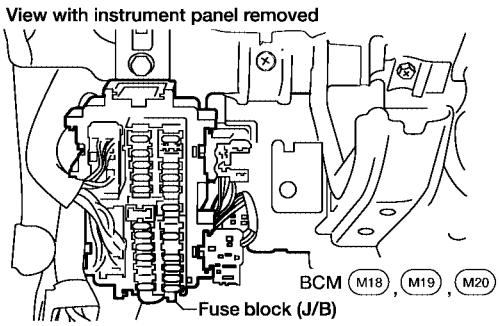
Component Parts and Harness Connector Location

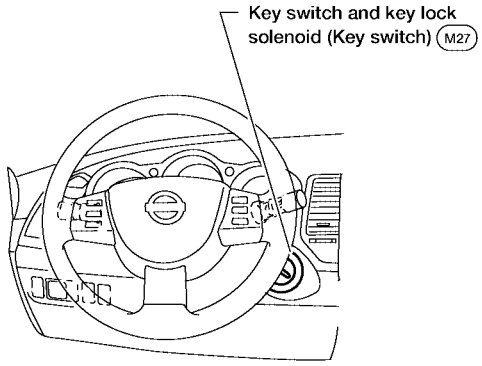
EIS001HH

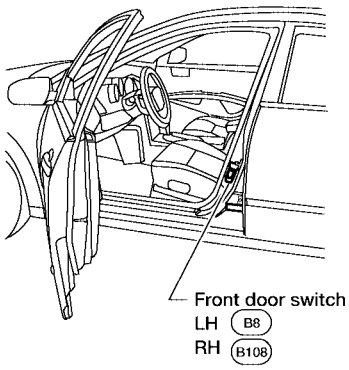


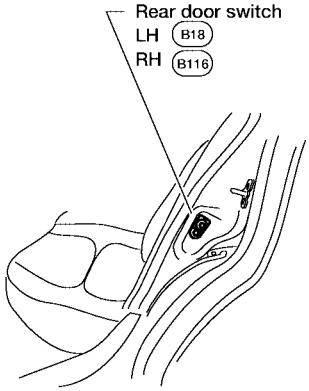


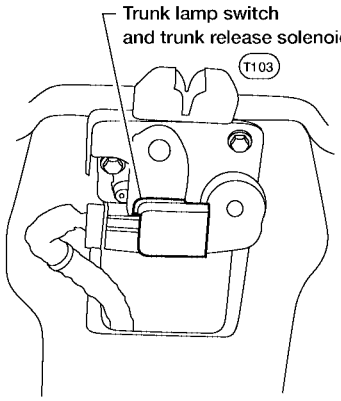


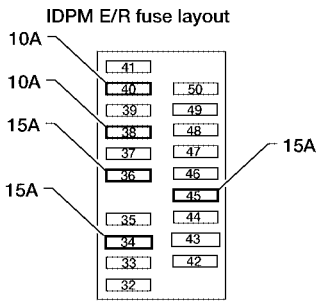


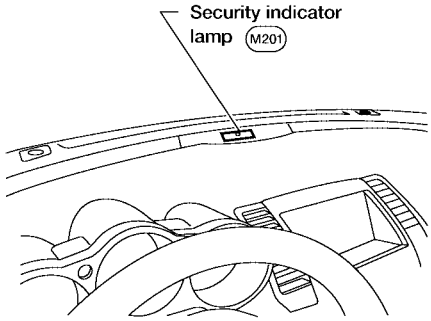












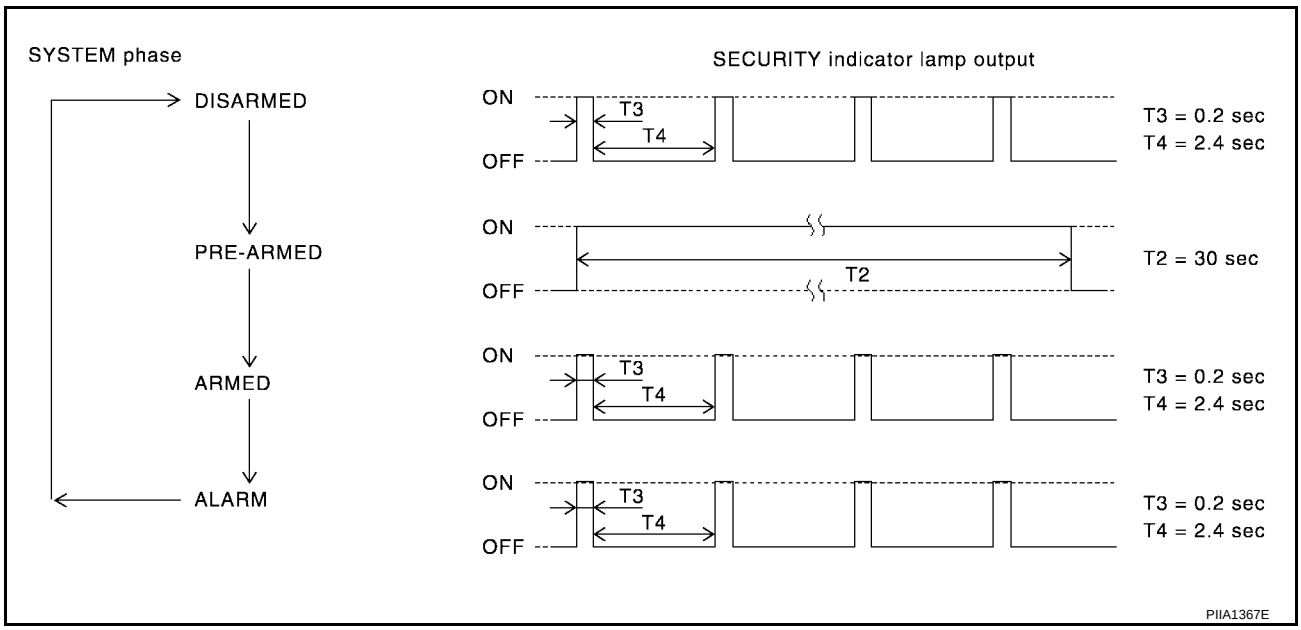
WIIA0395E

System Description

EIS001HI

DESCRIPTION

Operation Flow



Setting the vehicle security system

Initial condition

- Ignition switch is in OFF position.

Disarmed phase

- When the vehicle is being driven or when doors or trunk lid is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.

Pre-armed phase and armed phase

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

Canceling the set vehicle security system

When one of the following operations is performed, the armed phase is canceled.

1. Unlock the doors with the key or the key fob.
2. Open the trunk lid with the key or the key fob. When the trunk lid is closed after opening the trunk lid with the key fob, 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 one of the following operations is performed, the system sounds the horns and flashes the head-lamps for about 50 seconds.

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

POWER SUPPLY

Power is supplied at all times

- through 10A fuse [No.19, located in the fuse block (J/B)]
- to security indicator lamp terminal 1 and
- through 50A fusible link (letter f, located in the fuse and fusible link box)
- to BCM terminal 55
- through 15A fuse [No. 21, located in the fuse block (J/B)]

- to BCM terminal 42
- through 15A fuse (No. 25, located in the fuse and fusible link box)
- to horn relay terminal 2
- through 10A fuse (No. 34, located in the IPDM E/R)
- to IPDM E/R internal CPU.

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

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

INITIAL CONDITION TO ACTIVATE THE SYSTEM

The operation of the vehicle security system is controlled by the doors, hood and trunk lid.
To activate the vehicle security system, BCM must receive signals indicating the doors and trunk lid are closed and the doors are locked.
When a door is open, BCM terminal 12, 13, 62 or 63 receives a ground signal from each door switch.
When front door LH is unlocked, BCM terminal 22 receives a signal from terminal 14 of main power window and door lock/unlock switch.
When front door RH or either rear door is unlocked, BCM terminal 22 receives a signal from terminal 16 of front power window switch RH or the rear power window switch LH or RH.
When the trunk lid is open, BCM terminal 57 receives a ground signal

- from terminal 2 of the trunk lamp and trunk release solenoid switch
- through body grounds B7 and B19.

VEHICLE SECURITY SYSTEM ALARM OPERATION

The vehicle security system is triggered by

- opening a door
- opening the trunk lid
- unlocking door without using the key or key fob.

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

- when BCM receives a ground signal at terminals 12, 13, 62, 63 (door switch), or terminal 57 (trunk lamp and trunk release solenoid switch).

Power is supplied at all times

- to horn relay terminal 2
- through 15A fuse (No. 25, located in fuse and fusible link box).

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

- from IPDM E/R terminal 51
- to headlamp high relay and
- to 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 key fob.
When the key is used to unlock a door, BCM terminal 22 receives signal

- from terminal 14 of the main power window and door lock/unlock switch.

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

PANIC ALARM OPERATION

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

- from IPDM E/R terminal 51
- to headlamp high relay and
- to horn relay terminal 1.

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 30 seconds or when BCM receives any signal from key fob.

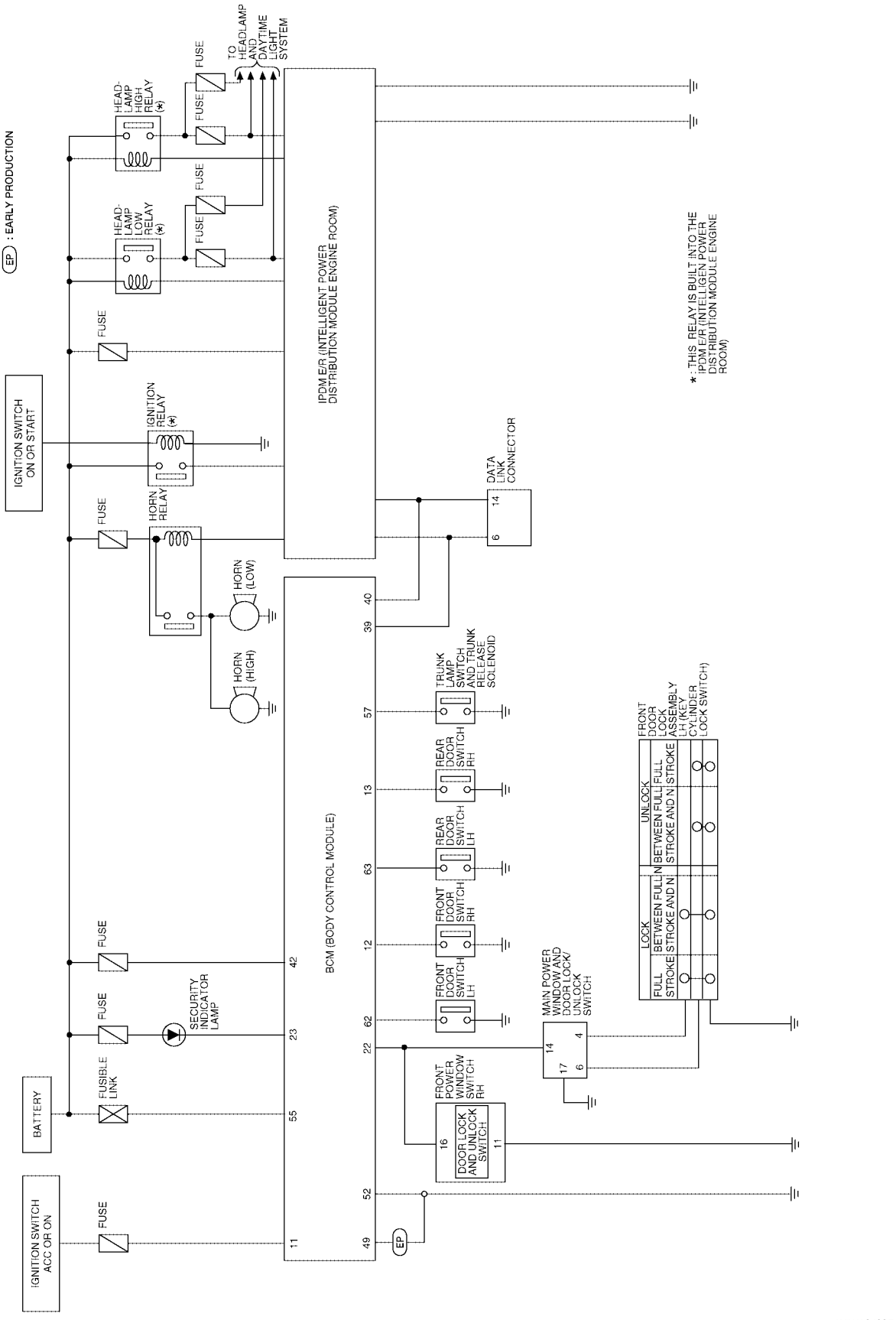
CAN Communication System Description

EIS001HJ

Refer to LAN-8, "CAN COMMUNICATION" .

Schematic

EIS001HK

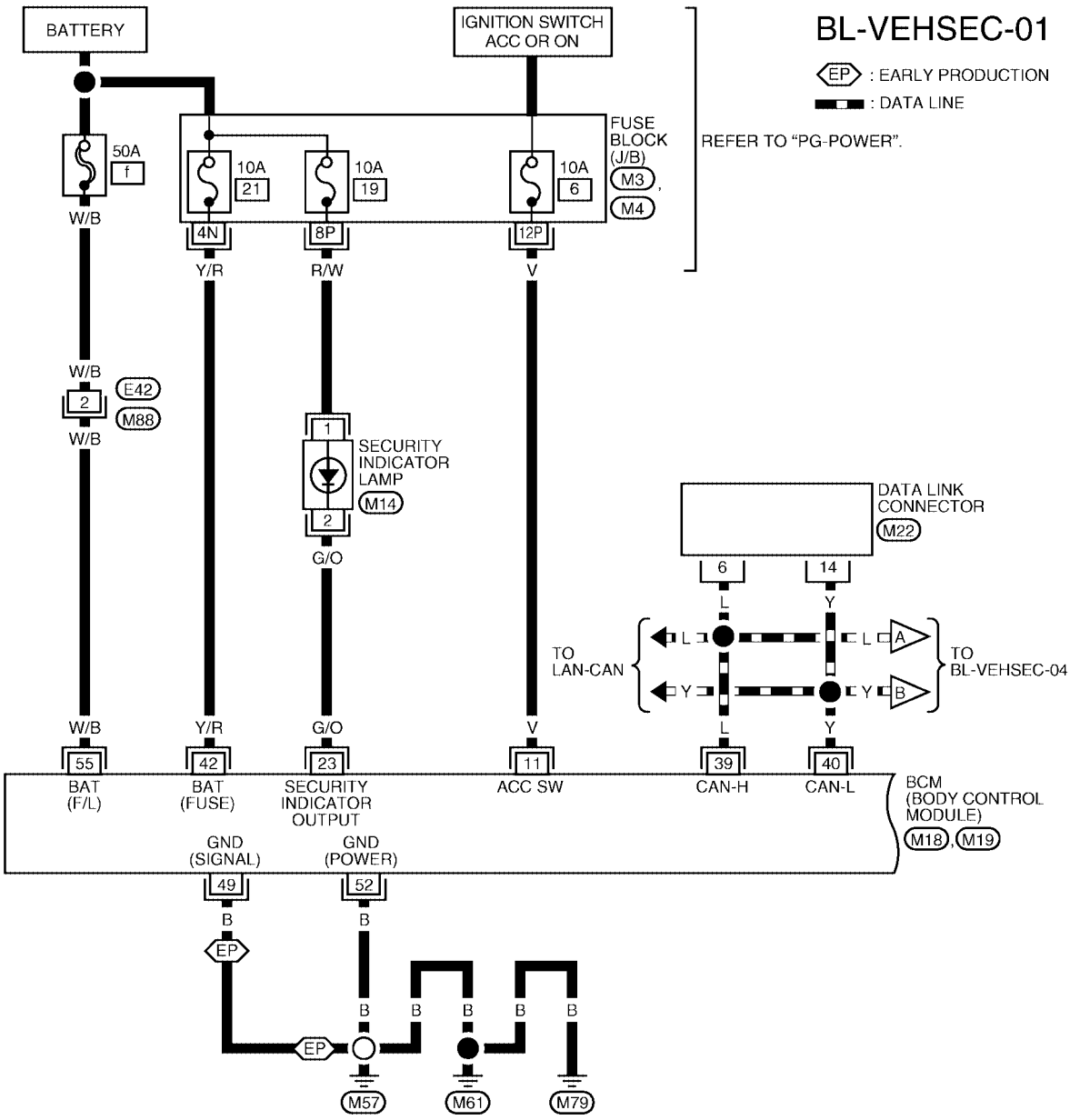


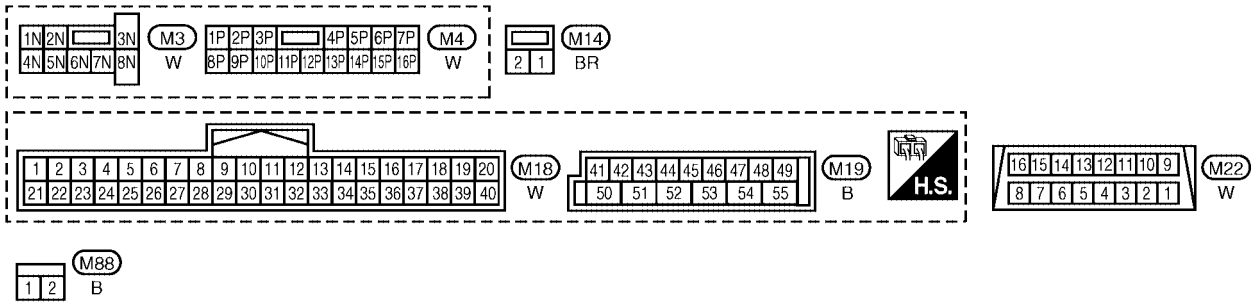
WIWA0400E

Wiring Diagram -VEHSEC-

EIS001HL

FIG. 1

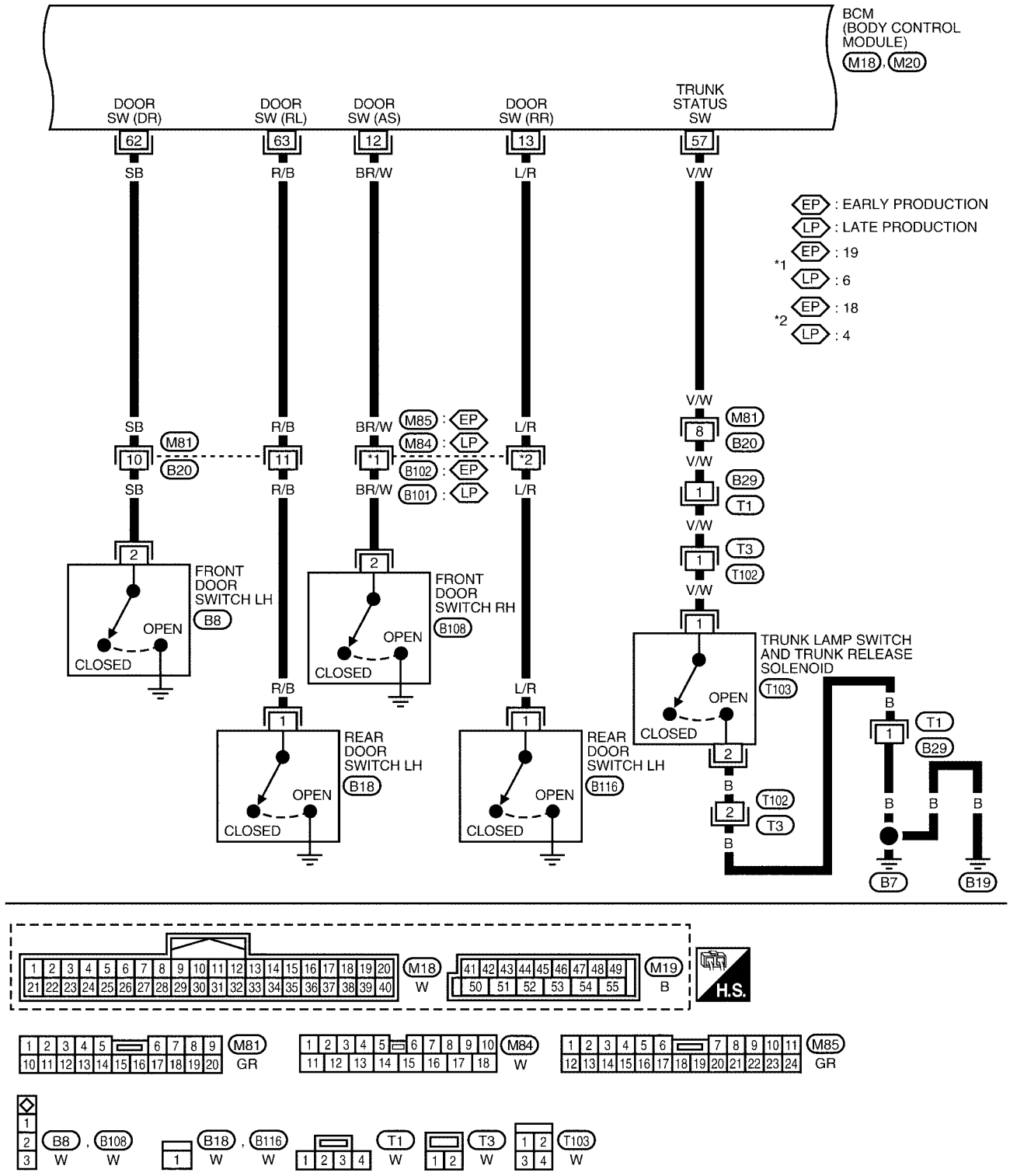




WIWA0401E

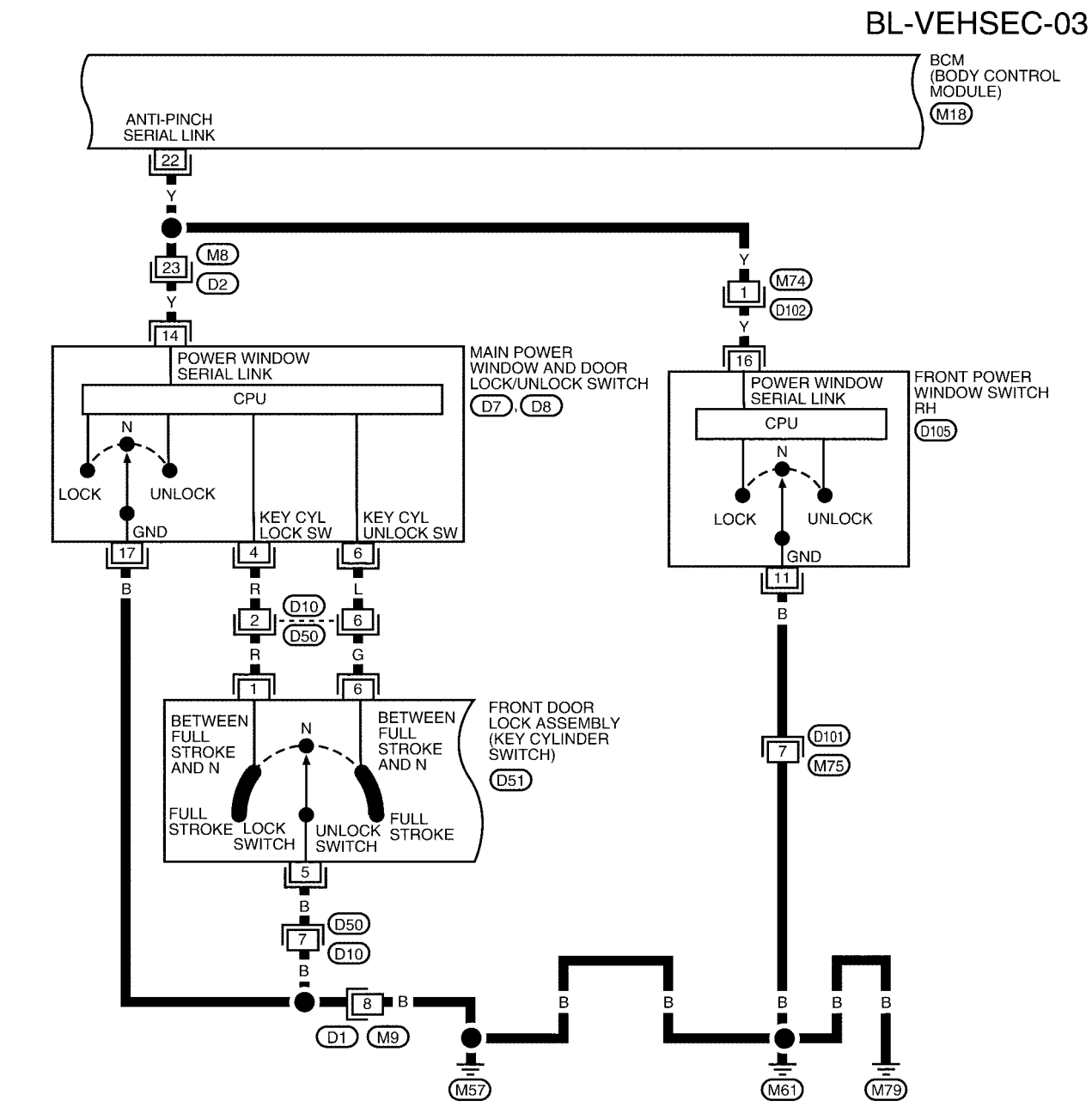
FIG. 2

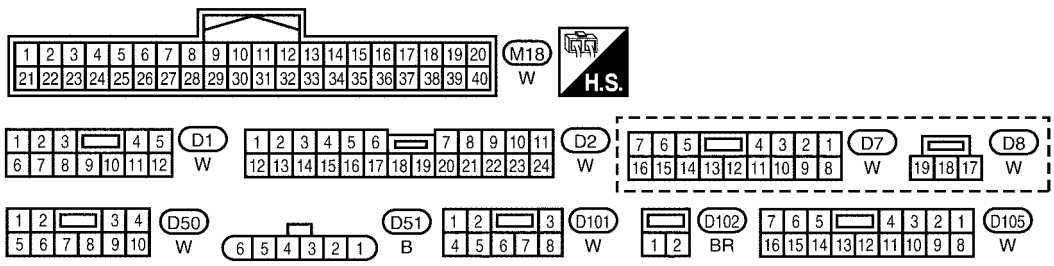
BL-VEHSEC-02



LIWA0275E

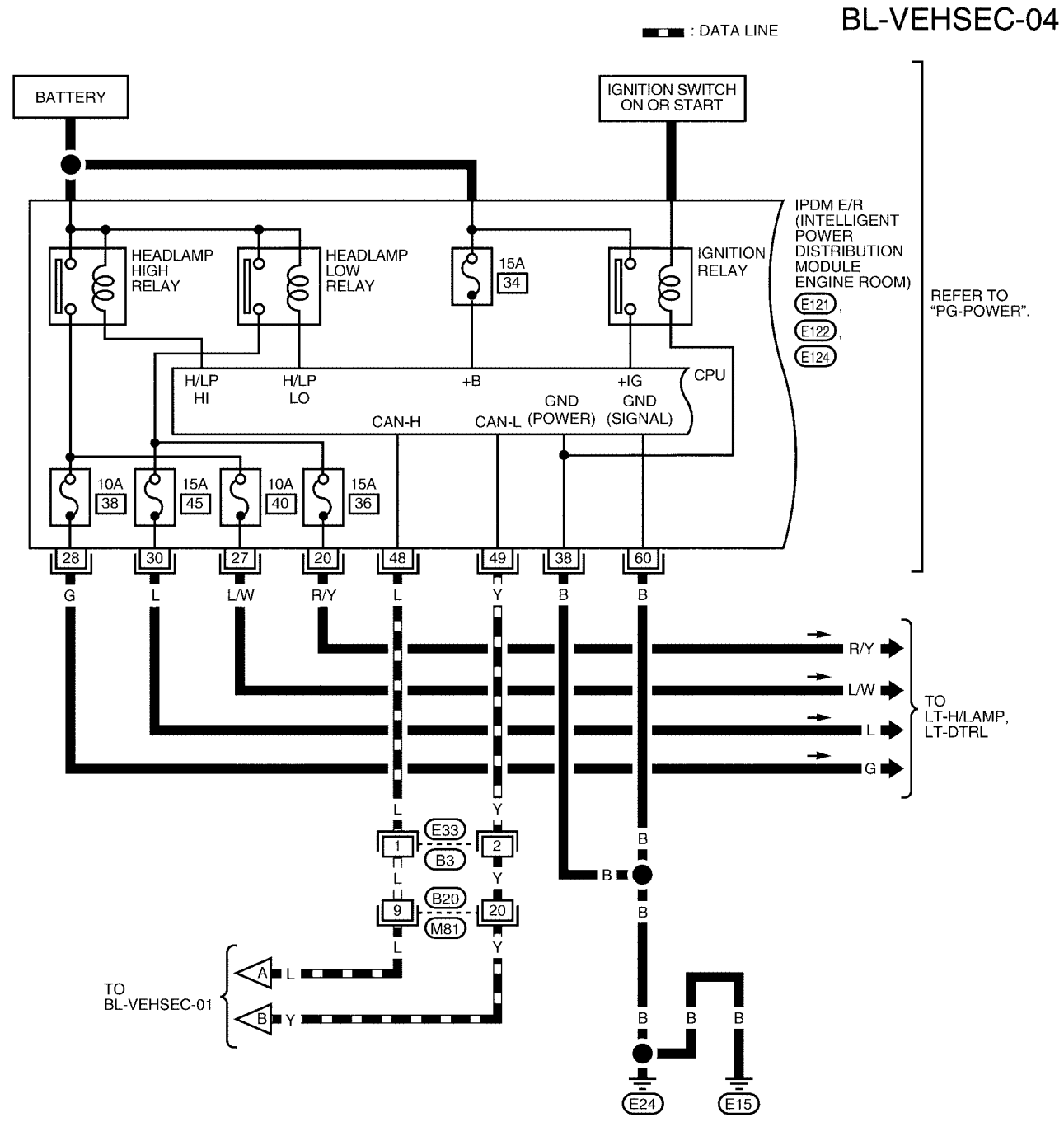
FIG. 3

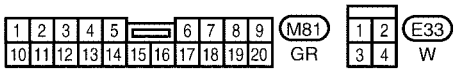


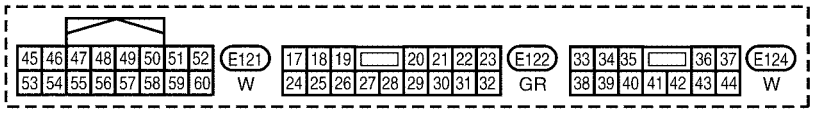


LIWA0112E

FIG. 4



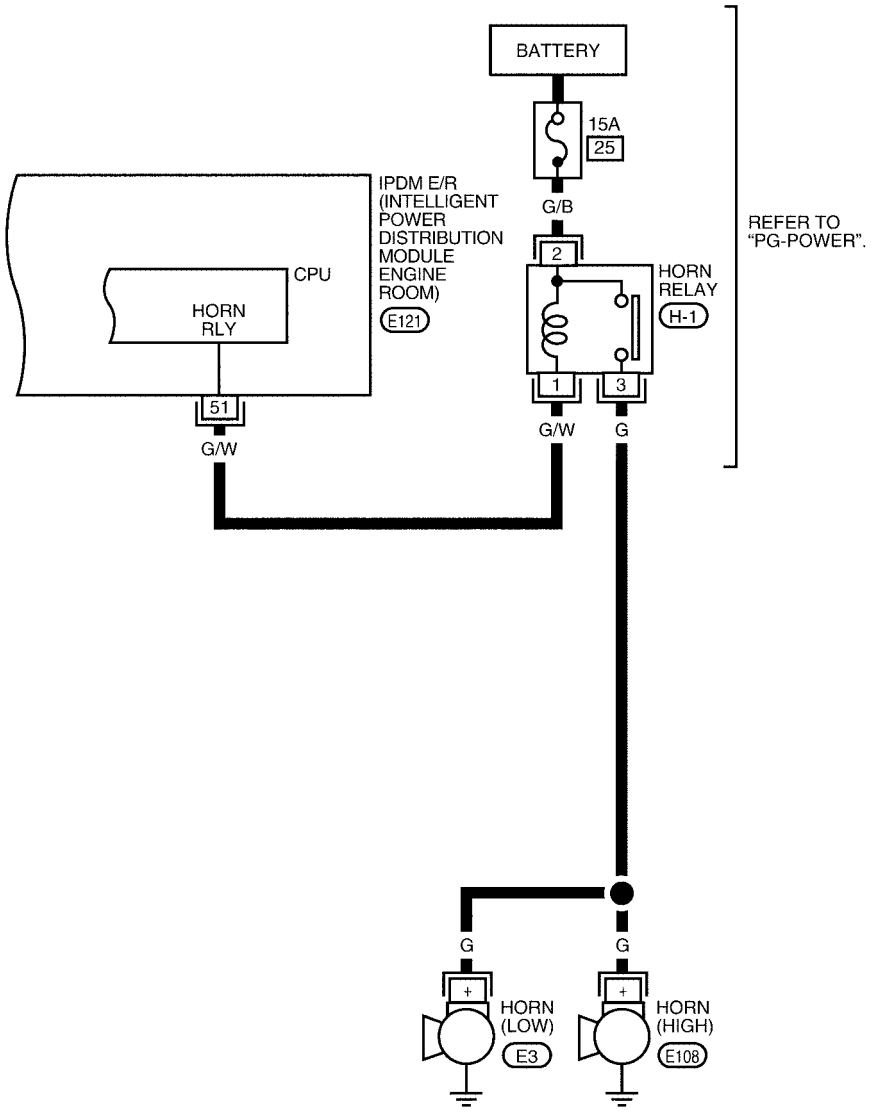


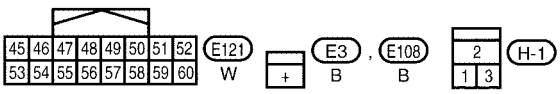


LIWA0113E

FIG. 5

BL-VEHSEC-05





LIWA0114E

CONSULT-II Function (BCM)

EIS001HM

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

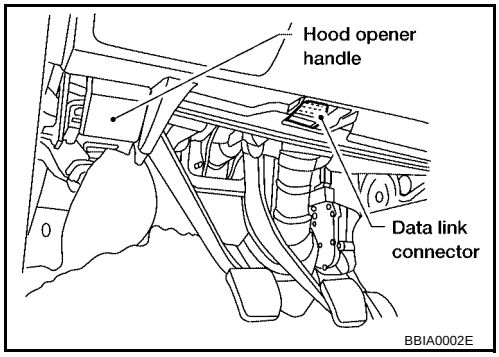
BCM diagnostic test item	Diagnostic mode	Content
Inspection by part	WORK SUPPORT	Changes setting of each function.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis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

CONSULT-II INSPECTION PROCEDURE

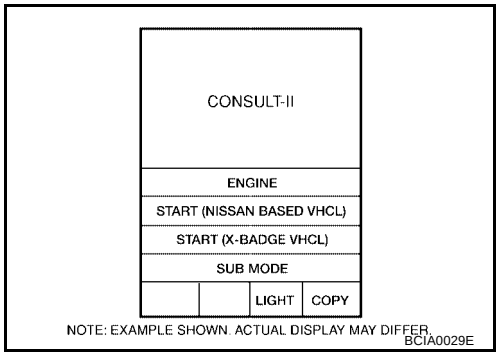
CAUTION:

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

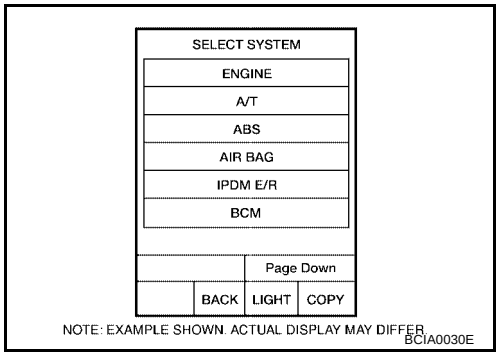
1. With the ignition switch OFF, connect CONSULT-II to the data link connector, and turn the ignition switch ON.



