

### Foreword

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This Body Repair Manual contains information and instructions for repairing the body structure of the NISSAN PATHFINDER (R51) 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 PATHFINDER (R51) 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.

# BODY REPAIR

## Contents

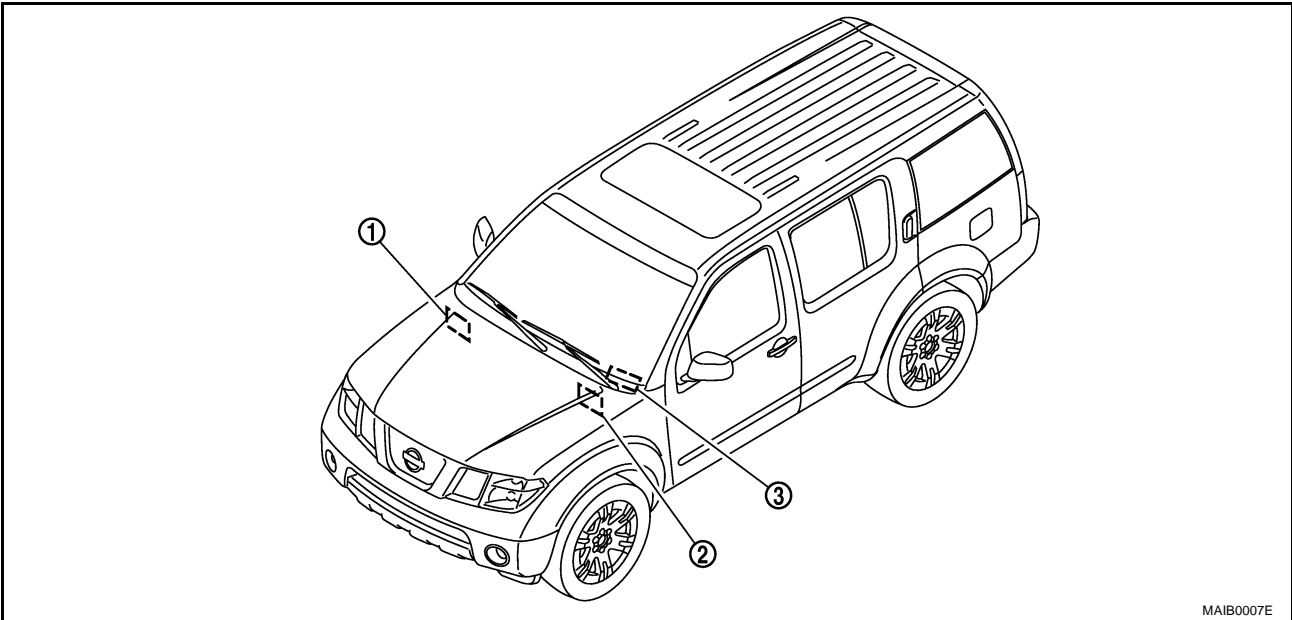
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# BODY REPAIR

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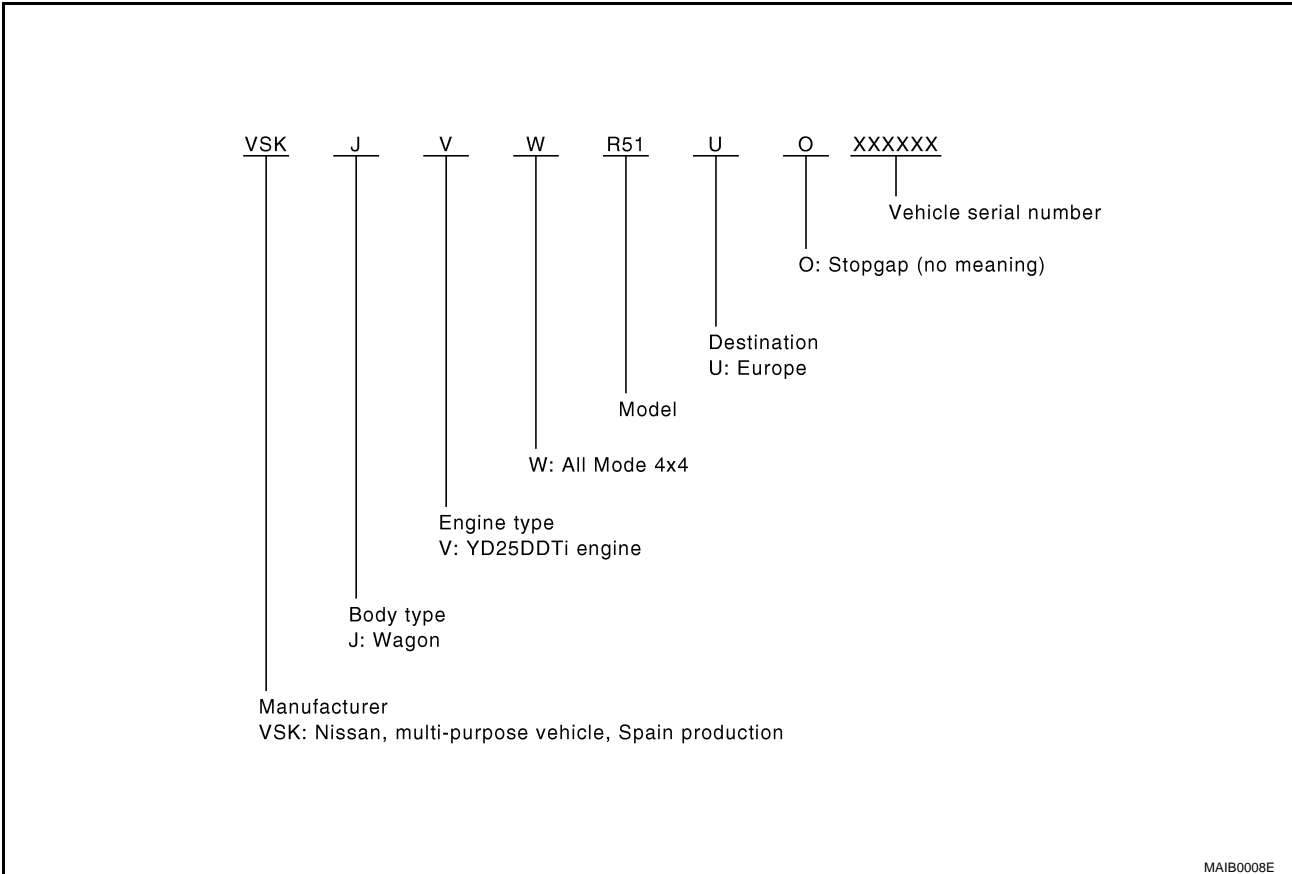
## General Information IDENTIFICATION NUMBER



MAIB0007E

1. Vehicle identification plate (LHD models)
2. Vehicle identification plate (RHD models)
3. Vehicle identification number

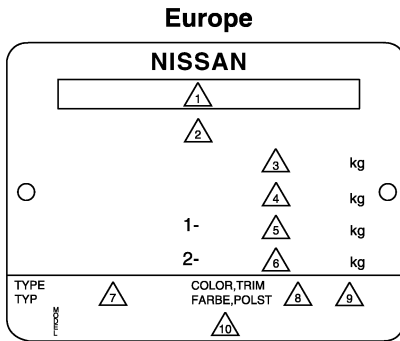
## Vehicle Identification Number Arrangement



MAIB0008E

# BODY REPAIR

## IDENTIFICATION PLATE



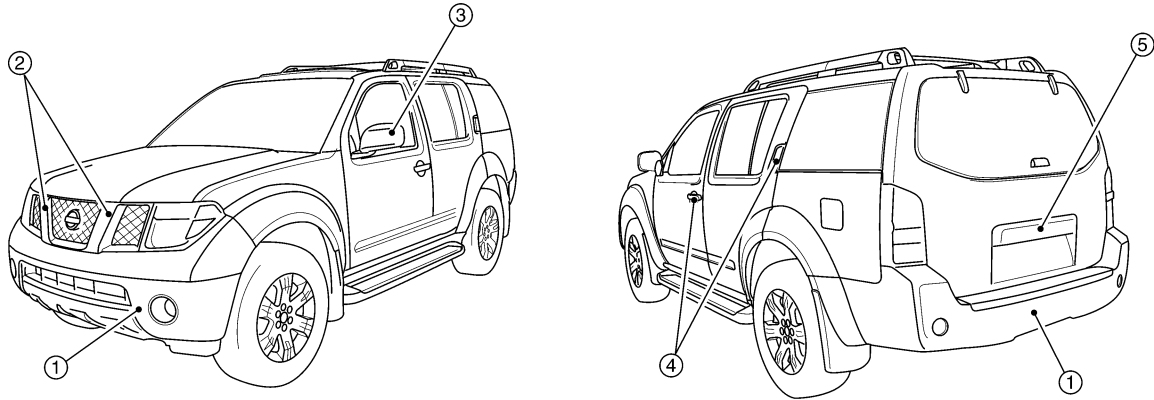
- 1 Type approval number (Models for Europe with Euro-OBD system)  
Blank (Models for Europe without Euro-OBD system)
- 2 Vehicle identification number (Chassis number)
- 3 Gross vehicle weight
- 4 Gross combination weight  
Gross vehicle weight  
+ Gross trailing capacity (Weight)
- 5 Gross axle weight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

- 8 Body color code
- 9 Trim color code
- 10 Model

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# BODY REPAIR

## BODY EXTERIOR PAINT COLOR



SIIA2514E

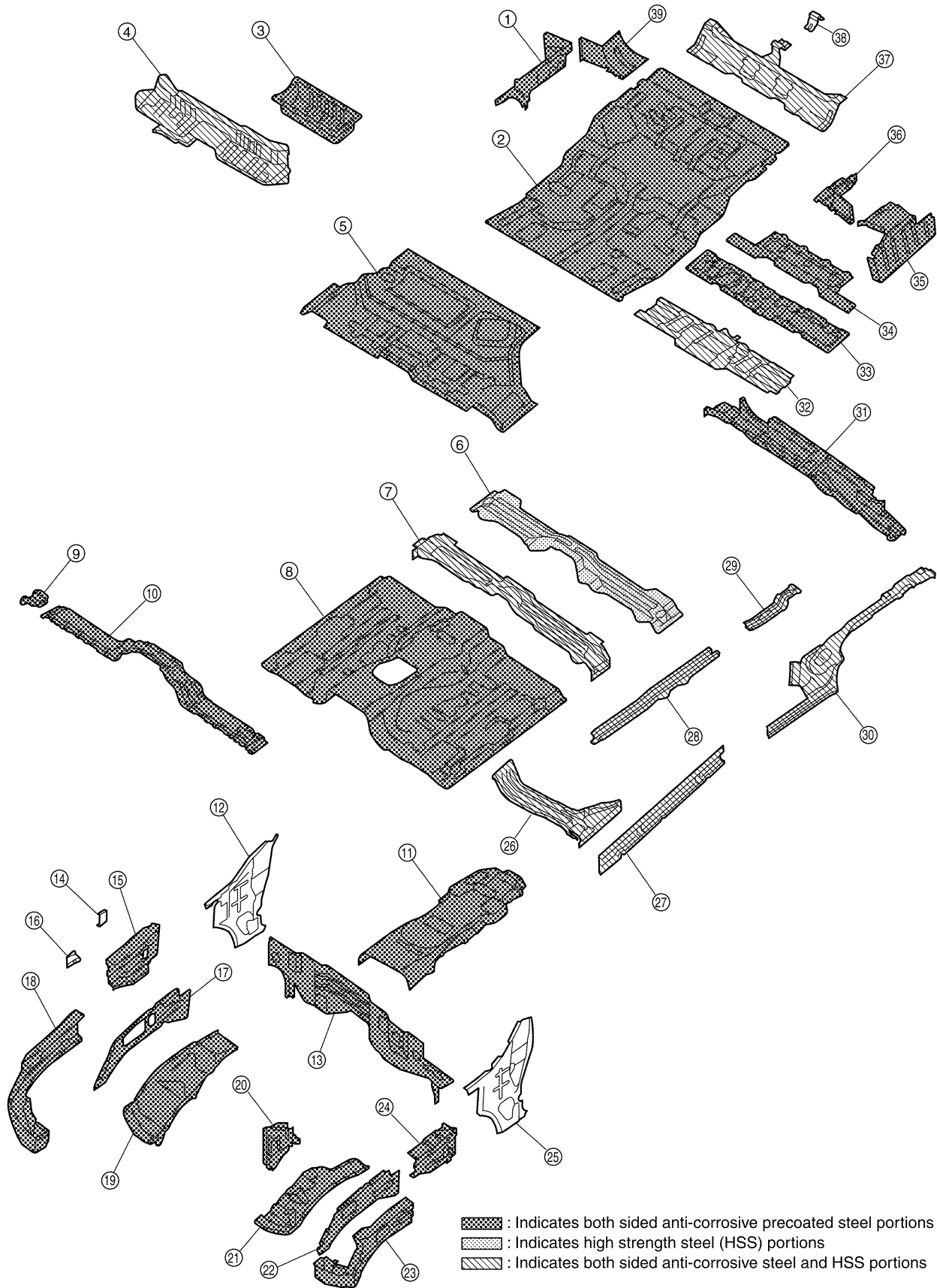
Component	Color code	B326	BA31	BB25	BBW9	BD13	BDW0	BGN0	BK27	BKL0	
	Description	White	Red	Grayish Blue	Dark Blue	Green	Green	Black	Gray	Silver	
	Paint type	2S	PM	PM	2P	PM	2P	M	M	M	
	Hard clear coat	×	×	×	×	×	×	×	×	×	
1	Bumper fascia	Body color	B326	BA31	BB25	BBW9	BD13	BDW0	BGN0	BK27	BKL0
2	Front grille	Chromium-plate	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P
		Body color	B326	BA31	BB25	BBW9	BD13	BDW0	BGN0	BK27	BKL0
3	Door outside mirror	Body color	B326	BA31	BB25	BBW9	BD13	BDW0	BGN0	BK27	BKL0
4	Door outside handle	Body color	B326	BA31	BB25	BBW9	BD13	BDW0	BGN0	BK27	BKL0
5	Back door finisher	Body color	B326	BA31	BB25	BBW9	BD13	BDW0	BGN0	BK27	BKL0

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 REPAIR

## Body Component Parts UNDERBODY COMPONENT PARTS

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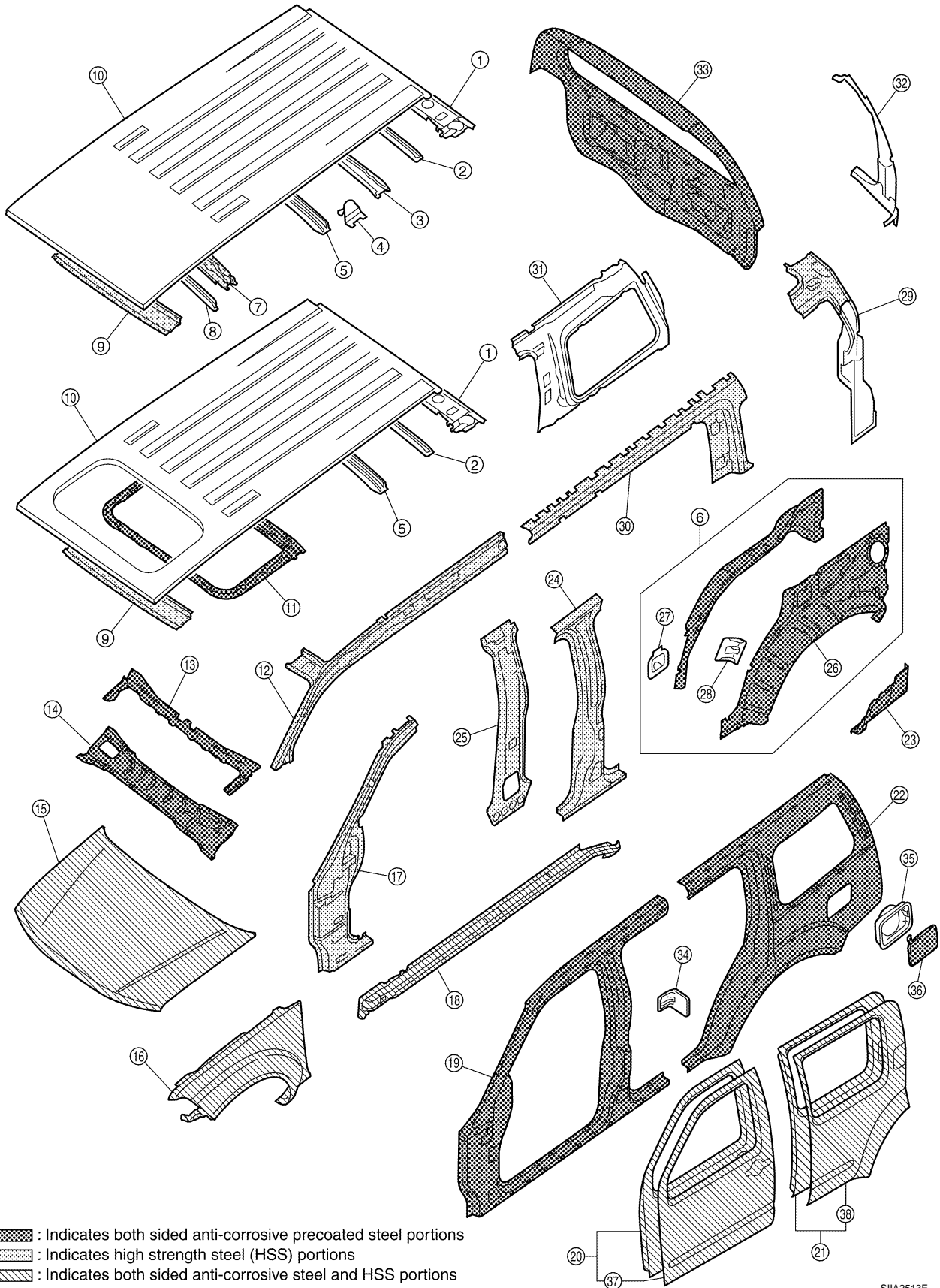
# BODY REPAIR

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1. Rear floor side (RH)
2. Rear floor rear
3. Storage bin
4. Second seat mounting crossmember
5. Rear floor front
6. Center pillar crossmember assembly
7. Front seat mounting rear crossmember
8. Front floor
9. Front seat mounting crossmember
10. Second crossmember extension
11. Front floor reinforcement
12. Side dash (RH)
13. Lower dash
14. Washer tank bracket (RH)
15. Hoodledge reinforcement rear (RH)
16. Hoodledge plate (RH)
17. Hoodledge (RH)
18. Hoodledge reinforcement assembly (RH)
19. Lower rear hoodledge (RH)
20. Battery tray (RH)
21. Lower rear hoodledge (LH)
22. Hoodledge (LH)
23. Hoodledge reinforcement assembly (LH)
24. Hoodledge reinforcement rear (LH)
25. Side dash (LH)
26. Second crossmember assembly (RH&LH)
27. Inner sill (RH&LH)
28. Front side member assembly (RH&LH)
29. Center floor member assembly
30. Rear side member rear (RH&LH)
31. Rear crossmember
32. Second seat mounting crossmember
33. Third seat mounting bracket assembly
34. Rope hook side
35. Rear floor side (LH)
36. Rear floor side upper extension assembly (LH)
37. Third seat mounting rear crossmember assembly
38. Trim mounting bracket
39. Rear floor side upper extension assembly (RH)

# BODY REPAIR

## BODY COMPONENT PARTS



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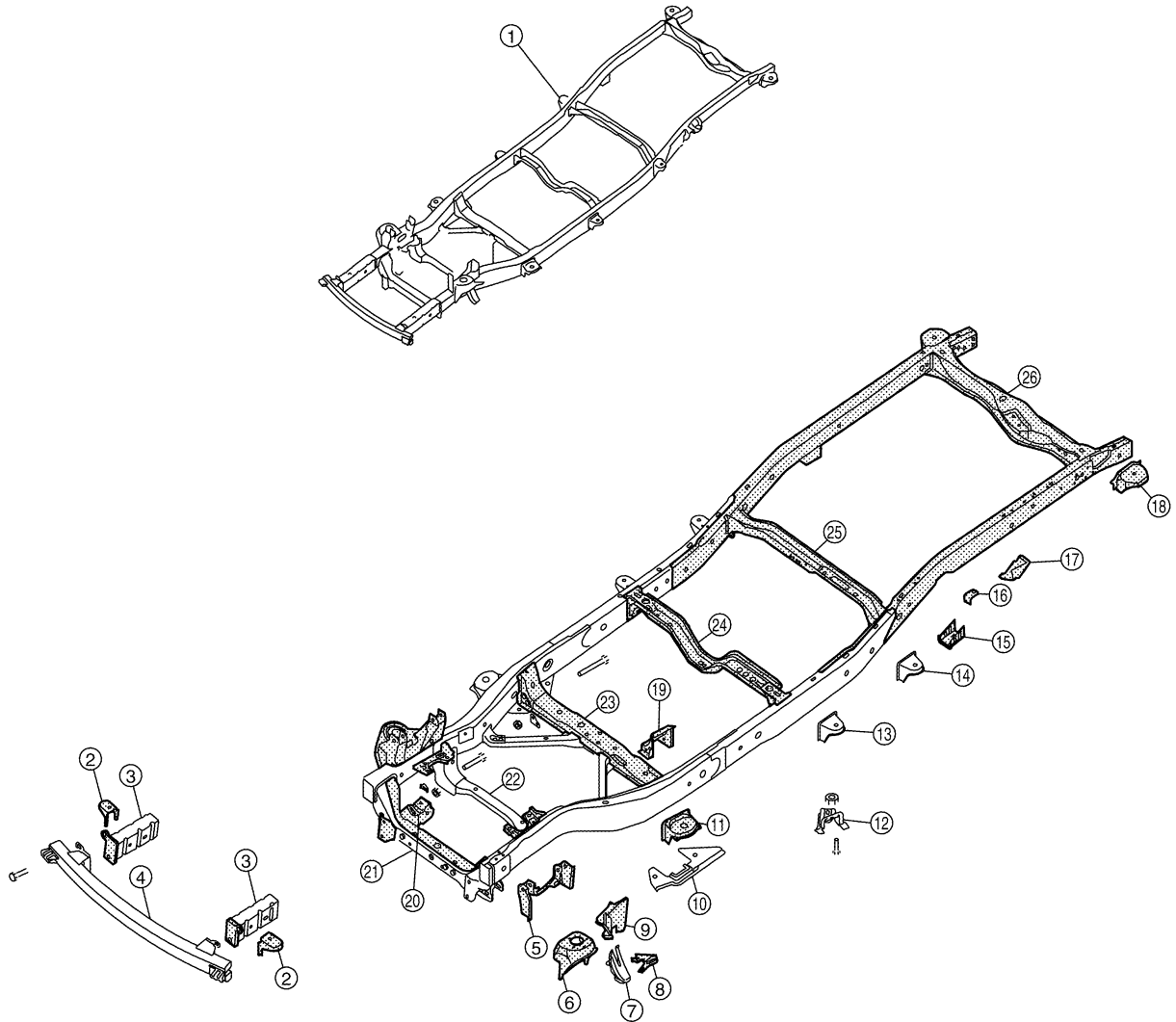
# BODY REPAIR




