SECTION BRM
BODY REPAIR

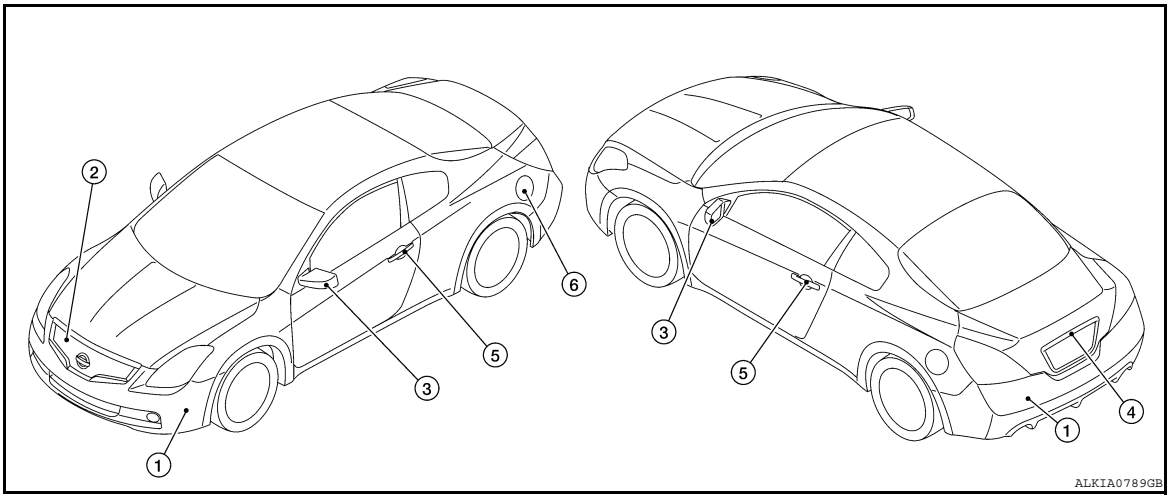
CONTENTS

FEATURES OF NEW MODEL

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:0000000005433473



Component			Color code	A20	GAD	K12	K50	KH3	QX3	RAB	RAP
			Description	Red	Red Highlight Black	Silver	Dark Grey	Black	White	Blue	Medium Grey
			Paint type	S	M	M	PM	S	3P	PM	M
			Hard clear coat	×	×	×	×	×	×	×	×
1	Bumper fascia		Body color	A20	GAD	K12	K50	KH3	QX3	RAB	RAP
2	Front grille	Surround	Body color	A20	GAD	K12	K50	KH3	QX3	RAB	RAP
		Slats	Black	—	—	—	—	—	—	—	—
		Base	chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr	Cr
3	Door outside mirror	Case	Body color	A20	GAD	K12	K50	KH3	QX3	RAB	RAP
		Base	Black	—	—	—	—	—	—	—	—
4	License plate finisher		Body color	A20	GAD	K12	K50	KH3	QX3	RAB	RAP
5	Door outside handle		Body color	A20	GAD	K12	K50	KH3	QX3	RAB	RAP
6	Fuel filler lid		Body color	A20	GAD	K12	K50	KH3	QX3	RAB	RAP

M = Metallic, S = Solid, 2S = Solid and Clear, 2P = 2-stage Pearl, 3P = 3-Stage pearl, PM = Pearl metallic, Black is solvent based, all others are water based.

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000005796906

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

HANDLING PRECAUTIONS FOR PLASTICS

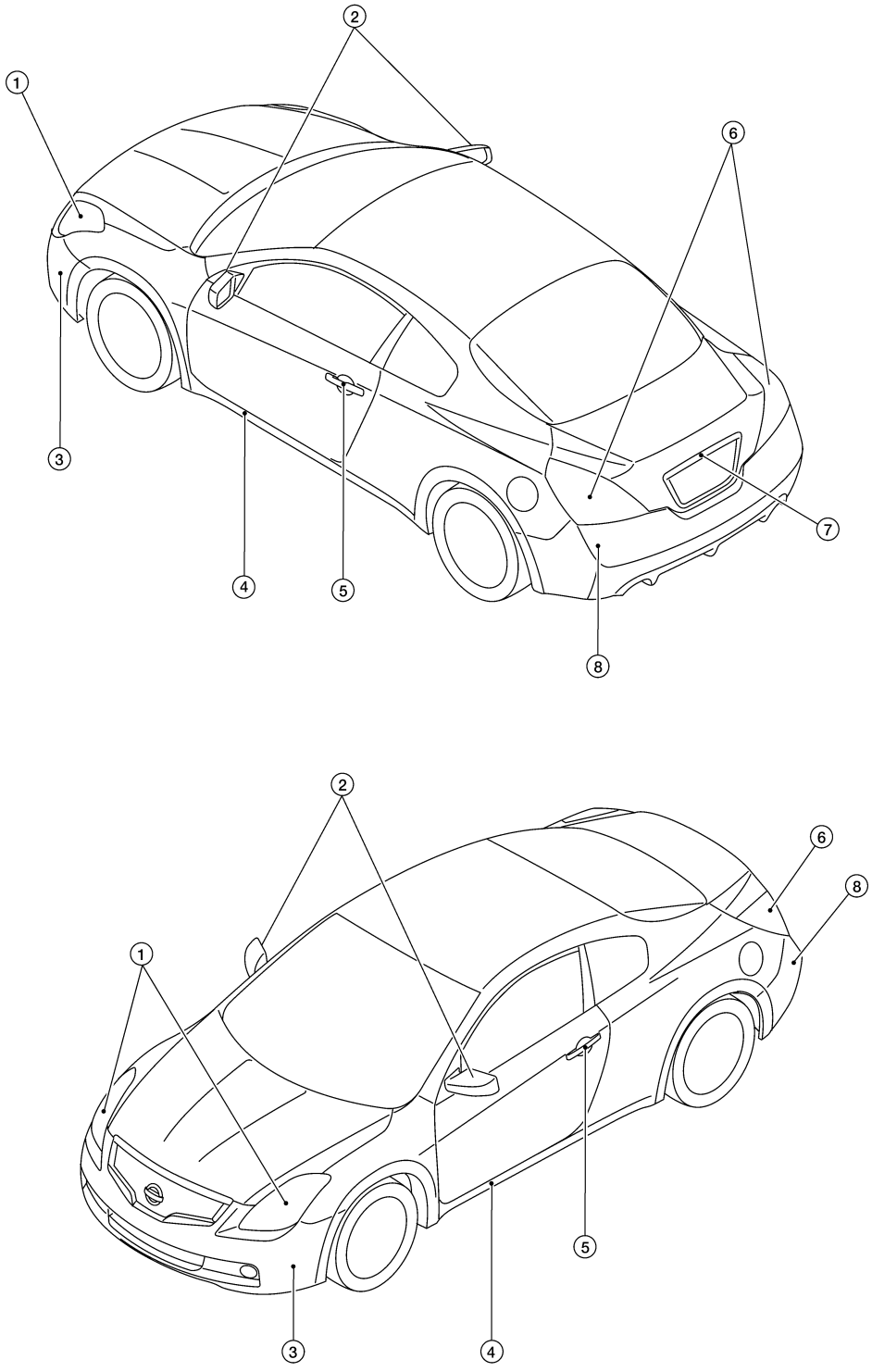
Precautions For Plastics

INFOID:0000000005433474

Abbre-viation	Material name	Heat resisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Poly Vinyl Chloride	80(176)	Same as above.	Poison gas is emitted when burned.
EPM/ EPDM	Ethylene Propylene (Diene) co-polymer	80(176)	Same as above.	Flammable
TPO/ TPR	Thermoplastic Olefine/ Thermoplastic rubber	80(176)	Same as above.	Flammable
PP	Polypropylene	90(194)	Same as above.	Flammable, avoid bat-tery 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.	
PPC	Polypropylene Composite	115 (239)	Same as above	Flammable
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 (Nylon)	140(284)	Same as above.	Avoid immersing in wa-ter.
PBT	Poly Butylene Terephthalate	140(284)	Same as above.	
PET	Polyester	180(356)	Same as above.	
PEI	Polyetherimide	200(392)	Same as above.	

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

LOCATION OF PLASTIC PARTS



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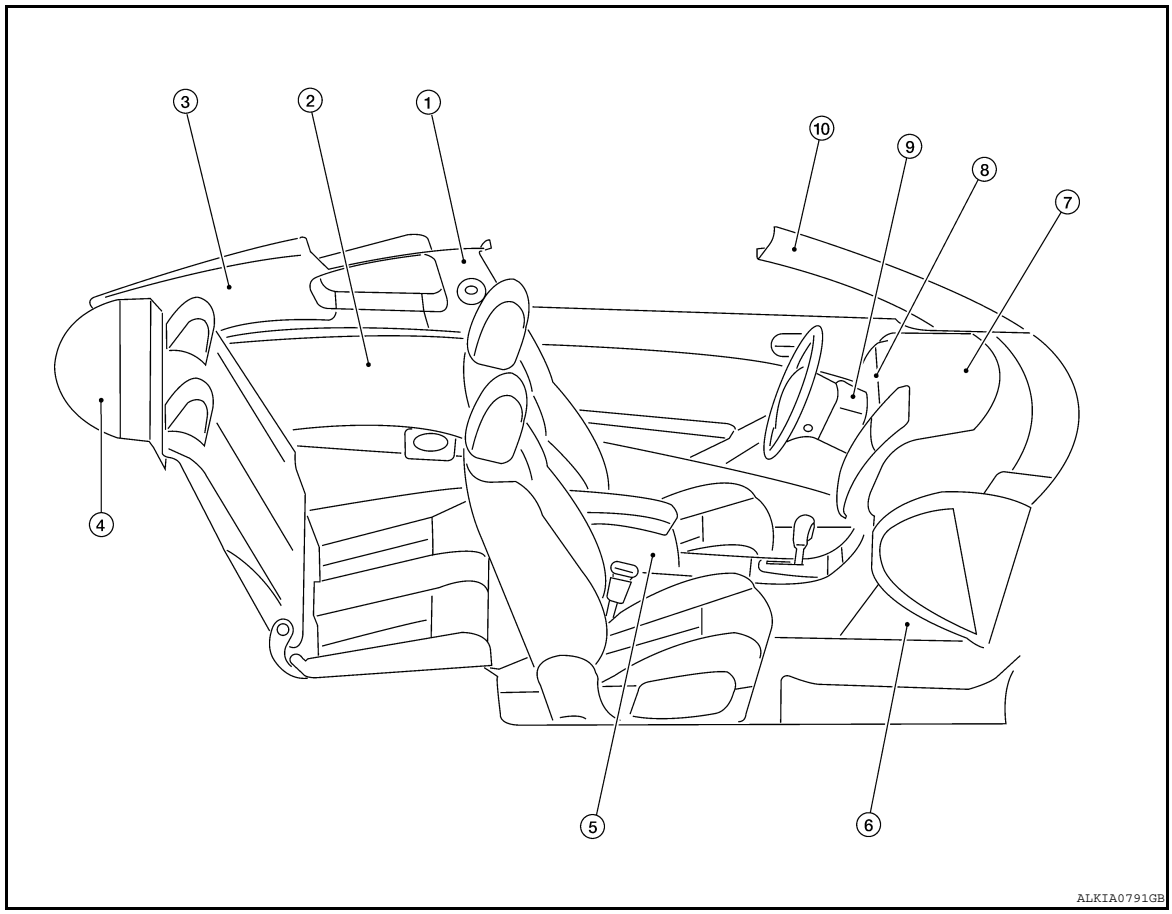
Item	Component		Abbreviation	Material
1.	Front combination lamp	Lens	PC	Polycarbonate
		Housing	PP	Polypropylene
2.	Door Mirror	Case	ASA	Acrylonitrile Styrene Acrylate
		Skull cap	ABS	Acrylonitrile Butadiene Styrene

Item	Component		Abbreviation	Material
3.	Front Fascia		PP + EPM	Polypropylene + Ethylene Propylene (Diene) copolymer
4.	Mudguard		TPO	Thermoplastic Olefine
5.	Outside door handle	Grip	PC	Polycarbonate
		Escutcheon	PA	Polyamide (Nylon)
6.	Rear combination lamp	Lens	PMMA	Poly Methyl Methacrylate
		Housing	ABS	Acrylonitrile Butadiene Styrene
7.	Trunk lid finisher		ABS + PC	Acrylonitrile Butadiene Styrene + Polycarbonate
8.	Rear fascia		PP + EPM	Polypropylene + Ethylene Propylene (Diene) copolymer



Item	Component		Abbreviation	Material
1.	Lock pillar upper trim		PP	Polypropylene
2.	Rear side finisher		PP	Polypropylene
3.	Rear pillar trim		PP	Polypropylene
4.	Rear parcel shelf finisher		PP	Polypropylene
5.	Center Console	Pocket	ABS	Acrylonitrile Butadiene Styrene + Polycarbonate
		Lid Substrate	PPC	Polypropylene Composite
		Lid slide plate	POM	Poly Oxymethylene
6.	Lower instrument cover		PP	Polypropylene
7.	Instrument panel		PP	Polypropylene

Item	Component	Abbreviation	Material
8.	Cluster lid A	PP	Polypropylene
9.	Steering column covers	PP	Polypropylene
10.	Front pillar garnish	PP	Polypropylene