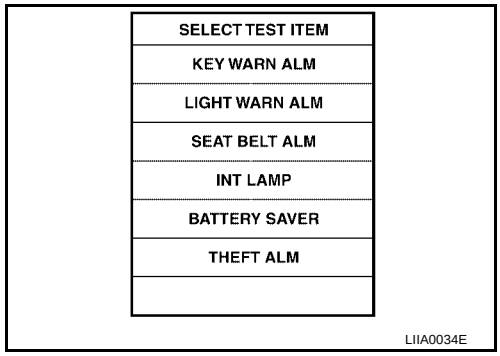
2. Touch "START (NISSAN BASED VHCL)".



3. Touch "BCM" on the "SELECT SYSTEM" screen.



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



CONSULT-II APPLICATION ITEM

Data Monitor

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY CYL LK SW	Indicates [ON/OFF] condition of lock signal from key cylinder switch.
KEY CYL UN SW	Indicates [ON/OFF] condition of unlock signal from key cylinder switch.
DOOR SW-DR	Indicates [ON/OFF] condition of 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 switches.
TRNK OPN MTR	Indicates [ON/OFF] condition of trunk opener motor.
TRNK OPNR SW	Indicates [ON/OFF] condition of trunk opener switch.
TRUNK KEY SW	Indicates [ON/OFF] condition of trunk key cylinder switch.
HOOD SWITCH	Indicates [ON/OFF] condition of hood switch. (Displayed even if not equipped)
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from key fob.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from key fob.
TRUNK BTN/SIG	Indicates [ON/OFF] condition of trunk open signal from key fob.

Active Test

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when “ON” on CONSULT-II screen is touched.
HEADLAMP	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.
HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.

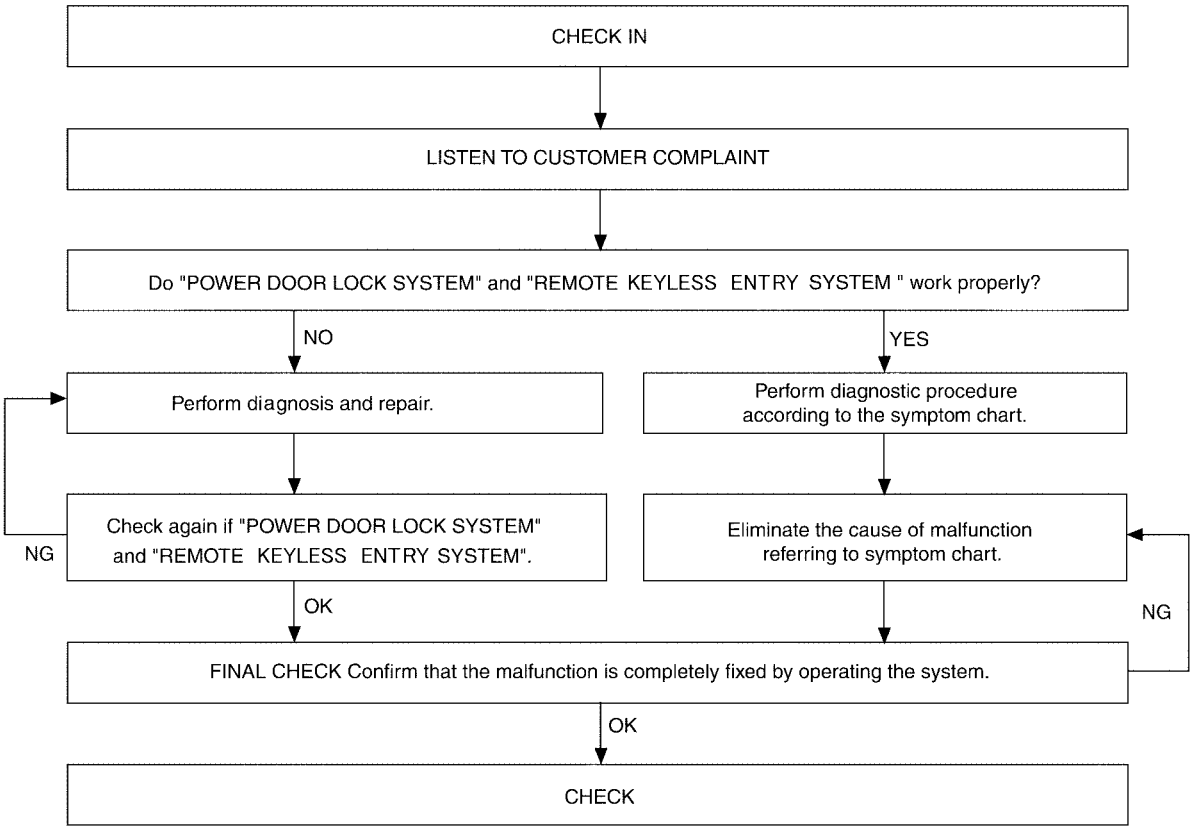
Work Support

Test Item	Description
SECURITY ALARM SET	This mode can confirm and change security alarm ON-OFF setting.
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching “CLEAR” on CONSULT-II screen.

Trouble Diagnosis

EIS001HN

WORK FLOW



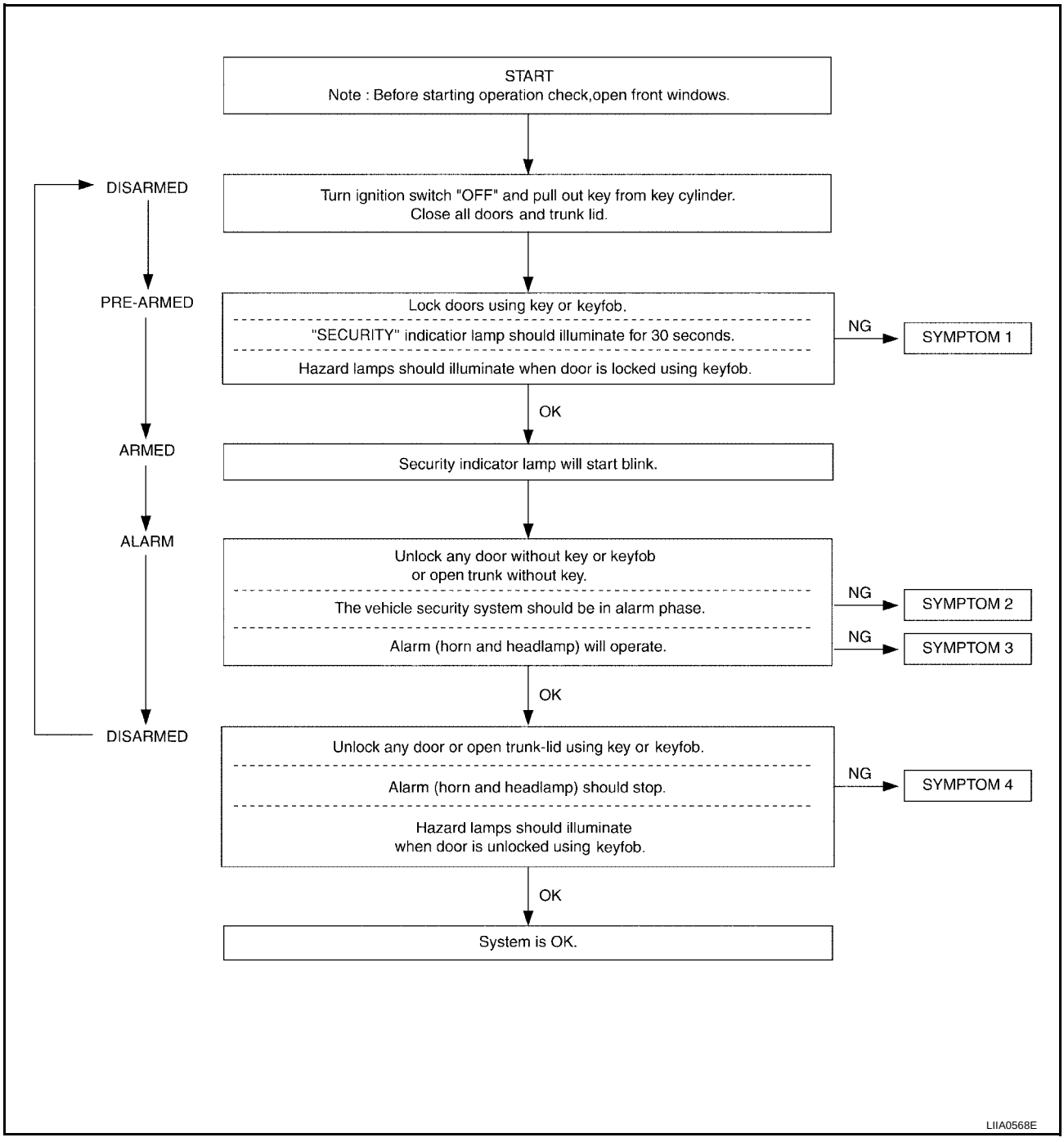
LIIA0123E

- “POWER DOOR LOCK SYSTEM” Diagnosis refer to BL-17, "POWER DOOR LOCK SYSTEM" .
- “REMOTE CONTROL SYSTEM” Diagnosis refer to BL-37, "REMOTE KEYLESS ENTRY SYSTEM" .

Preliminary Check

EIS001HO

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



After performing preliminary check, go to symptom chart.

Symptom Chart

EIS001HP

PROCEDURE / SYMPTOM			Diagnostic procedure
1	Vehicle security system cannot be set by ····	All items	Diagnostic Procedure 1 (Door, hood and trunk lamp and trunk release solenoid switch check) Refer to BL-93, "Diagnostic Procedure 1" .
			If the above systems are “OK”, replace BCM.
		Lock/unlock switch	Diagnostic Procedure 7 (Door lock/unlock switch check) Refer to BL-97, "Diagnostic Procedure 6" .
			If the above systems are “OK”, check main power window and door lock/ unlock switch.
		Door outside key	Diagnostic Procedure 3 (Door key cylinder switch check) Refer to BL-97, "Diagnostic Procedure 3" .
			If the above systems are “OK”, check main power window and door lock/ unlock switch.
	Security indicator does not turn “ON”.		Diagnostic Procedure 2 (Security indicator lamp check) Refer to BL-96, "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 and trunk room lamp switch check) Refer to BL-93, "Diagnostic Procedure 1" .
			If the above systems are “OK”, replace BCM.
3	Vehicle security alarm does not activate.	Horn alarm	Diagnostic Procedure 5 (Vehicle security horn alarm check) Refer to BL-97, "Diagnostic Procedure 5" .
			If the above systems are “OK”, check horn system. Refer to WW-31, "HORN" .
		Head lamp alarm	Diagnostic Procedure 6 (Head lamp alarm check) Refer to BL-97, "Diagnostic Procedure 5" .
			If the above systems are “OK”, replace BCM.
4	Vehicle security system cannot be canceled by ····	Door outside key	Diagnostic Procedure 3 (Door key cylinder switch check) Refer to BL-97, "Diagnostic Procedure 3" .
			If the above systems are “OK”, check main power window and door lock/ unlock switch.
		Trunk lid key	Diagnostic Procedure 4 (Trunk lid key cylinder switch check) Refer to BL-97, "Diagnostic Procedure 4" .
			If the above systems are “OK”, replace BCM.
		Key fob	Check remote keyless entry function
			If the above systems are “OK”, replace BCM.

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

Diagnostic Procedure 1

EIS001HQ

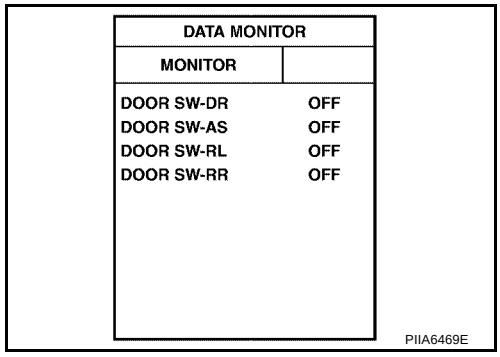
1 – 1 DOOR SWITCH CHECK

1. CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

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

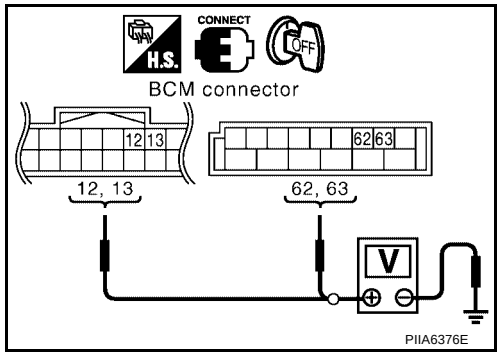
Monitor item	Condition	
DOOR SW-RL	OPEN	: ON
	CLOSE	: OFF
DOOR SW-RR	OPEN	: ON
	CLOSE	: OFF
DOOR SW-DR	OPEN	: ON
	CLOSE	: OFF
DOOR SW-AS	OPEN	: ON
	CLOSE	: OFF



Without CONSULT-II

Check voltage between BCM harness connector terminals 12, 13, 62 and 63 and ground.

	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
Front door switch RH	12 (BR/W)	Ground	OPEN	0
			CLOSE	Battery voltage
Rear door switch RH	13 (L/R)	Ground	OPEN	0V
			CLOSE	Battery voltage
Front door switch LH	62 (SB)	Ground	OPEN	0V
			CLOSE	Battery voltage
Rear door switch LH	63 (R/B)	Ground	OPEN	0V
			CLOSE	Battery voltage



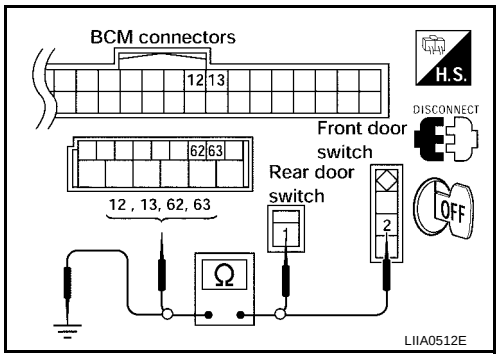
OK or NG

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

2. CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door swsitch and BCM.
3. Check continuity between door switch connector B8 (front LH) or B108 (front RH) terminal 2, B18 (rear LH) or B116 (rear RH) terminal 1 and BCM connector M18, M20 terminals 12, 13, 62 and 63

2 (SB) - 62 (SB) :Continuity should exist
2 (BR/W) - 12 (BR/W) :Continuity should exist
1 (R/B) - 63 (R/B) :Continuity should exist
1 (L/R) - 13 (L/R) :Continuity should exist



4. Check continuity between door switch connector B8 (front LH) or B108 (front RH) terminal 2, B18 (rear LH) or B116 (rear RH) terminal 1 and ground.

2 (SB or BR/W) - Ground :Continuity should not exist
1 (R/B or L/R) - Ground :Continuity should not exist

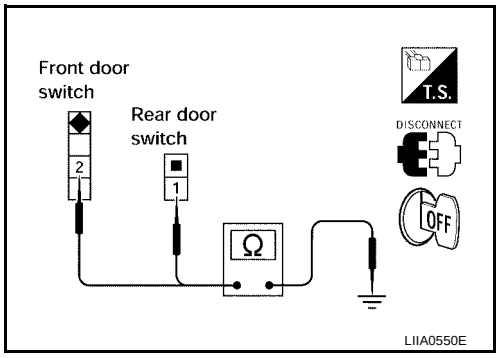
OK or NG

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

3. CHECK DOOR SWITCHES

Check continuity between door switch connector terminals 1, 2 and ground part of door switch.

	Terminals	Condition	Continuity
Front door switch LH/RH	2 – Ground part of door switch	Released	Yes
		Pushed	No
Rear door switch LH/RH	1 – Ground part of door switch	Released	Yes
		Pushed	No



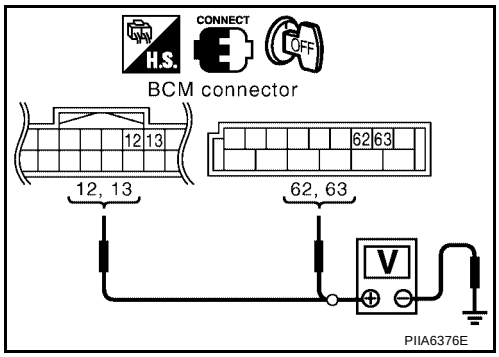
OK or NG

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

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Check voltage between BCM harness connector M18, M20 terminals 12, 13, 62 and 63 and ground.

	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
Front door switch RH	12 (BR/W)	Ground	OPEN	0
			CLOSE	Battery voltage
Rear door switch RH	13 (L/R)	Ground	OPEN	0V
			CLOSE	Battery voltage
Front door switch LH	62 (SB)	Ground	OPEN	0V
			CLOSE	Battery voltage
Rear door switch LH	63 (R/B)	Ground	OPEN	0V
			CLOSE	Battery voltage



OK or NG

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

1 – 2 TRUNK LAMP AND TRUNK RELEASE SOLENOID SWITCH CHECK

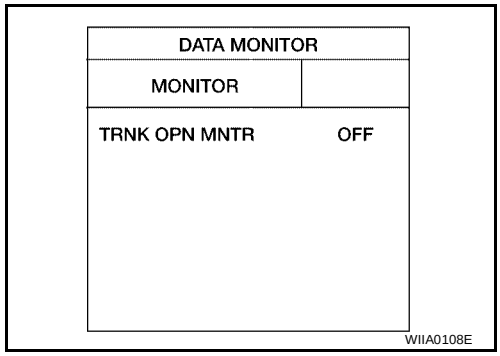
1. CHECK TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID INPUT SIGNAL

With CONSULT-II

Check “TRNK OPN MNTR” in "DATA MONITOR" mode with CONSULT-II.

When trunk lid is open : TRNK OPN MNTR ON

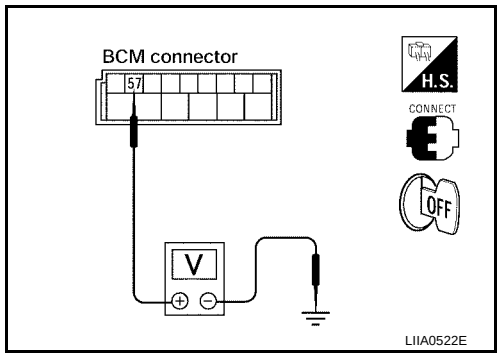
When trunk lid is closed : TRNK OPN MNTR OFF



Without CONSULT-II

Check voltage between BCM harness connector M20 terminal 57 (V/W) and ground.

Refer to BL-84, "FIG. 2" .



OK or NG

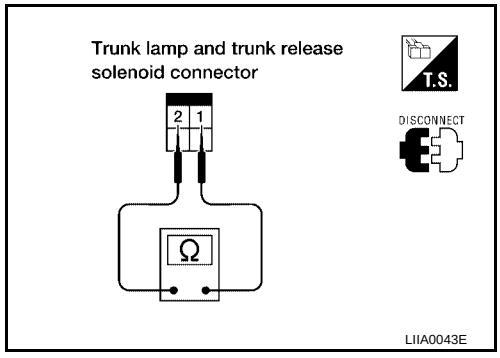
OK >> Trunk room lamp and trunk release solenoid switch is OK.

NG >> GO TO 2

2. CHECK TRUNK LAMP AND TRUNK RELEASE SOLENOID SWITCH

1. Turn ignition switch OFF.
2. Disconnect trunk lamp and trunk release solenoid switch.
3. Check continuity between trunk lamp and trunk release solenoid switch connector T103 terminals 1 and 2.

Connector	Terminals	Condition	Continuity
T103	1 – 2	Closed	No
		Open	Yes



OK or NG

OK >> Check the following.

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

NG >> Replace trunk lamp and trunk release solenoid switch.

Diagnostic Procedure 2

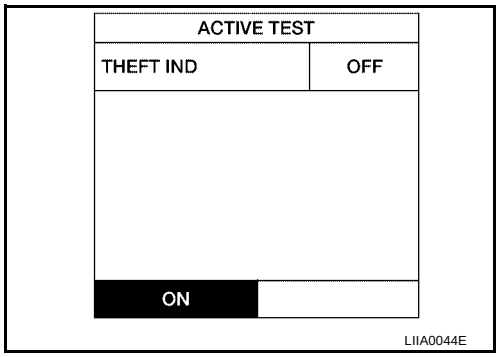
EIS001HR

SECURITY INDICATOR LAMP CHECK

1. SECURITY INDICATOR LAMP ACTIVE TEST

With CONSULT-II

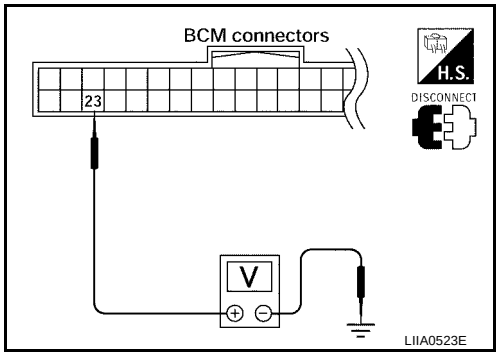
Check "THEFT IND" in "ACTIVE TEST" mode with CONSULT-II.



Without CONSULT-II

1. Disconnect BCM.
2. Check voltage between BCM harness connector M18 terminal 23 and ground.

Connector	Terminal (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M18	23 G/O	Ground	ON	0
			OFF	Battery voltage



OK or NG

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

2. SECURITY INDICATOR LAMP CHECK

Check indicator lamp condition.
Refer to BL-83, "FIG. 1" .

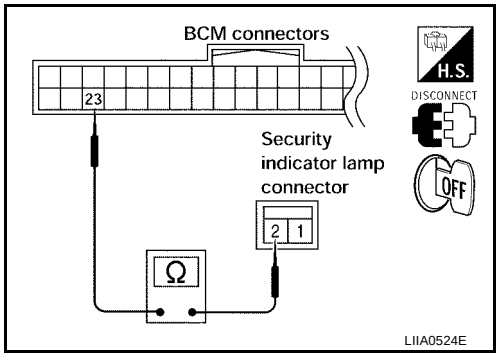
OK or NG

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

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and security indicator lamp connector.
3. Check continuity between BCM connector M18 terminal 23 and security indicator lamp harness connector M14 terminal 2 and ground.

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



OK or NG

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

NG >> Repair or replace harness.

Diagnostic Procedure 3

EIS001HS

1. FRONT DOOR KEY CYLINDER SWITCH LH CHECK

Check door key cylinder switch with key.

Do doors lock/unlock when using the key?

YES >> Front door key cylinder switch LH (lock) is OK.
NO >> Check door key cylinder switch circuit. Refer to BL-36, "Front Door Key Cylinder Switch LH Check" .

Diagnostic Procedure 4

EIS001HT

VEHICLE SECURITY HORN ALARM CHECK

1. CHECK HORN OPERATION

Check if horn sounds with horn switch.

Does horn operate?

YES >> Check harness for open or short between IPDM E/R and horn relay.
NO >> Check horn circuit. Refer to WW-31, "HORN" .

Diagnostic Procedure 5

EIS001HV

VEHICLE SECURITY HEADLAMP ALARM CHECK

1. CHECK VEHICLE SECURITY HEADLAMP ALARM OPERATION

Check if headlamps operate with lighting switch.

Do headlamps come on when turning switch ON?

YES >> Headlamp alarm is OK.
NO >> Check headlamp system. Refer to LT-6, "HEADLAMP (FOR USA)" .

Diagnostic Procedure 6

EIS001HW

DOOR LOCK/UNLOCK SWITCH CHECK

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

Check if power door lock operates with door lock/unlock switch.

Do doors lock/unlock when using each door lock/unlock switch?

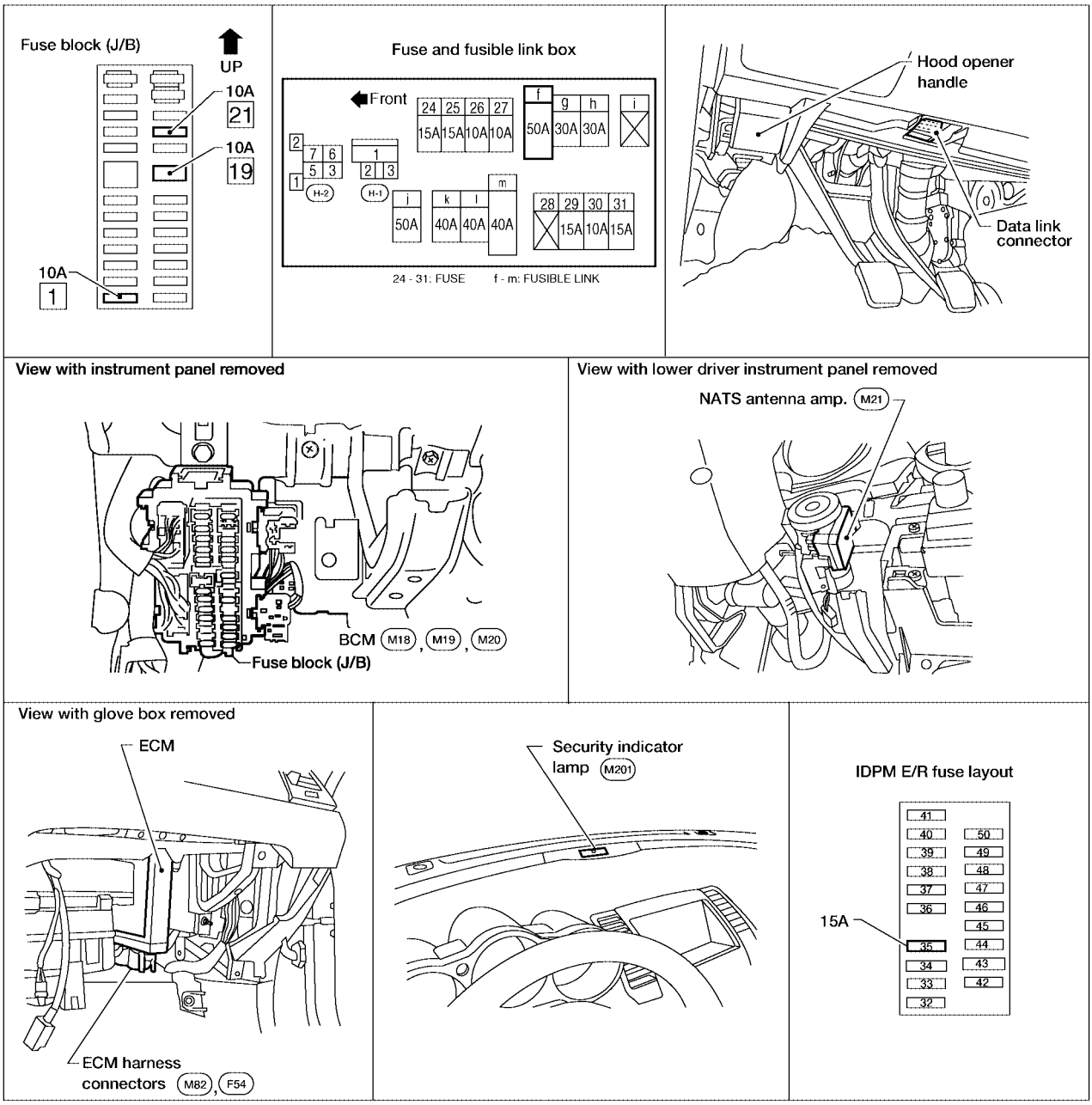
YES >> Door lock/unlock switch is OK.
NO >> Refer to BL-32, "Door Lock/Unlock Switch Check" .

NVIS(NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

PFP:28591

Component Parts and Harness Connector Location

EIS001HX



WIIA0397E

System Description

EIS001OC

NVIS (Nissan Vehicle Immobilizer System-NATS) has the following immobilizer functions:

- Since only NVIS (NATS) ignition keys, whose IDs have been registered into the ECM and BCM, allow the engine to run, operation of a stolen vehicle without a NVIS (NATS) registered key is prevented by NVIS (NATS).
  NVIS (NATS) will immobilize the engine if someone tries to start it without the registered key of NVIS (NATS).
- All of the originally supplied ignition key IDs have been NVIS (NATS) registered.
  If requested by the vehicle owner, a maximum of five key IDs can be registered into the NVIS (NATS) components.
- The security indicator blinks when the ignition switch is in OFF or ACC position. NVIS (NATS) warns outsiders that the vehicle is equipped with the anti-theft system.
- When NVIS (NATS) detects trouble, the security indicator lamp lights up while ignition key is in the ON position.
- NVIS (NATS) trouble diagnoses, system initialization and additional registration of other NVIS (NATS) ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II NVIS (NATS) software.
  When NVIS (NATS) initialization has been completed, the ID of the inserted ignition key is automatically NVIS (NATS) registered. Then, if necessary, additional registration of other NVIS (NATS) ignition key IDs can be carried out.
  Regarding the procedures of NVIS (NATS) initialization and NVIS (NATS) ignition key ID registration, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.
- **When servicing a malfunction of the NVIS (NATS) (indicated by lighting up of Security Indicator Lamp) or registering another NVIS (NATS) ignition key ID, it may be necessary to re-register original key identification. Therefore, be sure to receive ALL KEYS from vehicle owner.**

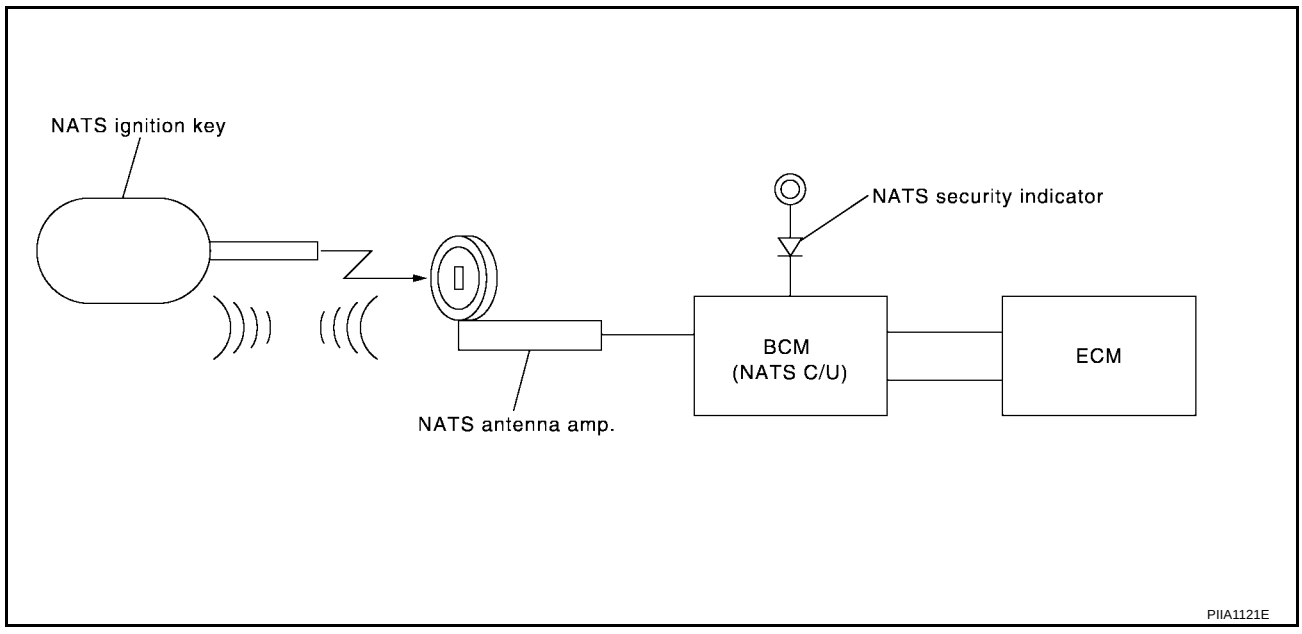
System Composition

EIS001OD

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

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

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



ECM Re-communicating Function

EIS001OE

The following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (*1).
*1: New one means a virgin ECM which has never been energized on-board.
(In this step, initialization procedure by CONSULT-II is not necessary)

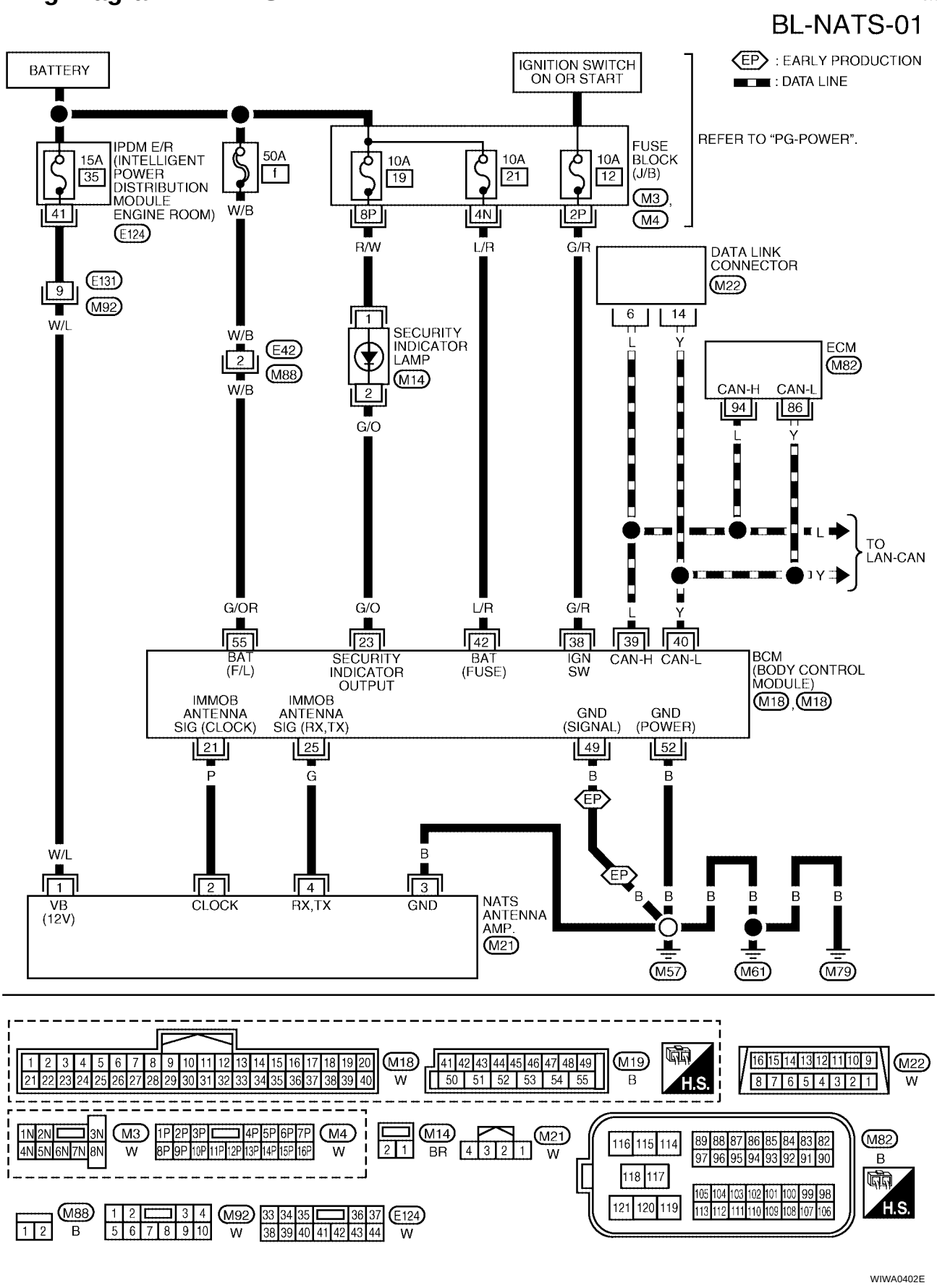
NOTE:

- **When registering new Key IDs or replacing the ECM other than brand new, refer to CONSULT-II Operation Manual NATS-IVIS/NVIS.**
- **If multiple keys are attached to the key holder, separate them before work.**
- **Distinguish keys with unregistered key ID from those with registered ID.**

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

Wiring Diagram — NATS —

EIS001OF



WIWA0402E

Terminals and Reference Value for BCM

EIS001OG

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
21	P	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move.
23	G/O	Security indicator lamp	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0
25	G	NATS antenna amp.	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move.
38	G/R	Ignition switch (ON or START)	Ignition switch (ON or START position)	Battery voltage
39	L	CAN-H	—	—
40	Y	CAN-L	—	—
49*	B	Ground	—	0
52	B	Ground	—	0
55	W/B	Power source (Fusible link)	—	Battery voltage

*: Early production

CONSULT-II

EIS001OH

CONSULT-II INSPECTION PROCEDURE

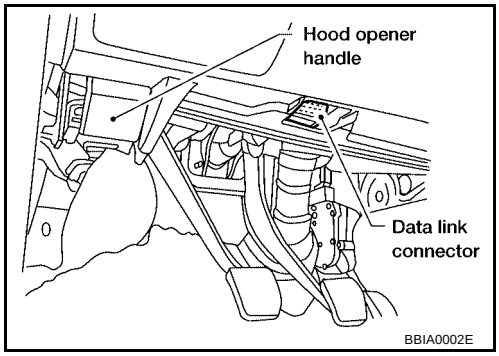
CAUTION:

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

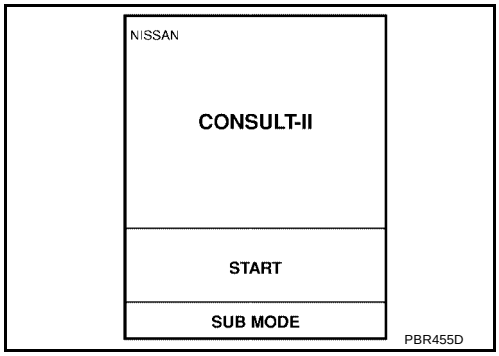
1. Turn ignition switch OFF.
2. Insert NVIS (NATS) program card into CONSULT-II.