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1. Rear roof rail
2. Roof 5th bow
3. Roof 4th bow
4. Roof rack plate
5. Roof 3rd bow
6. Wheel house assembly (RH&LH)
7. Roof 2nd bow
8. Roof 1st bow
9. Front roof rail
10. Roof
11. Sunroof reinforcement
12. Upper inner front pillar (RH&LH)
13. Upper dash crossmember assembly
14. Upper dash assembly
15. Hood assembly
16. Front fender (RH&LH)
17. Front pillar hinge brace (RH&LH)
18. Outer sill reinforcement (RH&LH)
19. Outer front body side (RH&LH)
20. Front door assembly (RH&LH)
21. Rear door assembly (RH&LH)
22. Outer rear body side (RH&LH)
23. Rear fender extension (RH&LH)
24. Center pillar hinge brace (RH&LH)
25. Inner center pillar (RH&LH)
26. Outer rear wheel house (RH&LH)
27. Seat belt anchor plate assembly (RH&LH)
28. 2ND seat belt anchor plate assembly (RH&LH)
29. Back pillar reinforcement (RH&LH)
30. Outer roof side rail reinforcement (RH&LH)
31. Inner rear side panel (RH&LH)
32. Main back pillar (RH&LH)
33. Lift gate assembly
34. Striker tapping retainer (RH&LH)
35. Fuel filler lid base (RH)
36. Fuel filler lid (RH)
37. Outer front door panel (RH&LH)
38. Outer rear door panel (RH&LH)

# BODY REPAIR

## FRAME COMPONENT PARTS



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

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# BODY REPAIR

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1. Frame assembly
2. 1st cab mounting bracket
3. Front side member extension assembly
4. 1st crossmember assembly
5. Front upper link mounting bracket (RH&LH)
6. Front shock absorber mounting bracket (RH&LH)
7. Bumper bound bracket (RH&LH)
8. Front brake hose bracket (RH&LH)
9. Panhard rod bracket reinforcement
10. 4th crossmember gusset (RH&LH)
11. 2nd cab mounting bracket (RH&LH)
12. Crossmember support (RH&LH)
13. 3rd cab mounting bracket (RH&LH)
14. 4th cab mounting bracket (RH&LH)
15. Rear suspension mounting bracket (RH&LH)
16. Rear brake hose bracket
17. Rear bumper bound bracket (RH&LH)
18. Cab mounting bracket assembly (RH&LH)
19. 4th crossmember gusset (RH&LH)
20. Front differential mounting bracket (RH&LH)
21. 2nd crossmember assembly
22. 3rd crossmember assembly
23. 4th crossmember assembly
24. 5th crossmember assembly
25. 6th crossmember assembly
26. 9th crossmember assembly

# BODY REPAIR

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## Corrosion Protection

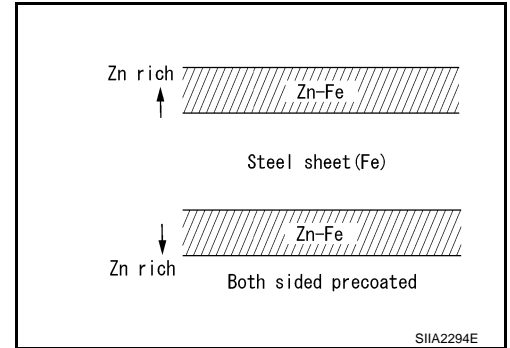
### DESCRIPTION

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

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

To improve repairability and corrosion resistance, a new type of anti-corrosive precoated steel sheet has been adopted replacing conventional zinc-coated steel sheet.

Galvannealed steel is electroplated and heated to form Zinc-iron alloy, which provides excellent and long term corrosion resistance with cationic electrodeposition primer.



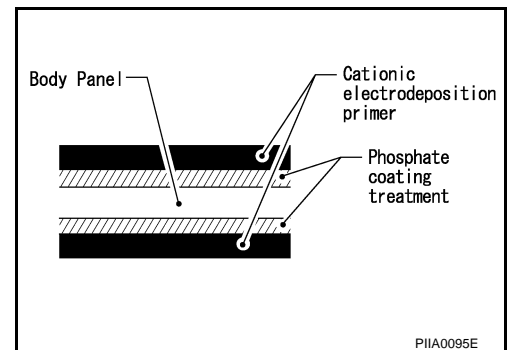
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

### Phosphate Coating Treatment and Cationic Electrodeposition Primer

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

#### CAUTION:

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

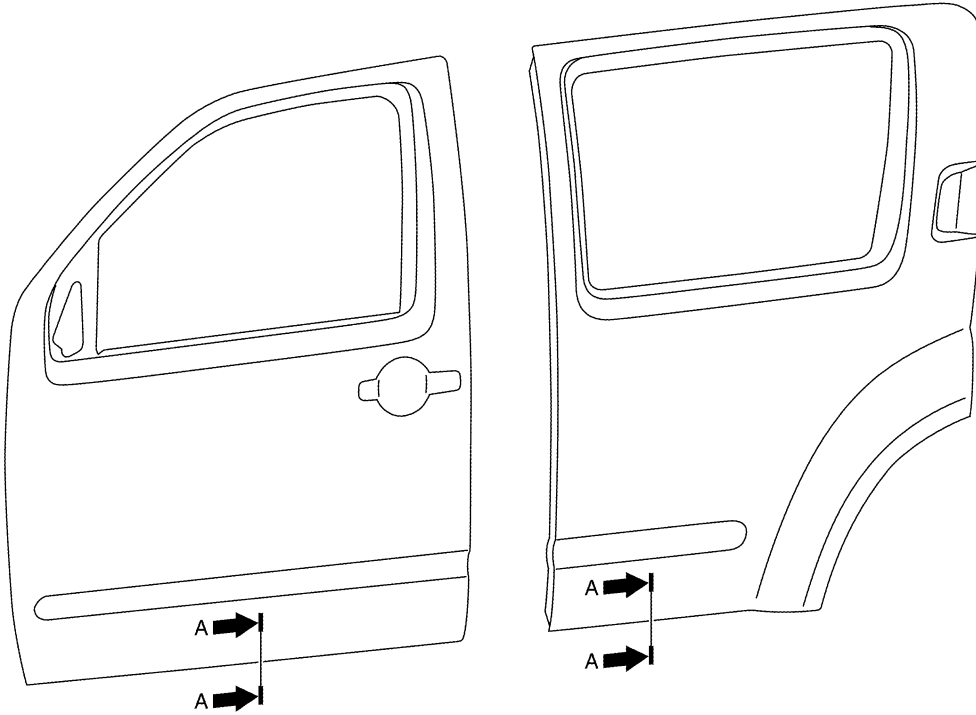



Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

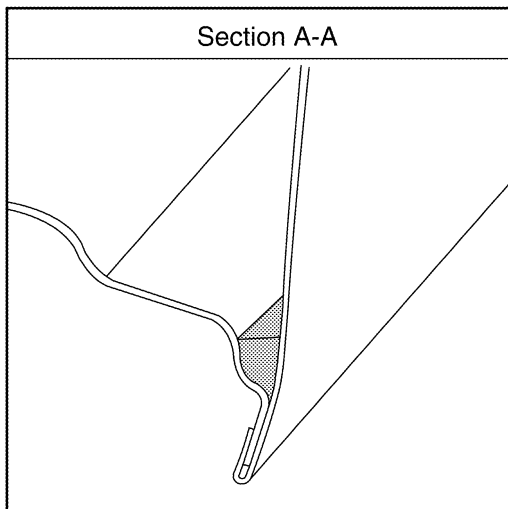
# BODY REPAIR

## ANTI-CORROSIVE WAX

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



 : Indicates anti-corrosive wax coated portions.




# BODY REPAIR


## UNDERCOATING

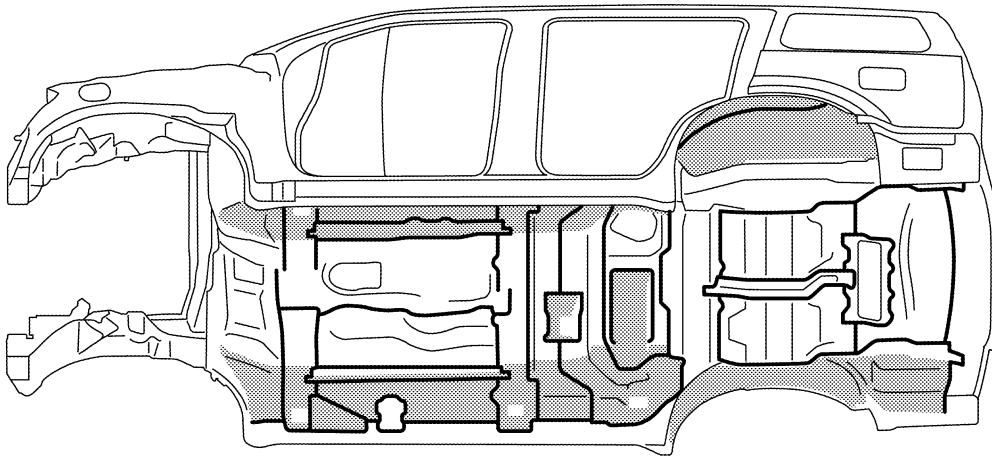
The underside of the floor and wheelhouse are undercoated to prevent rust, vibration, noise and stone chipping. Therefore, when such a panel is replaced or repaired, apply undercoating to that part. Use an undercoating which is rust preventive, soundproof, vibration-proof, shock-resistant, adhesive,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

### Precautions in Undercoating

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

 : Indicates undercoated portions.

 : Indicates sealed portions.



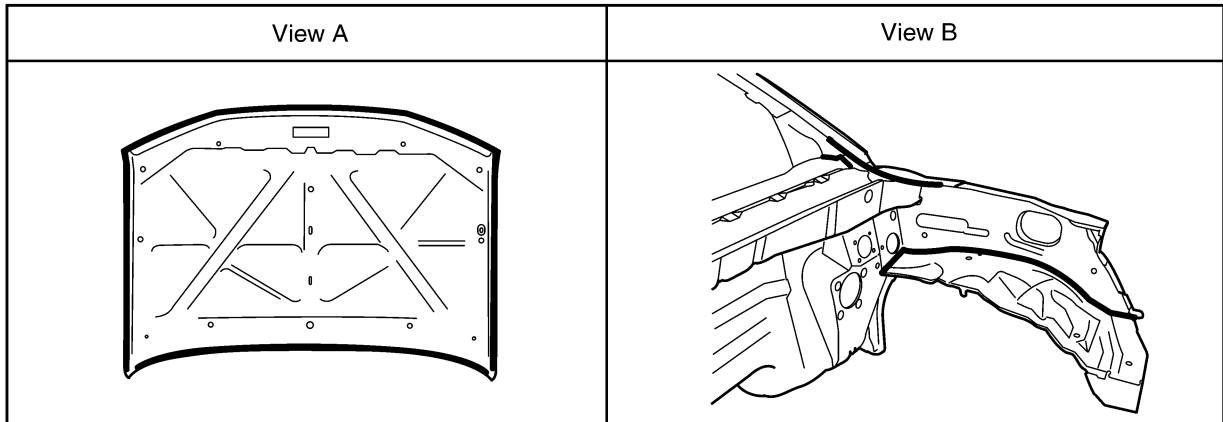
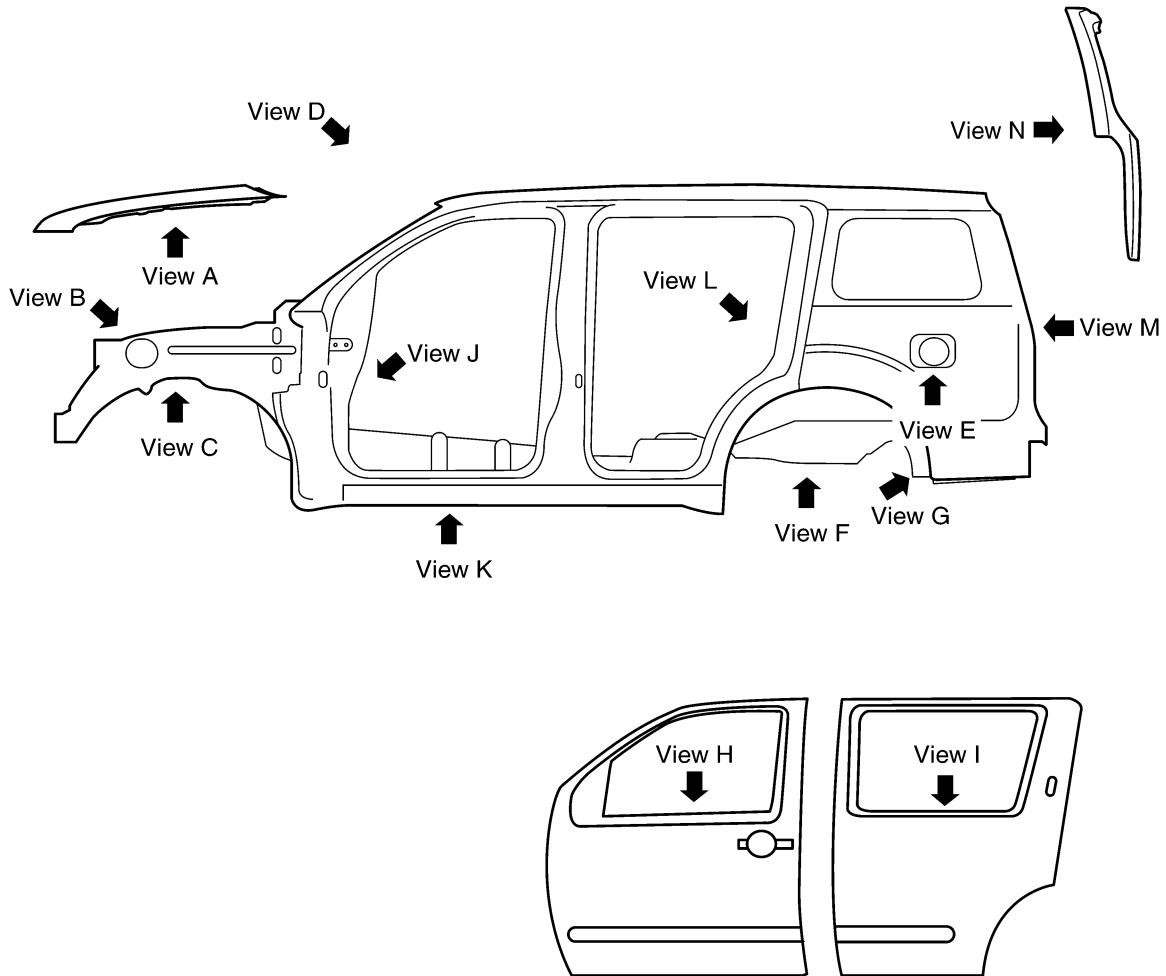
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# BODY REPAIR

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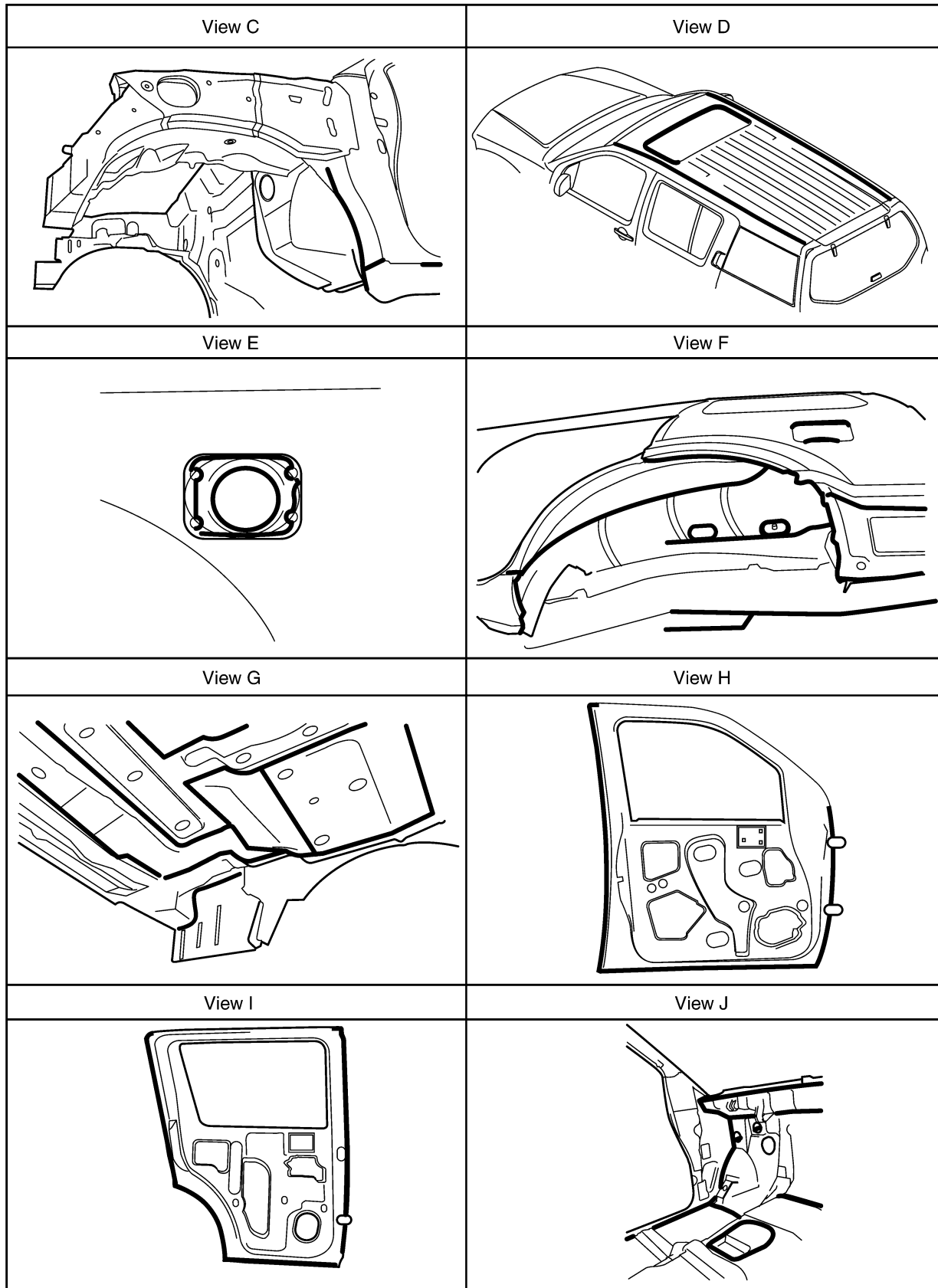
## Body Sealing DESCRIPTION

The following figure shows the areas which are sealed at the factory. Sealant which has been applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.



