# BODY REPAIR

PFP:60100

## Foreword

BIS000V5

This Body Repair Manual contains information and instructions for repairing the body structure of the NISSAN NOTE (E11) model. In order to achieve reliable repair work and ensure customer satisfaction, the technician should study this manual and become familiar with appropriate sections before starting and rebuilding work.

This Body Repair Manual 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 manual.

**Technicians are also encouraged to read Body Repair Manual (Fundamentals), Frame Repair Manual (Fundamentals) and the NISSAN NOTE (E11) Service Manual in order to ensure that the original functions and quality of the vehicle can be maintained. The Body Repair Manual (Fundamentals) and Frame Repair Manual (Fundamentals) contains additional information, including cautions and warnings, that are not included in this manual. Technicians should refer to both manuals to ensure proper repairs.**

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

All information in this manual is based on the latest product information at the time of publication. The right is reserved to make changes in specifications and methods at any time without notice.

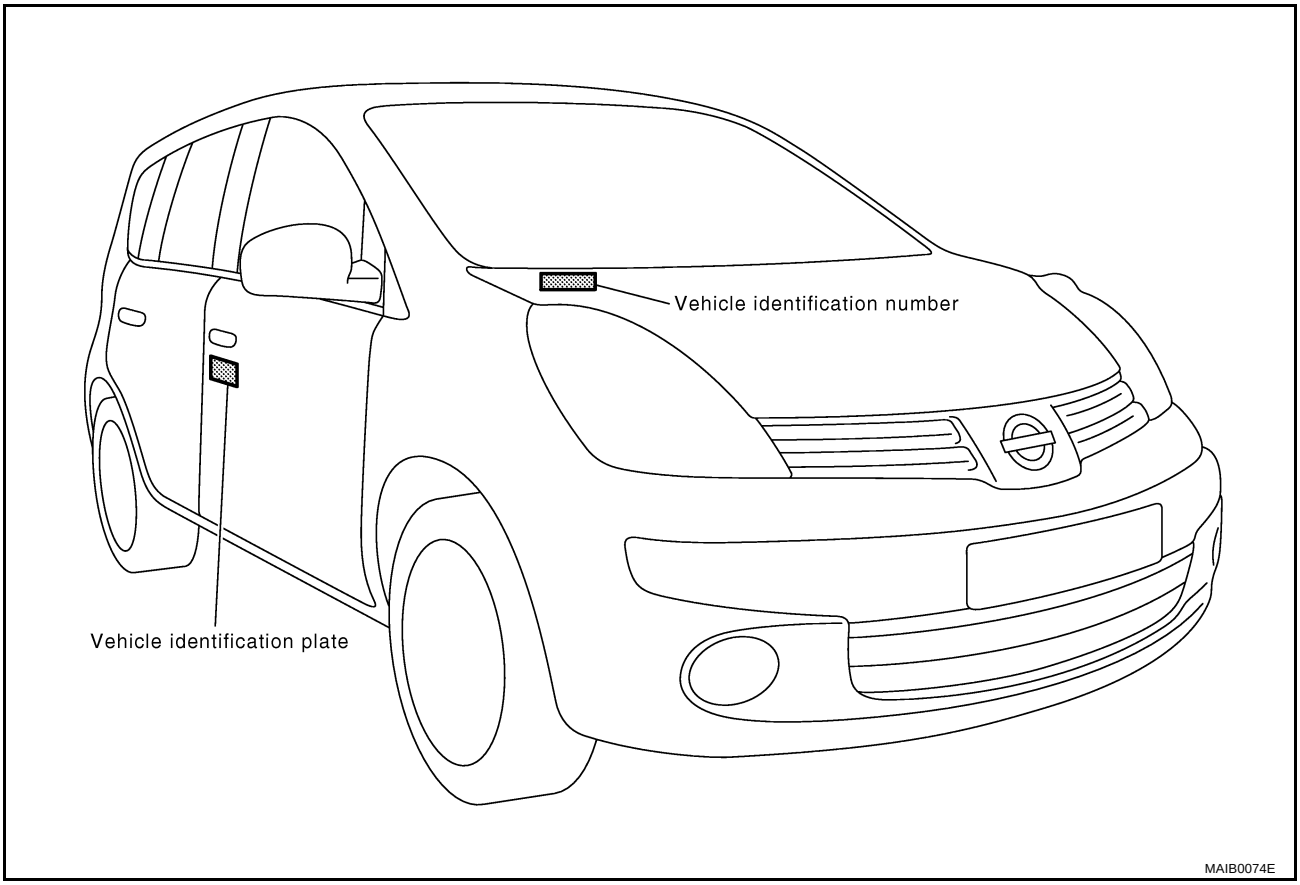
# Contents

BIS000V6

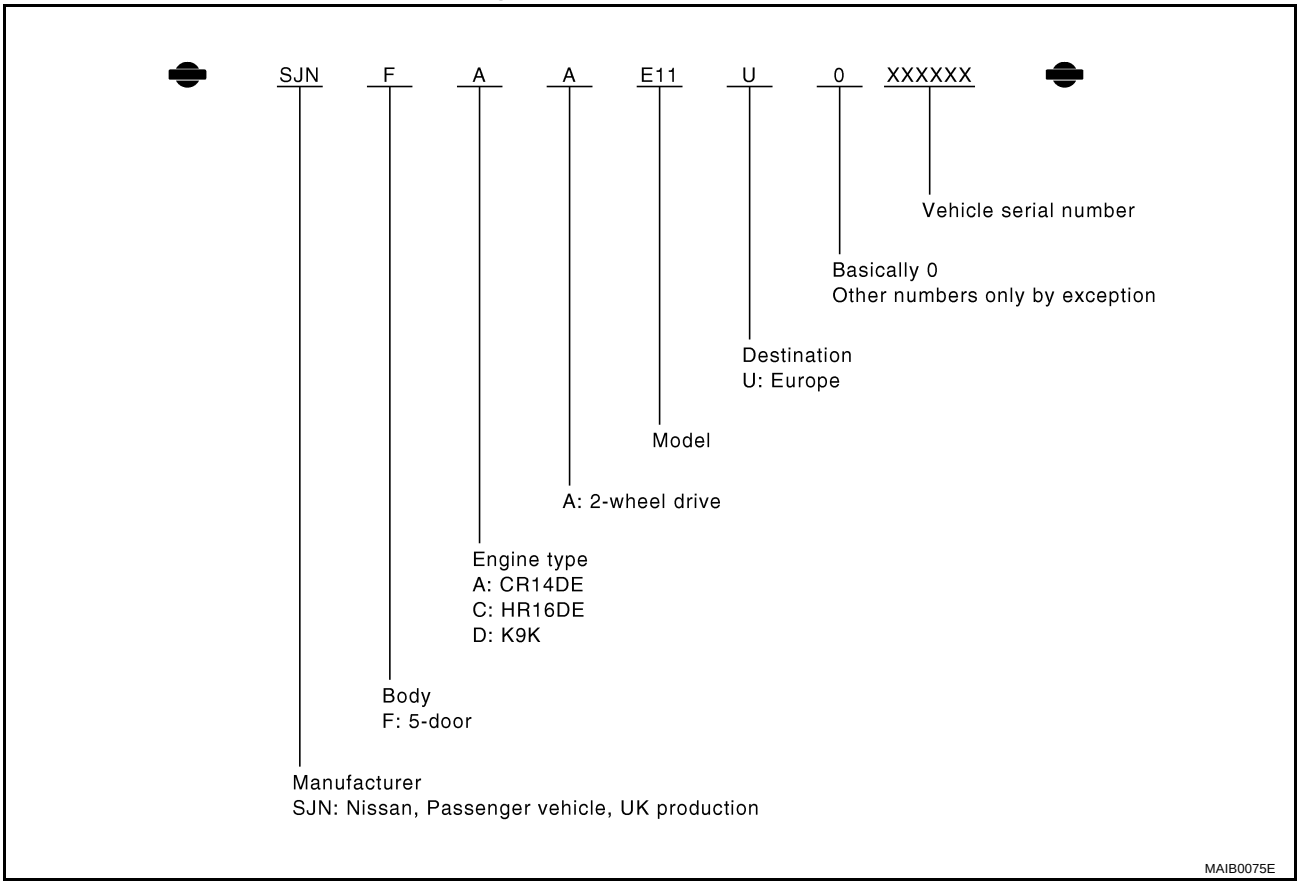
# General Information

BIS000V7

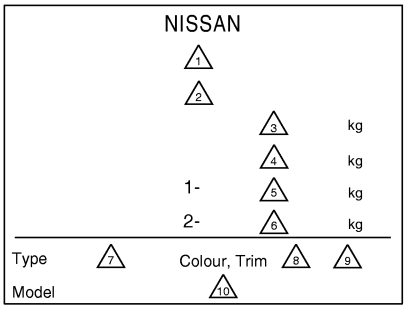
## IDENTIFICATION NUMBER




## Vehicle Identification Number Arrangement



## IDENTIFICATION PLATE




1 Type approval number (Models for Europe with Euro-OBD system) Blank (Models for Europe without Euro-OBD system)
2 Vehicle identification number (Chassis number)
3 Gross vehicle weight
4 Gross combination weight Gross vehicle weight + Gross trailing capacity (Weight)
5 Gross axle weight (Front)
6 Gross axle weight (Rear)
7 Vehicle type
8 Body color code
9 Trim color code
10 Model

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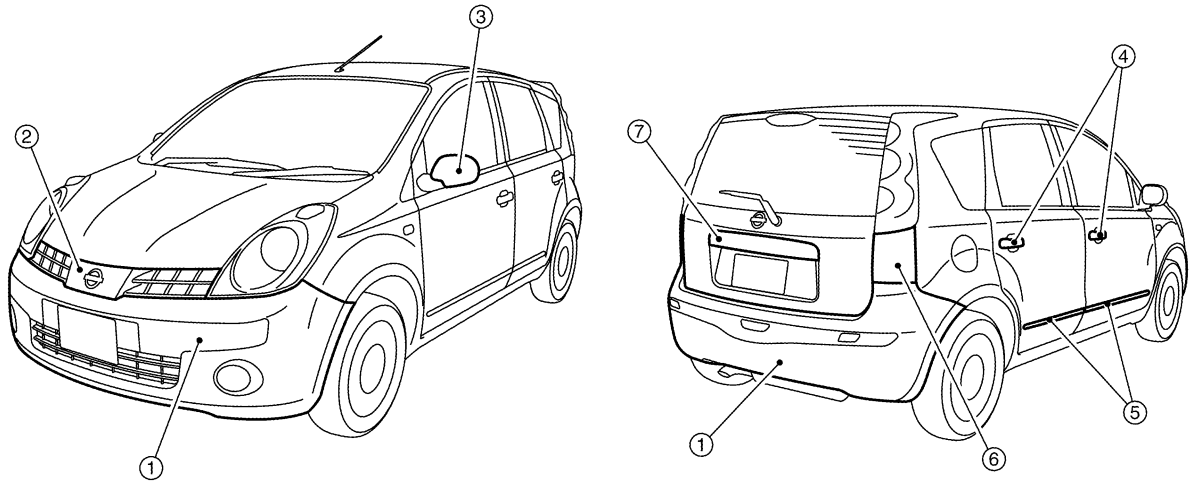
## BODY EXTERIOR PAINT COLOR

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| Component | | Color code | BBV4 | BBW9 | BC30 | BE42 | BKY0 | BKY5 | BR10 | BZ10 | BZ11 | B326 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Description | Blue | Dark Blue | Brown | Yellow | Silver | Gray | Orange | Red | Black | White |
| | | Paint type | M | 2P | M | M | M | M | M | 2S | M | S |
| | | Hard clear coat | × | × | × | × | × | × | × | × | × | - |
| 1 | Bumper fascia | Body color | BBV4 | BBW9 | BC30 | BE42 | BKY0 | BKY5 | BR10 | BZ10 | BZ11 | B326 |
| 2 | Front grille | Metallic color | LW67 | LW67 | LW67 | LW67 | LW67 | LW67 | LW67 | LW67 | LW67 | LW67 |
| | | Material color | G01-1 | G01-1 | G01-1 | G01-1 | G01-1 | G01-1 | G01-1 | G01-1 | G01-1 | G01-1 |
| 3 | Door outside mirror | Body color | BBV4 | BBW9 | BC30 | BE42 | BKY0 | BKY5 | BR10 | BZ10 | BZ11 | B326 |
| | | Material color | - | - | - | - | - | - | - | - | - | - |
| 4 | Door outside handle | Body color | BBV4 | BBW9 | BC30 | BE42 | BKY0 | BKY5 | BR10 | BZ10 | BZ11 | B326 |
| | | Material color | - | - | - | - | - | - | - | - | - | - |
| 5 | Side guard molding | Body color | BBV4 | BBW9 | BC30 | BE42 | BKY0 | BKY5 | BR10 | BZ10 | BZ11 | B326 |
| | | Material color | - | - | - | - | - | - | - | - | - | - |
| 6 | Rear fender cover | Body color | BBV4 | BBW9 | BC30 | BE42 | BKY0 | BKY5 | BR10 | BZ10 | BZ11 | B326 |
| 7 | Back door finisher | Body color | BBV4 | BBW9 | BC30 | BE42 | BKY0 | BKY5 | BR10 | BZ10 | BZ11 | B326 |

S: 1-Coat solid, 2S: Solid + Clear, M: Metallic, 2P: 2-Coat pearl, 3P: 3-Coat pearl, FPM: Iron oxide pearl, RPM: Multi flex color
TM: Micro titanium metallic, PM: Pearl metallic

# Body Component Parts

## UNDERBODY COMPONENT PARTS

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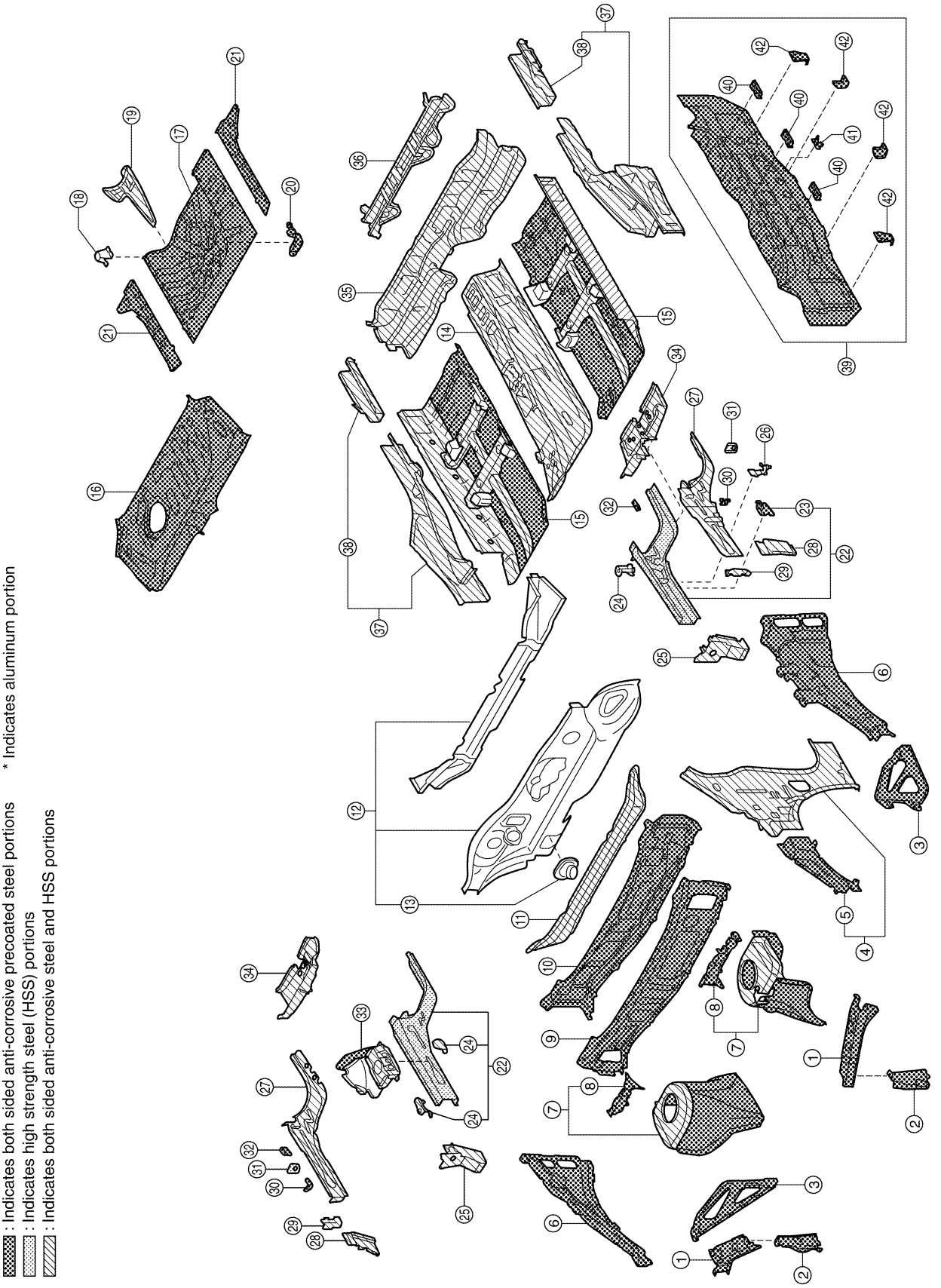
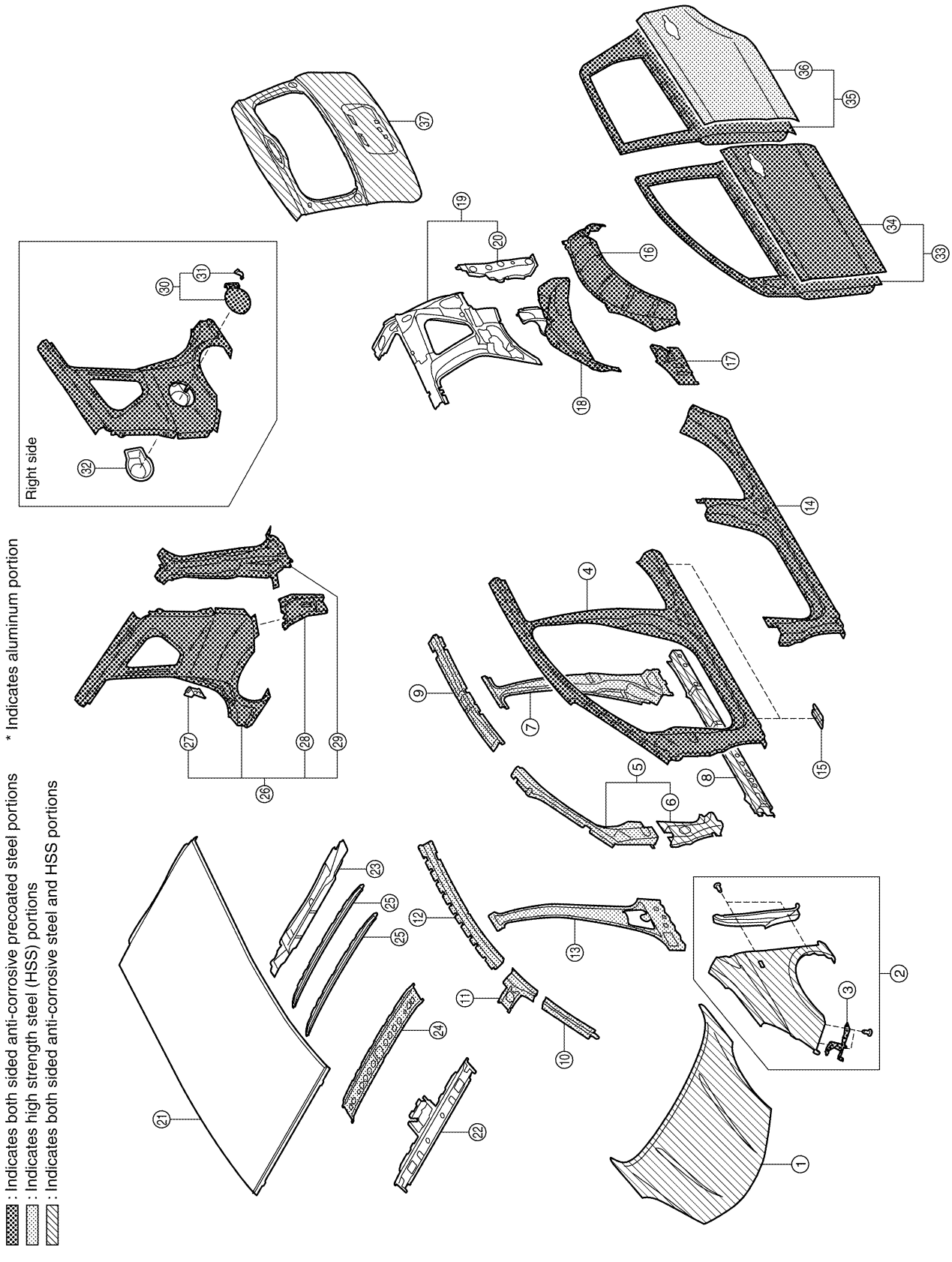


1. Side radiator core support
2. Side radiator core reinforcement
3. Hoodledge connector
4. Side dash (RH&LH)
5. Upper hoodledge (RH&LH)
6. Hoodledge reinforcement
7. Front strut housing
8. Upper side cowl top
9. Cowl top
10. Upper dash assembly
11. Lower dash crossmember
12. Lower dash
13. Steering hole patch
14. Center front floor
15. Front floor
16. Rear floor front
17. Rear floor rear
18. Spare tire clamp bracket
19. Towing hook bracket
20. Muffler mounting bracket
21. Rear floor side
22. Front side member
23. Engine mounting reinforcement
24. Front suspension mounting bracket
25. Add on frame bracket
26. Tie down hook reinforcement
27. Front side member closing plate
28. Outer add on frame bracket
29. Front side member flange
30. Sensor harness bracket
31. Front hook
32. Brake hose bracket
33. Engine mounting member bracket
34. Front suspension mounting bracket
35. Rear seat crossmember
36. Center rear crossmember assembly
37. Rear side member
38. Rear side member extension
39. Rear panel assembly
40. Upper rear bumper retainer
41. Lower rear bumper retainer
42. Rear side bumper bracket

## BODY COMPONENT PARTS



1. Hood
2. Front fender (RH&LH)
3. Lower front fender bracket (RH&LH)
4. Side body assembly (RH&LH)
5. Front pillar brace (RH&LH)
6. Lower front pillar hinge brace (RH&LH)
7. Center pillar brace (RH&LH)
8. Outer sill reinforcement (RH&LH)
9. Outer side roof rail reinforcement (RH&LH)
10. Upper inner front pillar (RH&LH)
11. Front roof rail brace (RH&LH)
12. Inner side roof rail (RH&LH)
13. Inner center pillar (RH&LH)
14. Outer sill (RH&LH)
15. Jack up point bracket (RH&LH)
16. Outer rear wheelhouse (RH&LH)
17. Outer rear wheelhouse extension (RH&LH)
18. Inner rear wheelhouse (RH&LH)
19. Inner rear pillar (RH&LH)
20. Back pillar reinforcement (RH&LH)
21. Roof
22. Front roof rail
23. Rear roof rail
24. Center roof reinforcement
25. Rear roof bow
26. Rear fender
27. Striker tapping retainer (RH&LH)
28. Rear fender corner (RH&LH)
29. Outer back pillar (RH&LH)
30. Fuel filler lid
31. Fuel filler lid spring
32. Fuel filler lid base
33. Front door (RH&LH)
34. Outer front door panel (RH&LH)
35. Rear door (RH&LH)
36. Outer rear door panel (RH&LH)
37. Back door

# Corrosion Protection

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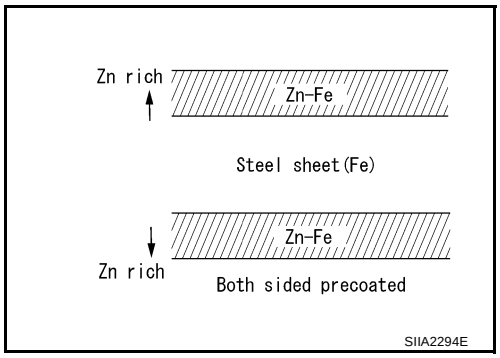
## DESCRIPTION