ON-VEHICLE REPAIR

BODY COMPONENT PARTS

Underbody Component Parts

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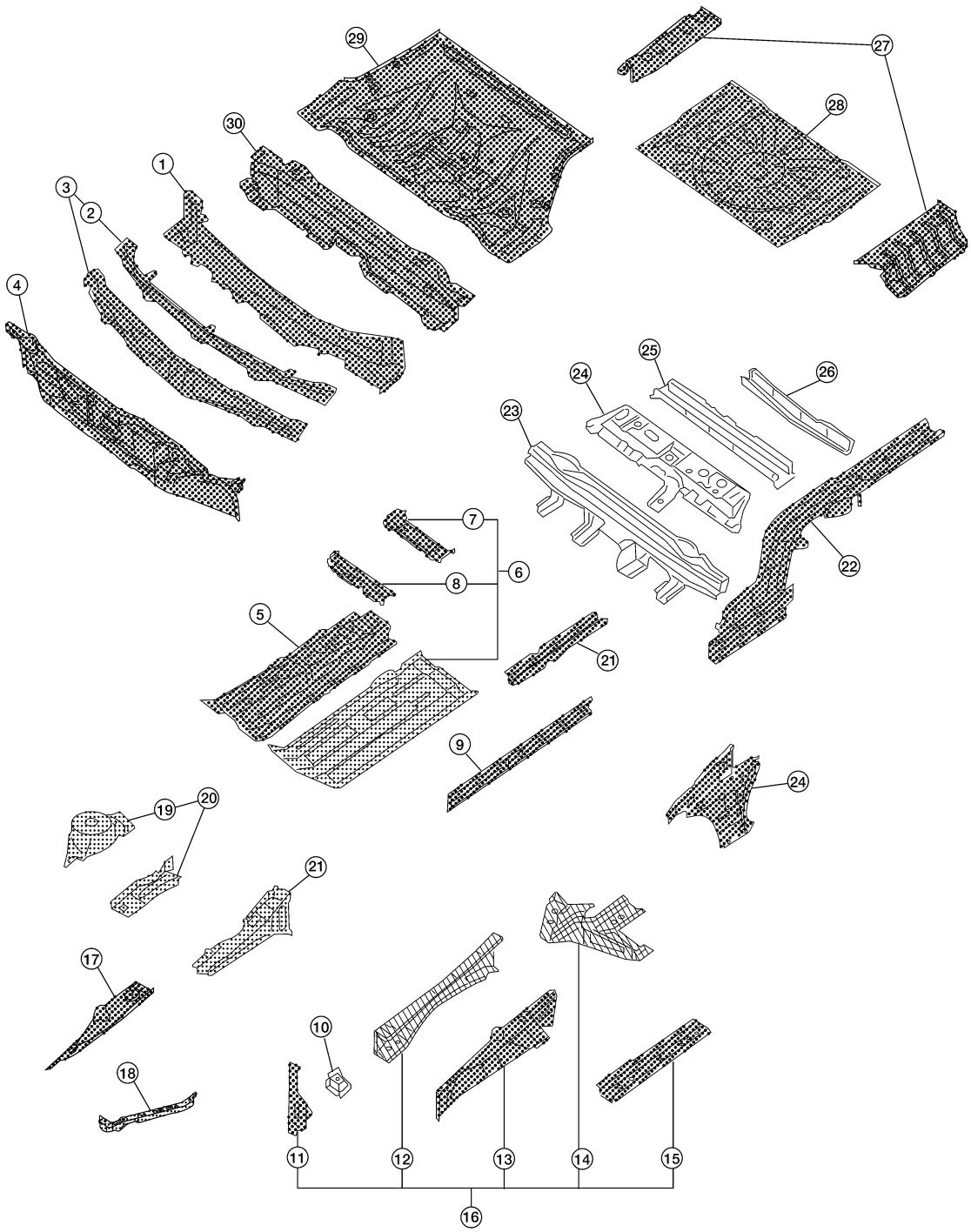

1. Upper dash assembly
2. Wiper bracket
3. Cowl top assembly
4. Lower dash assembly
5. Center floor assembly
6. Front floor assembly (RH,LH)
7. Rear crossmember (RH, LH)
8. Front crossmember (RH, LH)
9. Inner sill (RH, LH)
10. Front suspension member front nut plate (RH, LH)
11. Radiator core support side (RH, LH)
12. Front side member front assembly (RH, LH)
13. Front side member closing plate (RH, LH)
14. Front side member assembly (RH, LH)
15. Front side member center extension (RH, LH)
16. Front side member (RH, LH)
17. Hoodledge connector (RH, LH)
18. Radiator core support upper (RH, LH)
19. Strut tower (RH, LH)
20. Strut tower assembly (RH, LH)
21. Front side member rear extension (RH. LH)
22. Rear side member assembly (RH, LH)
23. Rear seat crossmember lower
24. Rear seat crossmember upper
25. Rear center crossmember
26. Rear floor rear crossmember
27 Rear floor rear side
28. Rear floor rear
29. Rear floor front
30. Rear floor front extension

Body Component Parts

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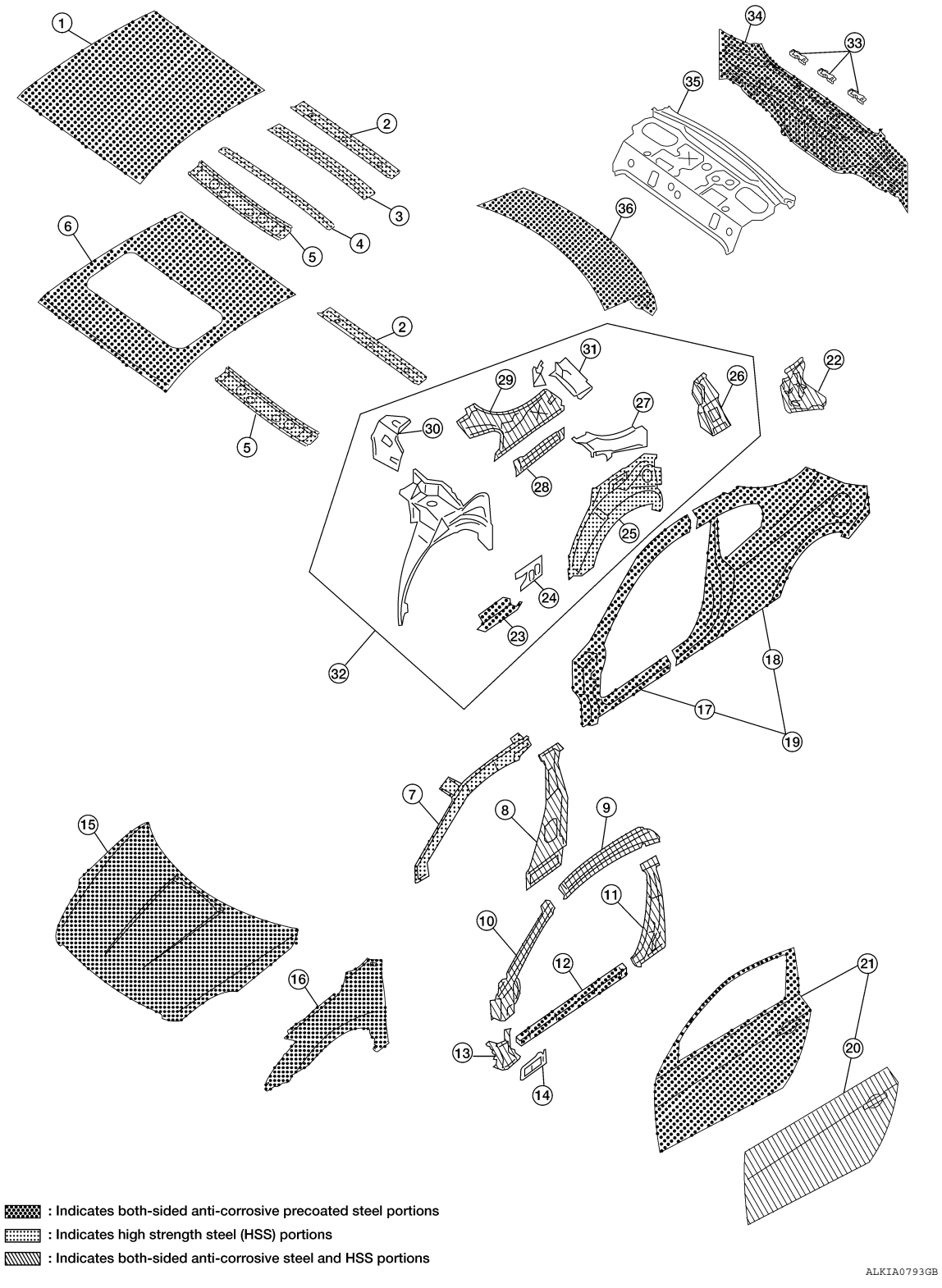


1. Roof panel assembly
2. Rear roof rail assembly
3. Center roof bow
4. Front roof bow
5. Front roof rail assembly
6. Sun roof panel assembly
7. Front pillar inner reinforcement (RH, LH)
8. Inner lock pillar (RH, LH)
9. Outer upper roof side rail (RH, LH)

10. Hinge pillar upper reinforcement (RH, LH)
11. Lock pillar reinforcement (RH, LH)
12. Outer sill reinforcement (RH, LH)
13. Hinge pillar lower reinforcement (RH, LH)
14. Front pillar lower reinforcement (RH, LH)
15. Hood assembly
16. Front fender (RH, LH)
17. Front portion of body side outer (RH, LH)
18. Rear fender portion of body side outer (RH, LH)
19. Body side outer (RH, LH)
20. Front door outer (RH, LH)
21. Front door assembly (RH, LH)
22. Rear combination lamp base (RH, LH)
23. Rear outer sill reinforcement (RH, LH)
24. Rear wheel outer front extension (RH, LH)
25. Rear wheel outer RH, LH)
26. Rear pillar inner reinforcement B (RH, LH)
27. Rear pillar inner reinforcement A (RH, LH)
28. Inner rear pillar lower (RH, LH)
29. Rear pillar inner (RH, LH)
30. Rear seat back side support (RH, LH)
31. Rear side upper reinforcement (RH, LH)
32. Rear wheel inner reinforcement assembly (RH, LH)
33. Rear bumper fascia brackets
34. Rear panel assembly
35. Parcel shelf assembly
36. Trunk lid assembly

CORROSION PROTECTION

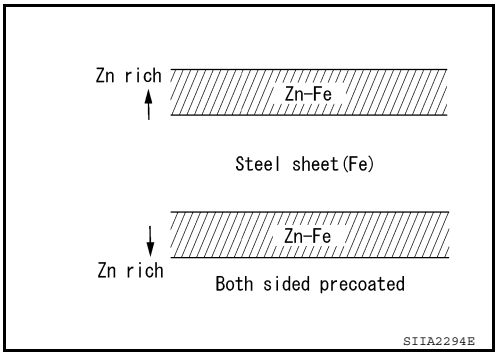
Description

INFOID:0000000005433477

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

Anti-Corrosive Precoated Steel (Galvannealed Steel)

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



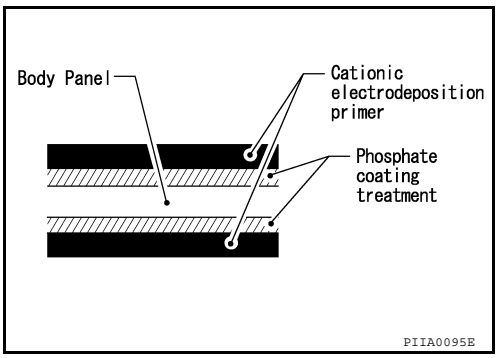
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

Phosphate Coating Treatment and Cationic Electrodeposition Primer

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

CAUTION:

Confine paint removal during welding operations to an absolute minimum.