   Program card : NATS (AEN02C)

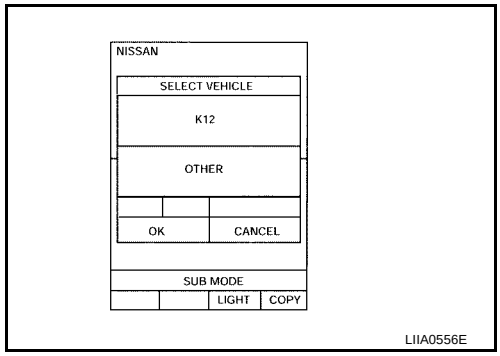
3. Connect CONSULT-II and CONSULT-II CONVERTER to data link connector.



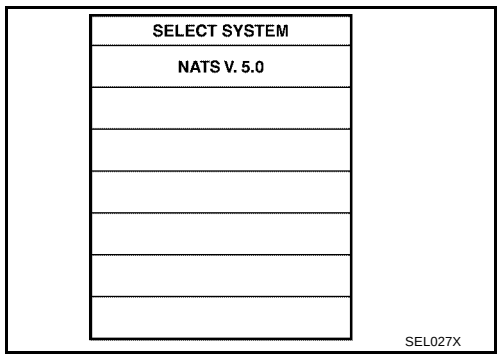
4. Turn ignition switch ON.
5. Touch “START”.



6. Touch "OTHER"

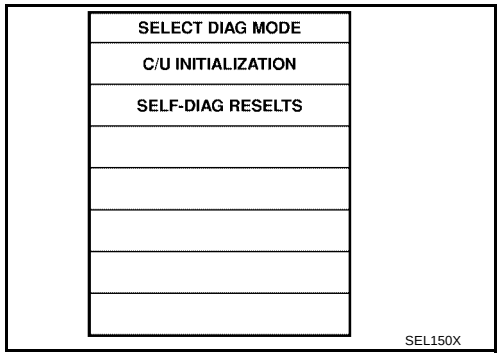


7. Select “NATS V.5.0”.
If “NATS V5.0” is not indicated, go to GI-36, "CONSULT-II Data Link Connector (DLC) Circuit" .



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

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



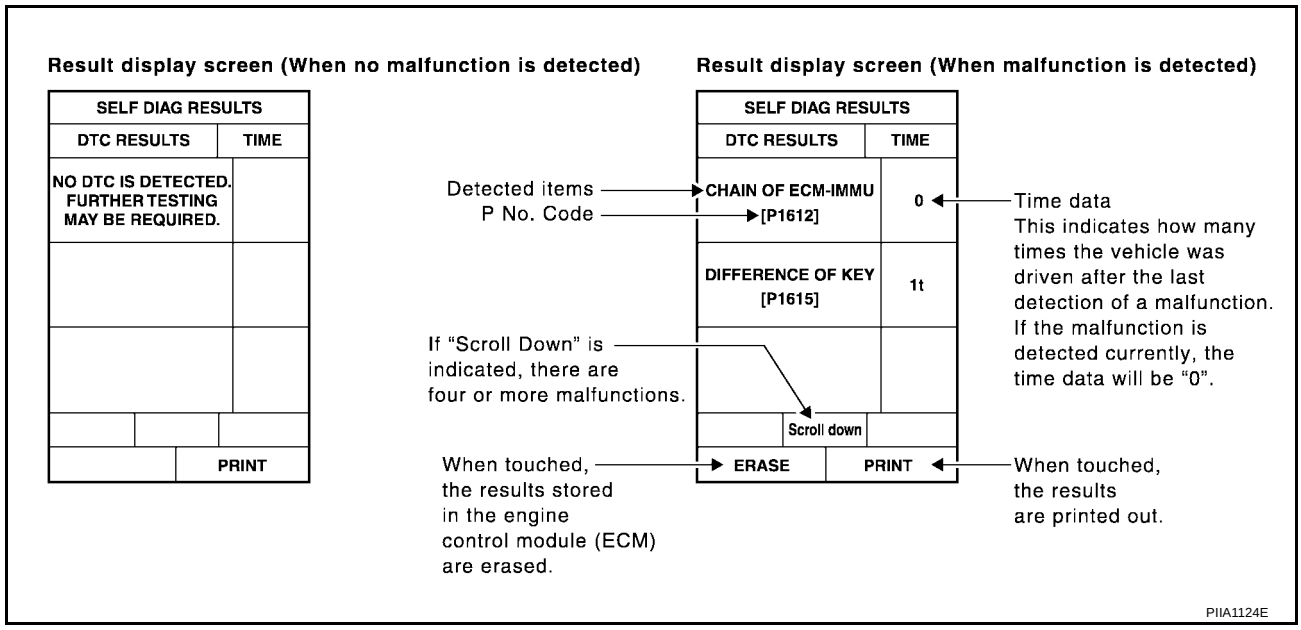
CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following components, C/U initialization and re-registration of all NATS ignition keys are necessary. [(NATS ignition key/ BCM/ ECM]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart. Refer to BL-104, "NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART" .

NOTE:

- When any initialization is performed, all IDs previously registered will be erased and all NATS ignition keys must be registered again.
- The engine cannot be started with an unregistered key. In this case, the system will show “DIFFERENCE OF KEY” or “LOCK MODE” as a self-diagnostic result on the CONSULT-II screen.
- In rare case, “CHAIN OF ECM-IMMU” might be stored as a self-diagnostic result during key registration procedure, even if the system is not malfunctioning.

HOW TO READ SELF-DIAGNOSTIC RESULTS

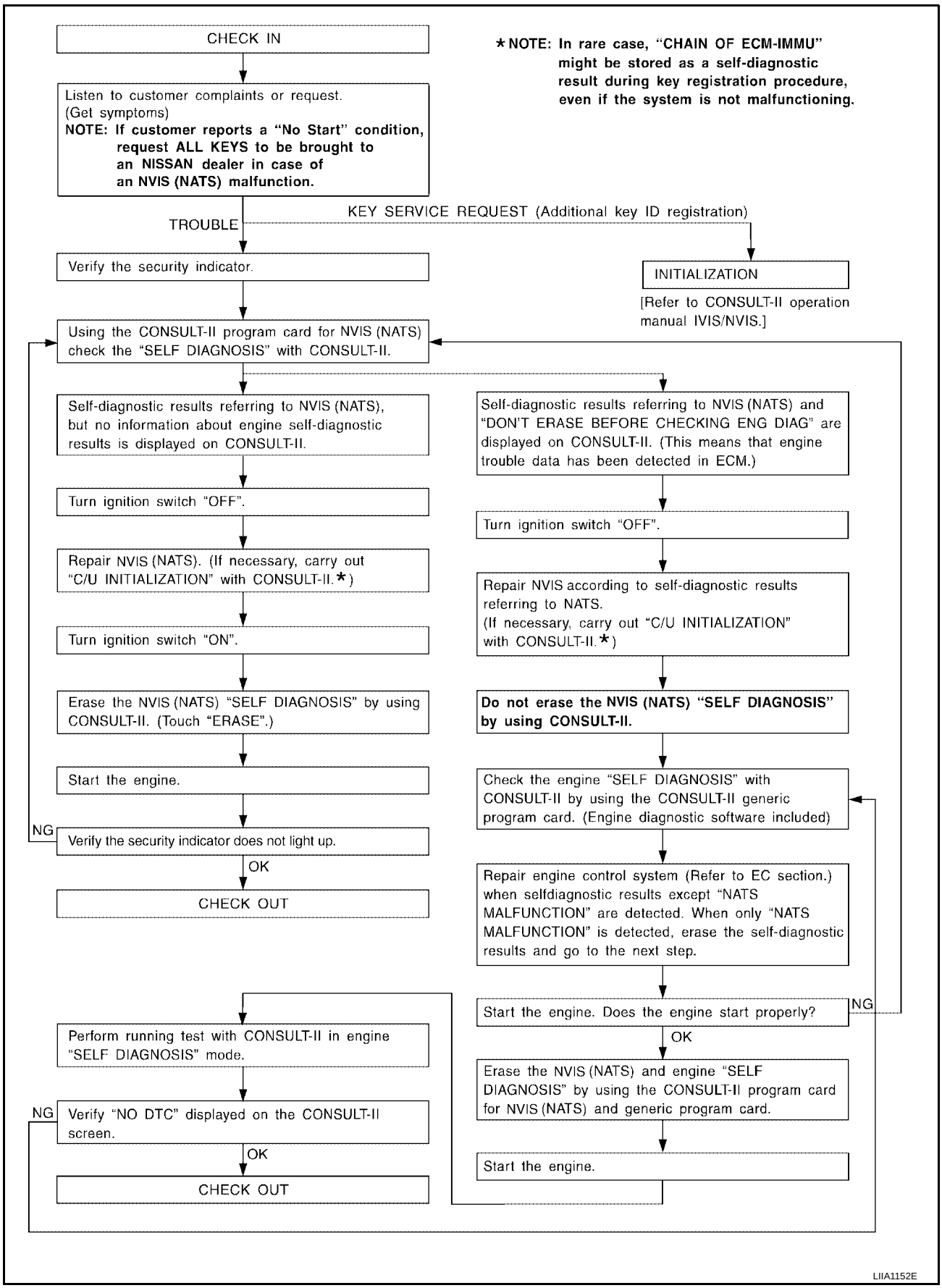


NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART

Detected items [NVIS (NATS) program card screen terms]	P No. Code (Self-diagnostic result of “ENGINE”)	Malfunction is detected when.....	Reference page
CHAIN OF ECM-IMMU [P1612]	NATS MAL-FUNCTION P1612	Communication impossible between ECM and BCM In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.	Refer to BL-108 .
DIFFERENCE OF KEY [P1615]	NATS MAL-FUNCTION P1615	BCM can receive the key ID signal but the result of ID verification between key ID and BCM is NG.	Refer to BL-109 .
CHAIN OF IMMU-KEY [P1614]	NATS MAL-FUNCTION P1614	BCM cannot receive the key ID signal.	Refer to BL-112 .
ID DISCORD, IMM-ECM [P1611]	NATS MAL-FUNCTION P1611	The result of ID verification between BCM and ECM is NG. System initialization is required.	Refer to BL-110 .
LOCK MODE [P1610]	NATS MAL-FUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, NVIS (NATS) will shift the mode to one which prevents the engine from being started. ● Unregistered ignition key is used. ● BCM or ECM’s malfunctioning.	Refer to BL-111 .
DON'T ERASE BEFORE CHECK-ING ENG DIAG	—	All engine trouble codes except NVIS (NATS) trouble code has been detected in ECM.	Refer to BL-105 .

Work Flow

EIS001OI



Trouble Diagnoses

EIS001OJ

SYMPTOM MATRIX CHART 1

Self-diagnosis related item

Symptom	Displayed “SELF-DIAG RESULTS” on CONSULT-II screen.	Diagnostic Procedure (Reference page)	System (Malfunctioning part or mode)	Reference Part No. Of Illustration On System Diagram
● Security indicator lighting up* ● Engine cannot be started	CHAIN OF ECM-IMMU [P1612]	PROCEDURE 1 (BL-108)	In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.	—
			Open circuit in battery voltage line of BCM circuit	C1
			Open circuit in ignition line of BCM circuit	C2
			Open circuit in ground line of BCM circuit	C3
			Open or short circuit between BCM and ECM communication line	C4
			ECM	B
			BCM	A
	DIFFERENCE OF KEY [P1615]	PROCEDURE 2 (BL-109)	Unregistered key	D
			BCM	A
	CHAIN OF IMMU-KEY [P1614]	PROCEDURE 5 (BL-112)	Malfunction of key ID chip	E5
			Communication line between ANT/ AMP and BCM: Open circuit or short circuit of battery voltage line or ground line	E1
				E2
			Open circuit in power source line of ANT/ AMP circuit	E3
			Open circuit in ground line of ANT/ AMP circuit	E4
			NATS antenna amp.	E6
			BCM	A
	ID DISCORD, IMM-ECM [P1611]	PROCEDURE 3 (BL-110)	System initialization has not yet been completed.	F
			ECM	B
	LOCK MODE [P1610]	PROCEDURE 4 (BL-111)	LOCK MODE	D
Security indicator lighting up*	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (BL-105)	Engine trouble data and NVIS (NATS) trouble data have been detected in ECM	—

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

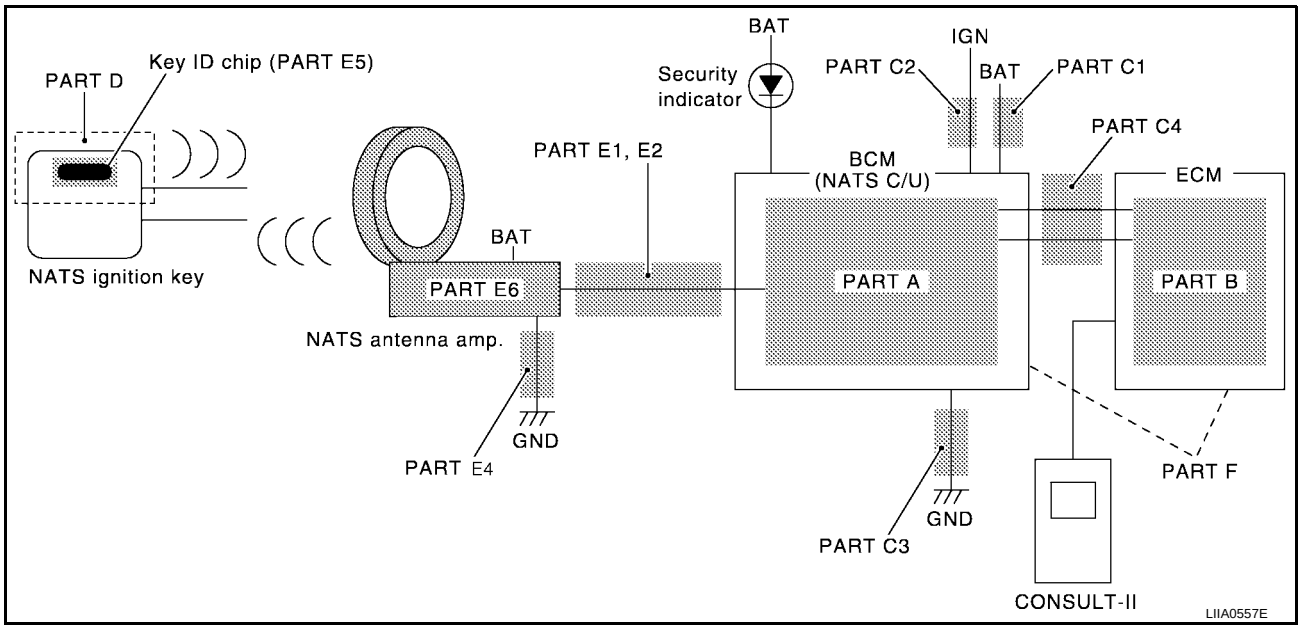
SYMPTOM MATRIX CHART 2

Non self-diagnosis related item

Symptom	Diagnostic Procedure (Reference page)	System (Malfunctioning part or mode)	Reference Part No. Of Illustration On System Diagram
Security indicator does not light up*.	PROCEDURE 6 (BL-115)	Combination meter (security indictor lamp)	—
		Open circuit between Fuse and BCM	—
		BCM	A

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

DIAGNOSTIC SYSTEM DIAGRAM



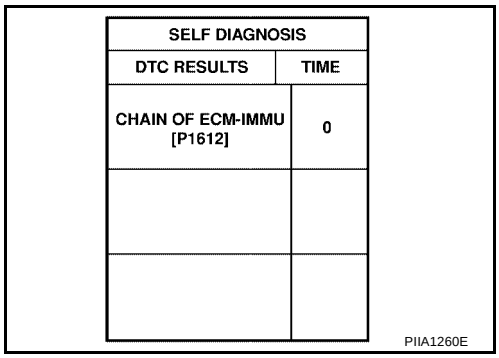
Diagnostic Procedure 1

EIS001OL

Self-diagnostic results:
“CHAIN OF ECM-IMMU” displayed on CONSULT-II screen
First perform the “SELF-DIAG RESULTS” in “BCM” with CONSULT-II, then perform the trouble diagnosis of malfunction system indicated “SELF-DIAG RESULTS” of “BCM”. Refer to BL-102, "CONSULT-II" .

1. CONFIRM SELF-DIAGNOSTIC RESULTS

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



NOTE:
In rare case, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.

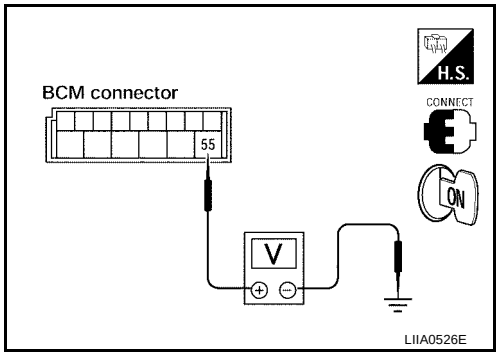
Is CONSULT-II screen displayed as above?

Yes >> GO TO 2
No >> GO TO BL-106, "SYMPTOM MATRIX CHART 1" .

2. CHECK POWER SUPPLY CIRCUIT FOR BCM

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

55 (W/B) – Ground : Battery voltage



OK or NG

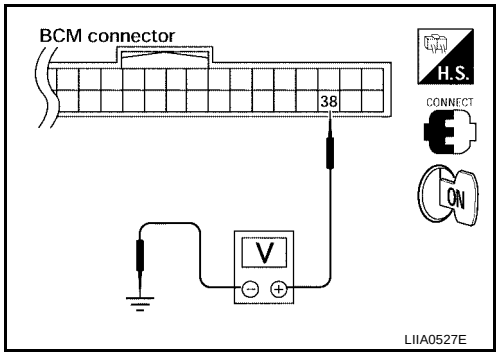
OK >> GO TO 3
NG >> Check the following.

- 50A fusible link (letter **f** , located in fuse and fusible link box)
- Harness for open or short between fuse and BCM connector
  Ref. Part No. C1

3. CHECK IGN SW. ON SIGNAL

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

38 (G/R) – Ground : Battery voltage



OK or NG

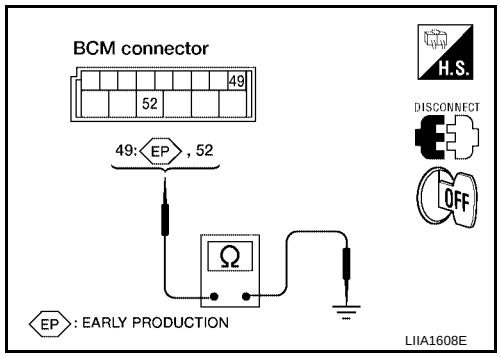
OK >> GO TO 4
NG >> Check the following.

- 10A fuse [No. 12, located in the fuse block (J/B)]
- Harness for open or short between fuse and BCM connector
  Ref. part No. C2

4. CHECK GROUND CIRCUIT FOR BCM

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

49 (B) – Ground : Continuity should exist.
52 (B) – Ground : Continuity should exist.



OK or NG

OK >> GO TO 5
NG >> Repair or replace harness. **Ref. part No. C3**

5. REPLACE BCM

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

Does the engine start?

Yes >> BCM is malfunctioning.
No >>
- ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
- Perform initialization or re-communicating function.
- For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.
- For re-communicating function, refer to BL-100, "ECM Re-communicating Function" .

Diagnostic Procedure 2

EIS001OM

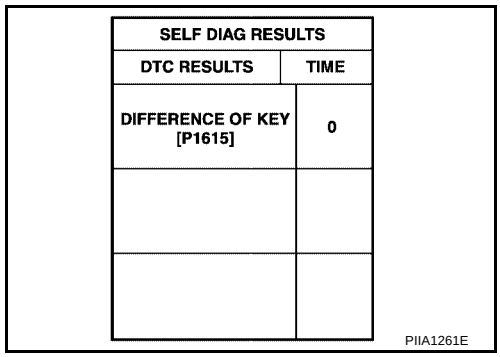
Self-diagnostic results:
“DIFFERENCE OF KEY” displayed on CONSULT-II screen

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-106, "SYMPTOM MATRIX CHART 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

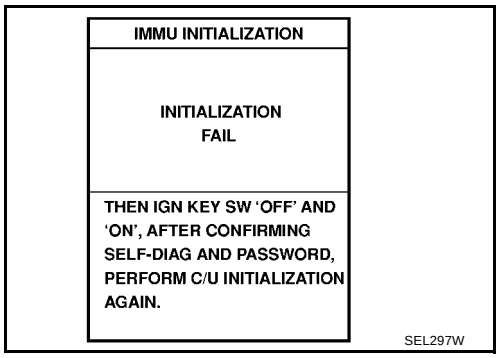
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization and registration of NATS ignition key IDs, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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

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

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

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



Diagnostic Procedure 3

EIS001ON

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

1. CONFIRM SELF-DIAGNOSTIC RESULTS

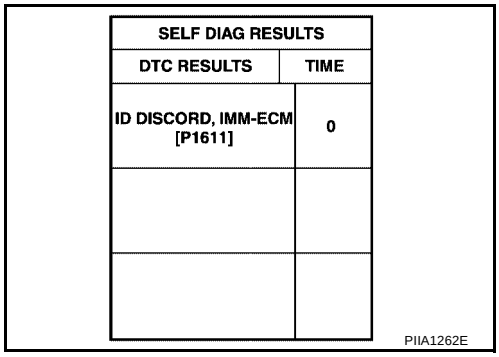
Confirm SELF-DIAGNOSTIC RESULTS “ID DISCORD, IMM-ECM” displayed on CONSULT-II screen.

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

Is CONSULT-II screen displayed as above?

Yes >> GO TO 2

No >> GO TO BL-106, "SYMPTOM MATRIX CHART 1" .



2. PERFORM INITIALIZATION WITH CONSULT-II

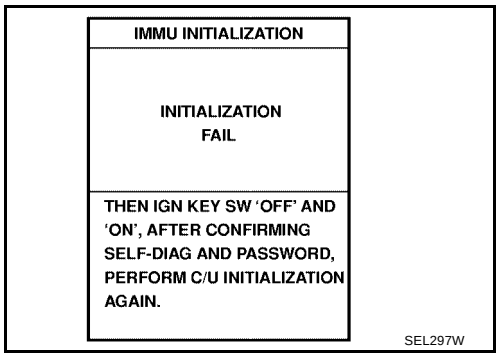
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs.
For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

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

Can the system be initialized?

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

No >> ● ECM is malfunctioning.
- Replace ECM. **Ref. part No. B**
- Perform initialization with CONSULT-II.
  For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.



Diagnostic Procedure 4

EIS001OO

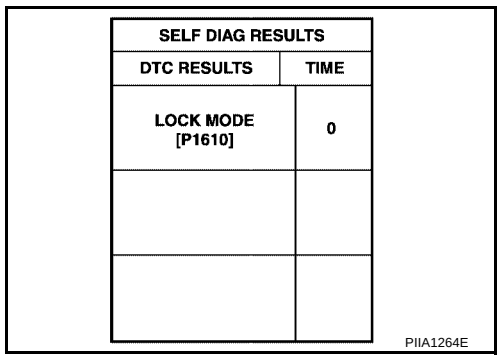
Self-diagnostic results:
“LOCK MODE” displayed on CONSULT-II screen

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-106, "SYMPTOM MATRIX CHART 1" .



2. ESCAPE FROM LOCK MODE

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

Does engine start?

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

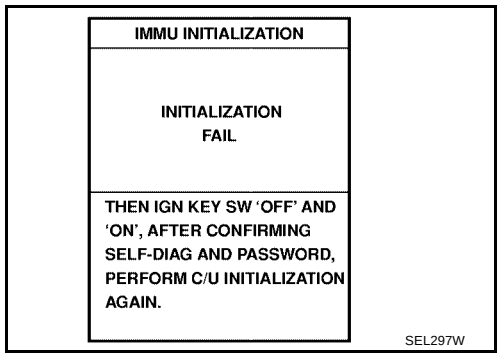
3. PERFORM INITIALIZATION WITH CONSULT-II

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

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

Can the system be initialized?

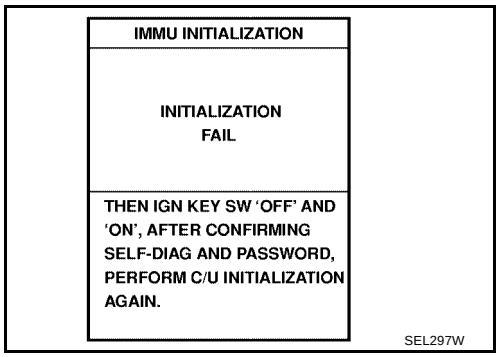
Yes >> System is OK.
No >> GO TO 4



4. PERFORM INITIALIZATION WITH CONSULT-II AGAIN

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

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



Can the system be initialized?

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

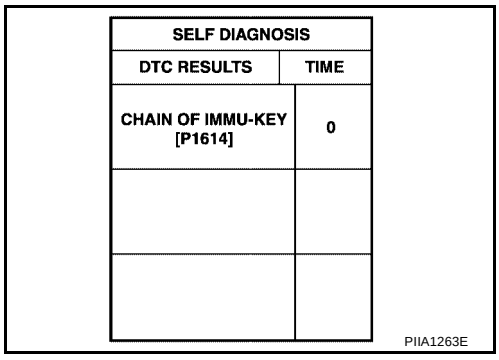
Diagnostic Procedure 5

EIS001OP

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

1. CONFIRM SELF-DIAGNOSTIC RESULTS

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



Is CONSULT-II screen displayed as above?

Yes >> GO TO 2
No >> GO TO BL-106, "SYMPTOM MATRIX CHART 1" .

2. CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to BL-116, "How to Replace NATS Antenna Amp." .

OK or NG

OK >> GO TO 3
NG >> Reinstall NATS antenna amp. correctly.

3. CHECK NVIS (NATS) IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

Does the engine start?

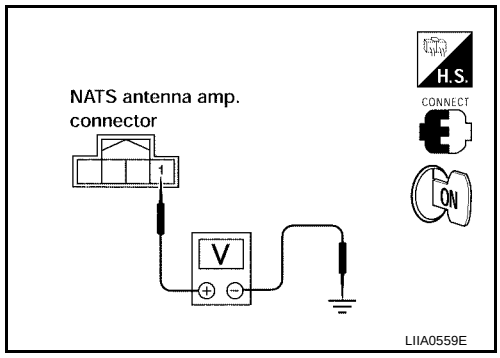
Yes >>
- Ignition key ID chip is malfunctioning.
- Replace the ignition key.
  Ref. part No, E5
- Perform initialization with CONSULT-II.
  For initialization, refer to “CONSULT-II Operation Manual NATS-IVIS/NVIS”.

No >> GO TO 4

4. CHECK POWER SUPPLY FOR NATS ANTENNA AMP.

1. Turn ignition switch ON.
2. Check voltage between NATS antenna amp. connector M21 terminal 1 and ground.

1 (W/L) – Ground : Battery voltage



OK or NG

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

5. CHECK NATS ANTENNA AMP. SIGNAL LINE- 1

1. Turn ignition switch OFF.
2. Check voltage between NATS antenna amp. connector M21 terminal 2 and ground with analog tester.

2 (P) – Ground

Before inserting key into ignition key cylinder

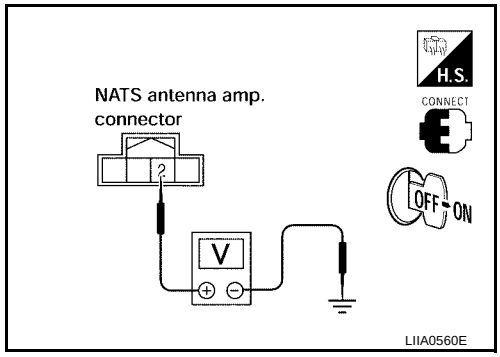
Voltage: Battery voltage

After inserting key into ignition key cylinder

: Pointer of tester should move for 30 seconds, then return to battery voltage.

Just after turning ignition switch ON

: Pointer of tester should move for approx. 1 second, then return to battery voltage.



OK or NG

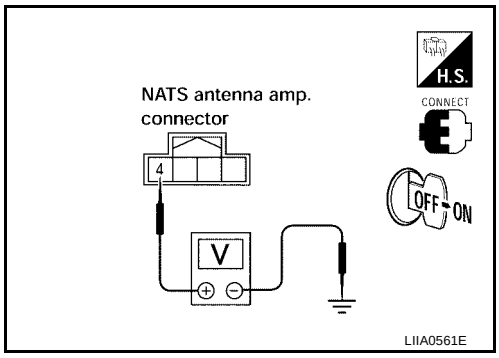
OK >> GO TO 6
NG >> ● Repair or replace harness.

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

6. CHECK NATS ANTENNA AMP. SIGNAL LINE- 2

1. Turn ignition switch OFF.
2. Check voltage between NATS antenna amp. connector M21 terminal 4 and ground with analog tester.

4 (G) – Ground	**Before inserting key into ignition key cylinder** **Voltage: Battery voltage** **After inserting key into ignition key cylinder** **: Pointer of tester should move for 30 seconds, then return to battery voltage.** **Just after turning ignition switch ON** **: Pointer of tester should move for approx. 1 second, then return to battery voltage.**



OK or NG

OK >> GO TO 7

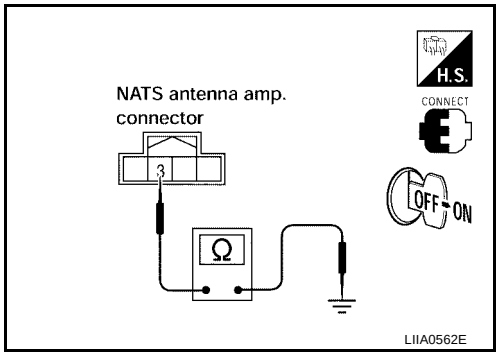
NG >> ● Repair or replace harness.

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

7. CHECK NATS ANTENNA AMP. GROUND LINE CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between NATS antenna amp. connector M21 terminal 3 and ground.

3 (B) – Ground	:Continuity should exist.



OK or NG

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

NG >> ● Repair or replace harness.

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

Diagnostic Procedure 6

EIS001PD

“SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

1. CHECK FUSE

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

OK or NG

OK >> GO TO 2
NG >> Replace fuse.

2. CHECK SECURITY INDICATOR LAMP

1. Install 10A fuse.
2. Start engine and turn ignition switch OFF.
3. Check the security indicator lamp lights up.

Security indicator lamp should light up.

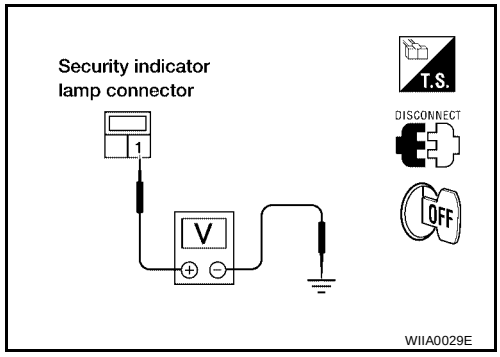
OK or NG

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

3. CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT

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

1 (R/W) – Ground :Battery voltage



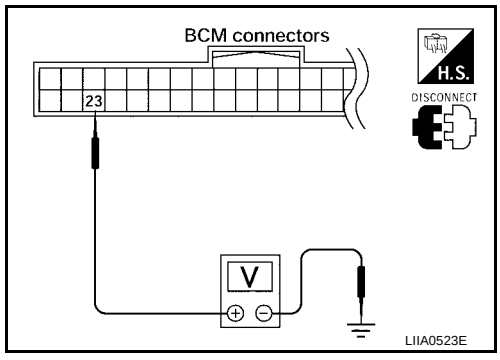
OK or NG

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

4. CHECK BCM (NATS CONTROL UNIT) FUNCTION

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

23 (G/O) – Ground :Battery voltage



OK or NG

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

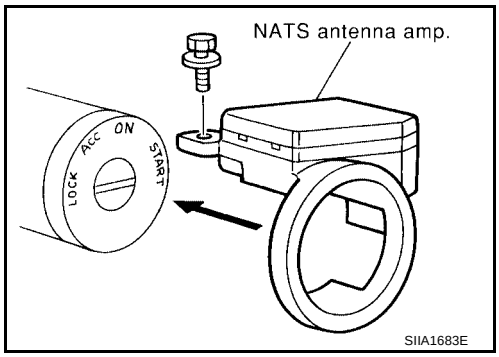
NG >> Check the following.
- Harness for open or short between security indicator lamp and BCM (NATS control unit).
- Indicator lamp condition

How to Replace NATS Antenna Amp.