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

### Anti-corrosive Precoated Steel (Galvannealed Steel)

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



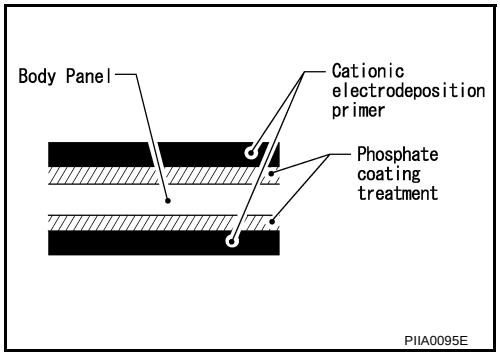

Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

### Phosphate Coating Treatment and Cationic Electrodeposition Primer

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

**CAUTION:**

**Confine paint removal during welding operations to an absolute minimum.**



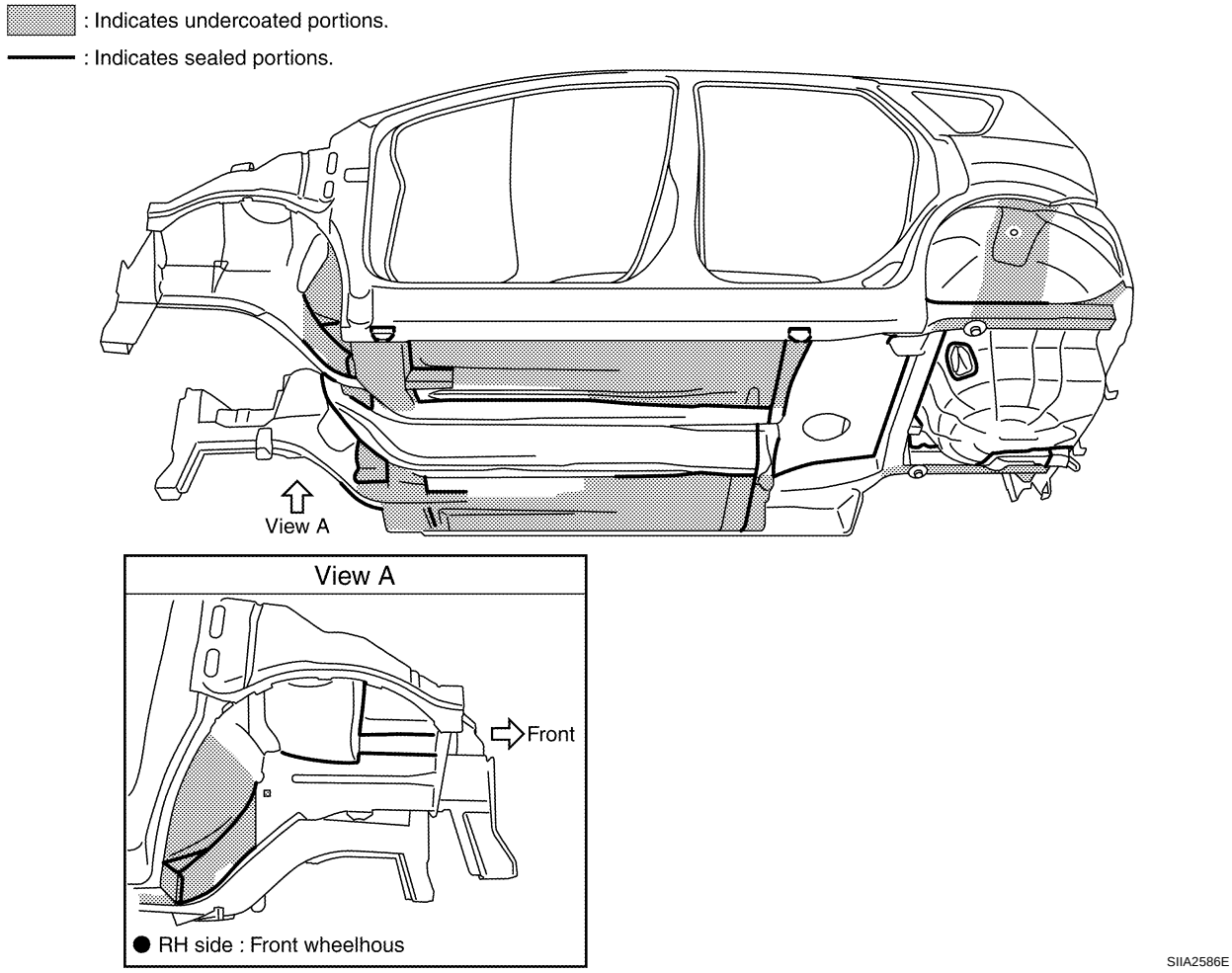

Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

## UNDERCOATING

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

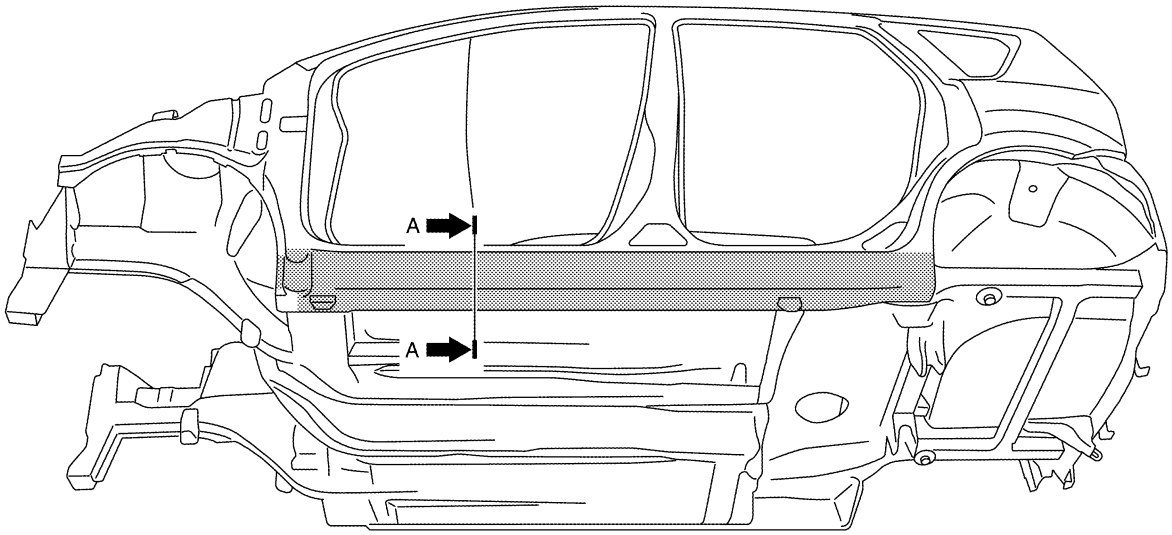
### Precautions in Undercoating

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

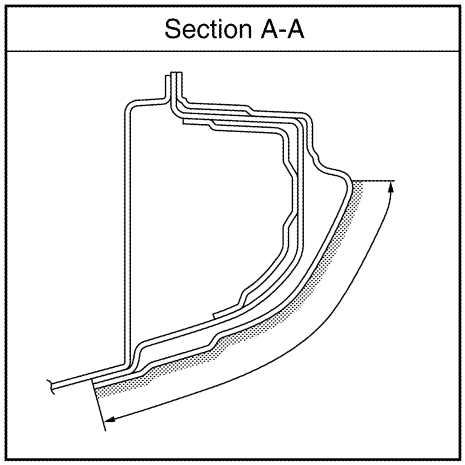


## STONE GUARD COAT

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




: Indicates stone guard coated portions.

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## Body Sealing

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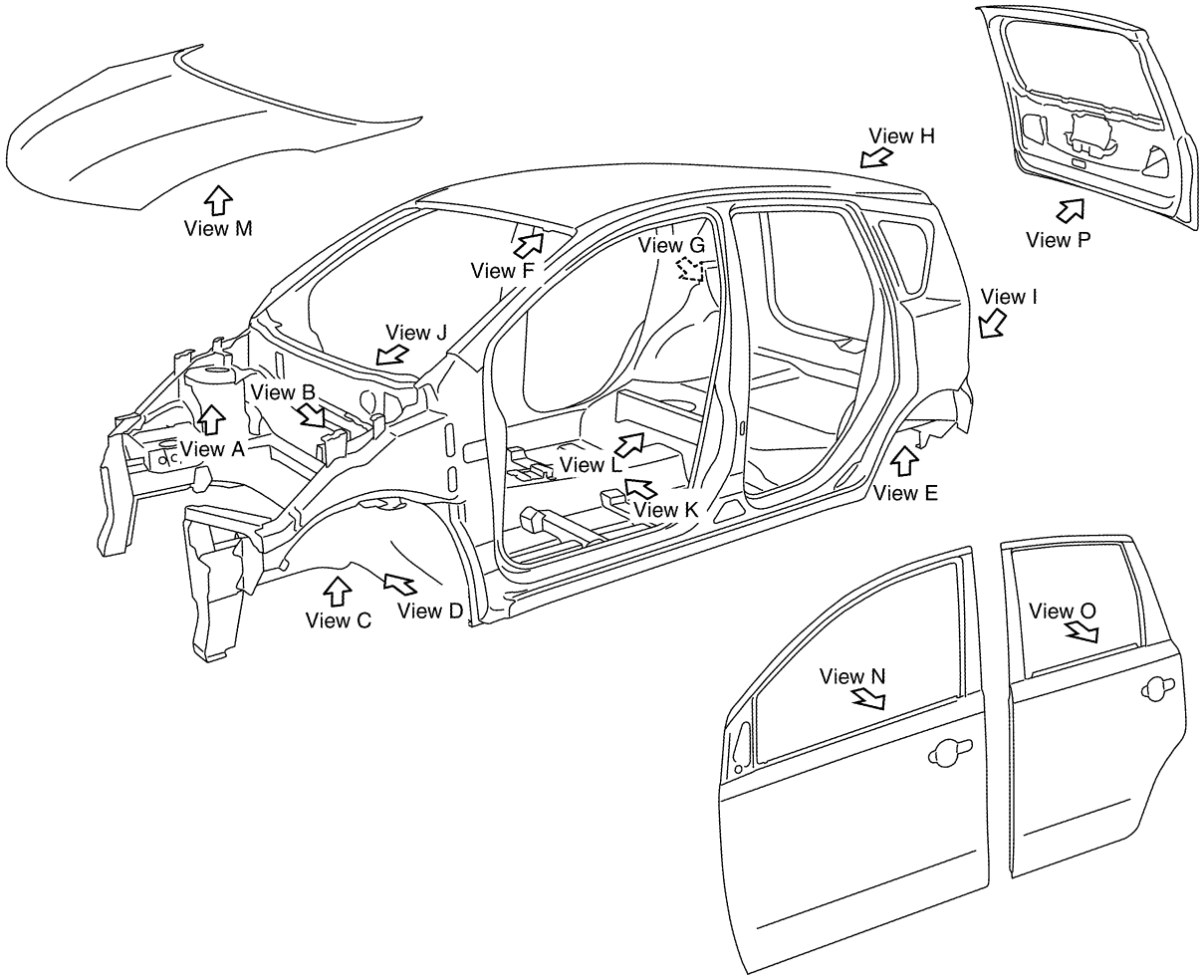
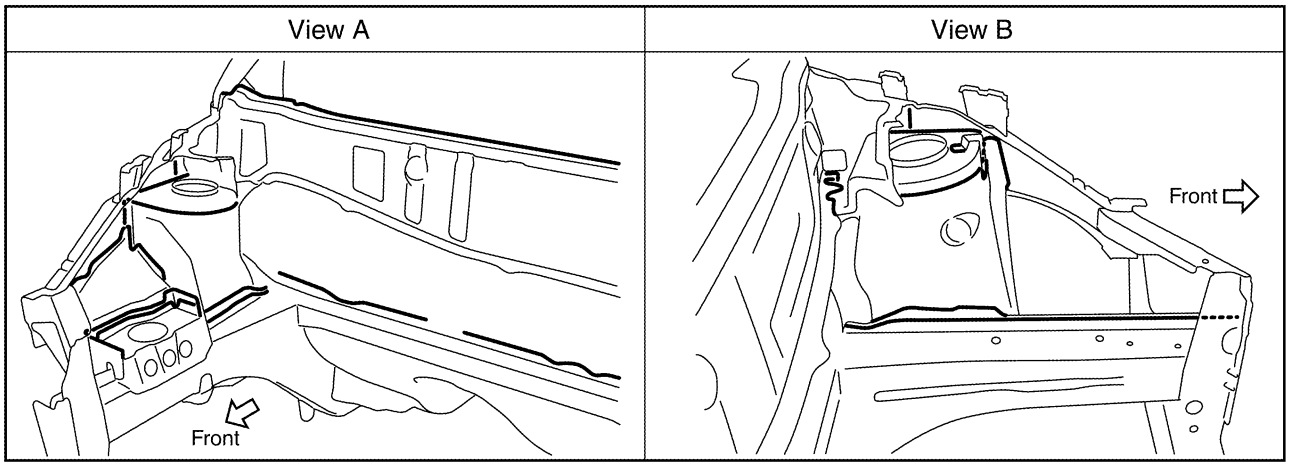
### DESCRIPTION

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.

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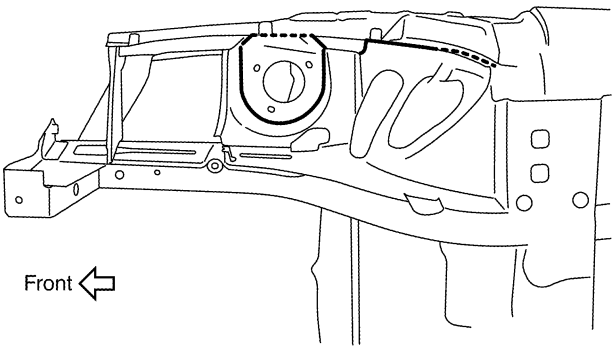
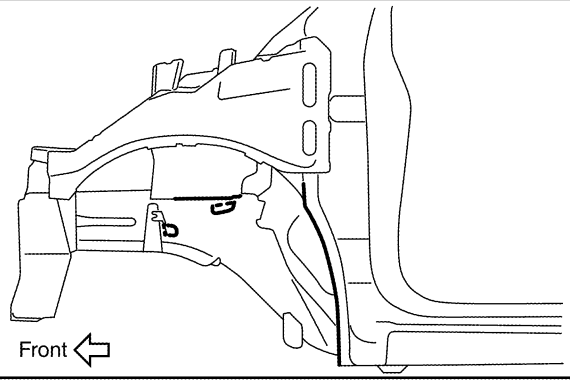
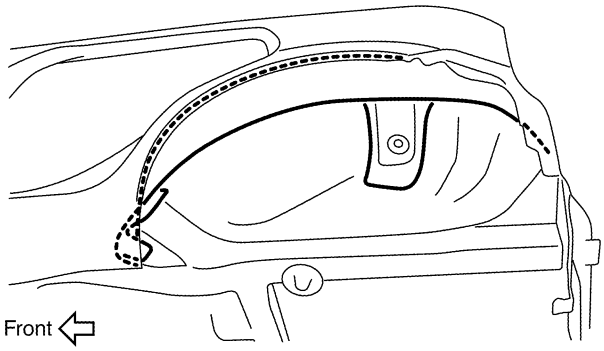
View C



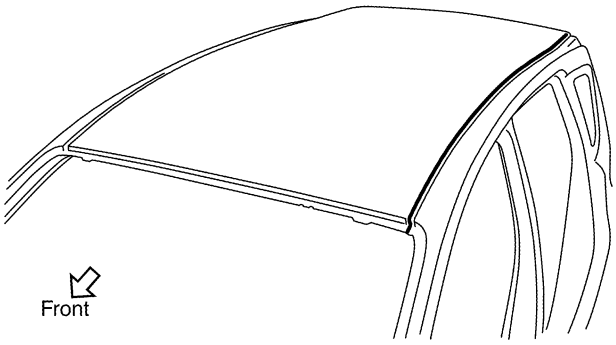

View D



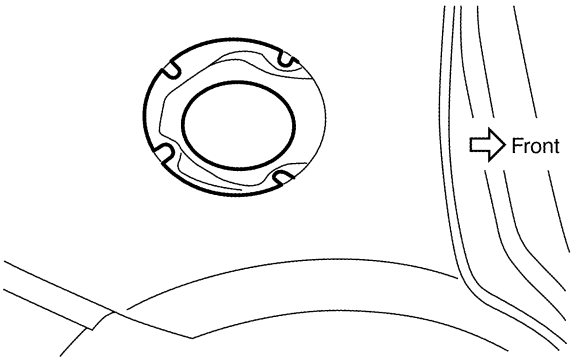

View E



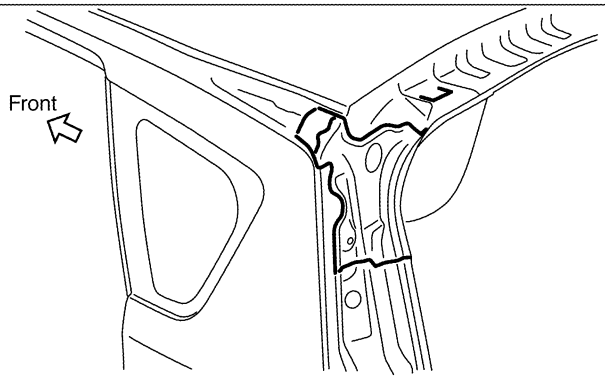

View F



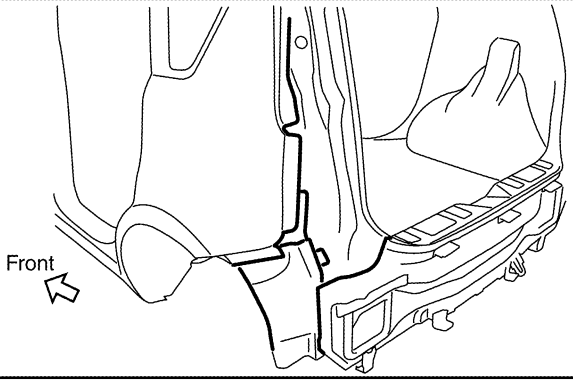

View G




View H




View I

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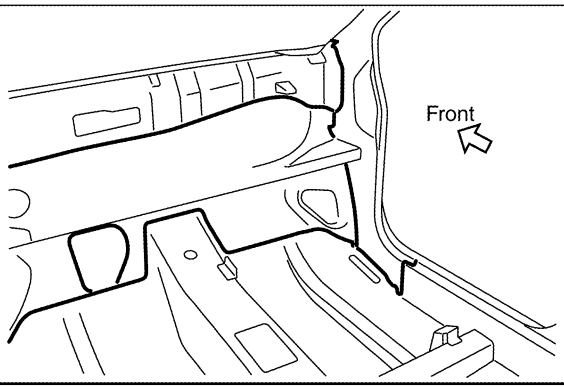


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| View K | View L |
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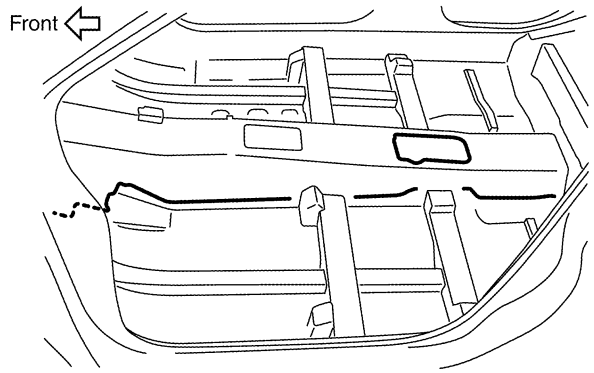
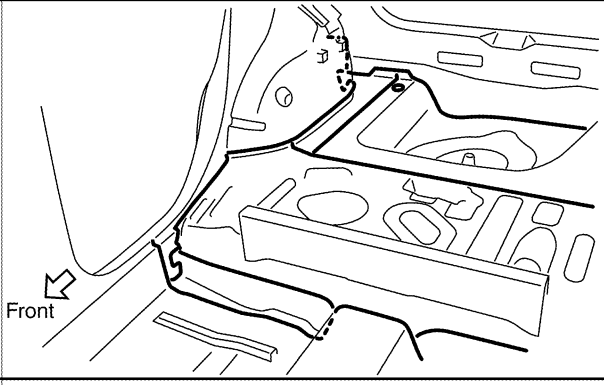
|  |  |
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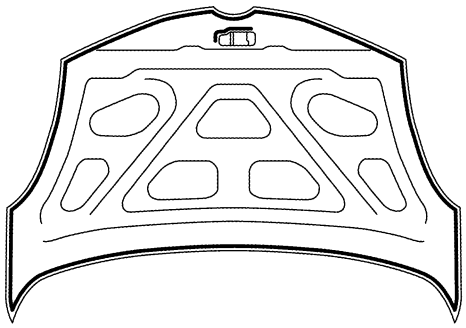
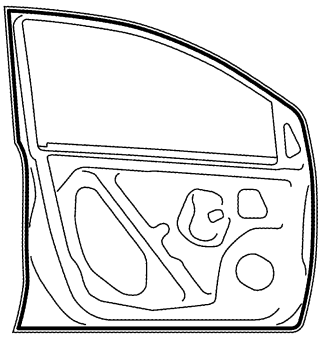
|  |  |
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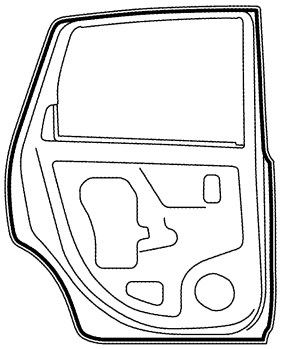
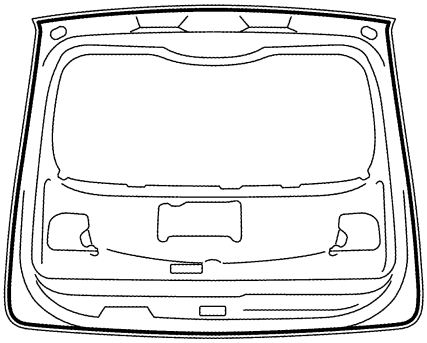
|  |  |

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## Body Construction
### BODY CONSTRUCTION

