FOREWORD

This Body Repair Manual contains information and instructions for repairing the body structure of the 2000 NISSAN MAXIMA (A33) 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 repair 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) and the 2000 NISSAN MAXIMA (A33) Service Manual in order to ensure that the original functions and quality of the vehicle can be maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warnings, that are not 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. In the U.S.A. it is recommended that a MIG welder be used by a trained technician.

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.

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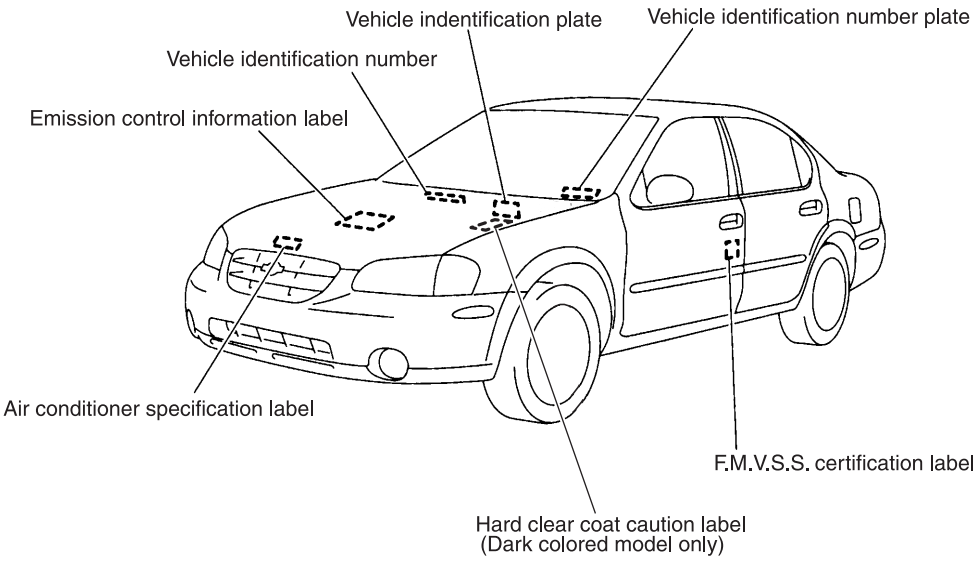
Identification Number

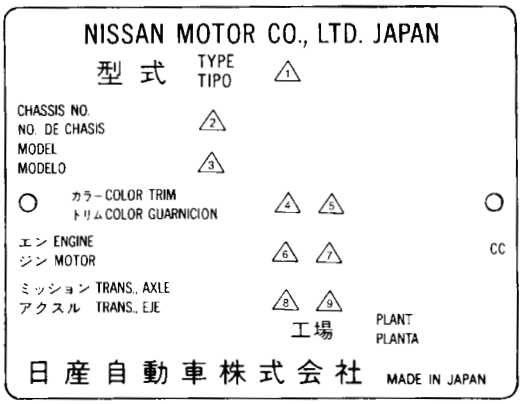


VEHICLE IDENTIFICATION NUMBER ARRANGEMENT

JN1 C A 3 1 A * Y T 000001(With SRS side air bags)
500001(Without SRS side air bags)

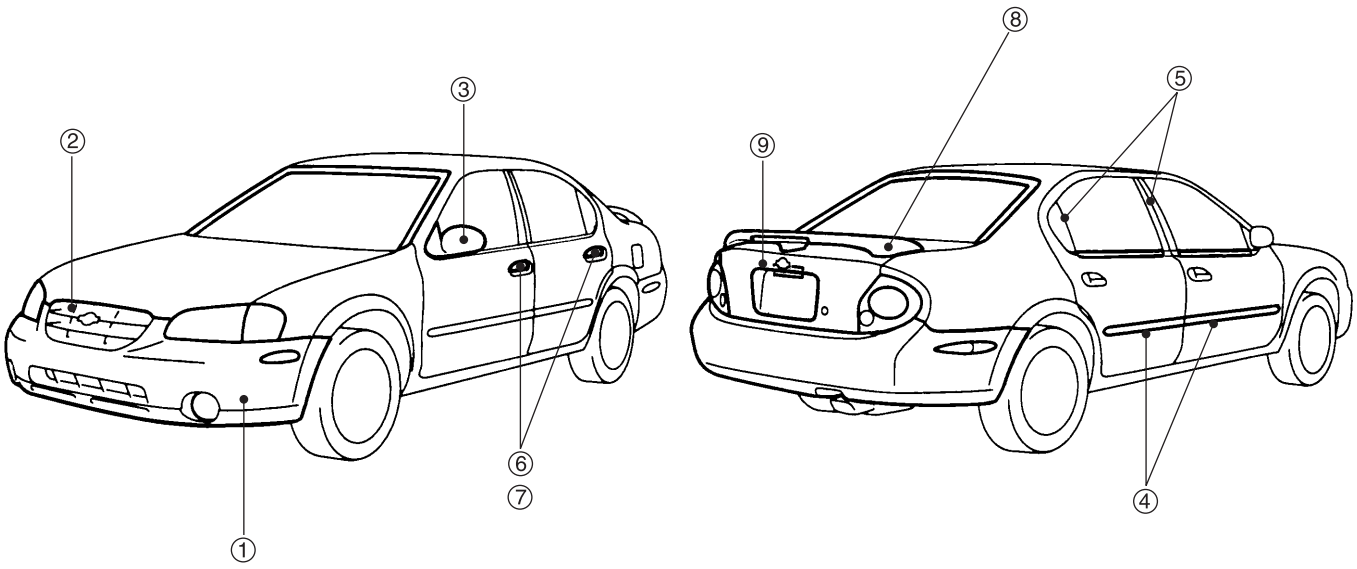
- Vehicle serial number
- Manufacturing plant
  T: Oppama
- Model year
  Y: 2000 model year
- Check digit (0 to 9 or X)
  The code for the check digit is determined by mathematical computation.
- Restraint system
  A: Driver and front passenger SRS air bags, SRS side air bags & 3-point manual seat belts
  D: Driver and front passenger SRS air bags & 3-point manual seat belts
- Body type
  1: Sedan
- Model change
- Vehicle line
  A: Nissan Maxima
- Engine type
  C: VQ30DE
- Manufacturer
  JN1: Nissan, Passenger vehicle

Identification Plate



1.Type
2.Vehicle indentification number (Chassis number)
3.Model
4.Body color code
5.Trim color code
6.Engine model
7.Engine displacement
8.Transmission model
9.Axle model

Body Exterior Paint Color



Component			Color code	BBV3	BCP2	BDR2	BEV0	BKH3	BKT3	BKV3	BQT1
			Description	Light blue	Brown	Green	Beige	Black	Silver	Greenish gray	White
			Paint type	TM	2P	2P	M	2S	M	M	3P
			Hard clear coat	-	X	X	-	X	-	X	-
①	Bumper fascia		Body color	BBV3	BCP2	BDR2	BEV0	BKH3	BKT3	BKV3	BQT1
②	Radiator grill		Chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
③	Outside mirror	Body	Body color	BBV3	BCP2	BDR2	BEV0	BKH3	BKT3	BKV3	BQT1
		Base	Black	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01
④	Side guard molding		Body color	BBV3	BCP2	BDR2	BEV0	BKH3	BKT3	BKV3	BQT1
⑤	Door sash	Center	Black tape	-	-	-	-	-	-	-	-
		Rear	Black	AG01	AG01	AG01	AG01	AG01	AG01	AG01	AG01
⑥	Outside handle escutcheon		Body color	BBV3	BCP2	BDR2	BEV0	BKH3	BKT3	BKV3	BQT1
⑦	Outside handle		Body color	BBV3	BCP2	BDR2	BEV0	BKH3	BKT3	BKV3	BQT1
⑧	Rear air spoiler		Body color	BBV3	BCP2	BDR2	BEV0	BKH3	BKT3	BKV3	BQT1
⑨	Trunk lid finisher		Gray metallic	AG05	AG05	AG05	AG05	AG05	AG05	AG05	AG05

S: Solid, 2S: Solid+Clear, M: Metallic, 2P: 2 Coat pearl, 3P: 3 Coat pearl, FPM: Iron oxide pearl metallic,
TM: Micro titanium metallic

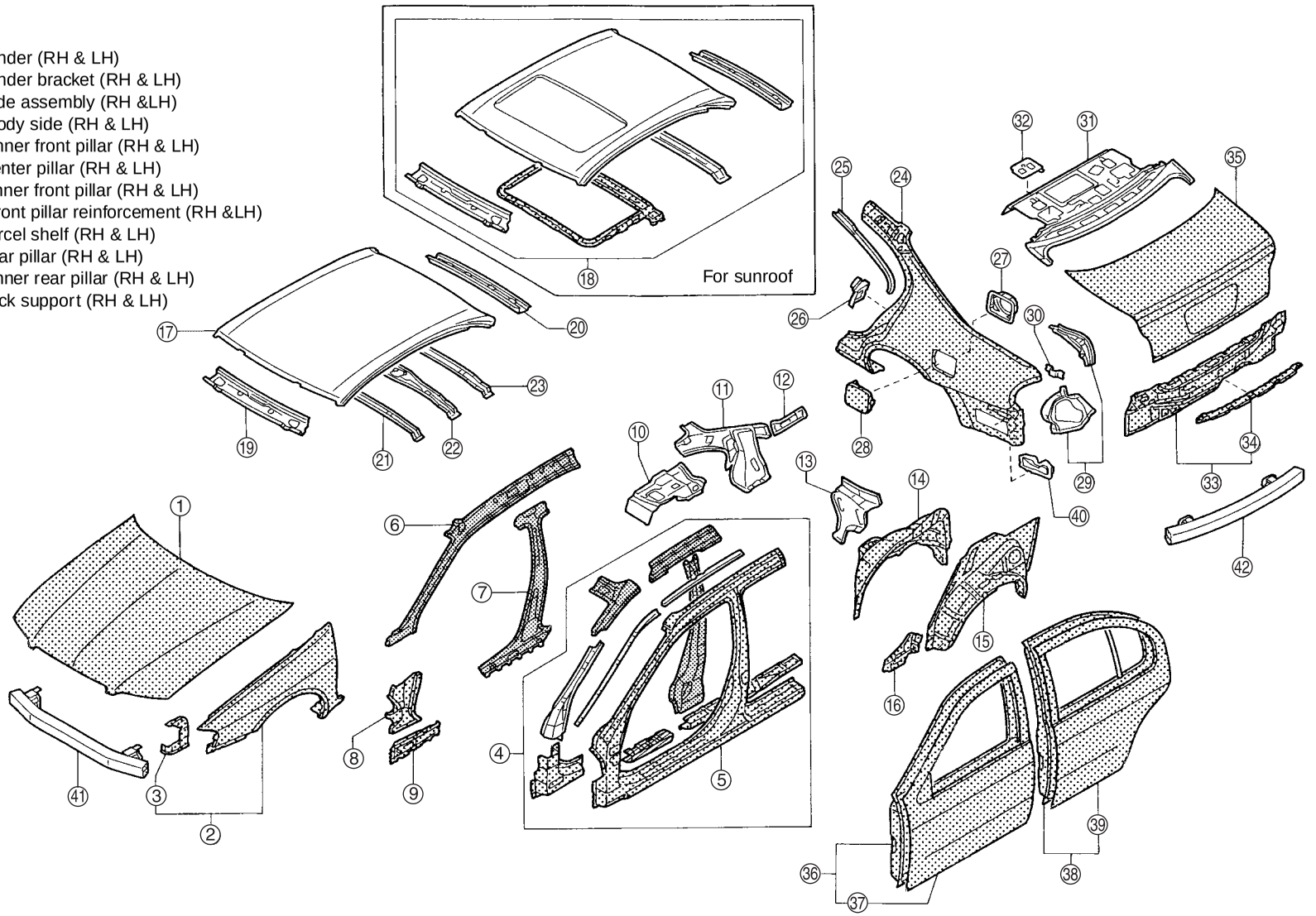
Underbody Component Parts

: Indicates two-side anti-corrosive precoated steel portions
: Indicates high strength steel (HSS) portions
: Indicates two-side anti-corrosive steel and HSS portions

1 Radiator core support assembly
2 Upper radiator core support
3 Side radiator core support
4 Lower radiator core support
5 Hood lock stay
6 Hoodledge assembly (RH & LH)
7 Upper hoodledge (RH & LH)
8 Lower front hoodlege (RH & LH)
9 Battery mounting reinforcement (LH only)
10 Engine mounting reinforcement (RH only)
11 Hoodledge reinforcement assembly (RH & LH)
12 Front hoodlege reinforcement (RH & LH)
13 Air box assembly
14 Center cowl top
15 Upper dash
16 Side cowl top
17 Side cowl top brace
18 Lower dash assembly
19 Front floor
20 2nd crossmember assembly
21 Parking brake and seat belt reinforcement
22 Exhaust mounting bracket
23 Inner sill (RH & LH)
24 Bolt
25 Outer front seat mounting bracket (RH & LH)
26 Rear floor front
27 Rear floor rear
28 Rear seat belt anchor reinforcement
29 Rear floor side (RH & LH)
30 Spare wheel clamp bracket
31 Muffler mounting bracket
32 Front side member assembly (RH & LH)
33 Front side member closing plate assembly (RH & LH)
34 Front side member front closing plate (RH & LH)
35 Front side member (RH & LH)
36 Battery support bracket (LH only)
37 Front side member center extension (RH & LH)
38 Front side member rear extension (RH & LH)
39 Rear side member assembly (RH & LH)
40 Rear side member extension (RH & LH)
41 Rear seat crossmember
42 Center rear crossmember assembly
43 Rear towing hook bracket assembly (LH only)
44 Rear tie-down hook (RH only)

Body Component Parts

: Indicates two-side anti-corrosive precoated steel portions
: Indicates high strength steel (HSS) portions
: Indicates two-side anti-corrosive steel and HSS portions



1 Hood
2 Front fender (RH & LH)
3 Front fender bracket (RH & LH)
4 Body side assembly (RH &LH)
5 Outer body side (RH & LH)
6 Upper inner front pillar (RH & LH)
7 Inner center pillar (RH & LH)
8 Lower inner front pillar (RH & LH)
9 Lower front pillar reinforcement (RH &LH)
10 Side parcel shelf (RH & LH)
11 Inner rear pillar (RH & LH)
12 Lower inner rear pillar (RH & LH)
13 Seat back support (RH & LH)
14 Inner rear wheelhouse (RH & LH)
15 Outer rear wheelhouse (RH & LH)
16 Outer rear wheelhouse extension (RH & LH)
17 Roof
18 Roof assembly (with sunroof)
19 Front roof rail
20 Rear roof rail
21 Roof bow No.1
22 Roof bow No.2
23 Roof bow No.3
24 Rear fender (RH & LH)
25 Rear fender drip (RH & LH)
26 Striker retainer (RH & LH)
27 Filler lid base
28 Fuel filler lid
29 Rear combination lamp base (RH & LH)
30 Jack bracket reinforcement (LH only)
31 Parcel shelf with rear waist
32 Parcel shelf trim bracket
33 Upper rear panel assembly
34 Upper rear panel stiffener
35 Trunk lid
36 Front door assembly (RH & LH)
37 Outer front door panel (RH & LH)
38 Rear door assembly (RH & LH)
39 Outer rear door panel (RH & LH)
40 Patch rear fender (RH & LH)
41 Front bumper armature
42 Rear bumper armature

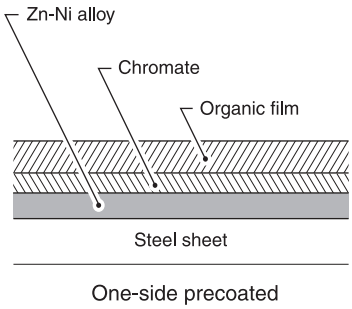
Description

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

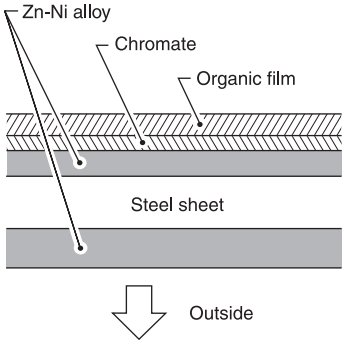
ANTI-CORROSIVE PRECOATED STEEL (DURASTEEL)

To improve repairability and corrosion resistance, a new type of anti-corrosive precoated steel sheet has been adopted replacing conventional zinc-coated steel sheet.
Durasteel is electroplated, zinc-nickel alloy under organic film, which provides excellent corrosion resistance.

Durasteel is classified as either one-side precoated steel or two-side precoated steel. The two side precoated steel provides excellent corrosion resistance.



One-side precoated



Two-side precoated

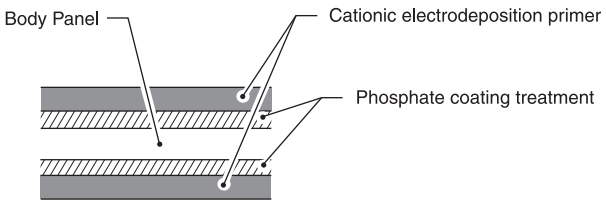
Nissan Genuine Service Parts are fabricated from durasteel sheets. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

PHOSPHATE COATING TREATMENT AND CATIONIC ELECTRODEPOSITION PRIMER

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

Caution:

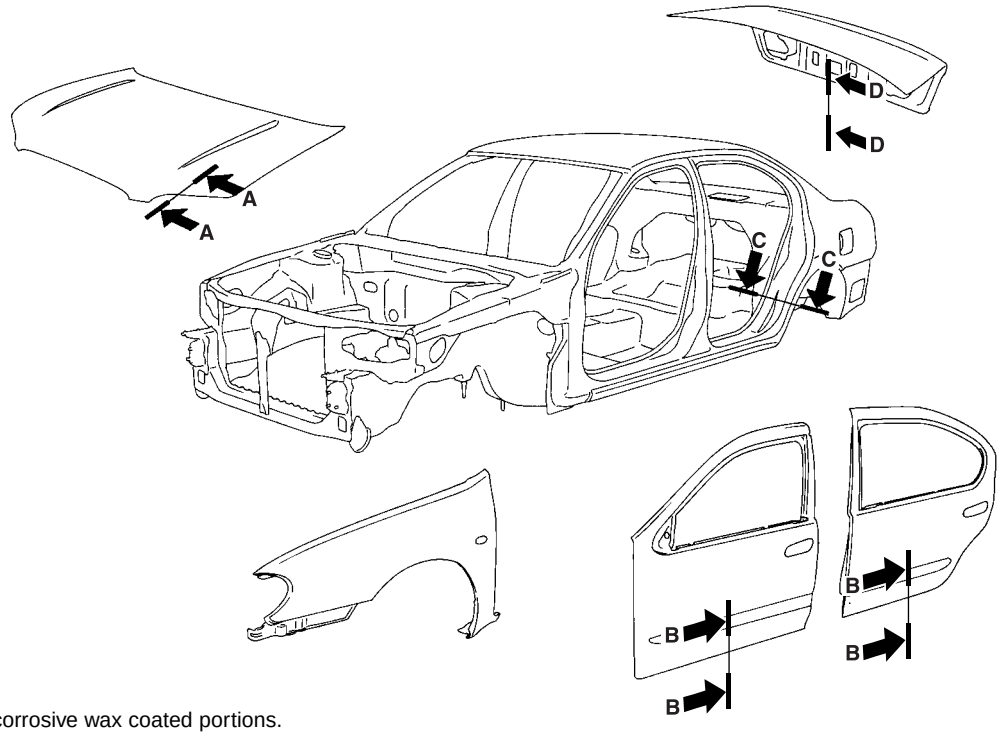
Confine paint removal during welding operations to an absolute minimum.



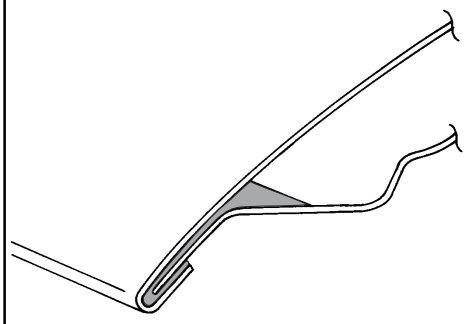
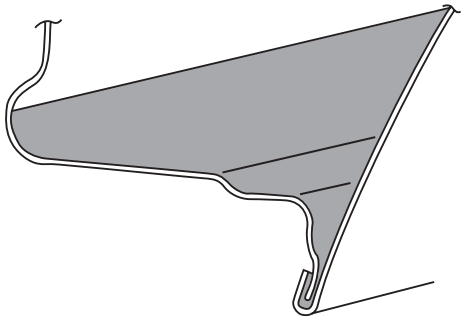
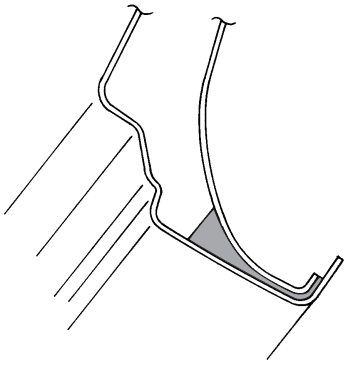
Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

Anti-Corrosive Wax

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



:Indicates anti-corrosive wax coated portions.