EIS001OQ

NOTE:

- **If NATS antenna amp. is not installed correctly, NVIS (NATS) system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show “LOCK MODE” or “CHAIN OF IMMU-KEY”.**
- **Initialization is not necessary only when NATS antenna amp. is replaced with a new one.**



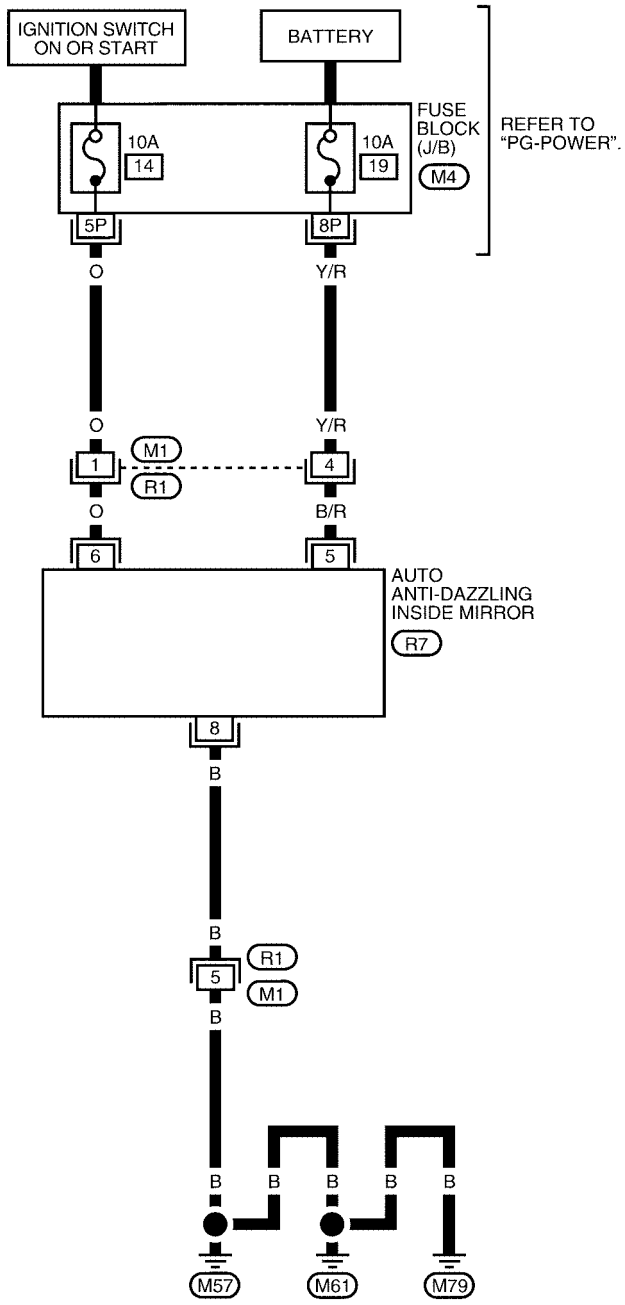
HOMELINK UNIVERSAL TRANSCEIVER

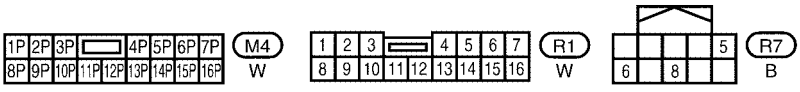
PFP:96401

Wiring Diagram —TRNSCV—

EIS001I4

BL-TRNSCV-01





LIWA0108E

Trouble Diagnoses

EIS001I5

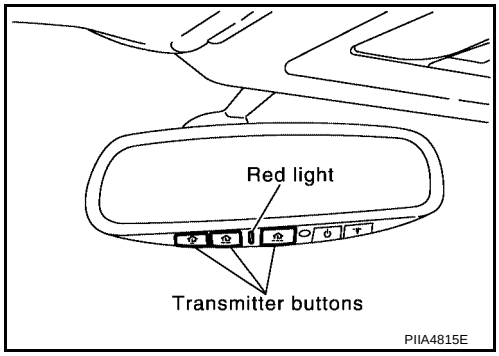
DIAGNOSTIC PROCEDURE

SYMPTOM: Transmitter does not activate receiver.

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

1. ILLUMINATE CHECK

- Turn ignition switch OFF.
- Does red light (LED) of transmitter illuminate when any button is pressed?



YES or NO

YES >> GO TO 2.
NO >> GO TO 3.

2. TRANSMITTER CHECK

Check transmitter with Tool*.
*:For details, refer to Technical Service Bulletin.

OK or NG

OK >> Receiver or handheld transmitter malfunction, not vehicle related.
NG >> Replace transmitter with sun visor assembly.

3. CHECK BCM OUTPUT POWER SUPPLY

Does room lamp come on when driver door is opened? Refer toLT-150, "INTERIOR ROOM LAMP" .

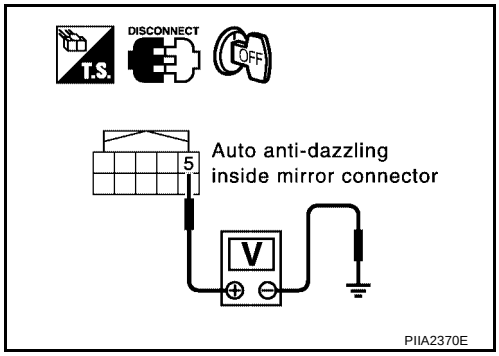
Yes or No?

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

4. POWER SUPPLY CHECK

1. Disconnect transmitter.
2. Check voltage between auto anti-dazzling inside mirror (HomeLink® Universal Transceiver) connector R7 terminal 5 and ground.

5 (B/R) – Ground : Battery voltage



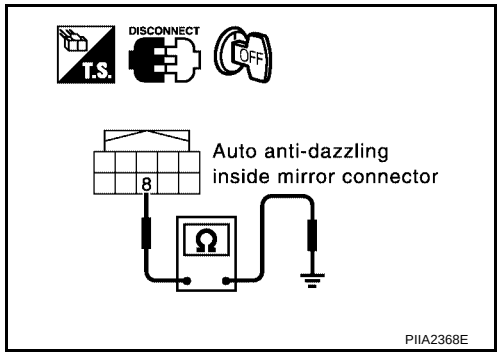
OK or NG

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

5. GROUND CIRCUIT CHECK

Check continuity between auto anti-dazzling inside mirror (HomeLink® Universal Transceiver) connector R7 terminal 8 (B) and body ground.

8 (B) – Ground : Continuity should exist.



OK or NG

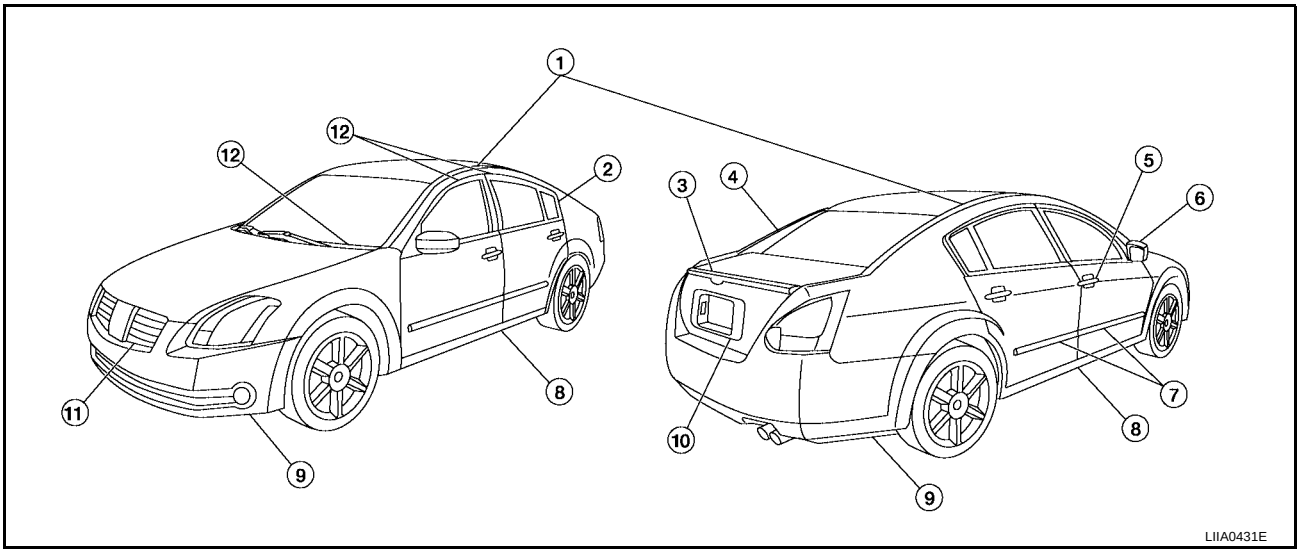
OK >> Replace inside mirror assembly.
NG >> Repair or replace harness.

BODY REPAIR

PFP:60100

Body Exterior Paint Color

EIS001I6



Component			Color code	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3
			Description	Red Opulence	Radiant Ember	Majestic Blue	Coral Sand	Champagne Mist	Smoke	Onyx	Liquid Silver	Spirited Bronze	Winter Frost
			Paint type	M	M	2p	M	M	M	2S	M	M	3P
			Clear coat	t	t	t	t	t	t	t	t	t	t
1	Roof side molding		Chrome	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
2	Rear door sash Cover		Black	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3
3	Rear Spoiler		Body color	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3
4	Rear pillar trim	Base	Black	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3
		Body	Chrome	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
5	Outside handle		Body color	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3
6	Outside mirror	Body	Body color	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3
		Base	Black	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01
7	Side guard molding	Body	Body color	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3
8	Center mudguard		Body color	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3
9	Bumper fascia	Body	Body color	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3
10	Trunk lid finisher		Body color	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3

Component			Color code	A15	A19	BW9	CY12	EY1	K11	KH3	KY1	KY2	QX3
			Description	Red Opulence	Radiant Ember	Majestic Blue	Coral Sand	Champagne Mist	Smoke	Onyx	Liquid Silver	Spirited Bronze	Winter Frost
			Paint type	M	M	2p	M	M	M	2S	M	M	3P
			Clear coat	t	t	t	t	t	t	t	t	t	t
11	Radiator grille	Center	Chromium-plate +Smoke Clear	Cr+HFM09	Cr+HFM09	Cr+HFM09	Cr+HFM 09	Cr+HFM09	Cr+HFM 09	Cr+HFM09	Cr+HFM 09	Cr+HFM 09	Cr+HFM09
12	Cowl top cover		Black	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01
13	Door sash		Black tape	X	X	X	X	X	X	X	X	X	X

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

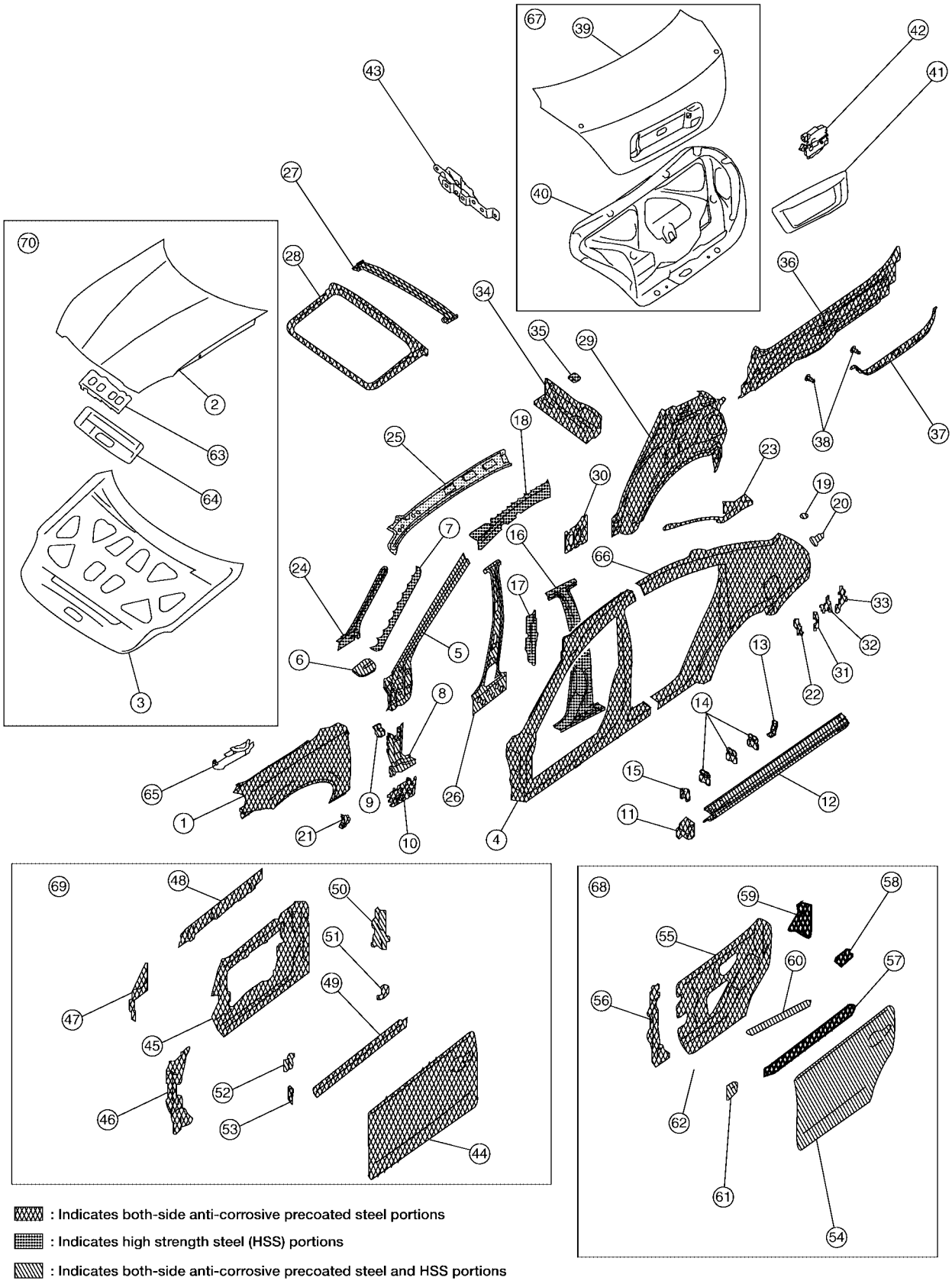
Body Component Parts
UNDERBODY COMPONENT PARTS

EIS001I7

LIIA0533E

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

BODY COMPONENT PARTS



WIIA0245E

1	Front Fender (RH,LH)	26	Center pillar inner (RH,LH)	51	Front door guard rear bracket (RH,LH)
2	Outer hood	27	Roof 2nd bow	52	Front door guard front bracket (RH,LH)
3	Inner hood	28	Roof reinforcement	53	Lower front door hinge reinforcement (RH,LH)
4	Front body side outer (RH,LH)	29	Rear wheel outer (RH,LH)	54	Outer rear door panel (RH,LH)
5	Front pillar upper hinge brace (RH,LH)	30	Rear wheel outer front extension (RH,LH)	55	Rear door inner (RH,LH)
6	Front pillar upper hinge bulkhead (RH,LH)	31	Fuel filler hinge A	56	Rear door inner reinforcement (RH,LH)
7	Front pillar outer reinforcement (RH,LH)	32	Fuel filler hinge B	57	Rear door outer waist reinforcement (RH,LH)
8	Front pillar lower hinge brace (RH,LH)	33	Fuel filler plate	58	Rear door glass stopper bracket (RH,LH)
9	Front pillar lower gusset (RH,LH)	34	Parcel shelf reinforcement	59	Rear door rear inner sash bracket (RH,LH)
10	Front pillar lower reinforcement (RH,LH)	35	Child seat anchor reinforcement	60	Rear door guard beam
11	Front sill outer reinforcement (RH,LH)	36	Rear upper panel	61	Rear door guard front bracket (RH,LH)
12	Outer sill reinforcement (RH,LH)	37	Rear bumper fascia center bracket	62	Rear door sash bracket (RH,LH)
13	Outer sill brace A	38	Rear bumper bracket A (RH)	63	Hood lock striker outer support
14	Outer sill brace B	39	Trunk lid outer	64	Hood lock striker base
15	Outer sill brace B	40	Trunk lid reinforcement	65	Hood hinge reinforcement (RH,LH)
16	Center pillar reinforcement (RH,LH)	41	License plate base	66	Rear body side outer (RH,LH)
17	Center pillar seat belt reinforcement (RH,LH)	42	Trunk lid lock reinforcement	67	Trunk lid assembly
18	Outer roof sIde rail reinforcement (RH,LH)	43	Trunk lid hinge reinforcement (RH,LH)	68	Rear door assembly (RH,LH)
19	Rear fascia bracket B (RH.LH)	44	Outer front door panel (RH,LH)	69	Front door assembly (RH,LH)
20	Rear bumper bracket C (RH,LH)	45	Front door inner (RH,LH)	70	Hood assembly
21	Front fender baffle (RH,LH)	46	Front door inner reinforcement (RH,LH)		
22	Rear bumper side bracket A	47	Front door inner corner piece (RH,LH)		
23	Rear fender extension (RH,LH)	48	Front door inner waist reinforcement (RH,LH)		
24	Front inner pillar lower (RH,LH)	49	Front door outer waist reinforcement (RH,LH)		
25	Front inner pillar upper (RH,LH)	50	Front door sash rear bracket (RH.LH)		

Corrosion Protection

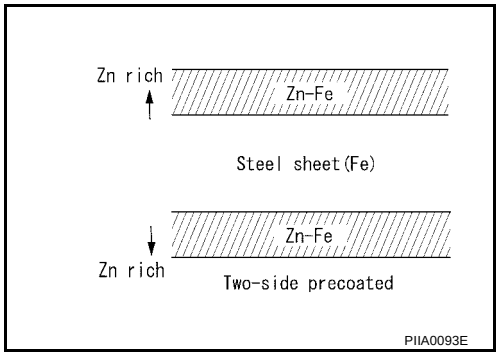
EIS001I8

DESCRIPTION

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

ANTI-CORROSIVE PRECOATED STEEL (GALVANNEALED STEEL)

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



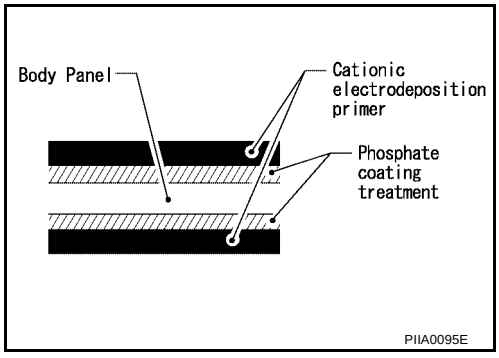
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

PHOSPHATE COATING TREATMENT AND CATIONIC ELECTRODEPOSITION PRIMER

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

CAUTION:

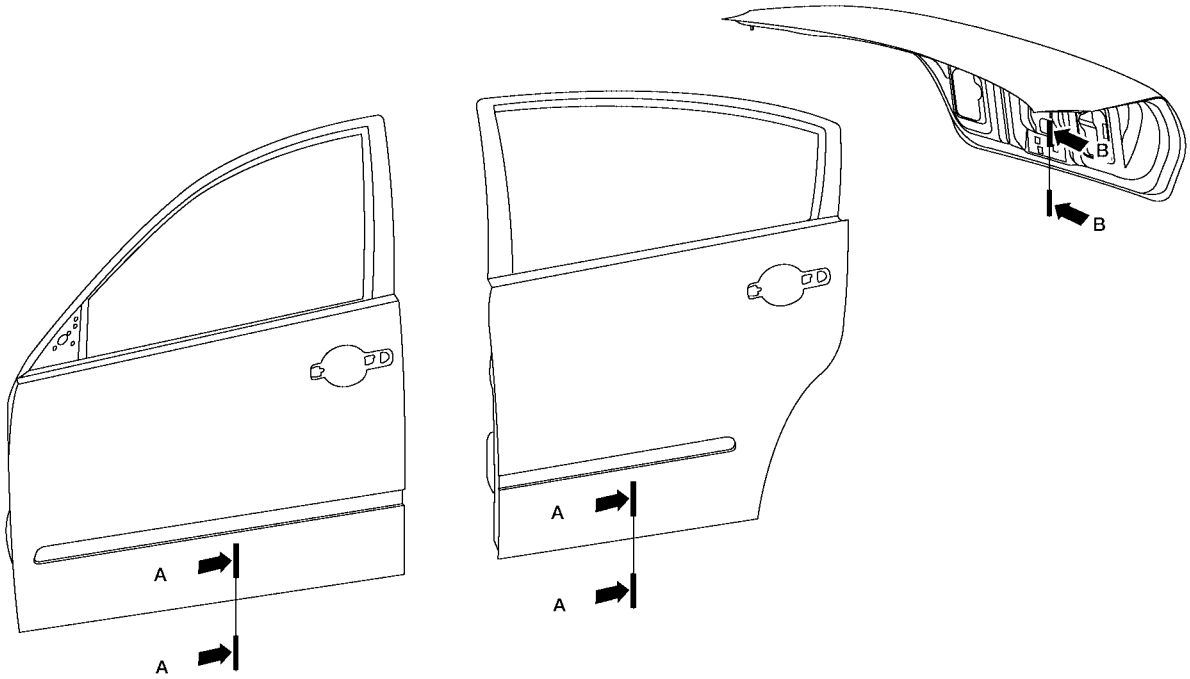
Confine paint removal during welding operations to an absolute minimum.



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

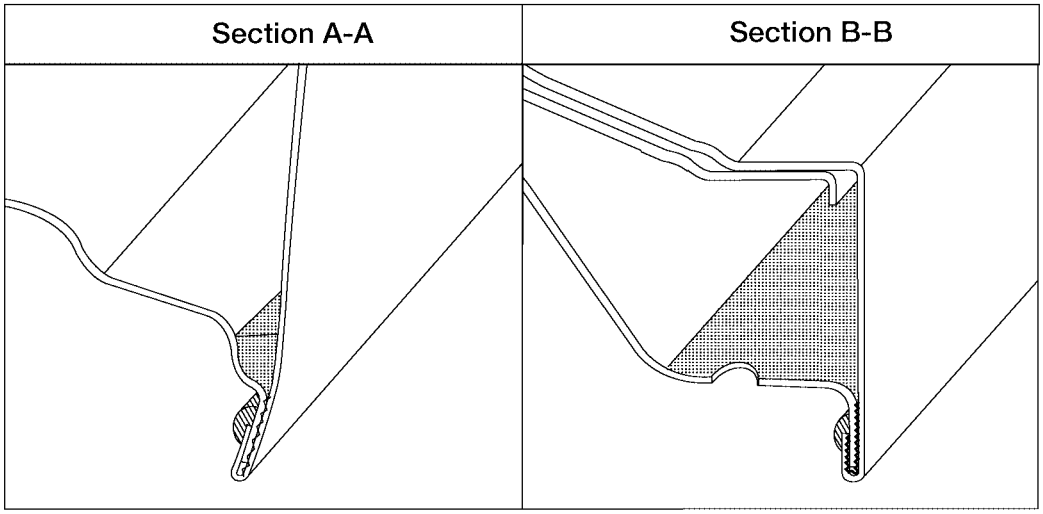
ANTI-CORROSIVE WAX

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



: indicates outside body sealant

: Indicates anti-corrosive wax coated portions



LIIA0266E

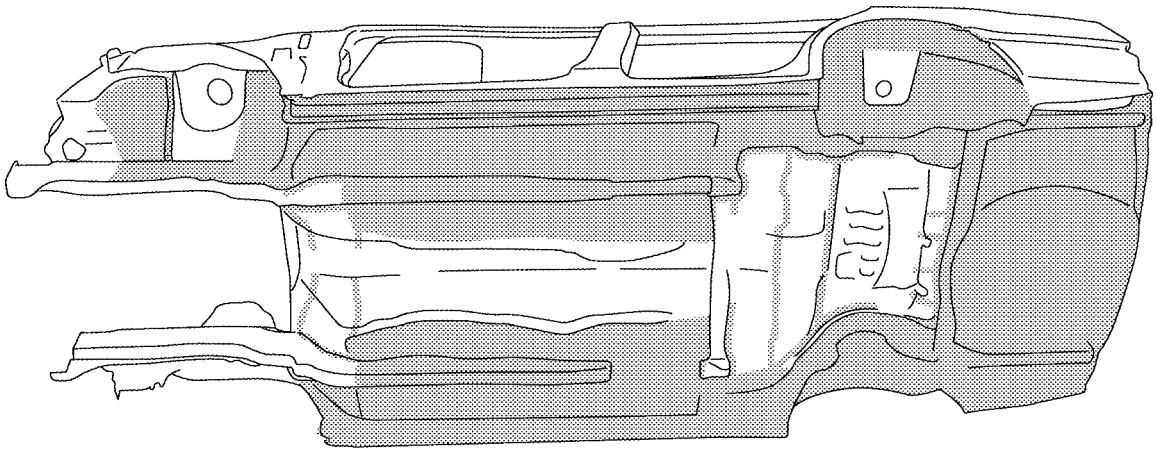
UNDERCOATING

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

Precautions in undercoating

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

: Indicates undercoated portions.



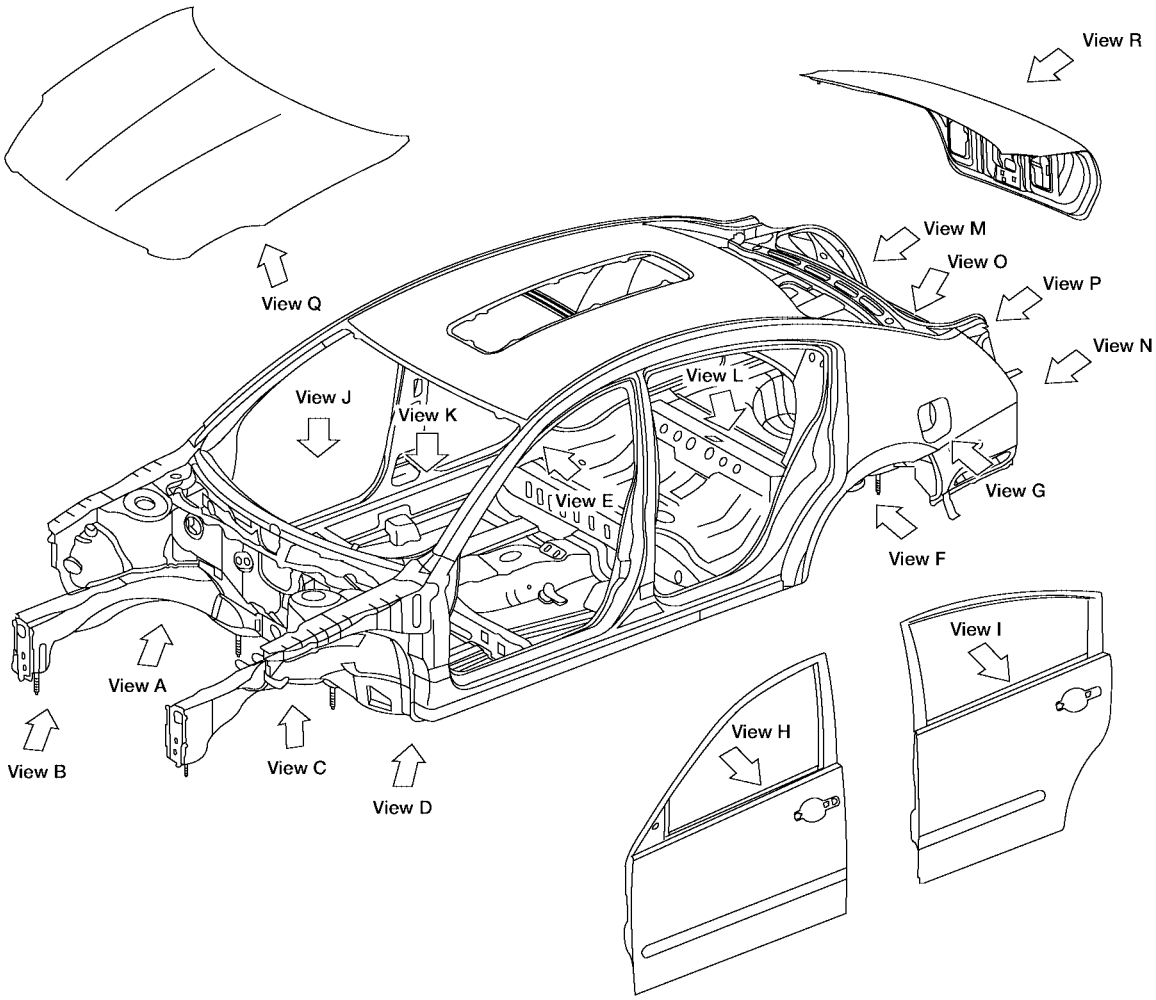
LIIA0129E

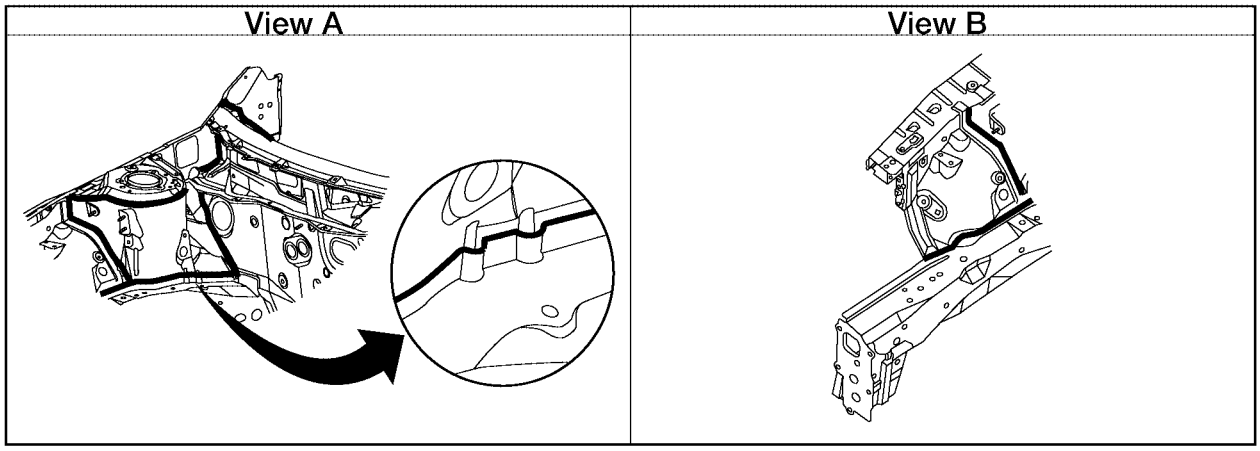
Body Sealing

EIS001I9

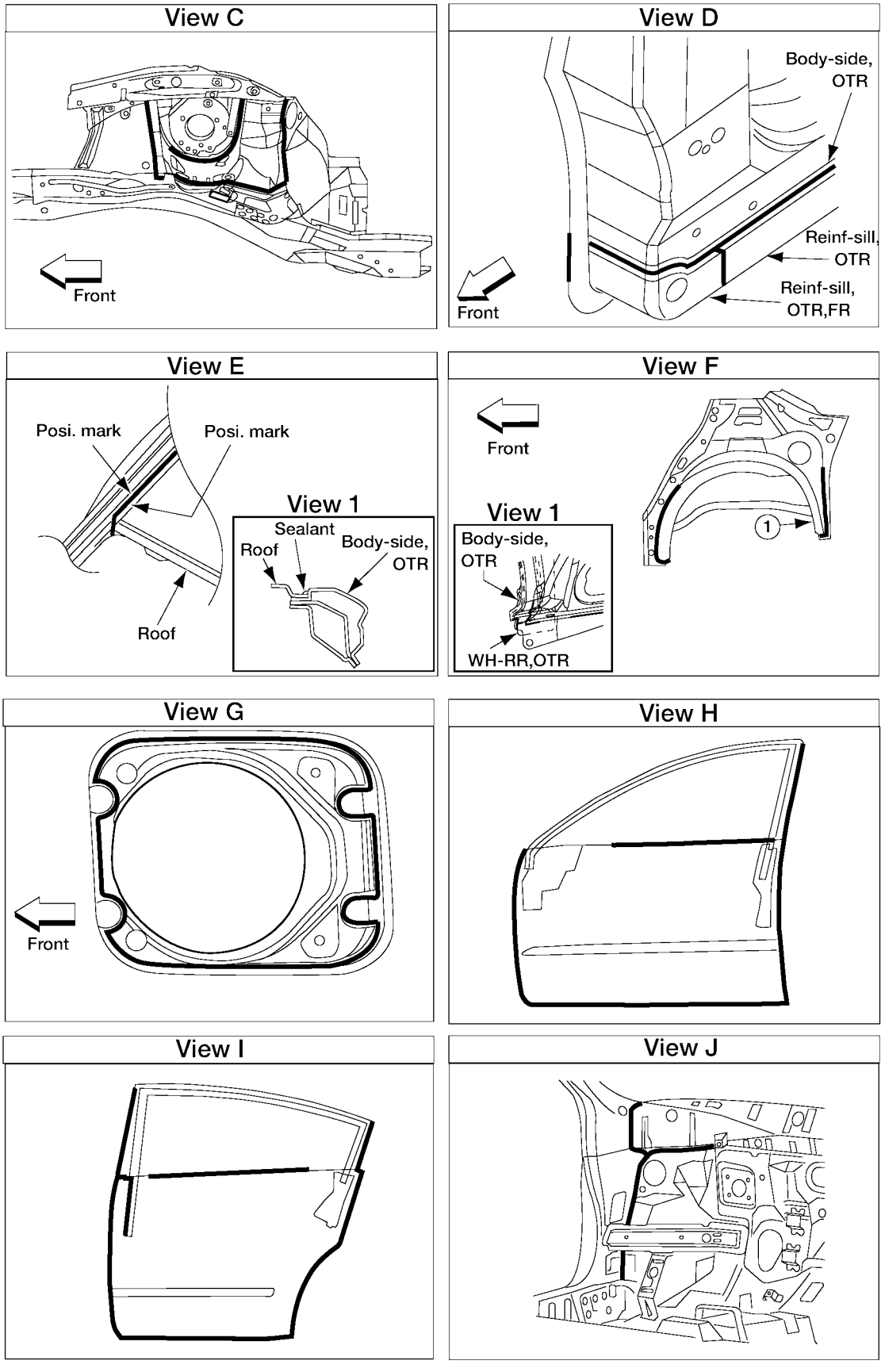
DESCRIPTION

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.