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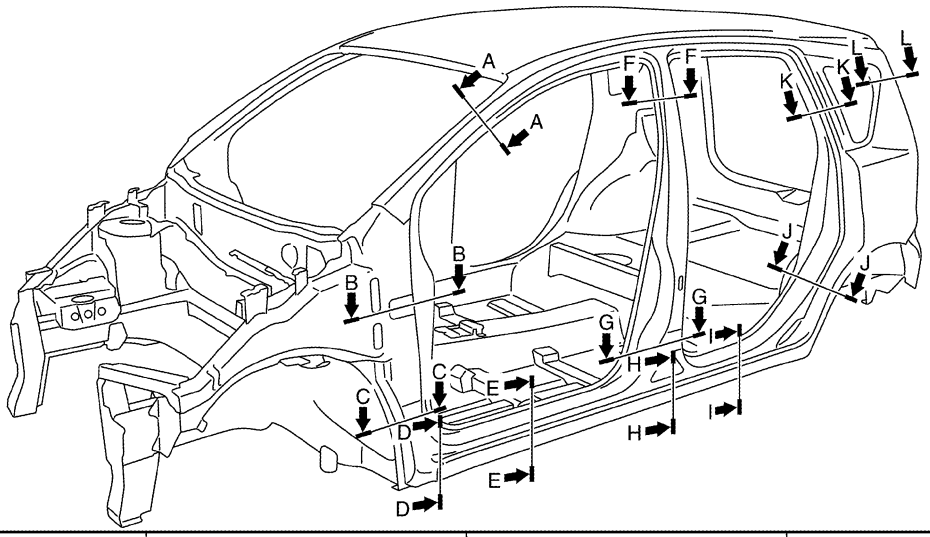


| Section A-A | Section B-B | Section C-C | Section D-D |
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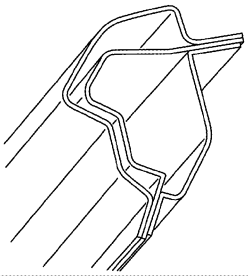
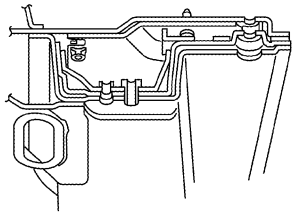
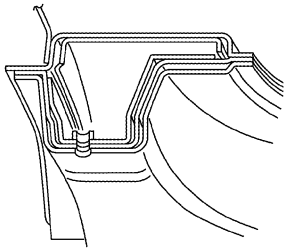
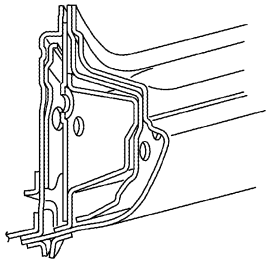
|  |  |  |  |
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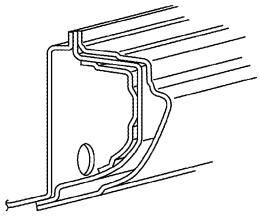
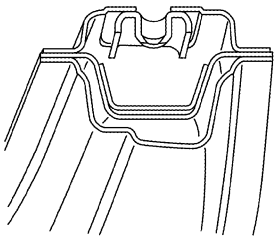
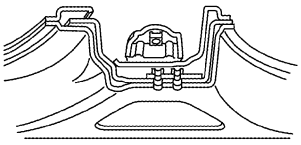
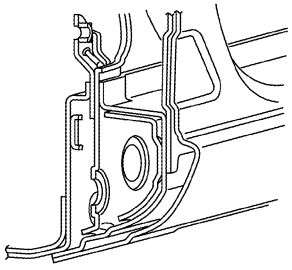
|  |  |  |  |
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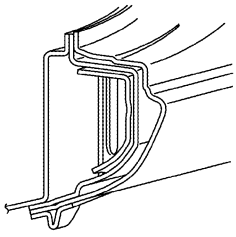
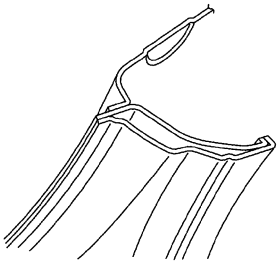
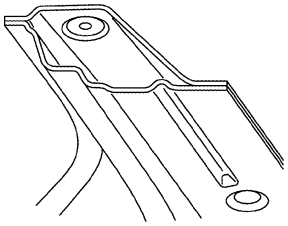
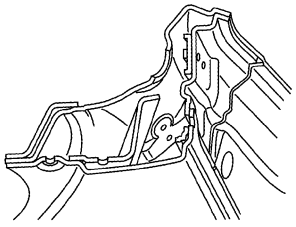
|  |  |  |  |

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## Body Alignment

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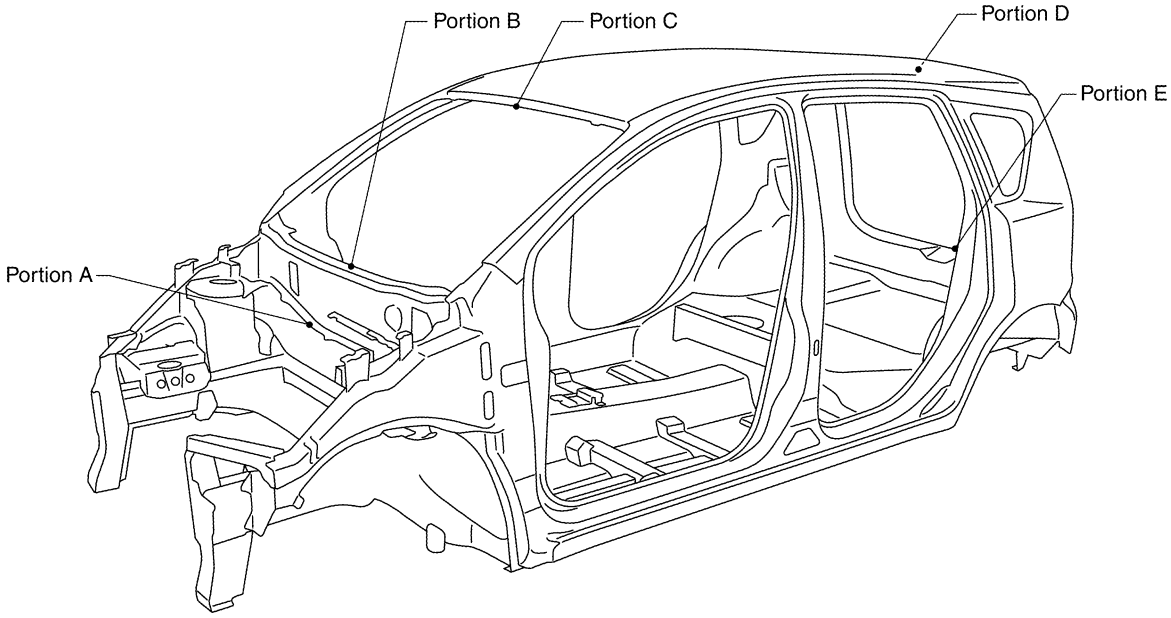
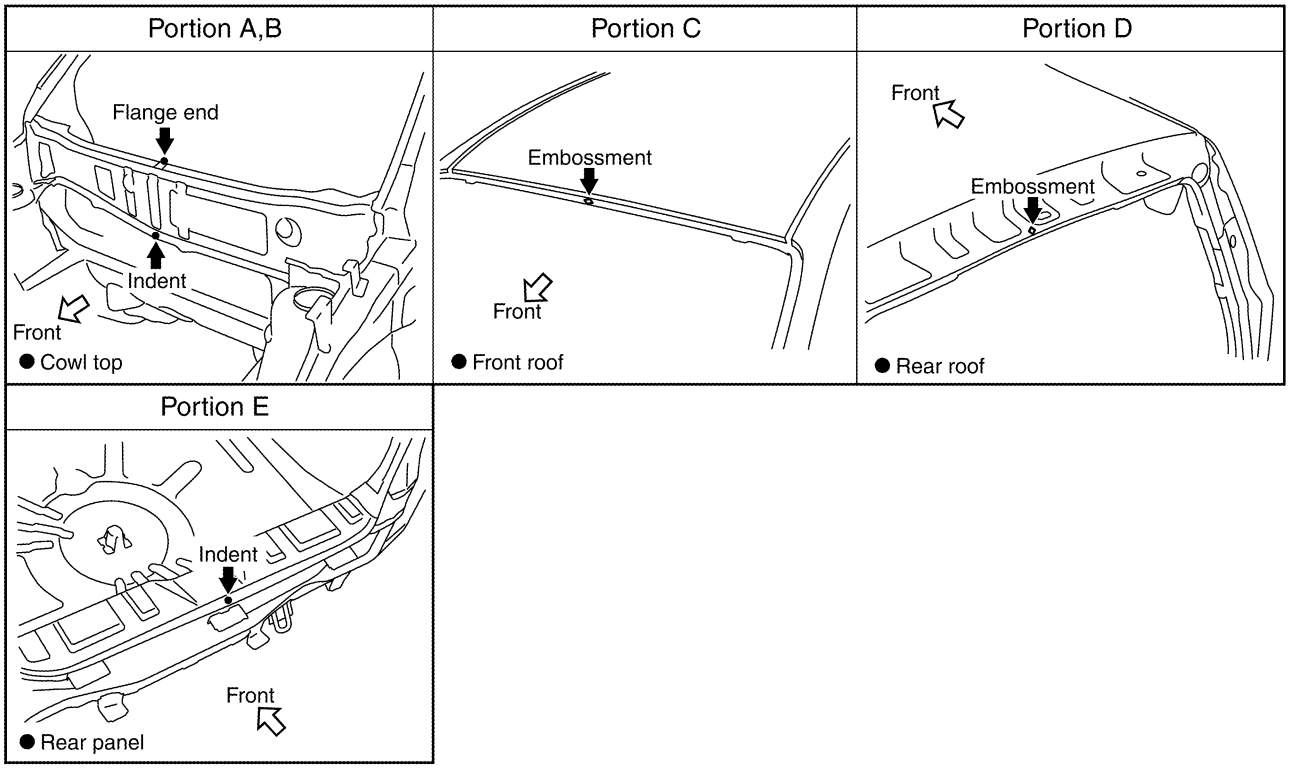
### BODY CENTER MARKS

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.

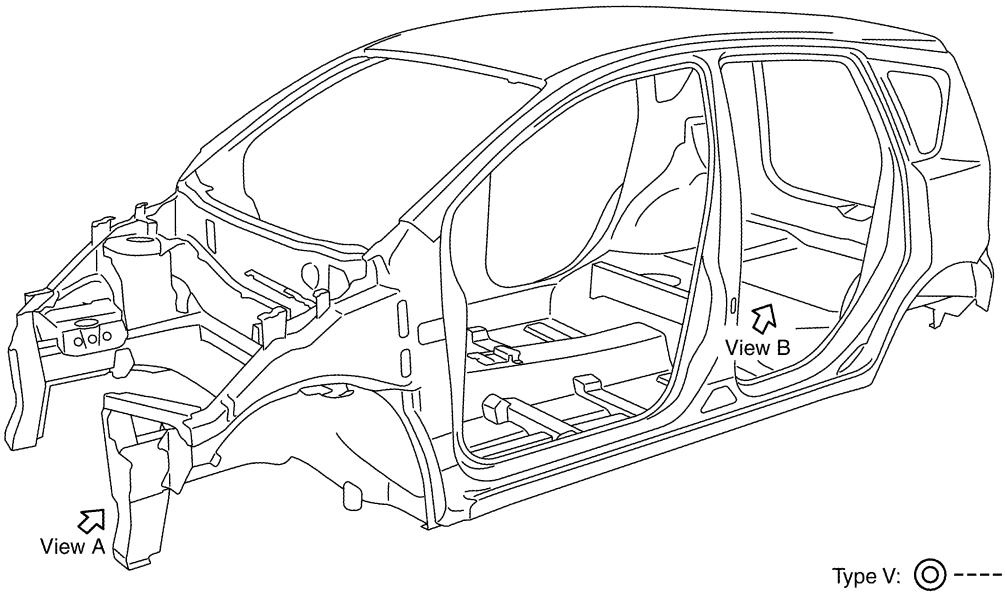


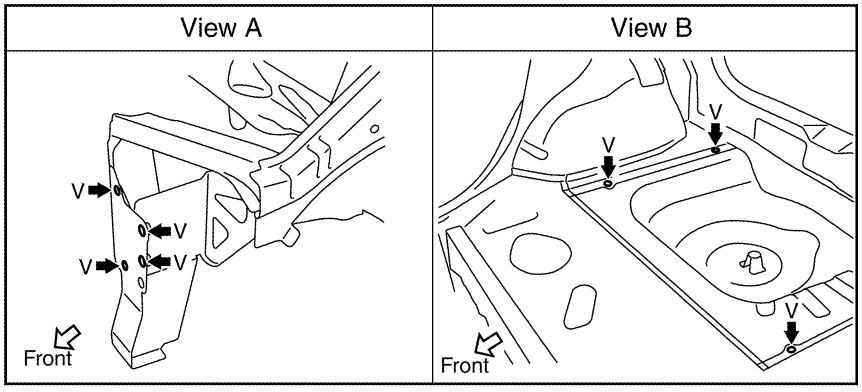

SIIA2592E

## PANEL PARTS MATCHING MARKS

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



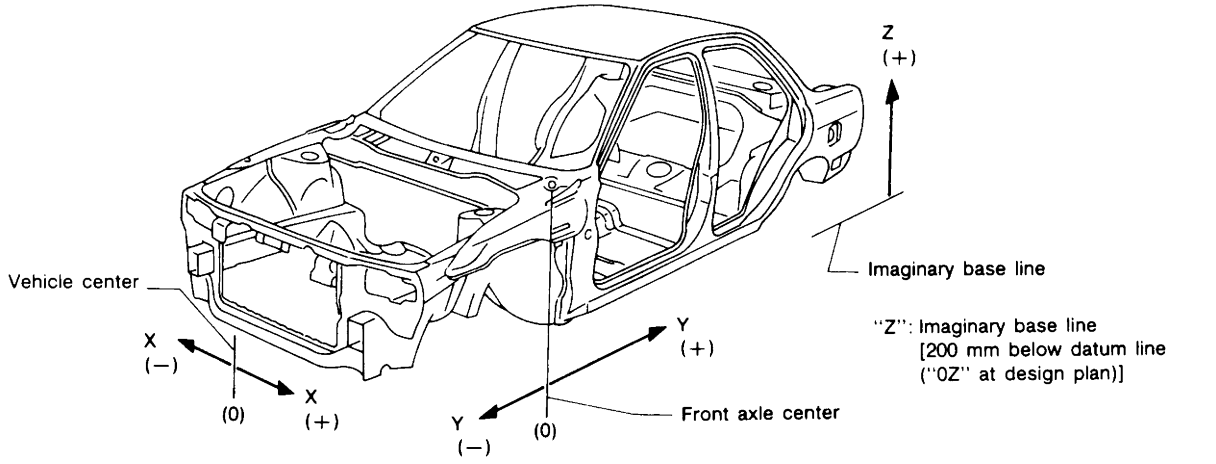

Type V:




SIIA2593E

## DESCRIPTION

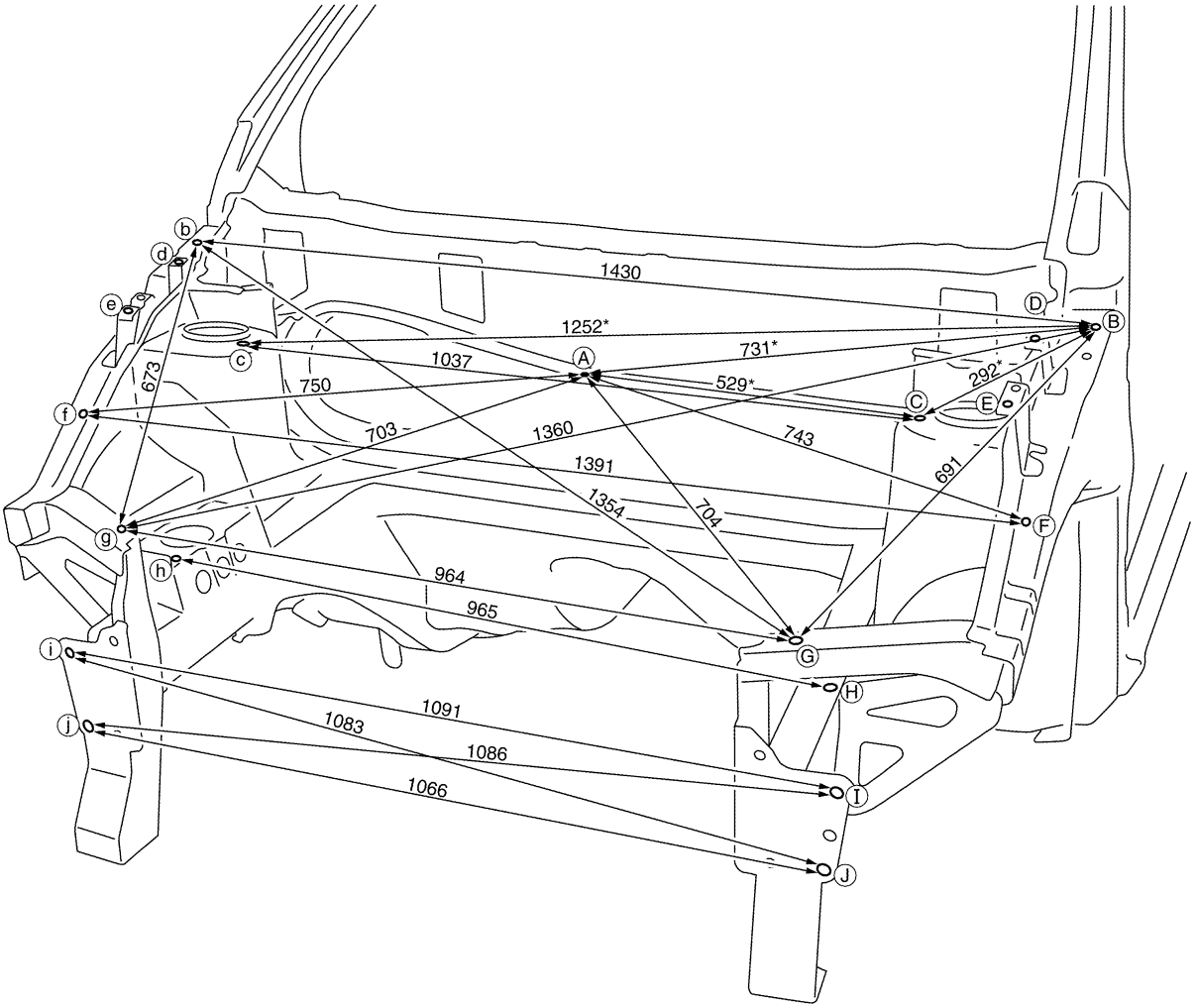
- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements 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

Unit : mm

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

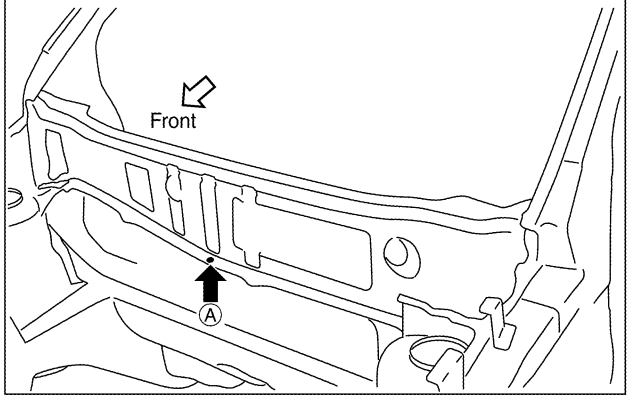



| Point | Dimension |
|---|---|
| Ⓐ~Ⓓ | 671* |
| Ⓐ~Ⓔ | 685* |
| Ⓐ~Ⓗ | 642 |
| Ⓐ~ⓗ | 656 |
| Ⓑ~Ⓓ | 144* |
| Ⓑ~Ⓔ | 300* |
| Ⓑ~Ⓕ | 387 |
| ⓑ~ⓕ | 406 |
| Ⓑ~ⓕ | 1,468 |
| ⓑ~Ⓕ | 1,462 |
| Ⓓ~ⓓ | 1,312 |
| Ⓔ~ⓔ | 1,300 |

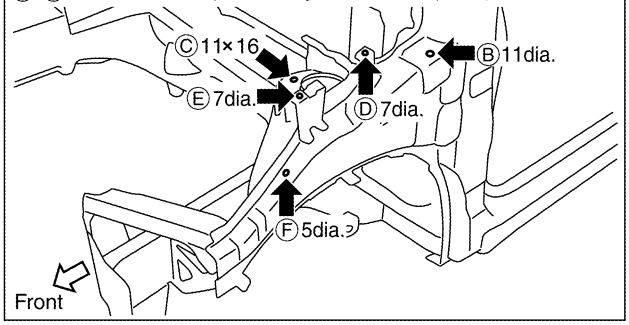
SIIA2594E

## Measurement Points

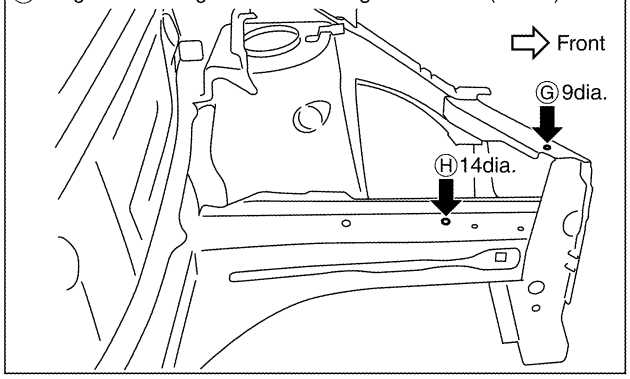
Ⓐ : Cowl top indent of center positioning mark



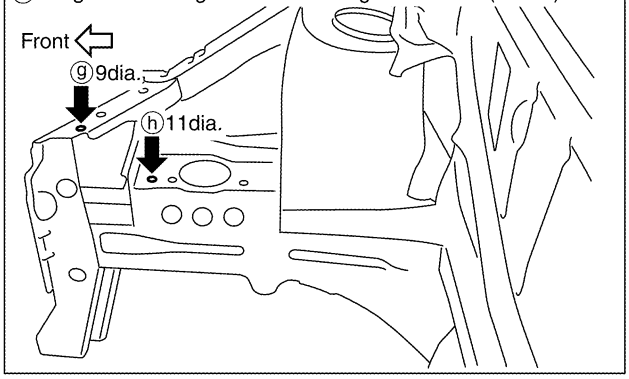

Ⓑ,ⓑ : Hood hinge installing hole center (12dia.)
Ⓒ,ⓒ : Front strut installing hole center (11×16)
Ⓓ,ⓓ,Ⓔ,ⓔ : Front fender installing hole center (7dia.)
Ⓕ,ⓕ : Harness clamp installing hole center (5dia.)



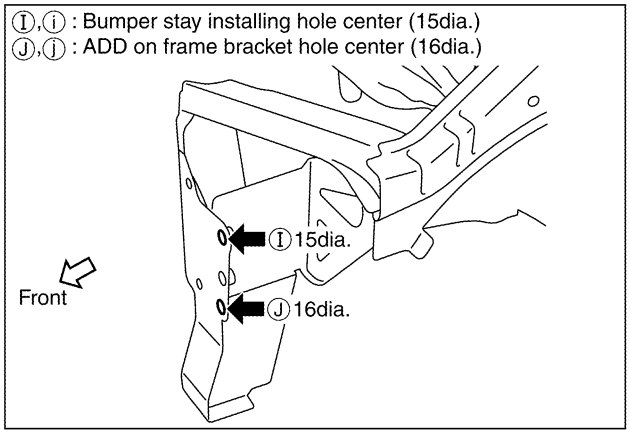

Ⓖ: Radiator core support installing hole center (9dia.)
Ⓗ: Engine mounting bracket installing hole center (14dia.)




ⓖ: Radiator core support installing hole center (9dia.)
ⓗ: Engine mounting bracket installing hole center (11dia.)