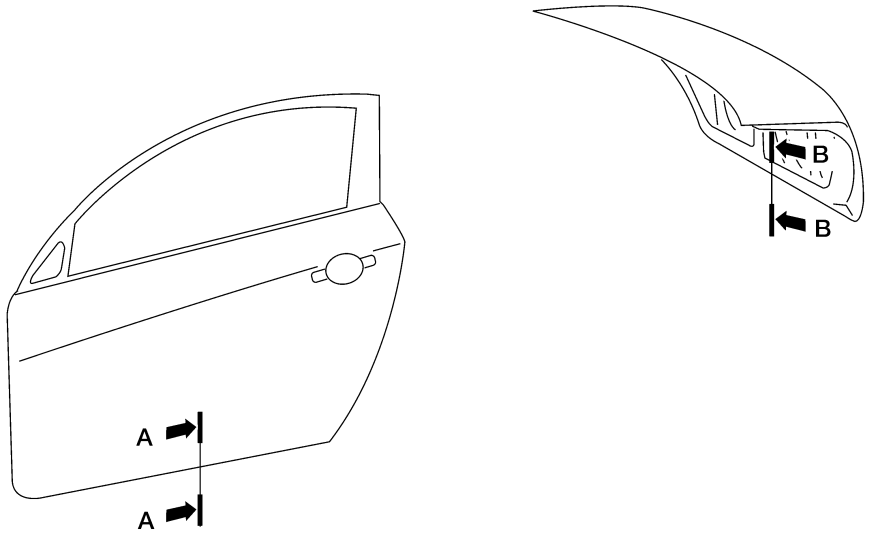
Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

Anti-Corrosive Wax

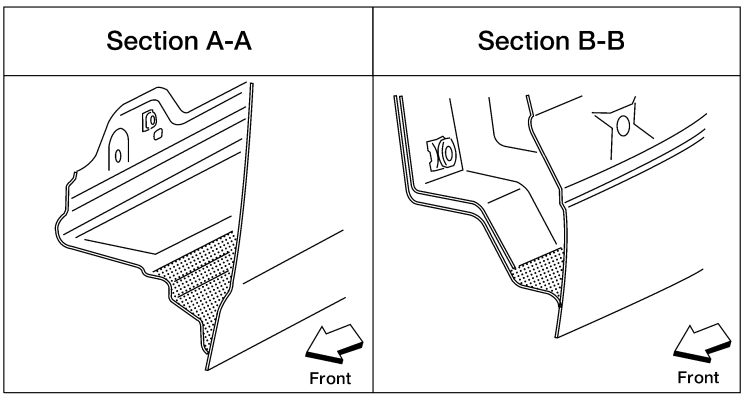
INFOID:0000000005433478

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



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Undercoating

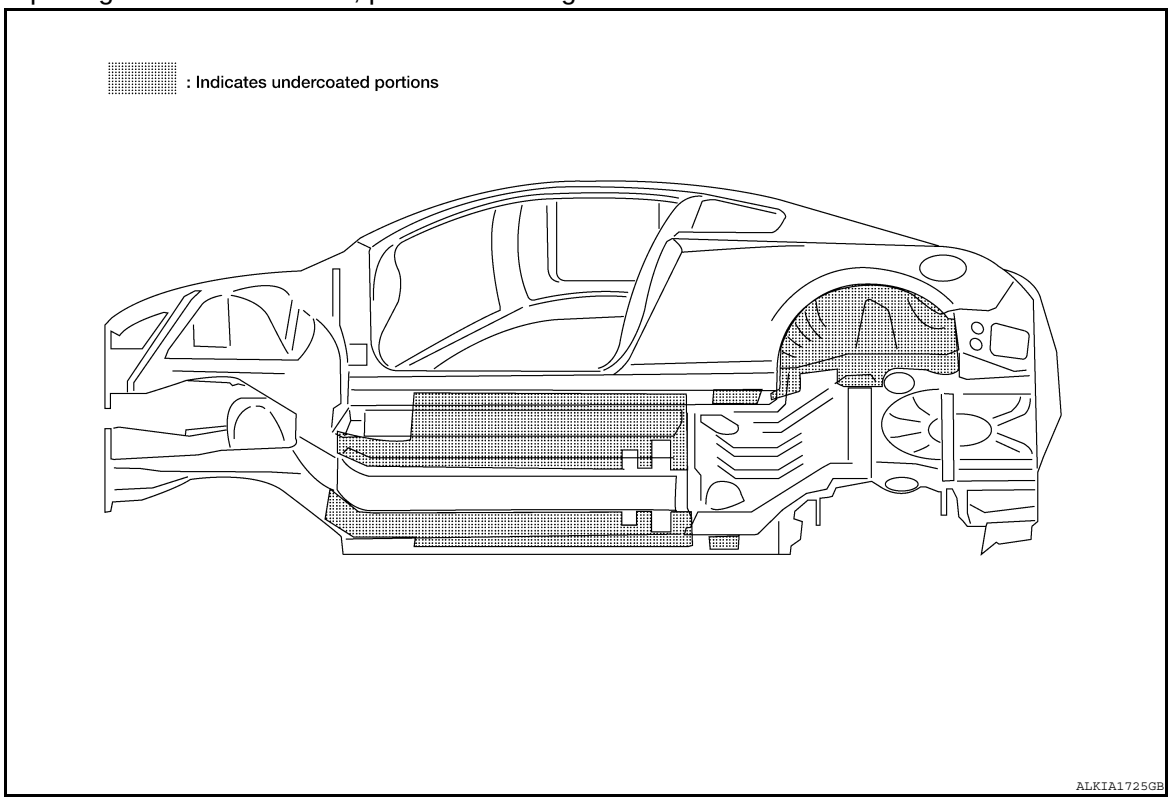
INFOID:0000000005433479

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

Precautions in Undercoating

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

5. After putting seal on the vehicle, put undercoating on it.



Stone Guard Coat

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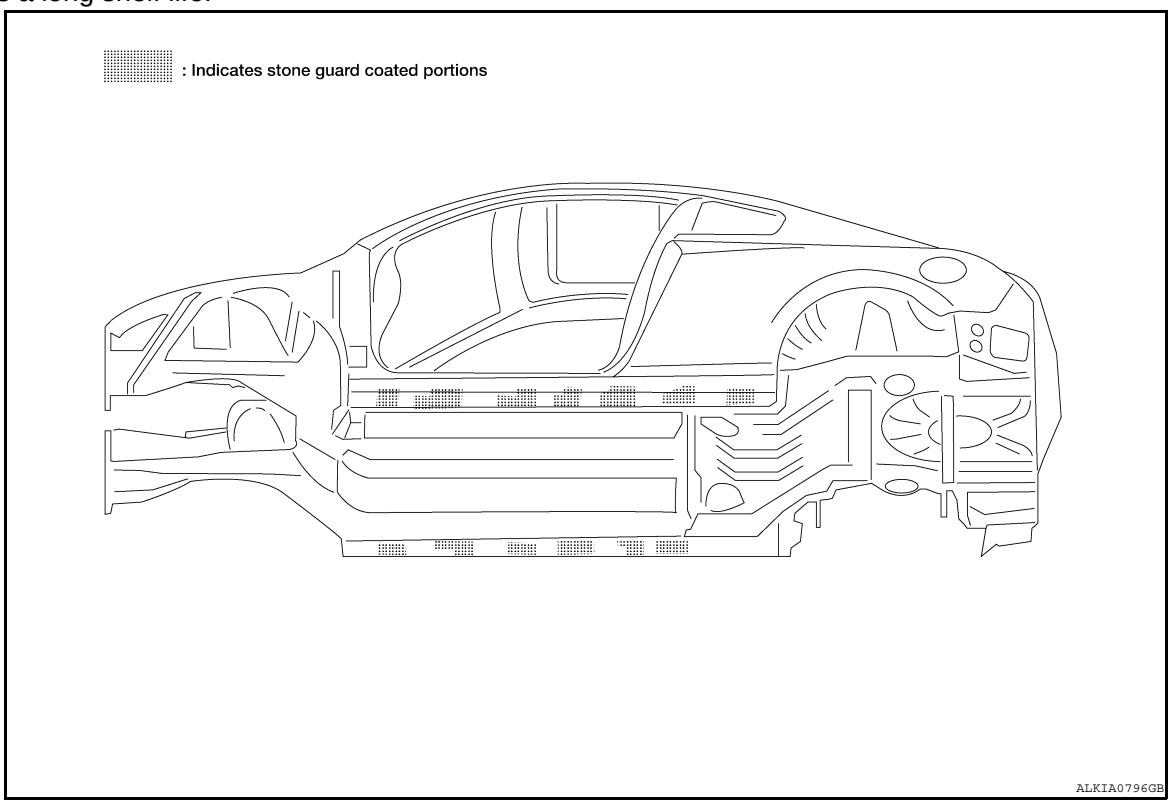
To prevent damage caused by stones, the lower outer body panel (fender, door, etc.) have an additional layer of Stone Guard Coating over the ED primer coating. When replacing or repairing these panels, apply Stone Guard coating to the same portions as before. Use a coating which is rust preventive, durable,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

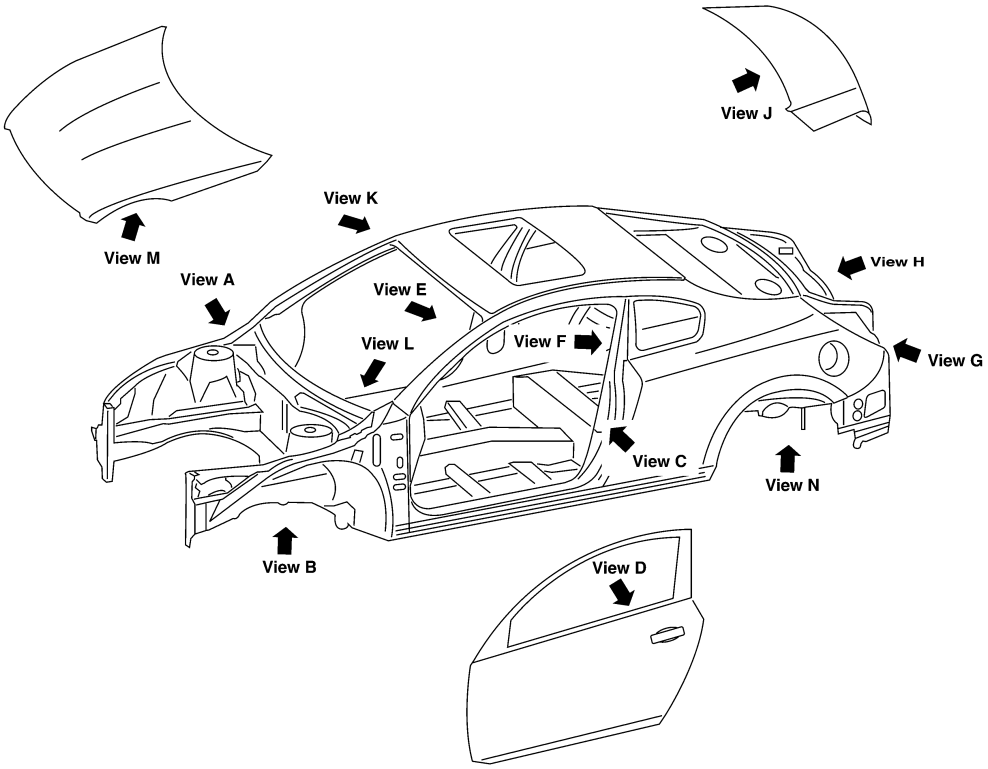


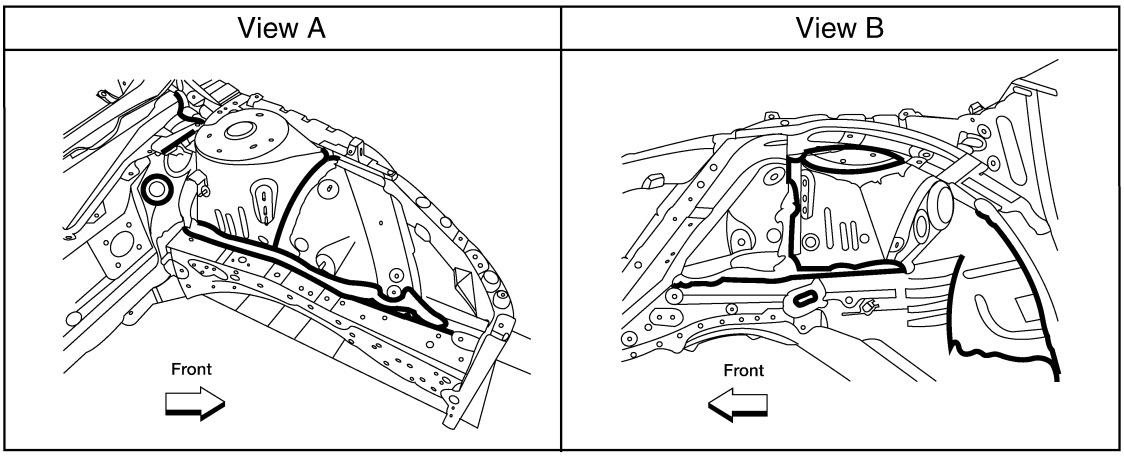
BODY SEALING

Description

INFOID:0000000005433481

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





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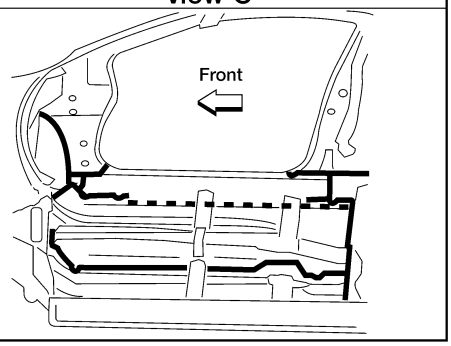
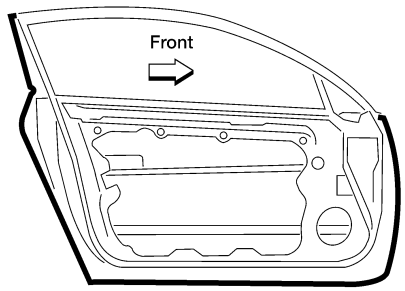
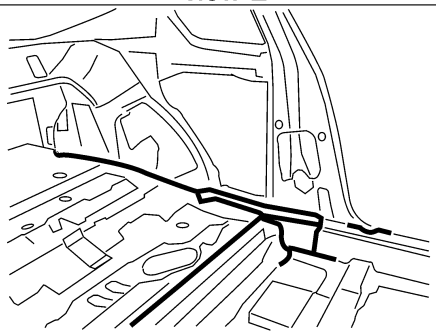
View C