SIIA2517E

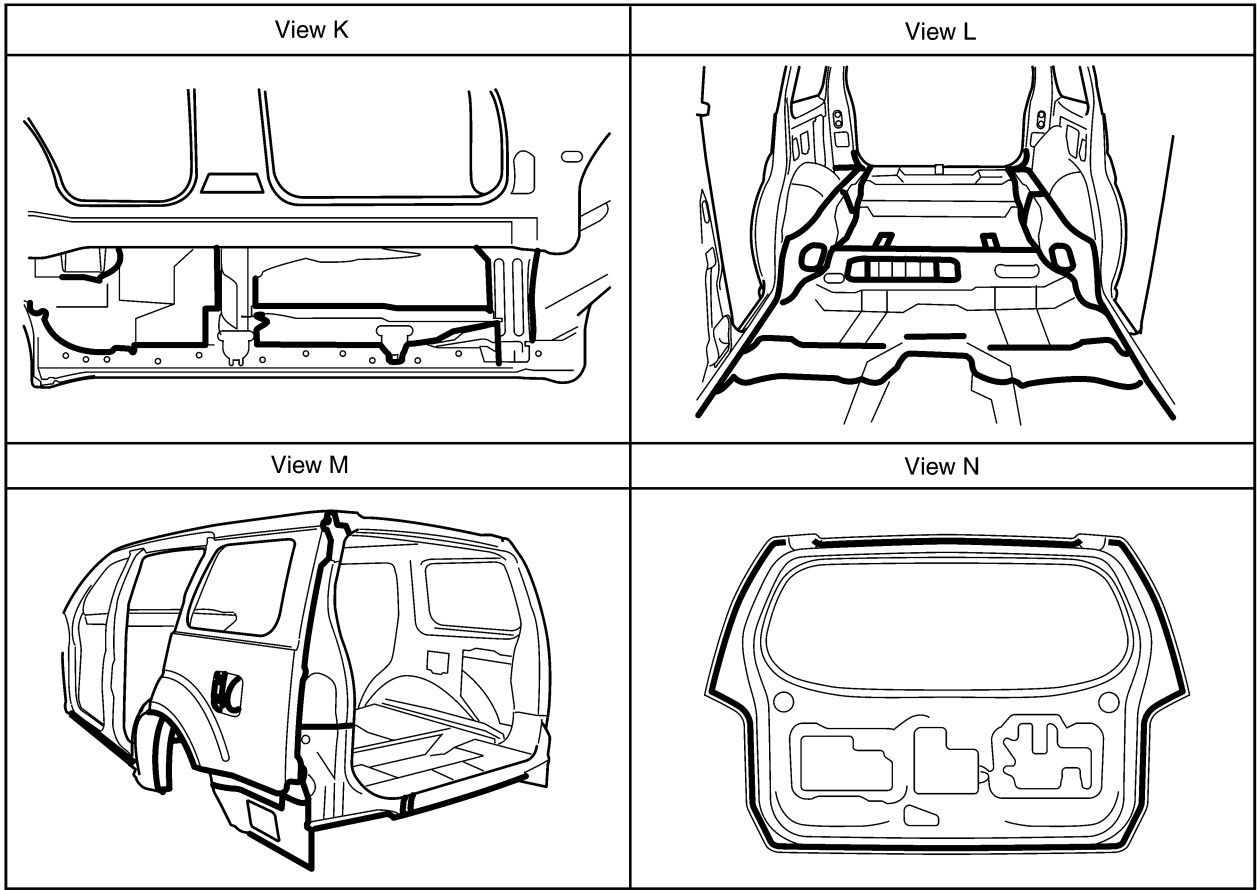
# BODY REPAIR



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# BODY REPAIR

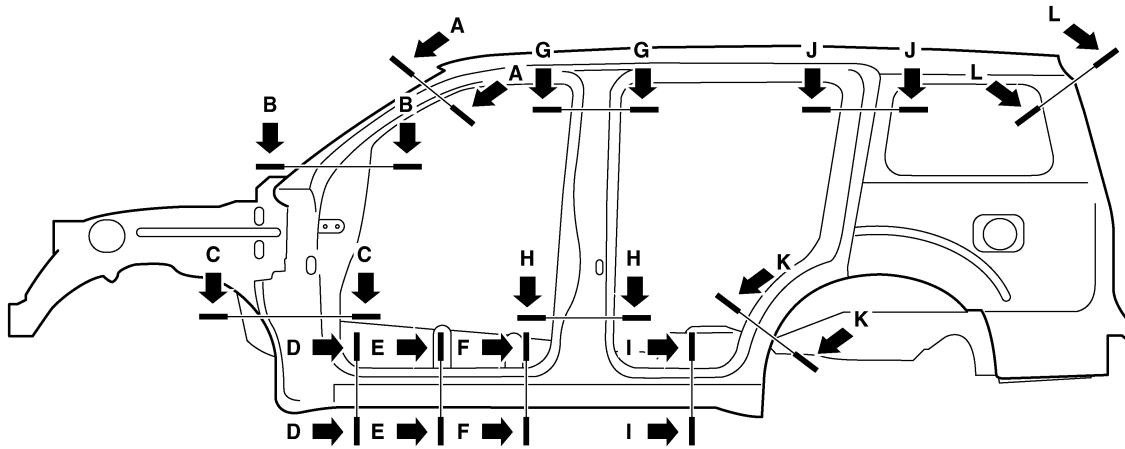


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# BODY REPAIR

## Body Construction BODY CONSTRUCTION

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Section A-A	Section B-B	Section C-C	Section D-D
Section E-E	Section F-F	Section G-G	Section H-H
Section I-I	Section J-J	Section K-K	Section L-L

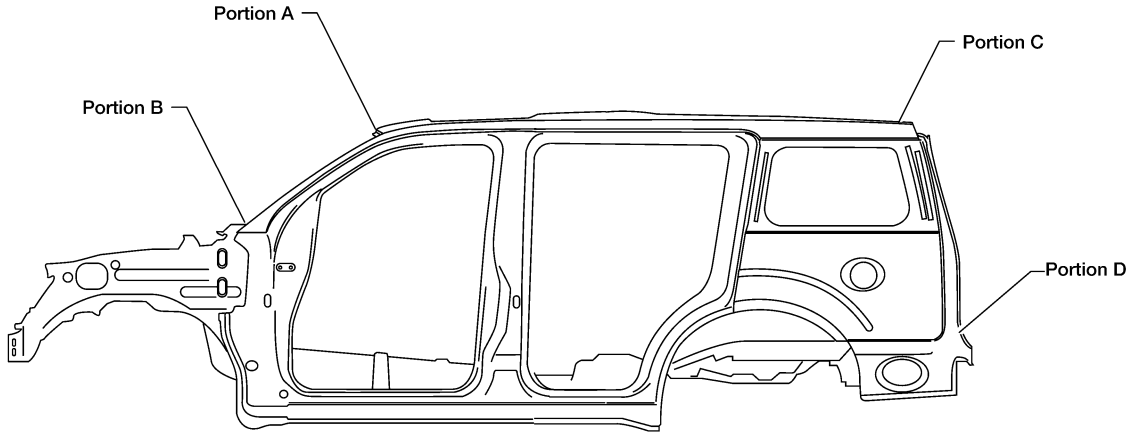
LIA1739E

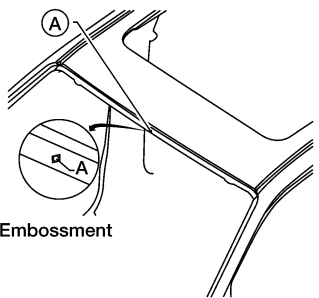
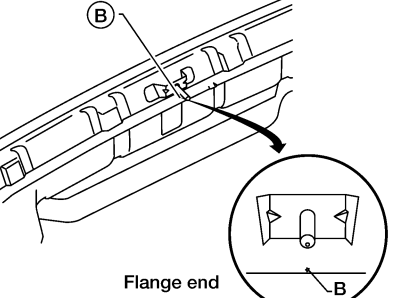
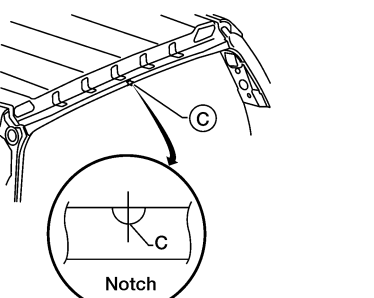
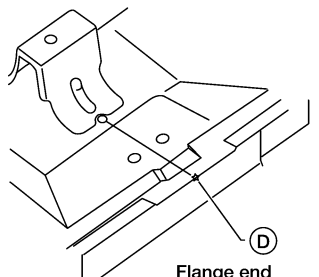
# BODY REPAIR

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## Body Alignment BODY CENTER MARKS

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



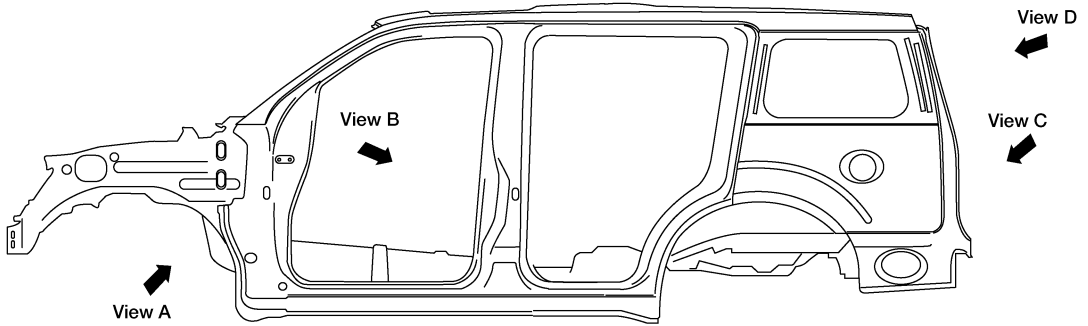
Portion A	Portion B	Portion C
 <p>A</p> <p>Embossment</p>	 <p>B</p> <p>Flange end</p>	 <p>C</p> <p>Notch</p>
 <p>D</p> <p>Flange end</p>		


LIIA1790E

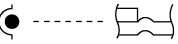
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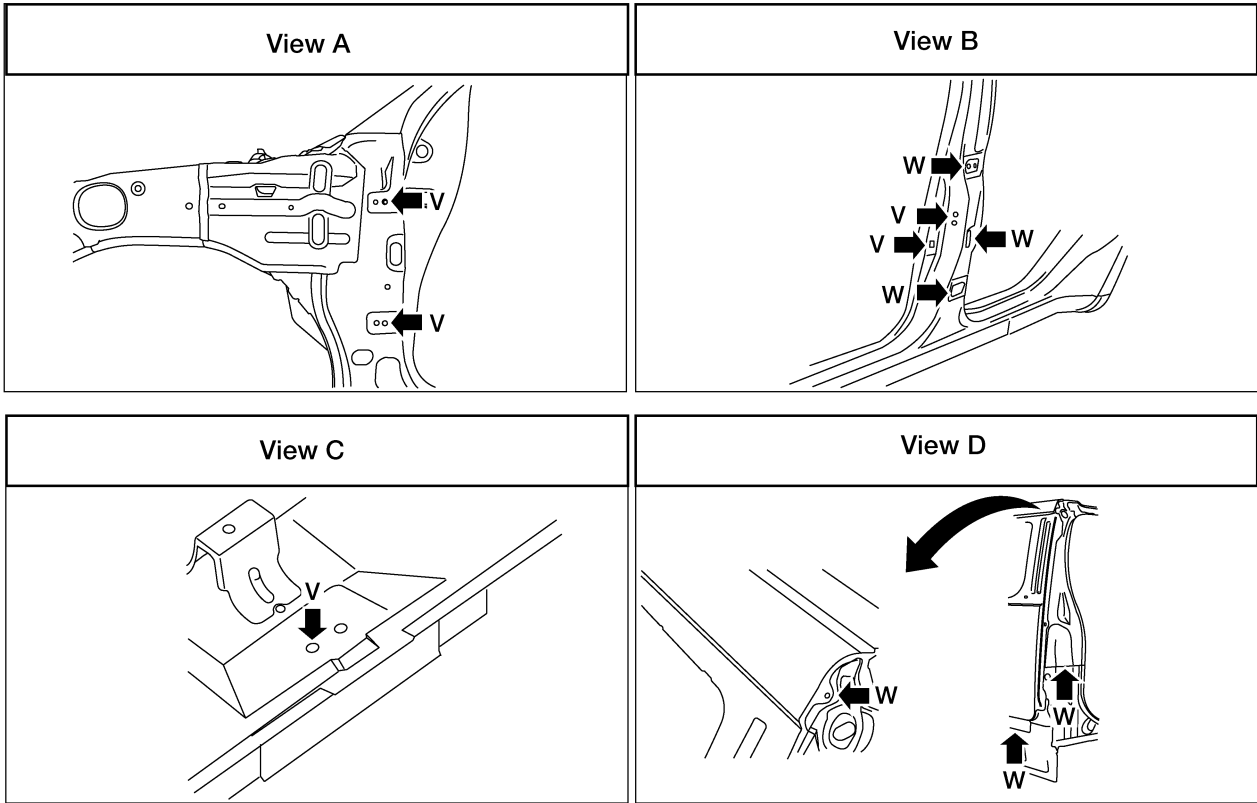
## PANEL PARTS MATCHING MARKS

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



Type V: 

Type W: 

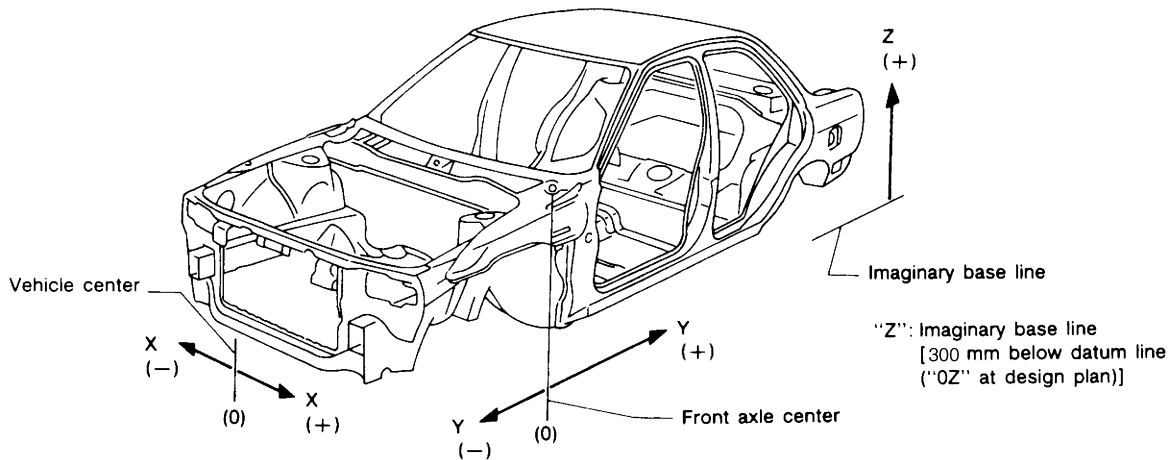


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# BODY REPAIR

## DESCRIPTION

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



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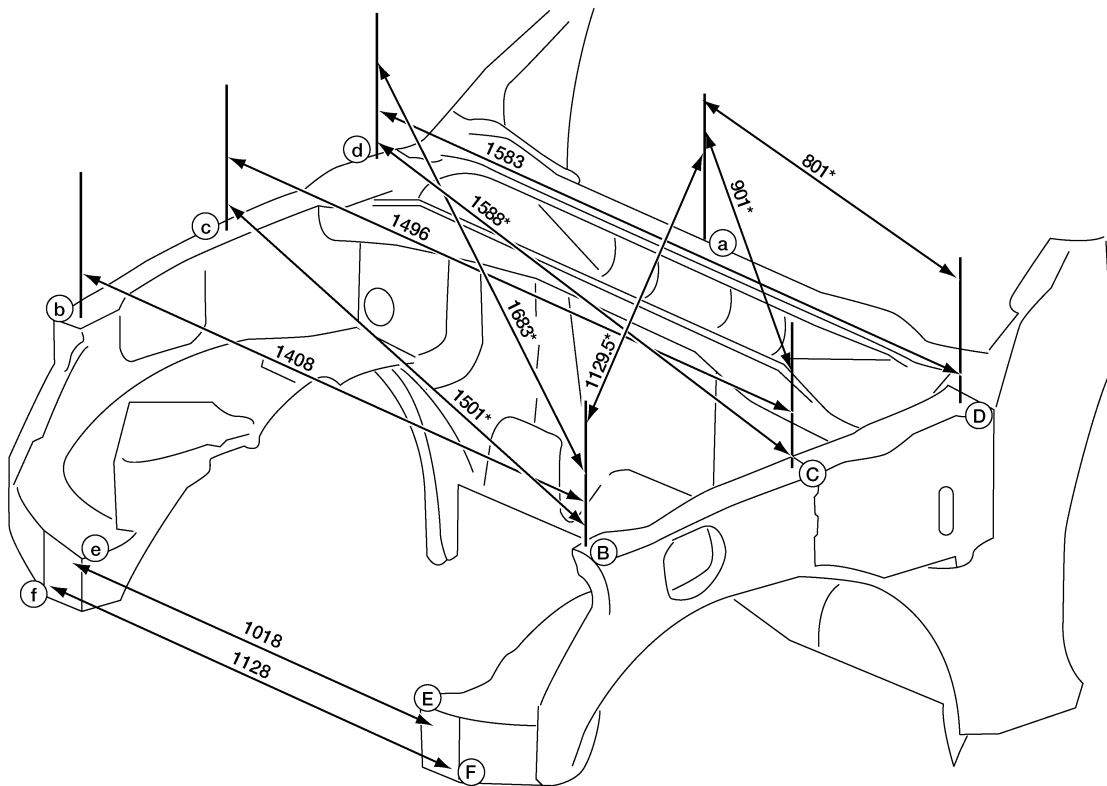
# BODY REPAIR

## ENGINE COMPARTMENT

### Measurement

All dimensions indicated in this figure are actual.

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

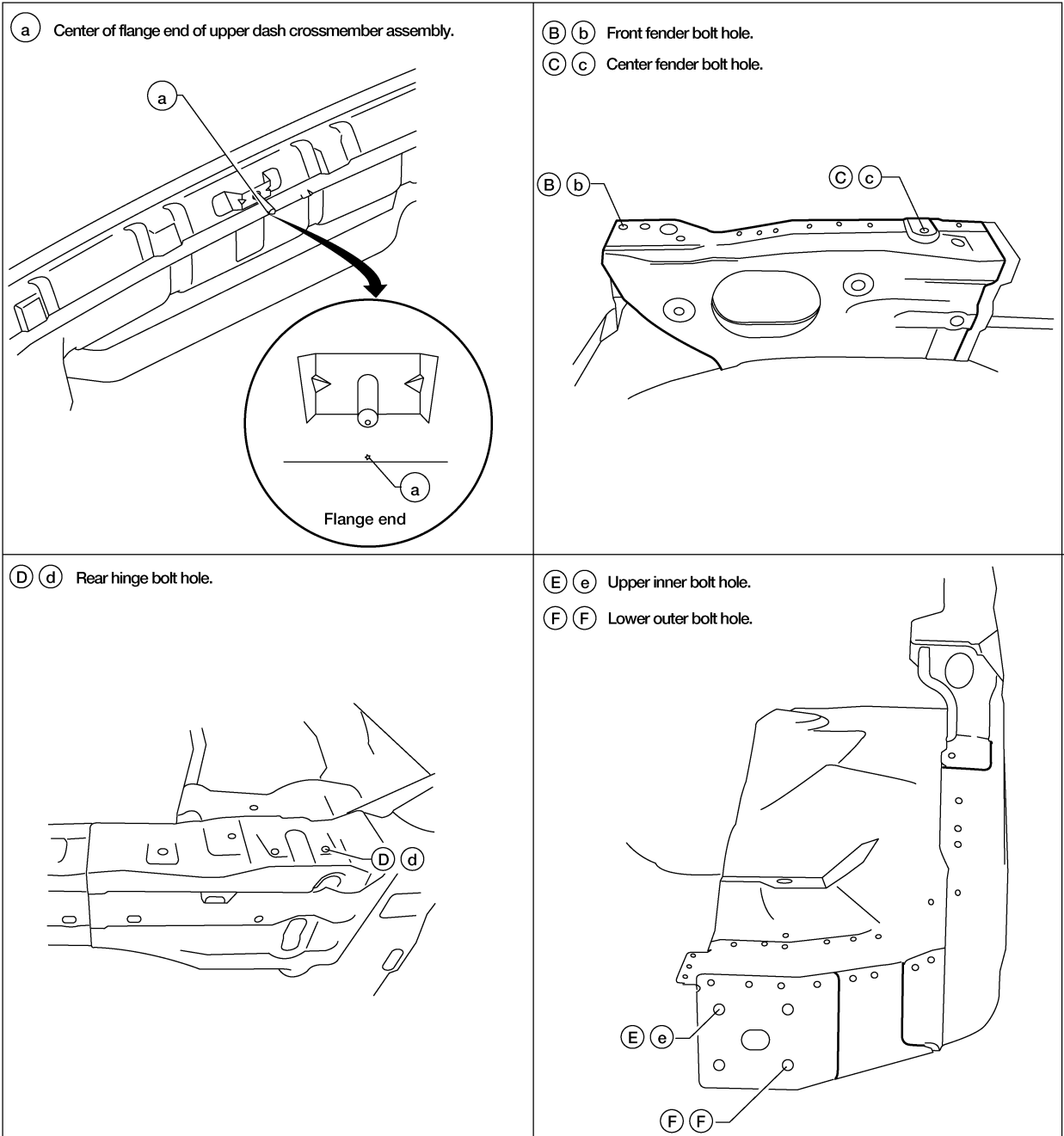


Unit: mm

LIA1792E

# BODY REPAIR

## Measurement Points



# BODY REPAIR

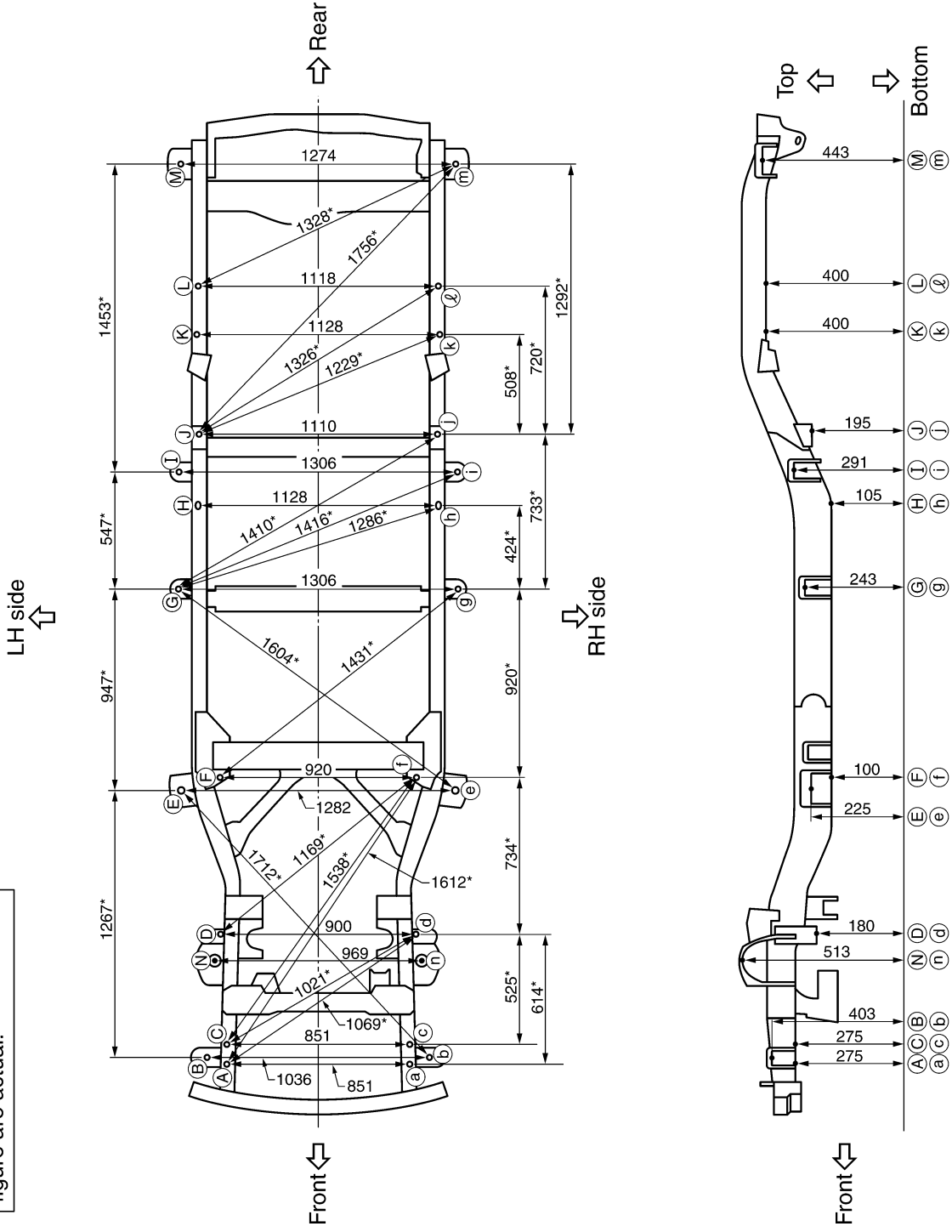
## UNDERBODY Measurement

Unit : mm

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

★ : Bolt head  
As viewed from underside.