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

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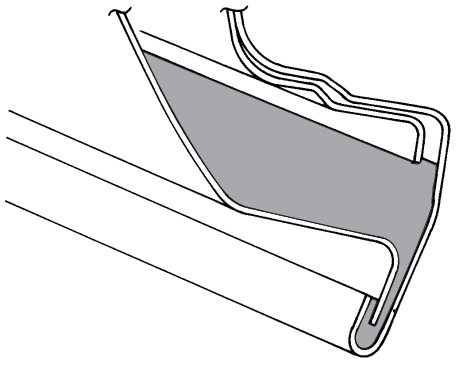


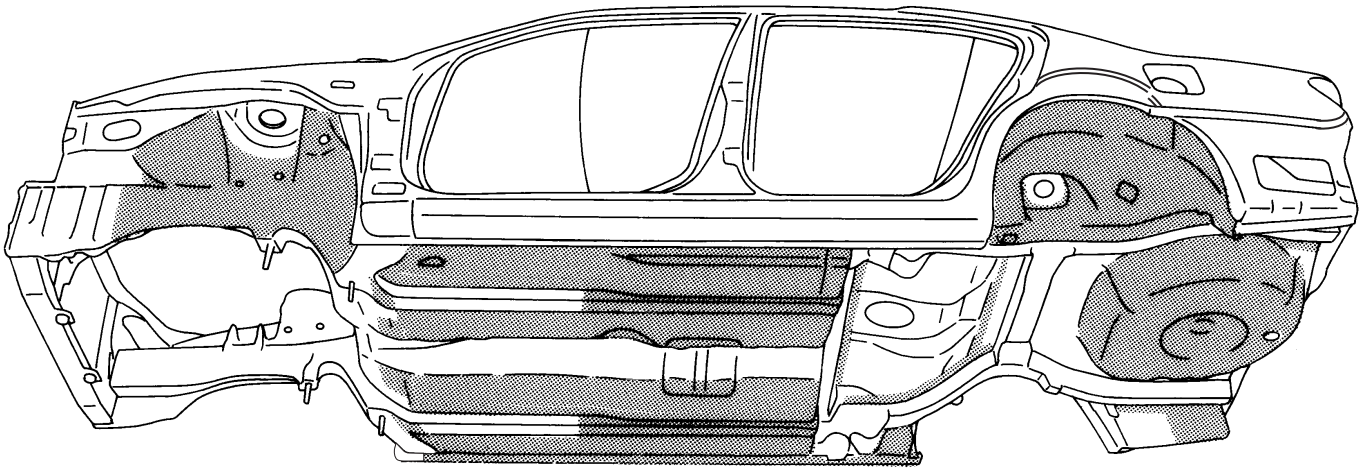
Undercoating

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

Precautions in undercoating

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

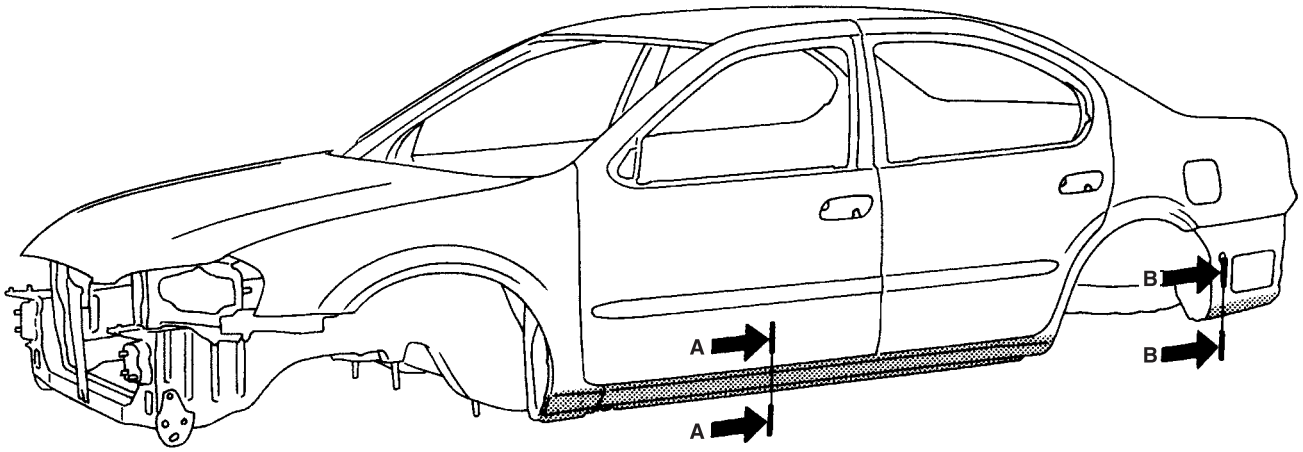
: Indicates undercoated portions.

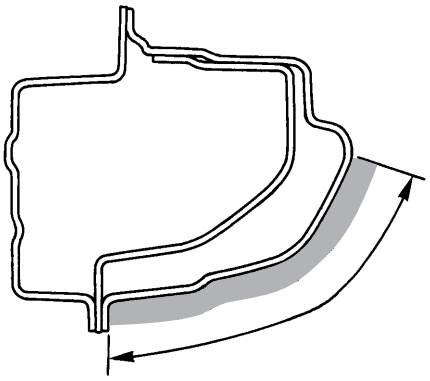


Stone Guard Coat

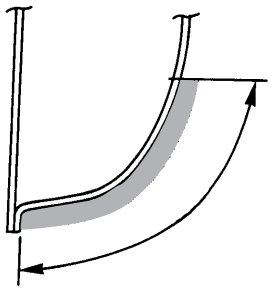
To prevent damage caused by stones, the lower outer body panel (fender, door, etc.) have an additional layer of Stone Guard Coating over the ED primer coating. When replacing or repairing these panels, apply Stone Guard coating to the same portions as before. Use a coating which is rust preventive, durable,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

: Indicates stone guard coated portions.





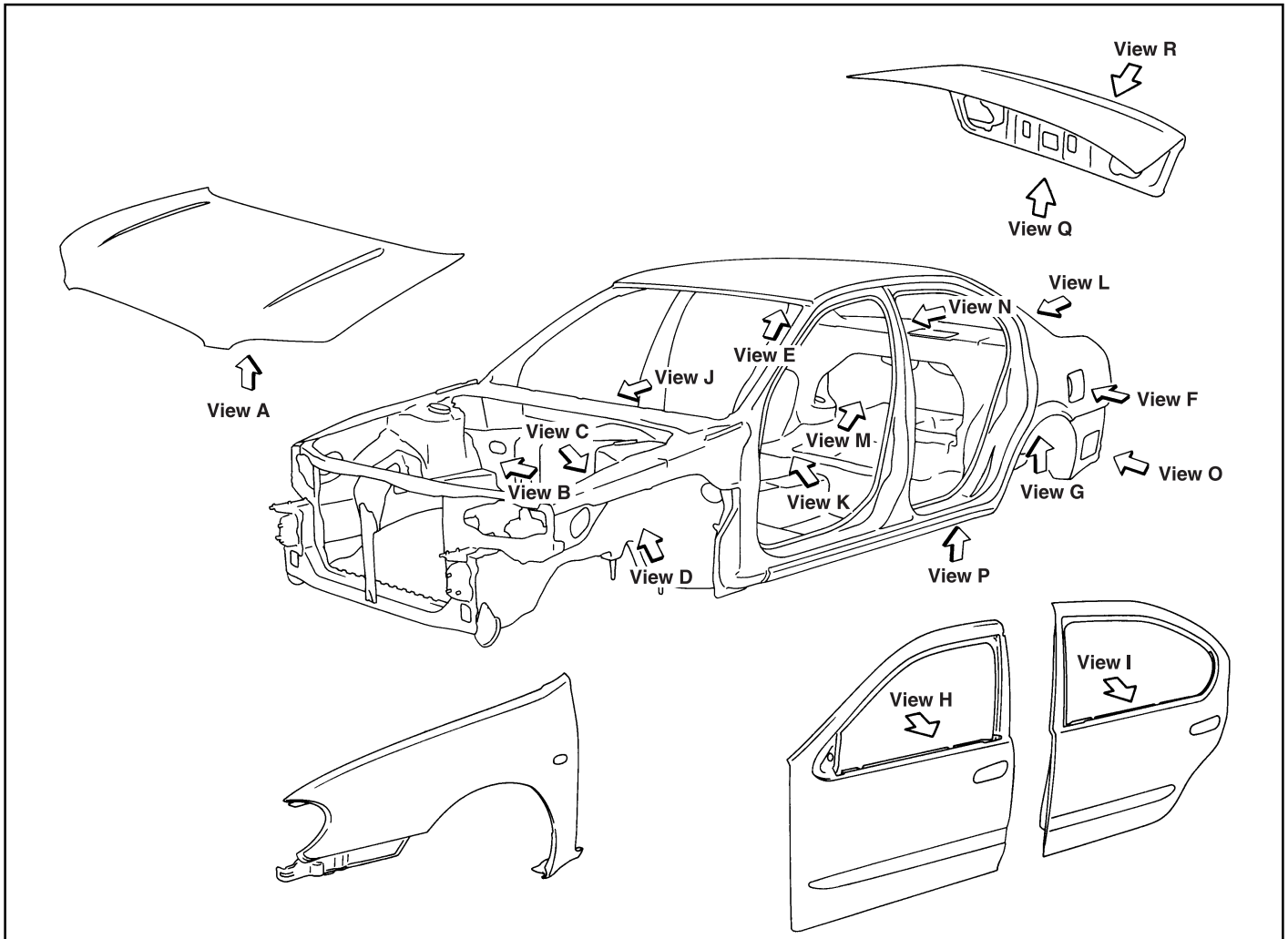
Section A-A

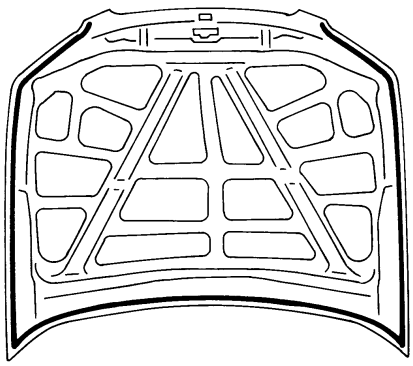
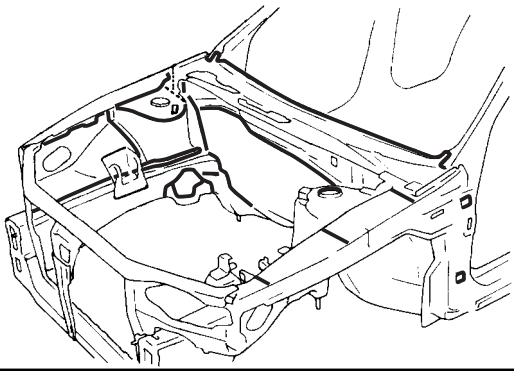


Section B-B

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.



View A	View B
	

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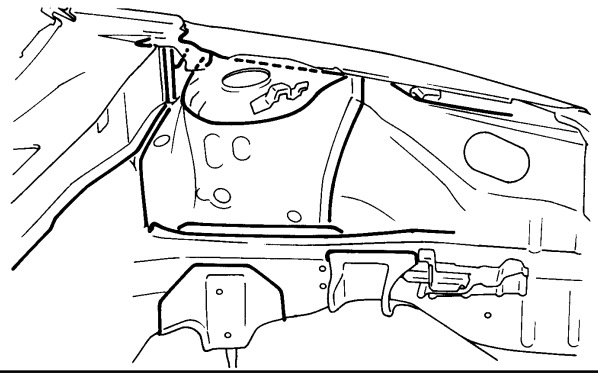
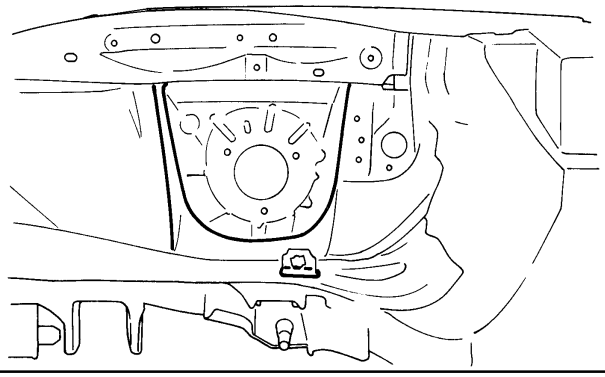
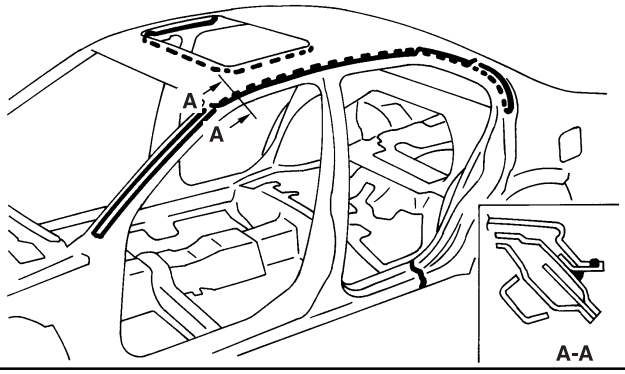
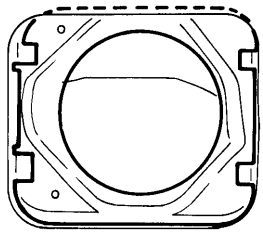
	
View E	View F
	
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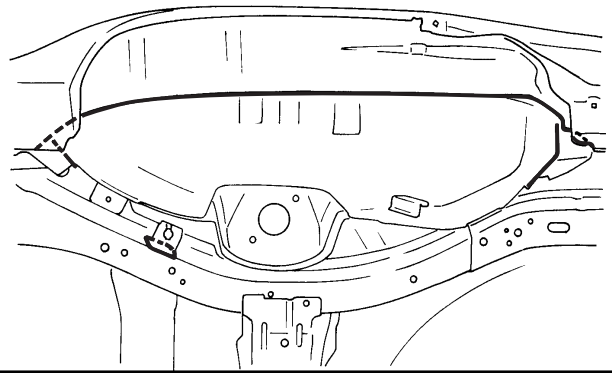	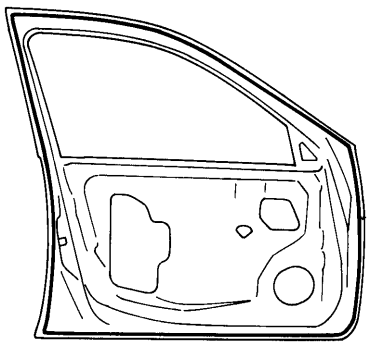
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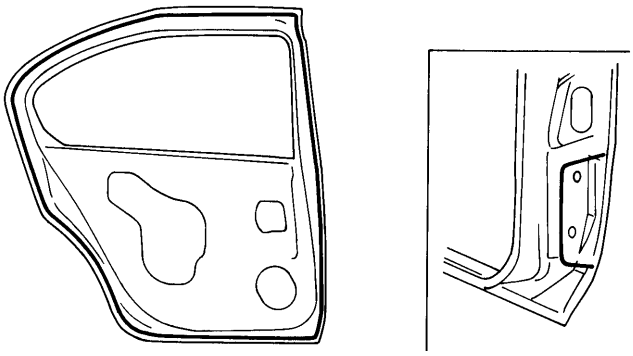	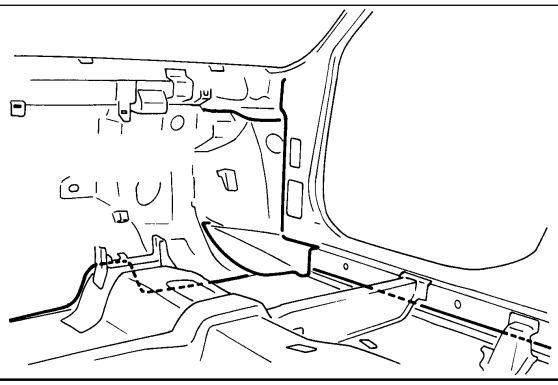