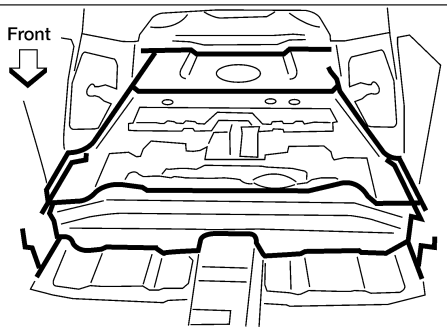
View D



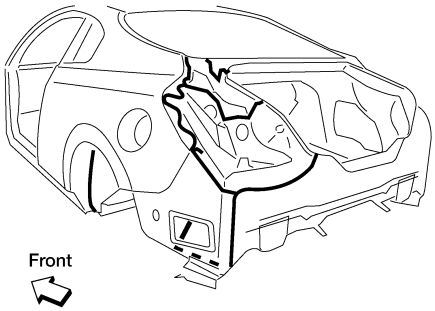
View E



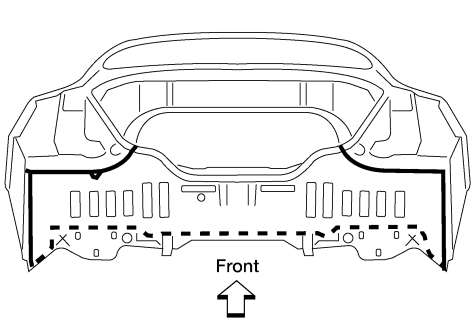
View F



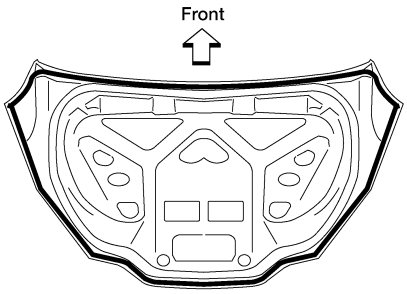
View G



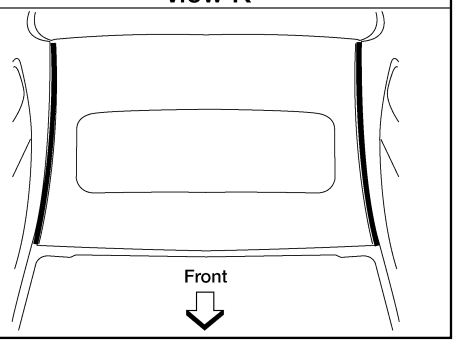
View H



View J



View K



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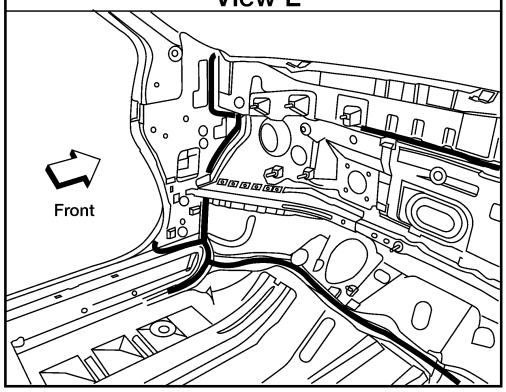
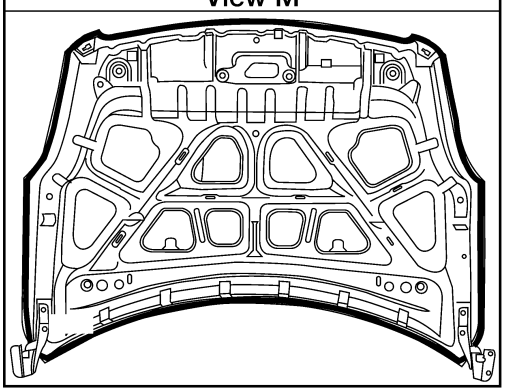
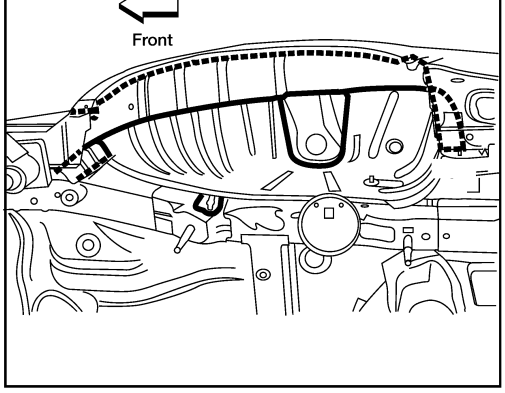
View L



View M



View N



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BODY CONSTRUCTION

Body Construction

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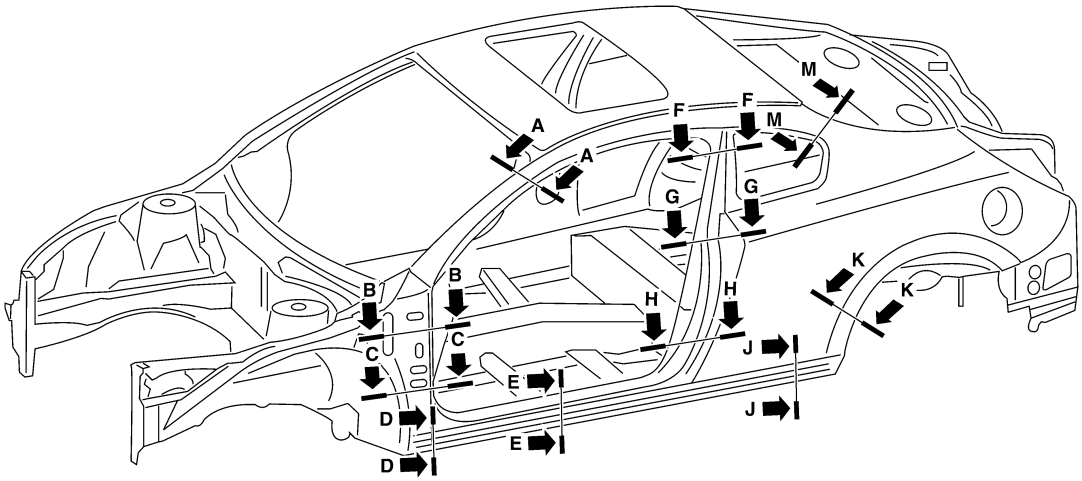

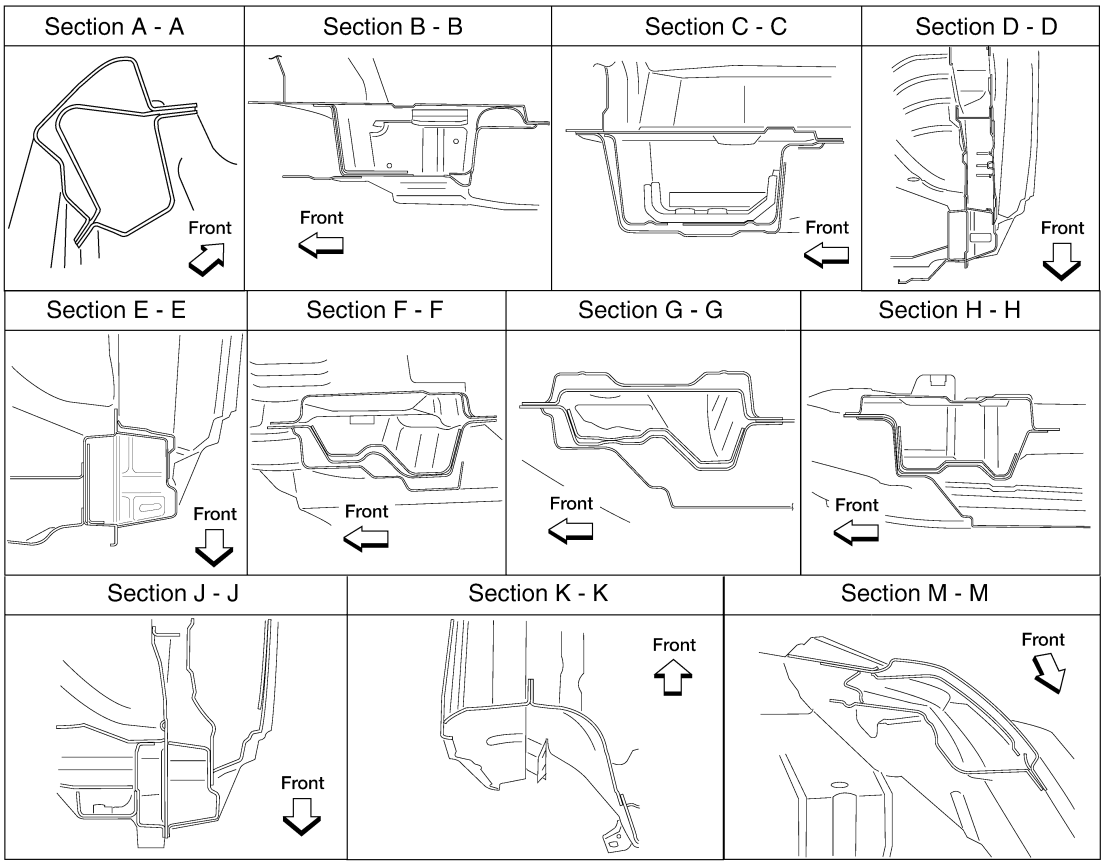

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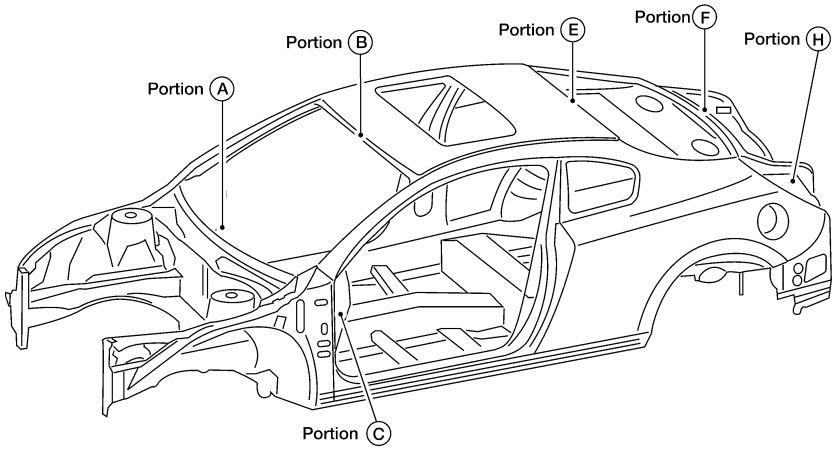
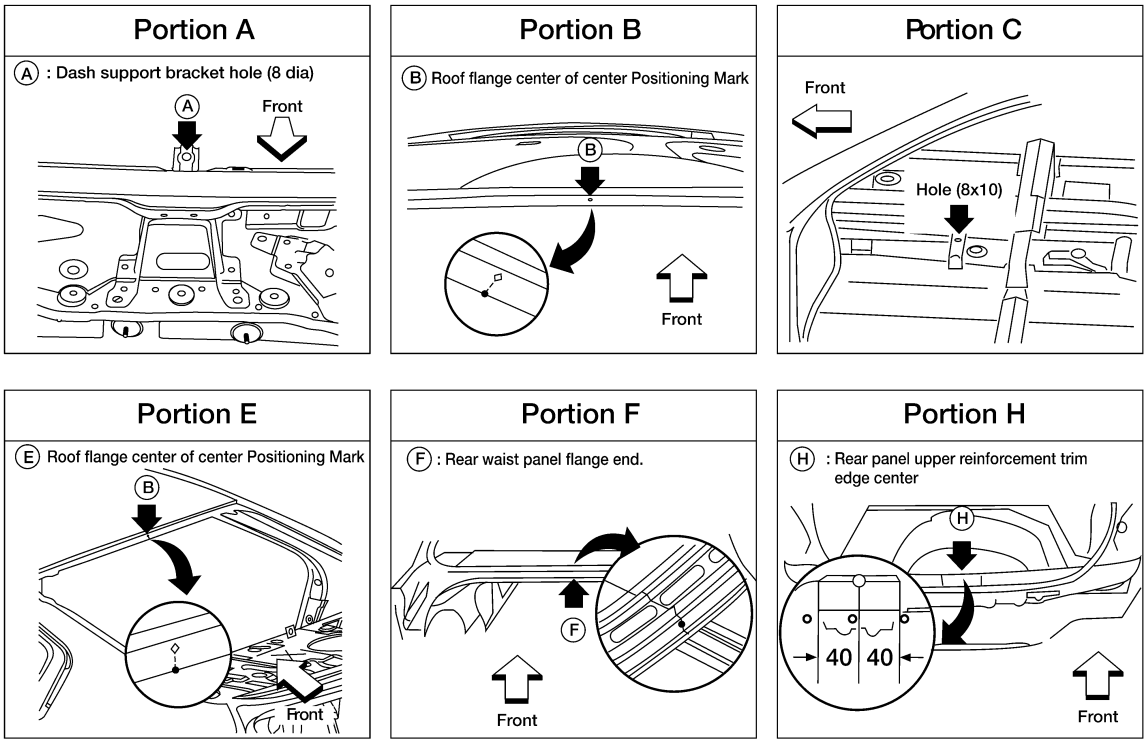
BODY ALIGNMENT

Body Center Marks

INFOID:0000000005433483

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.