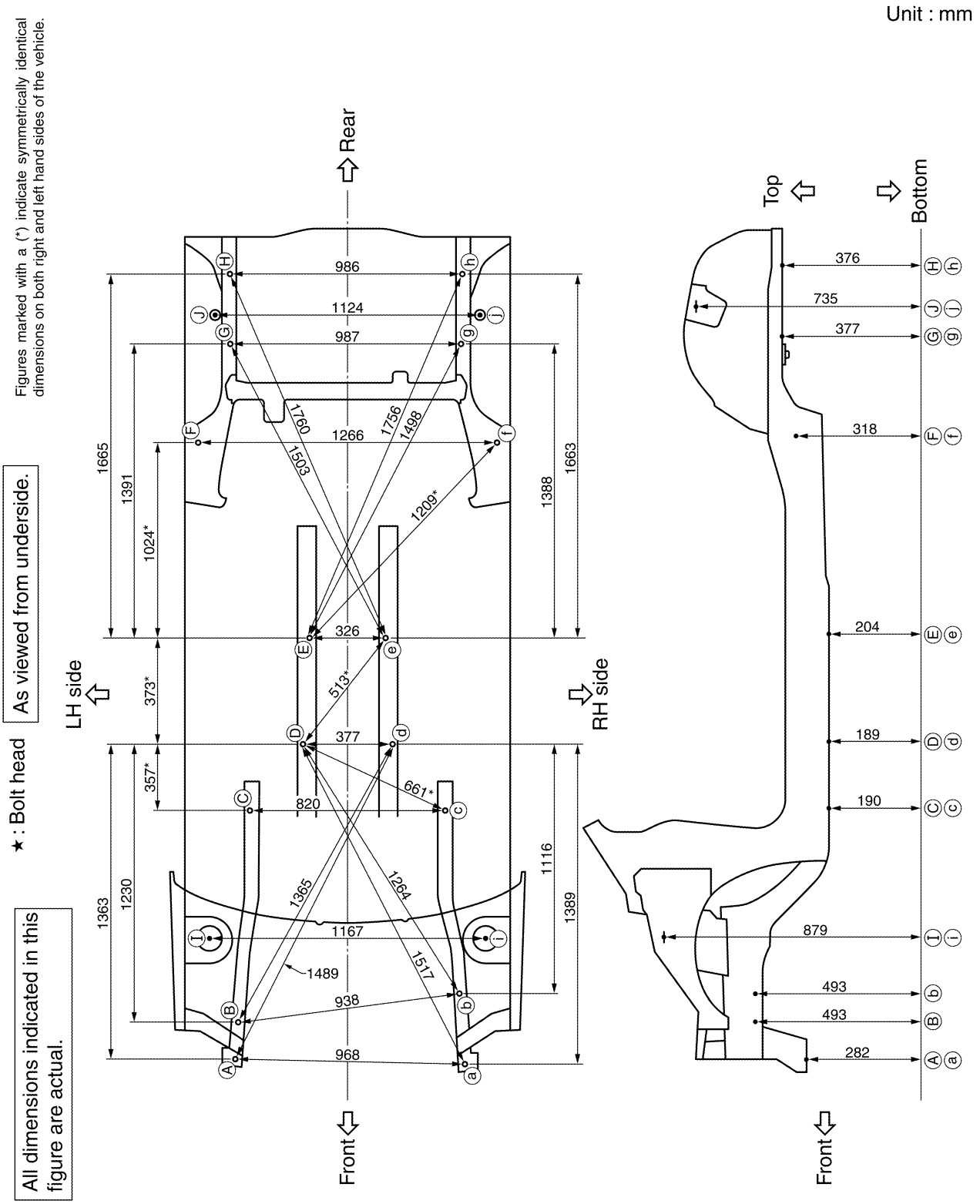

Ⓘ,ⓘ : Bumper stay installing hole center (15dia.)
Ⓙ,ⓙ : ADD on frame bracket hole center (16dia.)




SIIA2595E

## UNDERBODY
### Measurement

Unit : mm

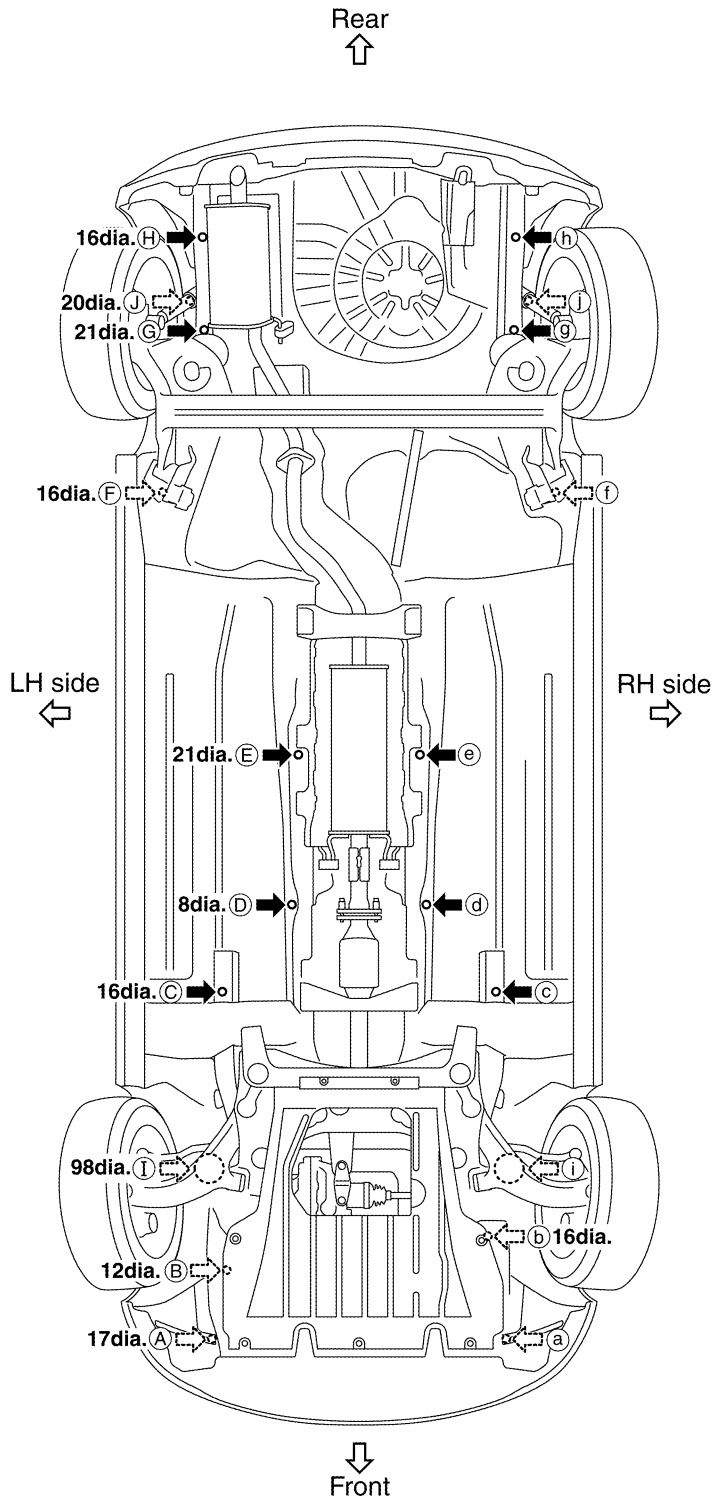



SIIA2596E

## Measurement Points

Unit : mm

As viewed from underside.




Coordinates:

Ⓐ
**X:476**
**Y:-502**
**Z:282**

Ⓖ
**X:500**
**Y:2538**
**Z:377**

ⓐ
**X:-492**
**Y:-525**
**Z:282**

ⓖ
**X:-488**
**Y:2538**
**Z:377**

Ⓑ
**X:464**
**Y:-333**
**Z:493**

Ⓗ
**X:498**
**Y:2822**
**Z:376**

ⓑ
**X:-467**
**Y:-210**
**Z:493**

ⓗ
**X:-488**
**Y:2822**
**Z:376**

Ⓒ,ⓒ
**X:±410**
**Y:547**
**Z:190**

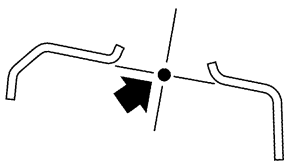
Ⓓ,ⓓ
**X:±189**
**Y:828**
**Z:189**

Ⓔ,ⓔ
**X:±163**
**Y:1200**
**Z:204**

Ⓕ,ⓕ
**X:±633**
**Y:2102**
**Z:318**

Front and rear strut tower centers
Coordinates:

Ⓘ,ⓘ
**X:±583**
**Y:8**
**Z:879**



Ⓙ,ⓙ
**X:±562**
**Y:2639**
**Z:735**

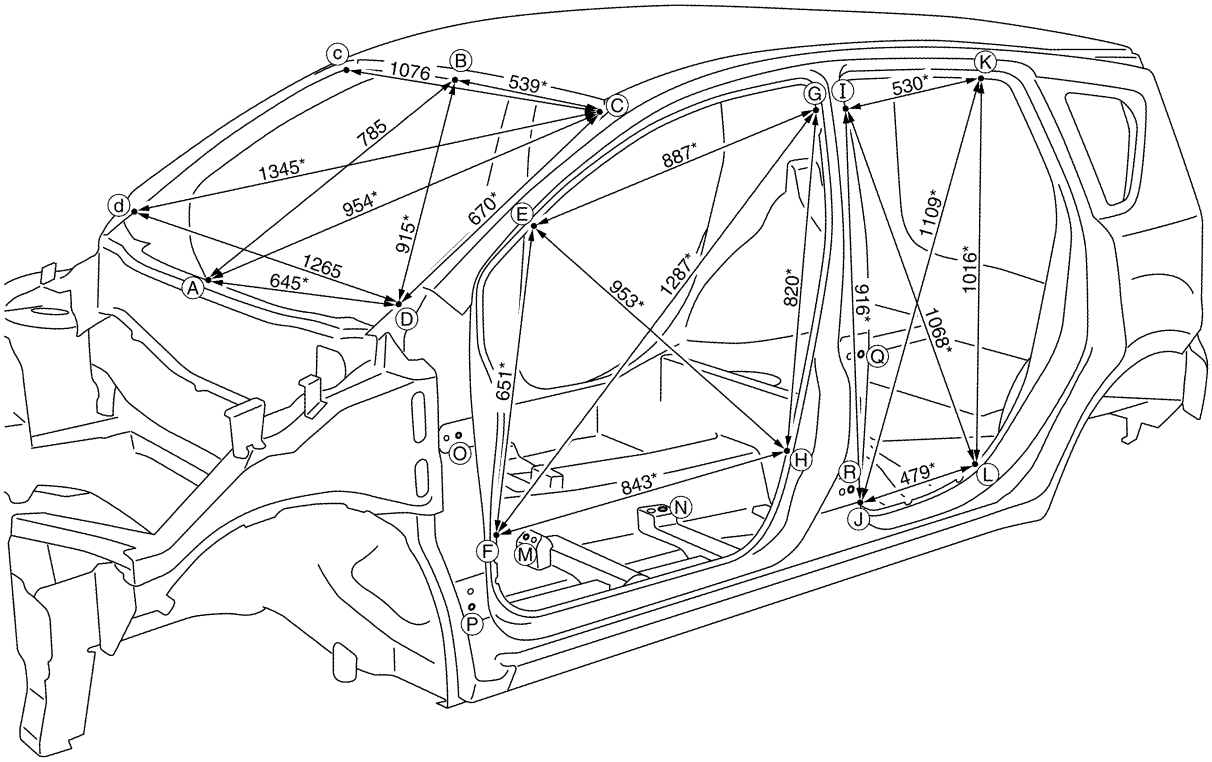
Front: Ⓘ,ⓘ **98dia.**
Rear: Ⓙ,ⓙ **20dia.**

SIIA2597E

## PASSENGER COMPARTMENT
### Measurement

Unit : mm

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

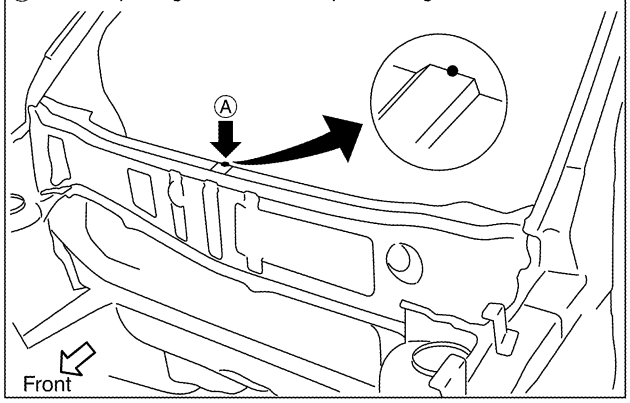



| Point | Dimension | Point | Dimension | Point | Dimension |
|---|---|---|---|---|---|
| Ⓔ~ⓔ | 1,279 | Ⓘ~ⓘ | 1,565* | Ⓜ~Ⓖ | 1,283* |
| Ⓔ~ⓕ | 1,470* | Ⓘ~ⓚ | 1,271* | Ⓜ~Ⓗ | 717* |
| Ⓔ~ⓖ | 1,514* | Ⓘ~ⓛ | 1,660* | Ⓝ~Ⓘ | 1,196* |
| Ⓔ~ⓗ | 1,628* | Ⓙ~ⓙ | 1,368 | Ⓝ~Ⓙ | 571* |
| Ⓕ~ⓕ | 1,359 | Ⓙ~ⓚ | 1,668* | Ⓝ~Ⓚ | 1,394* |
| Ⓕ~ⓖ | 1,805* | Ⓙ~ⓛ | 1,451* | Ⓝ~Ⓛ | 808* |
| Ⓕ~ⓗ | 1,601* | Ⓚ~ⓚ | 1,133 | Ⓞ~Ⓠ | 1,121* |
| Ⓖ~ⓖ | 1,178 | Ⓚ~ⓛ | 1,608* | Ⓞ~Ⓡ | 1,153* |
| Ⓖ~ⓗ | 1,510* | Ⓛ~ⓛ | 1,371 | Ⓟ~Ⓠ | 1,162* |
| Ⓗ~ⓗ | 1,363 | Ⓜ~Ⓔ | 1,101* | Ⓟ~Ⓡ | 1,087* |
| Ⓘ~ⓘ | 1,177 | Ⓜ~Ⓕ | 779* | | |

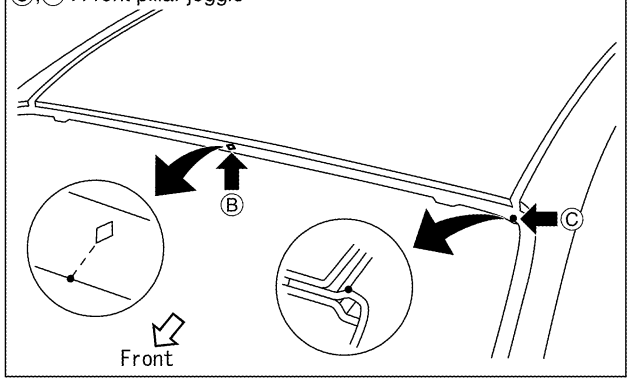
SIIA2598E

## Measurement Points

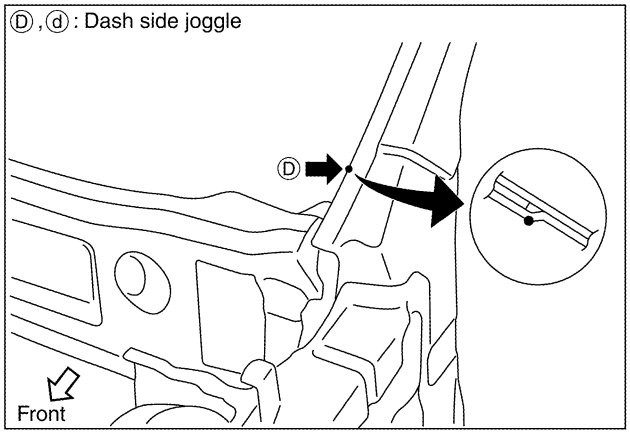
Ⓐ : Cowl top flange end of center positioning mark



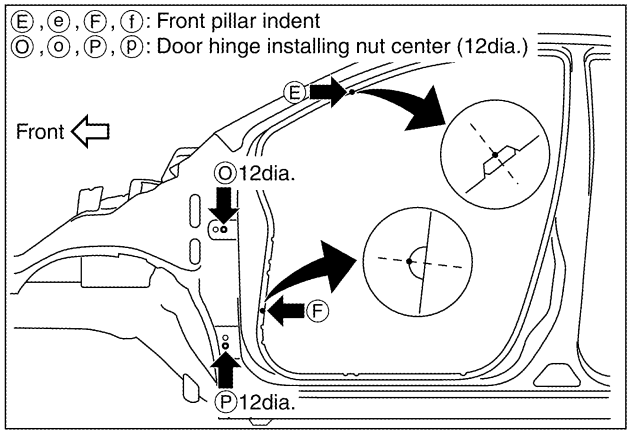

Ⓑ : Front roof flange end of center positioning mark
Ⓒ,ⓒ : Front pillar joggle



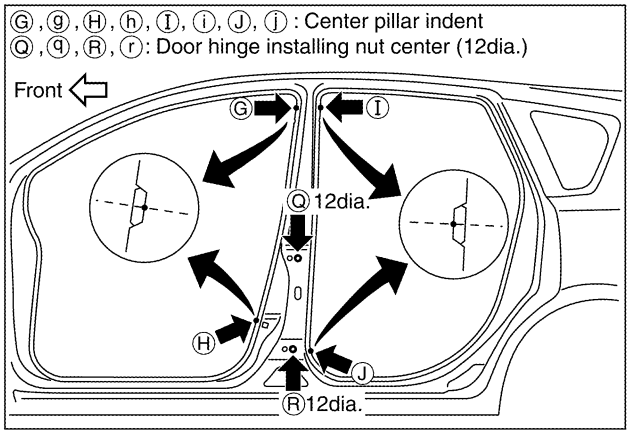

Ⓓ,ⓓ : Dash side joggle



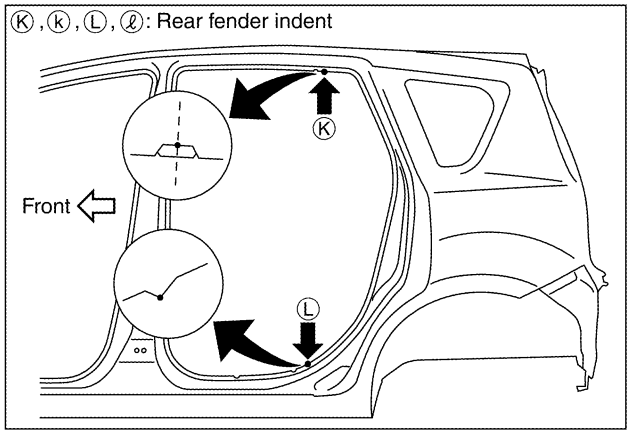

Ⓔ,ⓔ,Ⓕ,ⓕ: Front pillar indent
Ⓞ,ⓞ,Ⓟ,ⓟ: Door hinge installing nut center (12dia.)



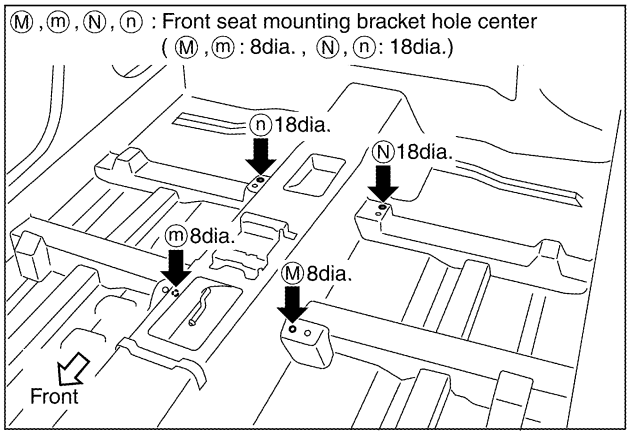

Ⓖ,ⓖ,Ⓗ,ⓗ,Ⓘ,ⓘ,Ⓙ,ⓙ : Center pillar indent
Ⓠ,ⓠ,Ⓡ,ⓡ: Door hinge installing nut center (12dia.)




Ⓚ,ⓚ,Ⓛ,ⓛ: Rear fender indent




Ⓜ,ⓜ,Ⓝ,ⓝ : Front seat mounting bracket hole center
( Ⓜ,ⓜ : 8dia. , Ⓝ,ⓝ: 18dia.)