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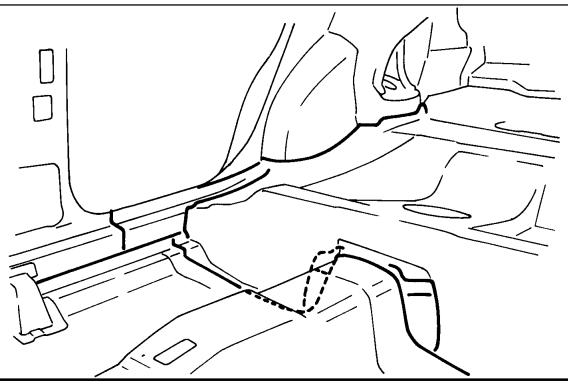	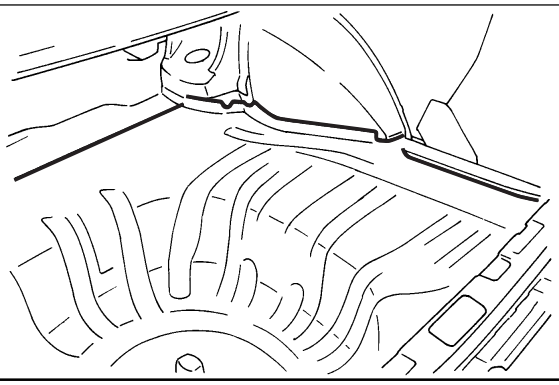
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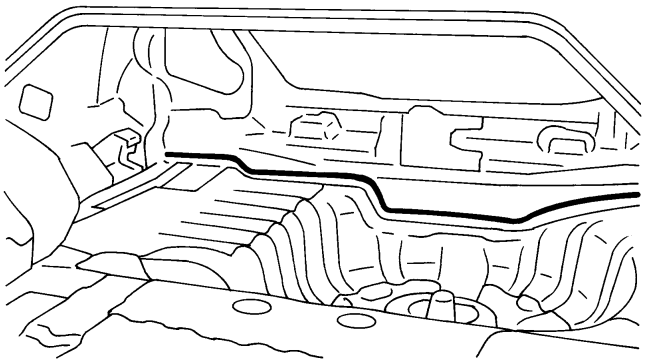
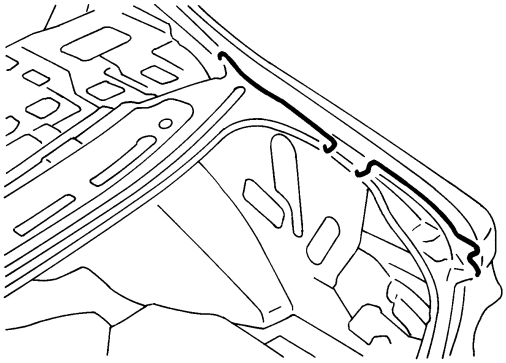
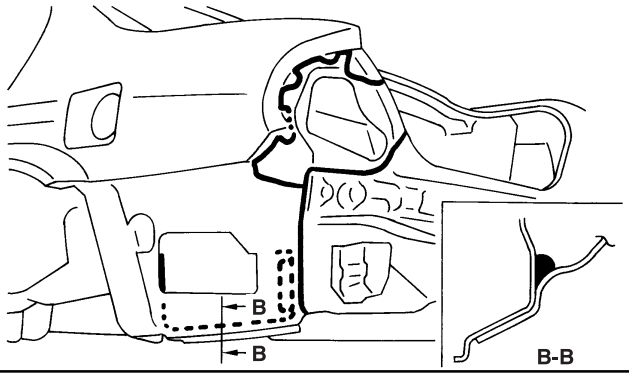
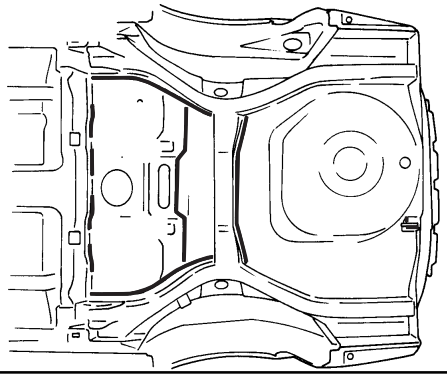
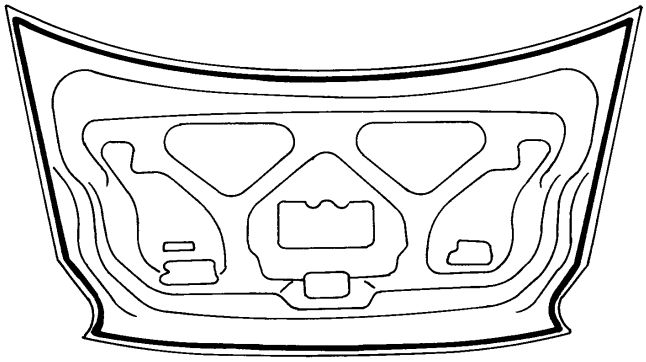
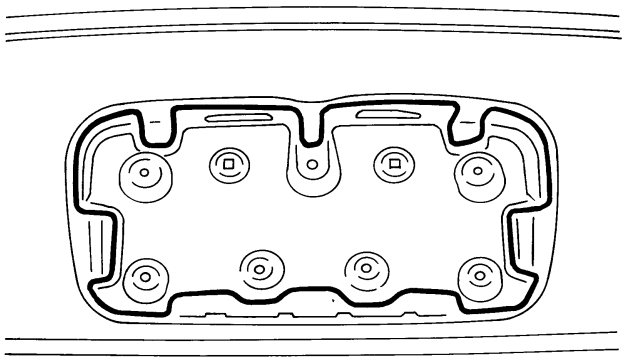
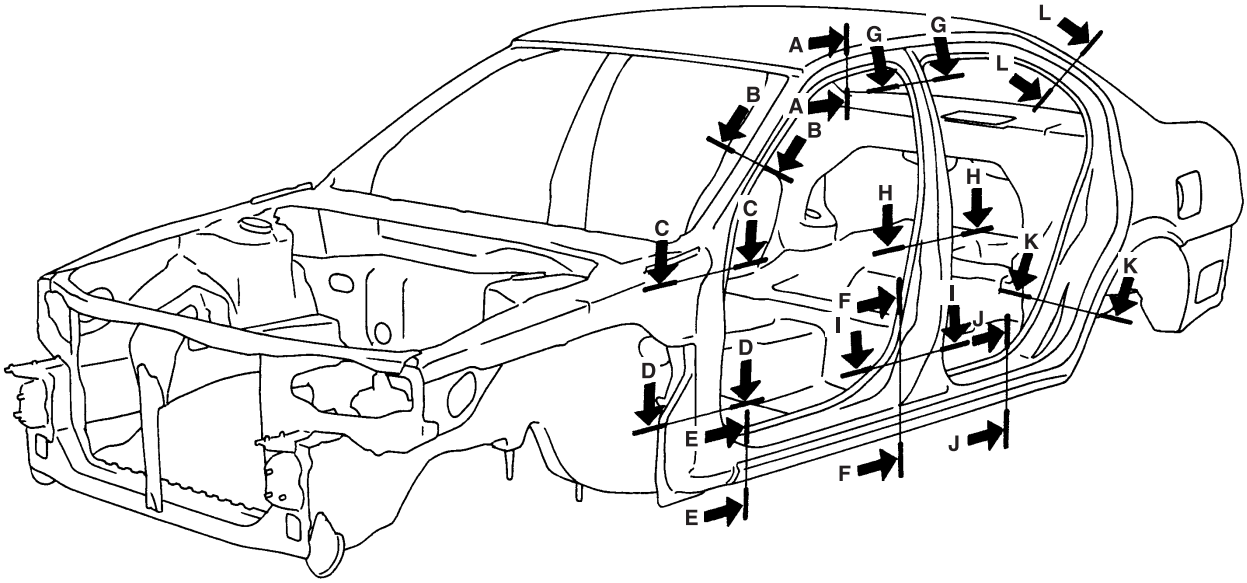
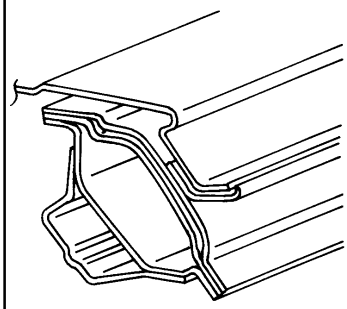
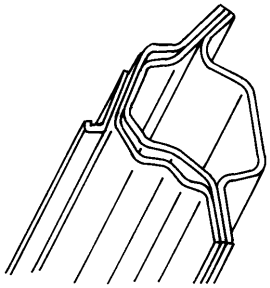
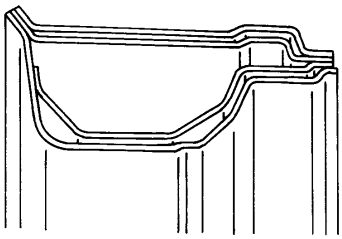
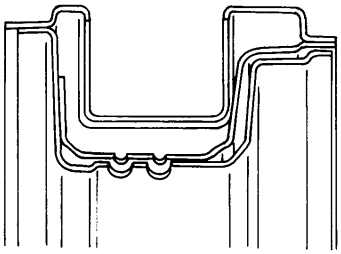
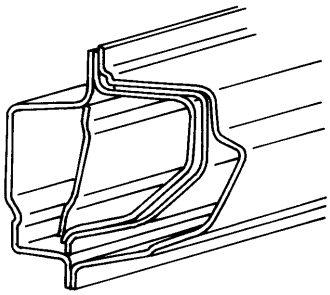
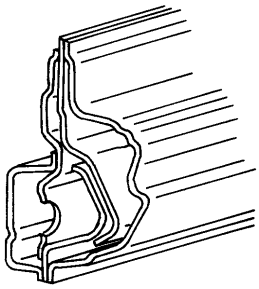
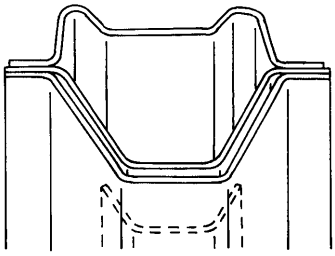
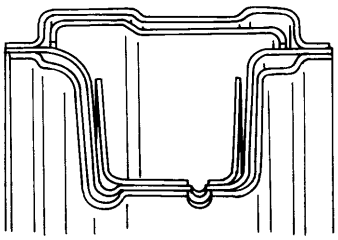
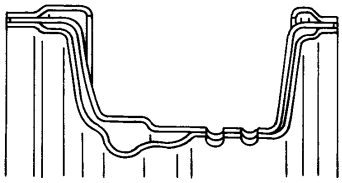
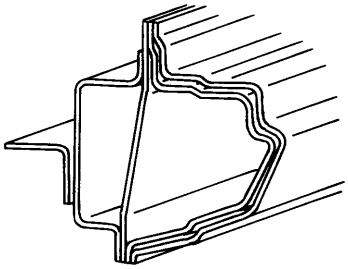
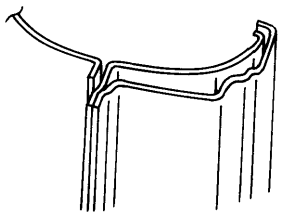
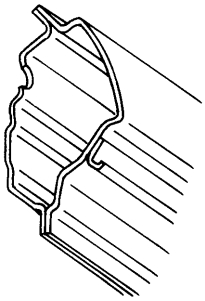
	
View O	View P
	
ViewQ	ViewR
	

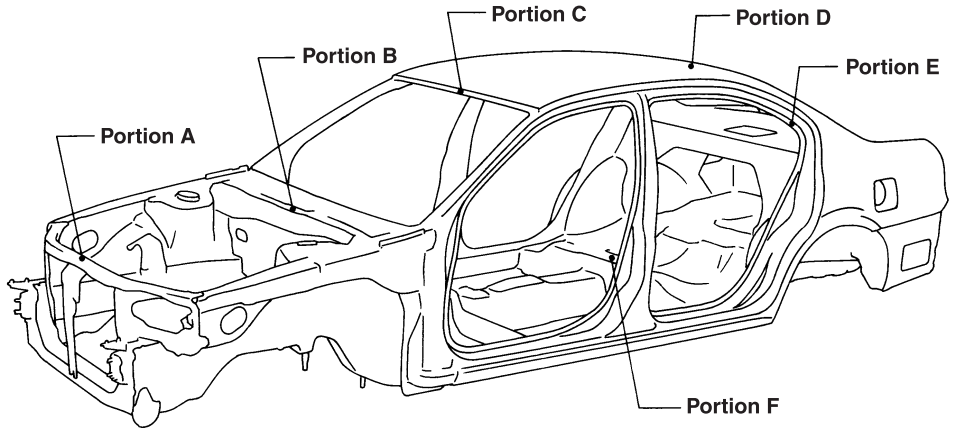
Body Construction

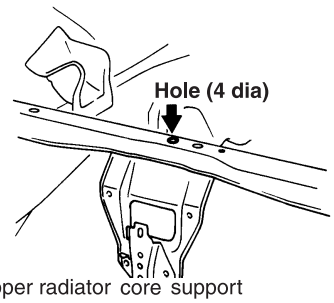
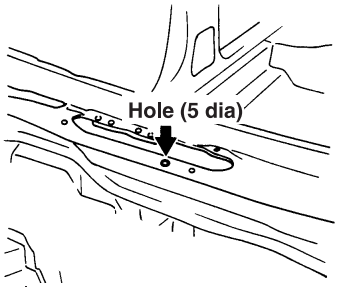
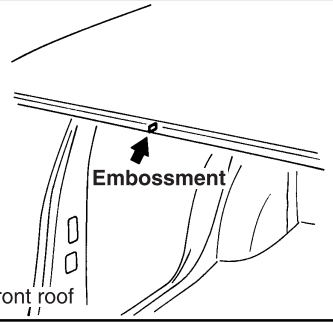
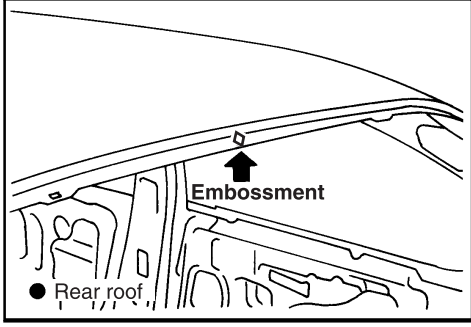
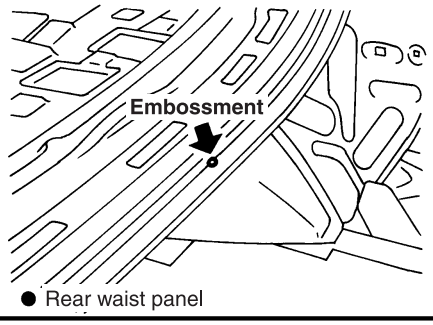
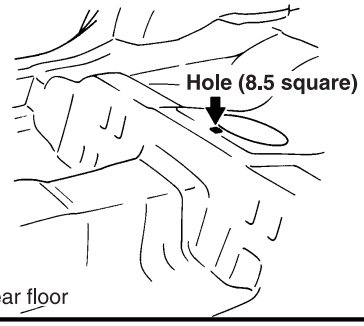


Section A-A	Section B-B	Section C-C	Section D-D
			
Section E-E	**Section F-F**	**Section G-G**	**Section H-H**
			
Section I-I	**Section J-J**	**Section K-K**	**Section L-L**
			

Body Center Marks

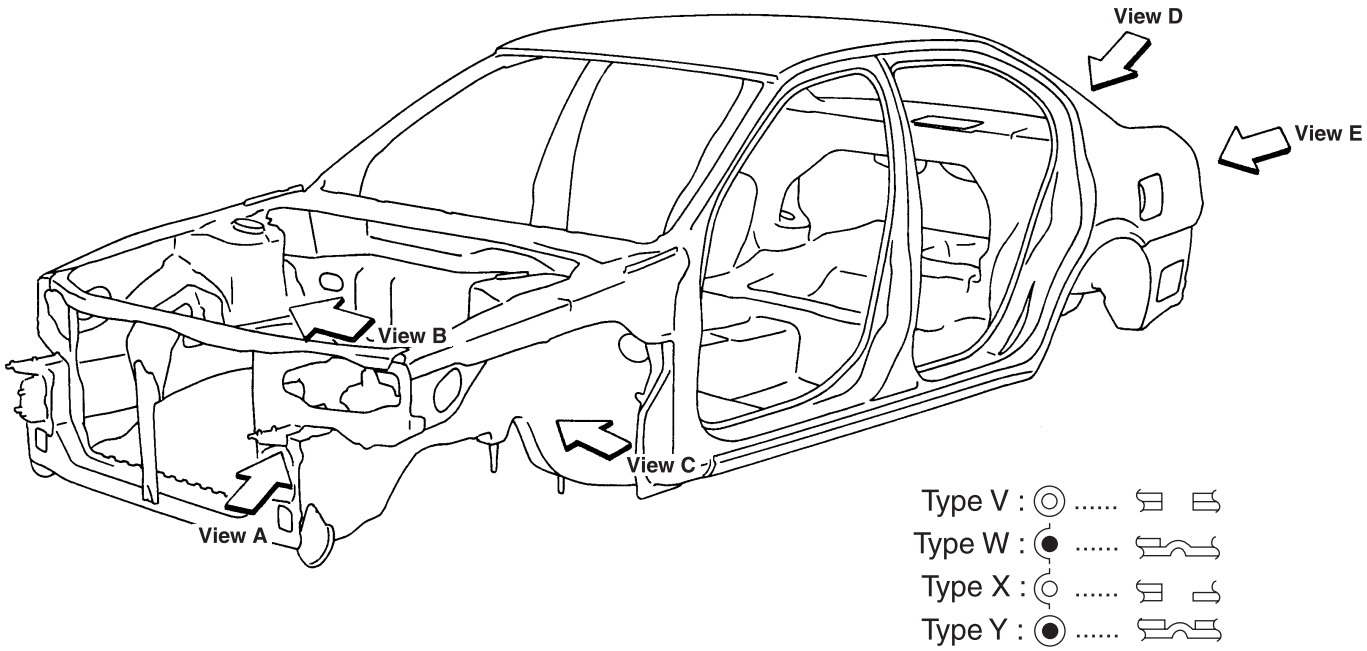
A mark has been placed on each part of the body to indicate the vehicle center. When repairing parts damaged by an accident which might affect the vehicle frame (members, pillars, etc.), more accurate and effective repair will be possible by using these marks together with body alignment specifications.

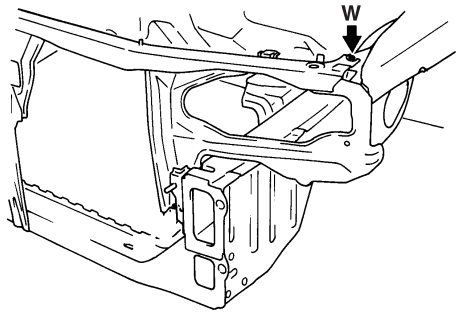
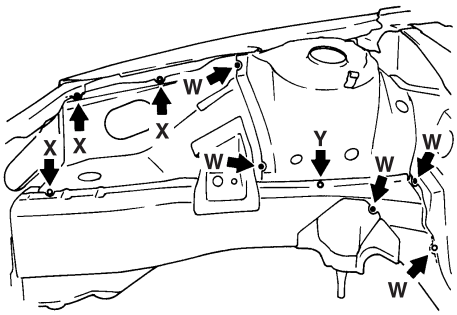
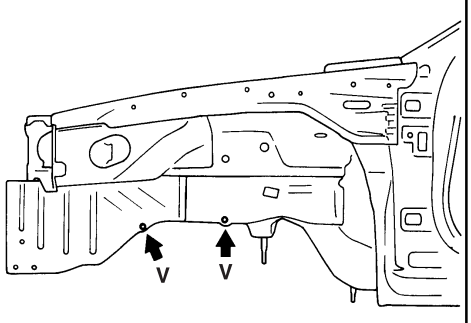


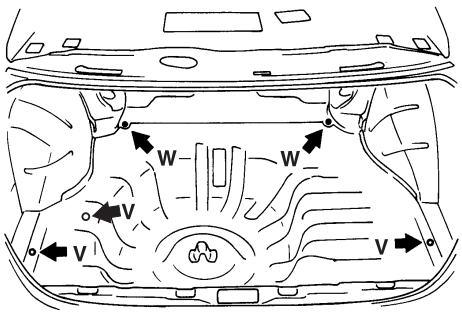
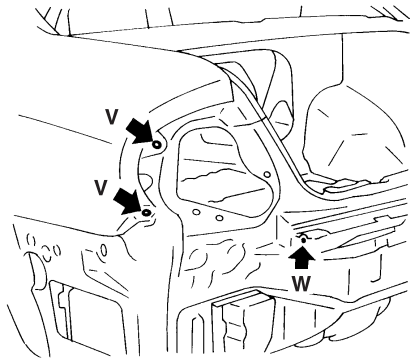
Portion A	Portion B	Portion C
 ● Upper radiator core support	 ● Cowl top	 ● Front roof
Portion D	**Portion E**	**Portion F**
 ● Rear roof	 ● Rear waist panel	 ● Rear floor

Panel Parts Matching Marks

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

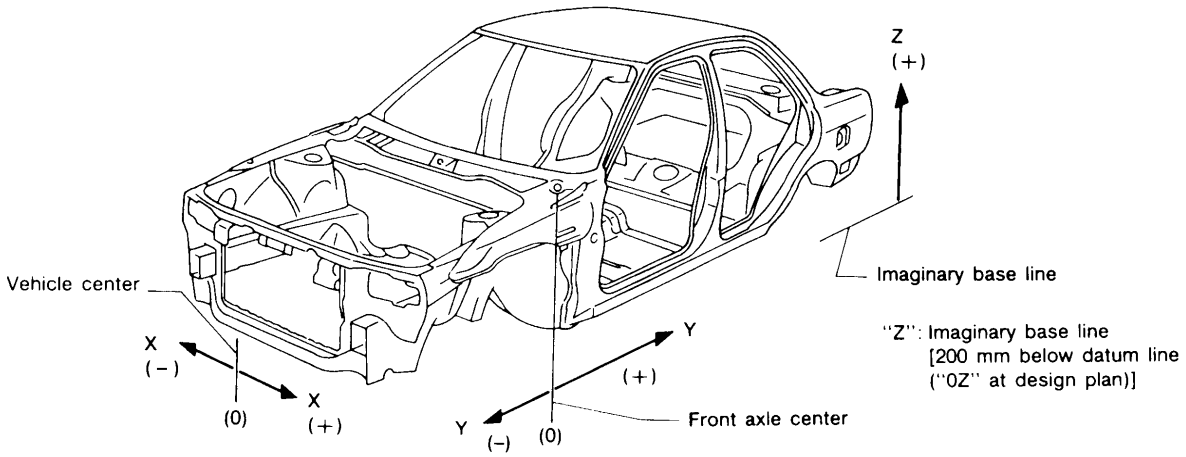


View A	View B	View C
		

View D	View E
	

Description

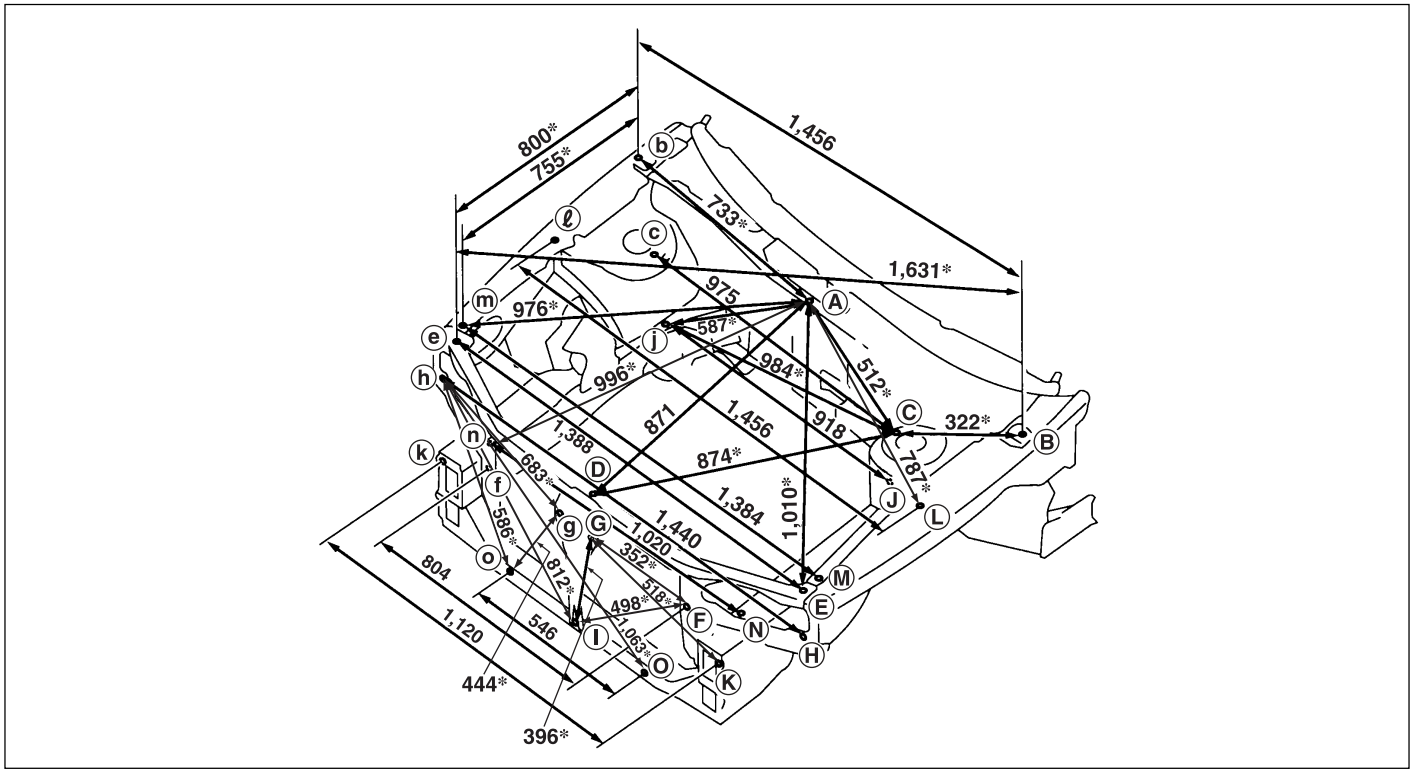
- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements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