All dimensions indicated in this figure are actual.



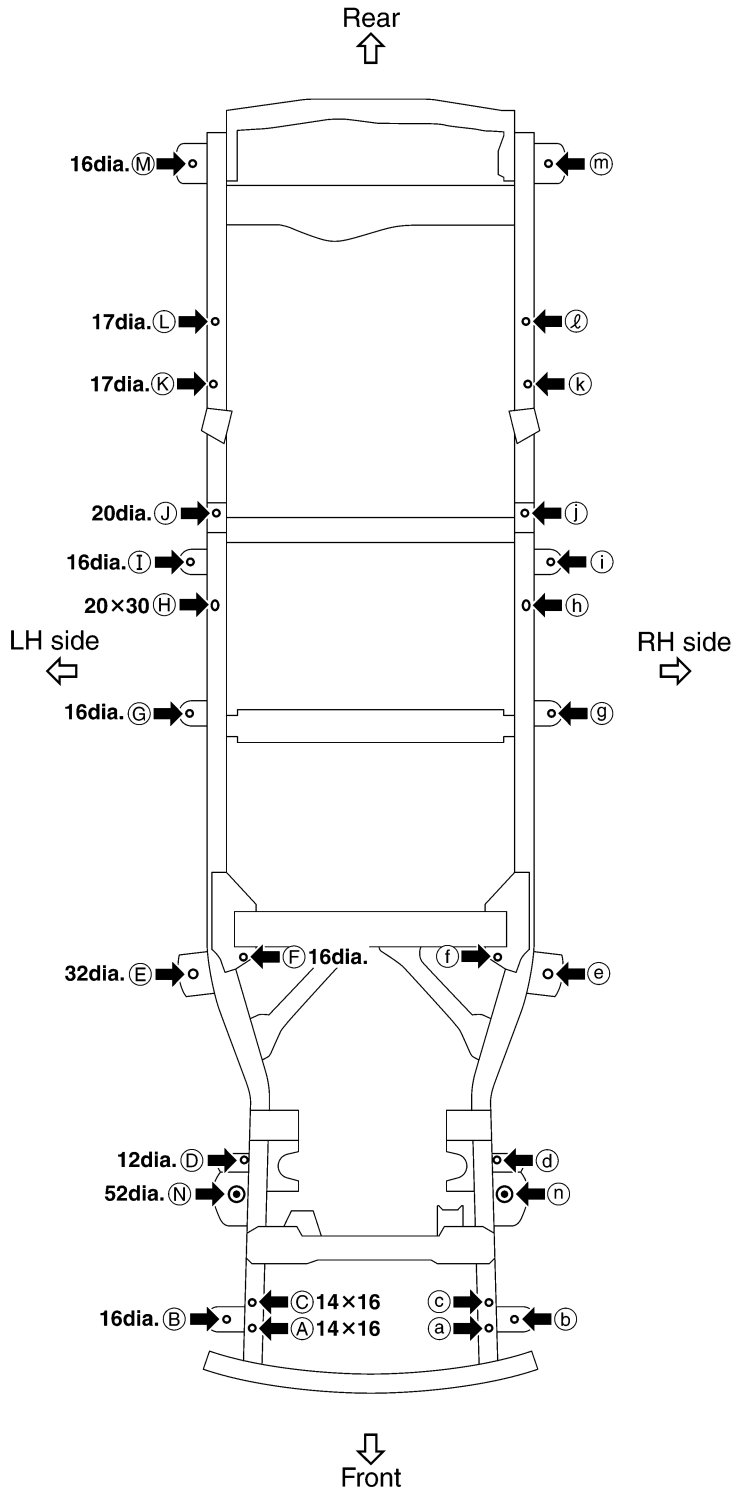


# BODY REPAIR

## Measurement Points

As viewed from underside.

Unit : mm



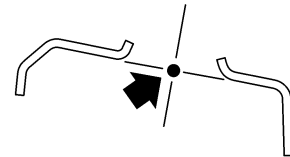
Coordinates:

(A), (a)	(I), (i)
X:±426	X:±653
Y:-528	Y:2240
Z:275	Z:291
(B), (b)	(J), (j)
X:±518	X:±555
Y:-500	Y:2420
Z:403	Z:195
(C), (c)	(K), (k)
X:±426	X:±564
Y:-438	Y:2885
Z:275	Z:400
(D), (d)	(L), (l)
X:±450	X:±559
Y:78	Y:3110
Z:180	Z:400
(E), (e)	(M), (m)
X:±641	X:±637
Y:748	Y:3685
Z:225	Z:443
(F), (f)	
X:±460	
Y:807	
Z:100	
(G), (g)	
X:±653	
Y:1695	
Z:243	
(H), (h)	
X:±564	
Y:2086	
Z:105	

Strut tower centers

Coordinates:

(N), (n)
X:±484
Y:-47
Z:513



Front: (N), (n) 52dia.

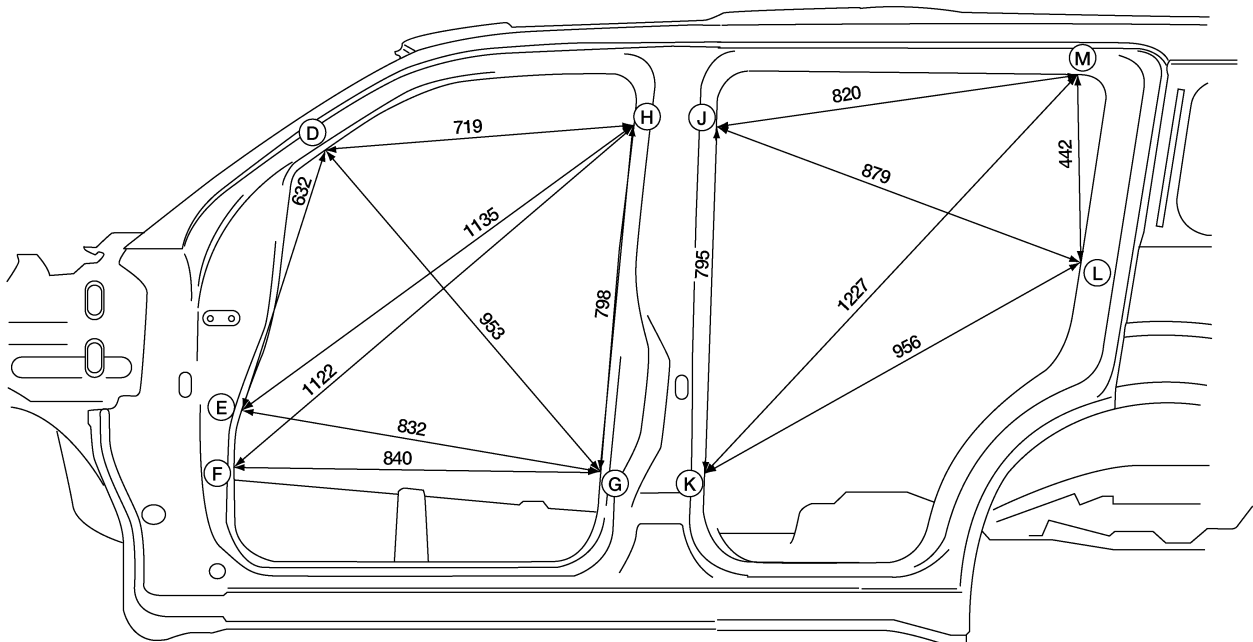
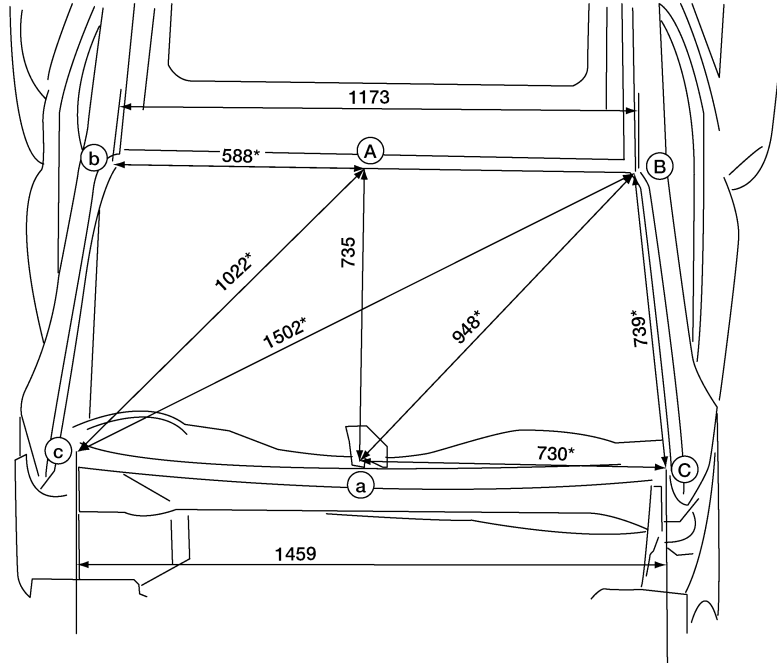
SIA2509E

# BODY REPAIR

## PASSENGER COMPARTMENT

### Measurement

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

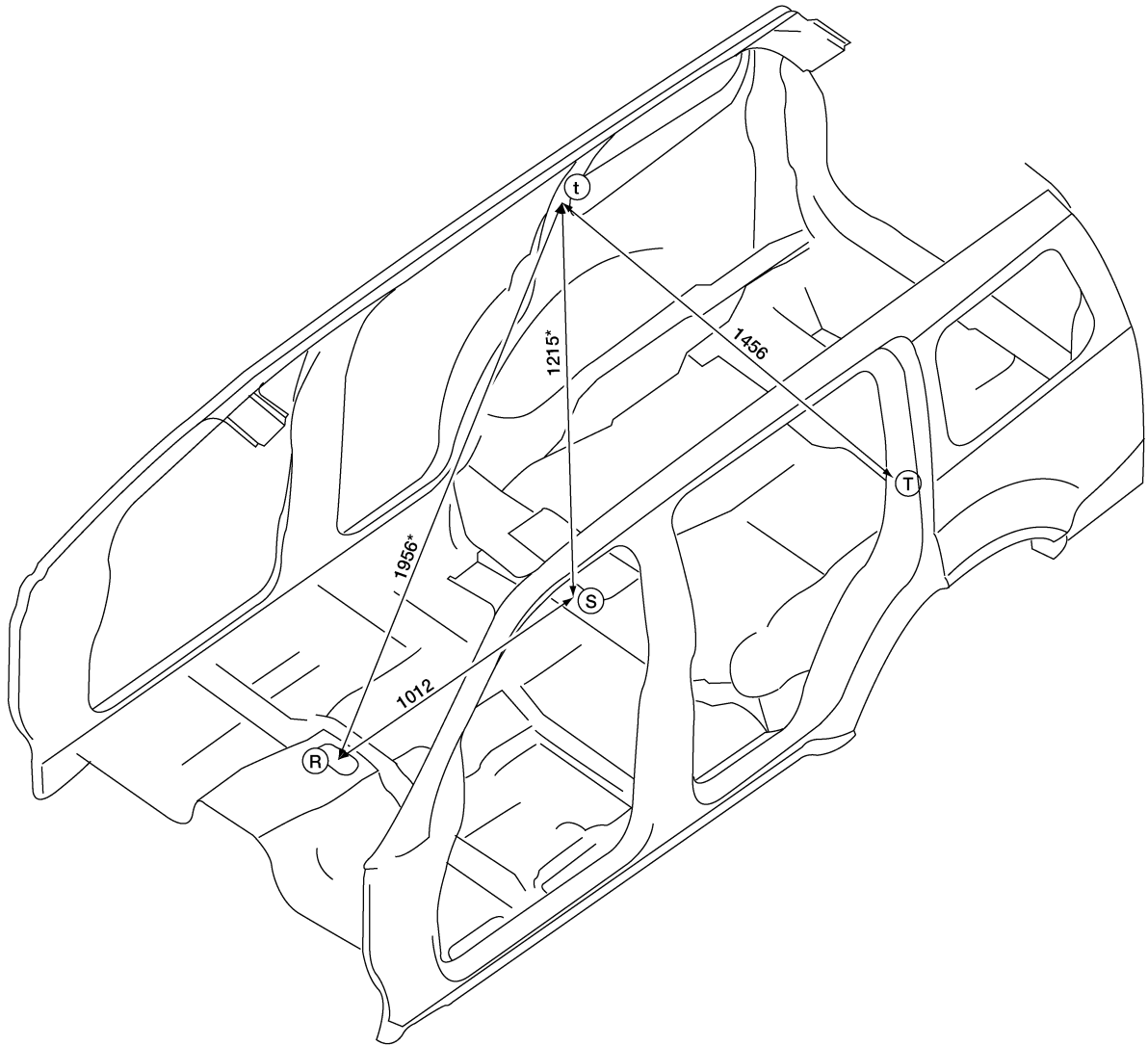


Unit: mm

LIIA1798E

# BODY REPAIR

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

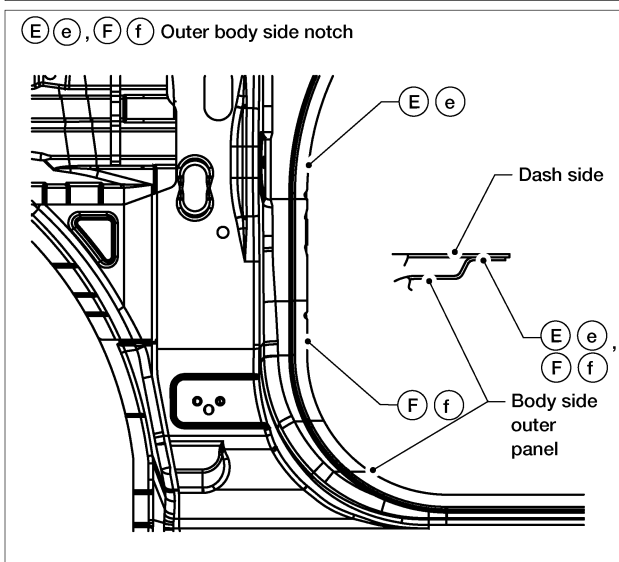
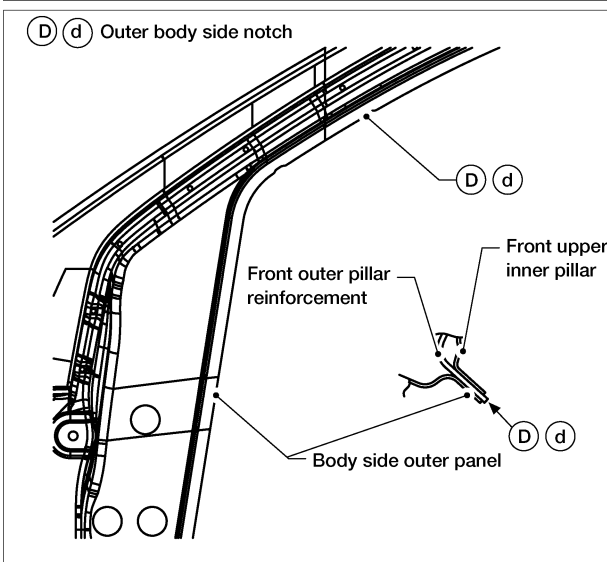
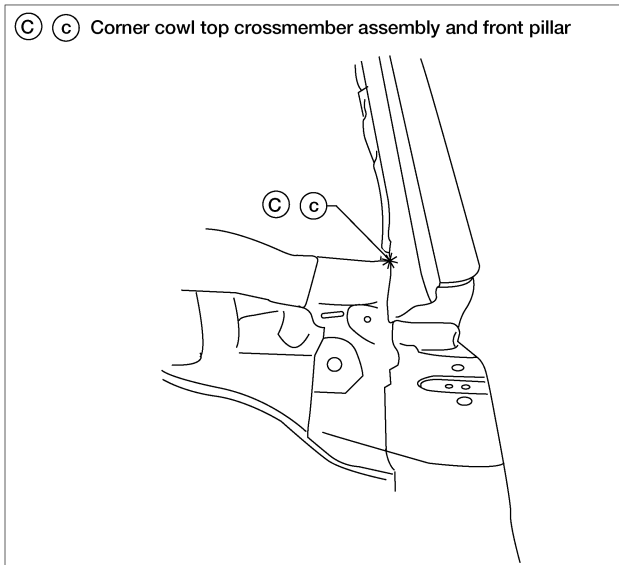
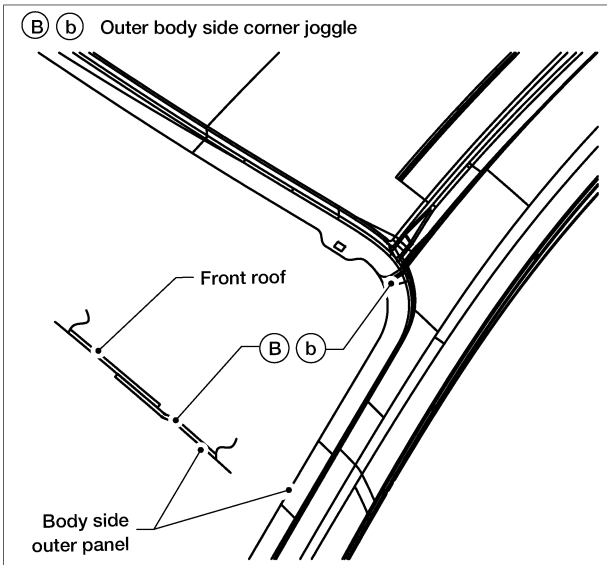
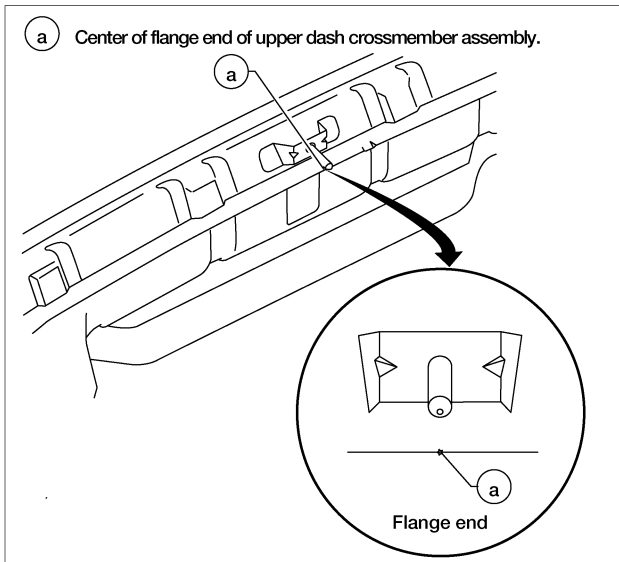
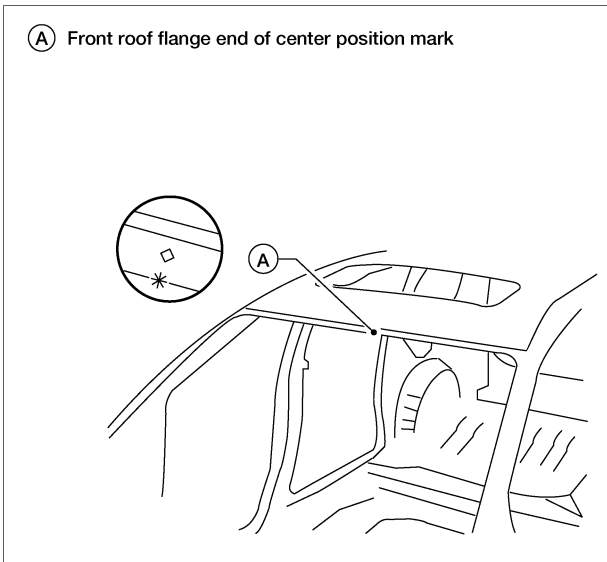