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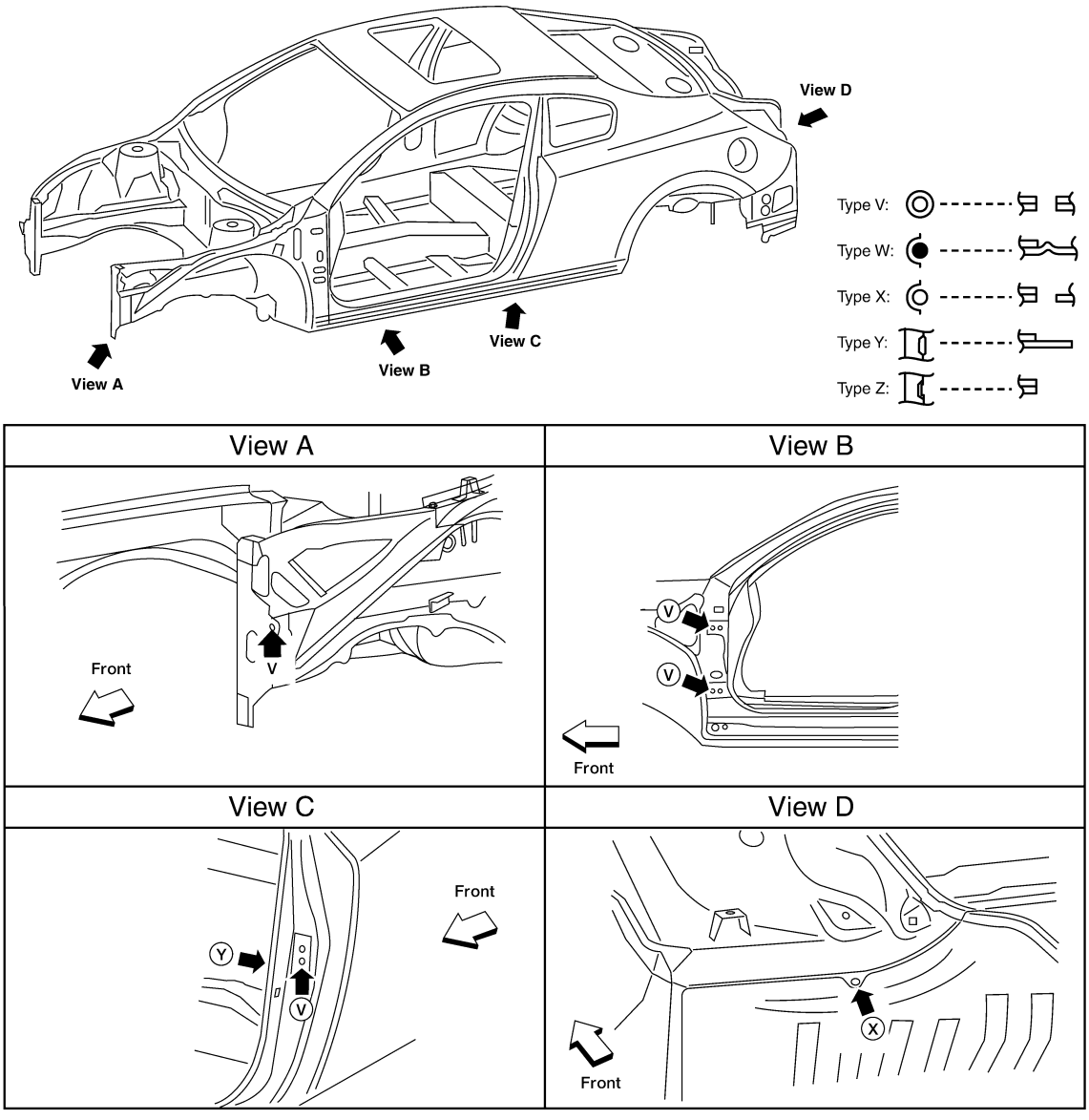
Panel Parts Matching Marks

INFOID:0000000005433484

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.



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Description

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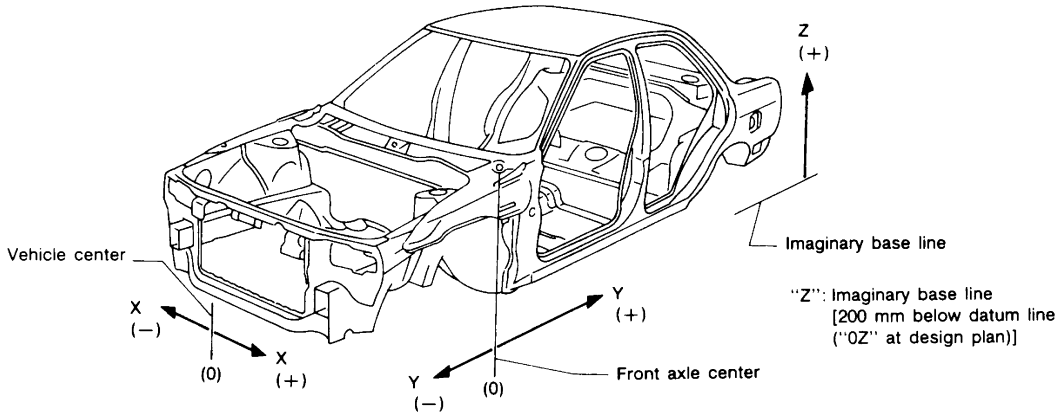
- All dimensions indicated in the figures are actual.
- When using a tracking gauge, adjust both pointers to equal length. Then check the pointers and gauge itself to make sure there is no free play.
- When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
- Measurements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


Z
(+)
Imaginary base line
"Z": Imaginary base line
[200 mm below datum line
("0Z" at design plan)]
Vehicle center
X
(−)
X
(+)
(0)
Y
(+)
Y
(−)
(0)
Front axle center

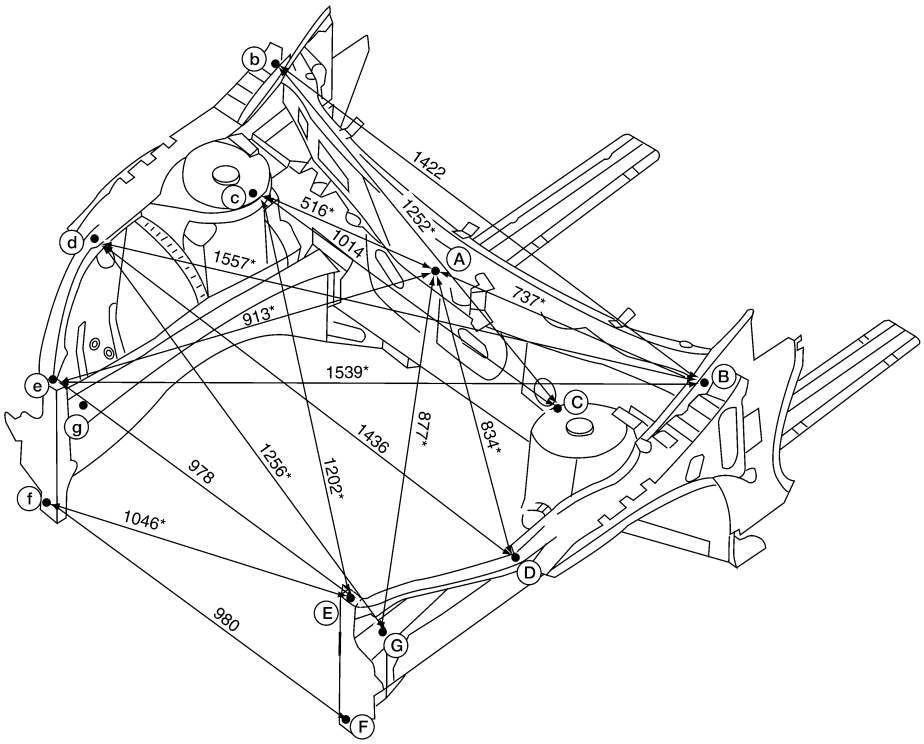
PIIA0104E

Engine Compartment

INFOID:0000000005433486

Measurement

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

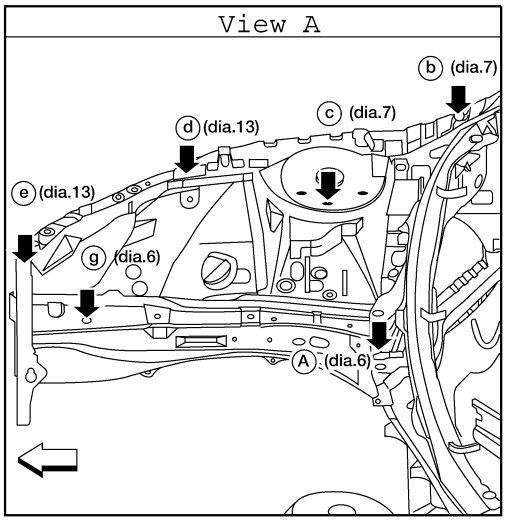


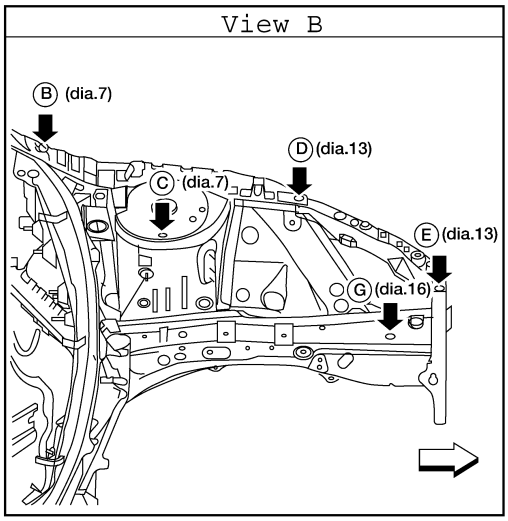
Point	Dimension
B ~ D	617*
B ~ E	989*
B ~ G	1512*
C ~ B	1268*
C ~ D	389*
C ~ E	673*
C ~ G	630*
C ~ g	1182*
D ~ G	394*
E ~ G	201*
G ~ g	990