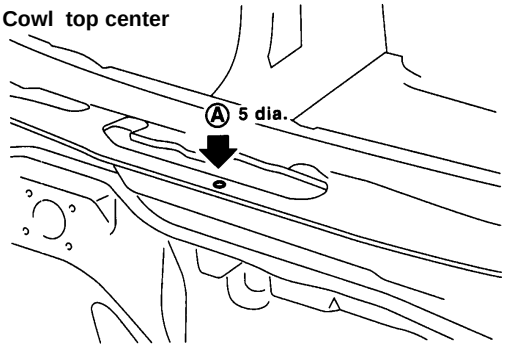


Engine Compartment (Cont'd)

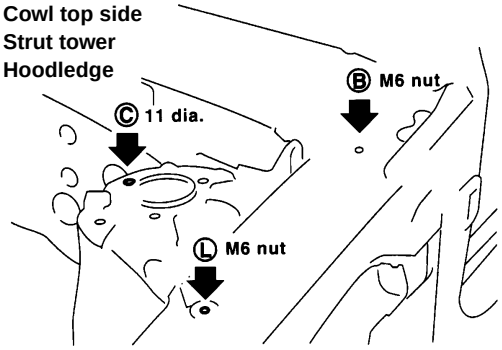
MEASUREMENT POINTS

Unit: mm

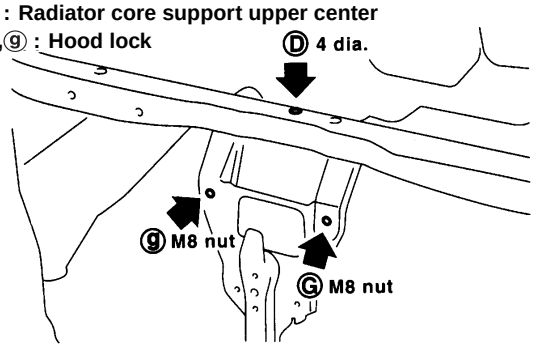
Ⓐ : Cowl top center



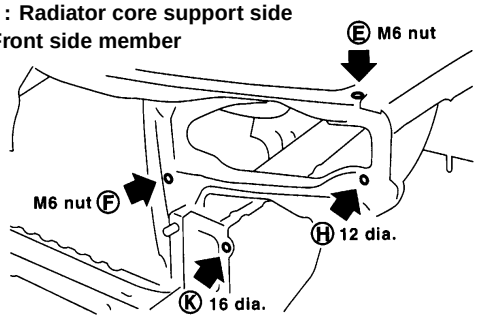
Ⓑ : Cowl top side
Ⓒ : Strut tower
Ⓛ : Hoodledge



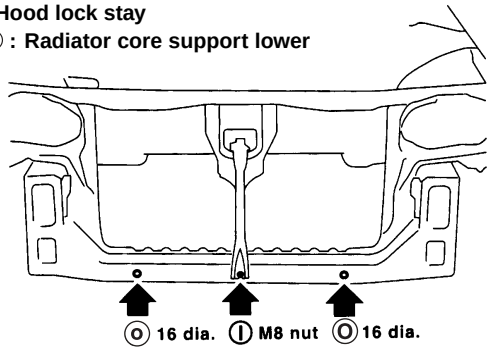
Ⓓ : Radiator core support upper center
Ⓖ,ⓖ : Hood lock



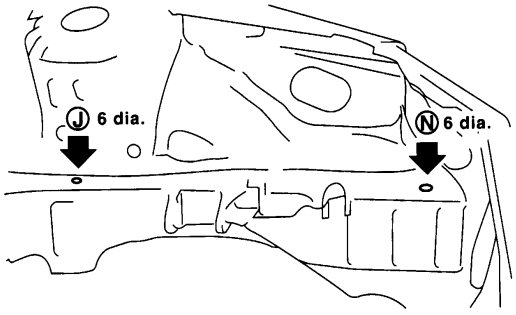
Ⓔ : Radiator core support upper side
Ⓕ,Ⓗ : Radiator core support side
Ⓚ : Front side member



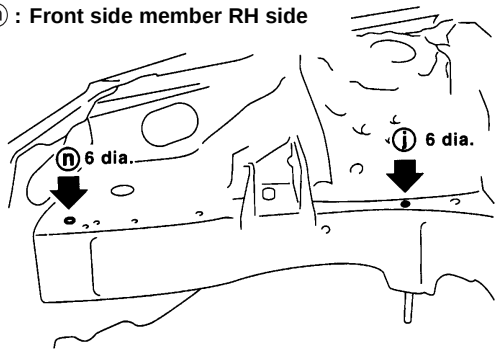
Ⓘ : Hood lock stay
Ⓞ,ⓞ : Radiator core support lower



Ⓙ,Ⓝ : Front side member LH side



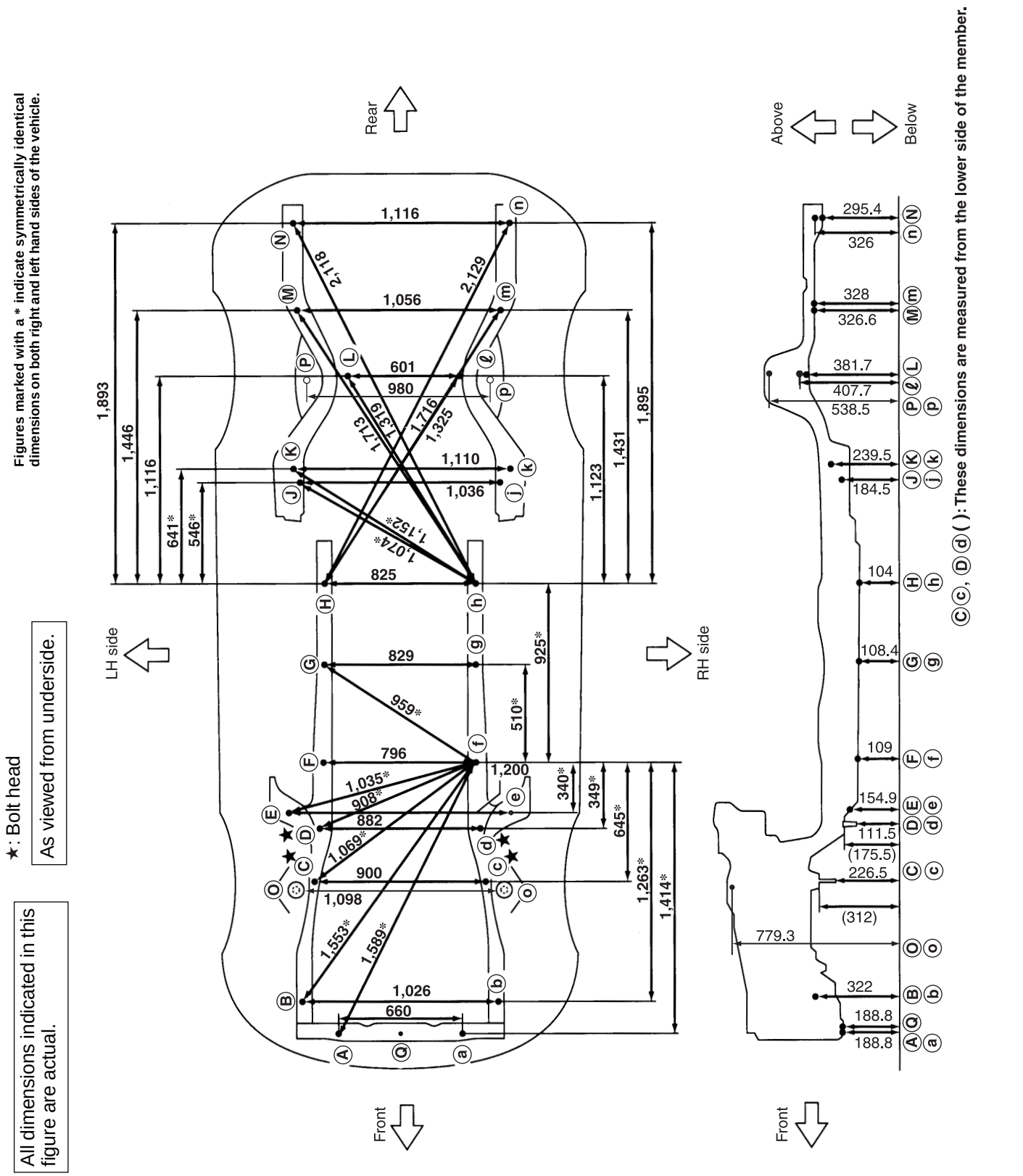
ⓙ,ⓝ : Front side member RH side



Underbody

MEASUREMENT

Unit: mm

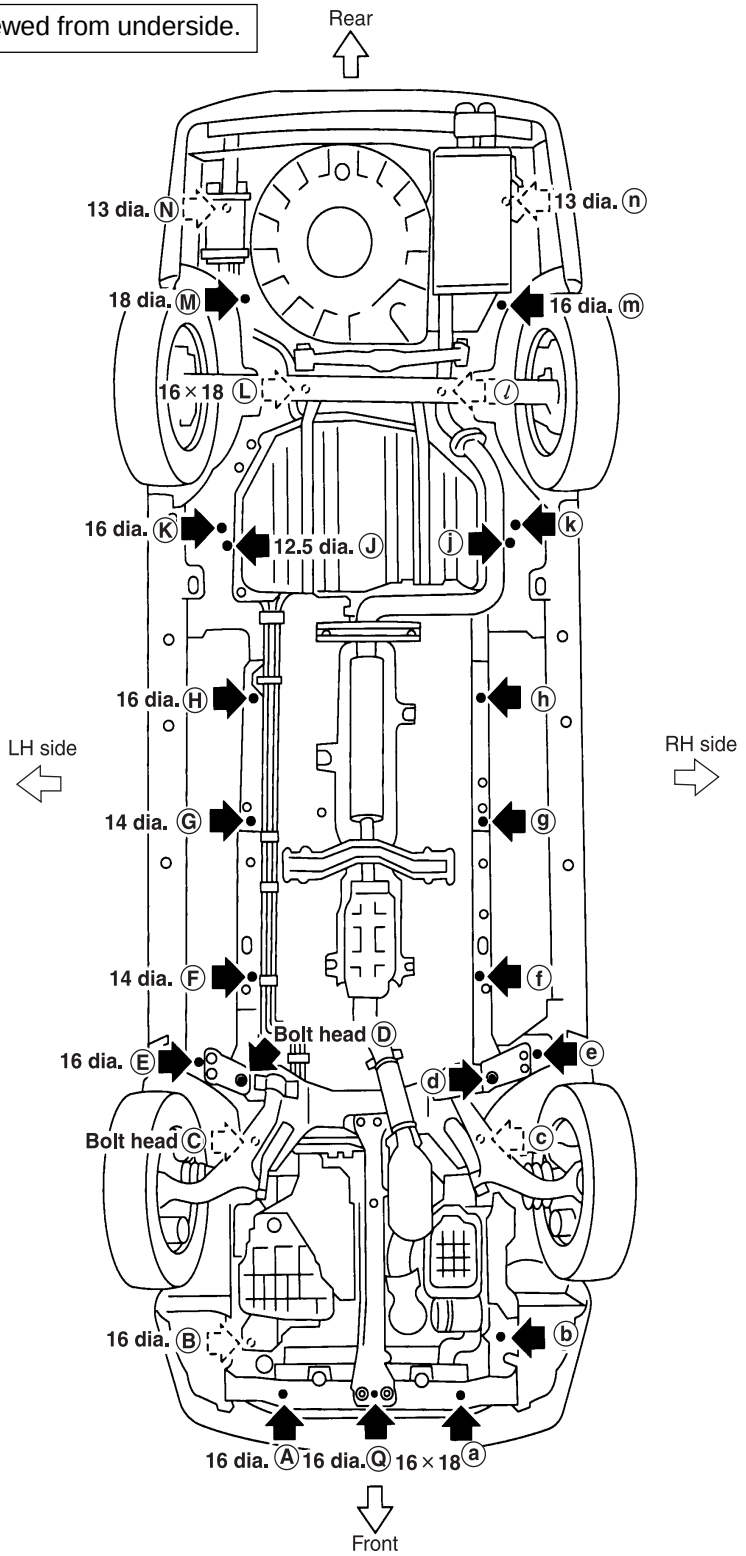


Underbody (Cont'd)

MEASUREMENT POINTS

Unit: mm

As viewed from underside.



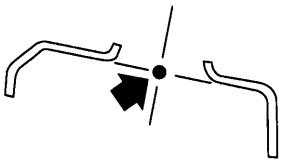
Coordinates:

Ⓐ,ⓐ	Ⓚ,ⓚ
X:330	X:555
Y:-710	Y:2,235
Z:188.8	Z:239.5
Ⓑ,ⓑ	Ⓛ
X:513	X:300
Y:-540	Y:2,700
Z:322	Z:381.7
Ⓒ,ⓒ	ⓛ
X:450	X:-300
Y:68	Y:2,700
Z:226.5	Z:407.7
Ⓓ,ⓓ	Ⓜ
X:441	X:512
Y:354	Y:3,050
Z:111.5	Z:326.6
Ⓔ,ⓔ	ⓜ
X:600	X:-544
Y:430	Y:3,032
Z:154.9	Z:328.2
Ⓕ,ⓕ	Ⓝ
X:398	X:546
Y:700	Y:3,504
Z:109	Z:295.4
Ⓖ,ⓖ	ⓝ
X:414	X:-570.5
Y:1,210	Y:3,500
Z:108.4	Z:326.6
Ⓗ,ⓗ	Ⓠ
X:412.5	X:0
Y:1,625	Y:-700.5
Z:104	Z:188.8
Ⓙ,ⓙ	
X:518.2	
Y:2,155	
Z:184.5	

Front and rear strut tower centers

Coordinates:

Ⓞ,ⓞ
X:548.8
Y:28.7
Z:779.3



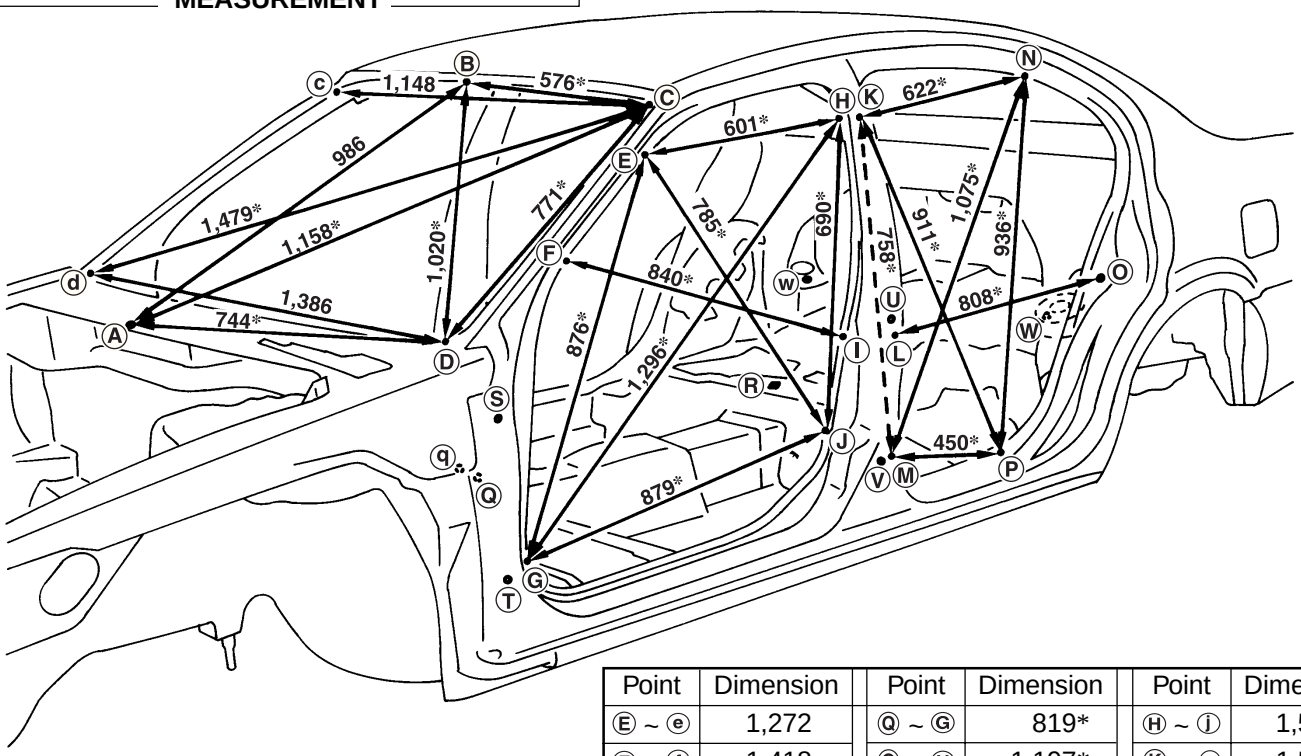
Ⓟ,ⓟ
X:490.1
Y:2,671
Z:538.5

Front:Ⓞ,ⓞ **87 dia**
Rear:Ⓟ,ⓟ **61.4 dia**

Passenger Compartment

MEASUREMENT

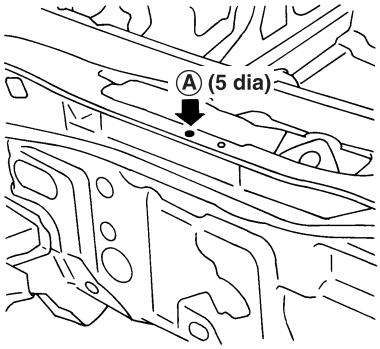
Unit: mm



Point	Dimension	Point	Dimension	Point	Dimension
Ⓔ ~ ⓔ	1,272	Ⓠ ~ Ⓖ	819*	Ⓗ ~ ⓙ	1,527*
Ⓕ ~ ⓕ	1,418	Ⓠ ~ Ⓗ	1,197*	Ⓚ ~ ⓜ	1,560*
Ⓖ ~ ⓖ	1,449	Ⓠ ~ Ⓘ	931*	Ⓚ ~ ⓝ	1,389*
Ⓗ ~ ⓗ	1,272	Ⓠ ~ Ⓙ	830*	Ⓜ ~ Ⓟ	1,518*
Ⓘ ~ ⓘ	1,473	Ⓡ ~ Ⓚ	1,059*	Ⓝ ~ Ⓟ	1,619*
Ⓙ ~ ⓙ	1,459	Ⓡ ~ Ⓛ	897*	Ⓟ ~ ⓚ	1,638*
Ⓚ ~ ⓚ	1,280	Ⓡ ~ Ⓜ	839*	Ⓢ ~ Ⓤ	1,128*
Ⓛ ~ ⓛ	1,473	Ⓡ ~ Ⓝ	1,063*	Ⓢ ~ Ⓥ	1,127*
Ⓜ ~ ⓜ	1,452	Ⓡ ~ Ⓞ	901*	Ⓣ ~ Ⓤ	1,173*
Ⓝ ~ ⓝ	1,205	Ⓡ ~ Ⓟ	727*	Ⓣ ~ Ⓥ	1,086*
Ⓞ ~ ⓞ	1,479	Ⓔ ~ ⓖ	1,616*	Ⓠ ~ Ⓦ	1,660*
Ⓟ ~ Ⓟ	1,448	Ⓔ ~ ⓗ	1,407*	Ⓡ ~ Ⓦ	736*
Ⓠ ~ Ⓔ	1,027*	Ⓖ ~ ⓗ	1,877*		
Ⓠ ~ Ⓕ	980*	Ⓖ ~ ⓙ	1,699*		

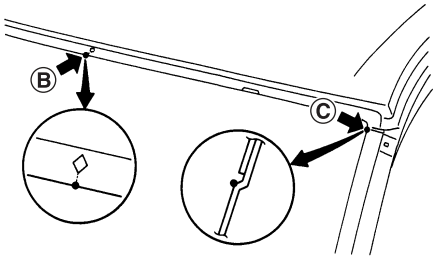
Figures marked with a * indicate symmetrically identical dimensions on both right and left hand sides of the vehicle.