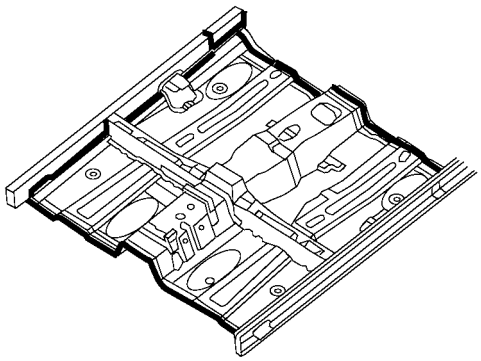


WIIA0383E

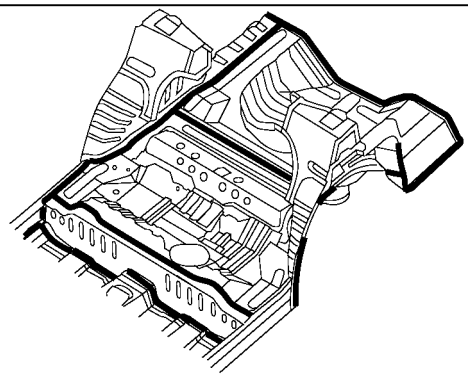

View C
Front
View D
Body-side, OTR
Reinf-sill, OTR
Reinf-sill, OTR,FR
Front
View E
Posi. mark
Posi. mark
Roof
View 1
Sealant
Roof
Body-side, OTR
View F
Front
1
View 1
Body-side, OTR
WH-RR,OTR
View G
Front
View H
View I
View J

WIIA0384E

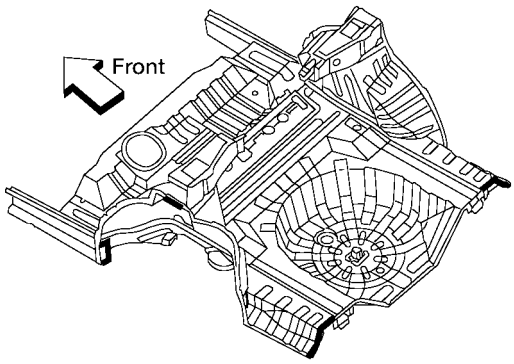
View K



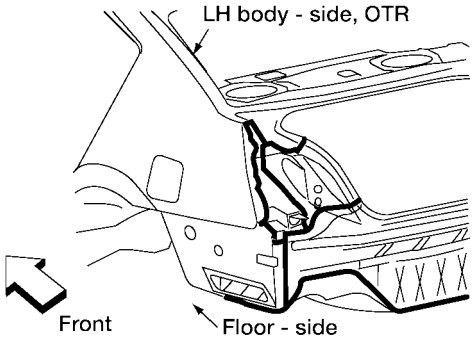
View L



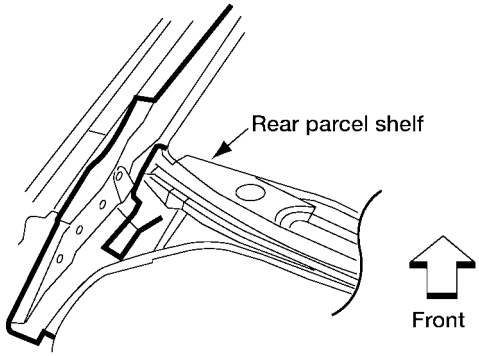
View M



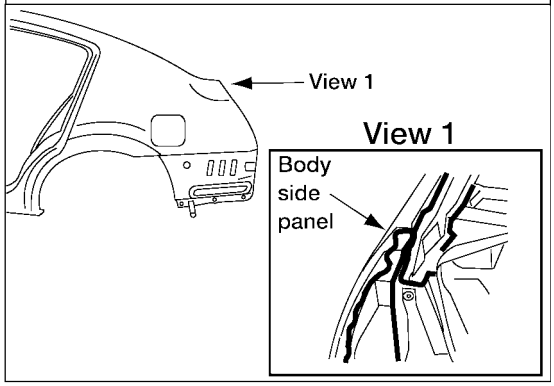
View N



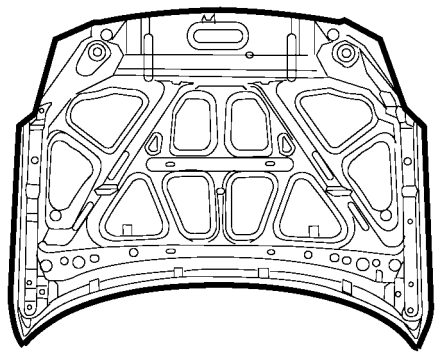
View O



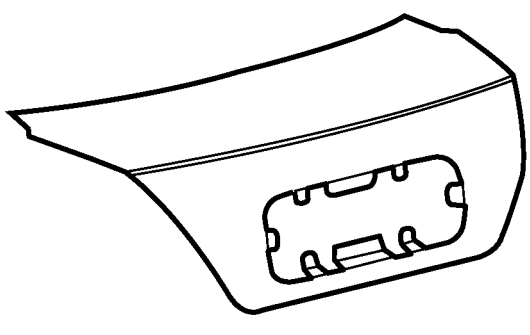
View P



View Q



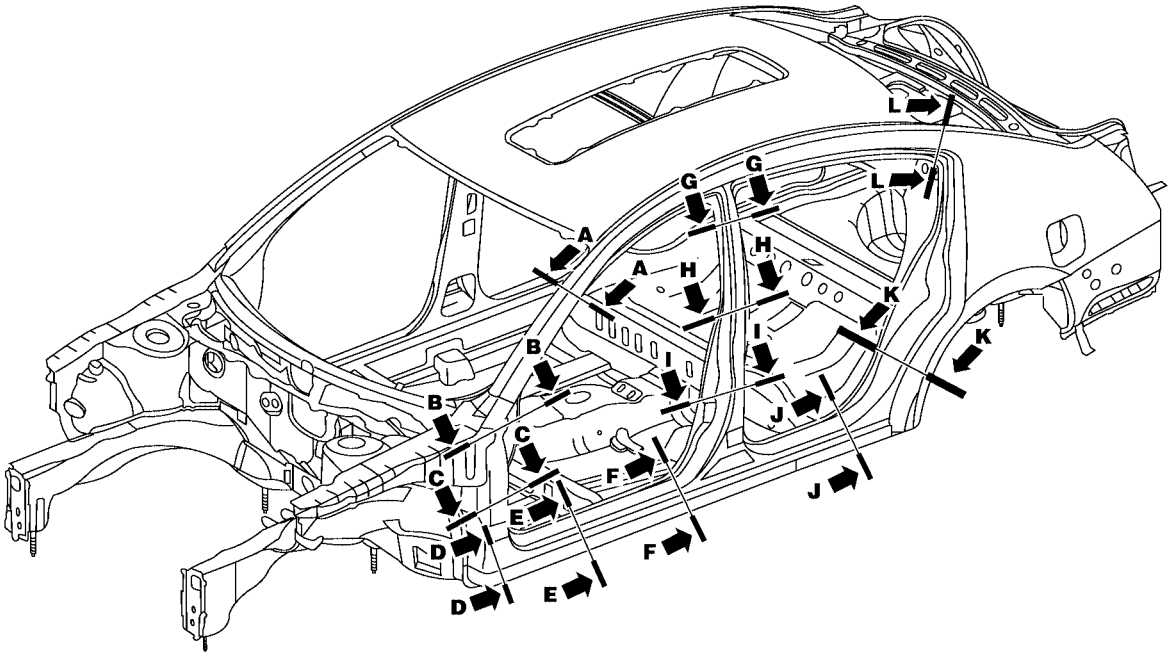
View R

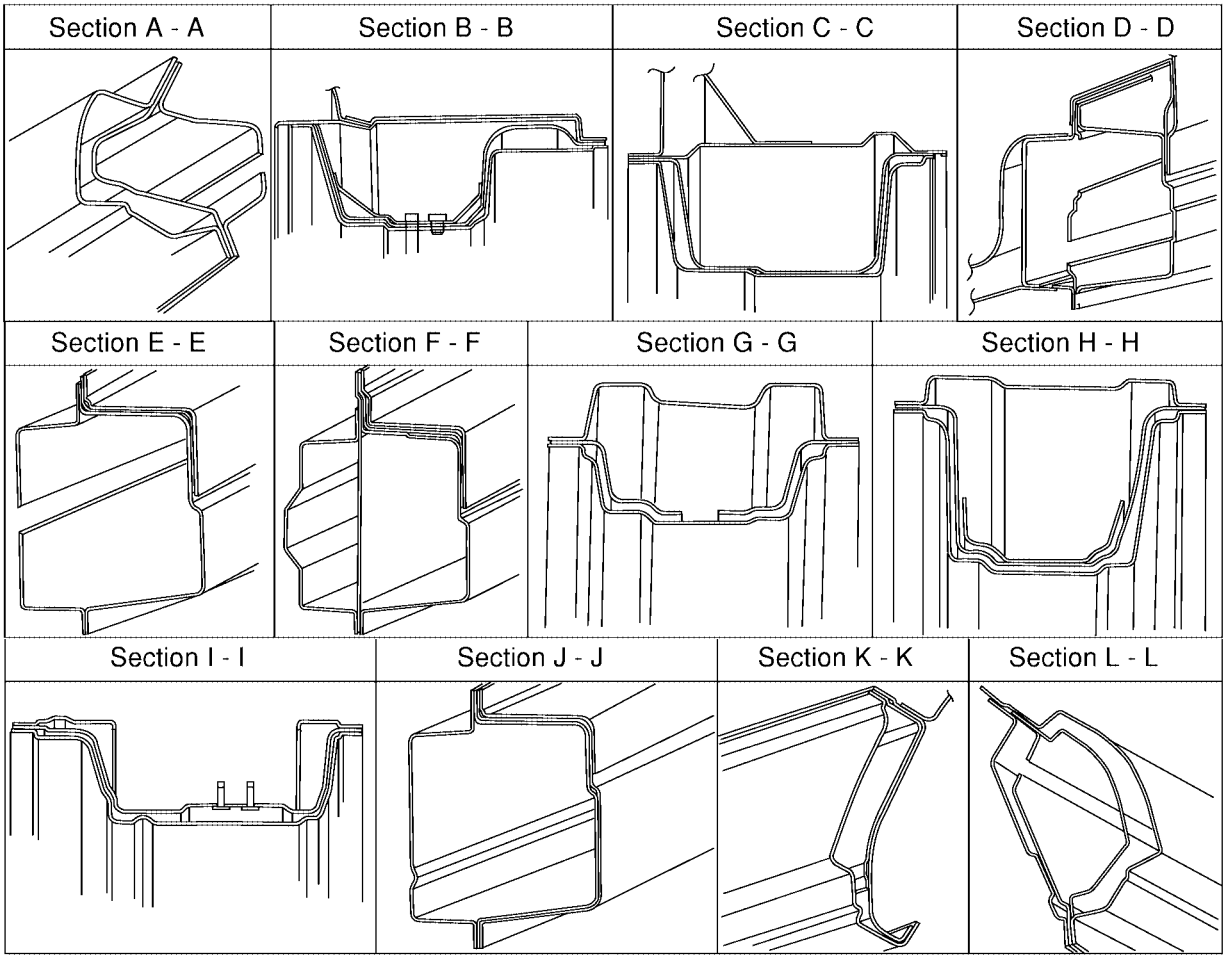


LIIA0508E

Body Construction
BODY CONSTRUCTION

EIS001IA





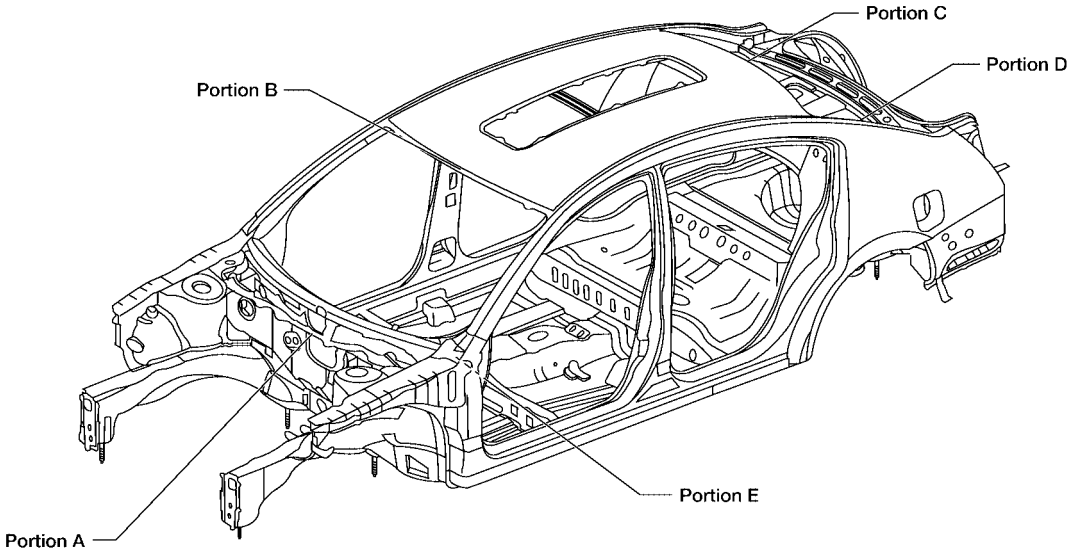
LIIA0509E

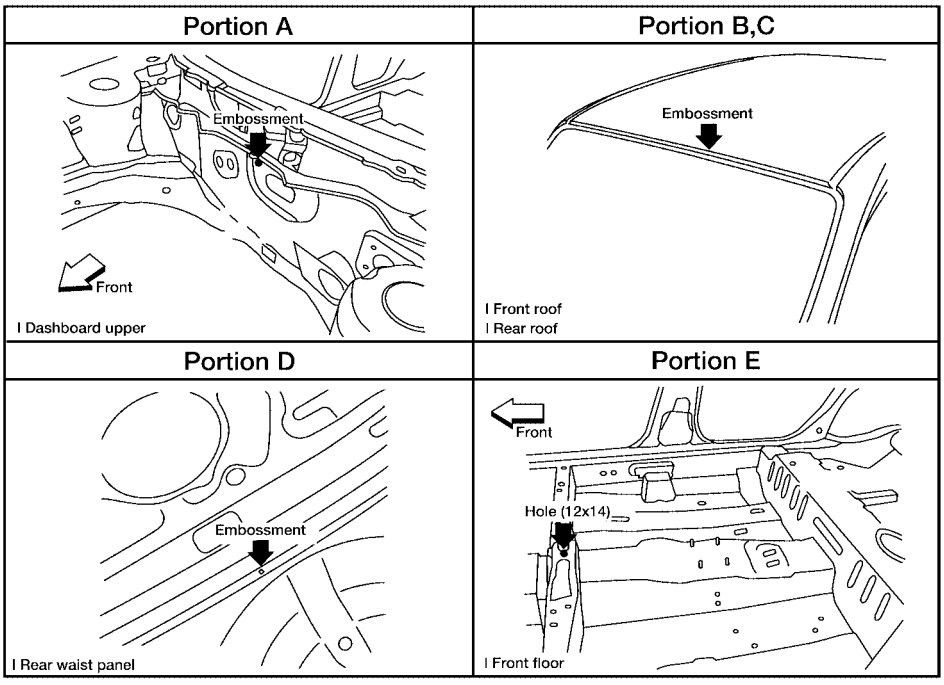
Body Alignment

EIS001IB

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.

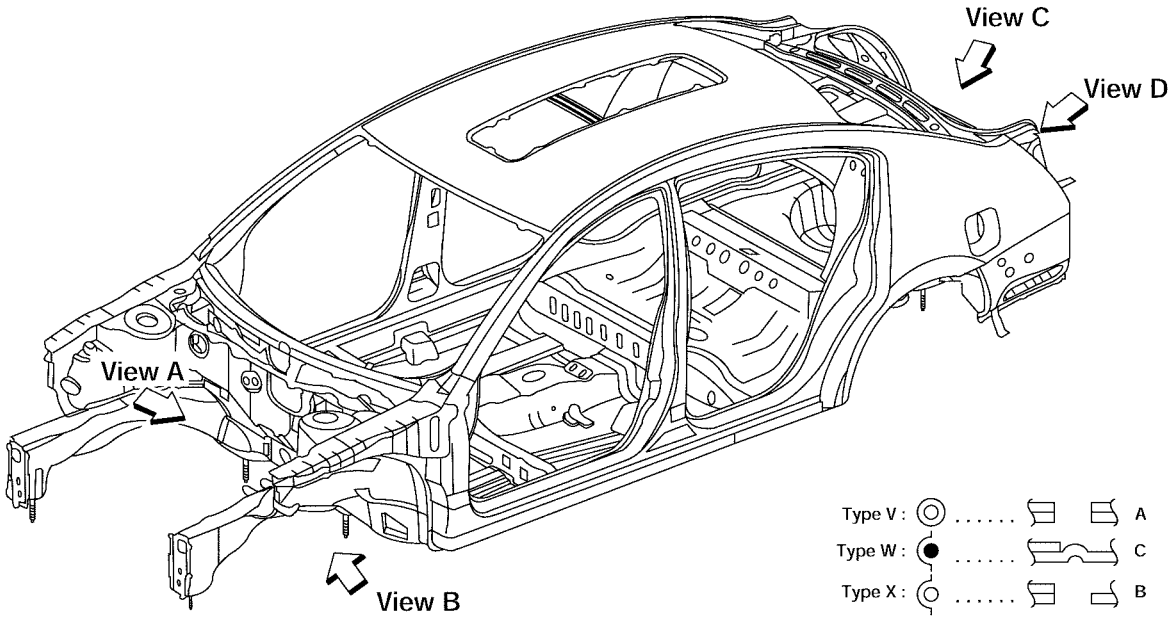


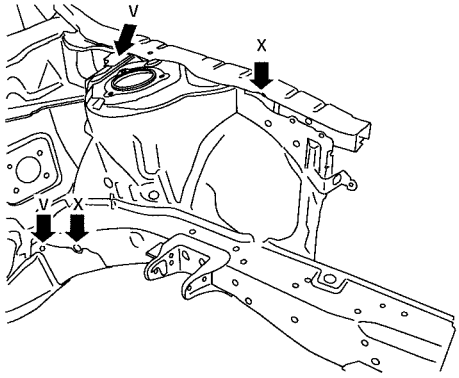
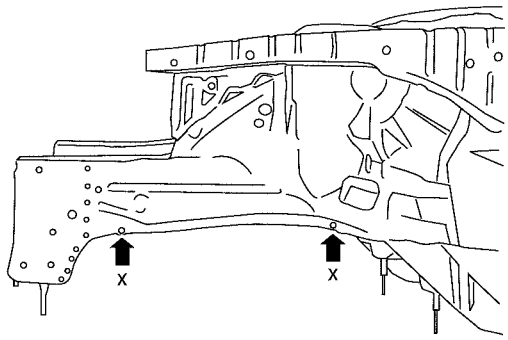
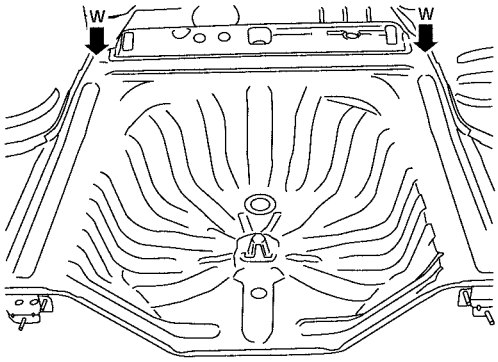
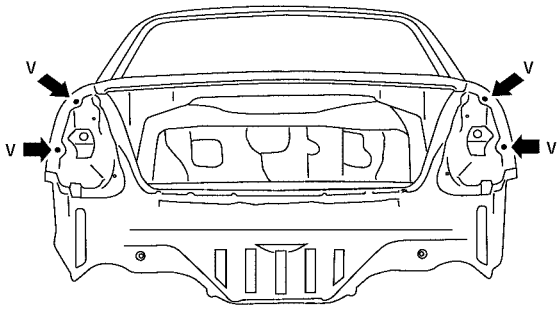


LIIA0510E

PANEL PARTS MATCHING MARKS

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

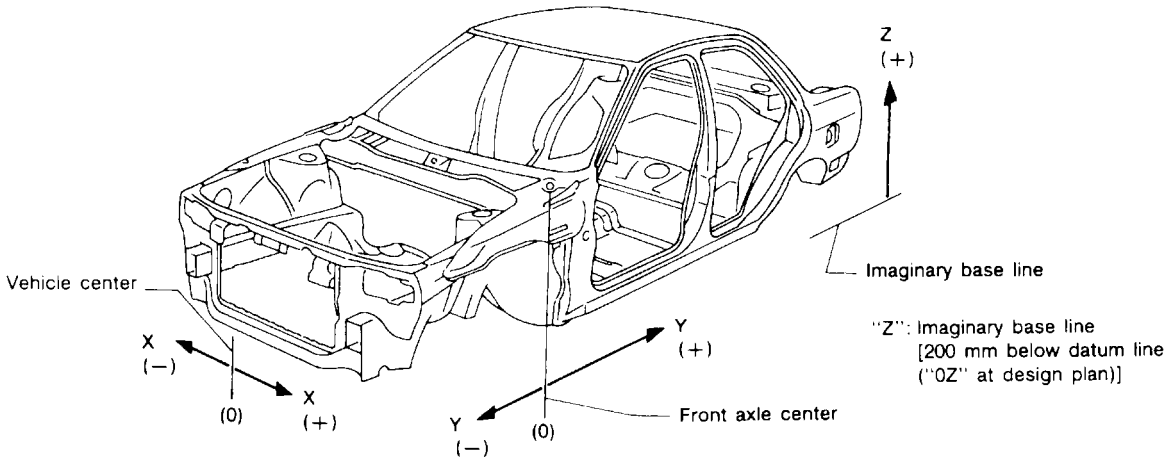


View A	View B
	
View C	**View D**
	

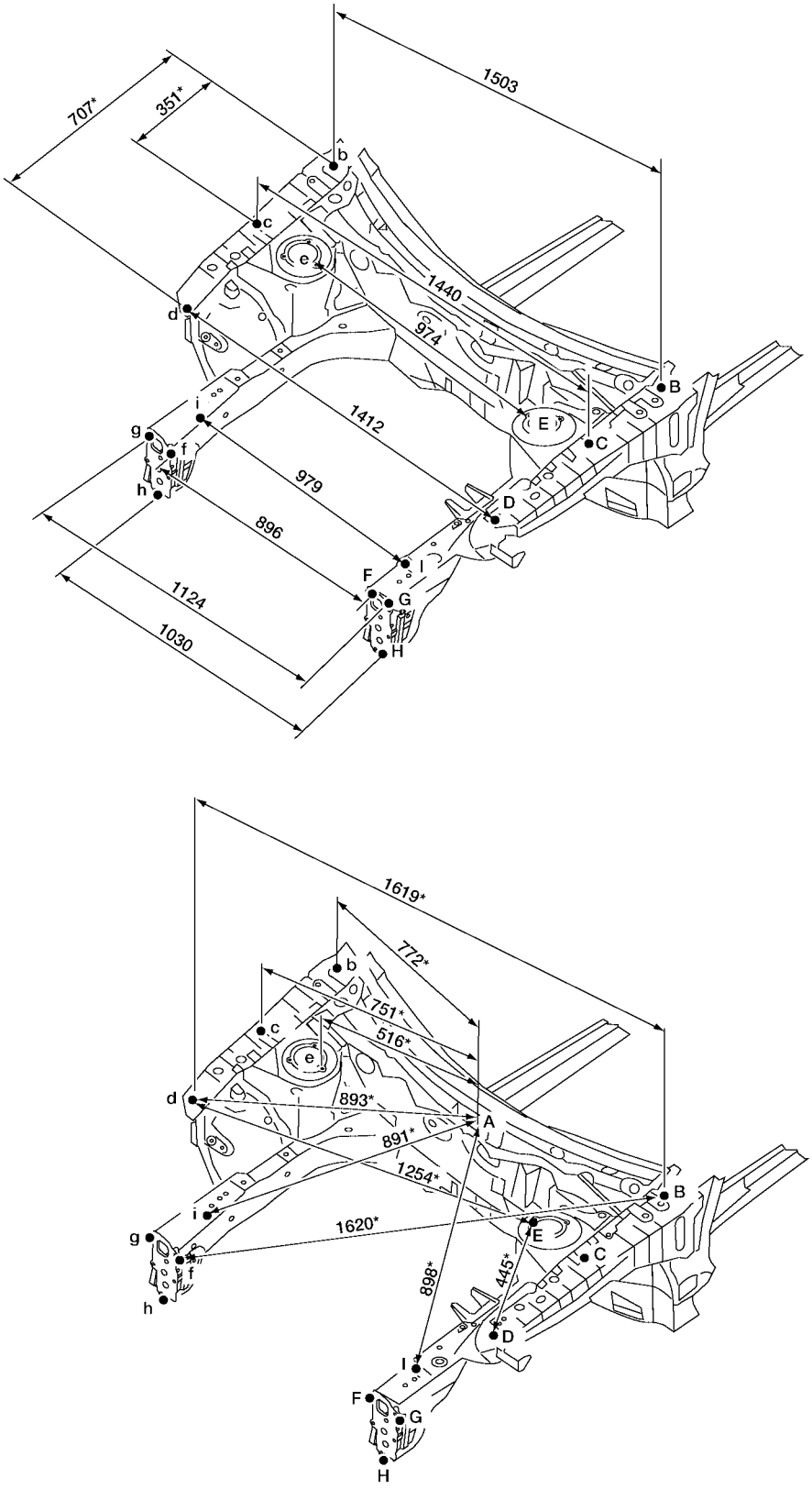
LIIA0511E

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".

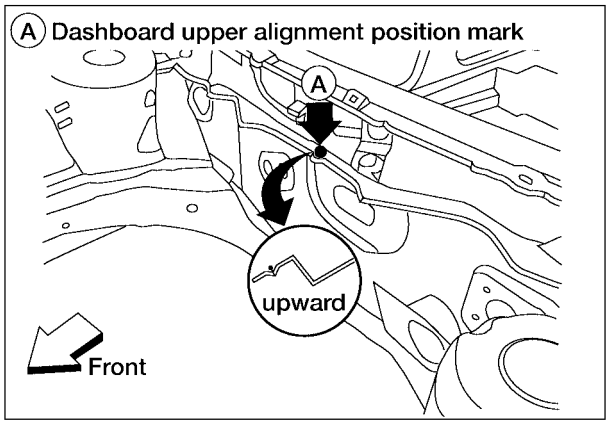


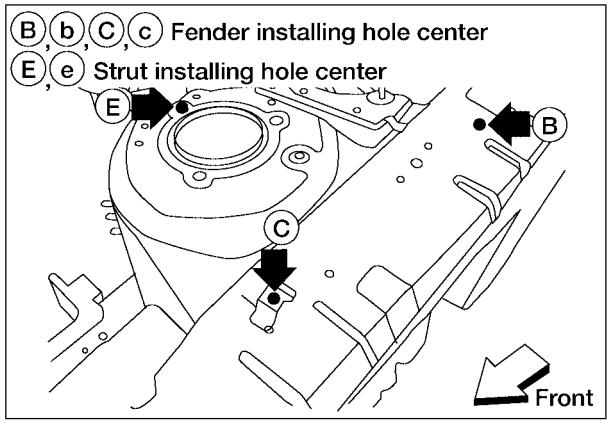
ENGINE COMPARTMENT
MEASUREMENT

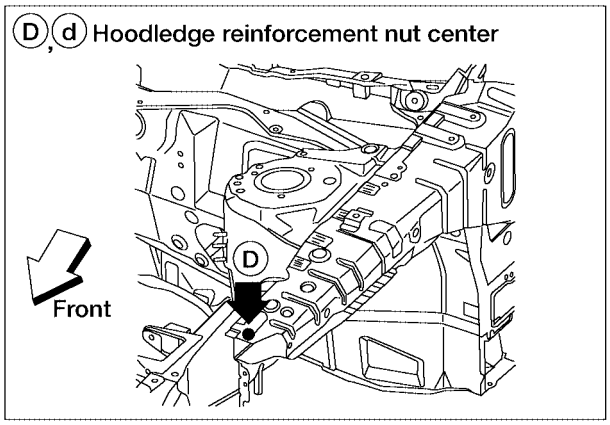


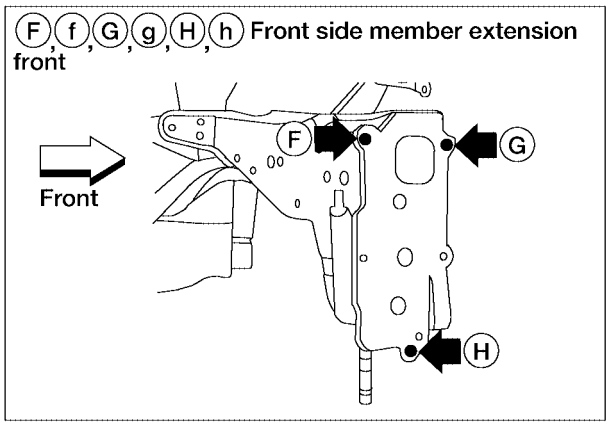
LIIA0276E

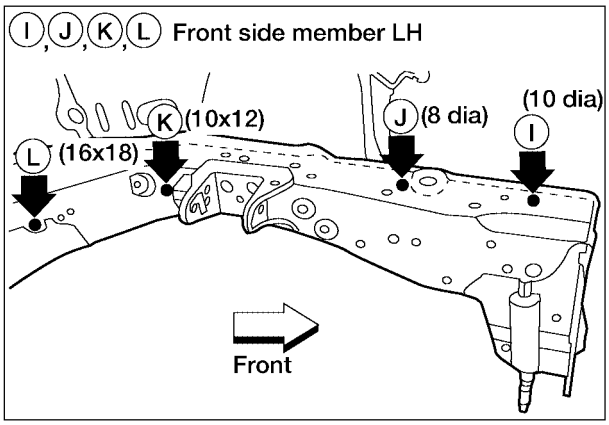
MEASUREMENT POINTS

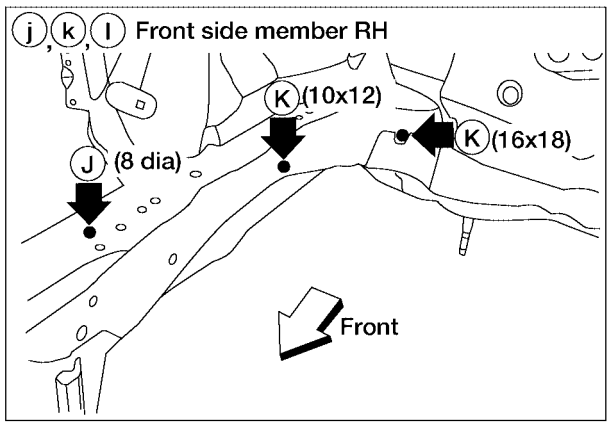






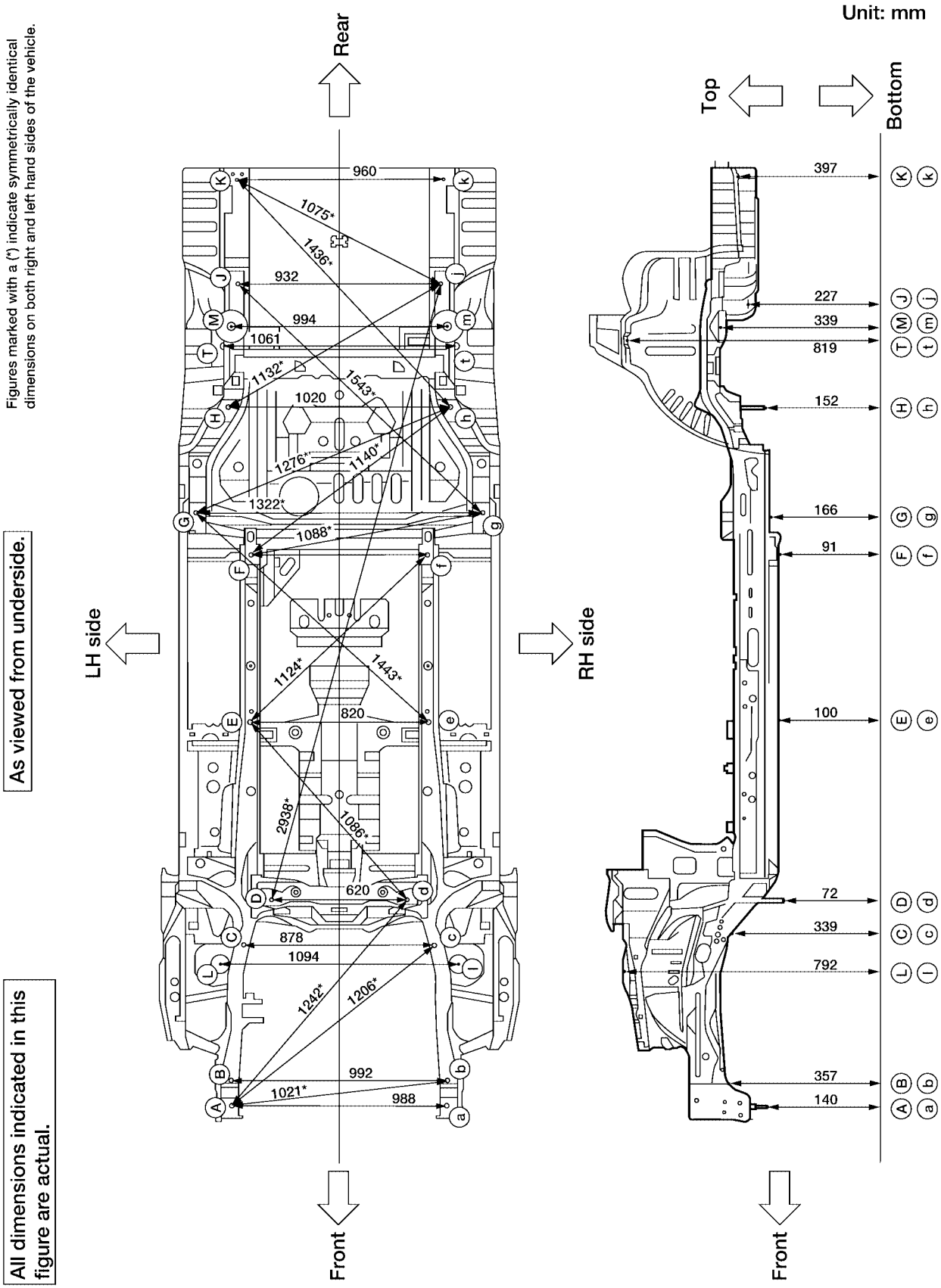






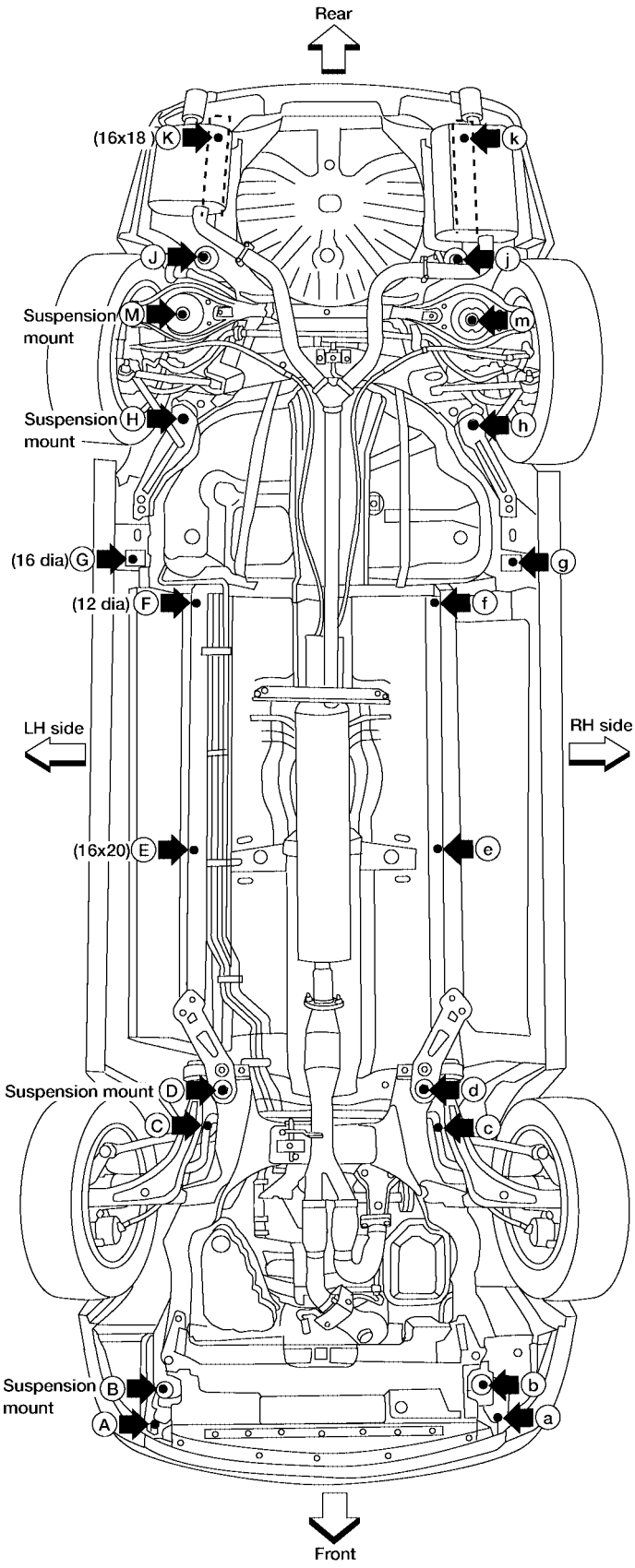
LIIA0551E

UNDERBODY MEASUREMENT



WIIA0246E

MEASUREMENT POINTS



Coordinates:

Ⓐ,ⓐ
X : 494
Y : -617
Z : 141

Ⓑ,ⓑ
X : 495
Y : -500
Z : 357

Ⓒ,ⓒ
X : 438
Y : 122
Z : 339

Ⓓ,ⓓ
X : 309
Y : 327
Z : 387

Ⓔ,ⓔ
X : 410
Y : 1140
Z : 100

Ⓕ,ⓕ
X : 407
Y : 1912
Z : 91

Ⓖ,ⓖ
X : 661
Y : 2105
Z : 166

Ⓗ,ⓗ
X : 510
Y : 2587
Z : 152

Ⓜ,ⓜ
X : 497
Y : 2961
Z : 338

Ⓙ,ⓙ
X : 465
Y : 3157
Z : 226

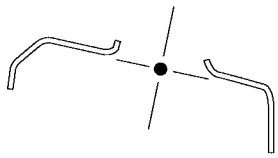
Ⓚ,ⓚ
X : 479
Y : 3636
Z : 397

Strut tower centers

Coordinates:

Ⓛ,Ⓘ Front
X : 547
Y : 28
Z : 791

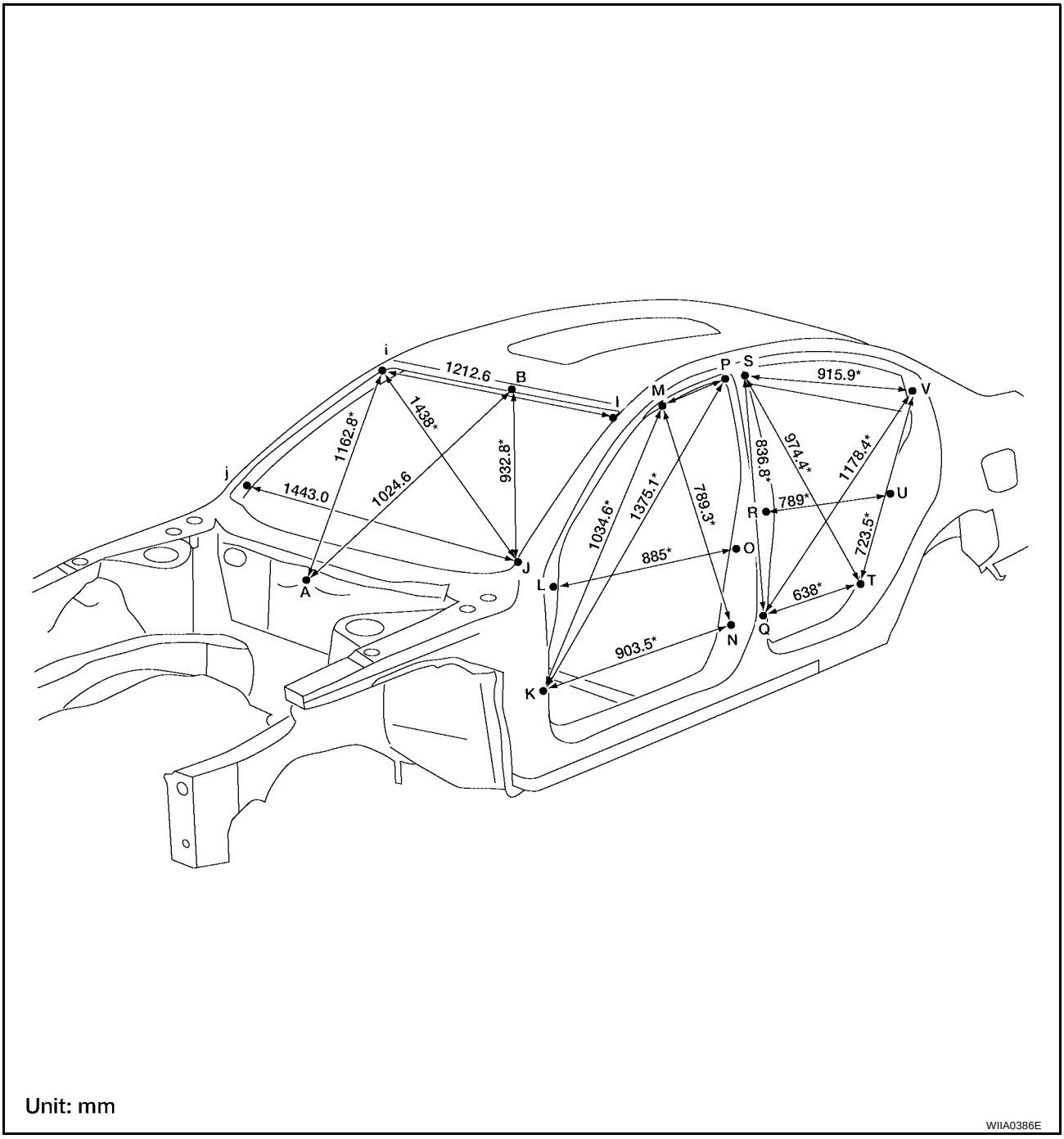
Ⓣ,ⓣ Rear
X : 530
Y : 2857
Z : 817



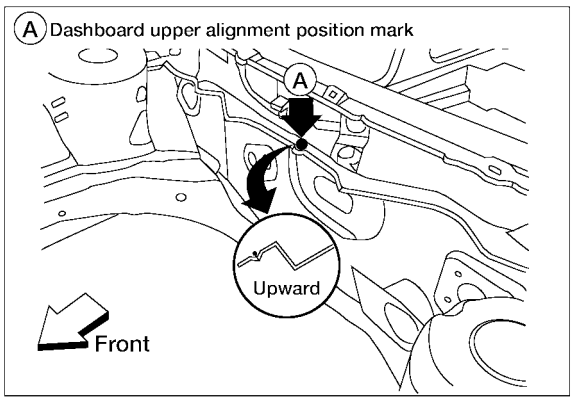
Unit: mm

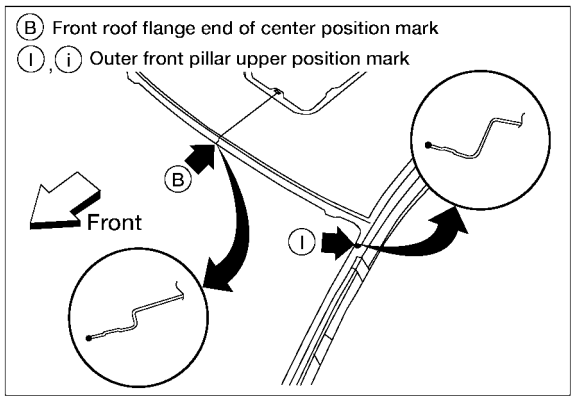
WIIA0385E

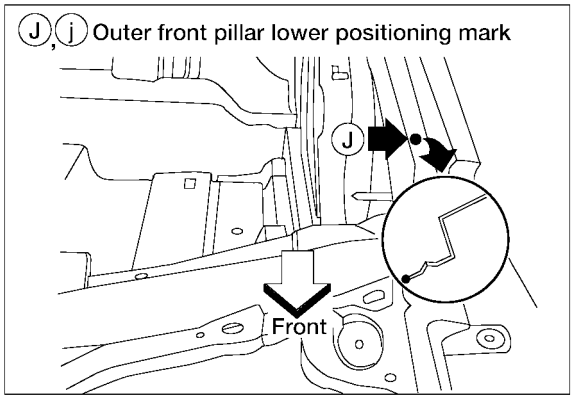
PASSENGER COMPARTMENT
MEASUREMENT

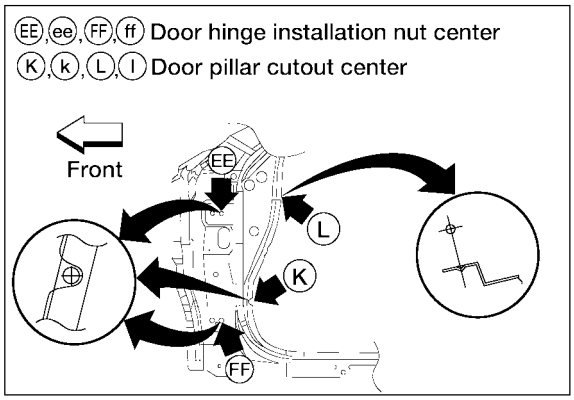


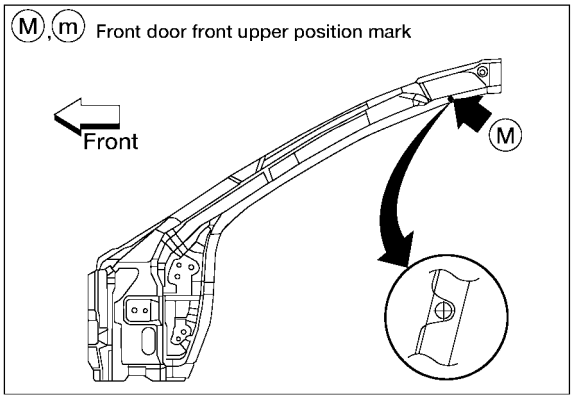
MEASUREMENT POINTS

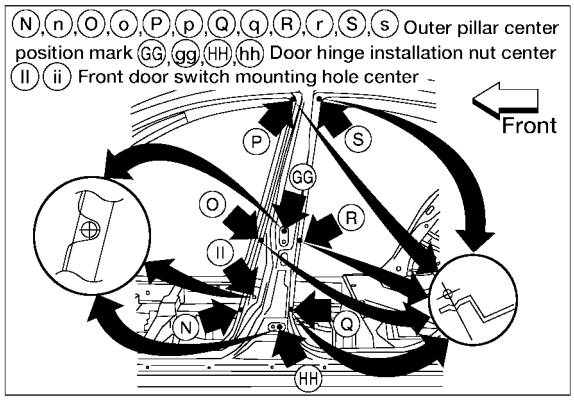


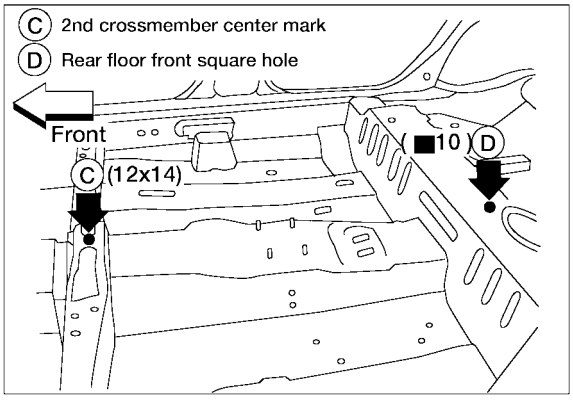


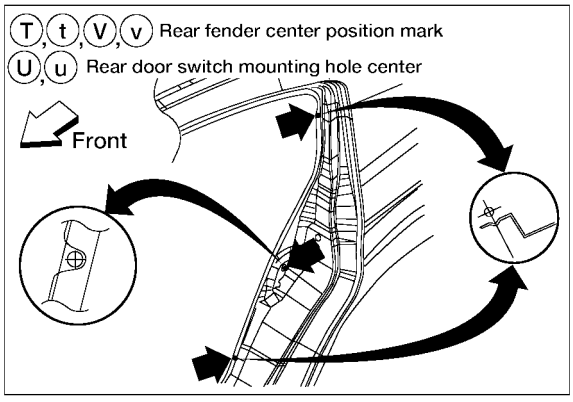






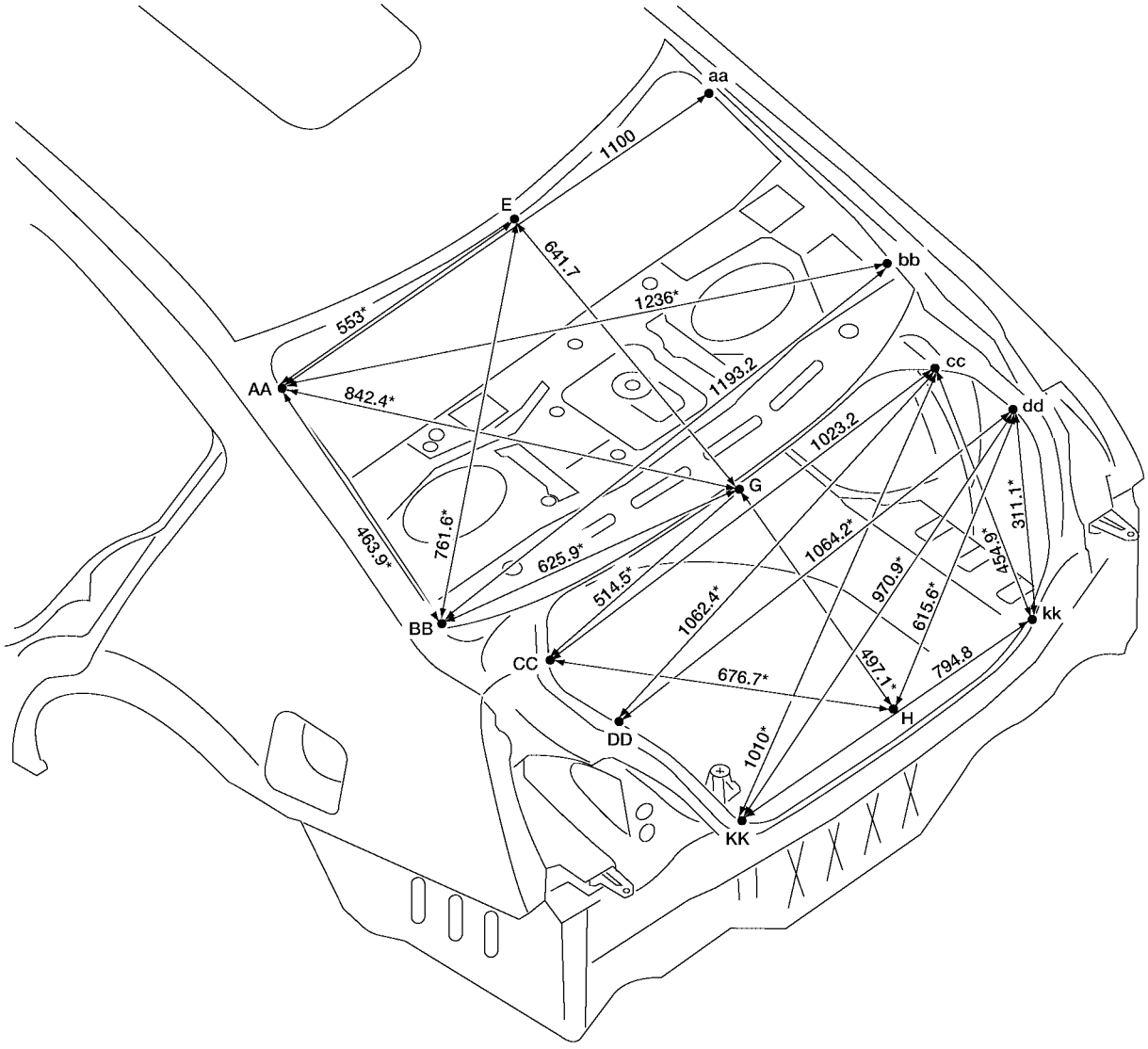






LIIA0555E

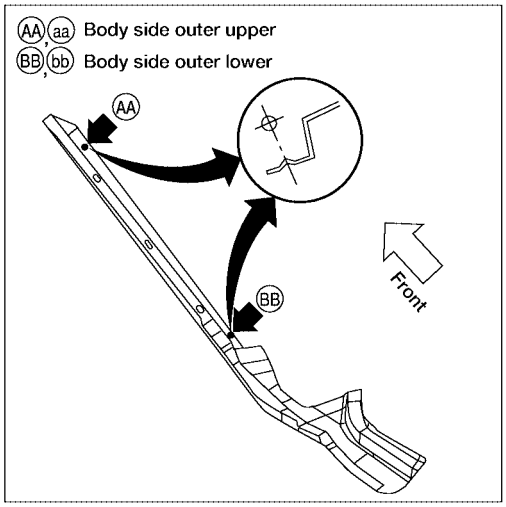
REAR BODY
MEASUREMENT

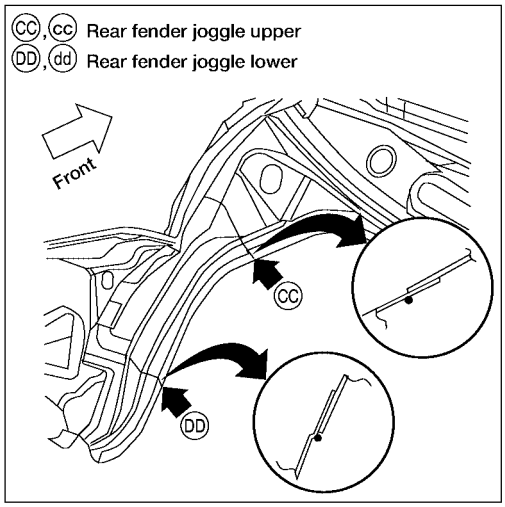


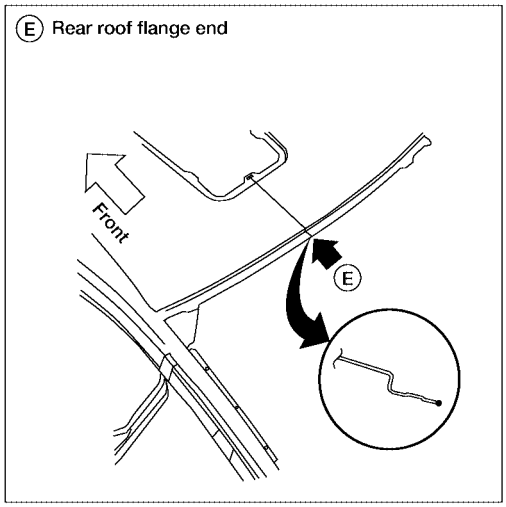
Unit: mm

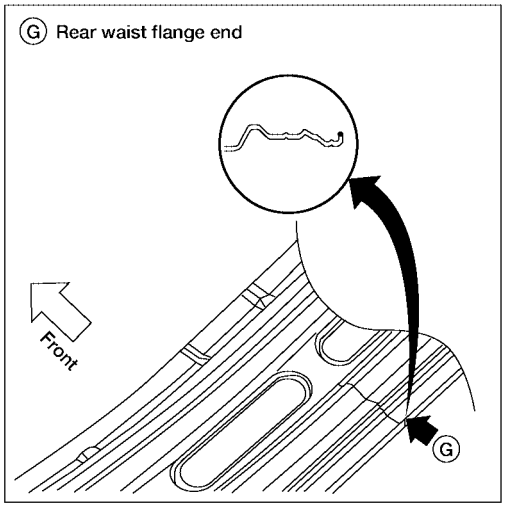
WIIA0387E

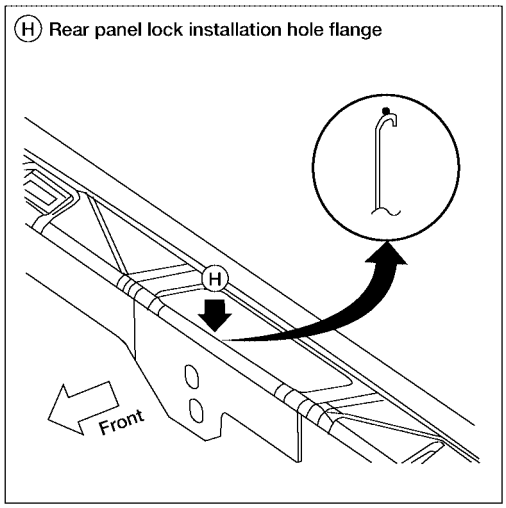
MEASUREMENT POINTS

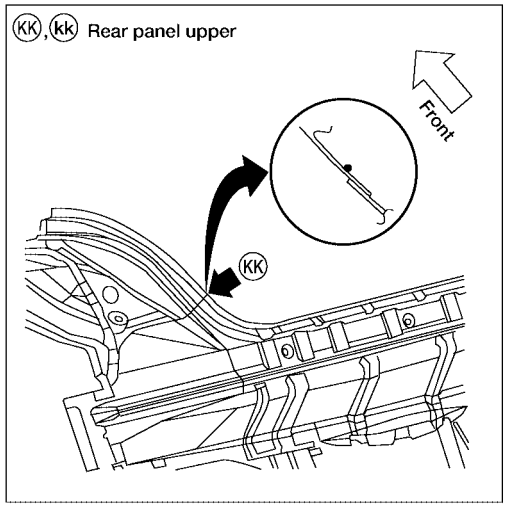












LIIA0554E

Handling Precautions for Plastics

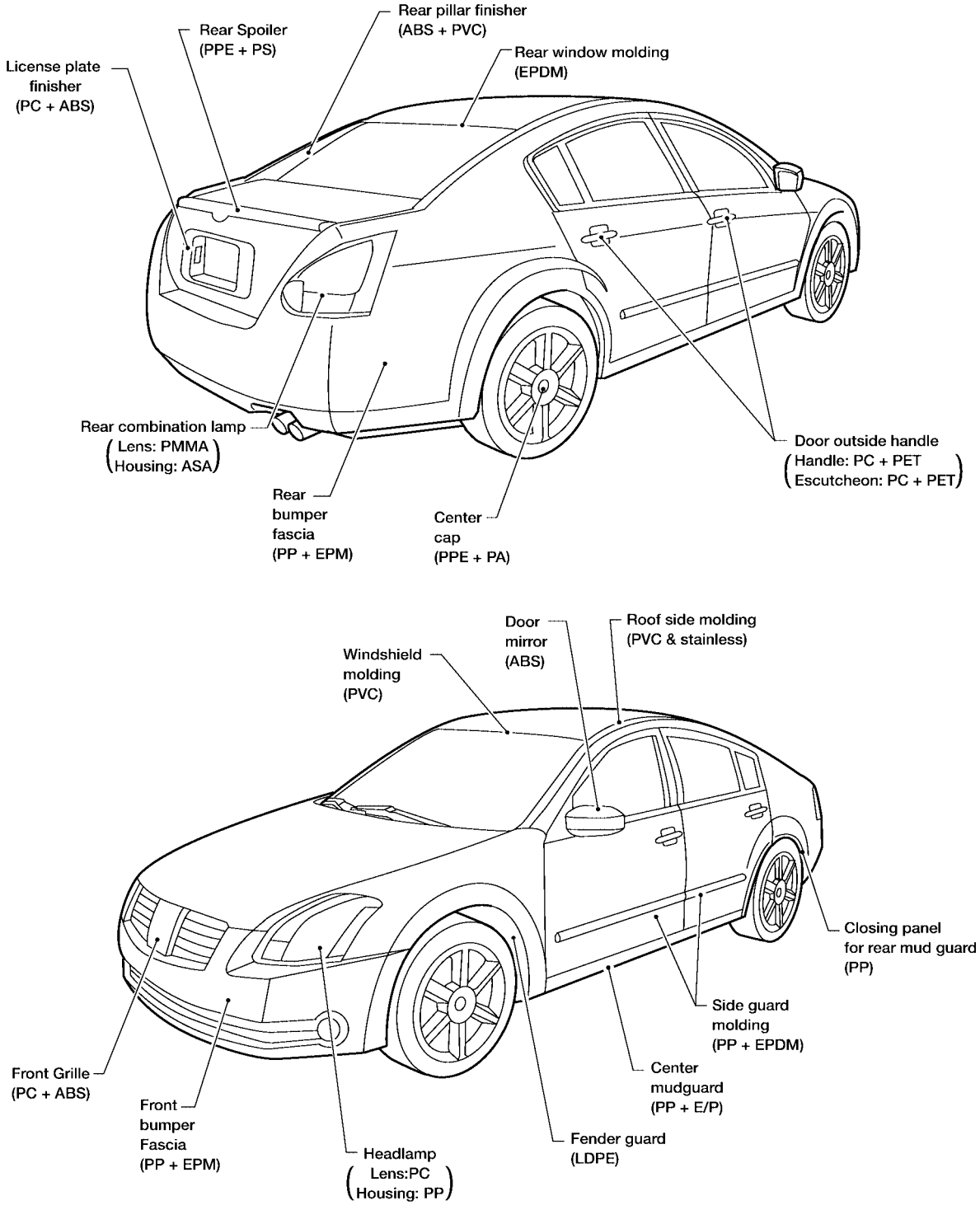
EIS001IC

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	Polyvinyl Chloride	80 (176)	Same as above.	Poison gas is emitted when burned.
EPM/ EPDM	Ethylene Propylene (Diene) rubber	80 (176)	Same as above.	Flammable
TPO/ TPR	Thermoplastic Olefine/ Thermoplastic Rubber	80 (176)	Same as above.	Flammable
PP	Polypropylene	90 (194)	Same as above.	Flammable, avoid battery acid.
UP	Polyester thermoset	90 (194)	Same as above.	Flammable
PS	Polystyrene	80 (176)	Avoid solvents.	Flammable
ABS	Acrylonitrile Butadiene Styrene resin	80 (176)	Avoid gasoline and solvents.	
AES	Acrylonitrile Ethylene Styrene	80 (176)	Same as above.	
PMMA	Polymethyl Methacrylate	85 (185)	Same as above.	
AAS	Acrylonitrile Acrylic Styrene	85 (185)	Same as above.	
AS	Acrylonitrile Styrene	85 (185)	Same as above.	
EVA	Polyvinyl Ethyl Acetate	90 (194)	Same as above.	
ASA	Acrylonitrile Styrene Acrylate	100 (222)	Same as above.	Flammable
PPO/ PPE	Polyphenylene Oxide/ Polyphenylene Ether	110 (230)	Same as above.	
PC	Polycarbonate	120 (248)	Same as above.	
PAR	Polyacrylate	180 (356)	Same as above.	
L-LDPE	Lenear Low Density PE	45 (100)	Gasoline and most solvents are harmless.	Flammable
PUR	Polyurethane	90 (194)	Same as above.	
TPU	Thermoplastic Urethane	110 (230)	Same as above.	
PPC	Polypropylene Composite	115 (239)	Same as above.	Flammable
POM	Polyacetal	120 (248)	Same as above.	Avoid battery acid.
PBT+PC	Polybutylene Terephthalate+Polycarbonate	120 (248)	Same as above.	Flammable
PA	Polyamide (Nylon)	140 (284)	Same as above.	Avoid immersing in water.
PBT	Polybutylene Terephthalate	140 (284)	Same as above.	
FRP	Fiber Reinforced Plastics	170 (338)	Same as above.	Avoid battery acid.
PET	Polyethylene Terephthalate	180 (356)	Same as above.	
PEI	Polyetherimide	200 (392)	Same as above.	

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

LOCATION OF PLASTIC PARTS



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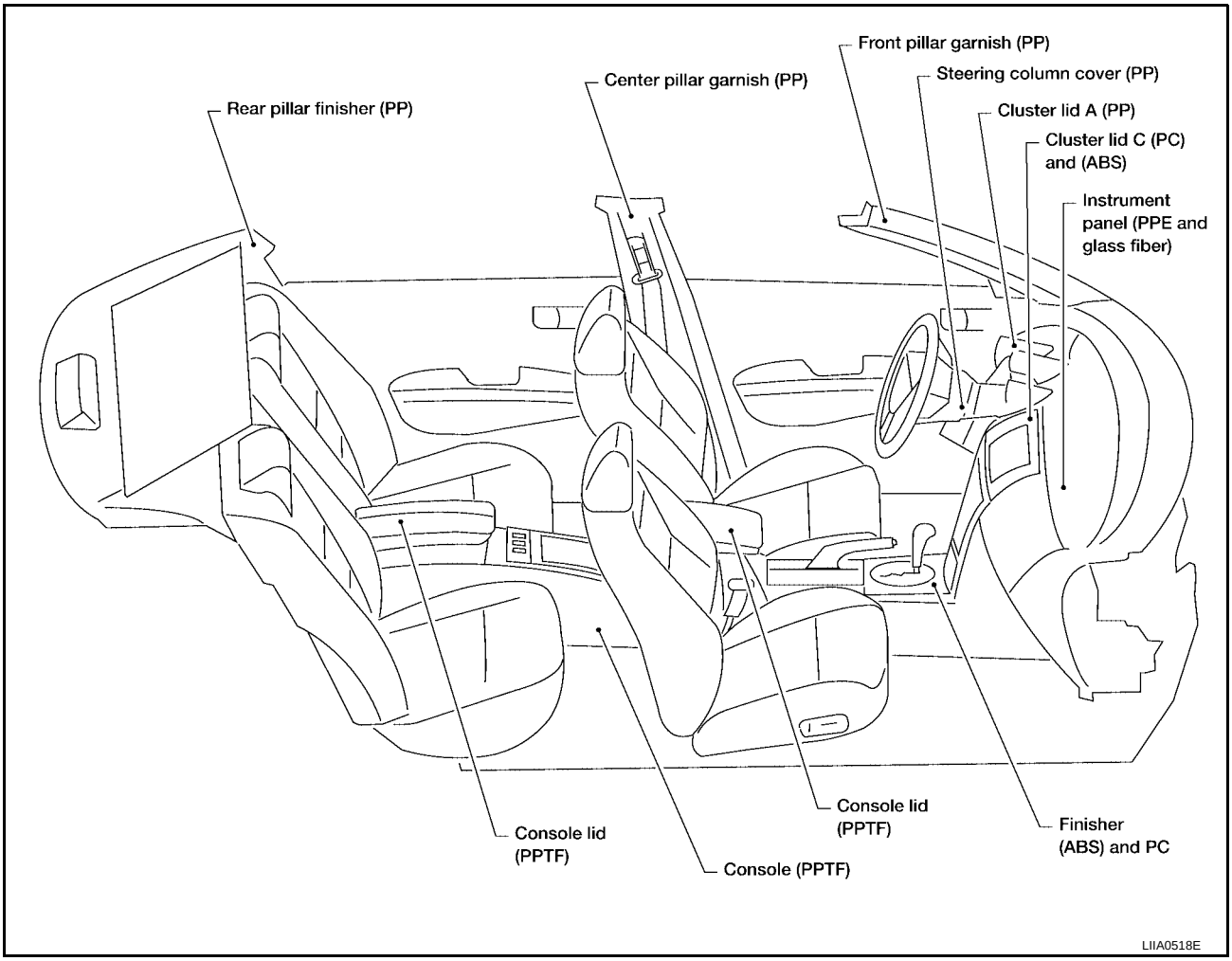

Front pillar garnish (PP)
Center pillar garnish (PP)
Steering column cover (PP)
Rear pillar finisher (PP)
Cluster lid A (PP)
Cluster lid C (PC) and (ABS)
Instrument panel (PPE and glass fiber)
Console lid (PPTF)
Console lid (PPTF)
Console (PPTF)
Finisher (ABS) and PC
LIIA0518E

Precautions in Repairing High Strength Steel

EIS001ID

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

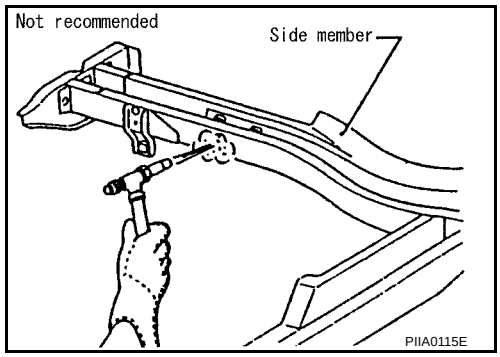
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm^2 (38kg/mm^2 ,54klb/sq in)	SP130	● Front side member assembly ● Upper hoodledge ● Upper pillar hinge brace assembly ● Rear side member extension ● Other reinforcements
785-981 N/mm^2 (80-100kg/mm^2 114-142klb/sq in)	SP150	●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

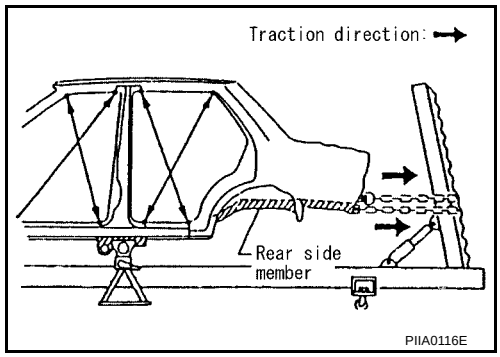
Read the following precautions when repairing HSS:

1. Additional points to consider

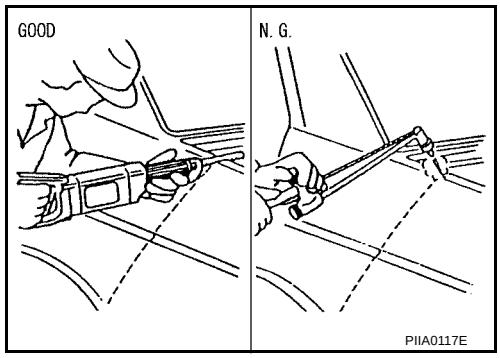
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).
  Verify heating temperature with a thermometer.
  (Crayon-type and other similar type thermometer are appropriate.)



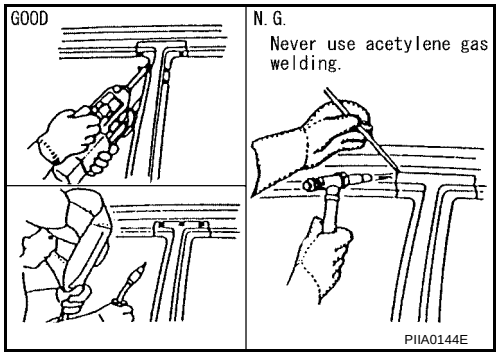
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



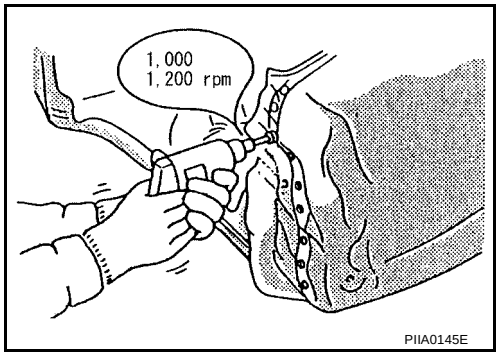
- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



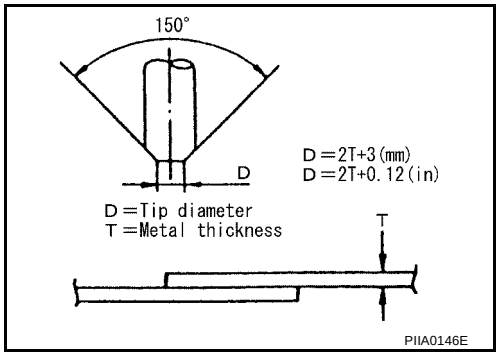
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



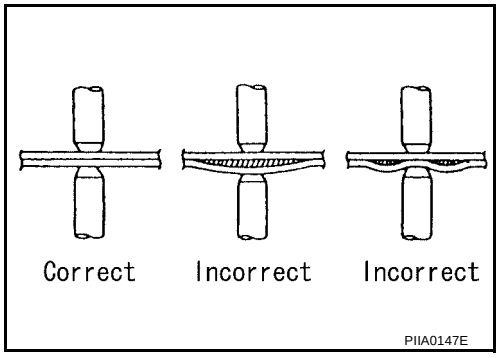
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.
- SP150 HSS panels with a tensile strength of 785 to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



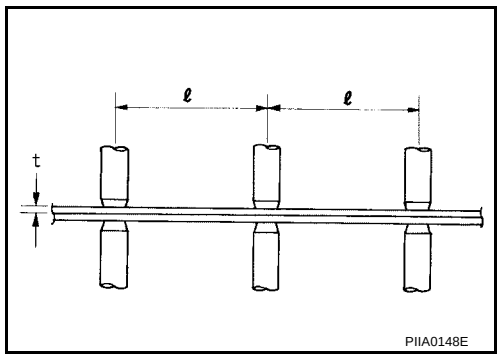
- The panel surfaces must fit flush to each other, leaving no gaps.