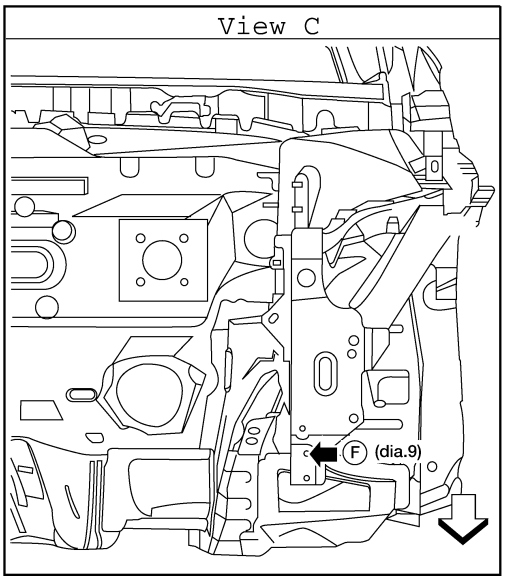
Unit : mm

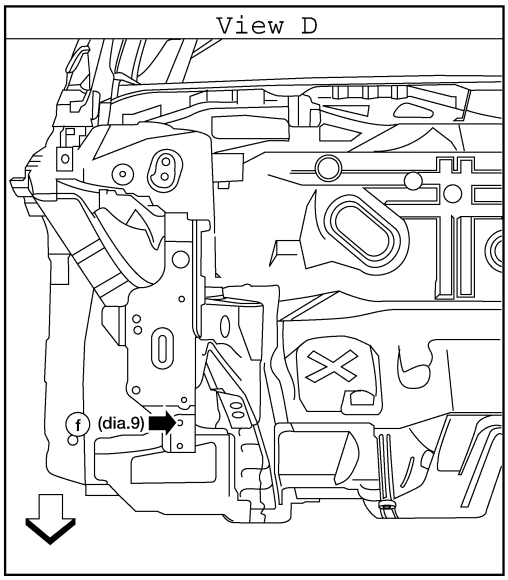
ALKIA0802GB

Measurement Points









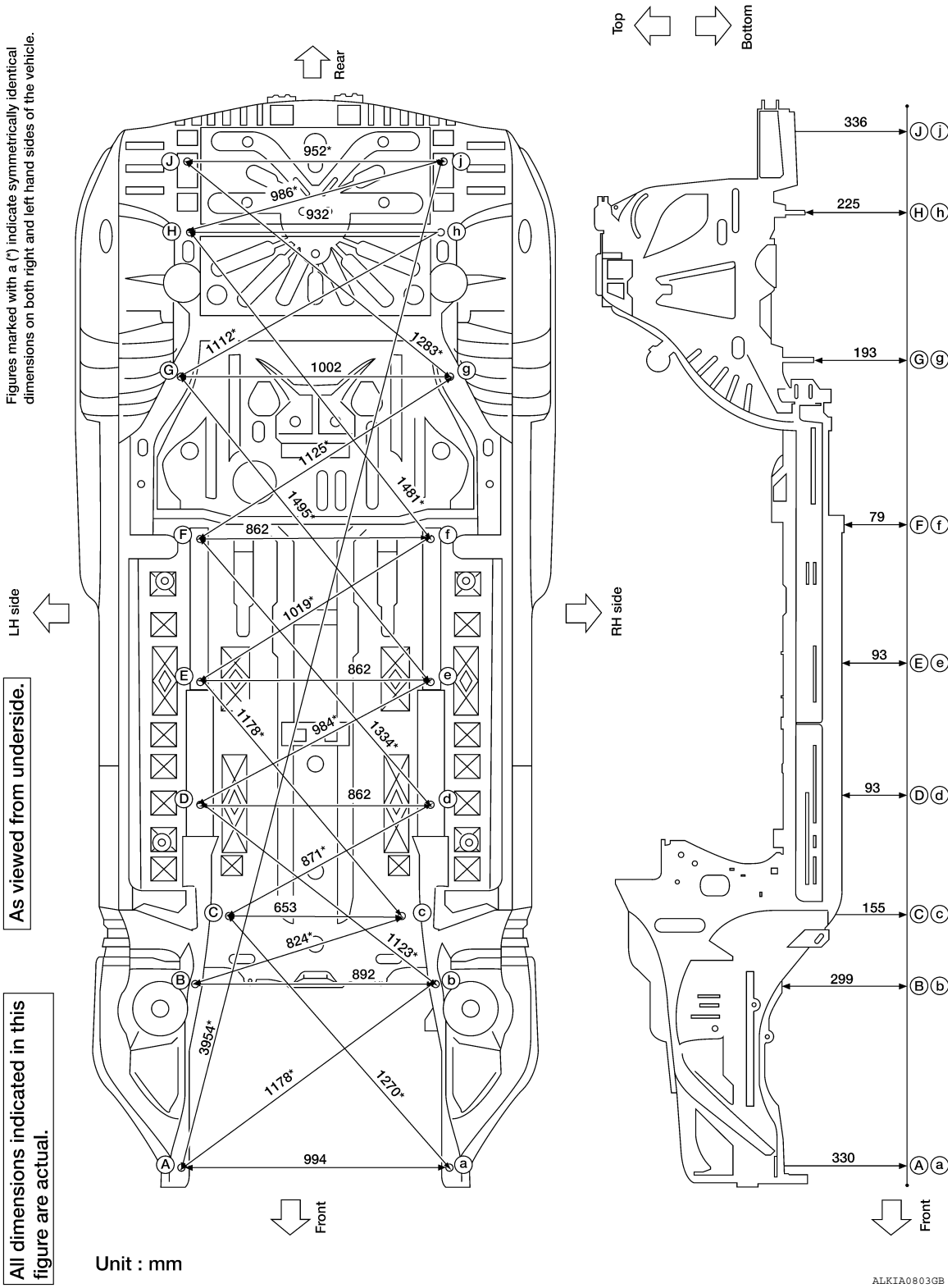
Unit : mm

AWKIA0389GB

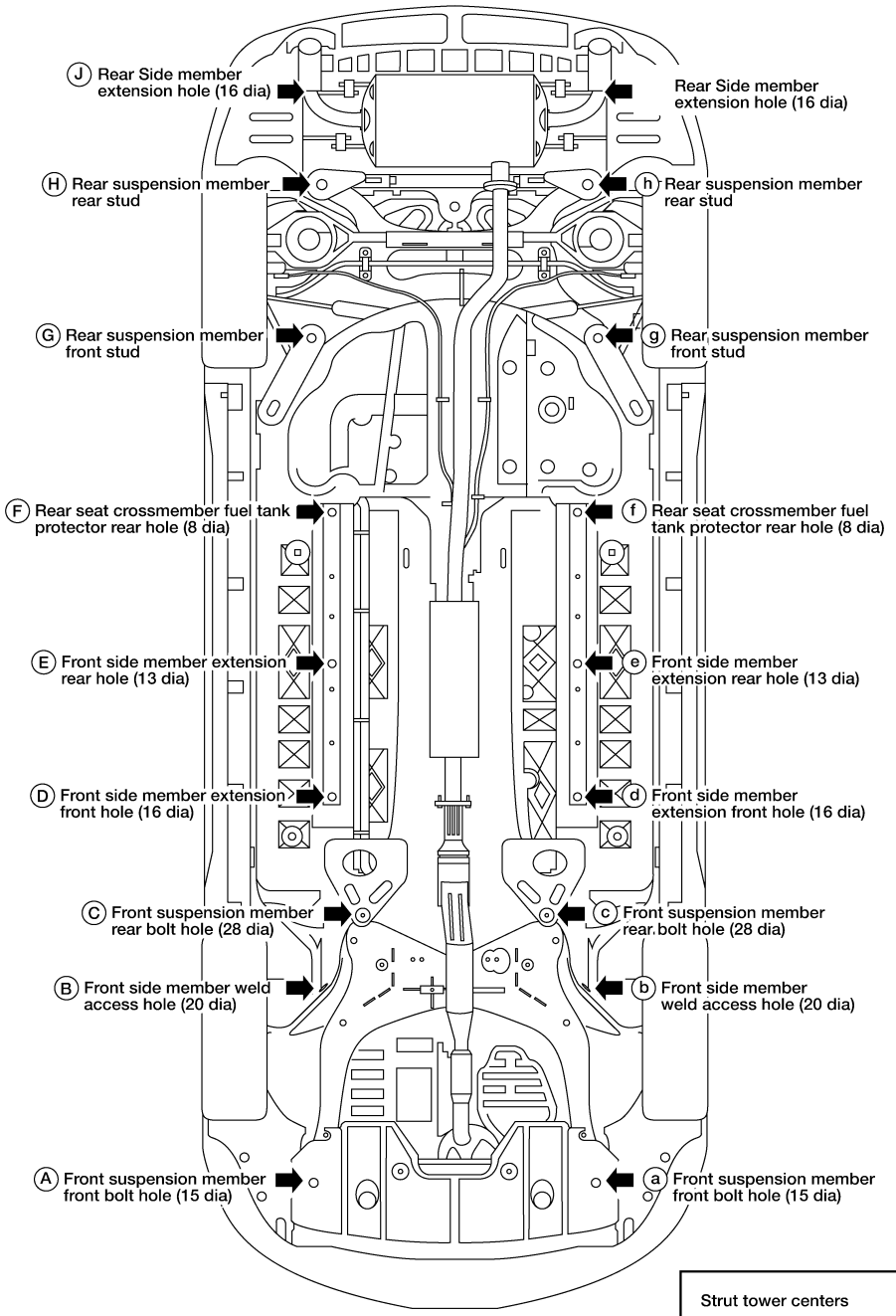
Underbody

INFOID:0000000005433487

Measurement



Measurement Points



Ⓐ ⓐ
X : ±497
Y : -556
Z : 330

Ⓑ ⓑ
X : ±466
Y : 149
Z : 299

Ⓒ ⓒ
X : ±327
Y : 395
Z : 155

Ⓓ ⓓ
X : ±431
Y : 820
Z : 93

Ⓔ ⓔ
X : ±431
Y : 1294
Z : 93

Ⓕ ⓕ
X : ±431
Y : 1838
Z : 79

Ⓖ ⓖ
X : ±501
Y : 2458
Z : 193

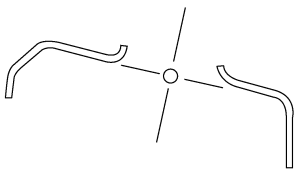
Ⓗ ⓗ
X : ±466
Y : 3007
Z : 225

Ⓙ ⓙ
X : ±476
Y : 3276
Z : 336

Strut tower centers

Coordinates

Ⓚ ⓚ Front
X : ± 584
Y : 48
Z : 790



Unit : mm

AWKIA1485GB

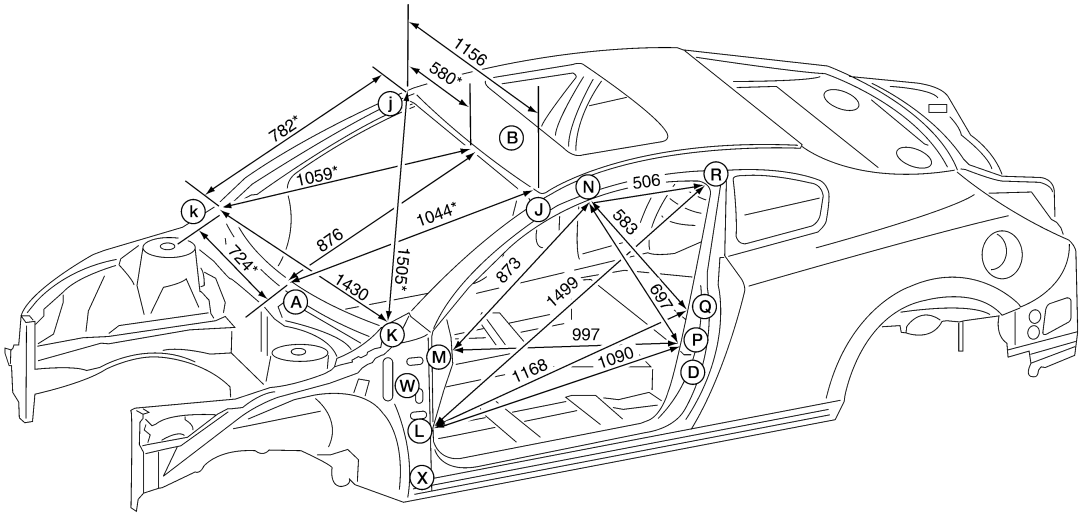
Passenger Compartment

INFOID:0000000005433488

Measurement

Unit : mm

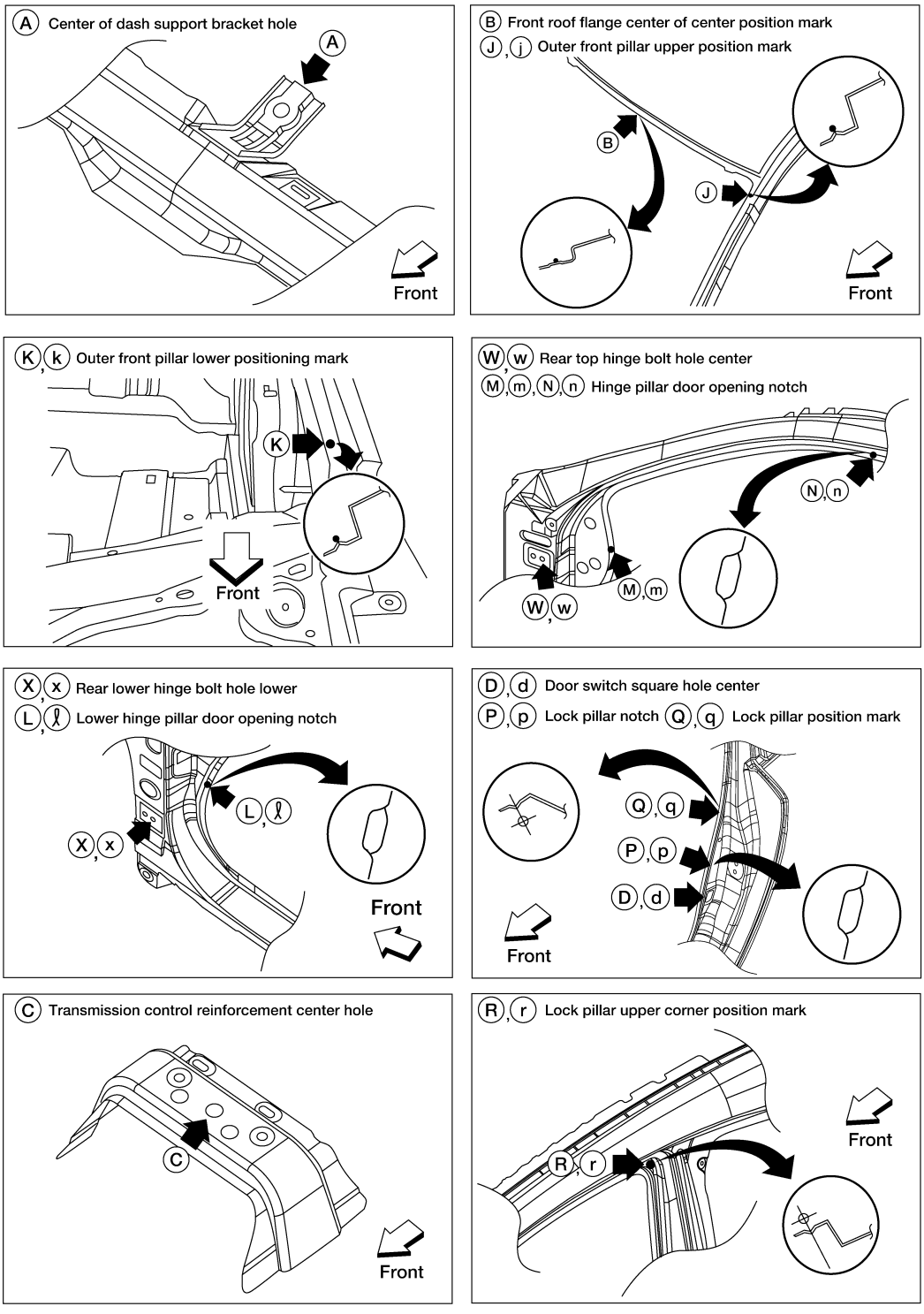
Figures marked with a (*) indicate symmetrically identical dimensions on both right and left sides of the vehicle.