Ⓐ : Cowl top center (5 dia)

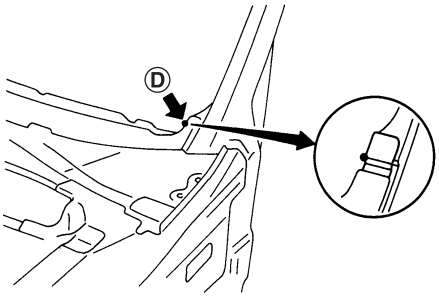


Ⓑ : Front roof flange end of center positioning mark

Ⓒ,ⓒ : Outer front pillar joggle



Ⓓ,ⓓ : Upper dash joggle

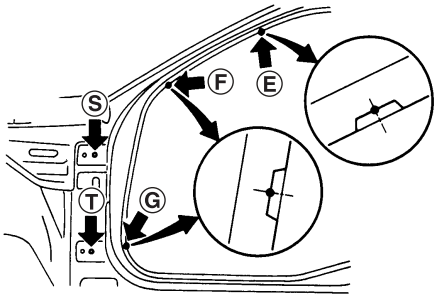


Passenger Compartment (Cont'd)

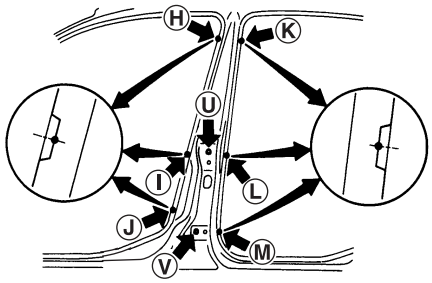
MEASUREMENT

Unit: mm

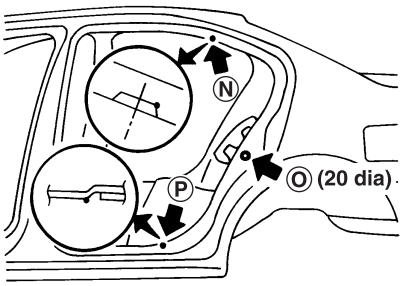
Ⓔ,ⓔ,Ⓕ,ⓕ,Ⓖ,ⓖ: Outer front pillar indention
Ⓢ,ⓢ,Ⓣ,ⓣ : Door hinge installing nut center



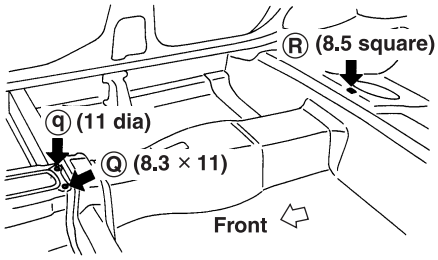
Ⓗ,ⓗ,Ⓘ,ⓘ,Ⓙ,ⓙ,
Ⓚ,ⓚ,Ⓛ,ⓛ,Ⓜ,ⓜ : Outer center pillar indention
Ⓤ,ⓤ,Ⓥ,ⓥ : Door hinge installing nut center



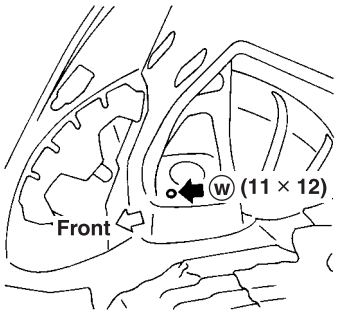
Ⓝ,ⓝ : Rear fender indention rear
Ⓞ,ⓞ : Door switch installing hole center (20 dia)
Ⓟ,ⓟ : Outer sill joggle



Ⓠ,ⓠ : Transmission control reinforcement hole center
Ⓡ : Fuel tank cover installing hole center of center positioning mark



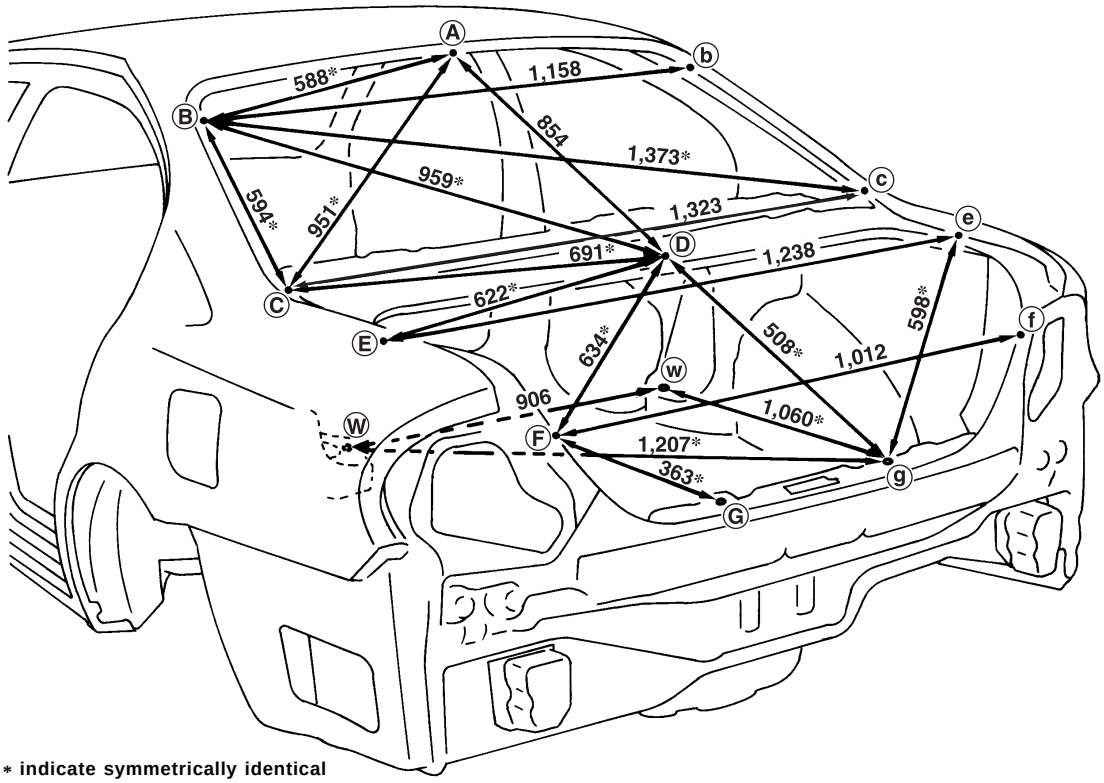
Ⓦ,ⓦ : Rear suspension installing hole center (11 × 12)



Rear Body

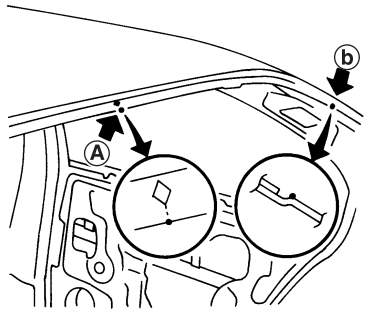
MEASUREMENT

Unit: mm

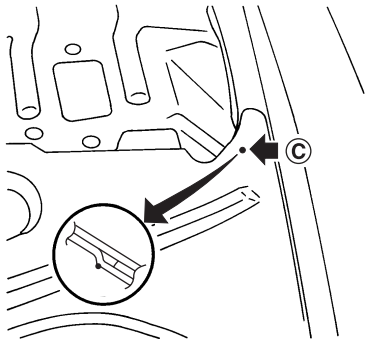


Figures marked with a ∗ indicate symmetrically identical dimensions on both right and left hand sides of the vehicle.

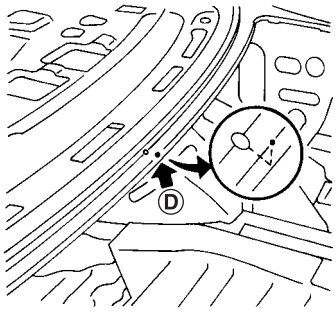
Ⓐ : Rear roof flange end of center positioning mark
Ⓑ,ⓑ : Rear fender joggle



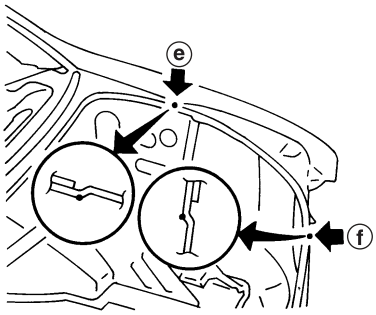
Ⓒ,ⓒ : Rear fender joggle



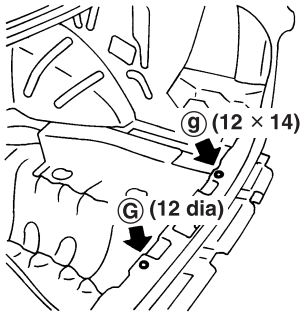
Ⓓ : Rear waist flange end of center positioning mark



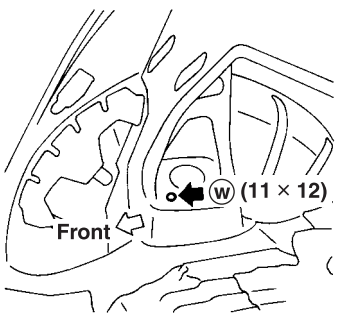
Ⓔ,ⓔ : Rear fender joggle
Ⓕ,ⓕ : Rear combination lamp base joggle



Ⓖ,ⓖ : Rear panel upper reinforcement hole center



Ⓦ,ⓦ : Rear suspension installing hole center (11 × 12)

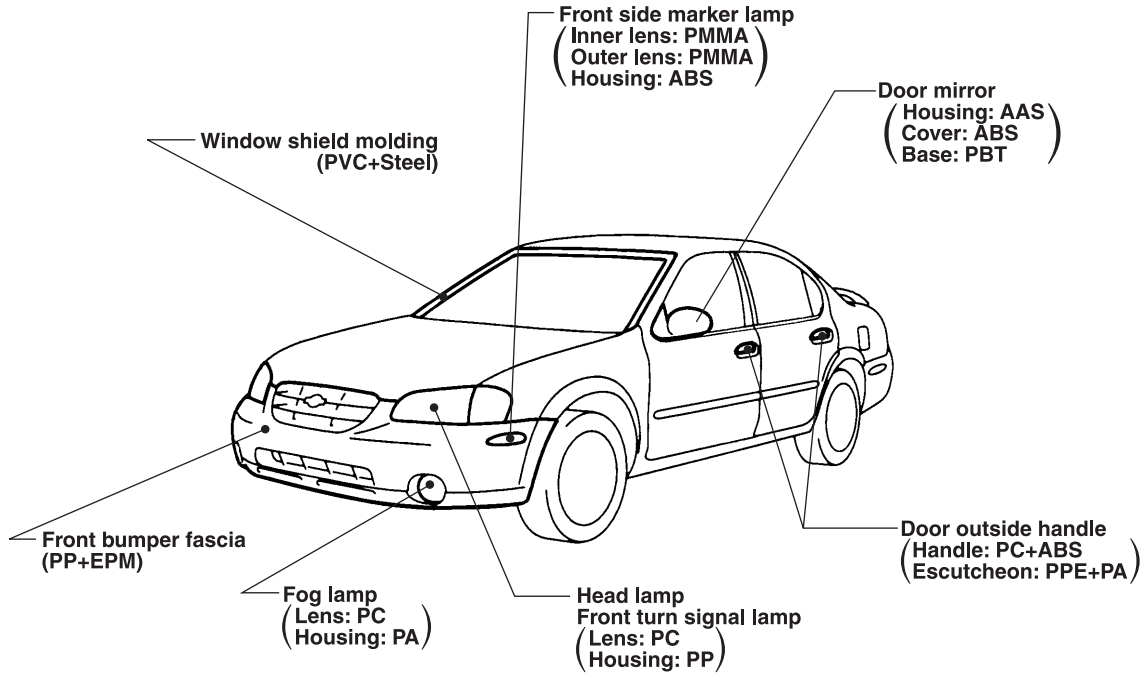


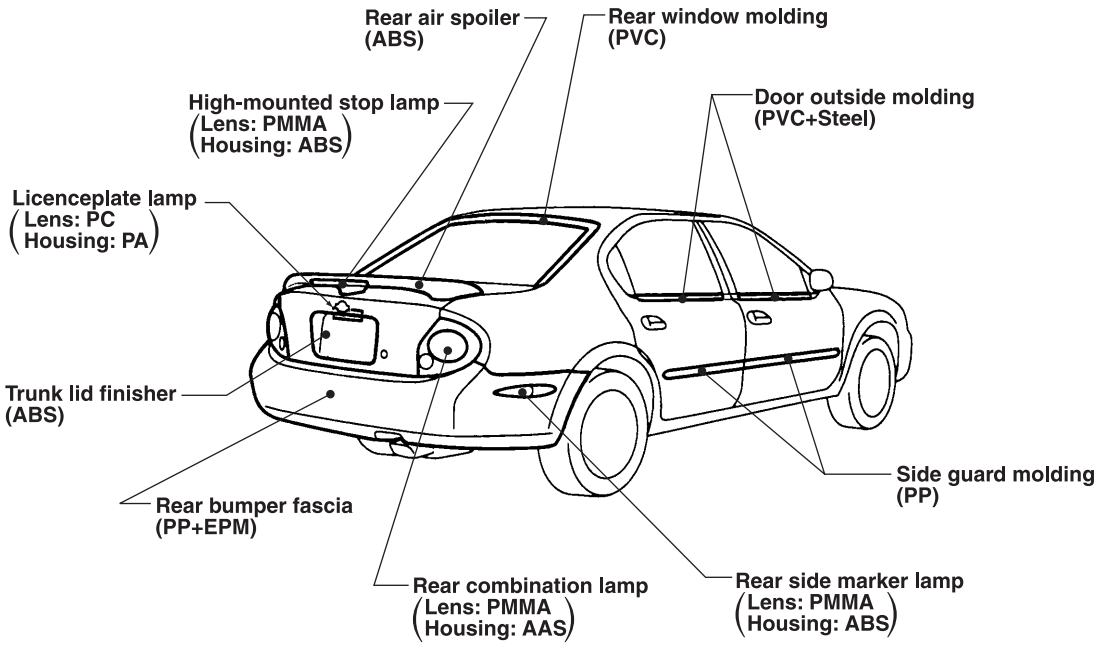
Handling Precautions for Plastics

Abbreviation	Material name	Heat resisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PVC	Polyvinyl chloride	80(176)	Gasoline and most solvents are harmless if applied for a very short time(wipe up quickly).	Poison gas is emitted when burned.
PP	Polypropylene	90(194)	Same as above.	Flammable,avoid battery acid.
EPM/EPDM	Ethylene Propylene (Diene) rubber	80(176)	Same as above.	Flammable
UP	Polyester thermoset	90(194)	Same as above.	Flammable
TPO/TPR	Thermoplastic olefine/ Thermoplastic rubber	80(176)	Same as above.	Flammable
ABS	Acrylonitrile butadiene styrene resin	80(176)	Avoid gasoline and solvents.	
AAS	Acrylonitrile acrylic styrene	85(185)	Avoid gasoline and solvents.	
ASA	Acrylonitrile styrene acrylate	100(222)	Avoid gasoline and solvents.	Flammable
AS	Acrylonitrile styrene	85(185)	Avoid gasoline and solvents.	
AES	Acrylonitrile ethylene styrene	80(176)	Avoid gasoline and solvents.	
PMMA	Polymethyl methacrylate	85(185)	Avoid gasoline and solvents.	
EVA	Polyvinyl ethyl acetate	90(194)	Avoid gasoline and solvents.	
PPO/PPE	Polyphenylene oxide/ether	110(230)	Avoid gasoline and solvents.	
PC	Polycarbonate	120(248)	Avoid gasoline and solvents.	
L-LDPE	Lenear low density polyethylene	45(100)	Gasoline and most solvents are harmless.	Flammable
PUR	Polyurethane	90(194)	Same as above.	
PPC	Polypropylene composite	115(239)	Same as above.	Flammable
POM	Polyacetal	120(248)	Same as above.	Avoid battery acid.
PA	Polyamide(Nylon)	140(284)	Same as above.	Avoid immersing in water.
PET	Polyethylene terephthalate	180(356)	Same as above.	
PBT	Polybutylene terephthalate	140(284)	Same as above.	

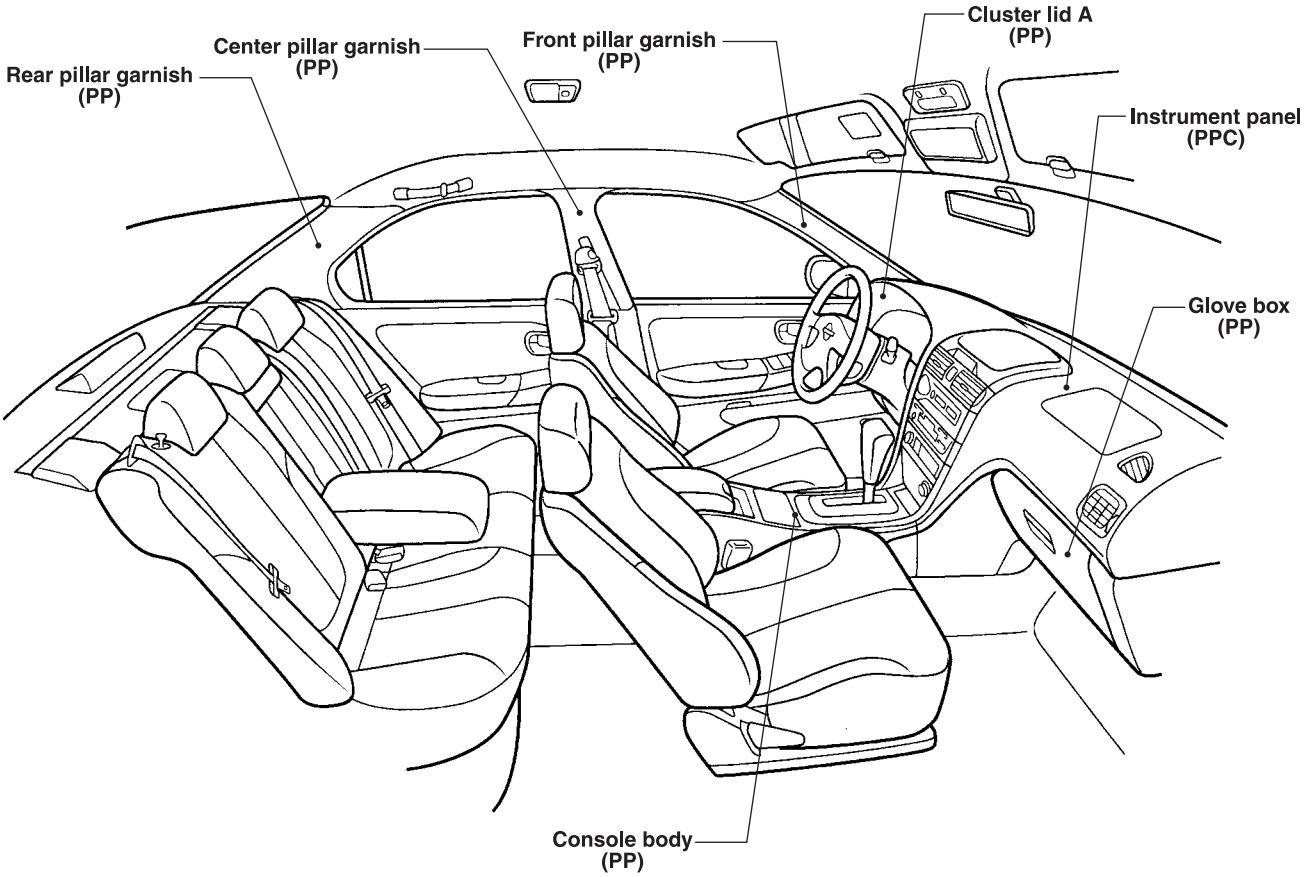
1. When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.
2. Plastic parts should be repaired and painted using methods suiting the materials characteristics.