Unit: mm

LIA1799E

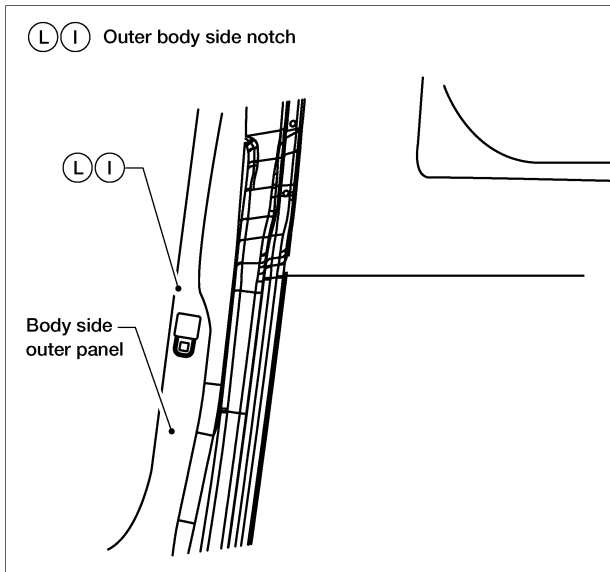
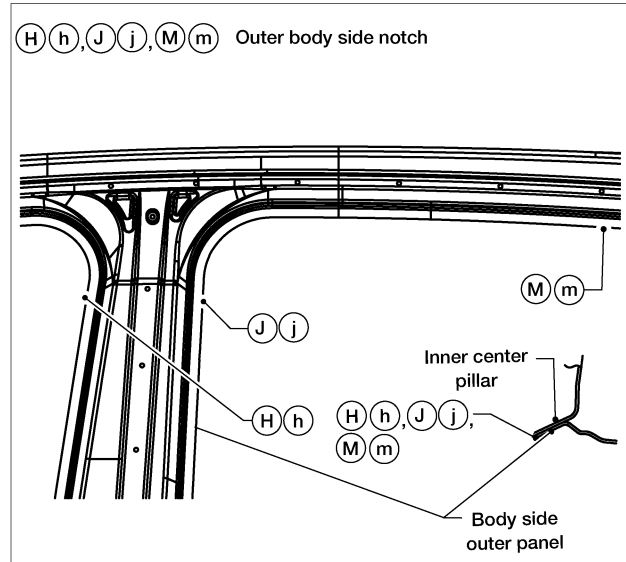
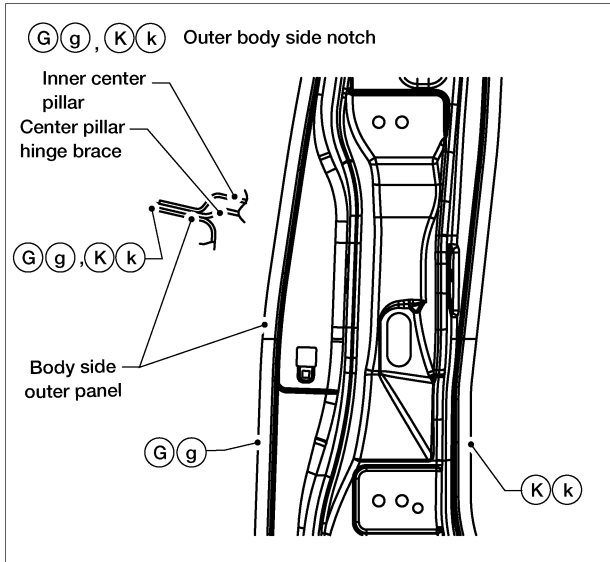
# BODY REPAIR

## Measurement Points



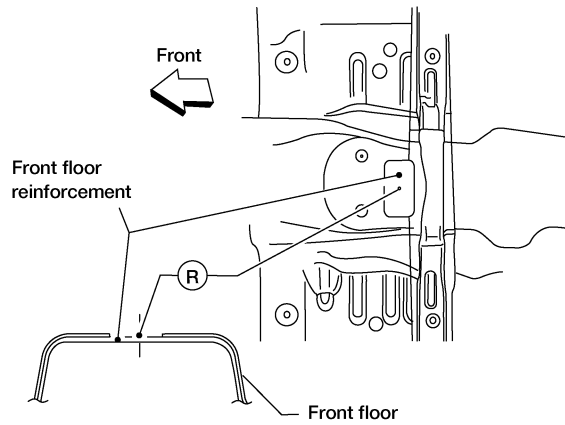
LIIA1800E

# BODY REPAIR

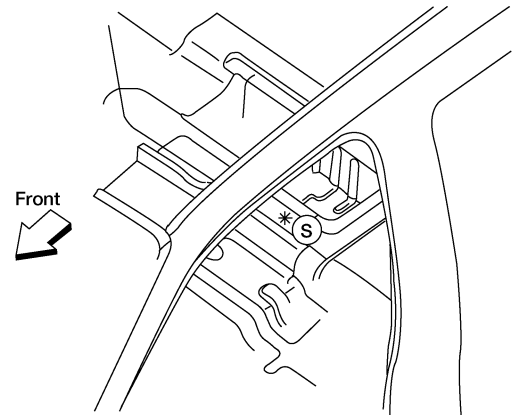


# BODY REPAIR

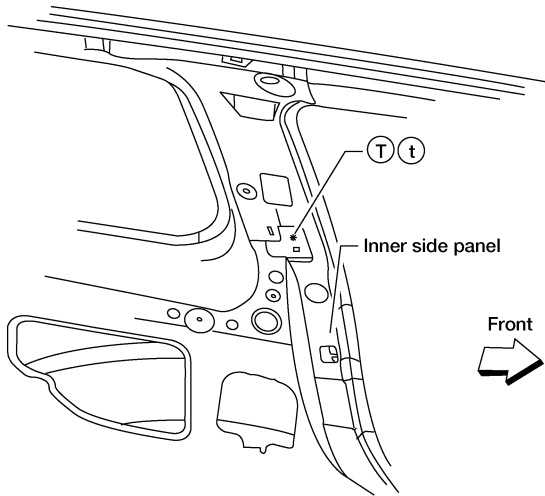
(R) Front floor reinforcement



(S) 2nd seat mounting front crossmember assembly



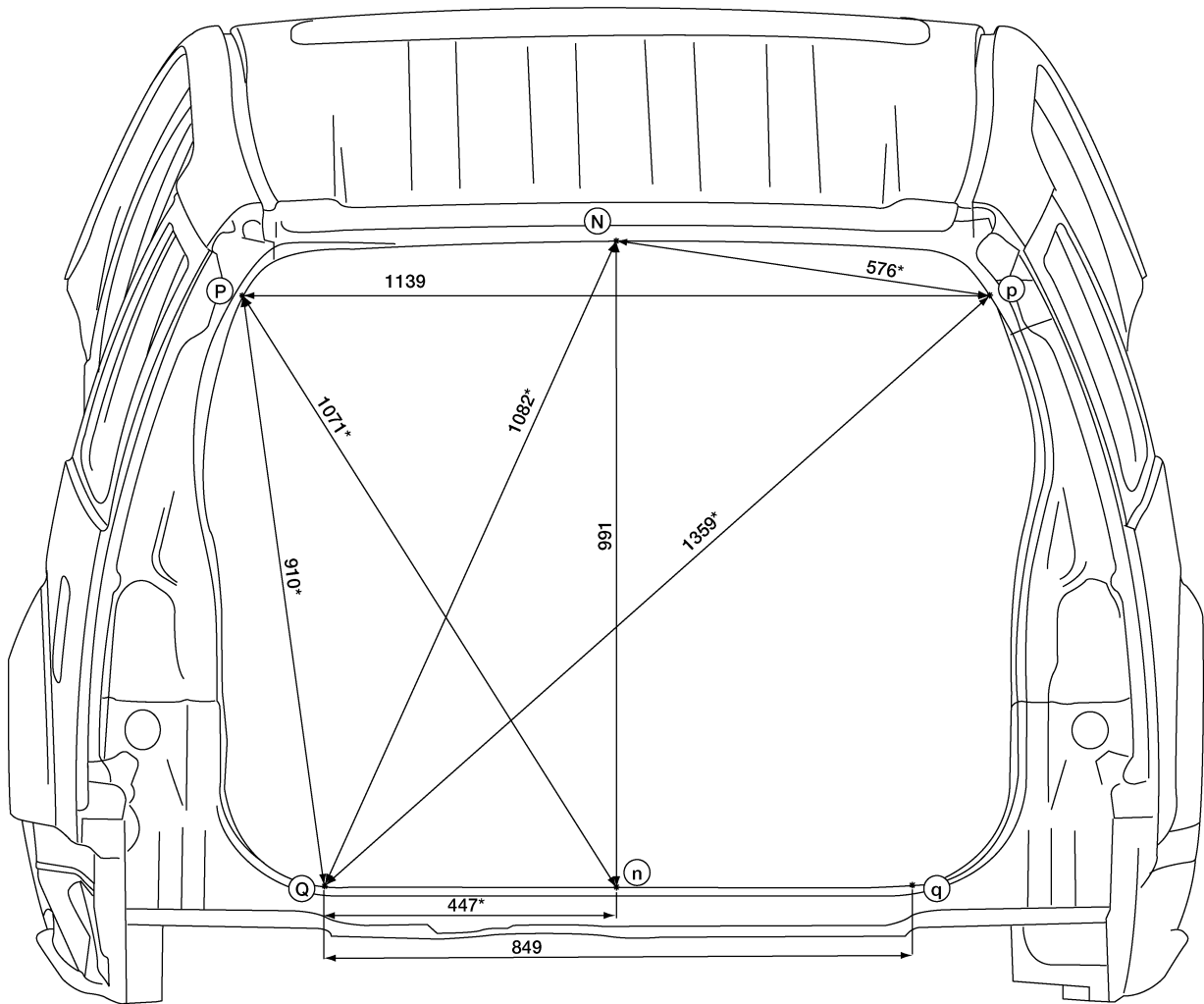
(T t) Lower seat belt shoulder height adjuster bolt hole



# BODY REPAIR

## REAR BODY Measurement

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

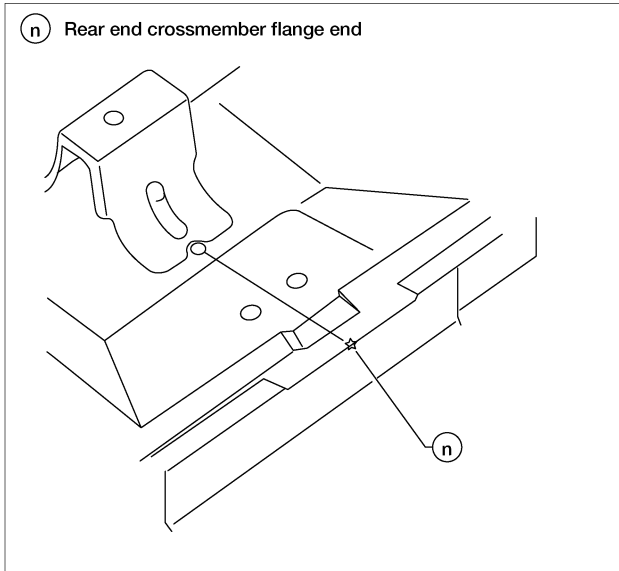
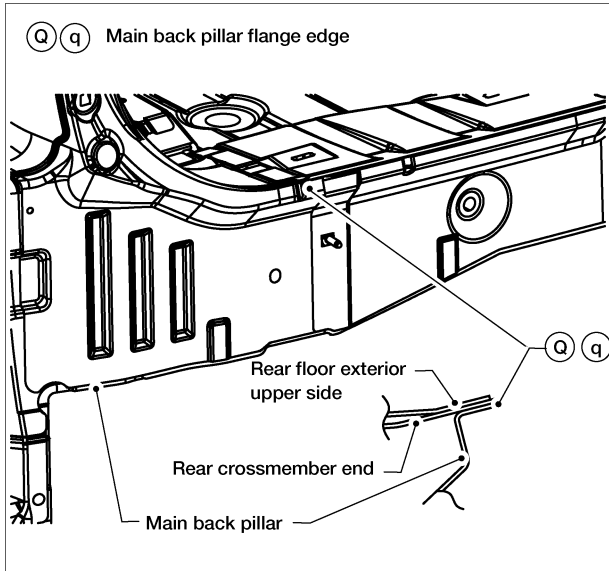
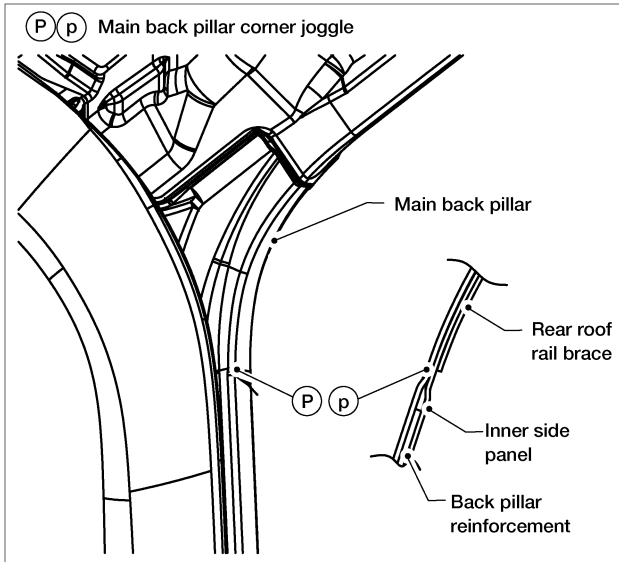
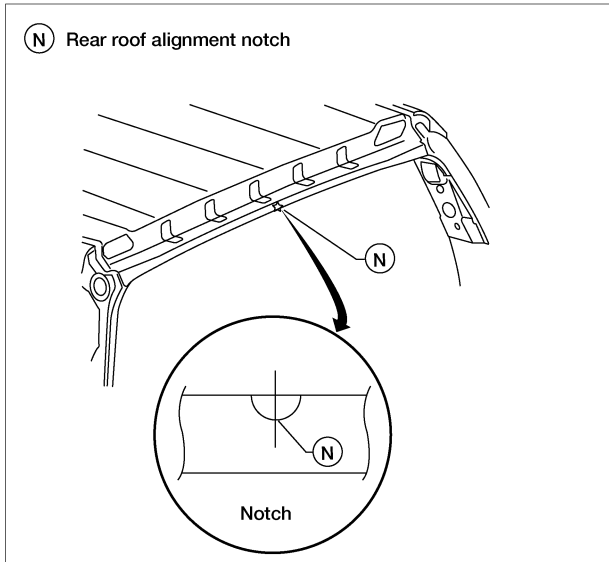


Unit: mm

LIA1803E

# BODY REPAIR

## Measurement Points





# BODY REPAIR

## Handling Precautions For Plastics HANDLING PRECAUTIONS FOR PLASTICS

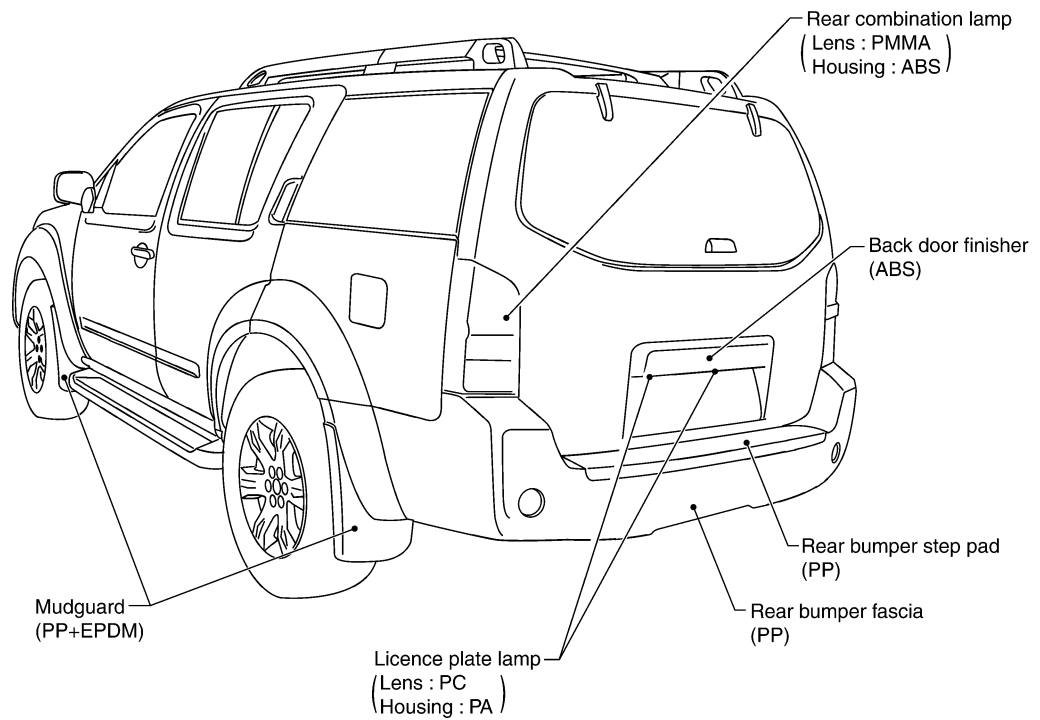
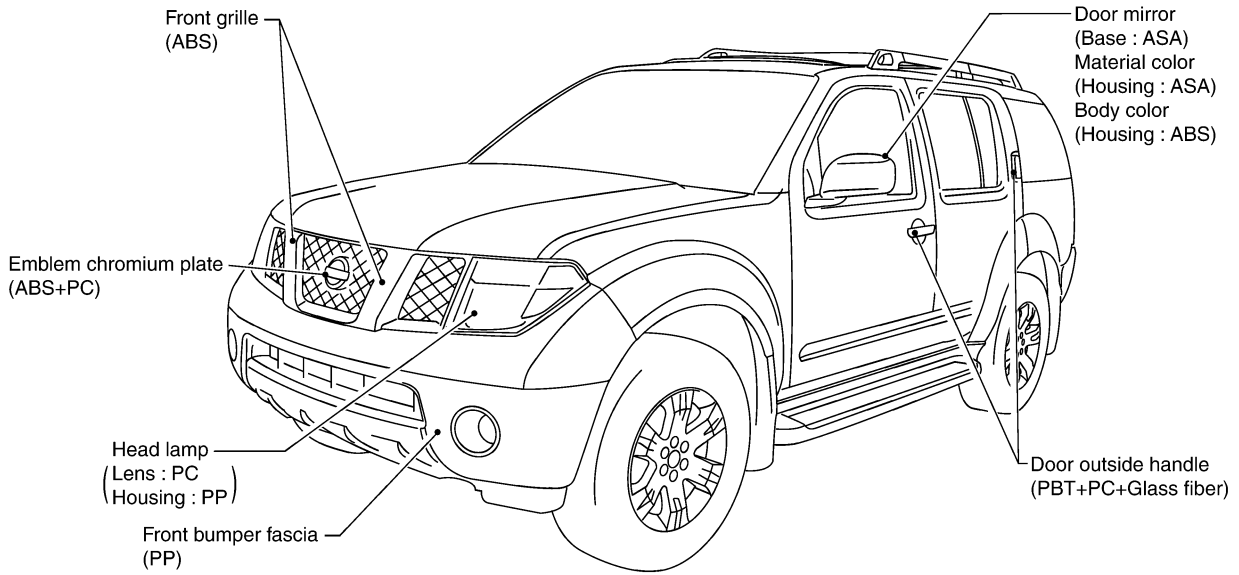
EIS00D7N

Abbreviation	Material name	Heat resisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Poly Vinyl Chloride	80(176)	Same as above.	Poison gas is emitted when burned.
EPM/EPDM	Ethylene Propylene (Diene) copolymer	80(176)	Same as above.	Flammable
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.	

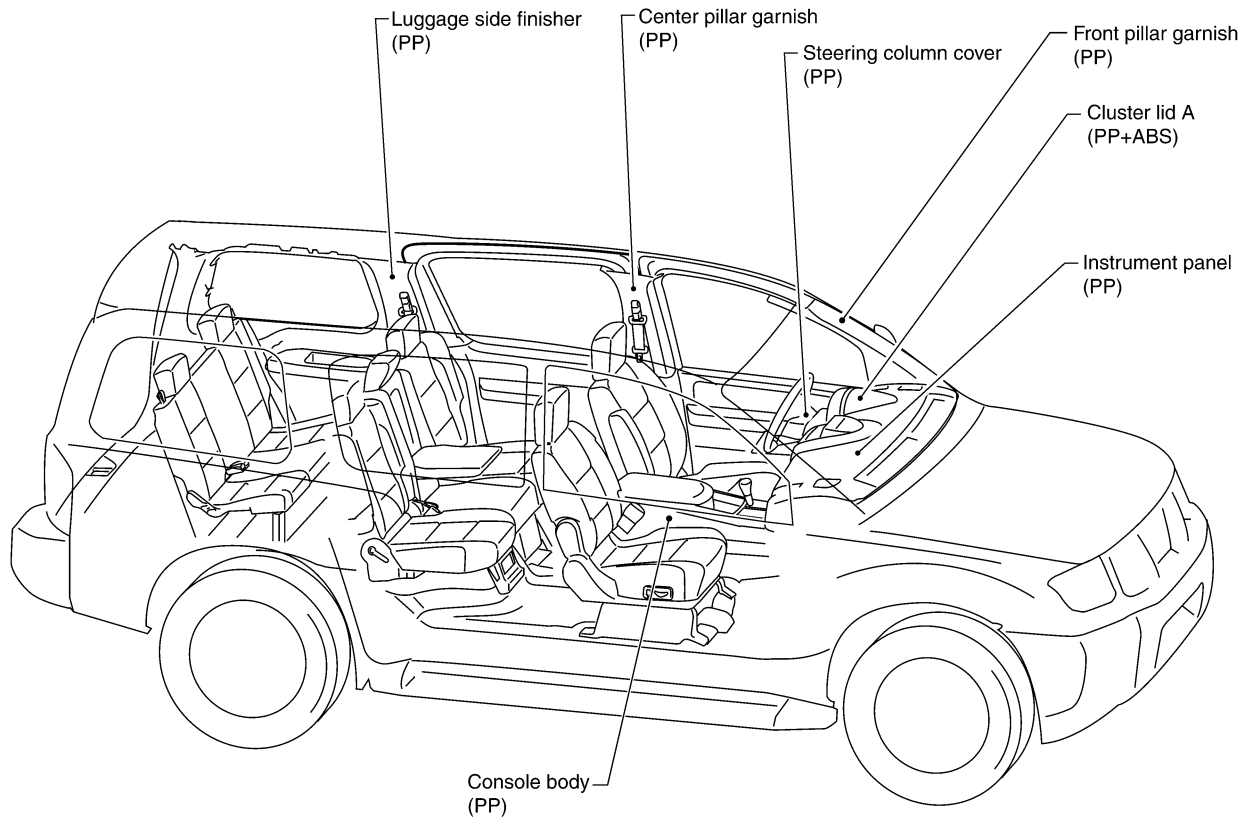
1. When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.
2. Plastic parts should be repaired and painted using methods suiting the materials' characteristics.