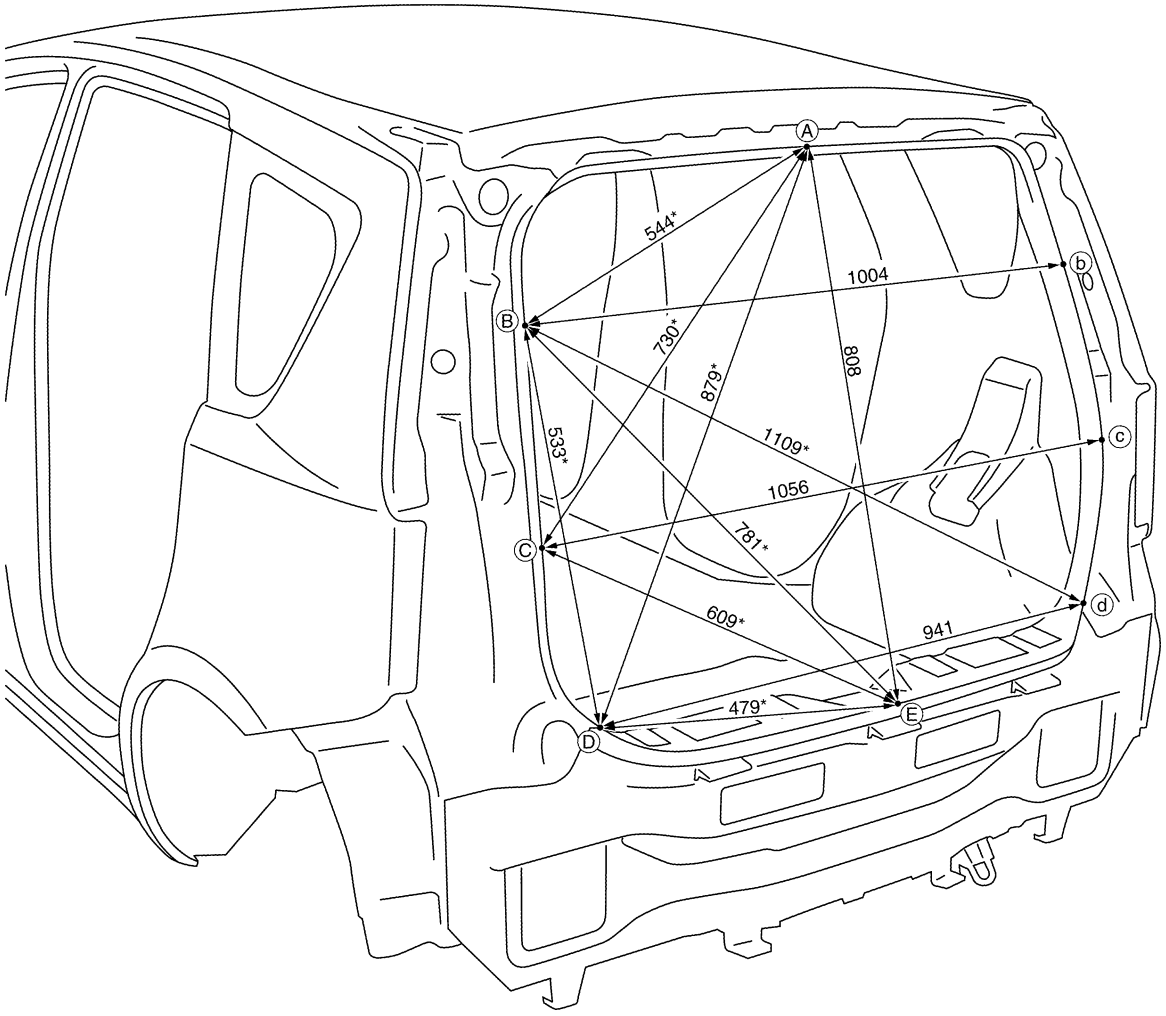



SIIA2599E

## REAR BODY
## Measurement

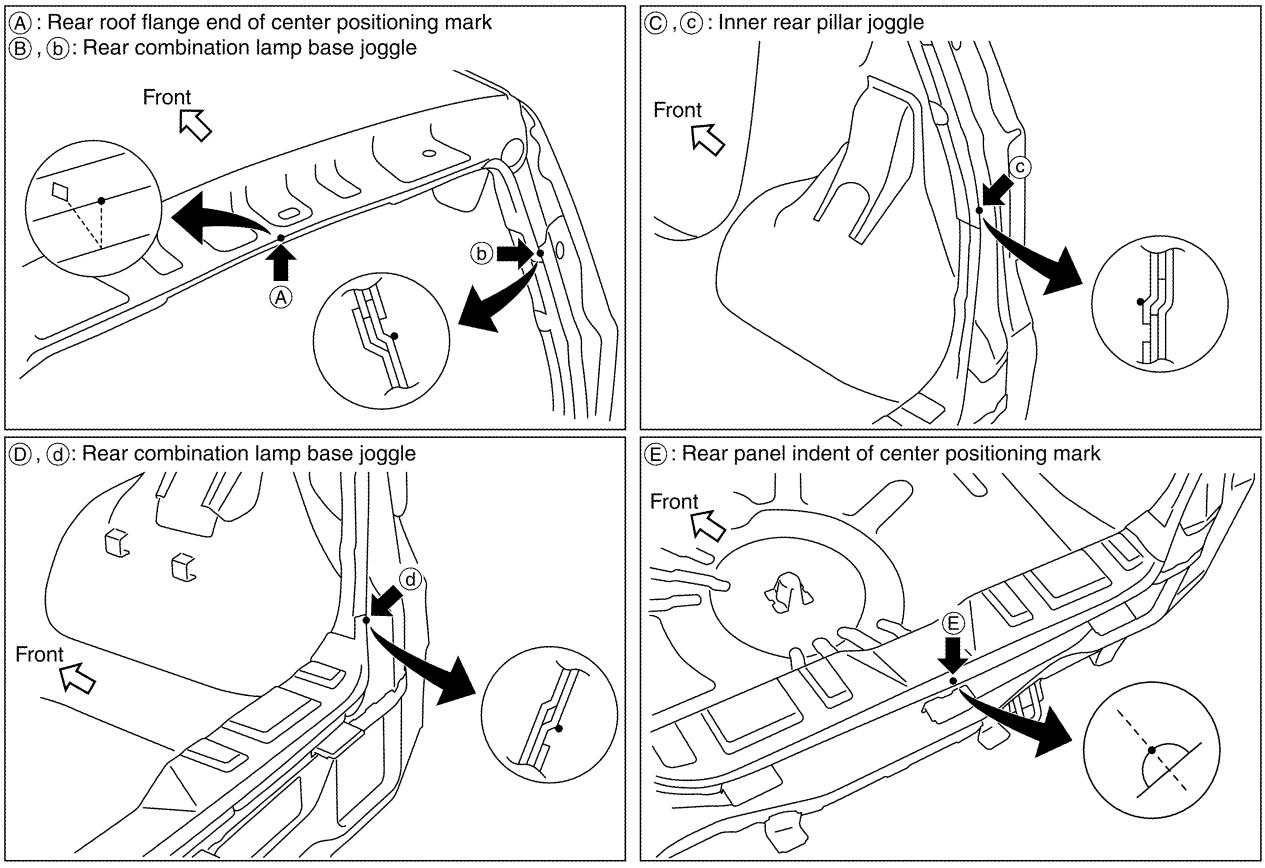
Unit : mm

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




SIIA2600E

## Measurement Points




SIIA2601E

## Handling Precautions For Plastics

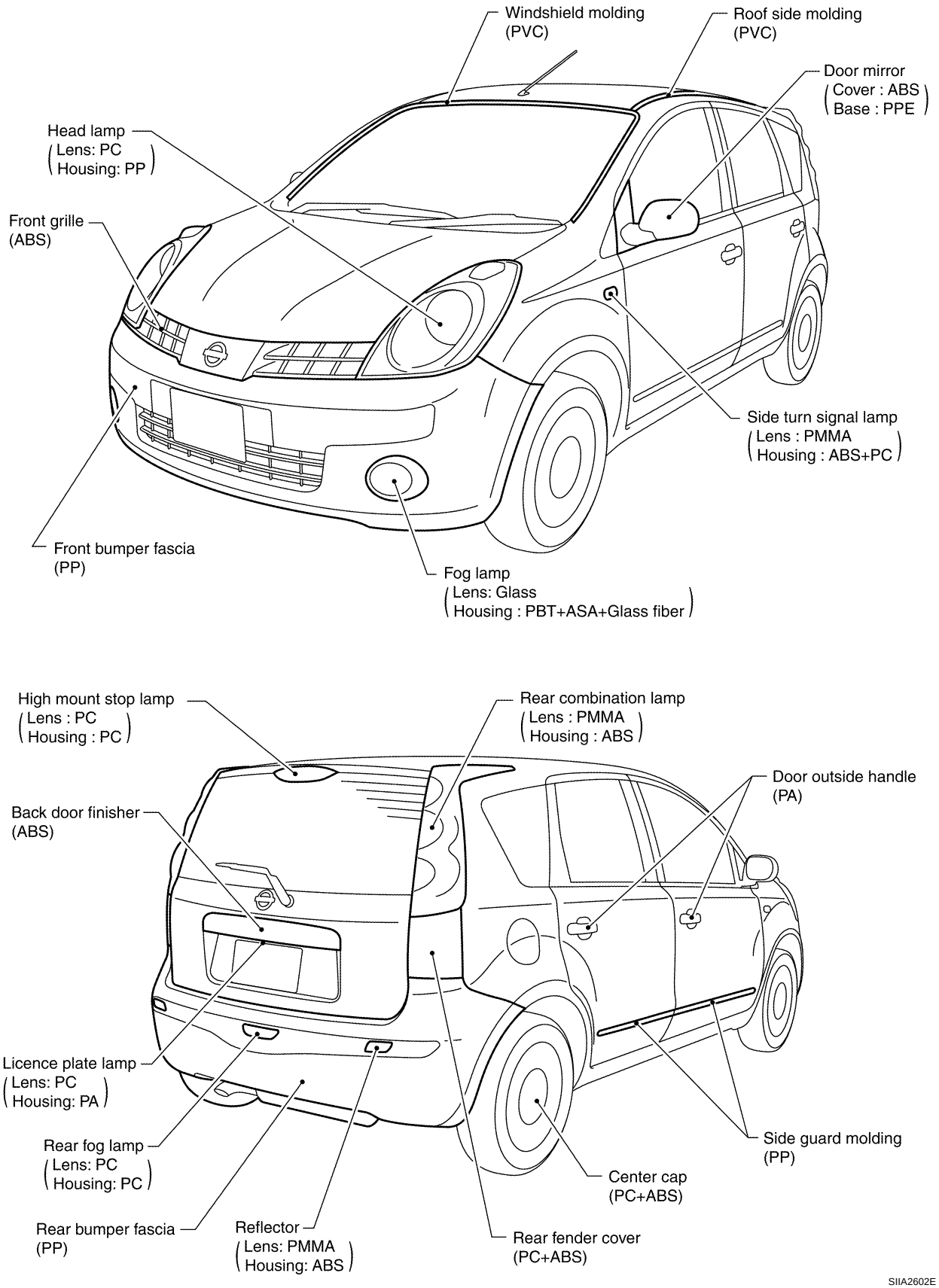
BIS000VD

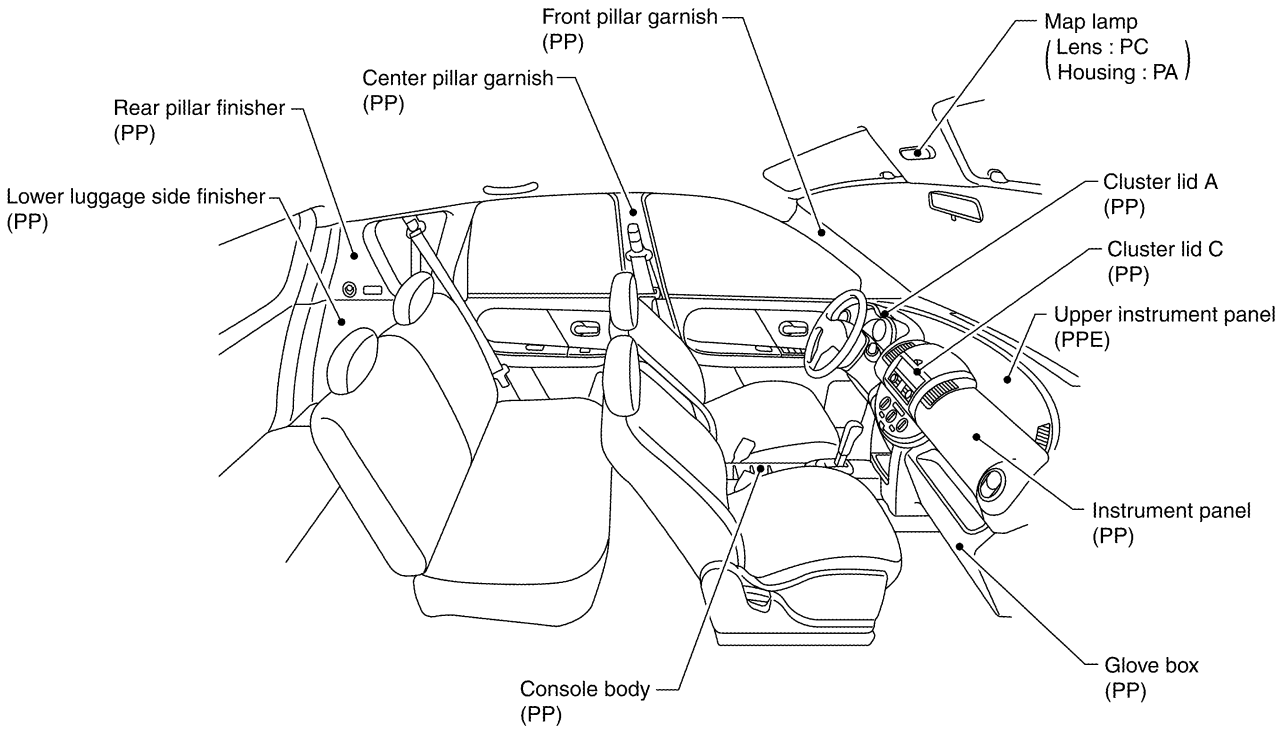
### HANDLING PRECAUTIONS FOR PLASTICS

| Abbre-viation | Material name | Heat resisting temperature °C(°F) | Resistance to gasoline and solvents | Other cautions |
|---|---|---|---|---|
| PE | Polyethylene | 60(140) | Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly). | Flammable |
| PVC | Poly Vinyl Chloride | 80(176) | Same as above. | Poison gas is emitted when burned. |
| EPM/ EPDM | Ethylene Propylene (Diene) copolymer | 80(176) | Same as above. | Flammable |
| TPO | Thermoplastic Olefine | 80(176) | Same as above. | Flammable |
| PP | Polypropylene | 90(194) | Same as above. | Flammable, avoid battery acid. |
| UP | Unsaturated Polyester | 90(194) | Same as above. | Flammable |
| PS | Polystyrene | 80(176) | Avoid solvents. | Flammable |
| ABS | Acrylonitrile Butadiene Styrene | 80(176) | Avoid gasoline and solvents. | |
| PMMA | Poly Methyl Methacrylate | 85(185) | Same as above. | |
| EVAC | Ethylene Vinyl Acetate | 90(194) | Same as above. | |
| ASA | Acrylonitrile Styrene Acrylate | 100(222) | Same as above. | Flammable |
| PPE | Poly Phenylene Ether | 110(230) | Same as above. | |
| PC | Polycarbonate | 120(248) | Same as above. | |
| PAR | Polyarylate | 180(356) | Same as above. | |
| PUR | Polyurethane | 90(194) | Same as above. | |
| POM | Poly Oxymethylene | 120(248) | Same as above. | Avoid battery acid. |
| PBT+ PC | Poly Butylene Terephthalate + Polycarbonate | 120(248) | Same as above. | Flammable |
| PA | Polyamide | 140(284) | Same as above. | Avoid immersing in water. |
| PBT | Poly Butylene Terephthalate | 140(284) | Same as above. | |
| PET | Polyester | 180(356) | Same as above. | |
| PEI | Polyetherimide | 200(392) | Same as above. | |

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

## LOCATION OF PLASTIC PARTS




Front pillar garnish
(PP)
Map lamp
(Lens : PC
Housing : PA)
Center pillar garnish
(PP)
Rear pillar finisher
(PP)
Lower luggage side finisher
(PP)
Cluster lid A
(PP)
Cluster lid C
(PP)
Upper instrument panel
(PPE)
Instrument panel
(PP)
Glove box
(PP)
Console body
(PP)

SIIA2603E

## Precautions In Repairing High Strength Steel

BIS000VE

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

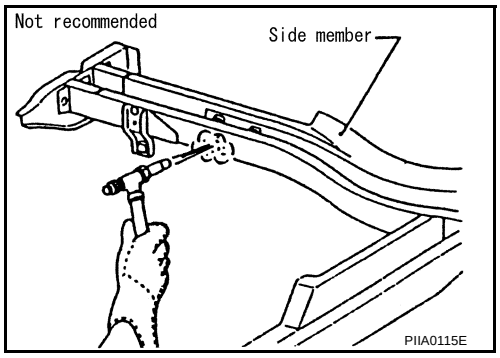
| Tensile strength | Nissan/Infiniti designation | Renault designation | Major applicable parts |
|---|---|---|---|
| 373 $N/mm^2$ (38$kg/mm^2$ ,54klb/sq in) | SP130 | X/Z E220P | ● Front side member assembly<br>● Pillar hinge brace assembly<br>● Rear side member assembly<br>● Other reinforcements |
| 785-981 $N/mm^2$ (80-100$kg/mm^2$ 114-142klb/sq in) | SP150 | XE 450P | ● Front bumper reinforcement |

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

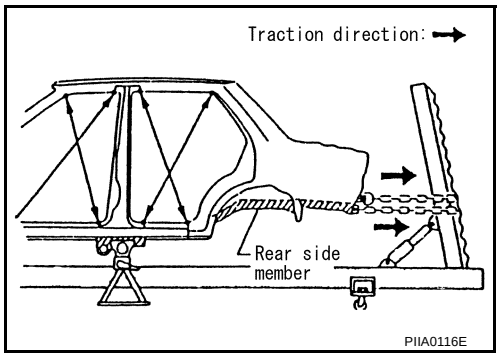
## Read the Following Precautions When Repairing HSS:

1. Additional points to consider

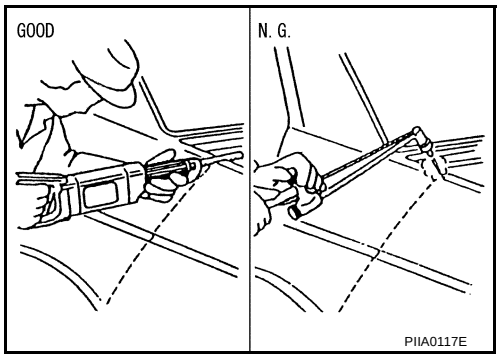
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).
  Verify heating temperature with a thermometer.
  (Crayon-type and other similar type thermometer are appropriate.)



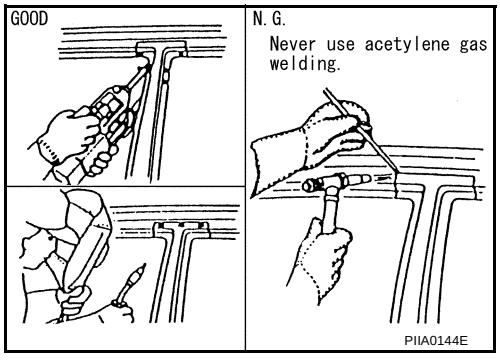

- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



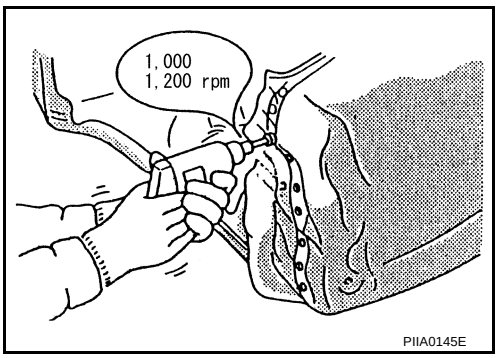

- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



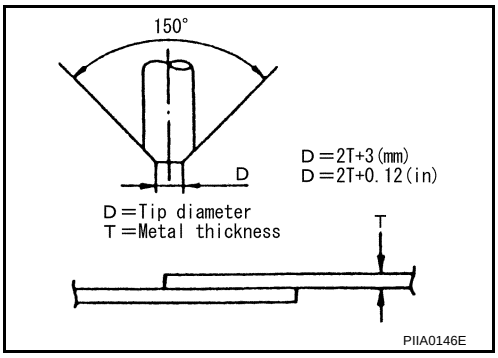

- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



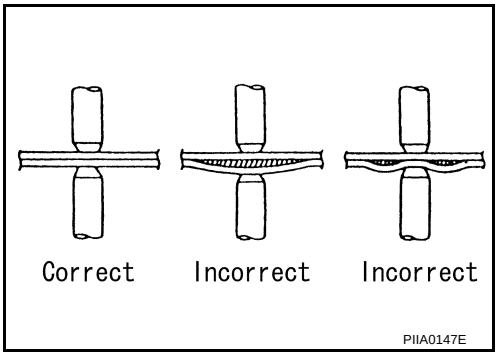
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.




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.



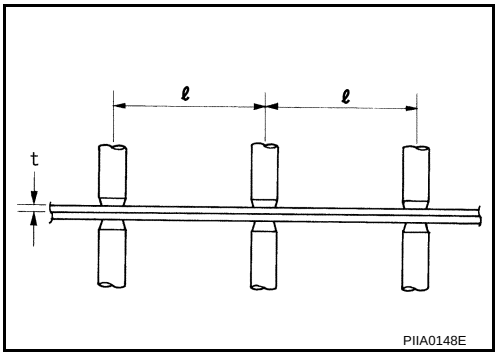

   - The panel surfaces must fit flush to each other, leaving no gaps.




   - 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 |



## Rear fender hemming process

1. A wheel arch is to be installed and hemmed over left and right outer wheel house.
2. In order to hem the wheel arch, it is necessary to repair any damaged or defaced parts around outer wheel house.

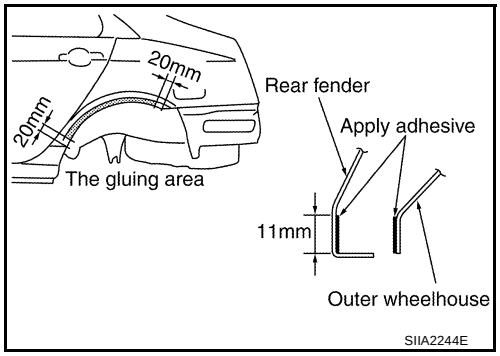
**CAUTION:**
**Ensure that the area that is to be glued around outer wheelhouse is undamaged or defaced.**

Procedure of the hemming process

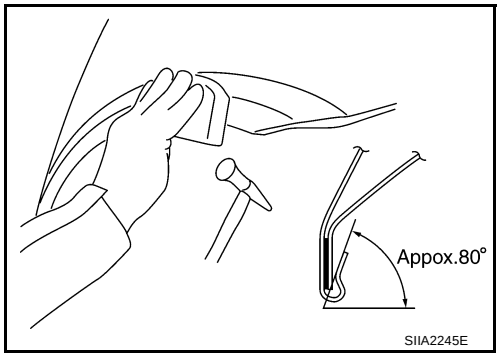
- Peel off old bonding material on the surface of outer wheelhouse and clean thoroughly.
- Peel off a primer coat in the specified area where new adhesive is to be applied on rear fender (the replacing part).
- Apply new adhesive to both specified areas of outer wheelhouse and rear fender.

  **<Adhesive> 3M automix panel bond 8115, or any equivalents**

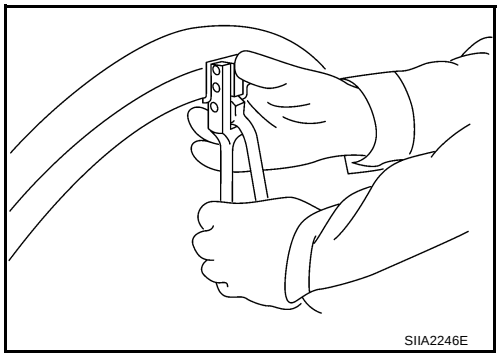
- Attach rear fender to the body of the car, and weld the required part except the hemming part.



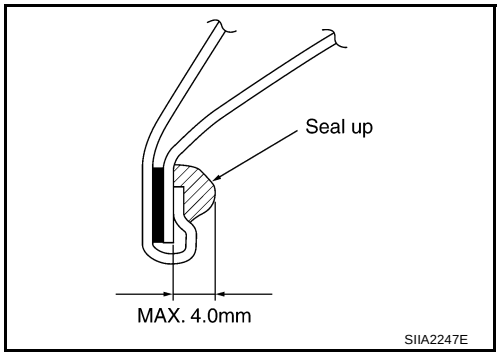

- Bend the welded part starting from the center of the wheel arch gradually with a hammer and a dolly. (Also hem the end of the flange.)
- Hemming with a hammer is conducted to an approximate angle of 80 degrees.




- Starting from the center, hem the wheel arch gradually, using slight back and forth motion with a hemming tool.




- Seal up the area around the hemmed end of the flange.



## Foam Repair

BIS000VF

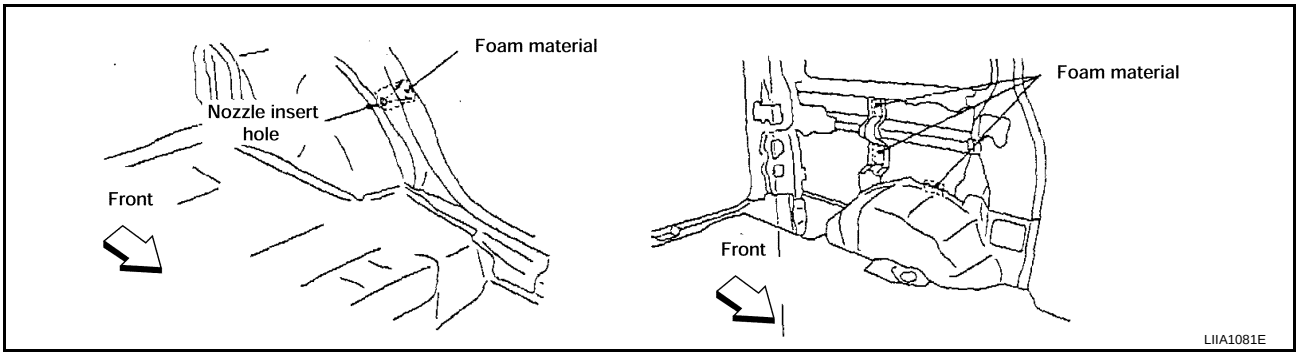
During factory body assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

### 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.

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.