Location of Plastic Parts





Location of Plastic Parts (Cont'd)



Precautions in Repairing High Strength Steel

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 designation	Major applicable parts
373 N/mm^2 (38 kg/mm^2, 54 klb/sq in)	SP130	●Front side member ●Hoodledge ●Inner sill ●2nd crossmember assembly ●Rear side member extension
785-981 N/mm^2 (80-100 kg/mm^2 114-142 klb/sq in)	SP150	●Door guard beam

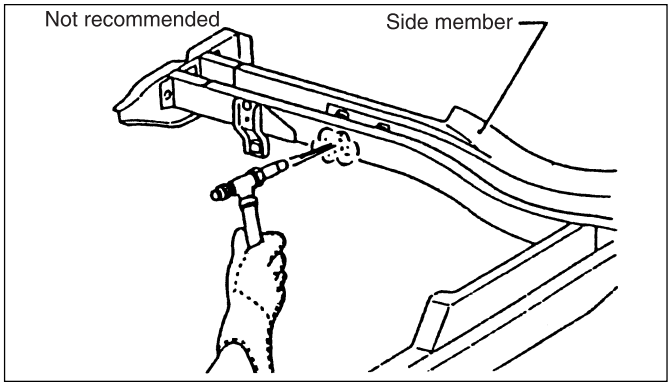
- SP130 is the most commonly used HSS.
  SP150 HSS is used only on parts that require much more strength.

Precautions in Repairing High Strength Steel (Cont'd)

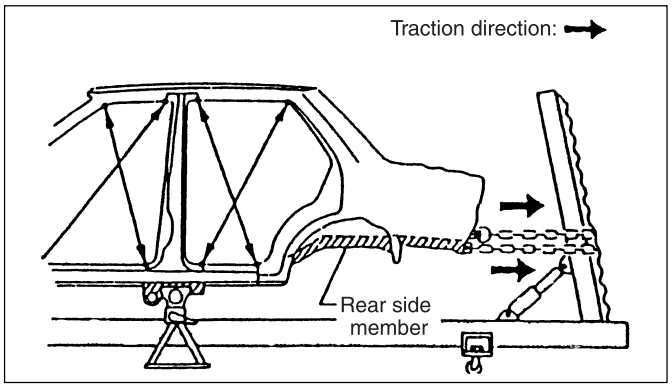
Read the following precautions when repairing HSS:

1. Additional points to consider

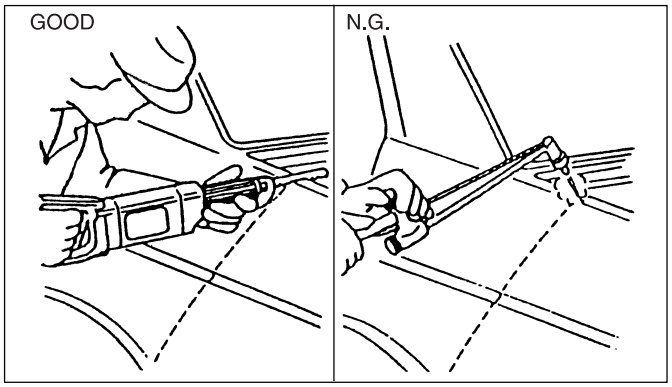
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1, 022°F)
  Verify heating temperature with a thermometer. (Crayon-type and other similar type thermometer are available.)



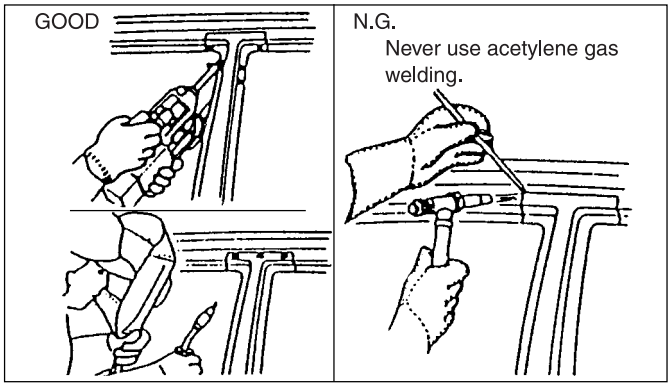
- When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



- 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 (1.97 in).

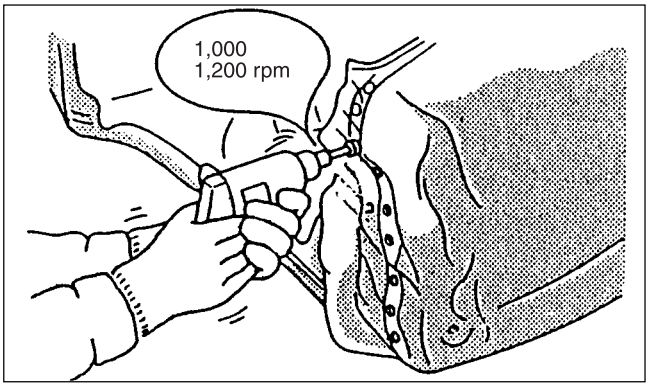


- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



Precautions in Repairing High Strength Steel (Cont'd)

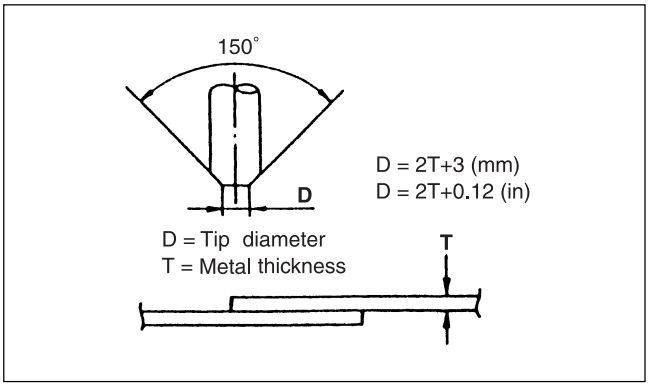
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



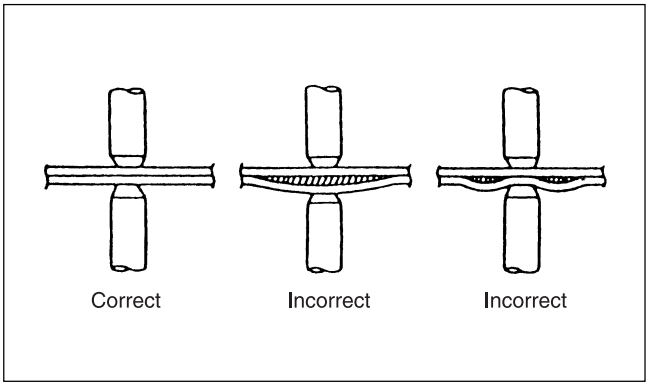
- SP150 HSS panels with a tensile strength of 785 to 981 N/mm^2 (80 to 100 kg/mm^2, 114 to 142 klb/sq in), used as reinforcement in the door guard beams and in the bumper, is too strong to repair. When these HSS parts are damaged, the outer panels also sustain substantial damage; therefore, the door assembly or bumper assembly must be replaced.

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

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



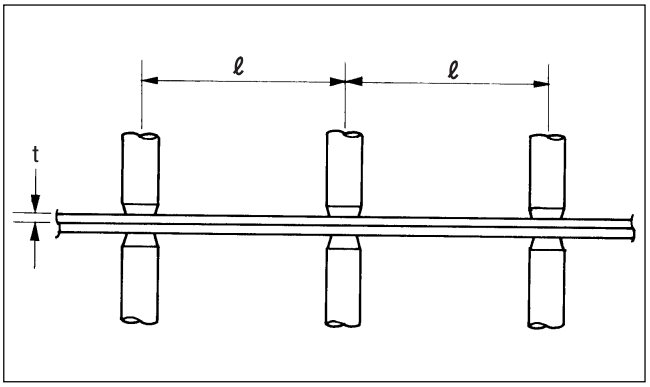
- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

Unit:mm

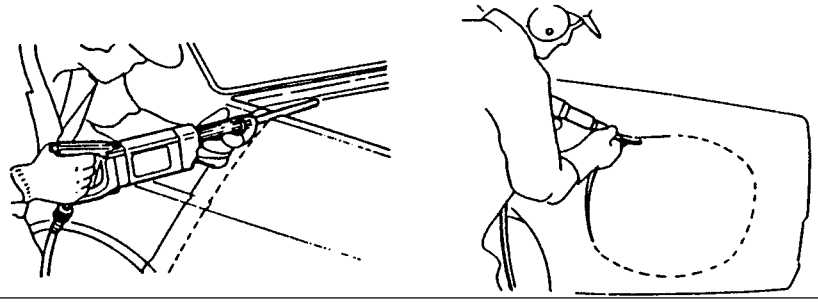
Thickness (t)	Minimum pich (ℓ)
0.6 (0.024)	10 (0.39) or over
0.8 (0.031)	12 (0.47) or over
1.0 (0.039)	18 (0.71) or over
1.2 (0.047)	20 (0.79) or over
1.6 (0.063)	27 (1.06) or over
1.8 (0.071)	31 (1.22) or over



Description

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

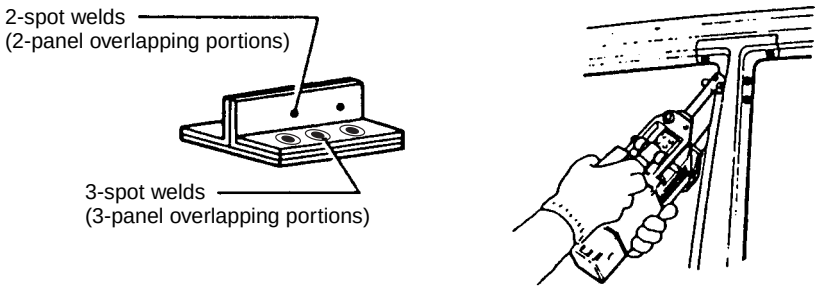
Saw cut or air chisel cut



Spot weld

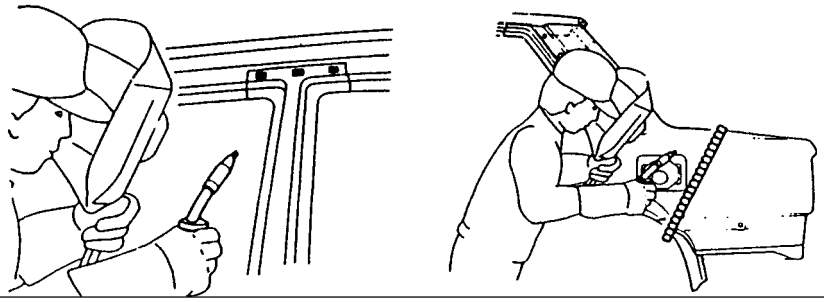
2-spot welds

3-spot welds

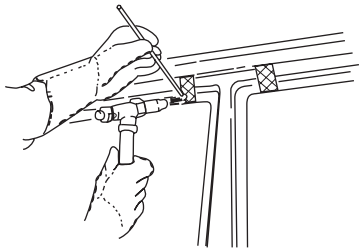


MIG plug weld

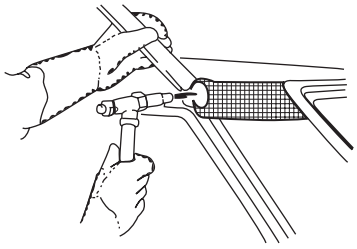
MIG seam weld/
Point weld



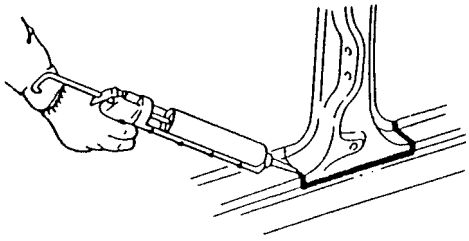
Brazing



Soldering



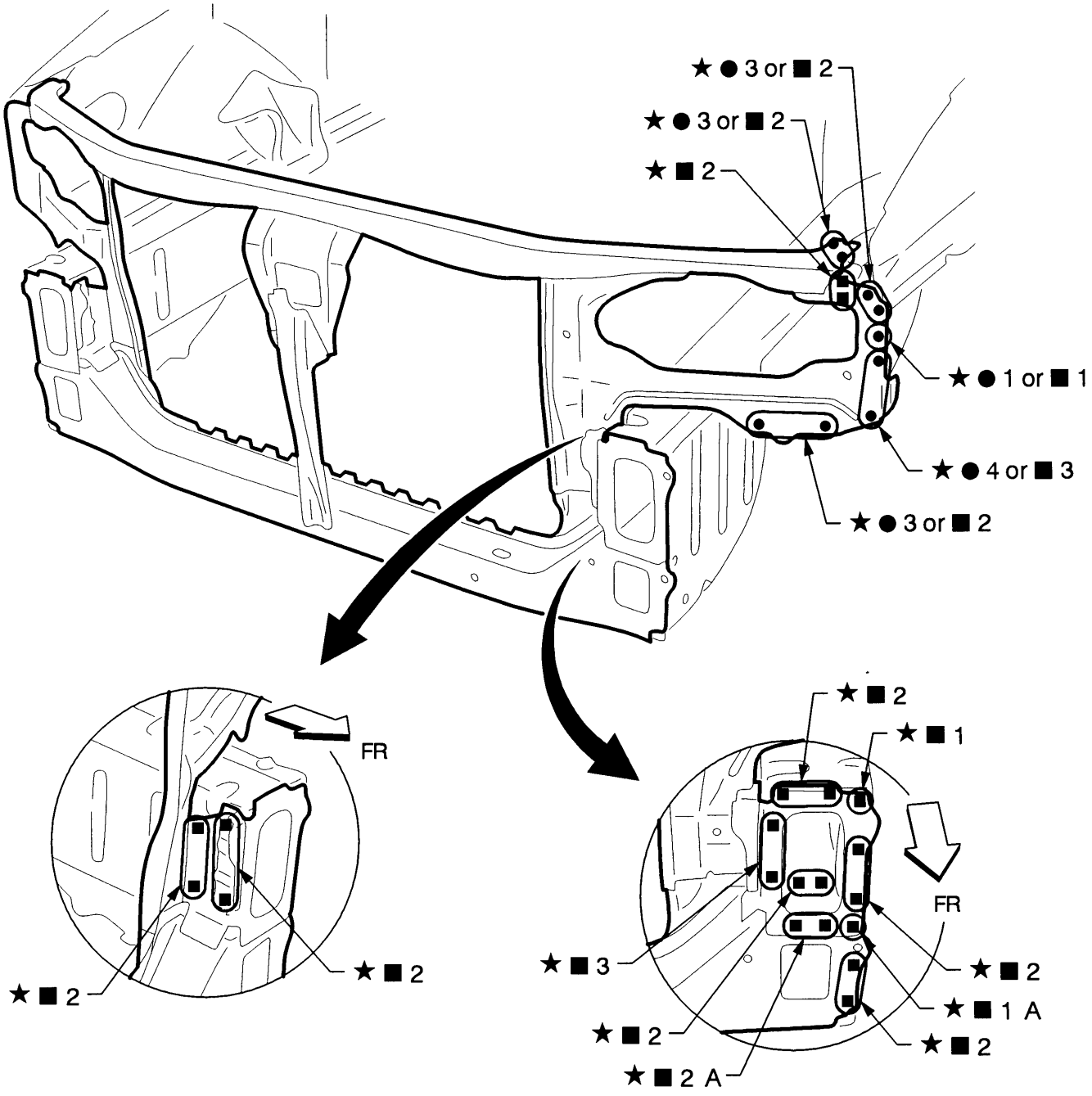
Sealing



Radiator Core Support

Service Joint

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



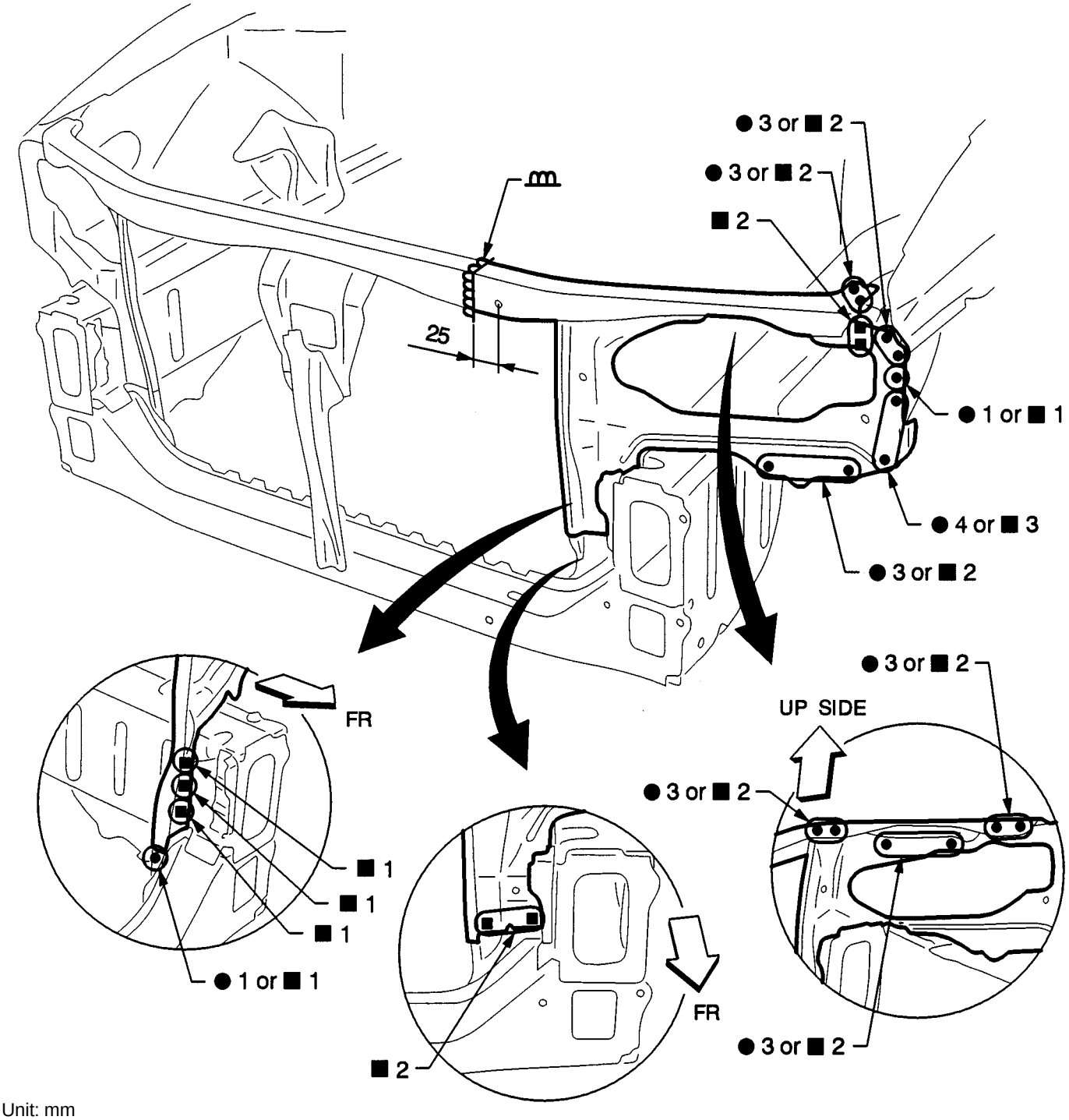
2-spot welds ● 3-spot welds ◉ MIG plug weld ■