# BODY REPAIR

## LOCATION OF PLASTIC PARTS



# BODY REPAIR



SIIA2511E

# BODY REPAIR

## Precautions In Repairing High Strength Steel

EIS00D70

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

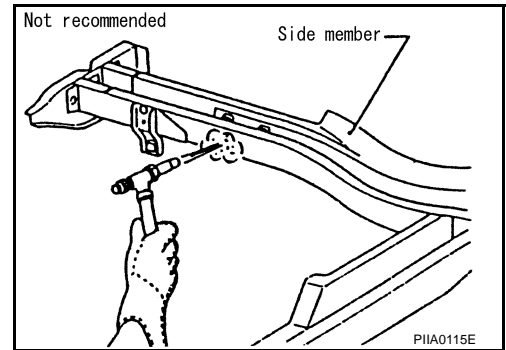
Tensile strength	Major applicable parts
373 N/mm <sup>2</sup> (38kg/mm <sup>2</sup> ,54klb/sq in)	<ul style="list-style-type: none"><li>● Upper inner front pillar</li><li>● Front pillar hinge brace</li><li>● Outer front pillar reinforcement</li><li>● Other reinforcements</li></ul>
785-981 N/mm <sup>2</sup> (80-100kg/mm <sup>2</sup> 114-142klb/sq in)	<ul style="list-style-type: none"><li>● Outer sill reinforcement</li><li>● Main back pillar</li></ul>

# BODY REPAIR

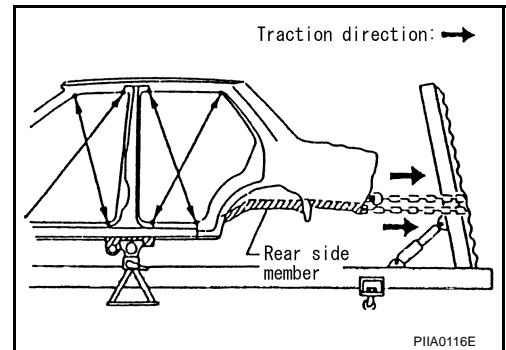
## Read the Following Precautions When Repairing HSS:

### 1. Additional points to consider

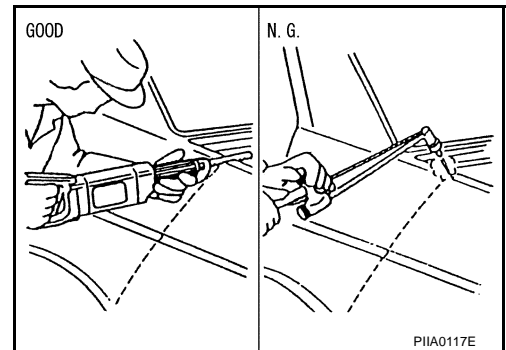
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F). Verify heating temperature with a thermometer. (Crayon-type and other similar type thermometer are appropriate.)



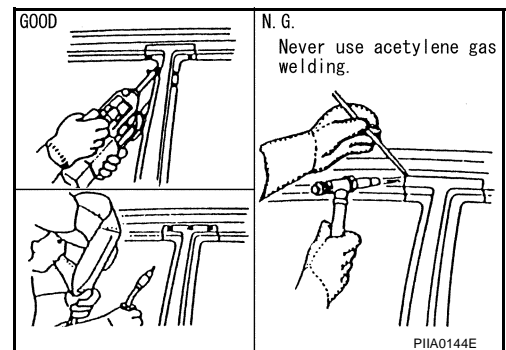
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



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

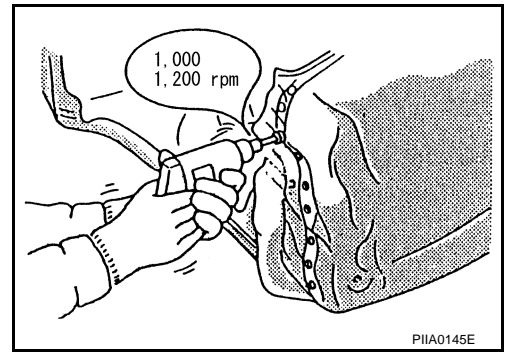


- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat. If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



# BODY REPAIR

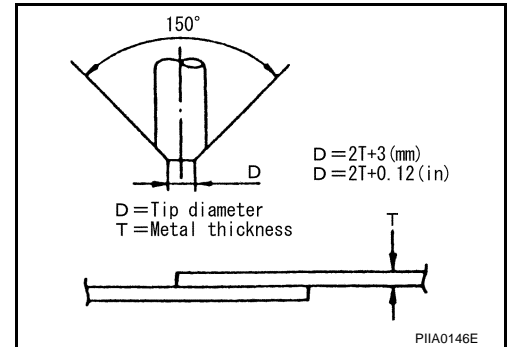
- The spot weld on HSS panels is harder than that of an ordinary steel panel.  
Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



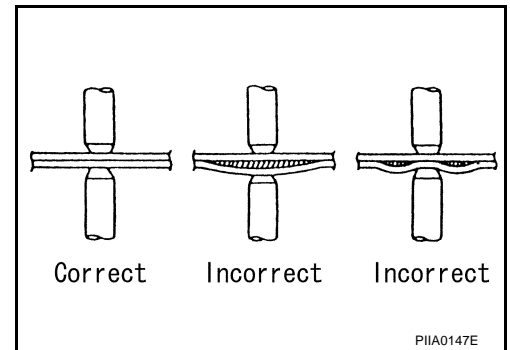
## 2. Precautions in spot welding HSS

This work should be performed under standard working conditions. Always note the following when spot welding HSS:

- The electrode tip diameter must be sized properly according to the metal thickness.



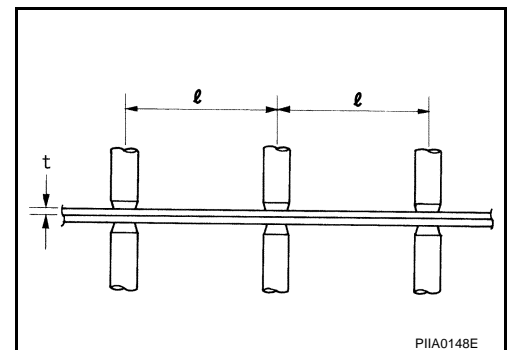
- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

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



# BODY REPAIR

EIS00415

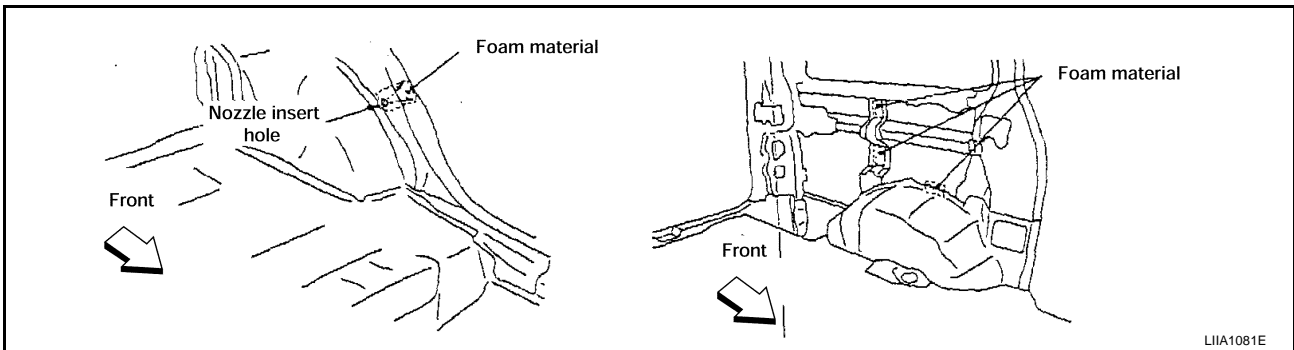
## Foam Repair

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.

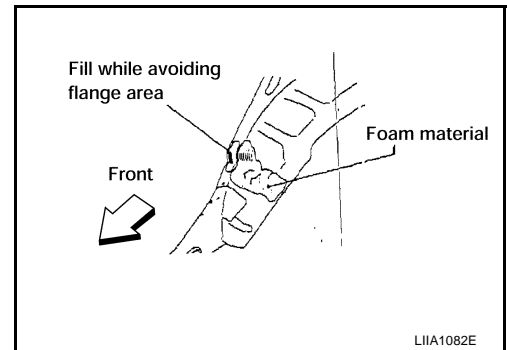
#### NOTE:

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.



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## Replacement Operations

EIS00D7P

### 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.


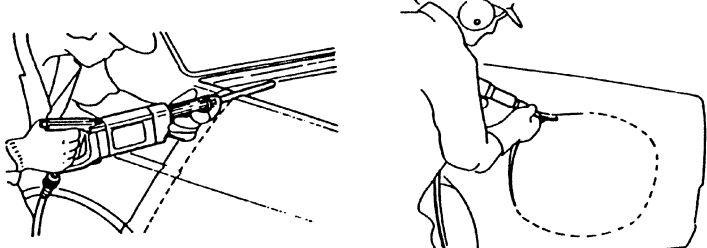
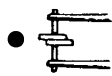
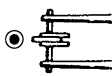

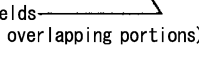
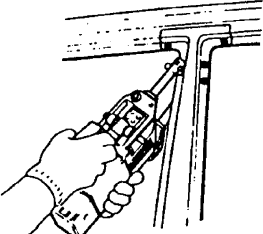
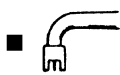
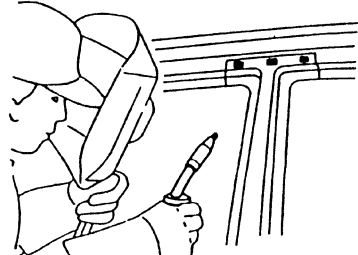

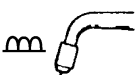



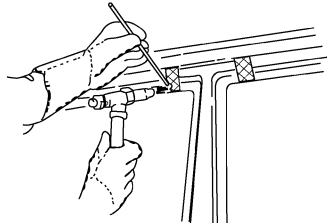


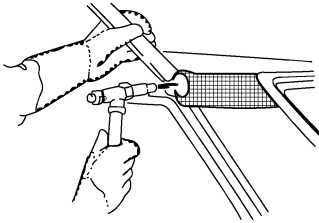
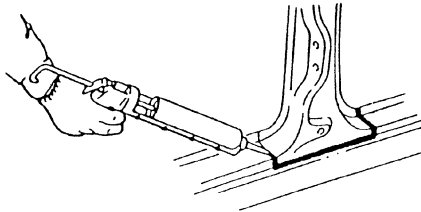
Technicians are also encouraged to read Body Repair Manual (Fundamentals) and Frame Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle can be maintained. The Body Repair Manual (Fundamentals) and Frame Repair Manual (Fundamentals) contains additional 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.



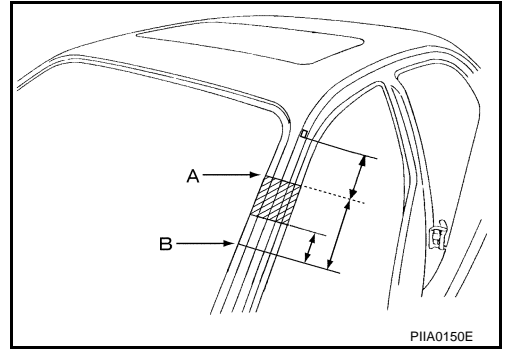
# BODY REPAIR

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

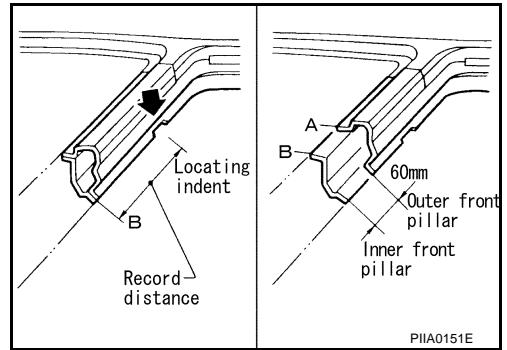
 <p>Saw cut or air chisel cut</p>		
<p>Spot weld</p> <p>●●●●● 2-spot welds</p>  <p>●●●●● 3-spot welds</p> 	<p>2-spot welds (2-panel overlapping portions)</p>  <p>3-spot welds (3-panel overlapping portions)</p> 	
<p>■ ■ ■ ■</p> <p>MIG plug weld</p> 		
 <p>MIG seam weld/ Point weld</p> 		
 <p>Brazing</p>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

# BODY REPAIR

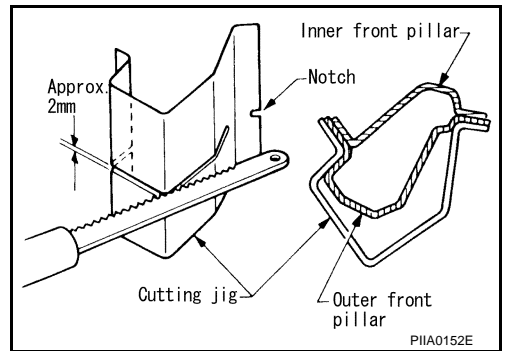
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



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

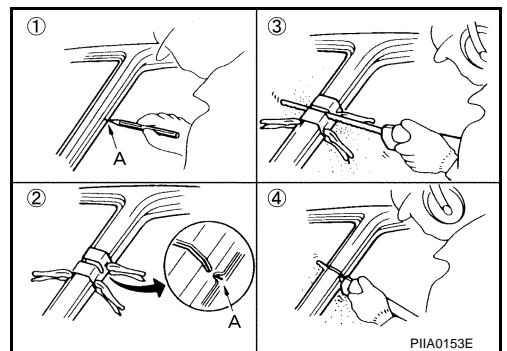


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



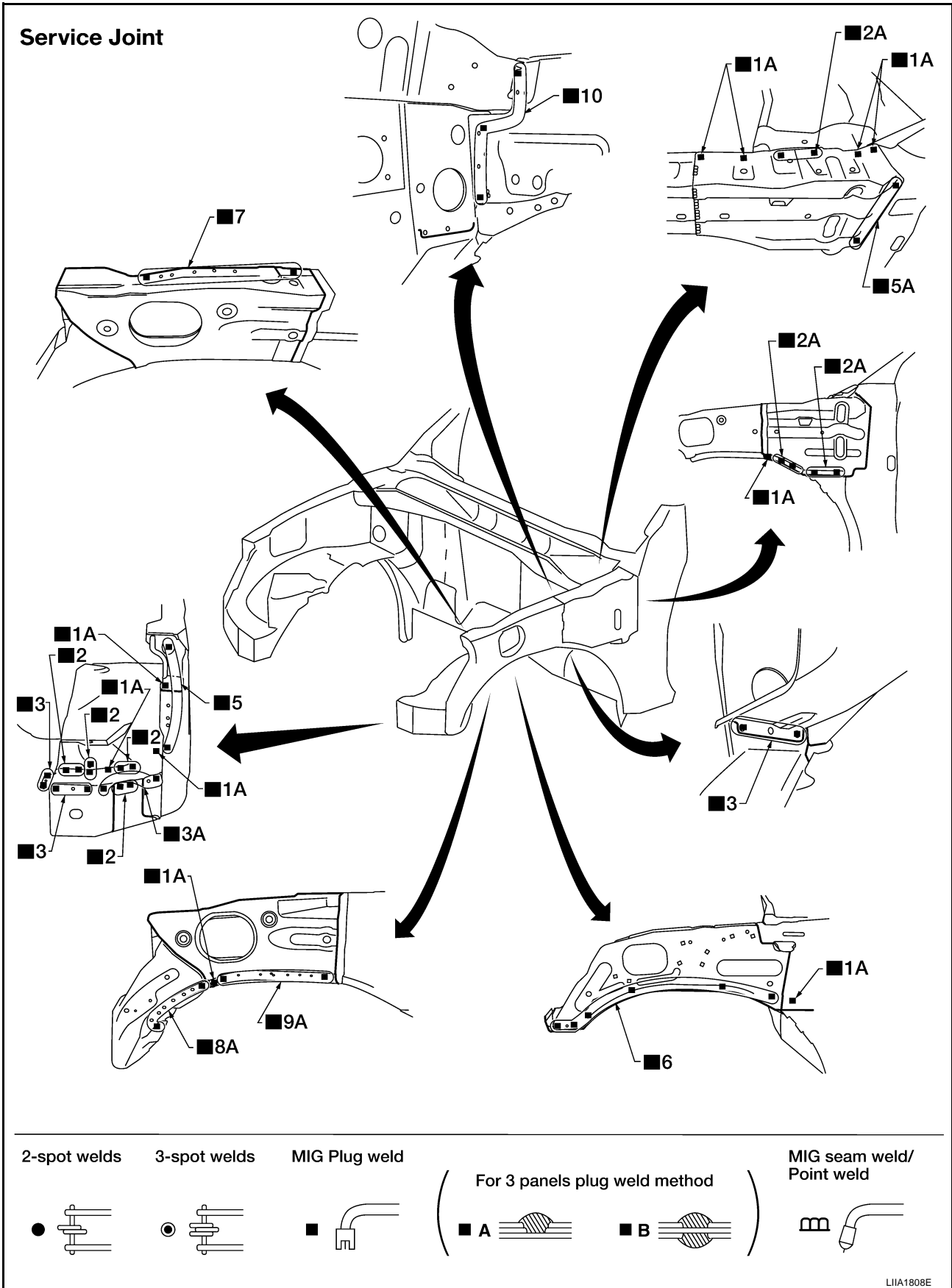
- An example of cutting operation using a cutting jig is as follows.

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



# BODY REPAIR

## HOODLEDGE (LH SIDE)



LIA1808E

Change parts

## BODY REPAIR

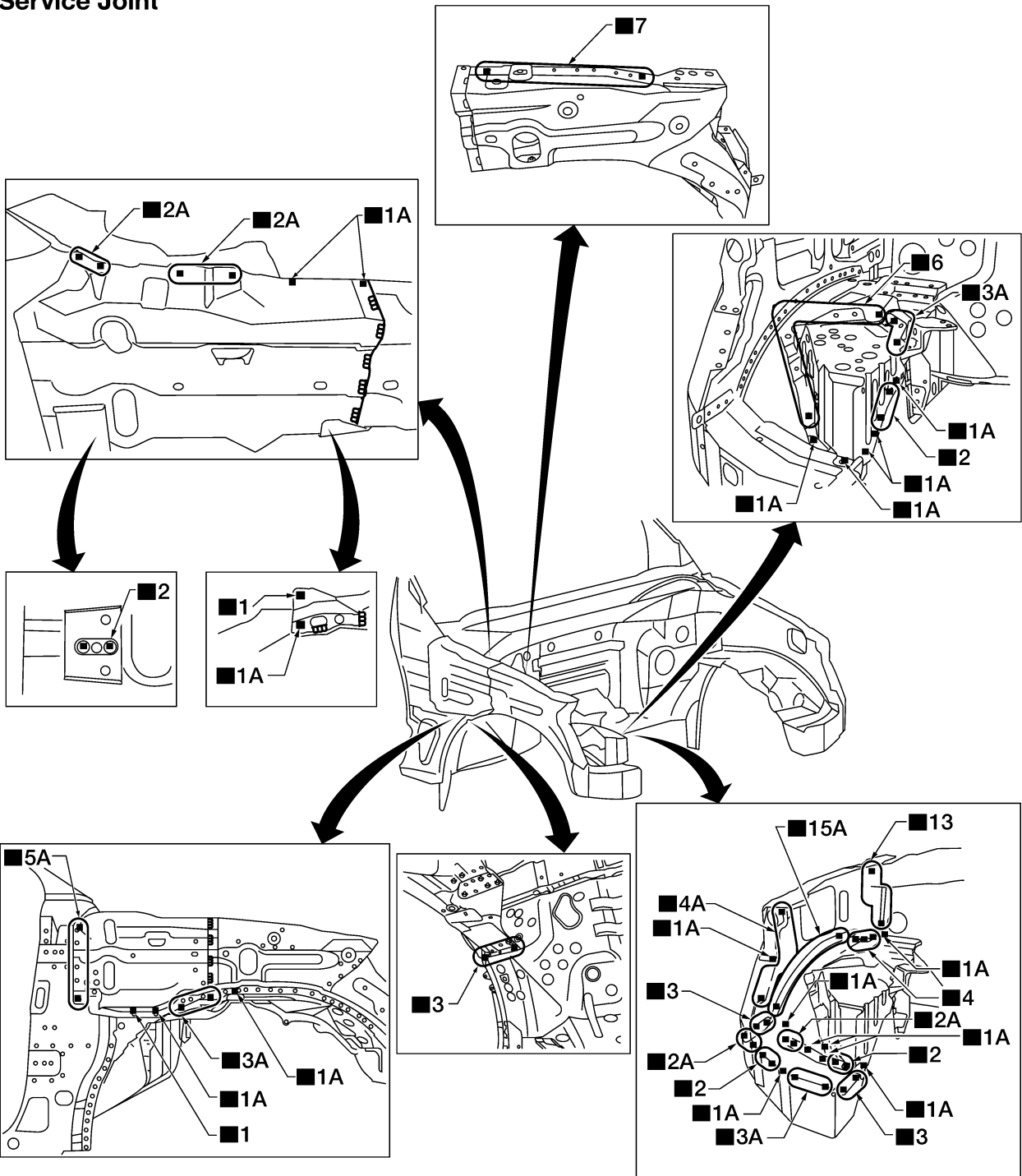
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- Hoodledge (LH)
- Lower rear hoodledge (LH)
- Hoodledge reinforcement rear (LH)
- Hoodledge reinforcement assembly (LH)

# BODY REPAIR

## HOODLEDGE (RH SIDE)

### Service Joint



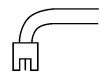
2-spot welds

3-spot welds

MIG Plug weld

( For 3 panels plug weld method )

MIG seam weld/  
Point weld



LIA1809E

Change parts

● Hoodledge (RH)

● Hoodledge reinforcement rear (RH)

● Hoodledge reinforcement assembly (RH)

## BODY REPAIR

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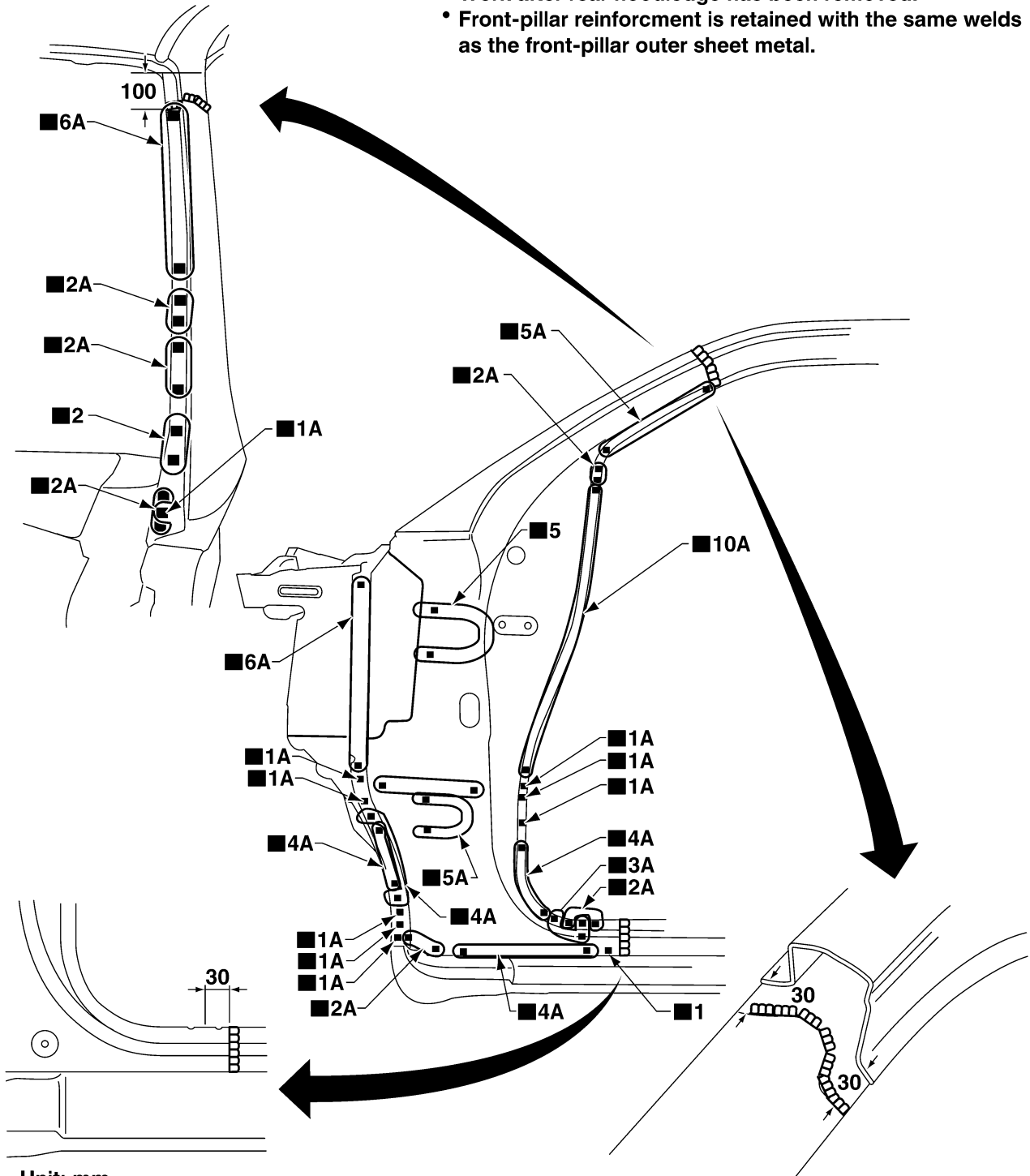
- Lower rear hoodledge (RH)
- Battery tray (RH)
- Washer tank bracket (RH)
- Hoodledge plate (RH)

# BODY REPAIR

## FRONT PILLAR

### Service Joint

- Work after rear hoodledge has been removed.
- Front-pillar reinforcement is retained with the same welds as the front-pillar outer sheet metal.