Point	Dimension	Point	Dimension	Point	Dimension
Ⓐ ~ Ⓒ	999	ⓙ ~ Ⓒ	1071*	ⓟ ~ Ⓒ	955*
Ⓧ ~ Ⓓ	1195	ⓛ ~ Ⓒ	918*	Ⓟ ~ ⓟ	1472
Ⓧ ~ Ⓦ	320	Ⓛ ~ ⓚ	1466	ⓠ ~ Ⓒ	1040*
Ⓐ ~ ⓔ	2029	ⓜ ~ Ⓒ	932*	Ⓠ ~ ⓠ	1473
Ⓑ ~ Ⓒ	954	Ⓜ ~ ⓜ	1443	ⓡ ~ Ⓒ	1295*
Ⓓ ~ Ⓦ	1200	ⓝ ~ Ⓒ	1092*	Ⓡ ~ ⓡ	1178
Ⓔ ~ Ⓒ	1497	Ⓝ ~ ⓝ	1167	ⓢ ~ Ⓒ	1594*

ALKIA0805GB

Measurement Points



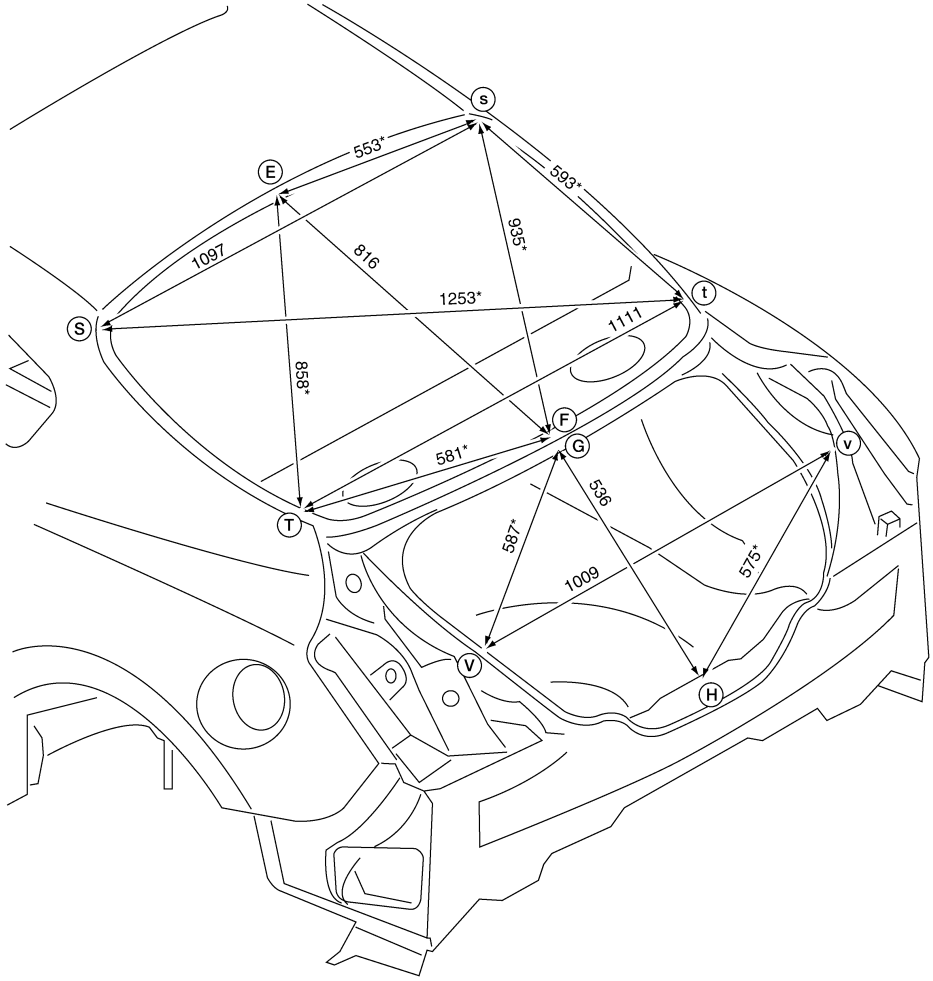
ALKIA0806GB

Rear Body

INFOID:0000000005433489

Measurement

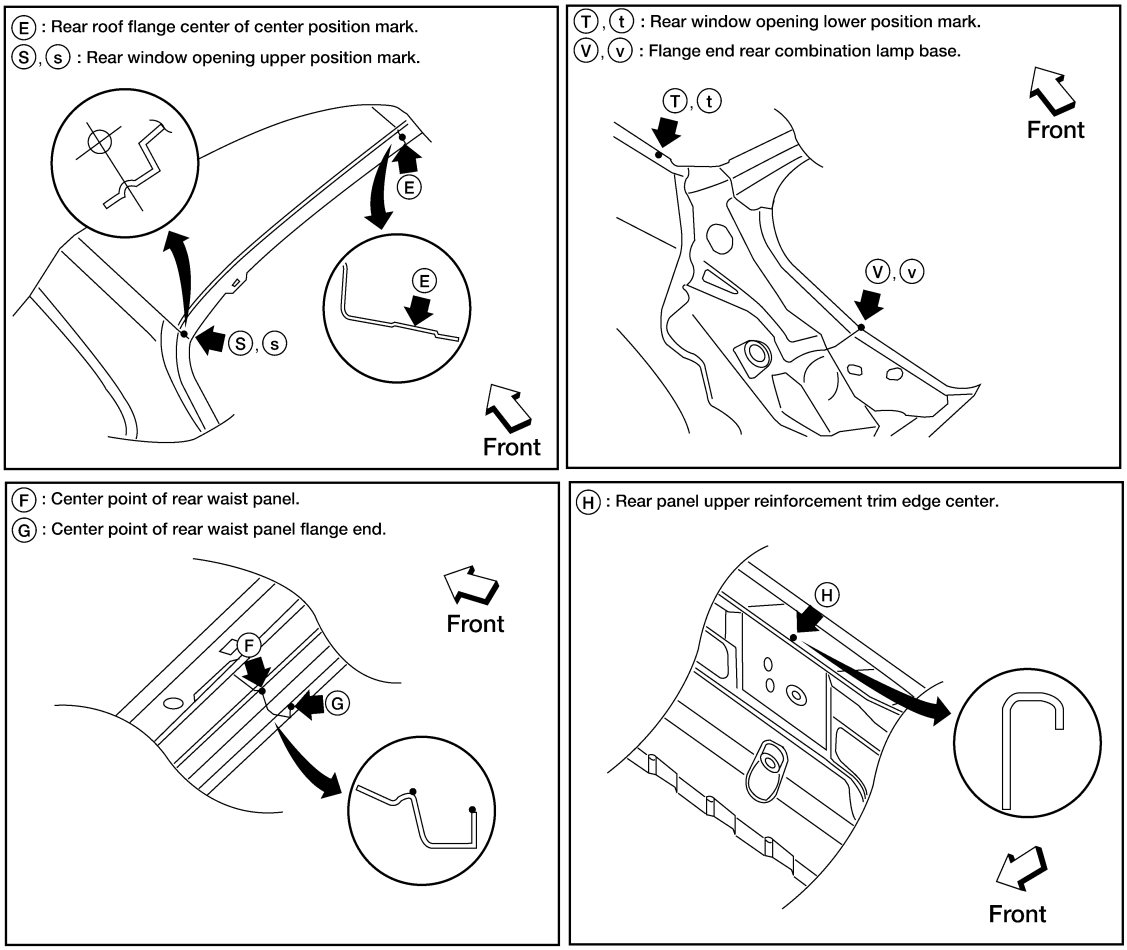
Figures marked with a (*) indicate symmetrically identical dimensions on both right and left sides of the vehicle.



Unit : mm

ALKIA0807GB

Measurement Points



ALKIA0808GB

PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:0000000005433490

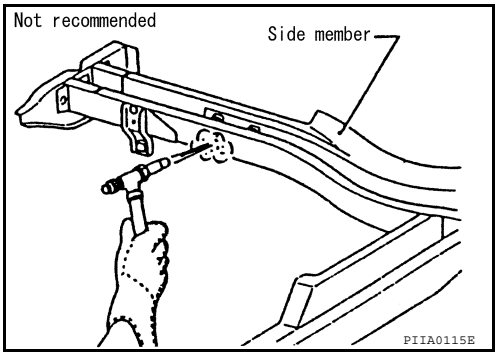
High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm^2 (38kg/mm^2,54klb/sq in)	SP130	• Front side member assembly • Hoodledge assembly • Upper dash • Front pillar reinforcement assembly • Rear side member assembly • Other reinforcements

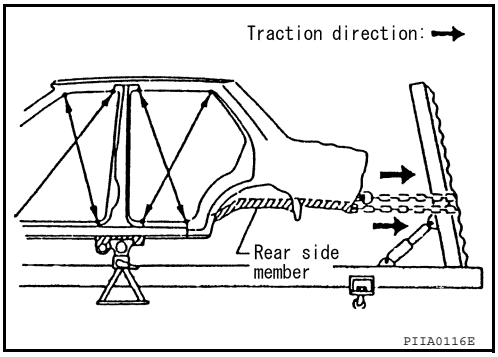
SP130 is the most commonly used HSS.

Read the following precautions when repairing HSS:

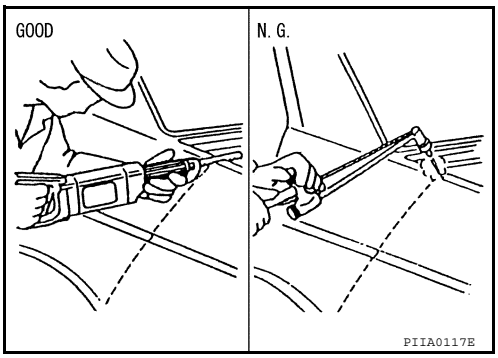
1. Additional points to consider
   - The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).
     Verify heating temperature with a thermometer.
     (Crayon-type and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



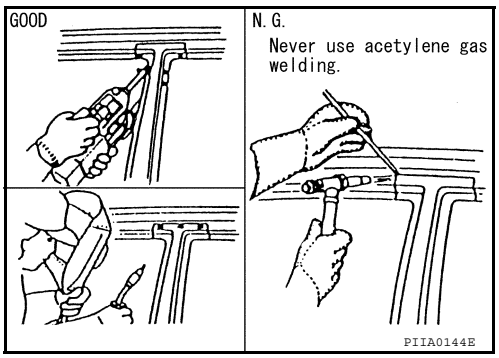
   - When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



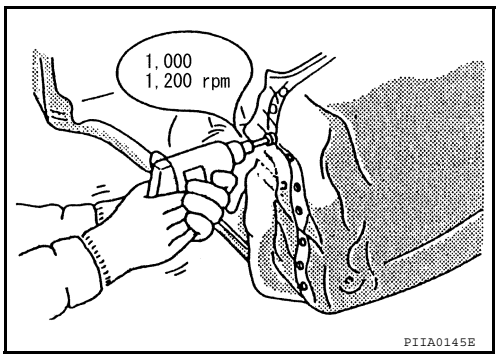
   - When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



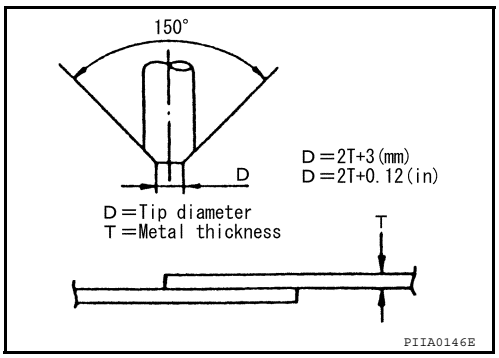
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



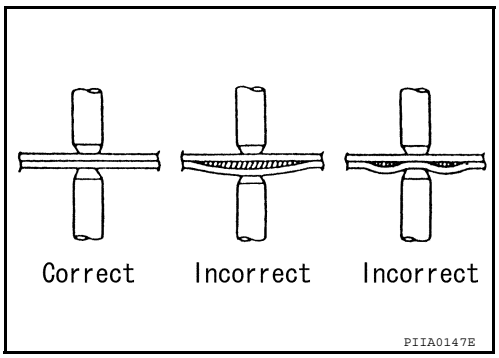
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



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



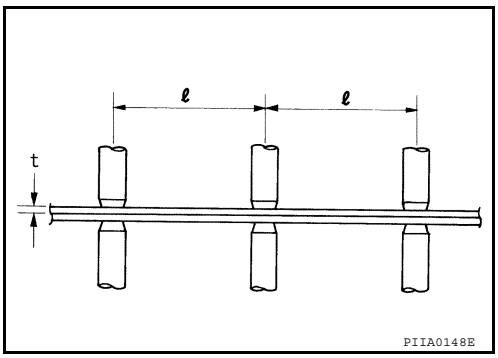
- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