For 3 panels plug weld method ■ A ■ B

MIG seam weld / Point weld

Radiator Core Support (Partial Replacement)

Service Joint



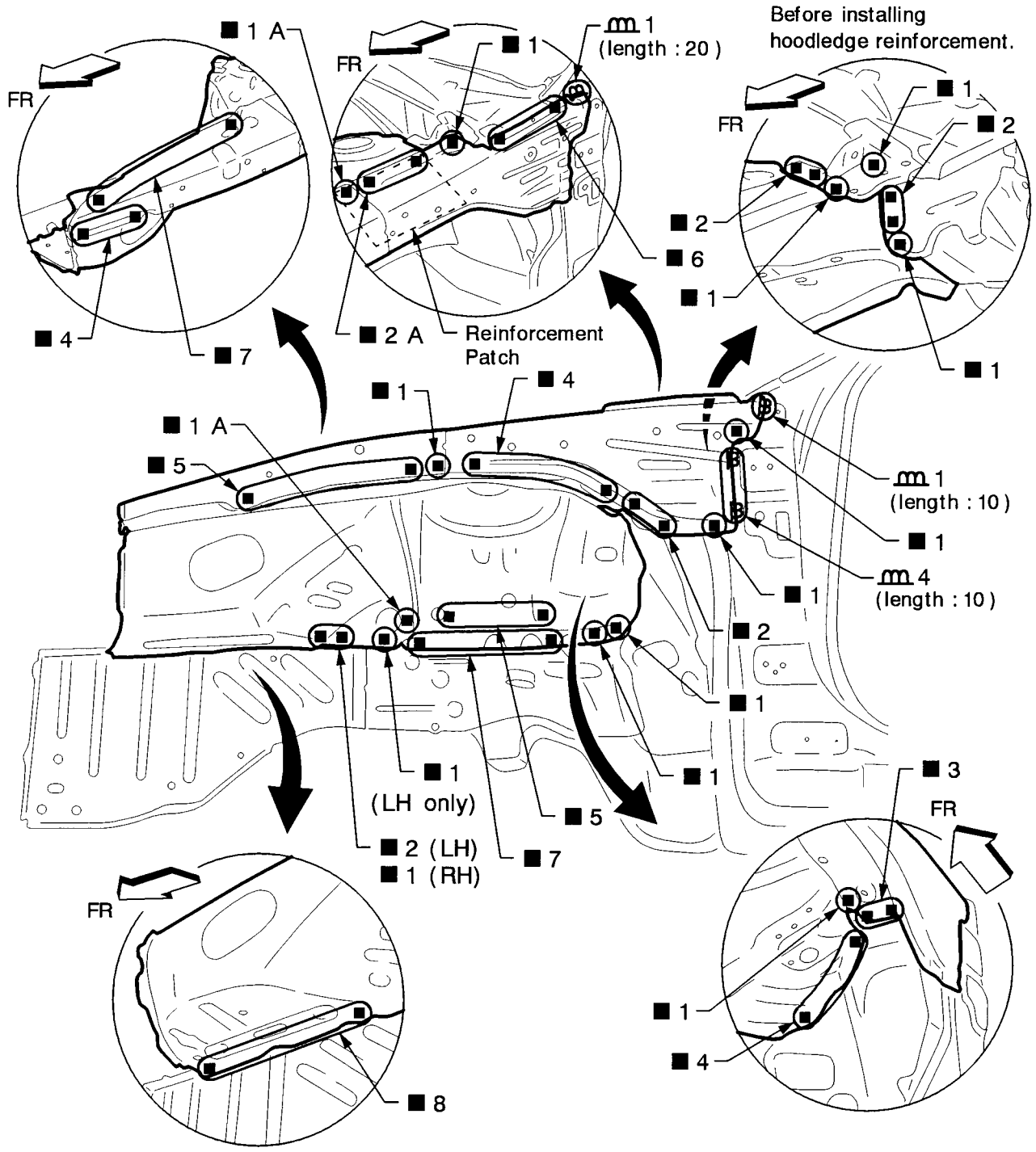
Unit: mm

2-spot welds 3-spot welds MIG plug weld For 3 panels plug weld method MIG seam weld / Point weld

Hoodledge

● **Work after radiator core support has been removed.**

Service Joint



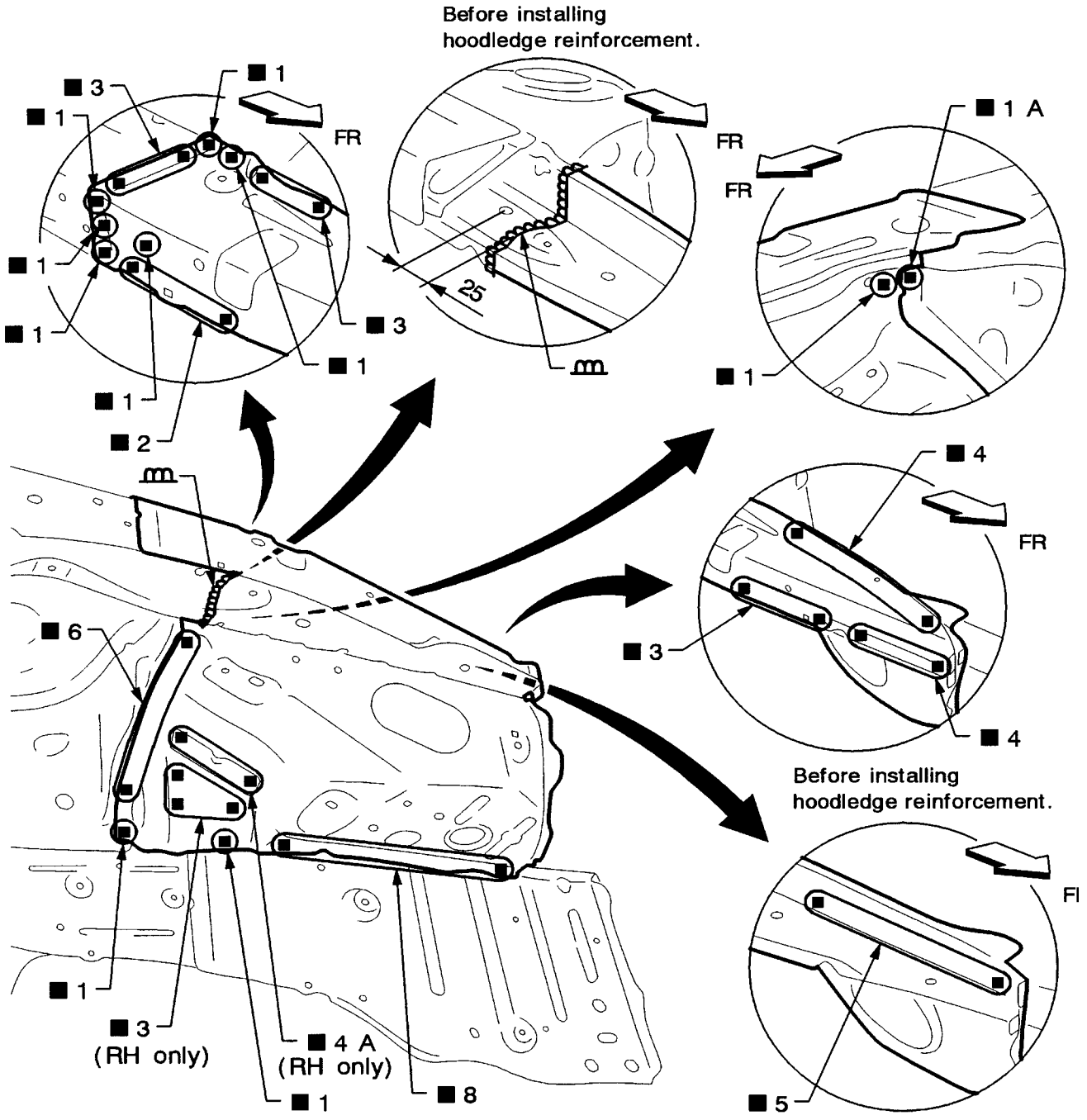
Unit: mm

2-spot welds 3-spot welds MIG plug weld For 3 panels plug weld method ■ A ■ B MIG seam weld / Point weld

Hoodledge (Partial Replacement)

● **Work after radiator core support has been removed.**

Service Joint
(This figure shows right side hoodledge)



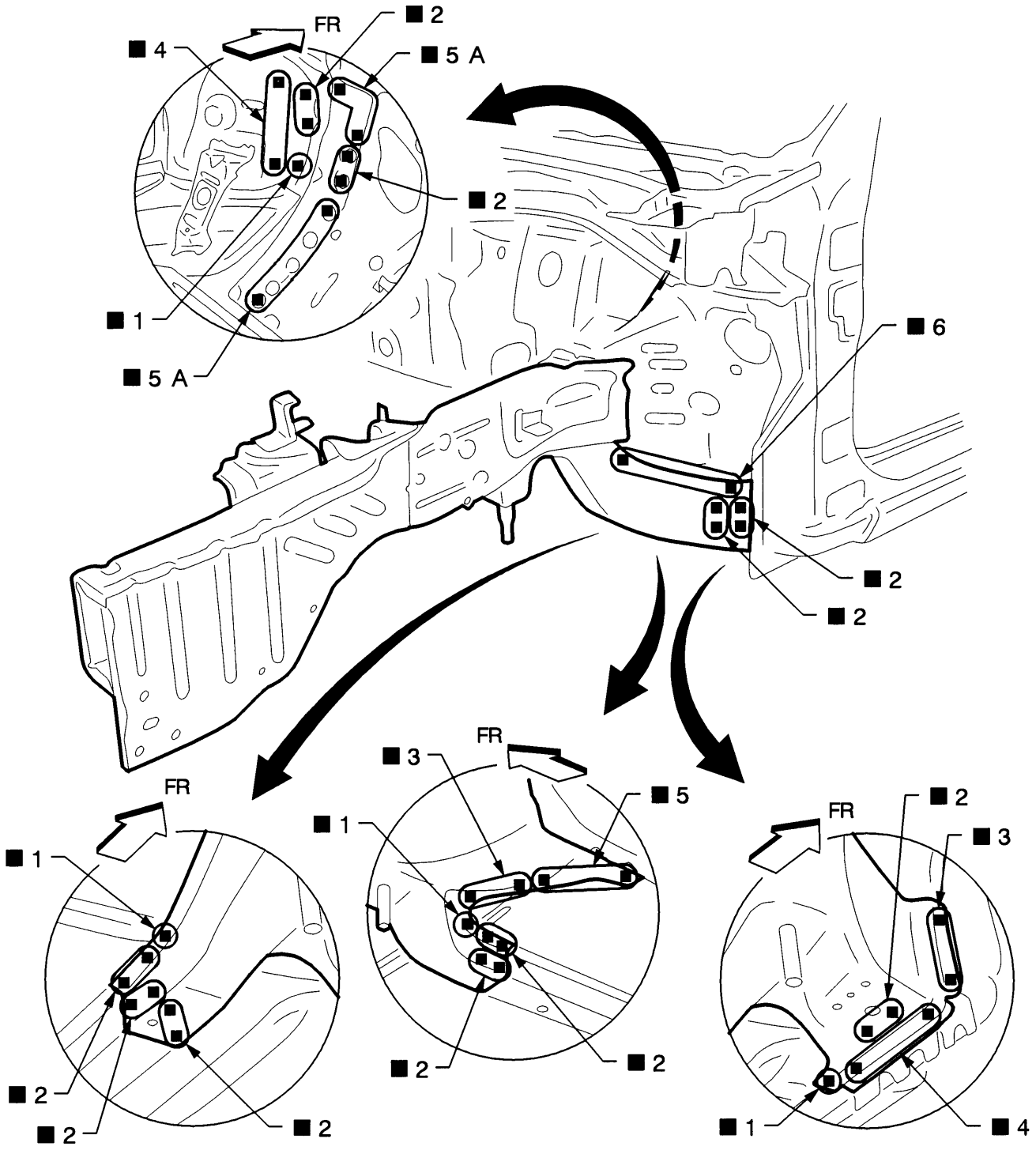
Unit: mm

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

Front Side Member

● **Work after hoodledge and radiator core support have been removed.**

Service Joint

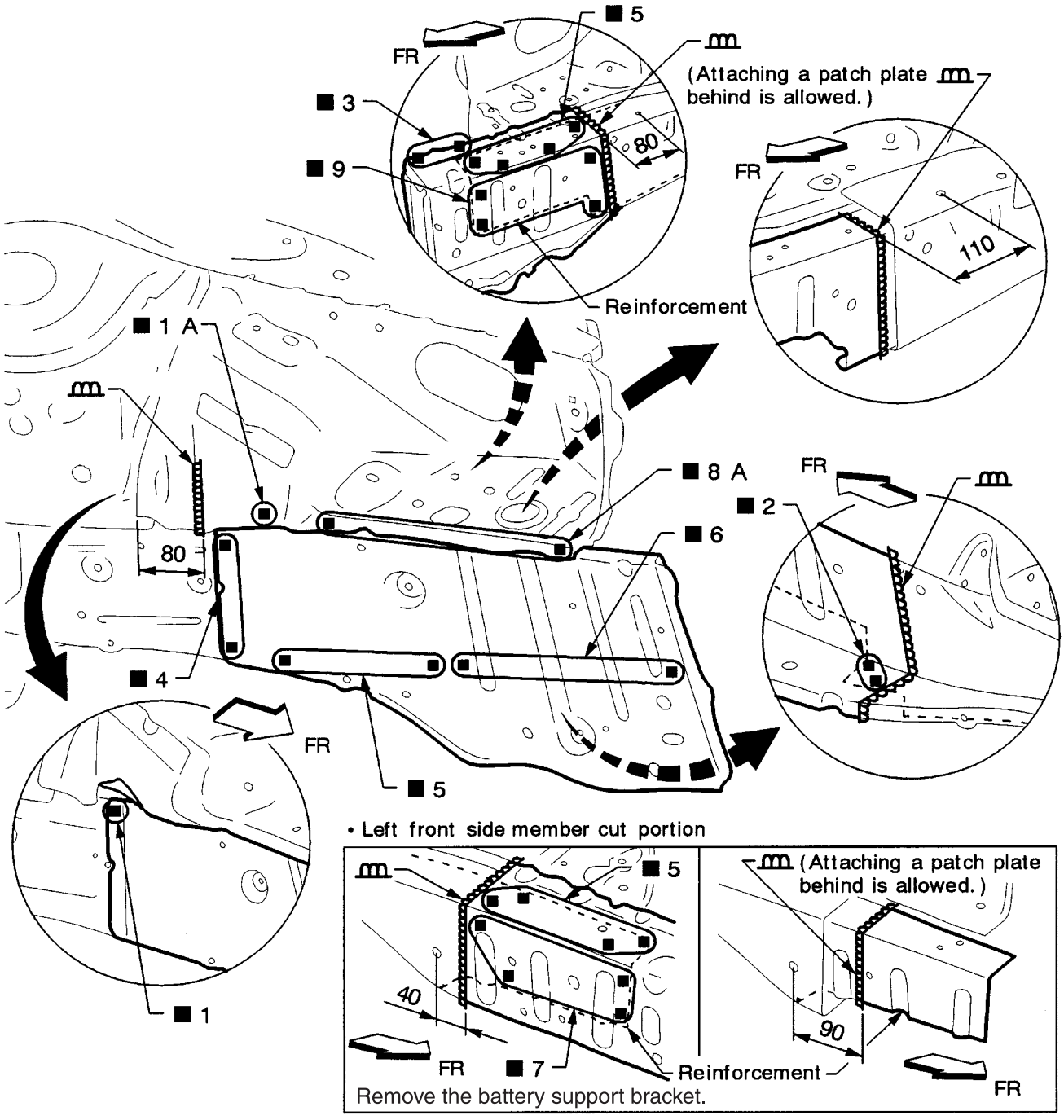


2-spot welds 3-spot welds MIG plug weld For 3 panels plug weld method ■ A ■ B MIG seam weld / Point weld

Front Side Member (Partial Replacement)

● **Work after radiator core support has been removed.**

Service Joint (This figure shows right front side member)



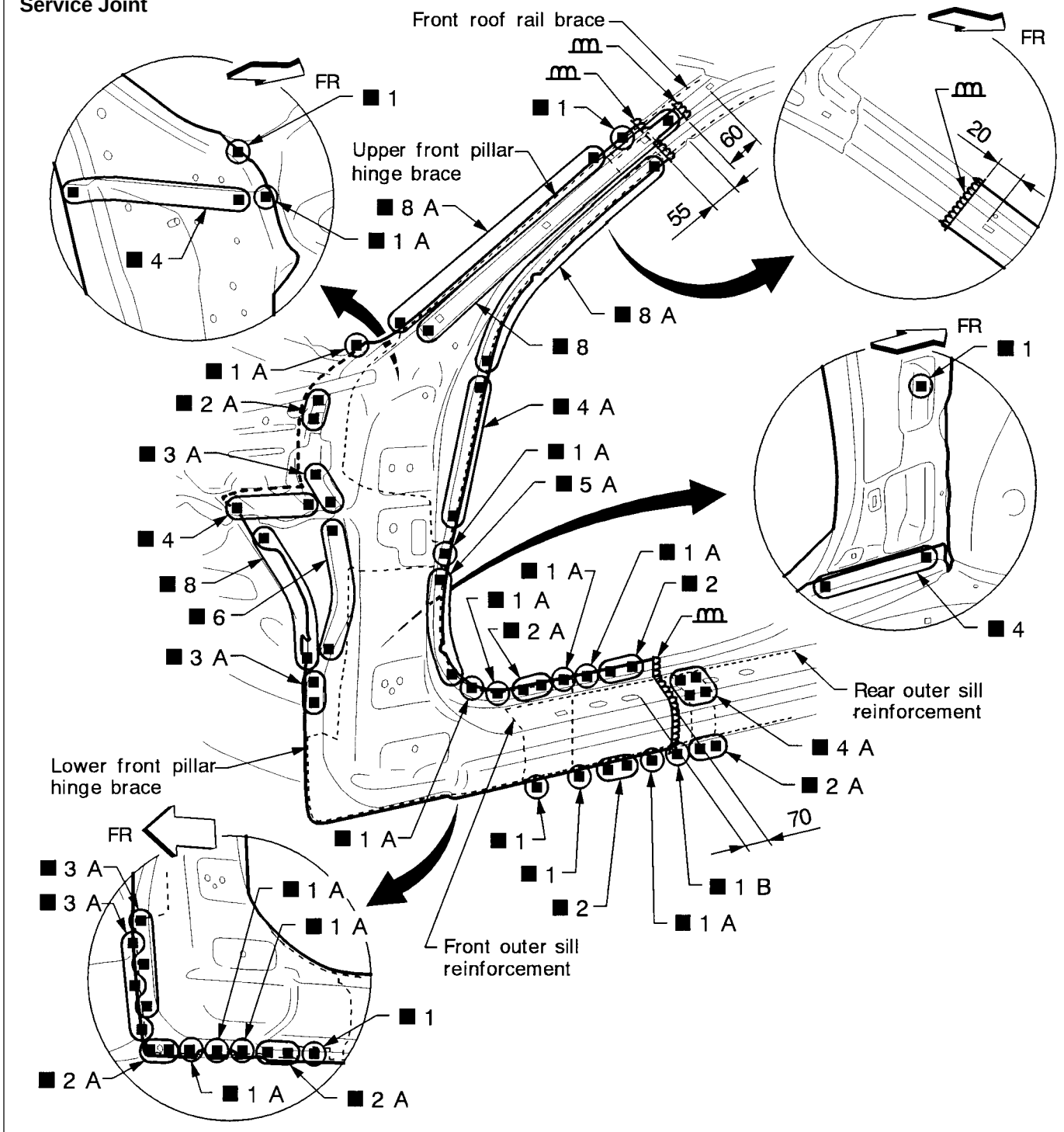
Unit: mm

2-spot welds 3-spot welds MIG plug weld For 3 panels plug weld method ■ A ■ B MIG seam weld / Point weld

Front Pillar

- **See REPLACEMENT NOTES.**
- **Work after hoodledge reinforcement has been removed.**