Unit: mm

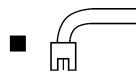
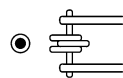
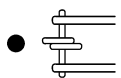
2-spot welds

3-spot welds

MIG Plug weld

( For 3 panels plug weld method )

MIG seam weld/  
Point weld



SIIA2521E

Change parts

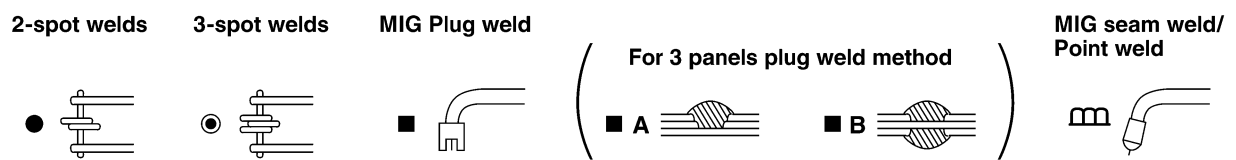
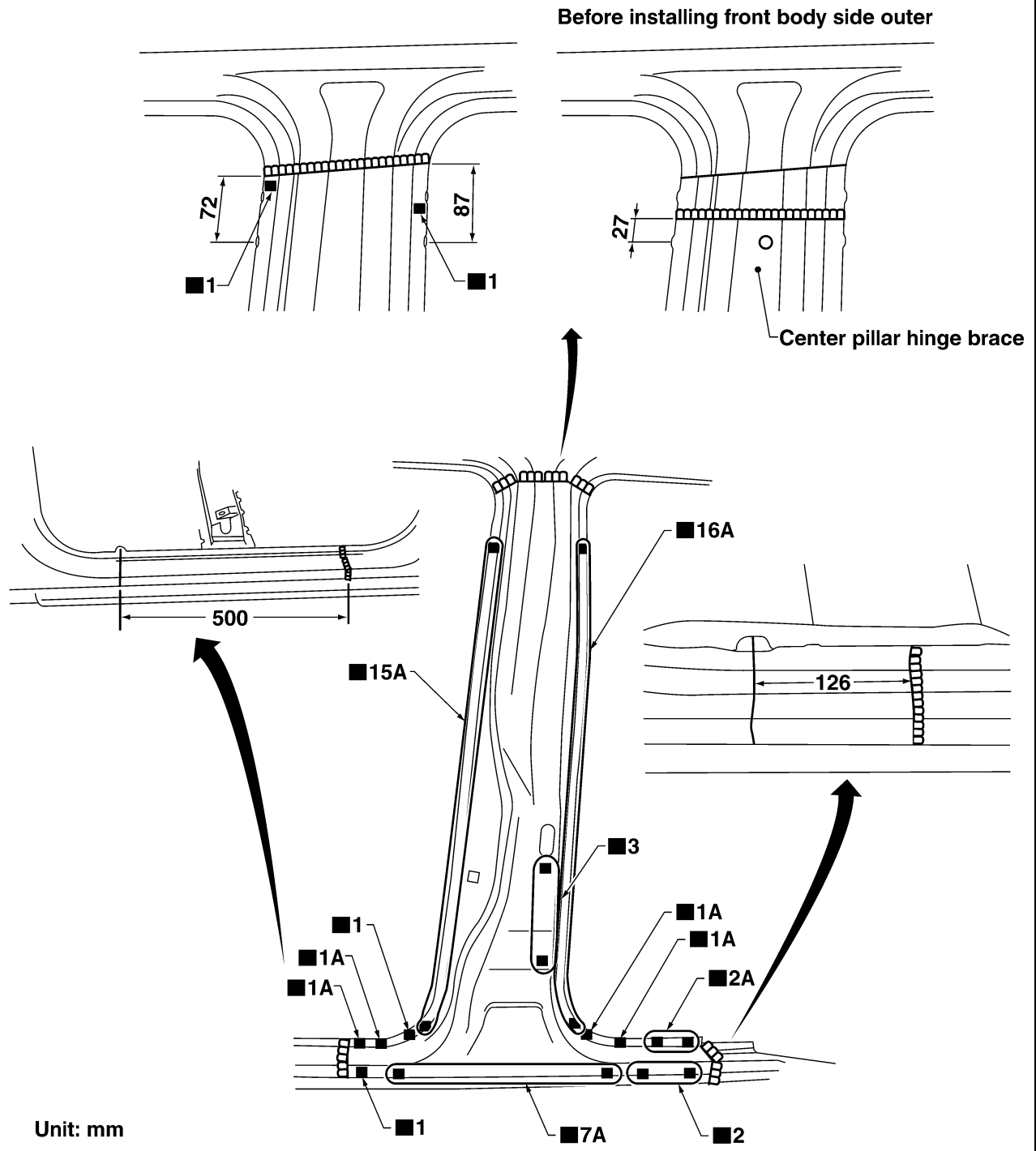
● Outer front body side (LH)

● Front pillar hinge brace (LH)

# BODY REPAIR

## CENTER PILLAR

### Service Joint



S1A2522E

#### Change parts

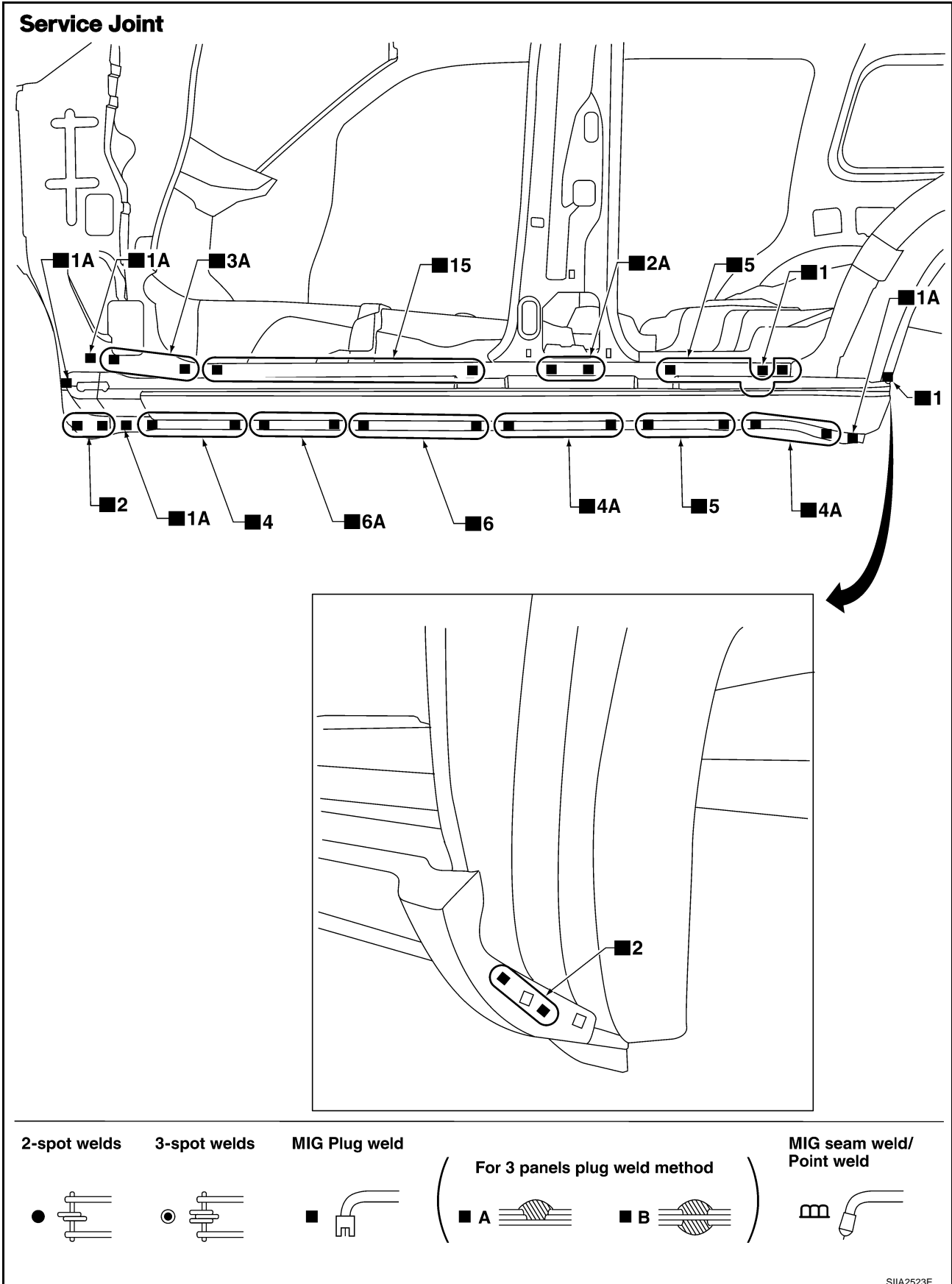
- Outer front body side (LH)
- Center pillar hinge brace (LH)
- Weld nut (LH)



# BODY REPAIR

## OUTER SILL REINFORCEMENT

- Work after outer front body side, outer rear body side, front pillar hinge brace and center pillar hinge brace have been removed.



SIIA2523E

## BODY REPAIR

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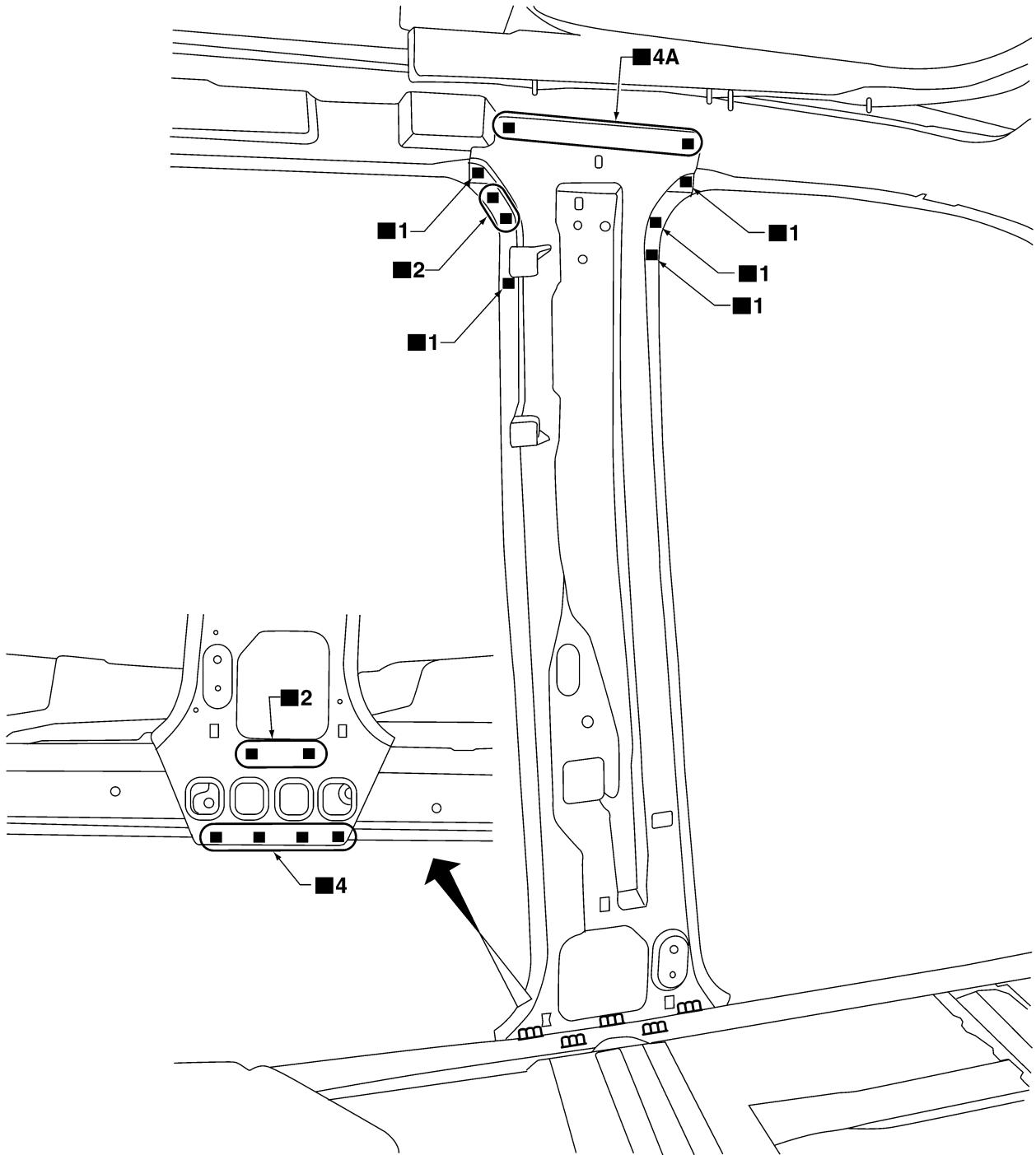
Change parts

- Outer sill reinforcement (LH)

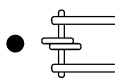
# BODY REPAIR

## INNER CENTER PILLAR

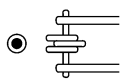
### Service Joint



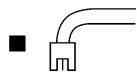
2-spot welds



3-spot welds



MIG Plug weld



For 3 panels plug weld method



MIG seam weld/  
Point weld



SIIA2524E

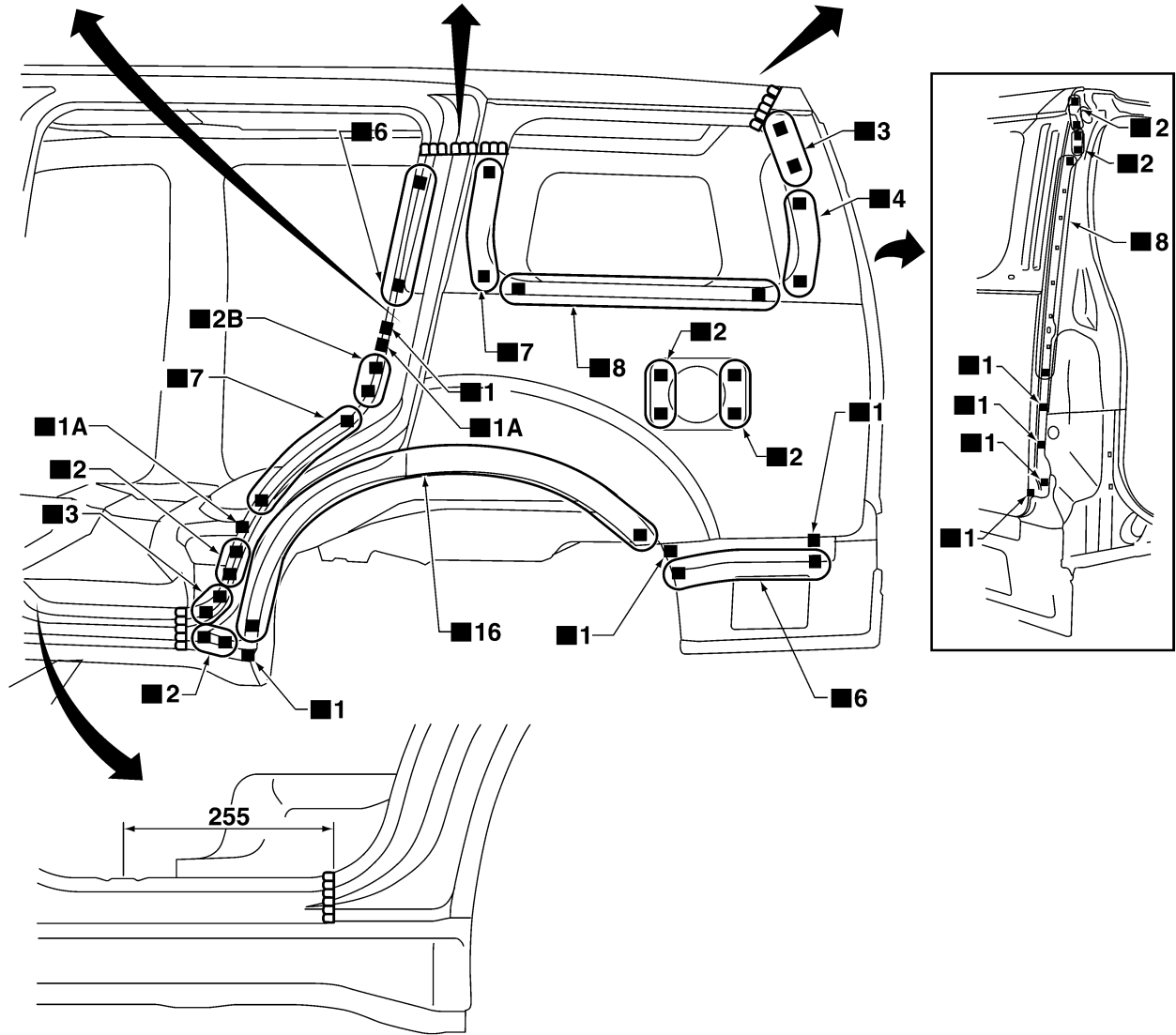
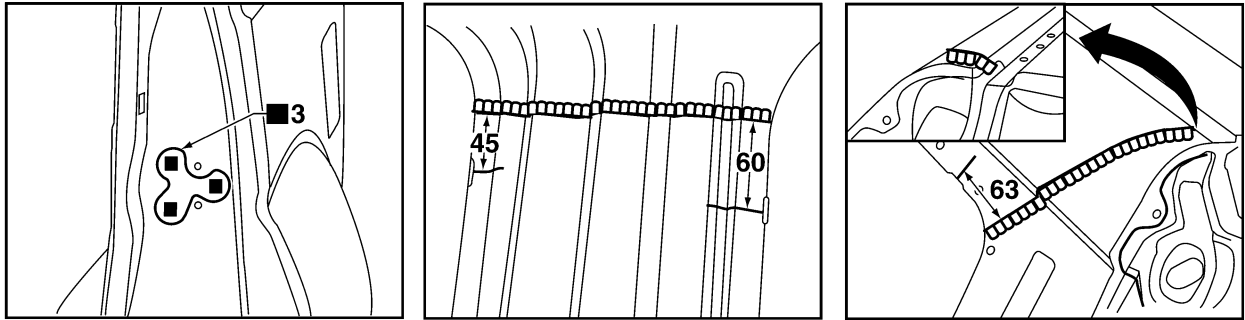
Change parts

- Inner center pillar (LH)