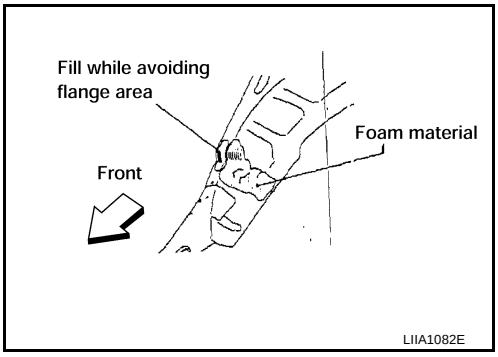



2. Fill procedures before installation of service part.

- 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

BIS000VG

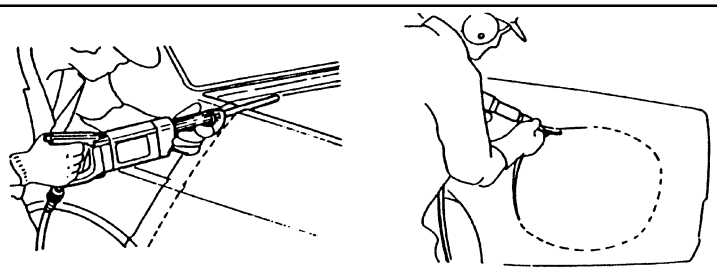
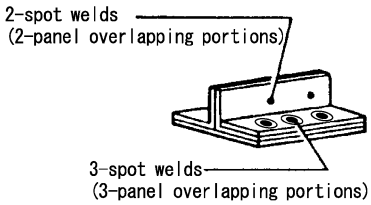
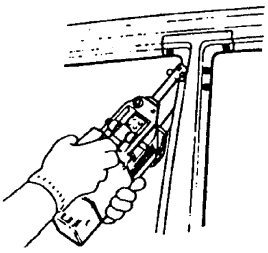
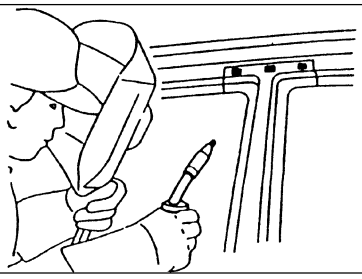
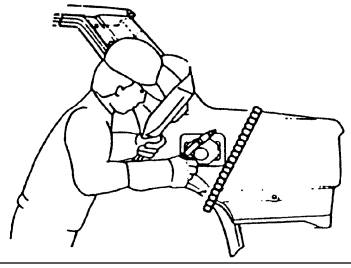
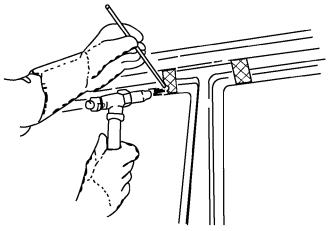
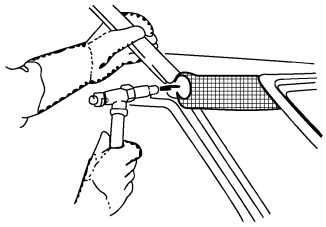
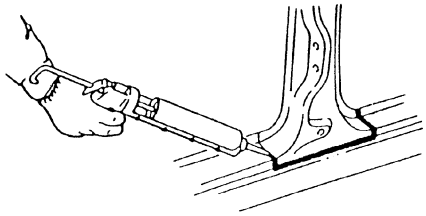
## DESCRIPTION

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

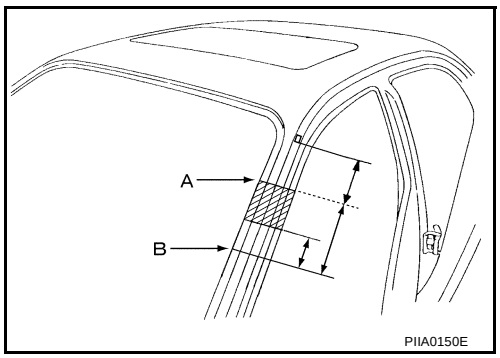
Please note that these information are prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

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

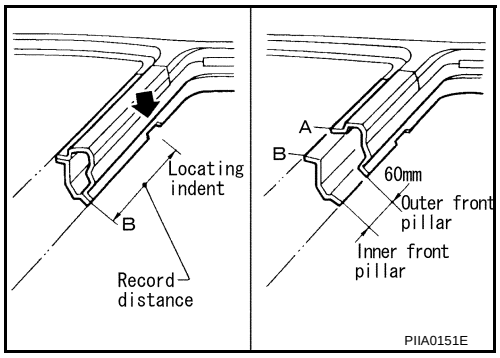
| | |
|---|---|
| Saw cut or air chisel cut |  |
| Spot weld<br>●●●● 2-spot welds |   |
| ◉◉◉◉ 3-spot welds | |
| ■ ■ ■ MIG plug weld |   |
| MIG seam weld/ Point weld | |
| Brazing |  |
| Soldering |  |
| Sealing |  |

PIIA0149E

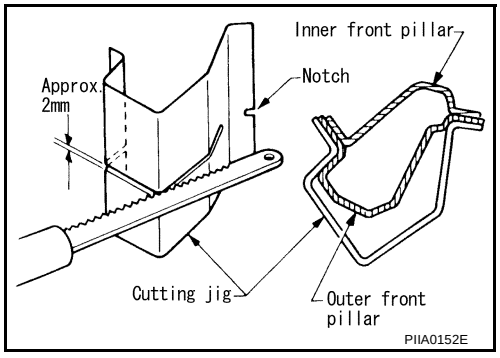
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.




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

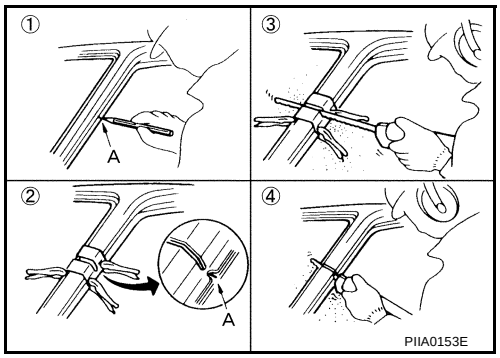



- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



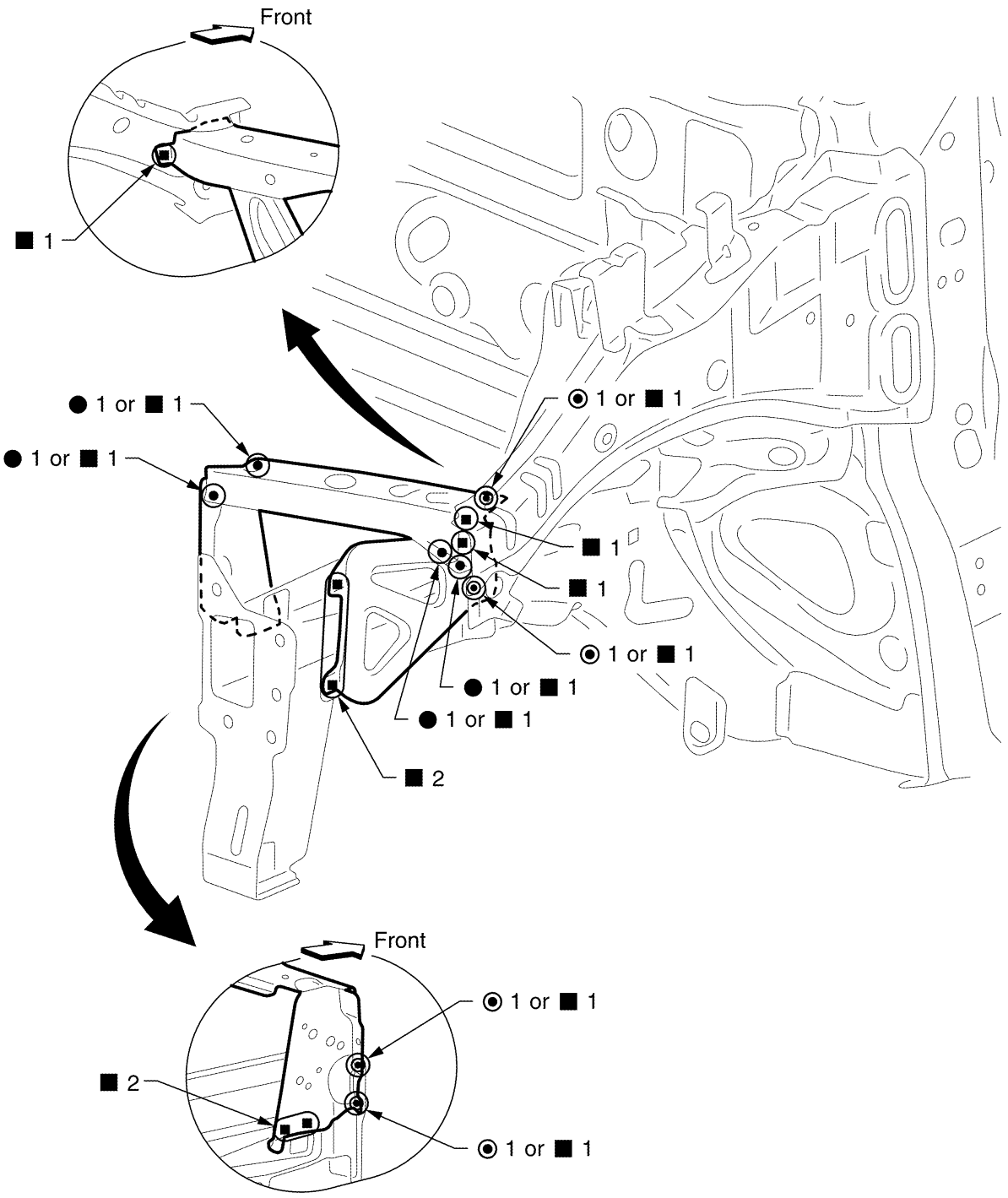

- An example of cutting operation using a cutting jig is as follows.

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



## RADIATOR CORE SUPPORT

**Service Joint**




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

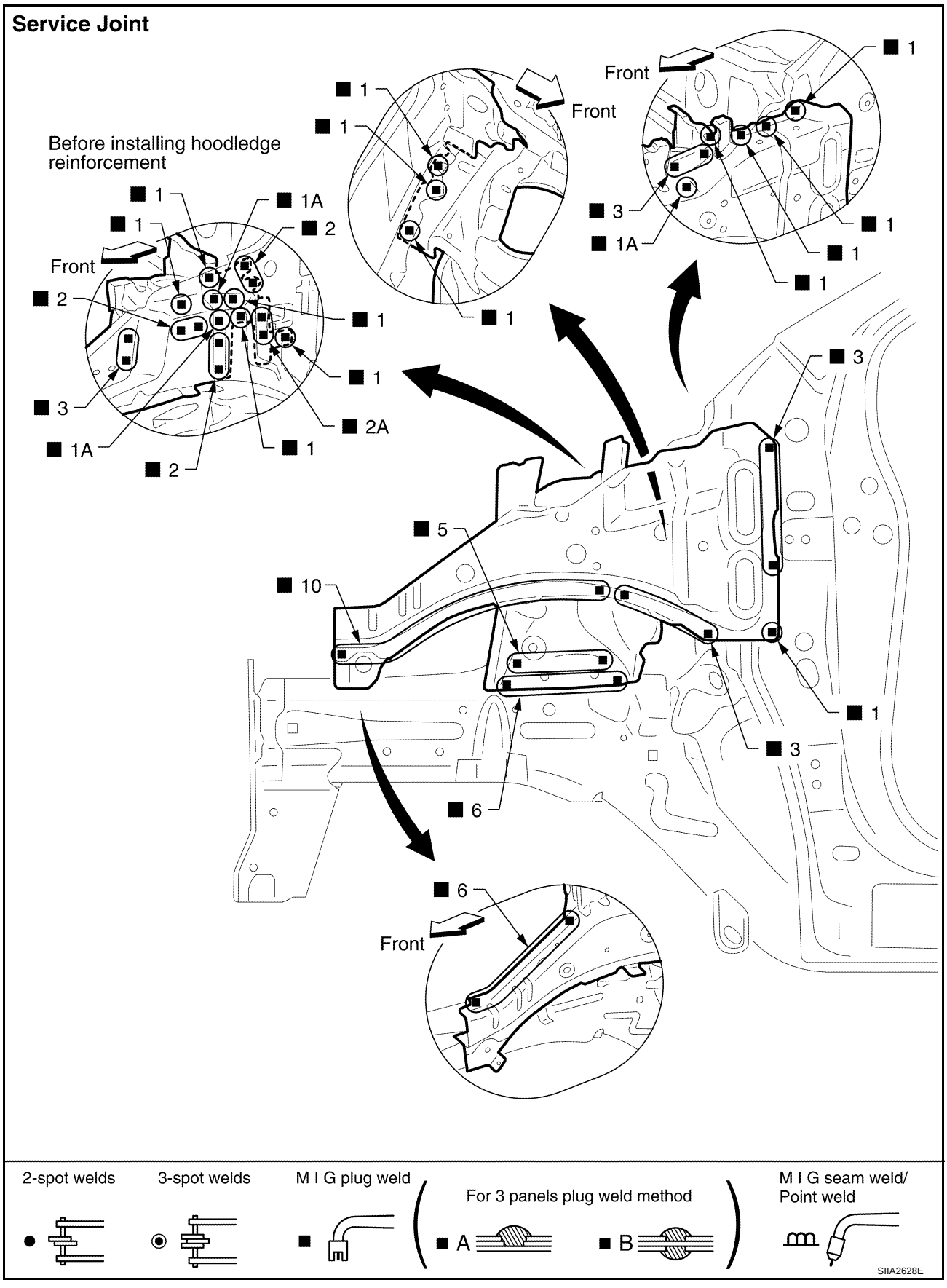
SIIA2627E

Change parts

- ● Side radiator core support (LH)
- ● Side radiator core reinforcement (LH)
- ● Hoodledge connector (LH)

## HOODLEDGE

- Work after radiator core support has been removed.

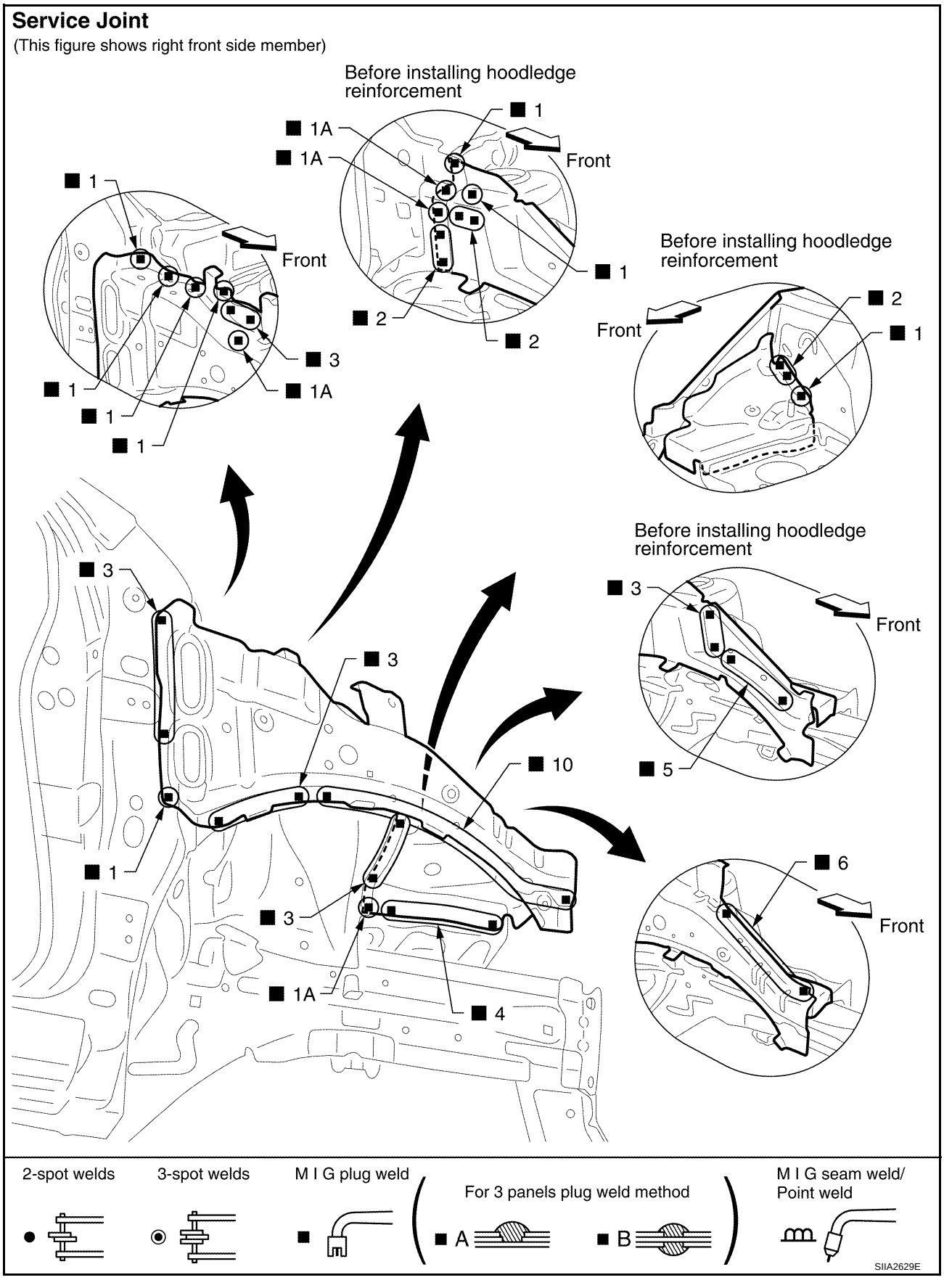


Change parts

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

## HOODLEDGE (PARTIAL REPLACEMENT)

- Work after radiator core support has been removed.

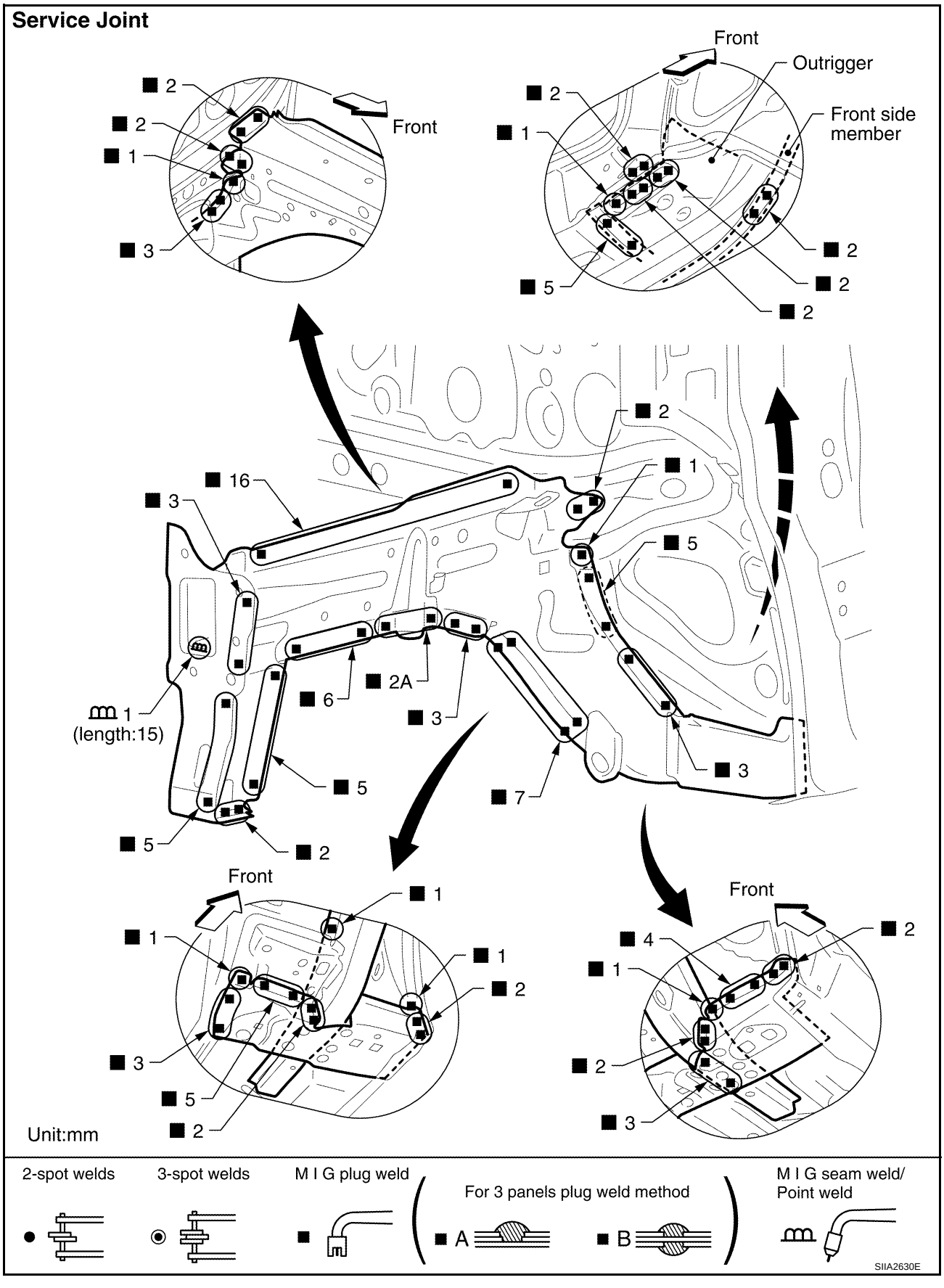


Change parts

- Engine mounting member bracket (RH)
- Upper hoodledge (RH)
- Hoodledge reinforcement (RH)

## FRONT SIDE MEMBER

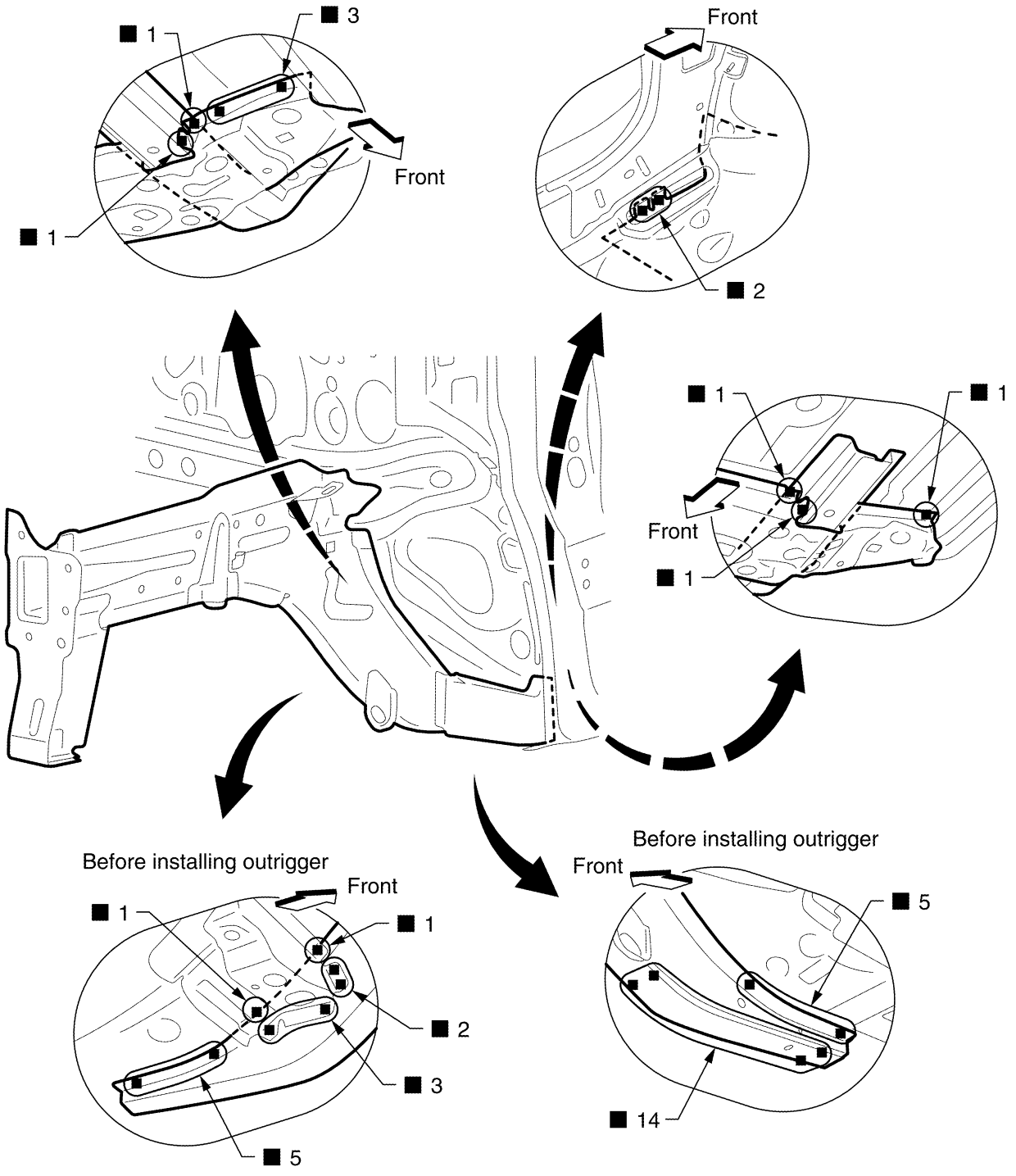
- Work after hoodledge and radiator core support have been removed.