- 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



Foam Repair

EIS0047N

During factory body assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

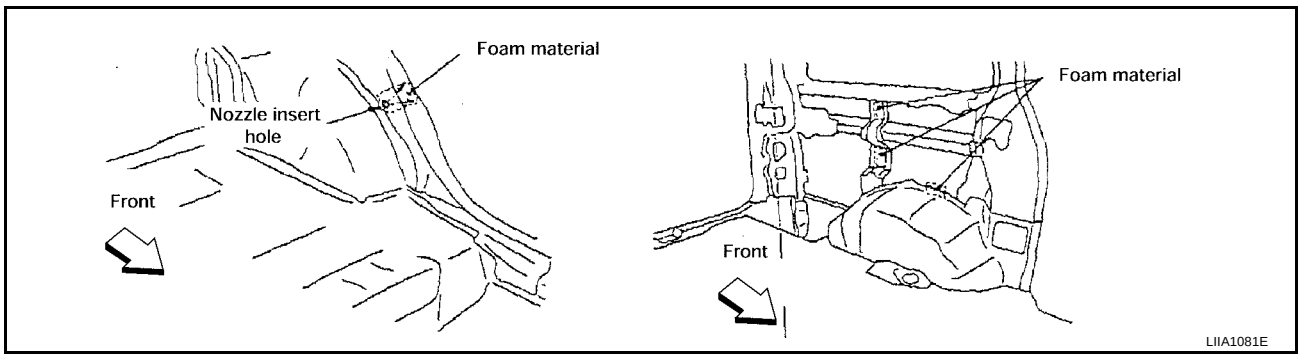
URETHANE FOAM APPLICATIONS

Use commercially available spray foam for sealant (foam material) repair of material used on vehicle. Read instructions on product for fill procedures.

FILL PROCEDURES

1. Fill procedures after installation of service part.

- Remove foam material remaining on vehicle side.
- Clean area in which foam was removed.
- Install service part.
- Insert nozzle into hole near fill area and fill foam material or fill in enough to close gap with the service part.



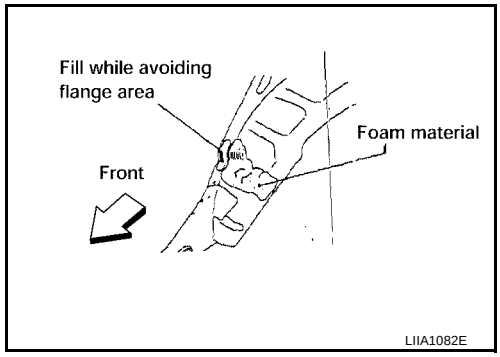
2. Fill procedures before installation of service part.

- Remove foam material remaining on vehicle side.
- Clean area in which foam was removed.
- Fill foam material on wheelhouse outer side.

NOTE:
Fill in enough to close gap with service part while avoiding flange area.

- Install service part.

NOTE:
Refer to label for information on working times.



Replacement Operations

EIS001IE

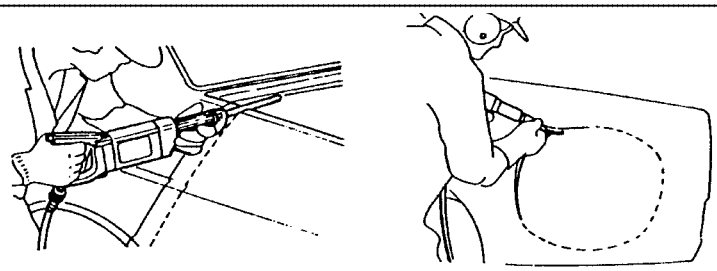
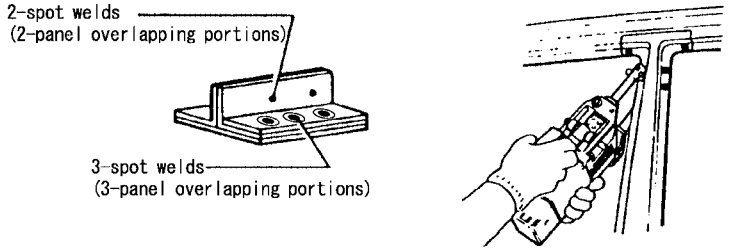
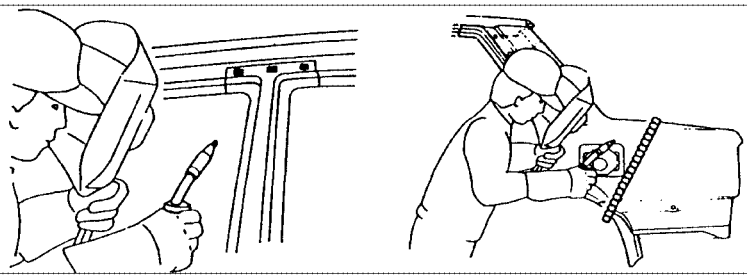
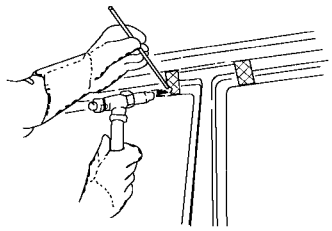
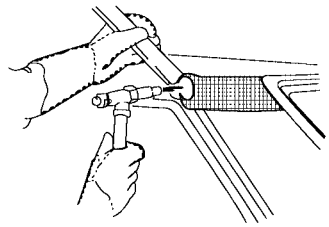
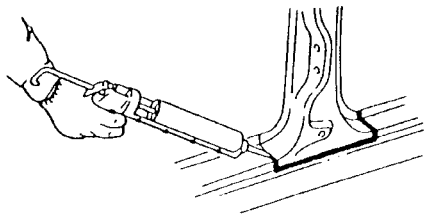
DESCRIPTION

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

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

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

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

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

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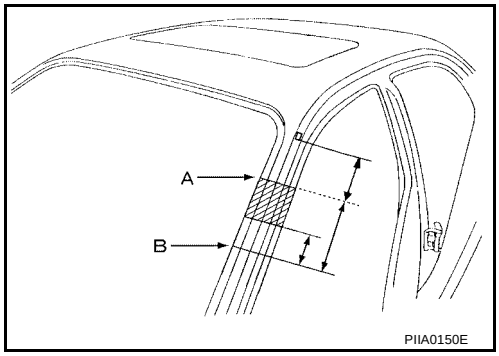
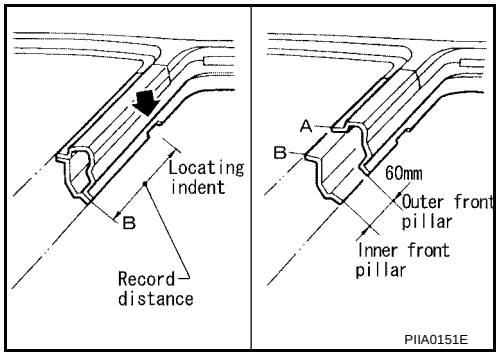
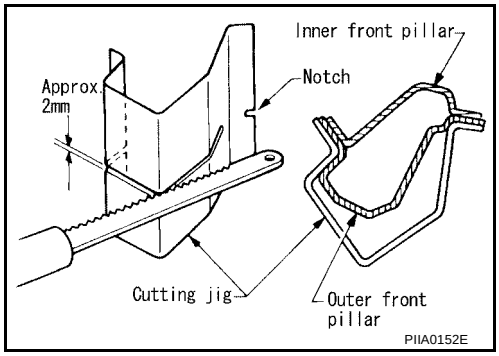
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



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

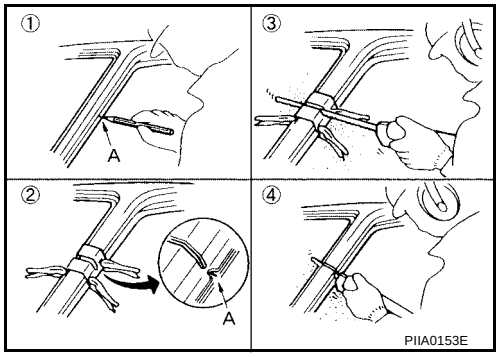


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



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

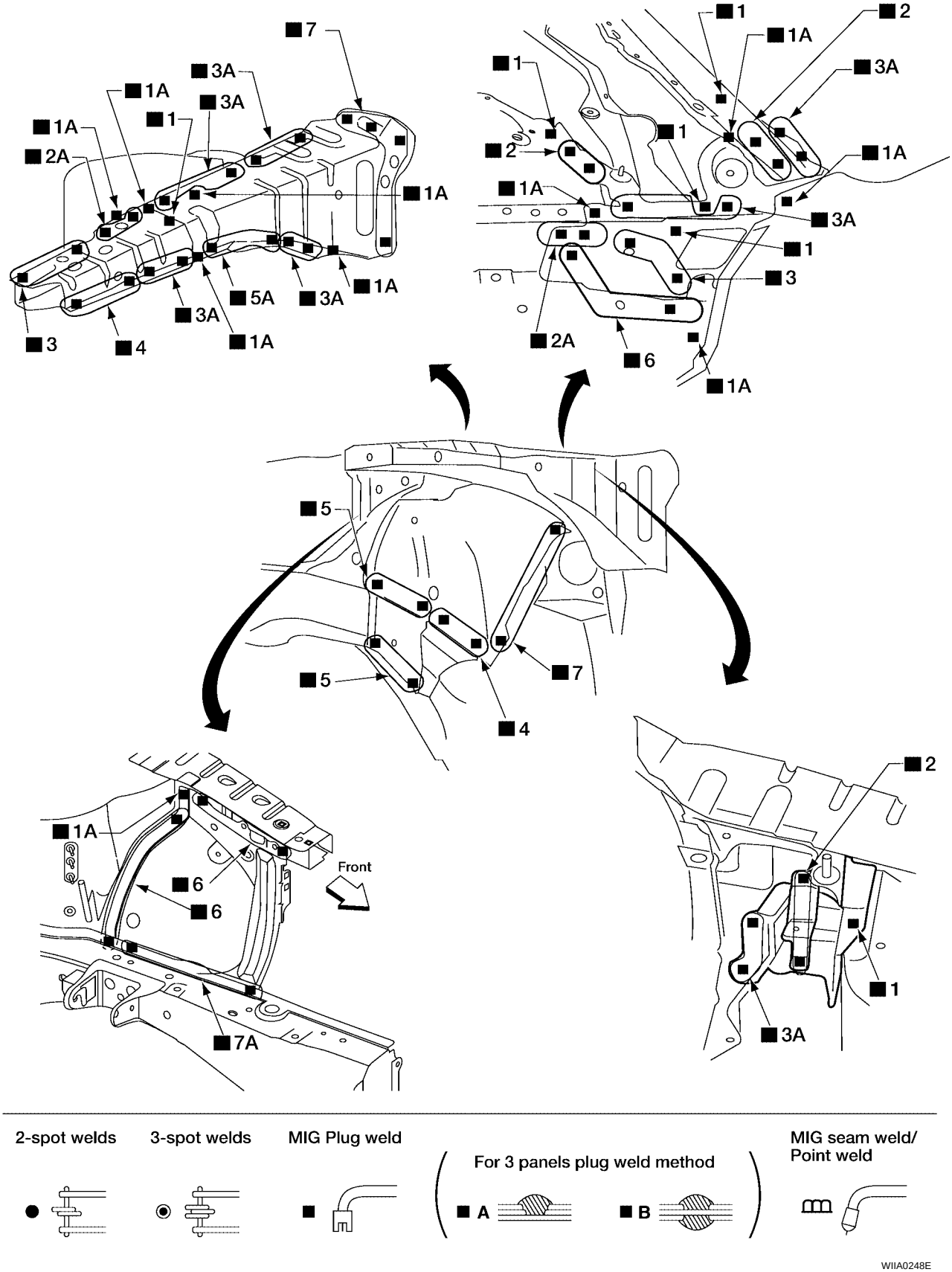
1. Mark cutting lines.
   A: Cut position of outer pillar
   B: Cut position of inner pillar
2. Align cutting line with notch on jig. Clamp jig to pillar.
3. Cut outer pillar along groove of jig. (At position A)
4. Remove jig and cut remaining portions.
5. Cut inner pillar at position B in same manner.



HOODLEDGE

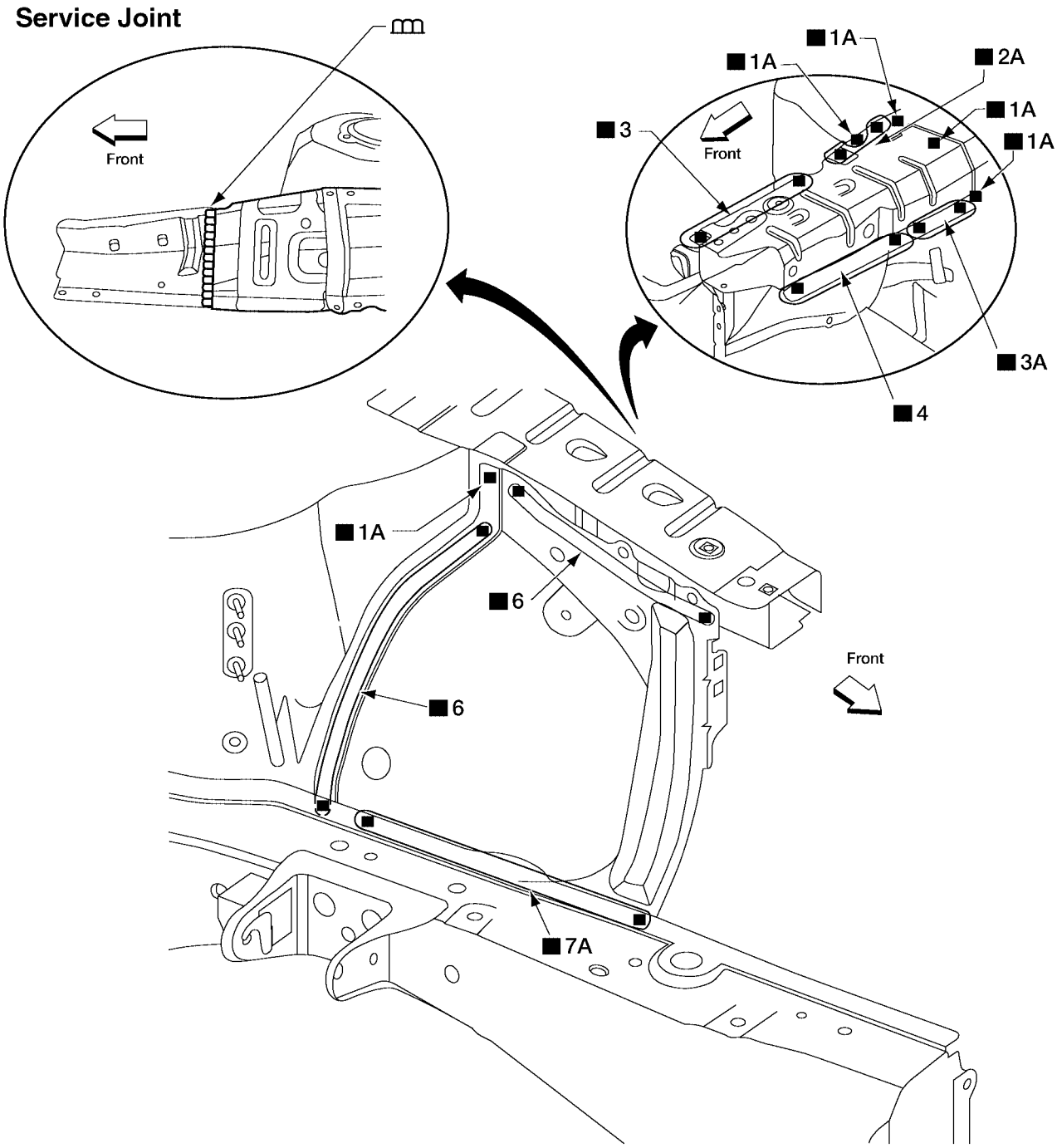
- Work after radiator core support has been removed.

Service Joint



HOODLEDGE (PARTIAL REPLACEMENT)

- Work after radiator core support has been removed.



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

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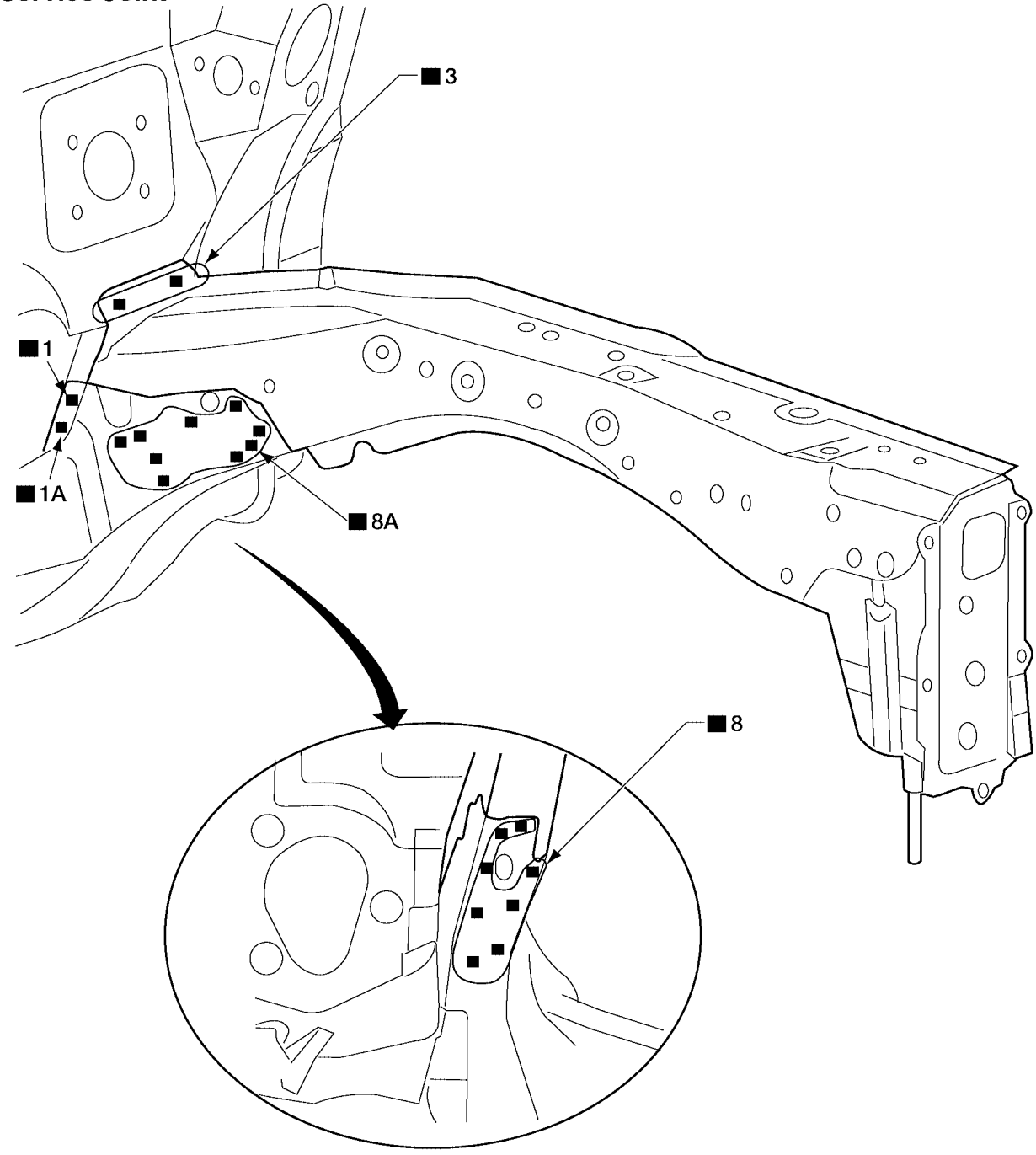
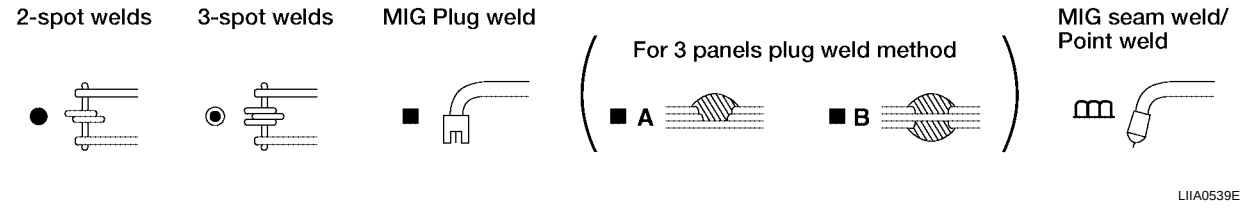
FRONT SIDE MEMBER

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

Service Joint

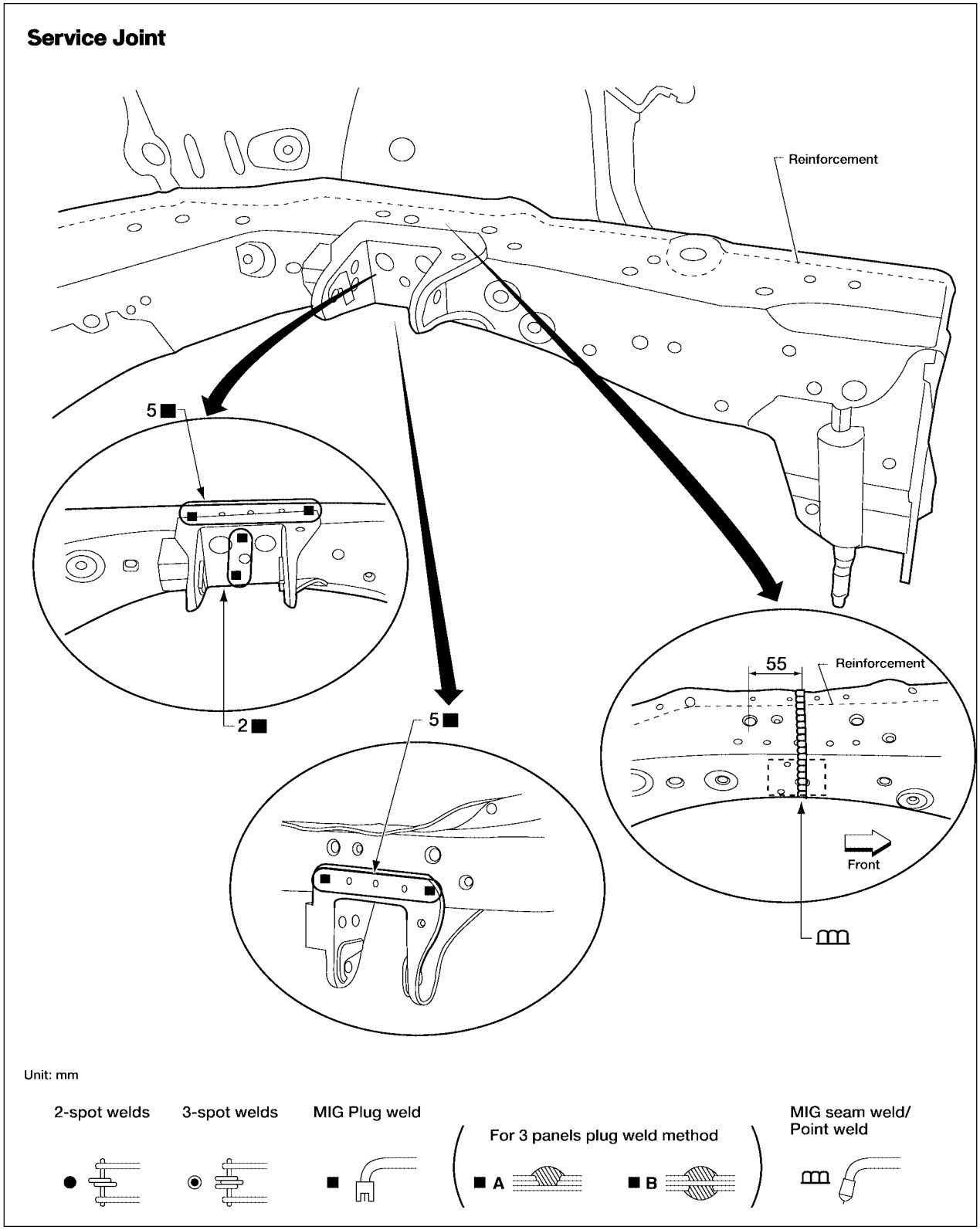




LIIA0539E

FRONT SIDE MEMBER (PARTIAL REPLACEMENT)

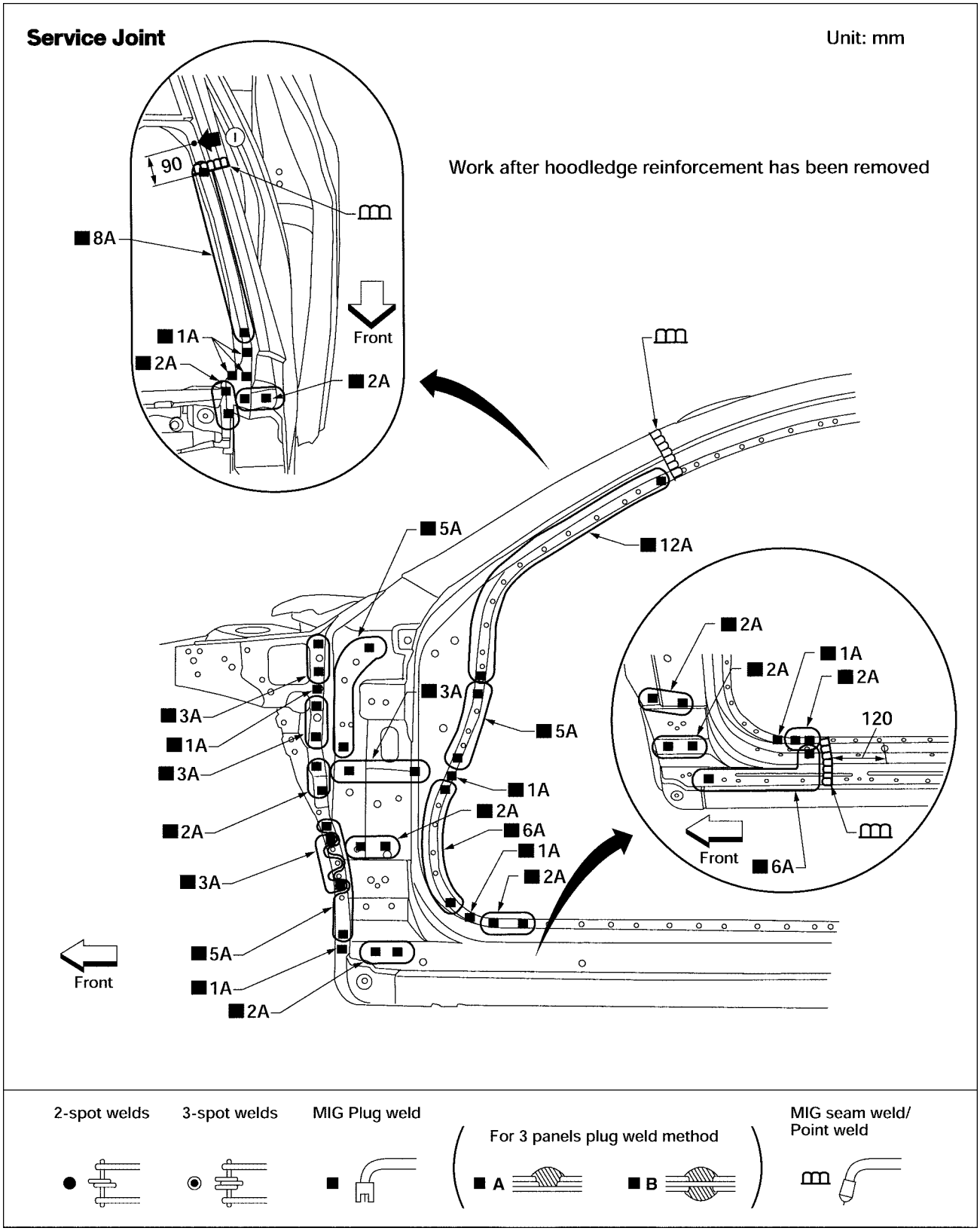
- Work after radiator core support has been removed.



WIIA0158E

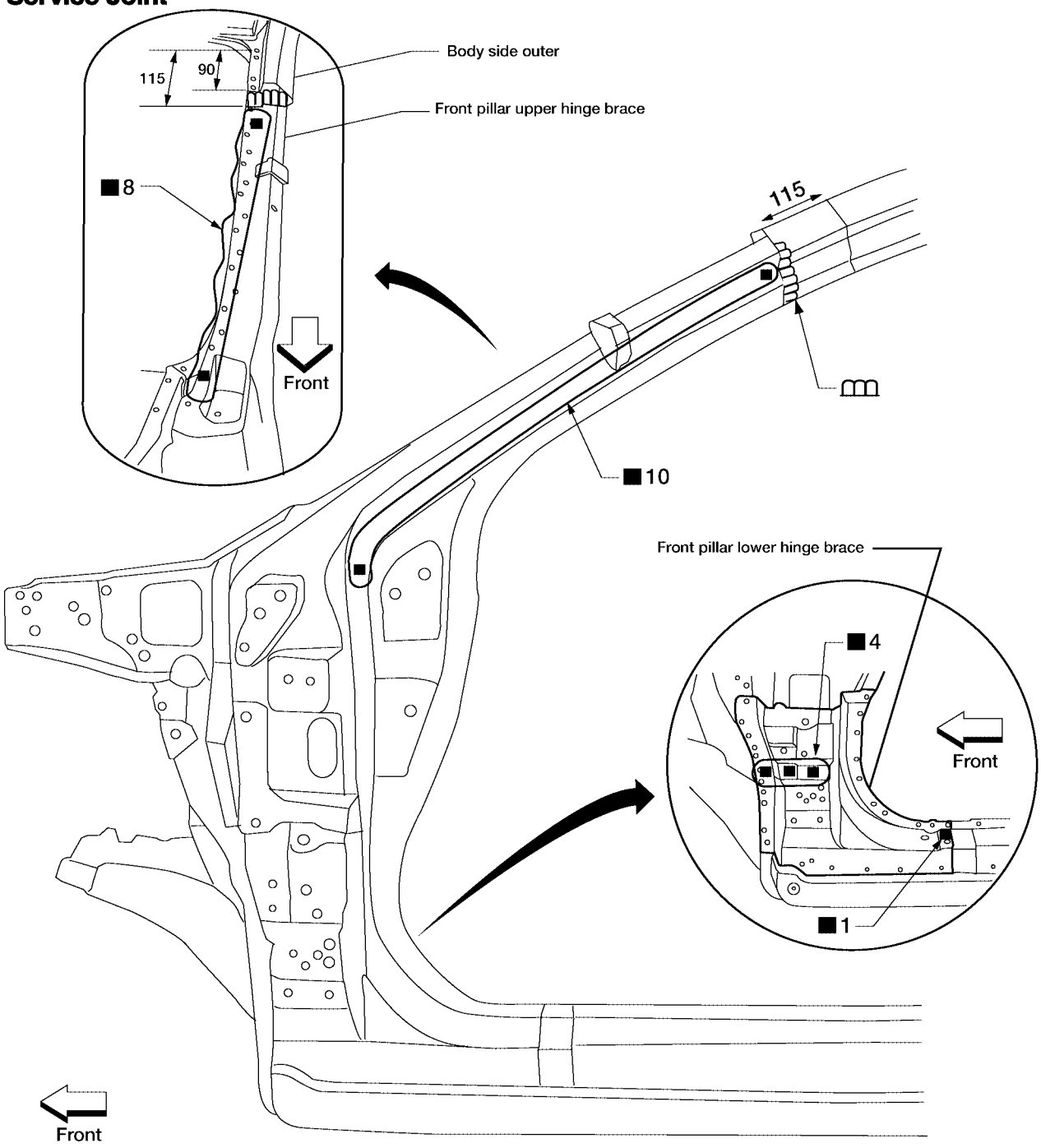
FRONT PILLAR

- Work after rear hoodledge reinforcement has been removed.