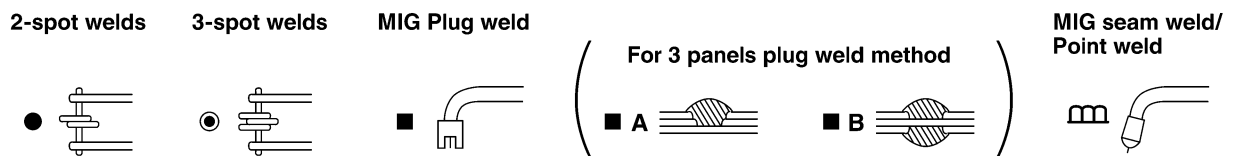
# BODY REPAIR

## REAR FENDER

### Service Joint



Unit: mm



SIIA2525E

Change parts

## BODY REPAIR

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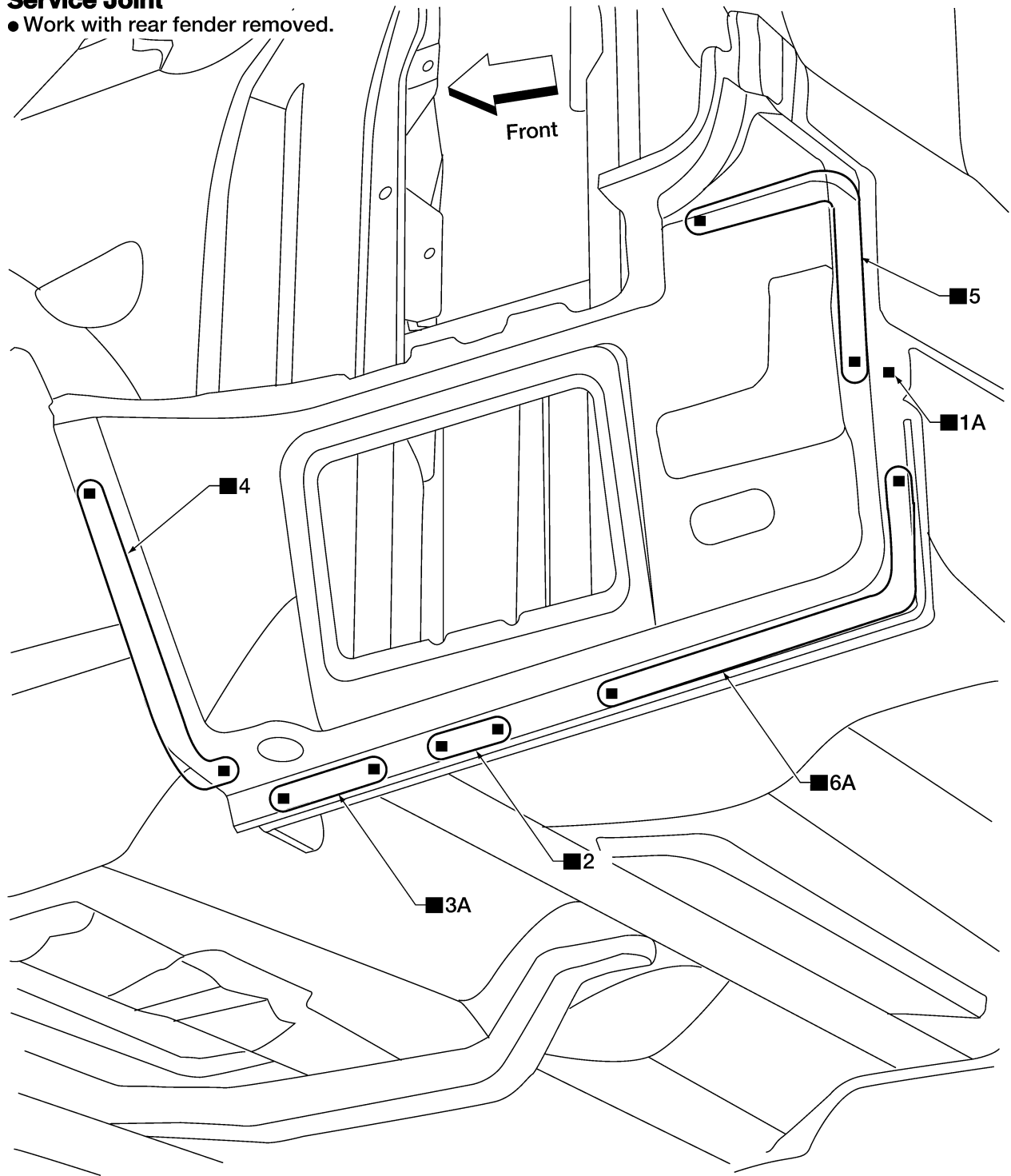
- Outer rear body side (LH)
- Weld nut (LH)
- Striker tapping retainer (LH)
- Fuel filler lid base (LH)

# BODY REPAIR

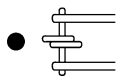
## REAR FENDER EXTENSION (LH SIDE)

### Service Joint

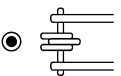
- Work with rear fender removed.



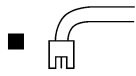
2-spot welds



3-spot welds



MIG Plug weld



( For 3 panels plug weld method )



MIG seam weld/  
Point weld



Change parts

- Rear fender extension (LH)

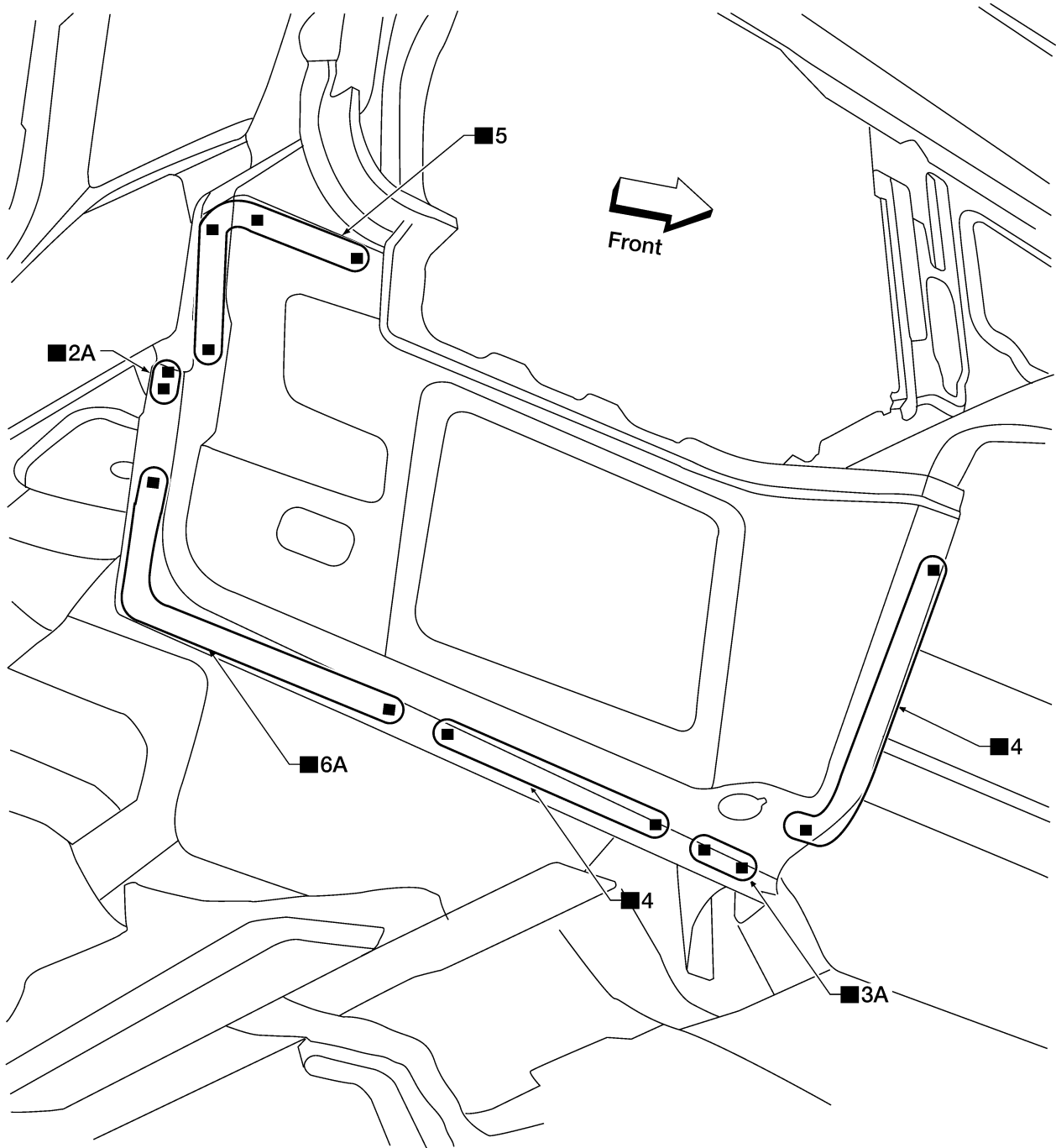
LIIA1818E

# BODY REPAIR

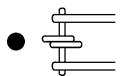
## REAR FENDER EXTENSION (RH SIDE)

### Service Joint

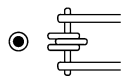
- Work with rear fender removed.



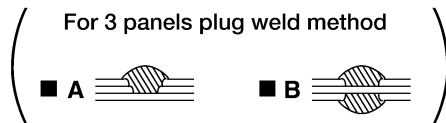
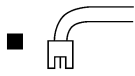
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/  
Point weld



LIA1819E

Change parts

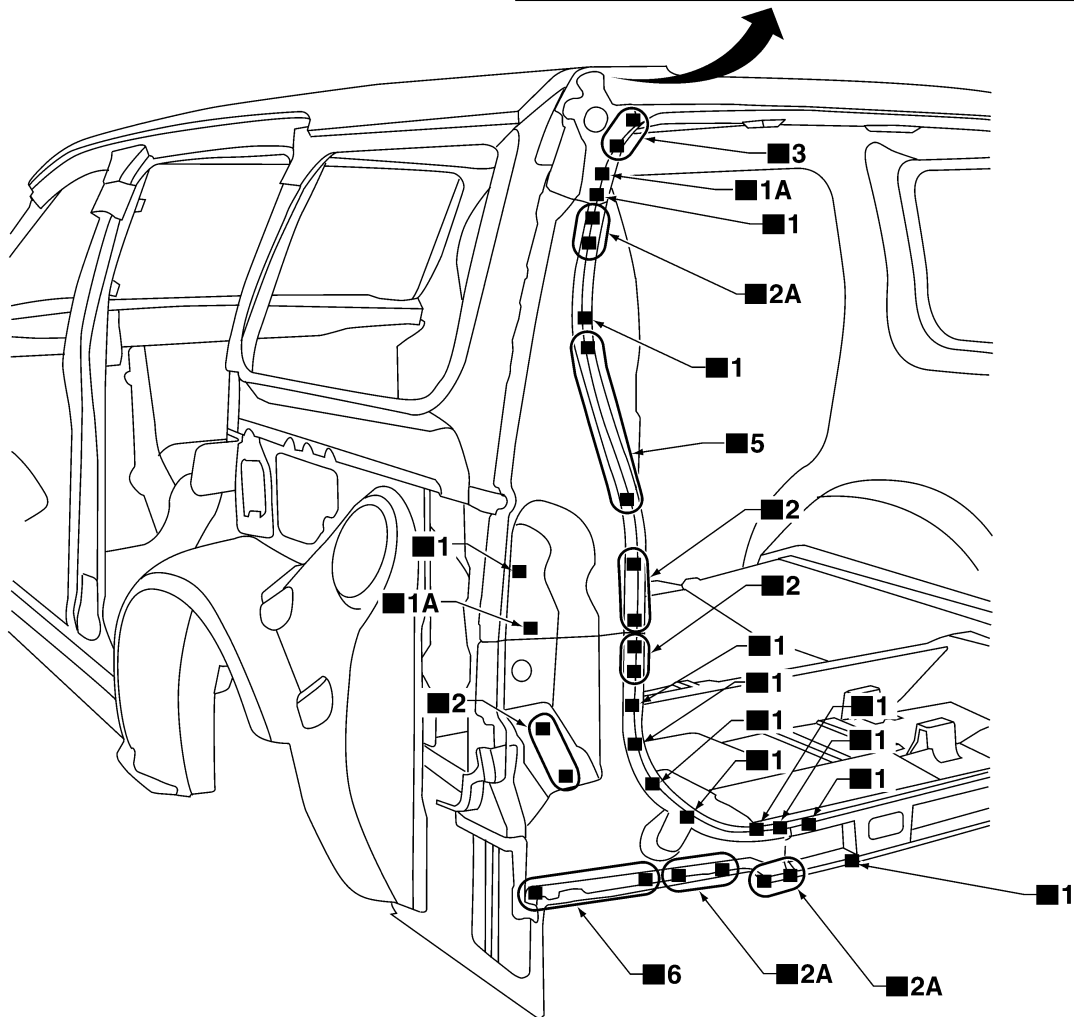
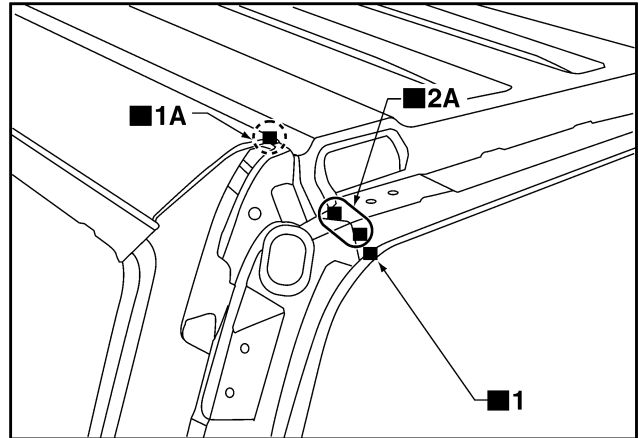
- Rear fender extension (RH)

# BODY REPAIR

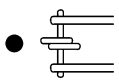
## MAIN BACK PILLAR

### Service Joint

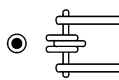
● Work with rear fender and extension removed.



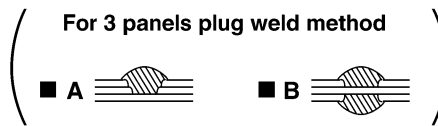
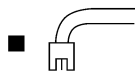
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/  
Point weld



SIIA2526E

Change parts

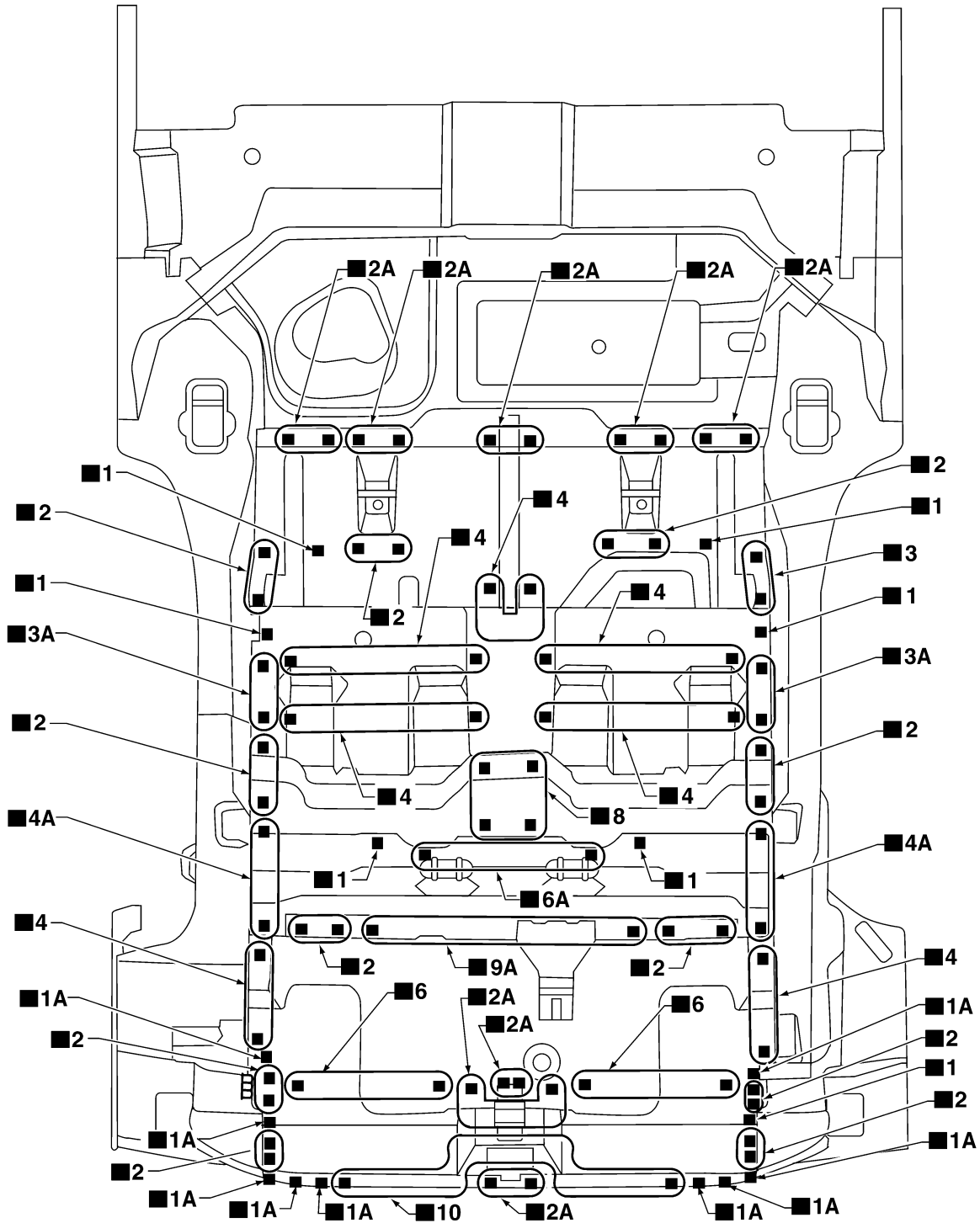
- Main back pillar (LH)



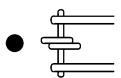
# BODY REPAIR

## REAR FLOOR REAR

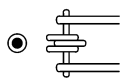
### Service Joint



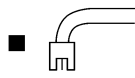
2-spot welds



3-spot welds



MIG Plug weld



( For 3 panels plug weld method )



MIG seam weld/  
Point weld



Change parts

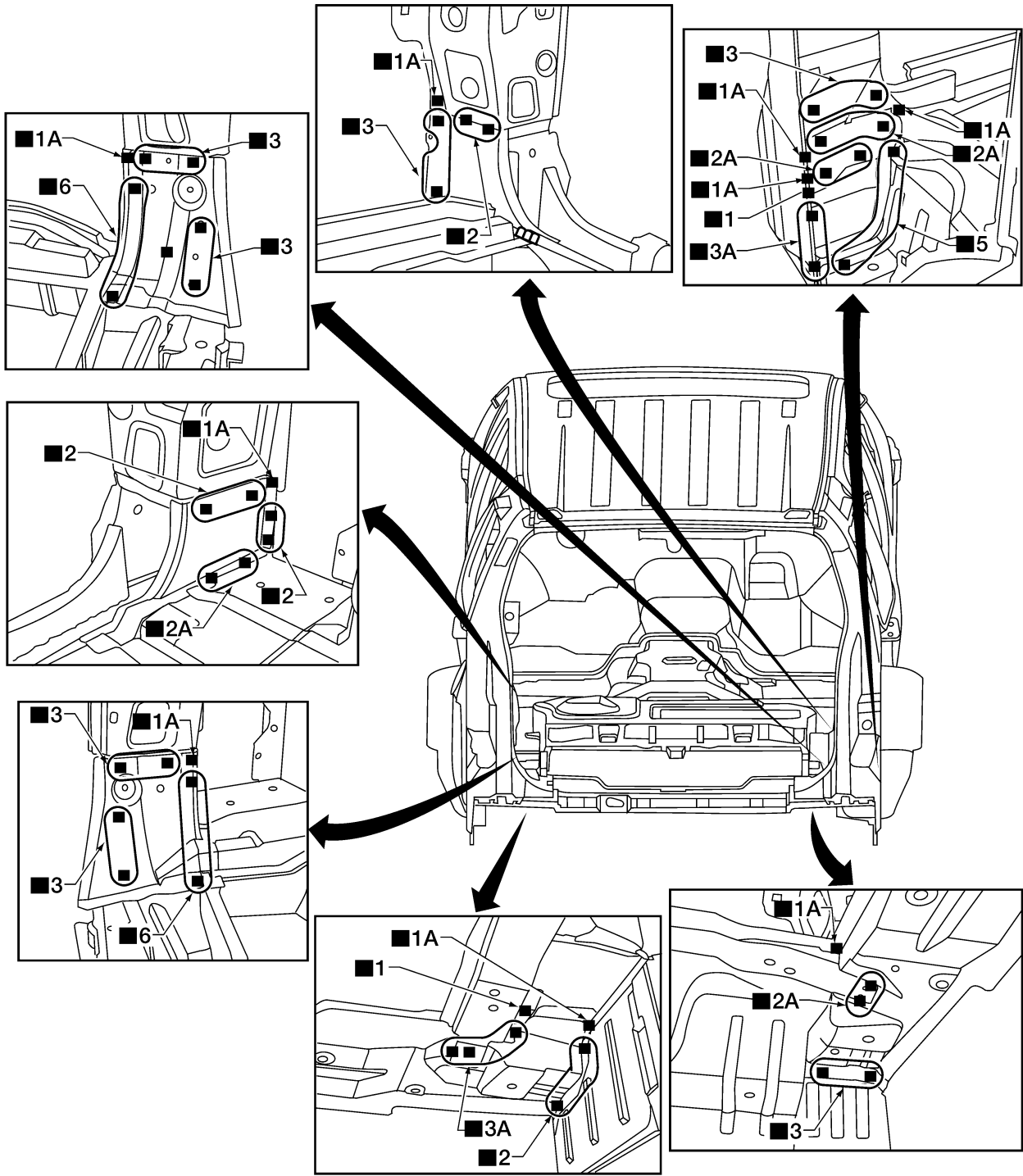
- Rear floor rear

SIIA2527E

# BODY REPAIR

## REAR CROSSMEMBER

### Service Joint



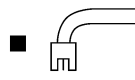
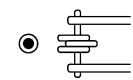
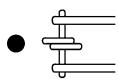
2-spot welds

3-spot welds

MIG Plug weld

( For 3 panels plug weld method )

MIG seam weld/  
Point weld



Change parts

- Rear crossmember

LIIA1816E

## BODY REPAIR

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### CRUSH HORN

**CAUTION:**

When replacing a damaged crush horn on R51 model, do not choose partial replacement method, such as cutting and butt-joint welding the crush horn.