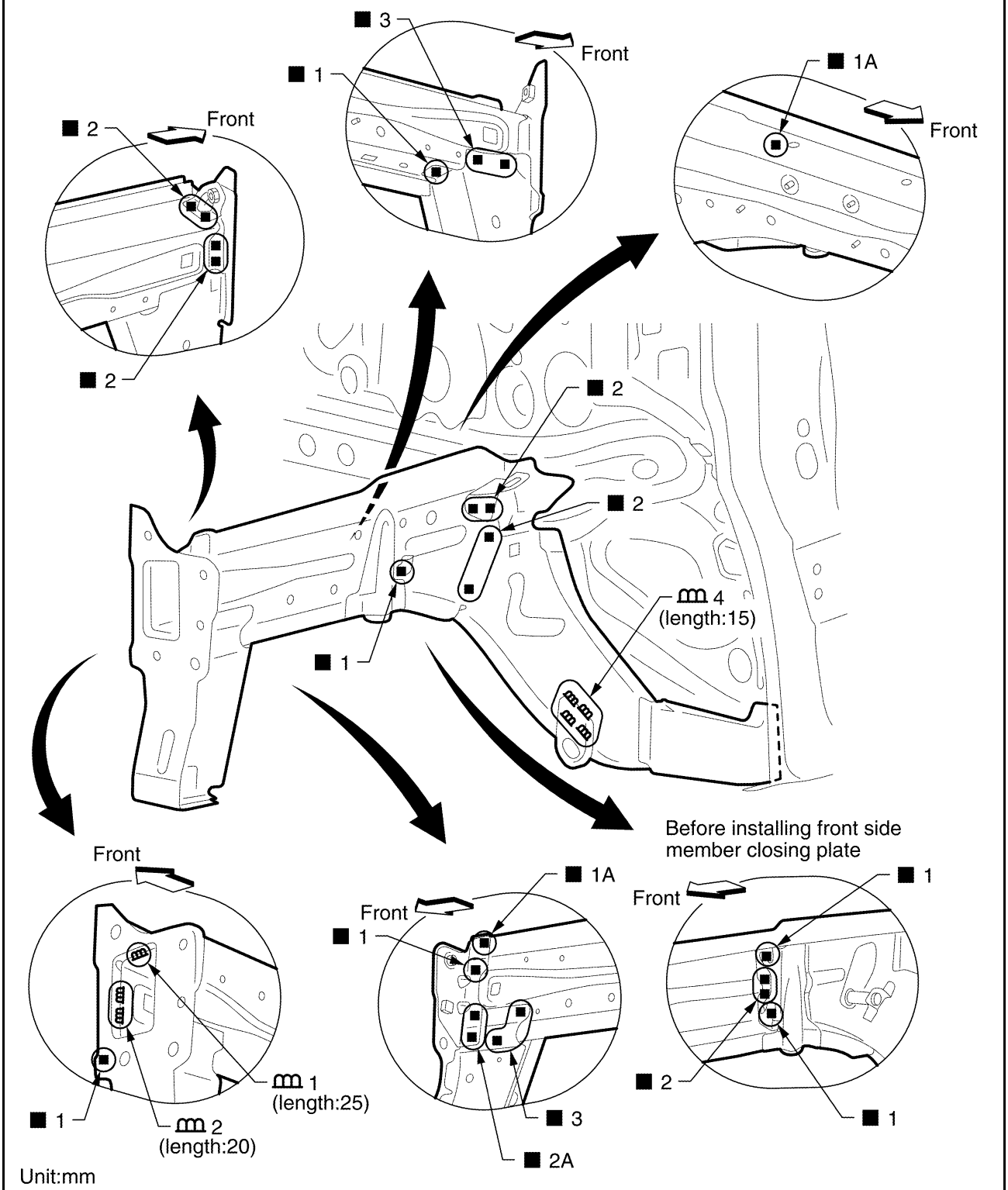
Change parts

- Front side member (LH)
- Front side member flange (LH)
- Sensor harness bracket (LH)
- Front hook (LH)
- Front side member closing plate (LH)
- Outer add on frame bracket (LH)
- Front suspension mounting bracket (LH)
- Add on frame bracket (LH)
- Tie down hook reinforcement (LH)
- Brake hose bracket (LH)

**Service Joint**

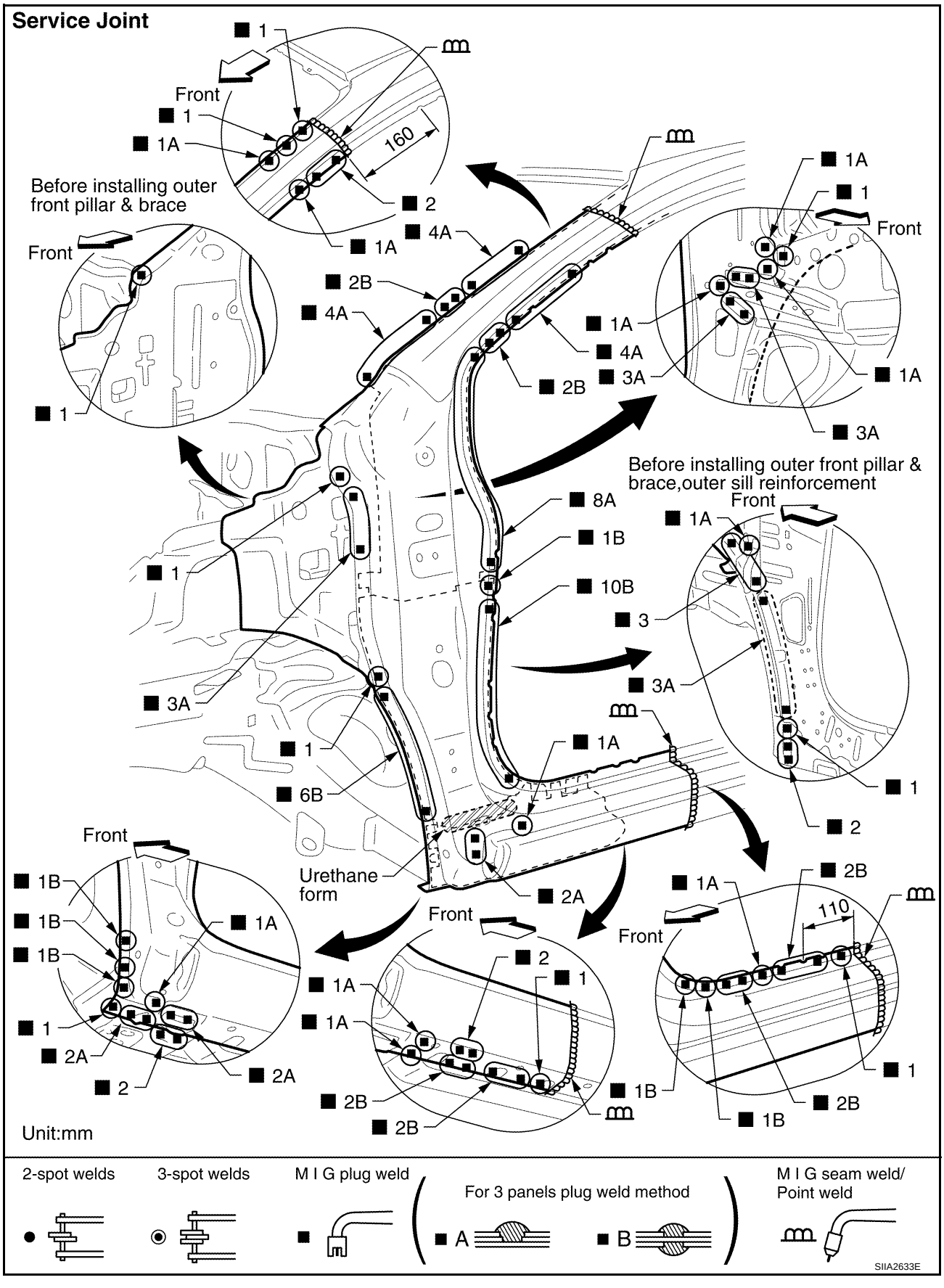


**Service Joint**



## FRONT PILLAR

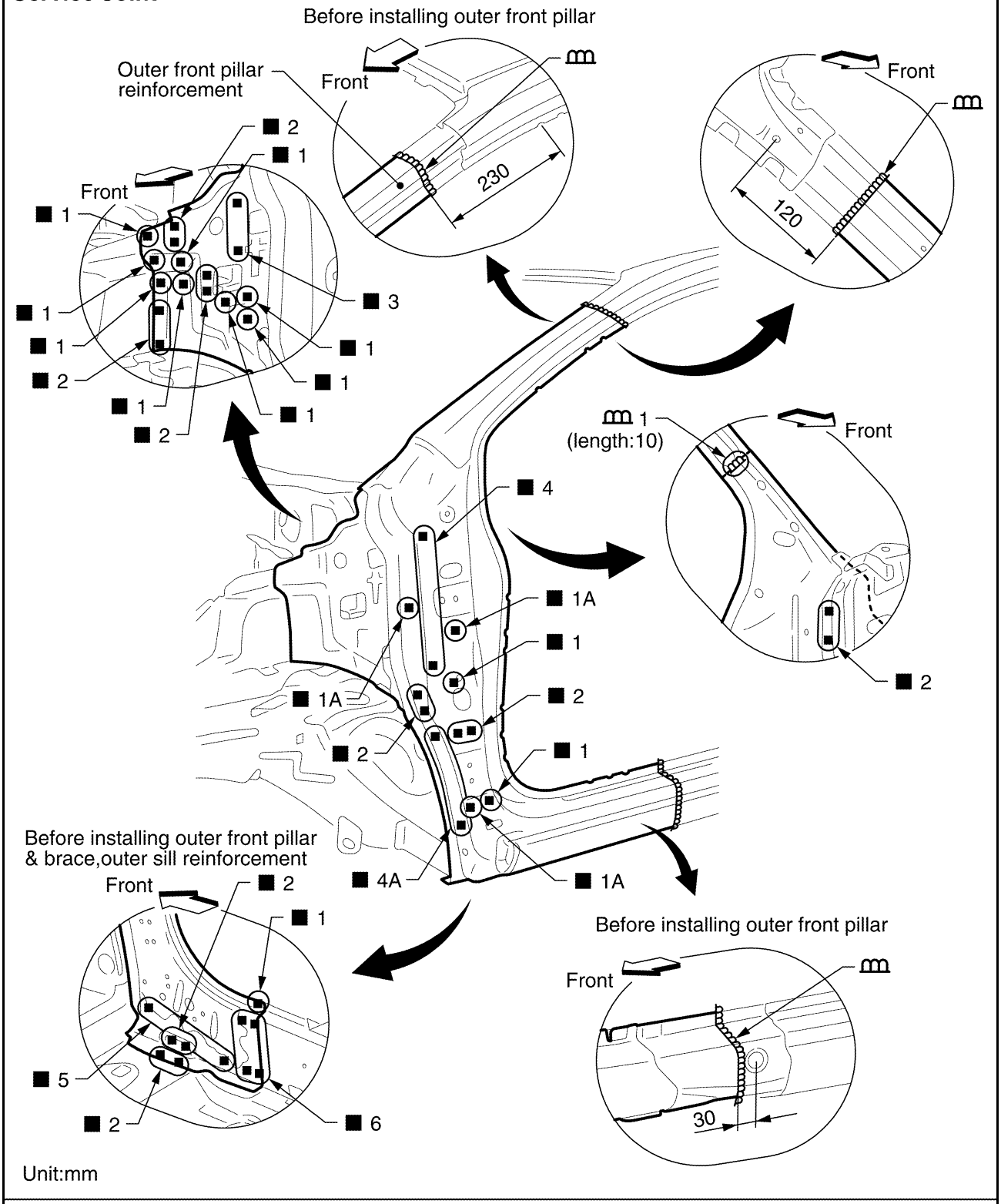
- Work after hoodledge reinforcement has been removed.



Change parts

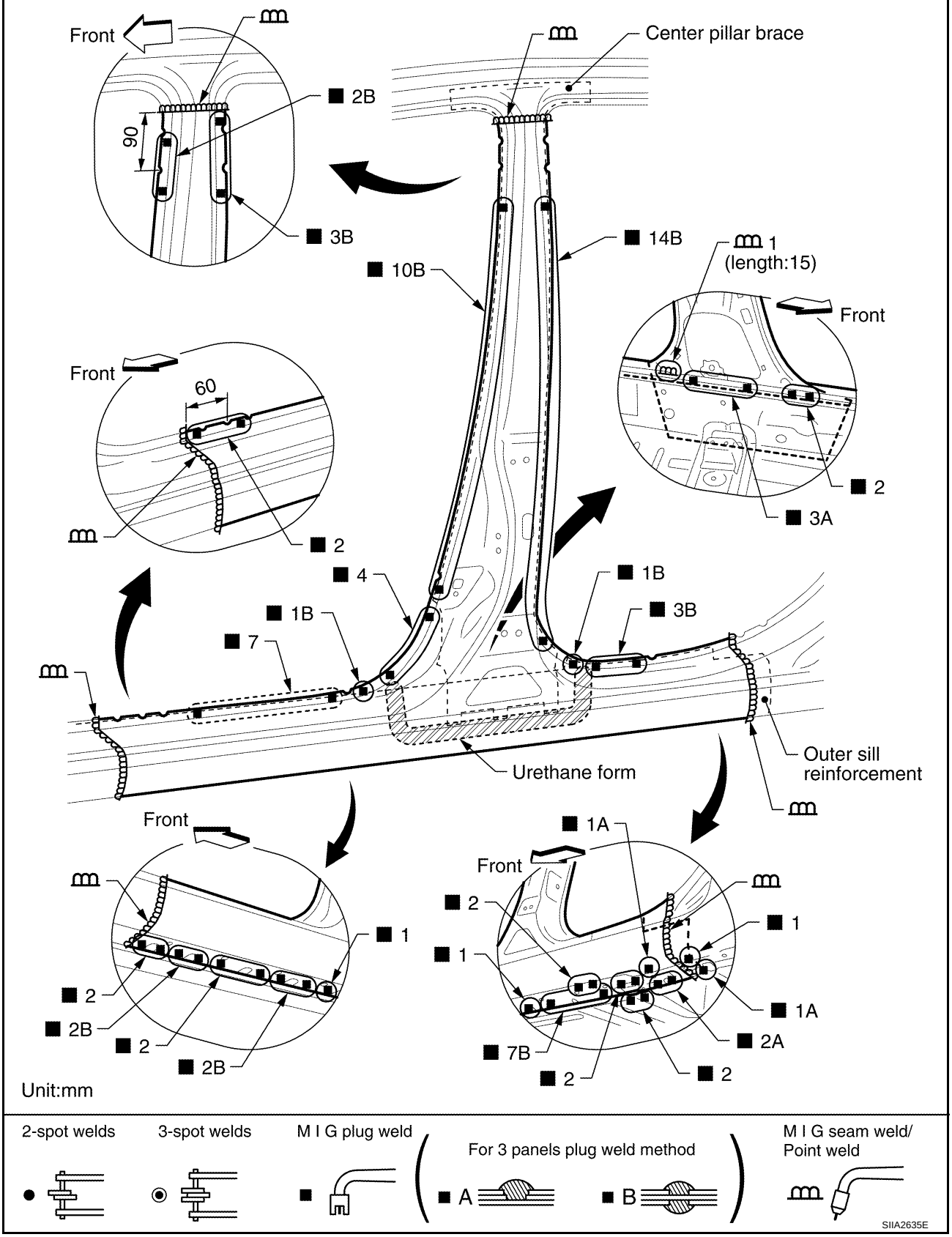
- Side body assembly (LH)
- Upper inner front pillar (LH)
- Front pillar brace (LH)
- Outer sill reinforcement (LH)
- Side dash (LH)

**Service Joint**



## CENTER PILLAR

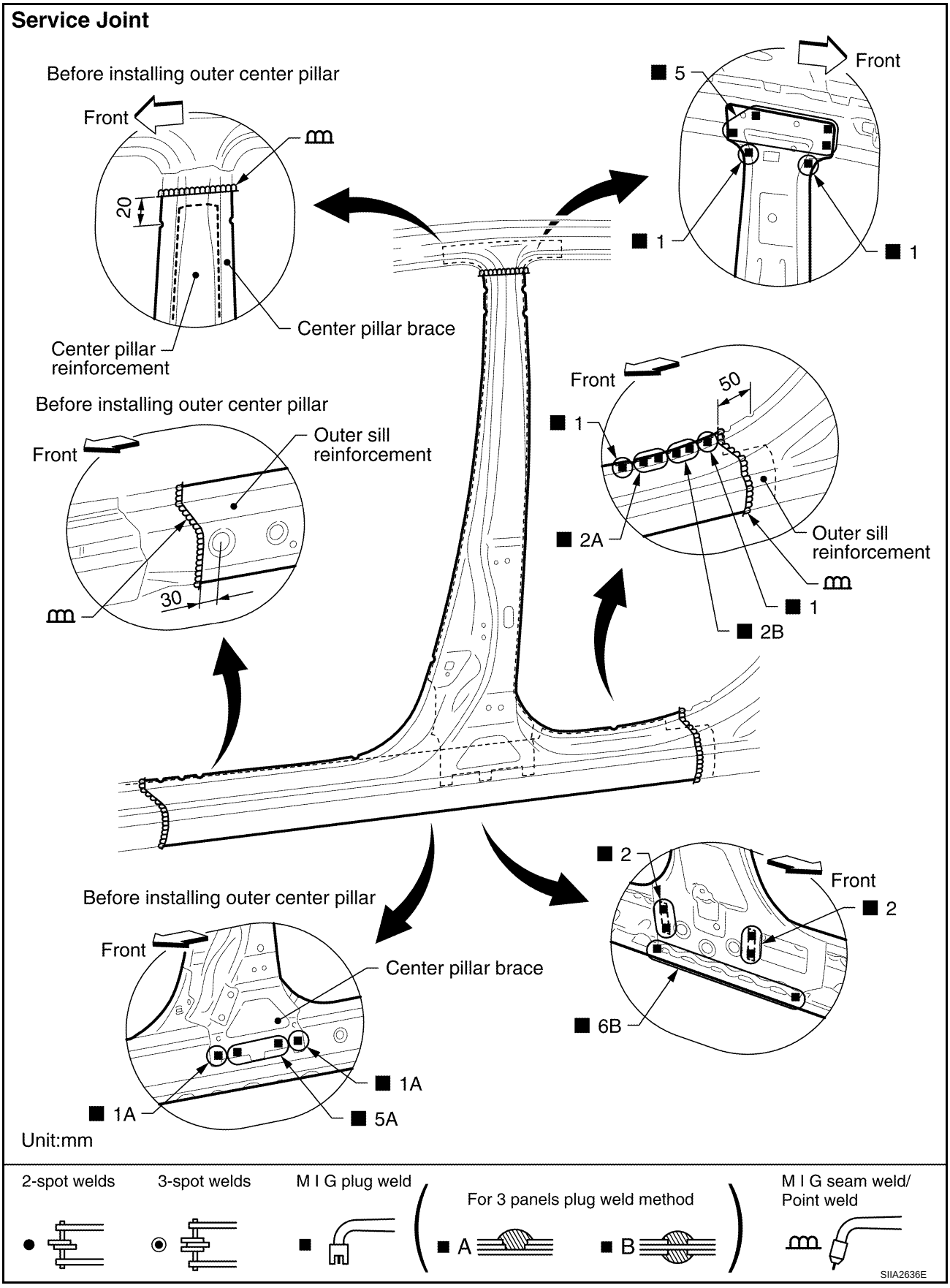
**Service Joint**




Change parts

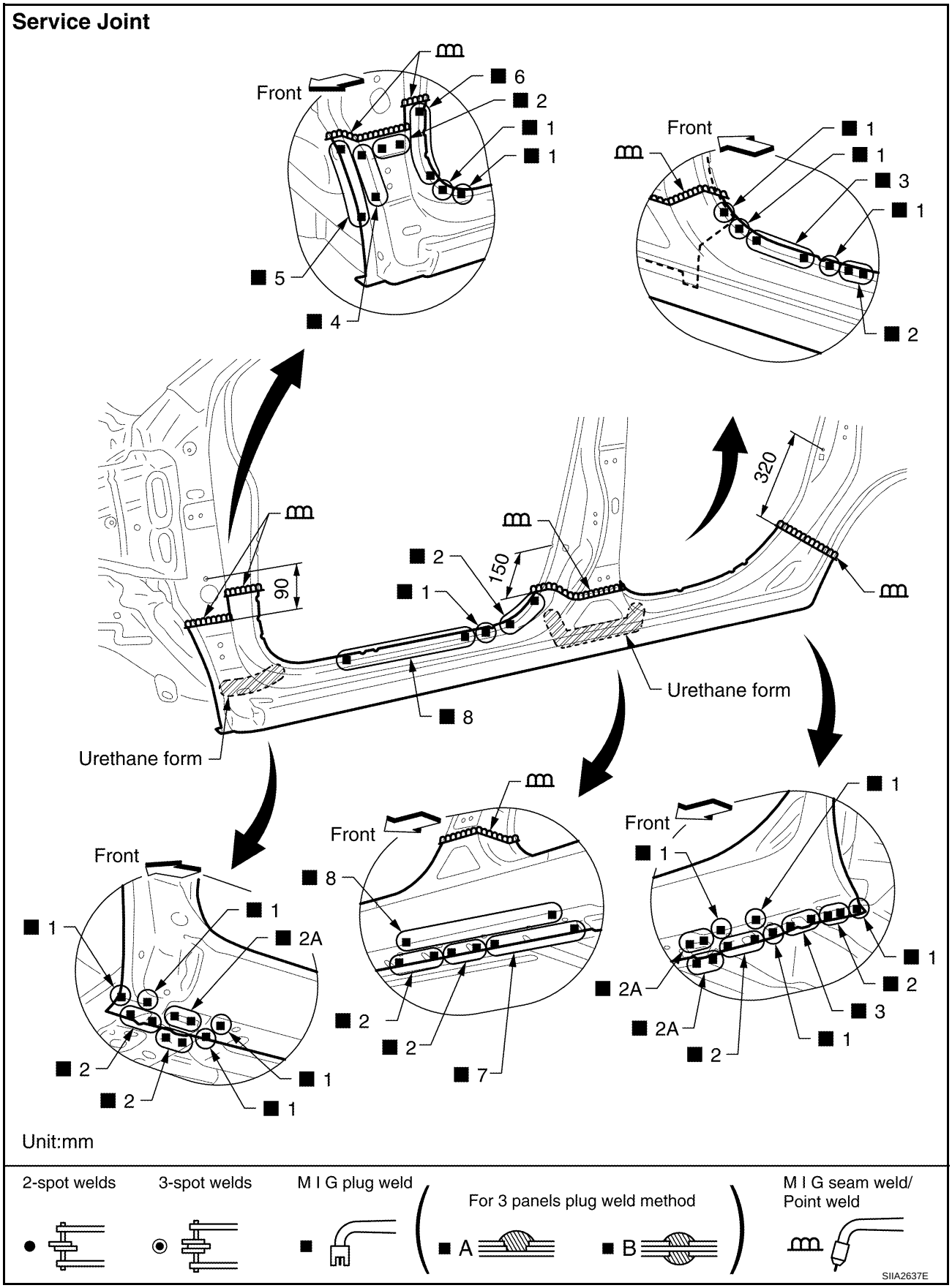
- Side body assembly (LH)
- Center pillar brace (LH)
- Inner center pillar (LH)
- Outer sill reinforcement (LH)