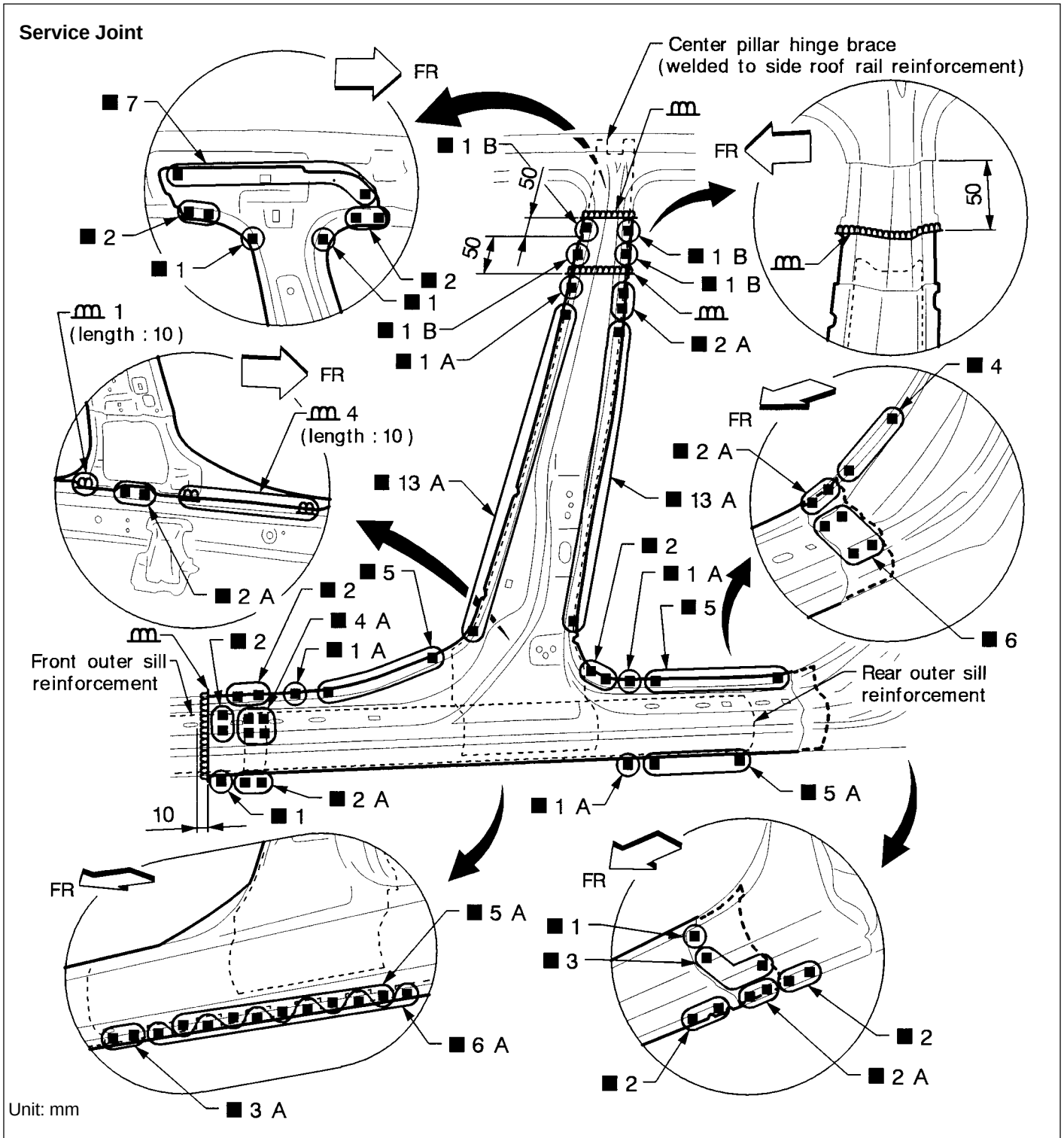
Service Joint



Unit: mm

2-spot welds 3-spot welds MIG plug weld For 3 panels plug weld method ■ A ■ B MIG seam weld / Point weld

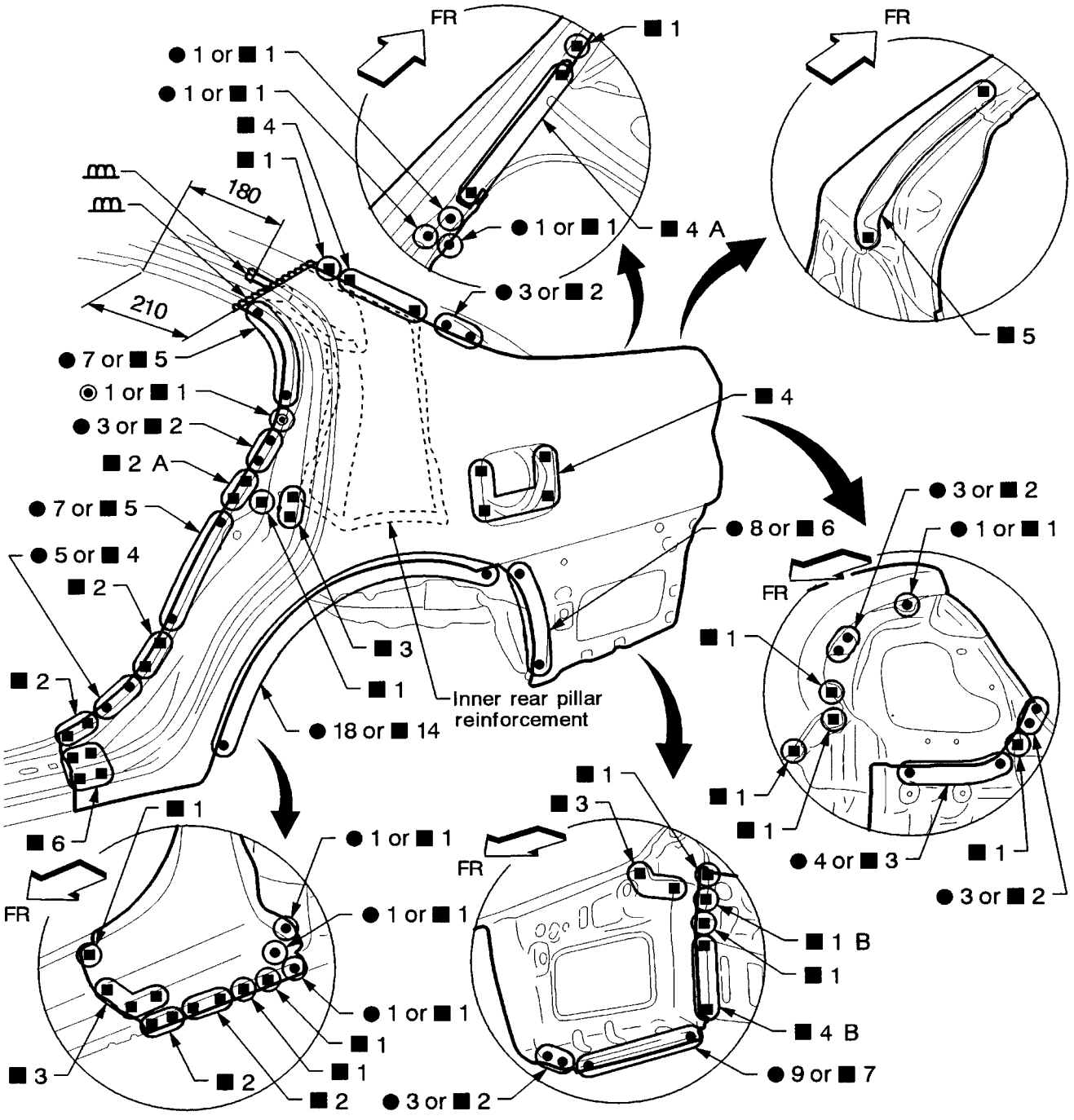
Center Pillar



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

Rear Fender

Service Joint



Unit: mm

2-spot welds 3-spot welds MIG plug weld For 3 panels plug weld method MIG seam weld / Point weld

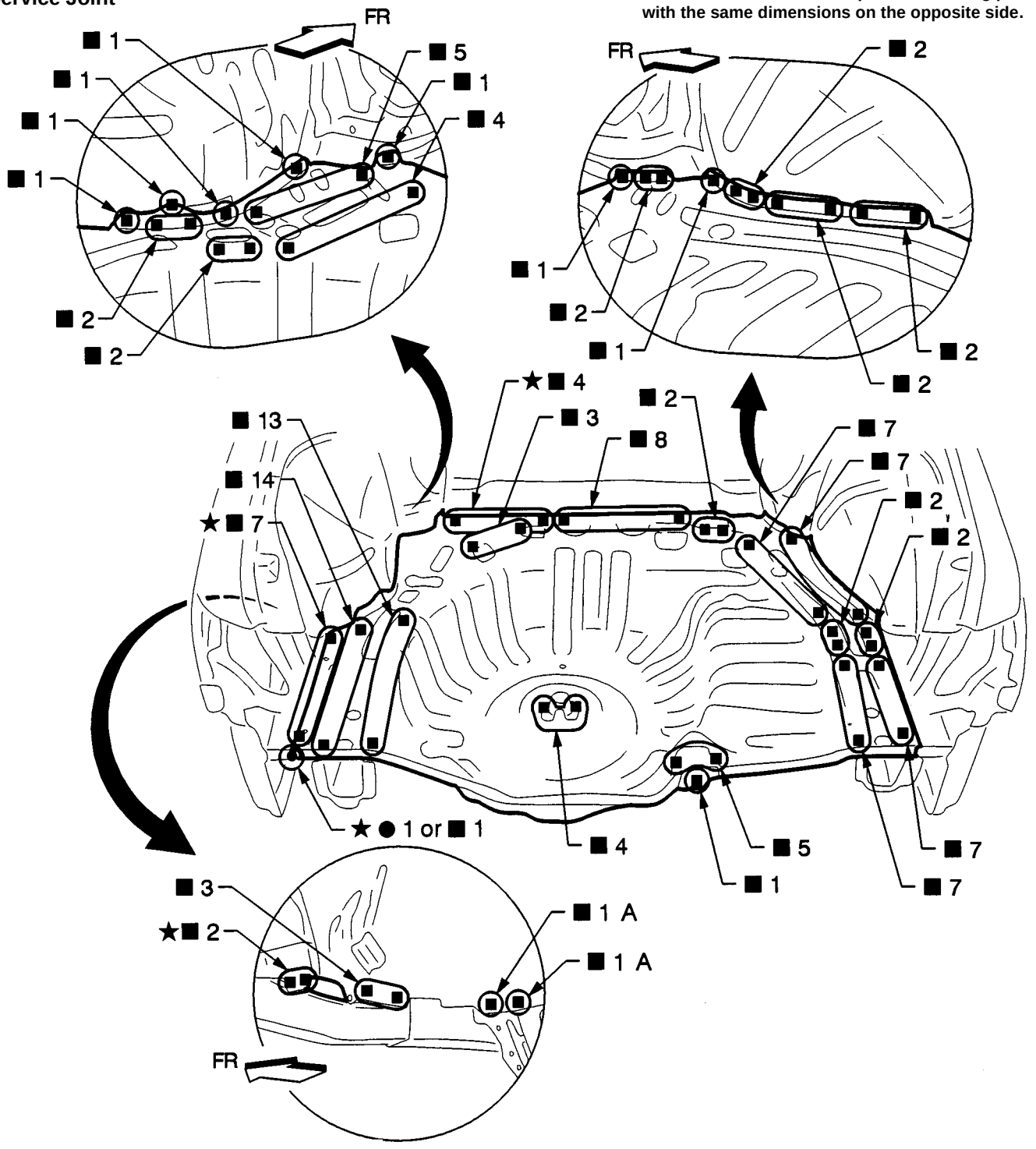
■ A ■ B

Rear Floor Rear

● **Work after rear panel has been removed.**

Service Joint

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

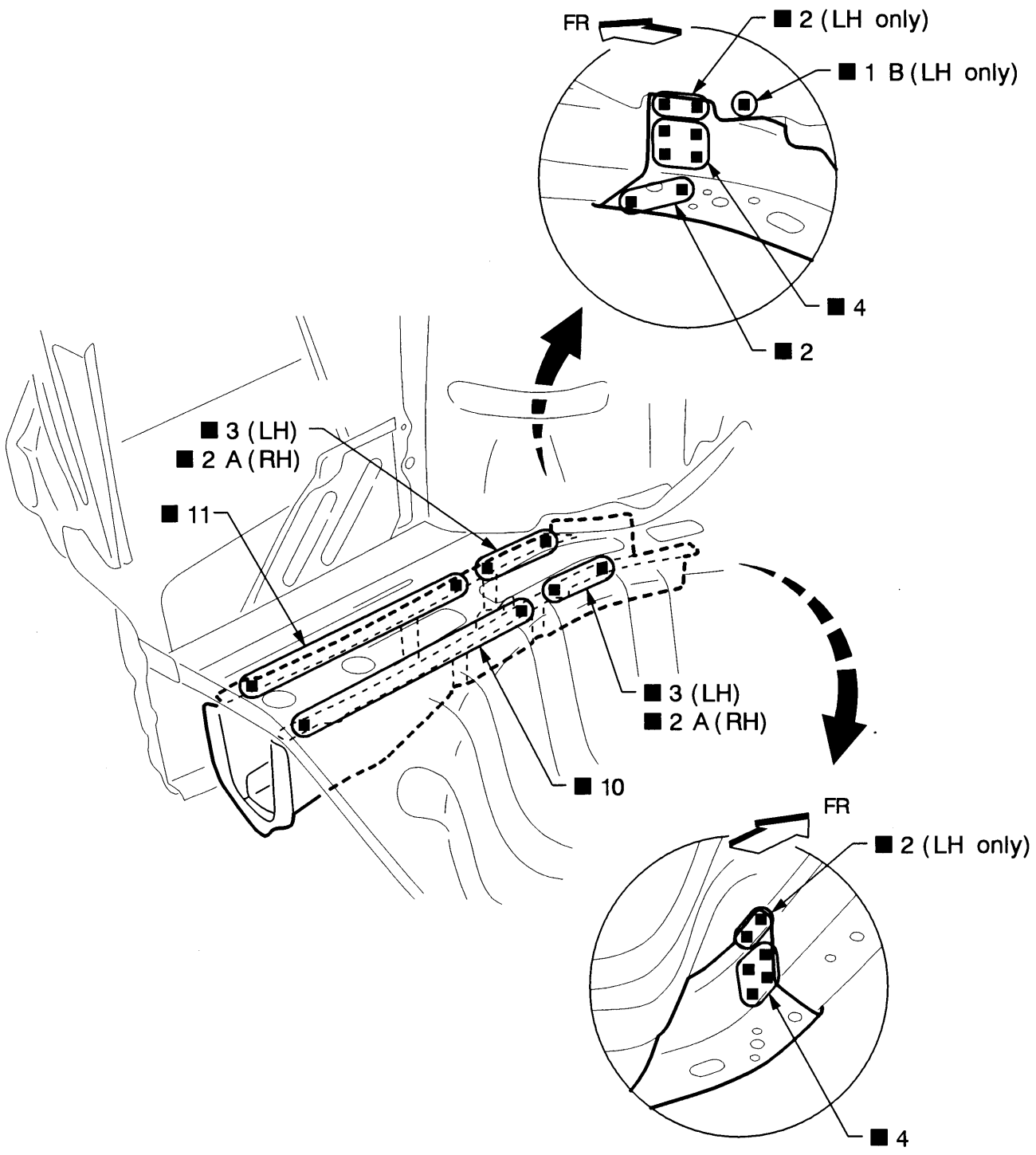


2-spot welds 3-spot welds MIG plug weld For 3 panels plug weld method ■ A ■ B MIG seam weld / Point weld

Rear Side Member Extension

● **Work after rear panel has been removed.**

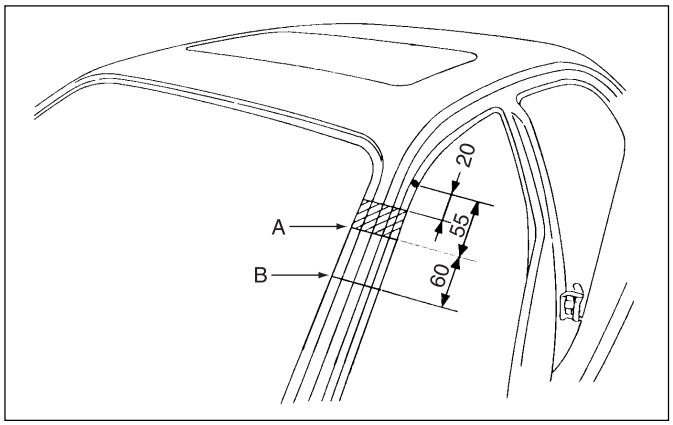
Service Joint



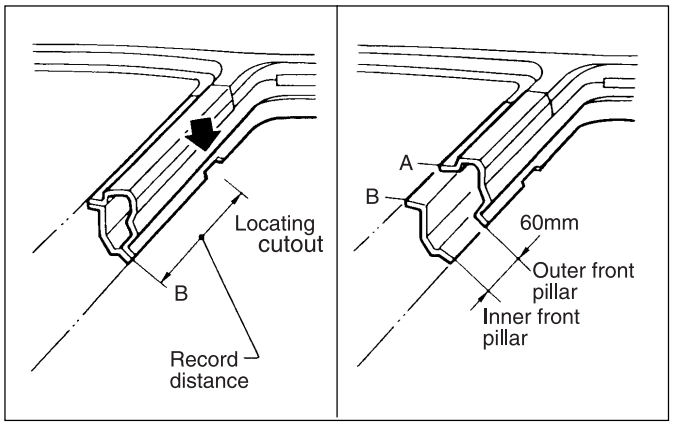
2-spot welds ● 3-spot welds ◉ MIG plug weld ■ For 3 panels plug weld method ■ A ■ B MIG seam weld / Point weld

Front Pillar

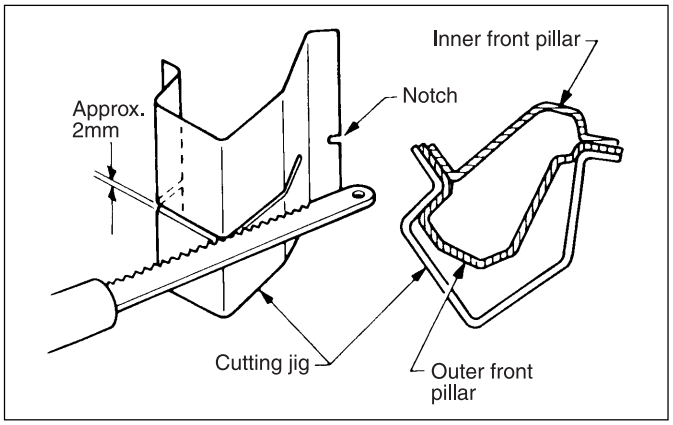
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure.
  The best location for the butt joint is at position A due to the construction of the vehicle.



- Determine cutting position and record distance from location cutout. Use this distance when cutting service part. Cut outer front pillar 60 mm above inner front pillar cut position.

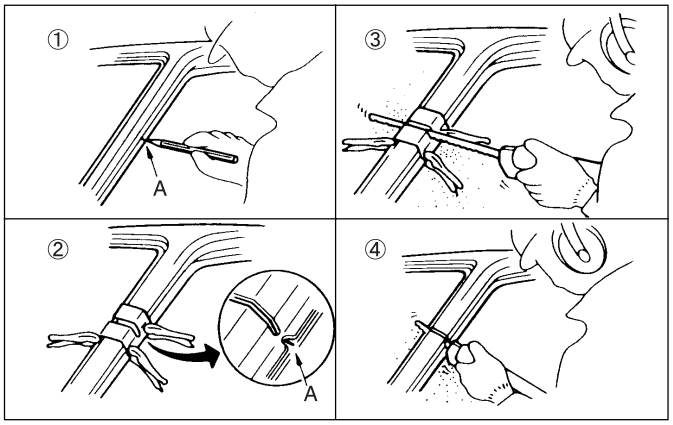


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



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

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



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BODY REPAIR MANUAL: Model: _____ Year: _____
PUBLICATION NO. : _____
VEHICLE INFORMATION VIN: _____ Production Data: _____
Please describe any issues or problems in detail:
Page number(s) _____ *Note: Please include a copy of each page, marked with your comments.*

_____
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Is the information useful in helping you to repair customers vehicles? (circle your answer) YES NO
If no, what page number(s)?_____ *Note: Please include a copy of each page, marked with your comments.*
Please describe the issue or problem in detail: _____

_____
_____
_____

Is the organization of the manual clear and easy to follow? (circle your answer) YES NO
Please comment: _____

_____
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What information should be included in NISSAN Body Repair Manuals to better support you in repairing customer vehicles?

_____
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DATE: _____ YOUR NAME: _____ POSITION: _____
DEALER: _____ DEALER NO.:_____ ADDRESS: _____
CITY: _____ STATE/PROV./COUNTRY: _____ ZIP/POSTAL CODE:_____