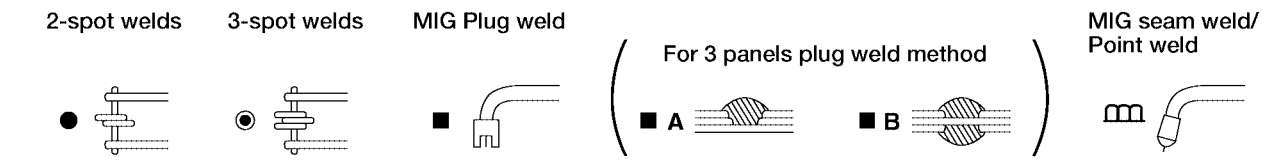


LIIA0541E

Service Joint



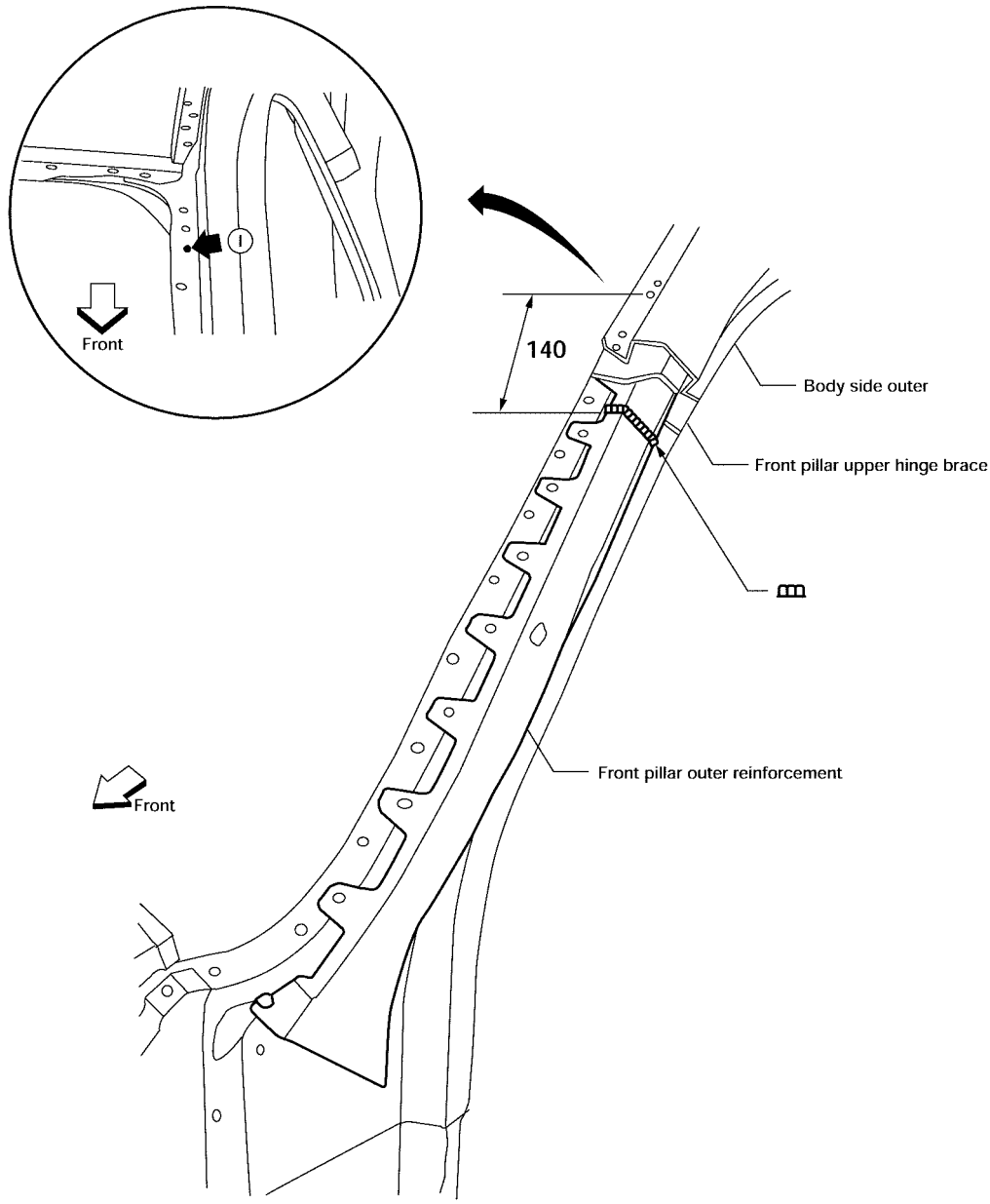
Unit: mm

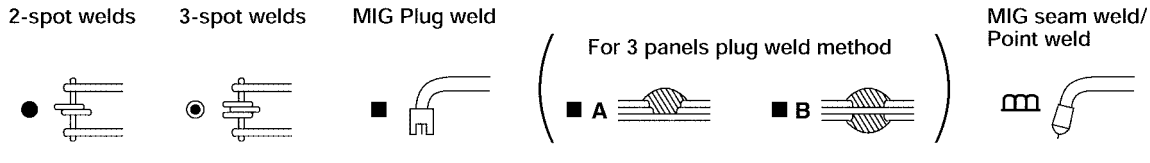


WIIA0388E

Service Joint

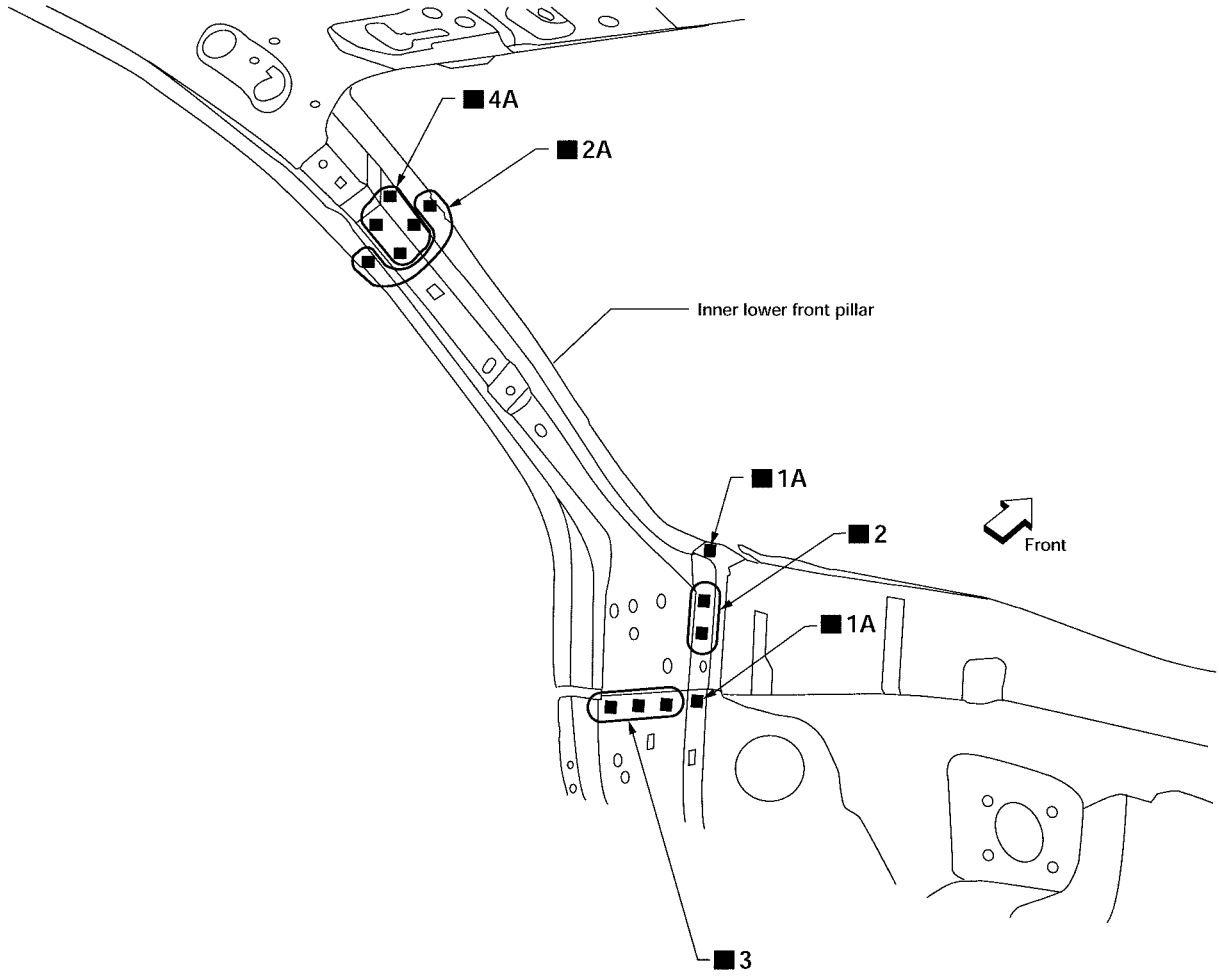
Unit: mm

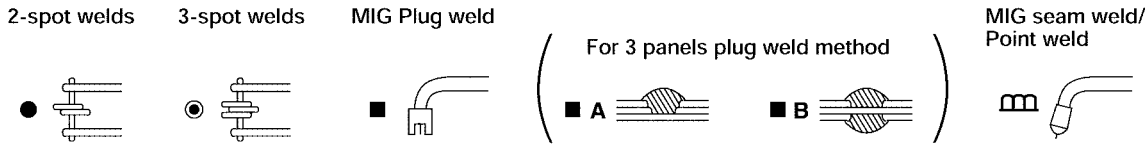




LIIA0543E

Service Joint



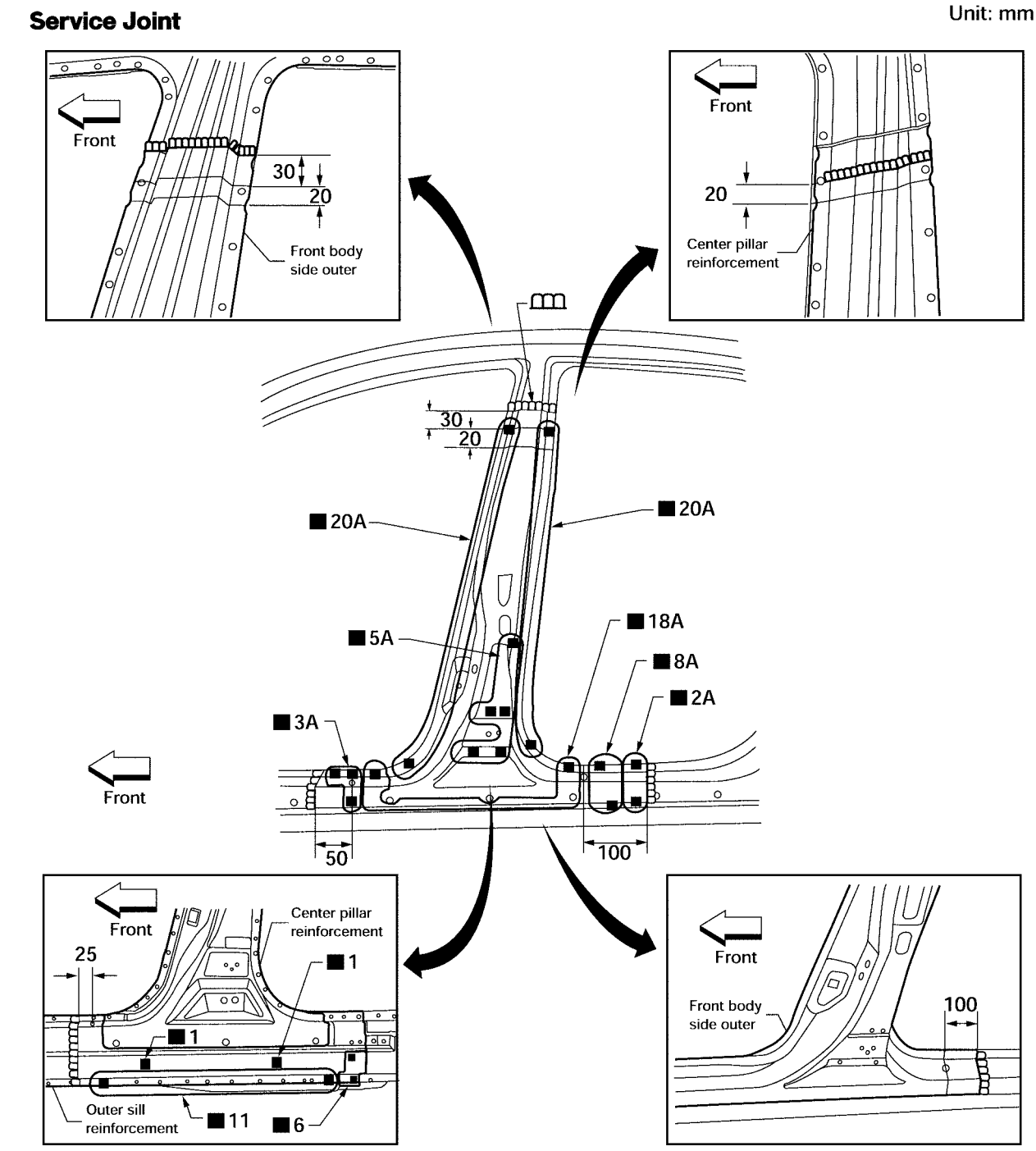


LIIA0544E

CENTER PILLAR

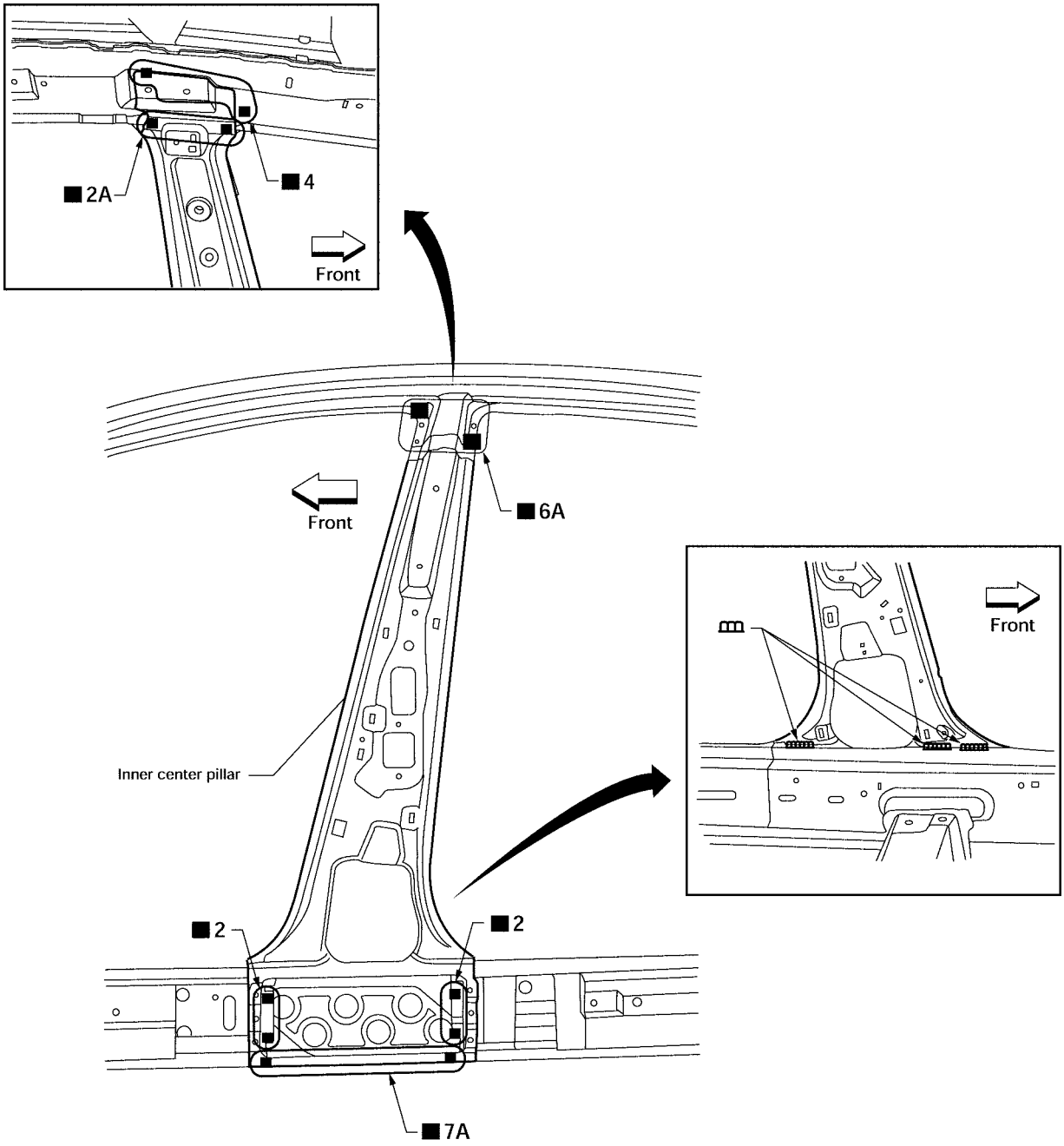
Service Joint

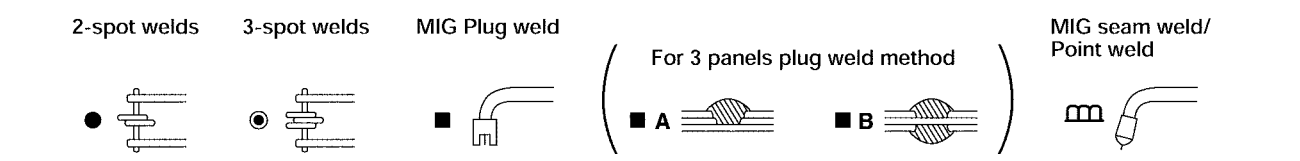
Unit: mm



LIIA0545E

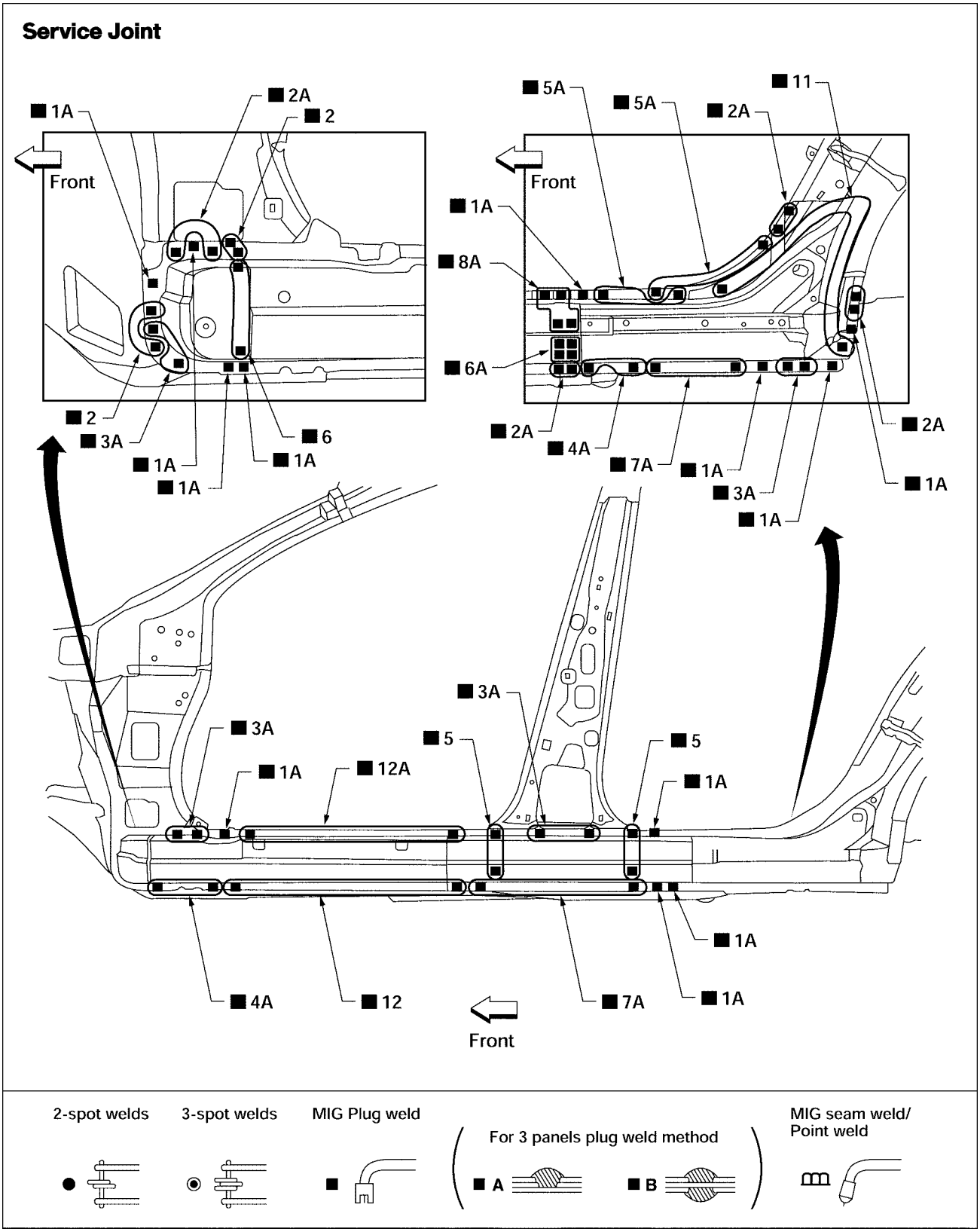
Service Joint





LIIA0546E

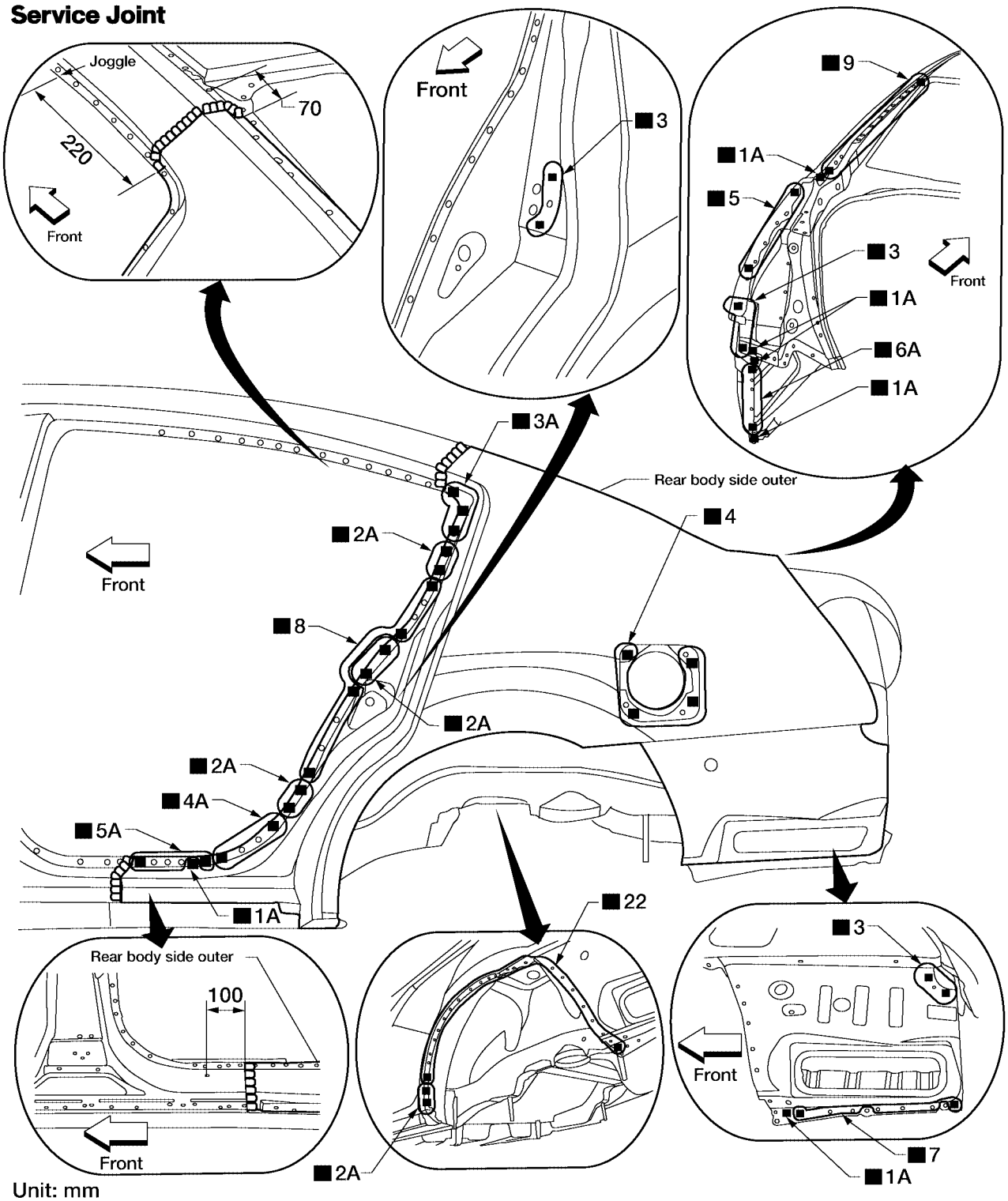
OUTER SILL



LIIA0549E

REAR FENDER

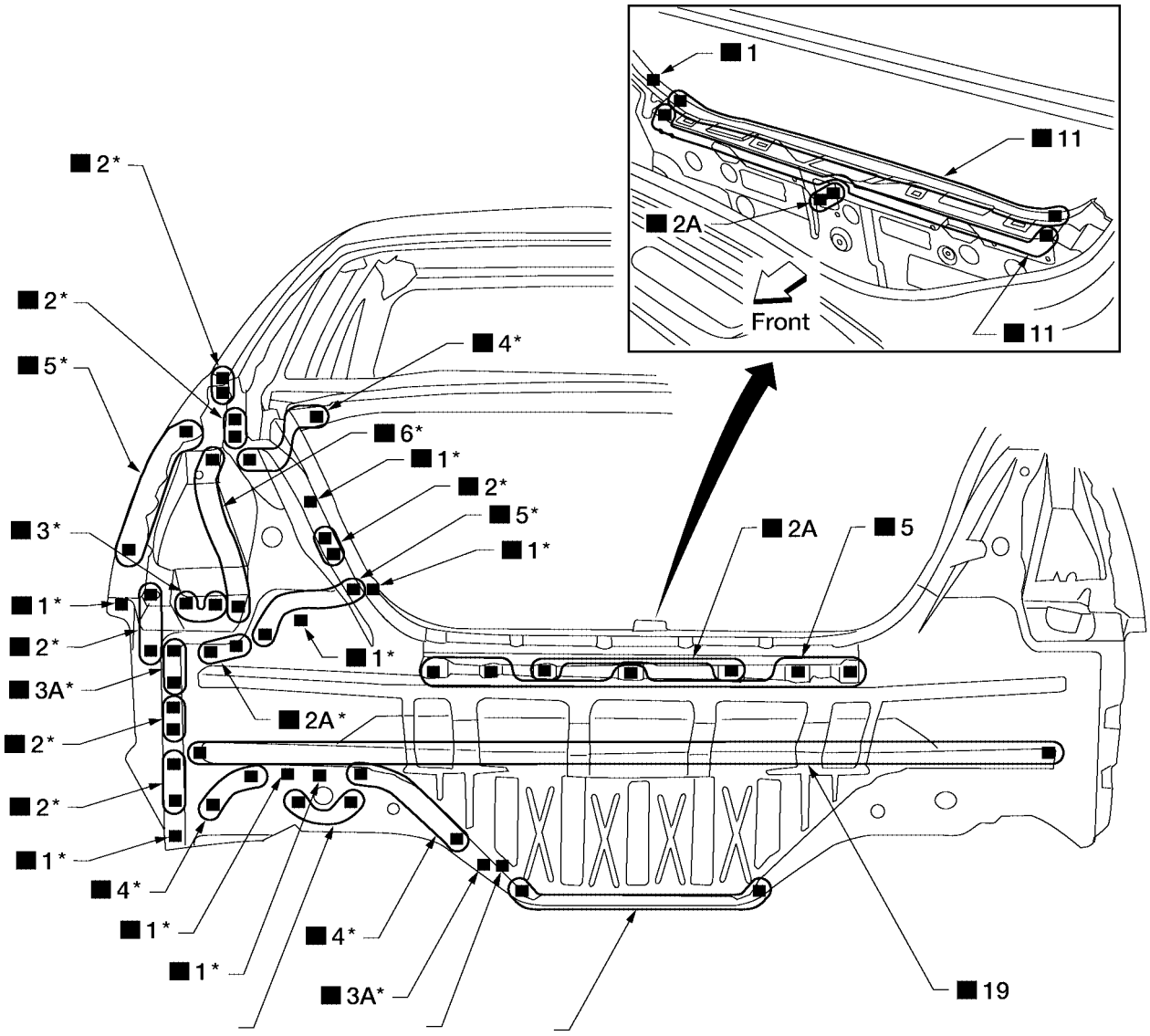
Service Joint

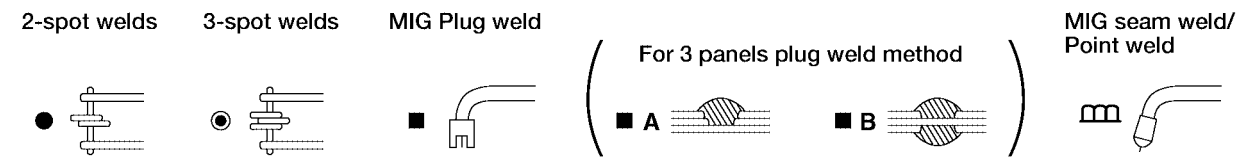


REAR PANEL

Service Joint

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





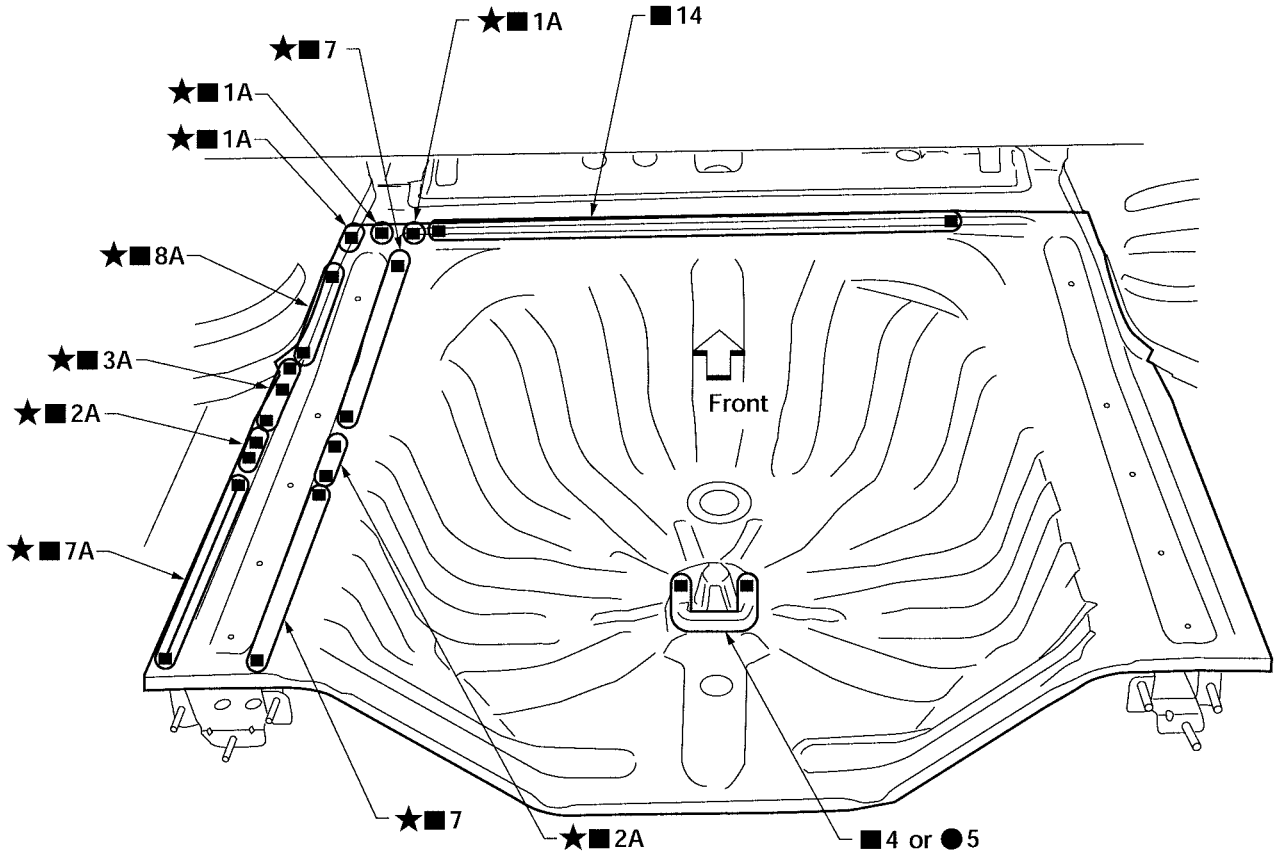
WIIA0390E

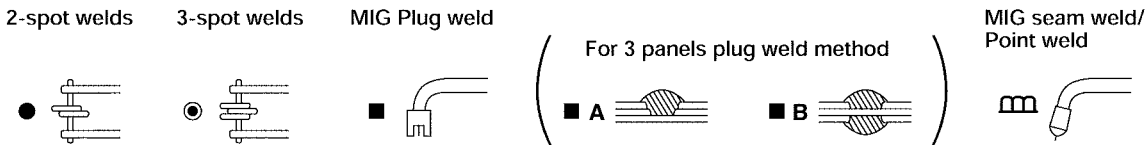
REAR FLOOR REAR

- 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

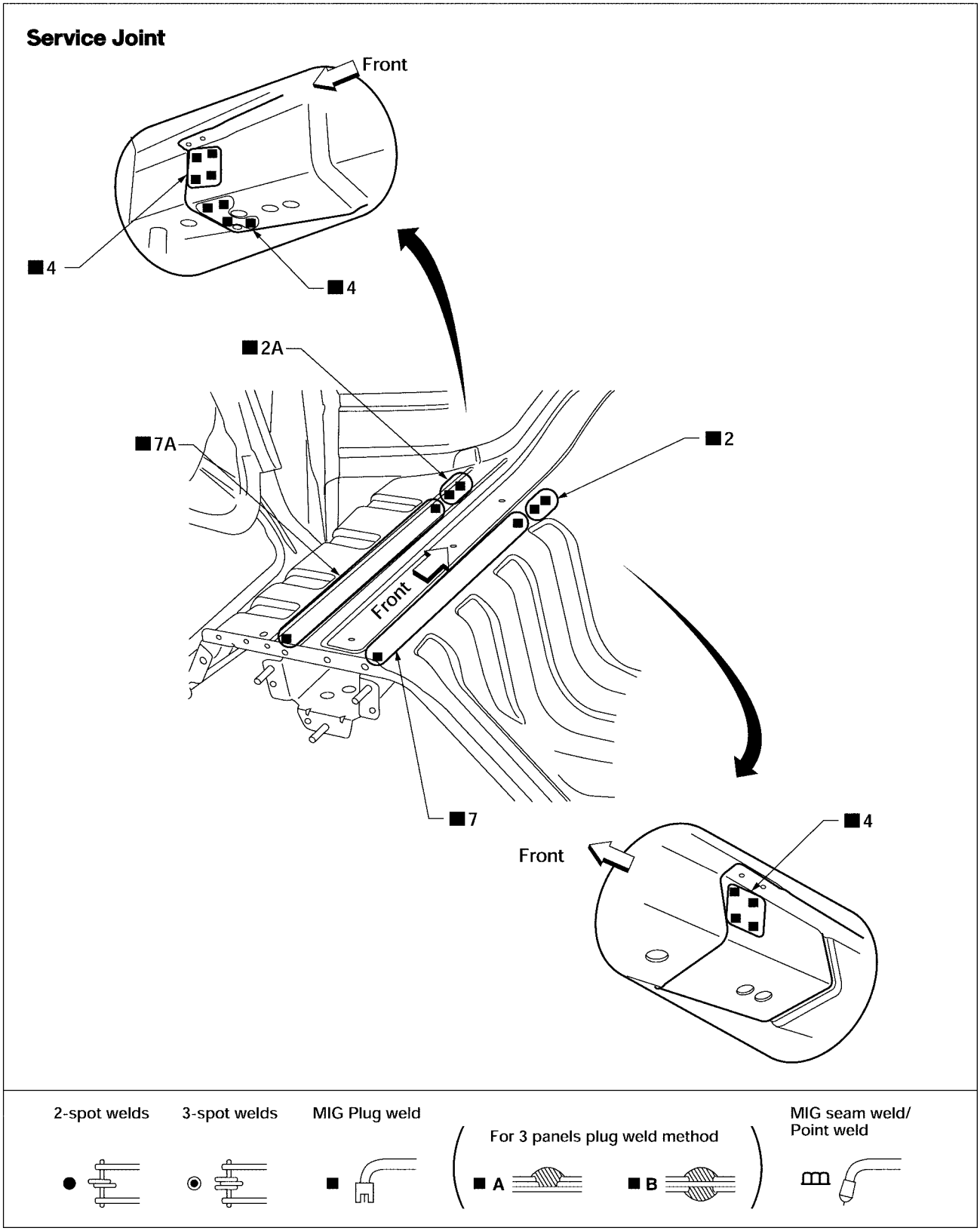




LIIA0536E

REAR SIDE MEMBER EXTENSION

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



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