## Service Joint



## OUTER SILL

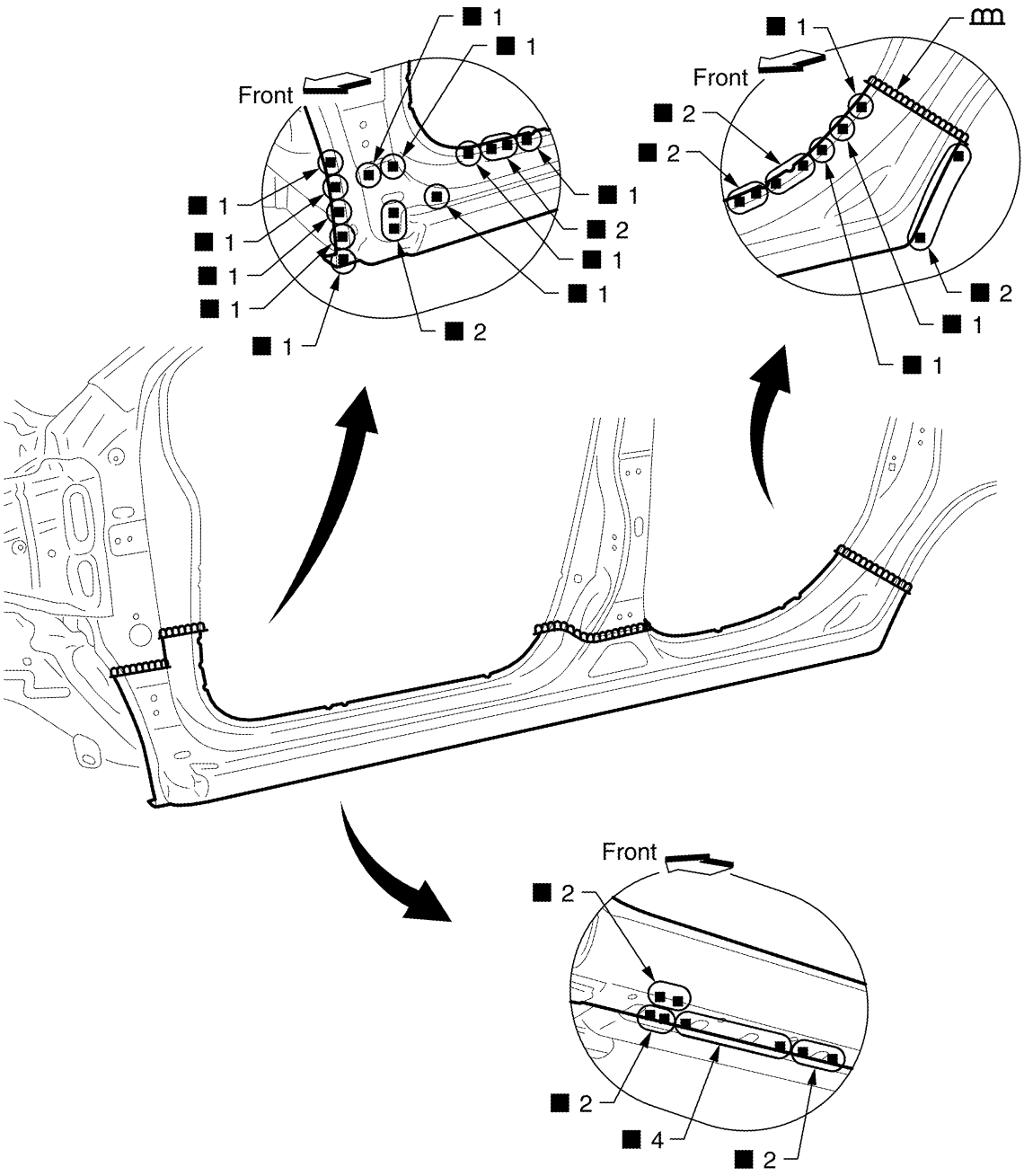
**Service Joint**




Change parts

- Outer sill (LH)

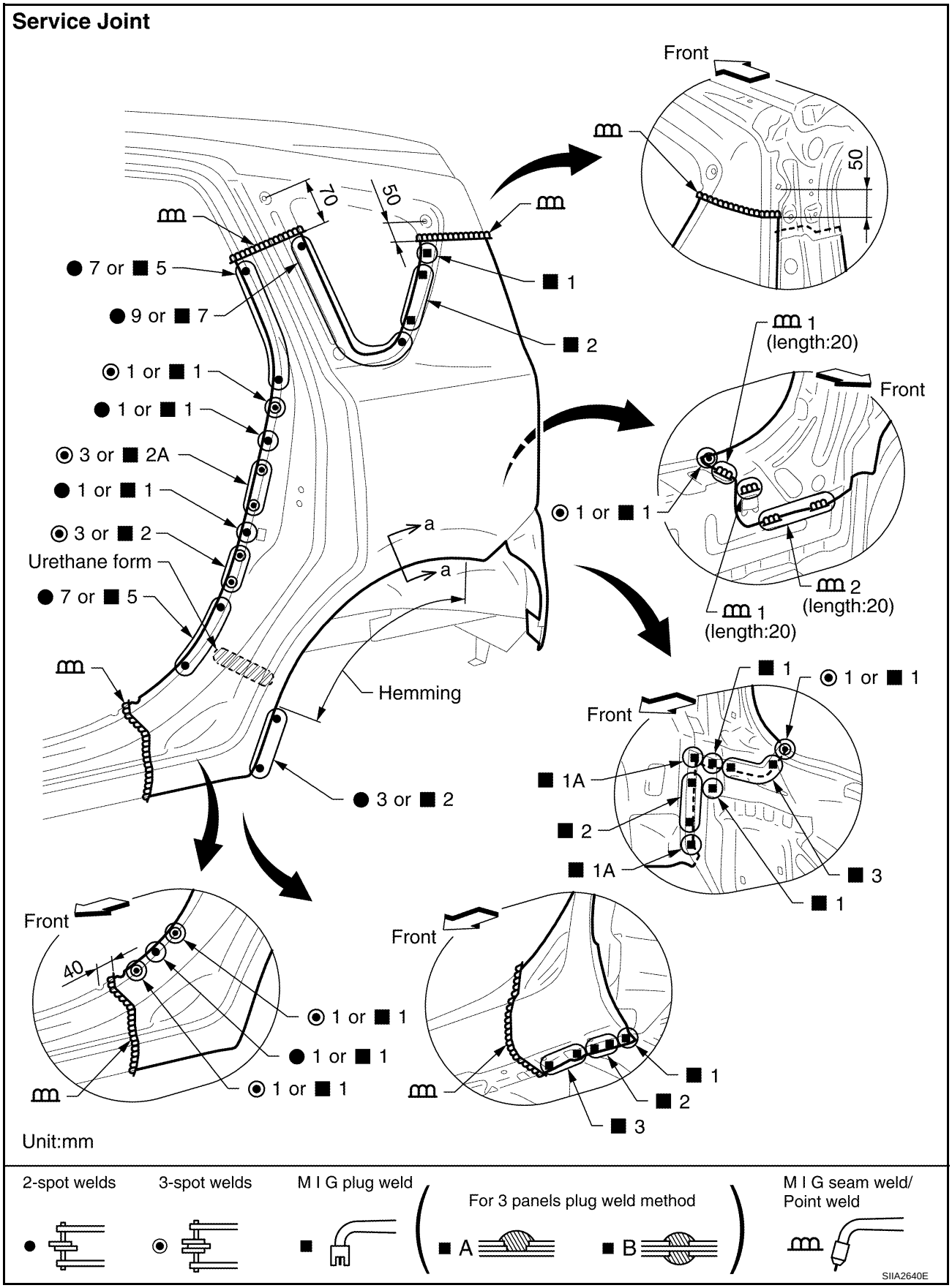
**Service Joint**




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

SIIA2638E

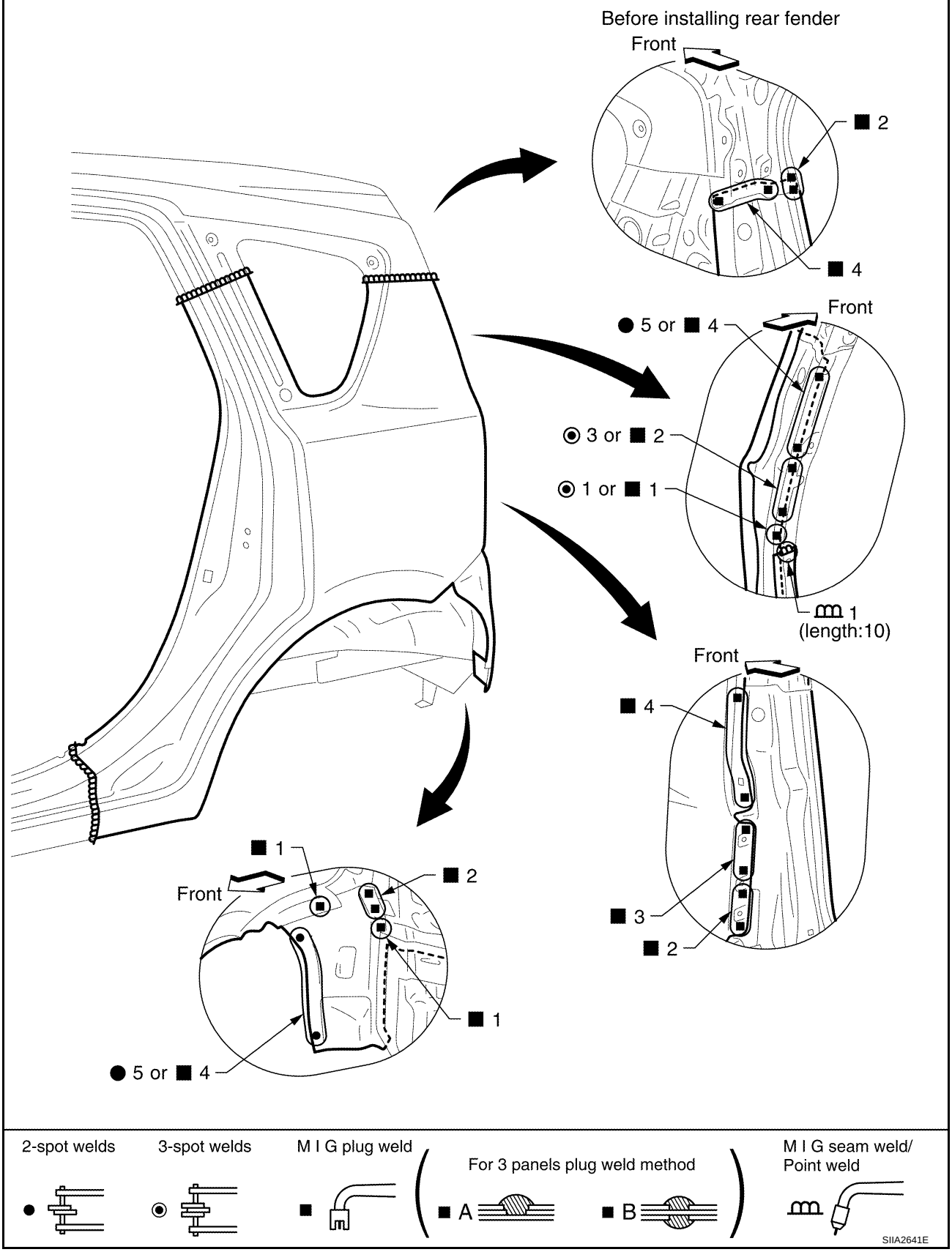
## REAR FENDER

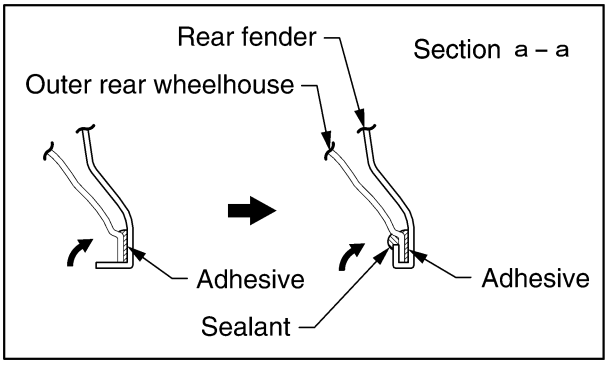



Change parts

- Rear fender (LH)

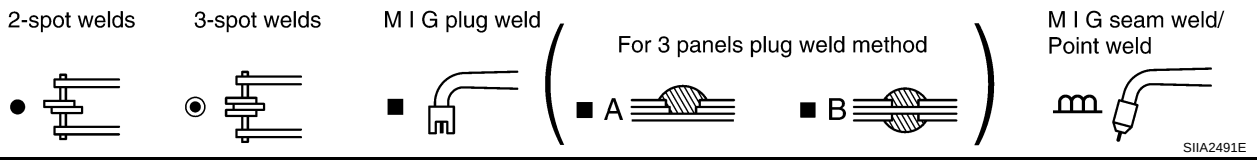
**Service Joint**






INSTALLATION NOTES

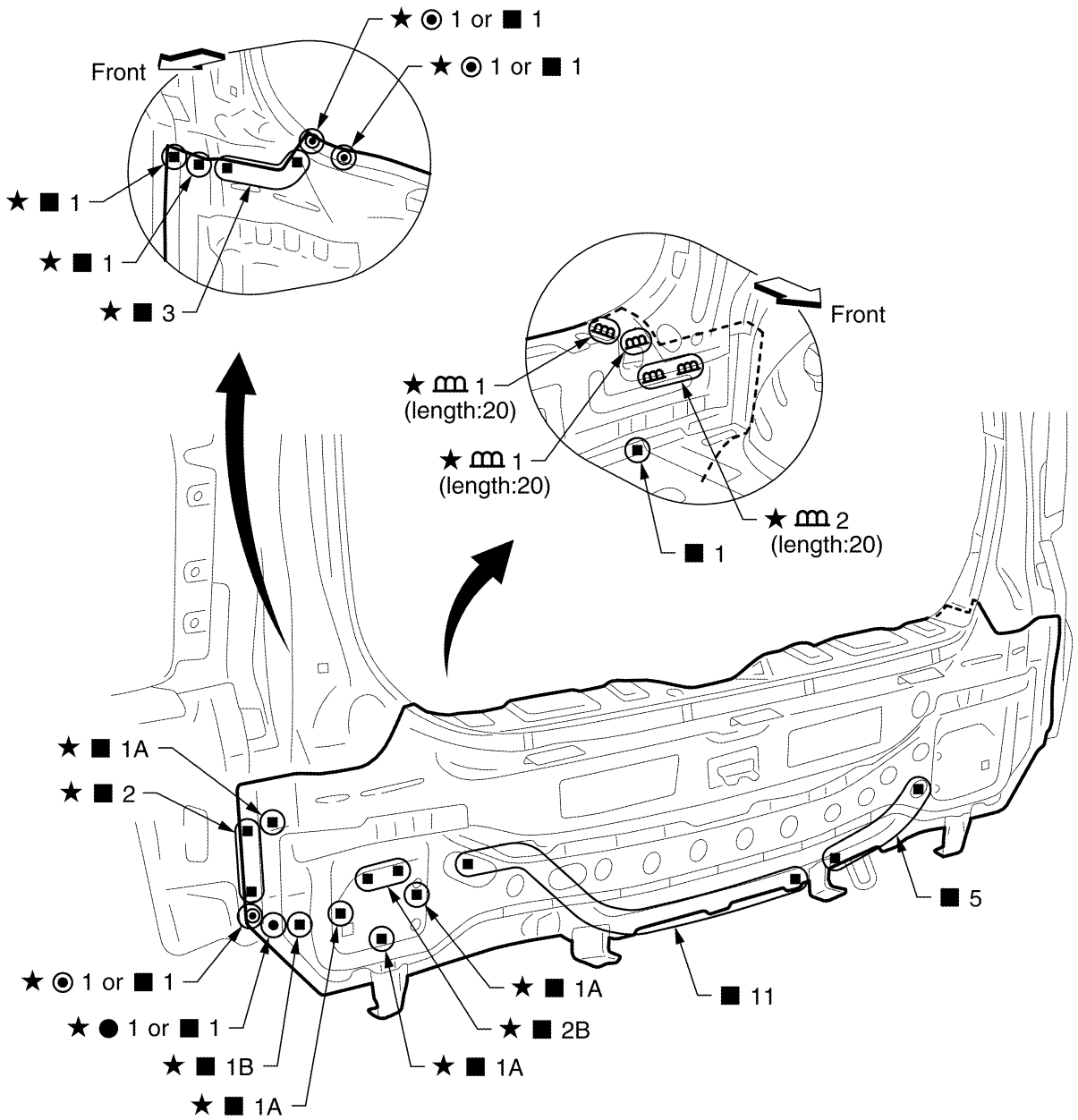
- Flange of a wheel arch department hem after having apply adhesive.
- Seal up the area around the hemmed end of the flange.
- Refer to "Rear fender hemming process".

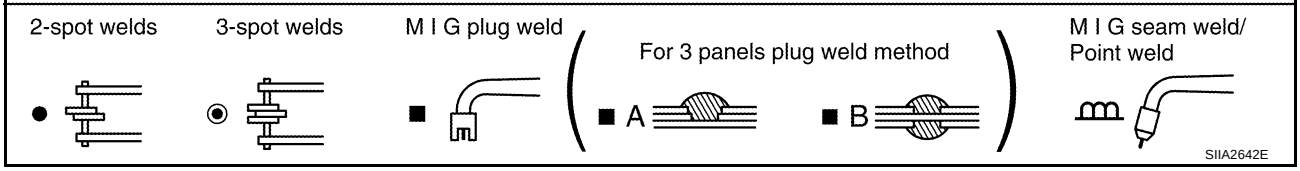


## REAR PANEL

### Service Joint

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



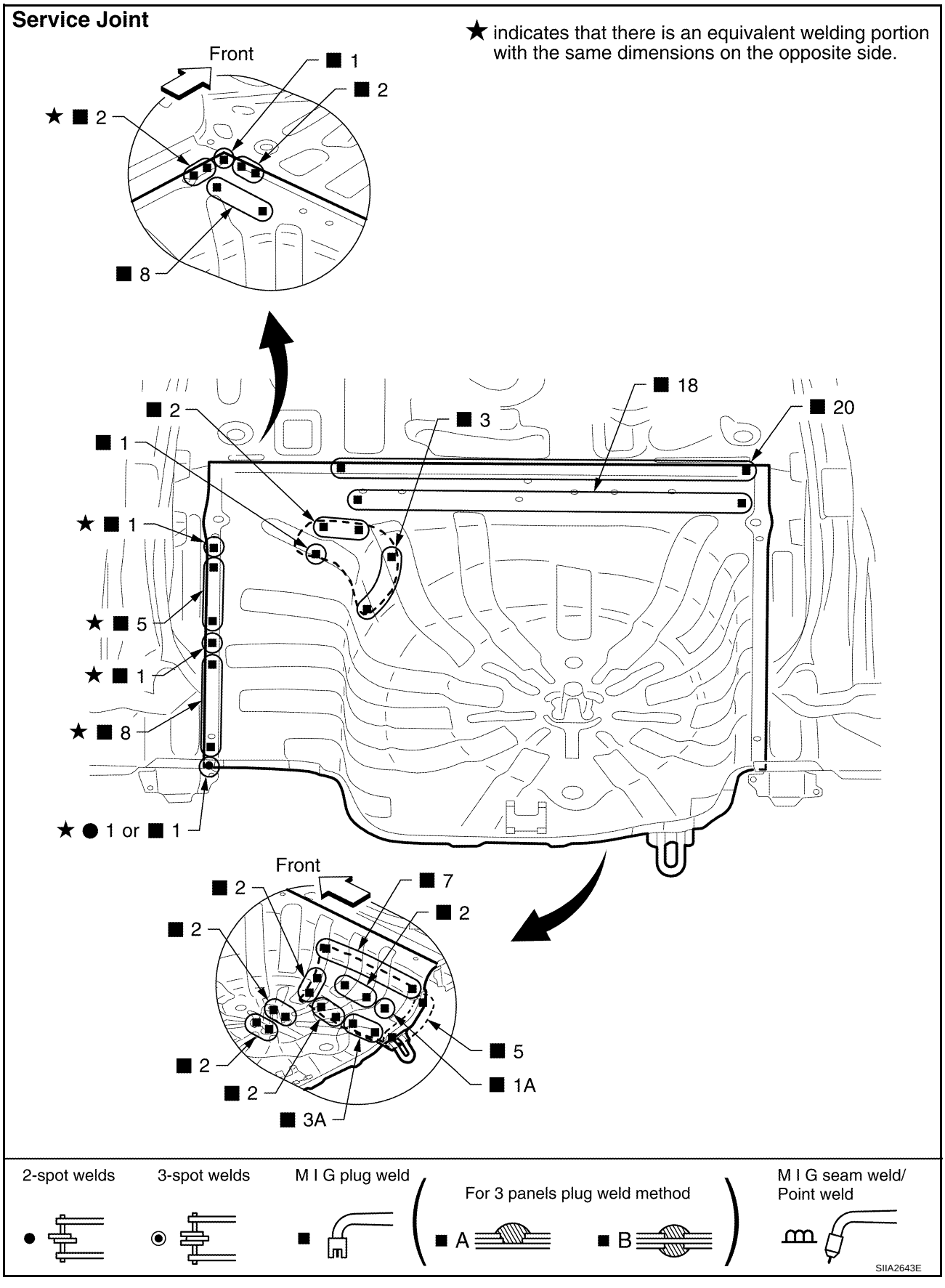




Change parts

- ● Rear panel assembly

## REAR FLOOR REAR

- Work after rear panel has been removed.



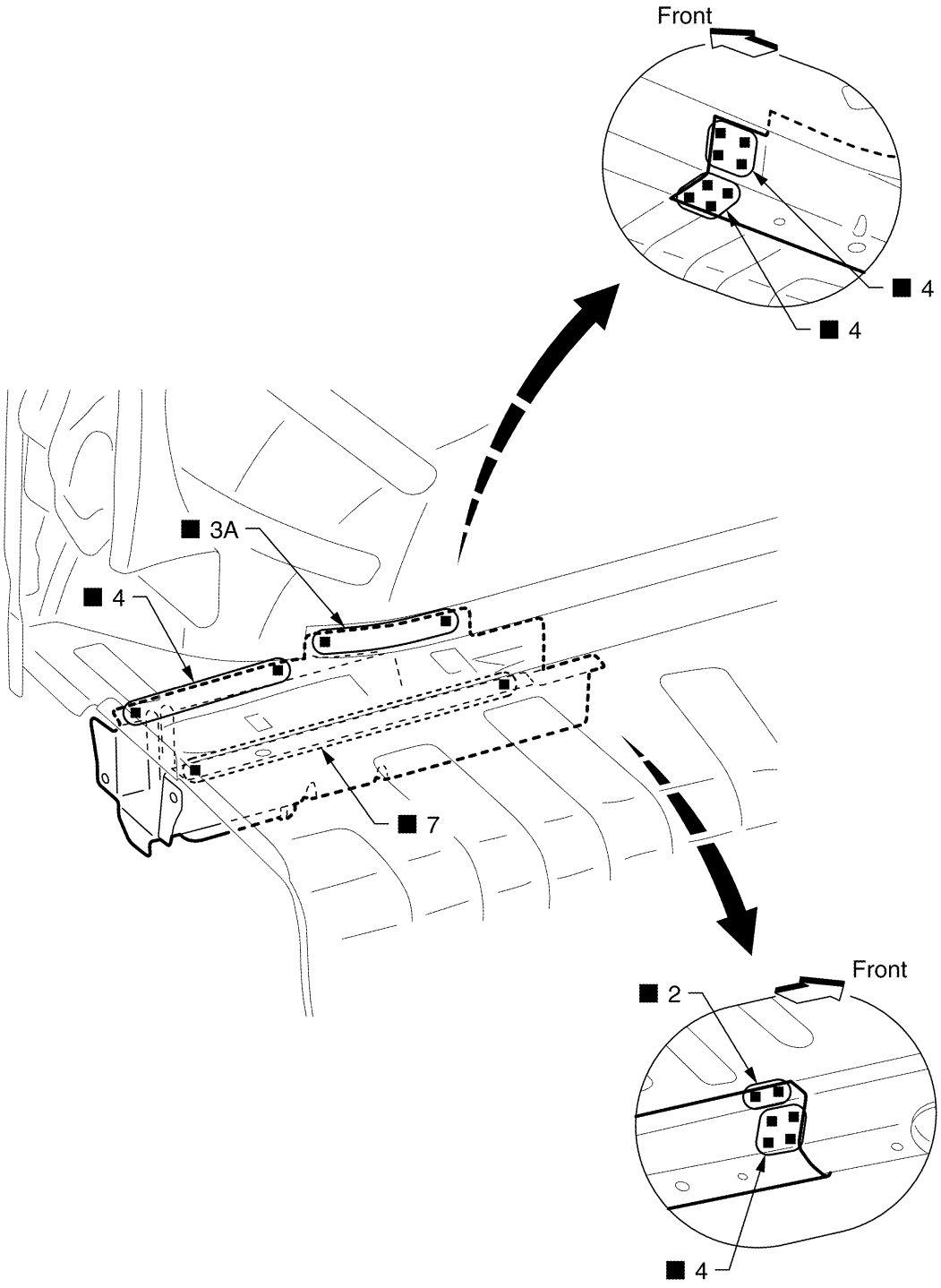
Change parts

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

## REAR SIDE MEMBER EXTENSION

- Work after rear panel has been removed.

**Service Joint**



Change parts

- Rear side member extension (LH)