Unit:mm

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



REPLACEMENT OPERATIONS

Description

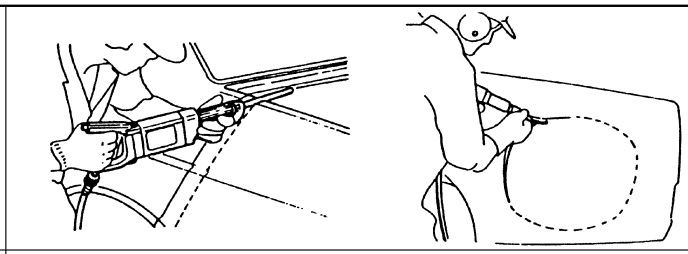
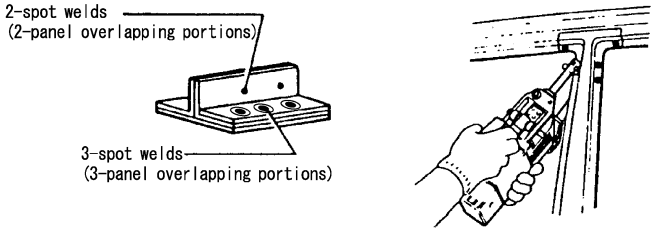
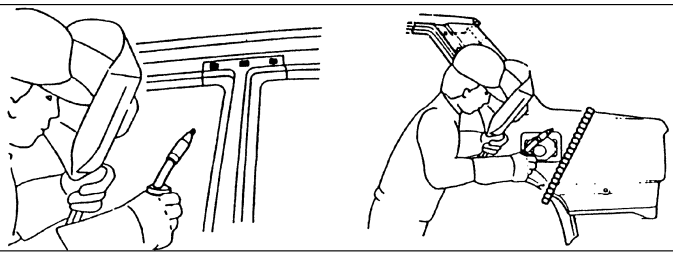
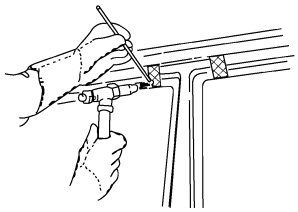
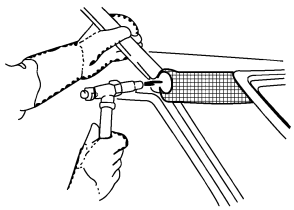
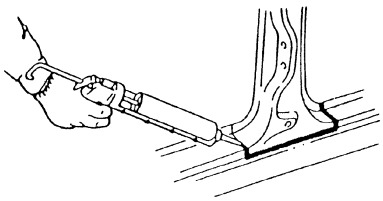
INFOID:0000000005433491

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

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

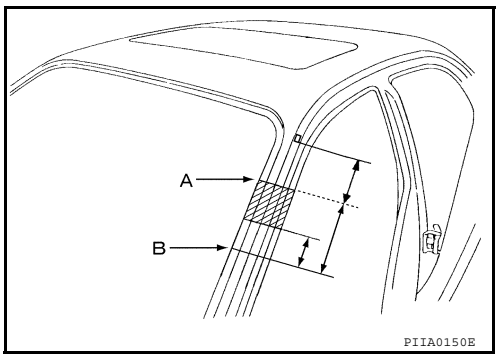
Please note that these information are prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

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

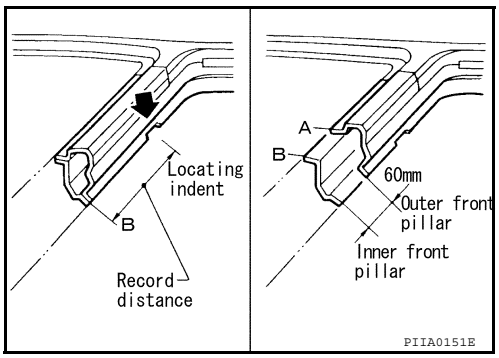
Saw cut or air chisel cut	
Spot weld ●●●● 2-spot welds ◉◉◉◉ 3-spot welds	
■■■ MIG plug weld	
MIG seam weld/ Point weld	
Brazing	
Soldering	
Sealing	

PIIA0149E

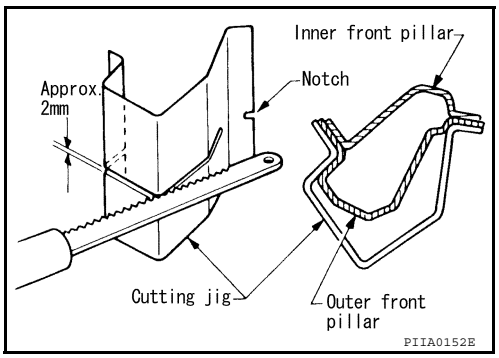
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



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

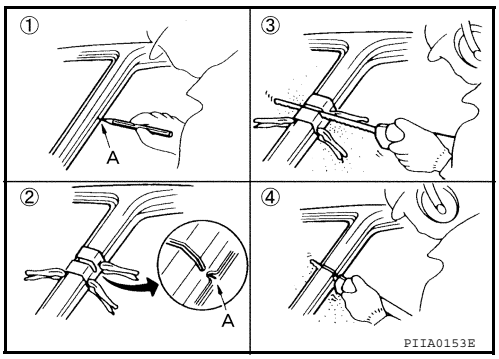


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



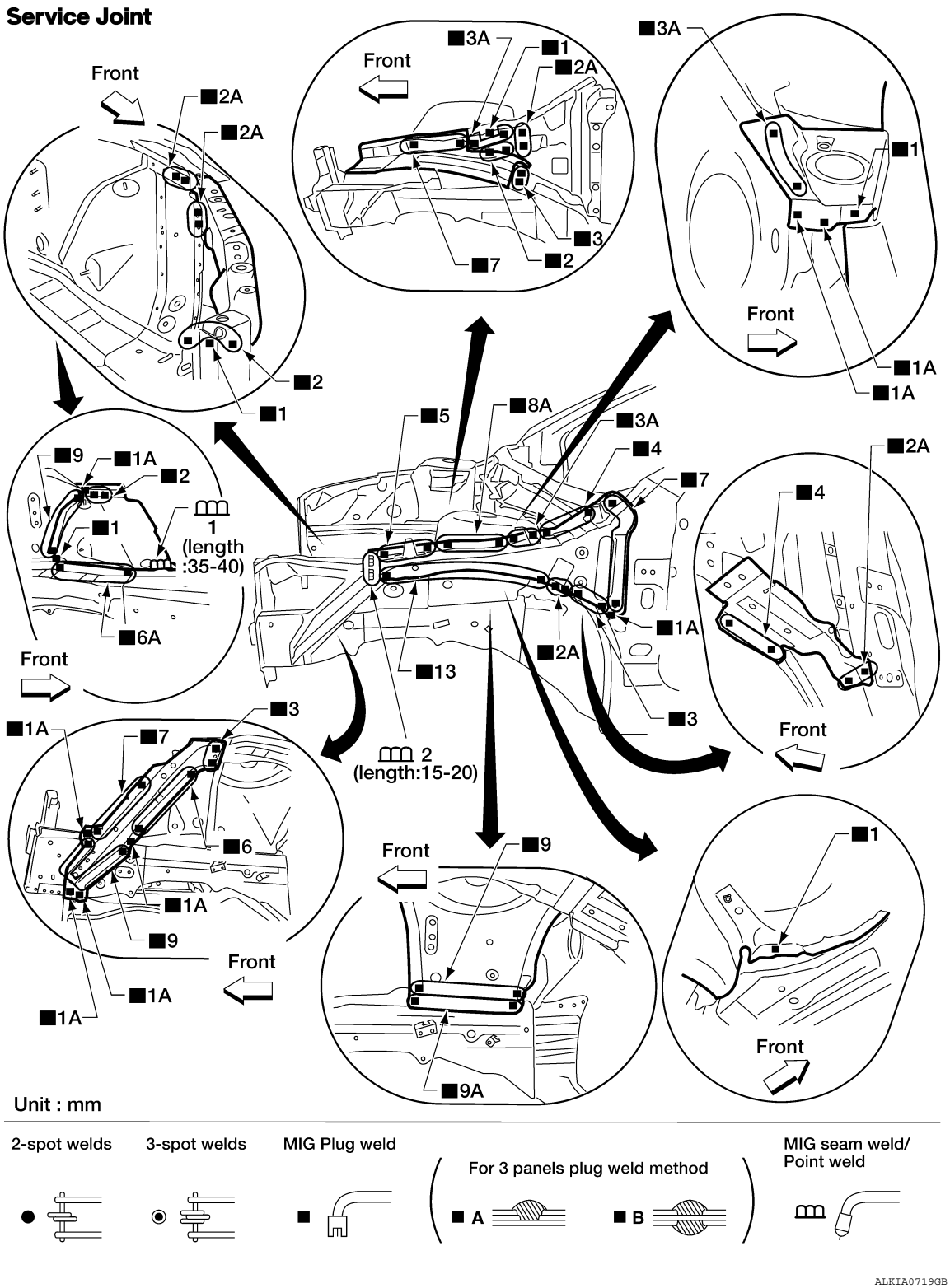
- An example of cutting operation using a cutting jig is as follows.

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



Hoodledge

INFOID:0000000005433492



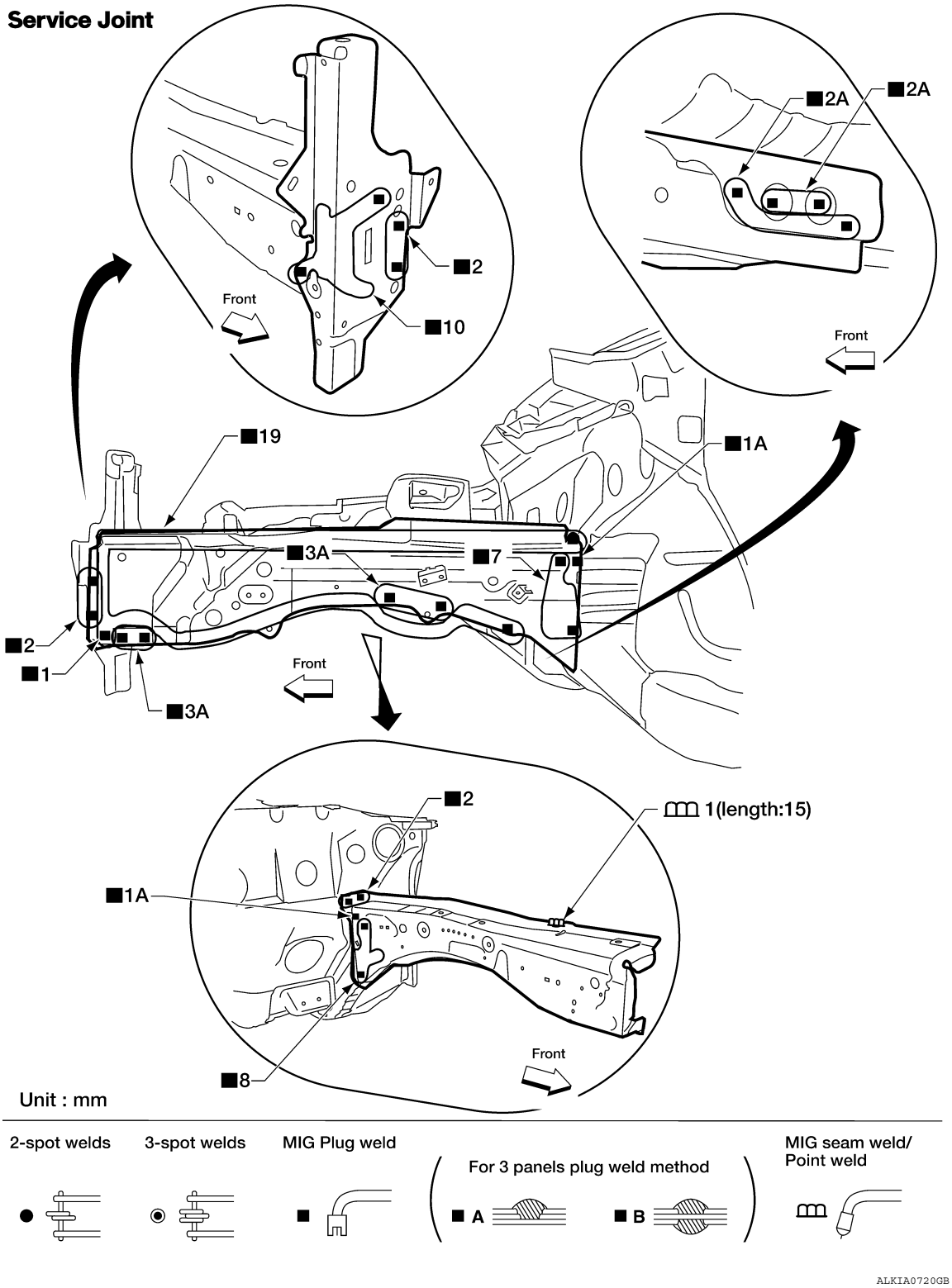
Change parts

- Front strut housing (LH)
- Hoodledge connector
- Upper front hoodledge
- Radiator core support upper
- Hoodledge reinforcement
- Hoodledge reinforcement rear

Front Side Member Front Assembly

INFOID:0000000005433493

• Work after the hoodledge has been removed.



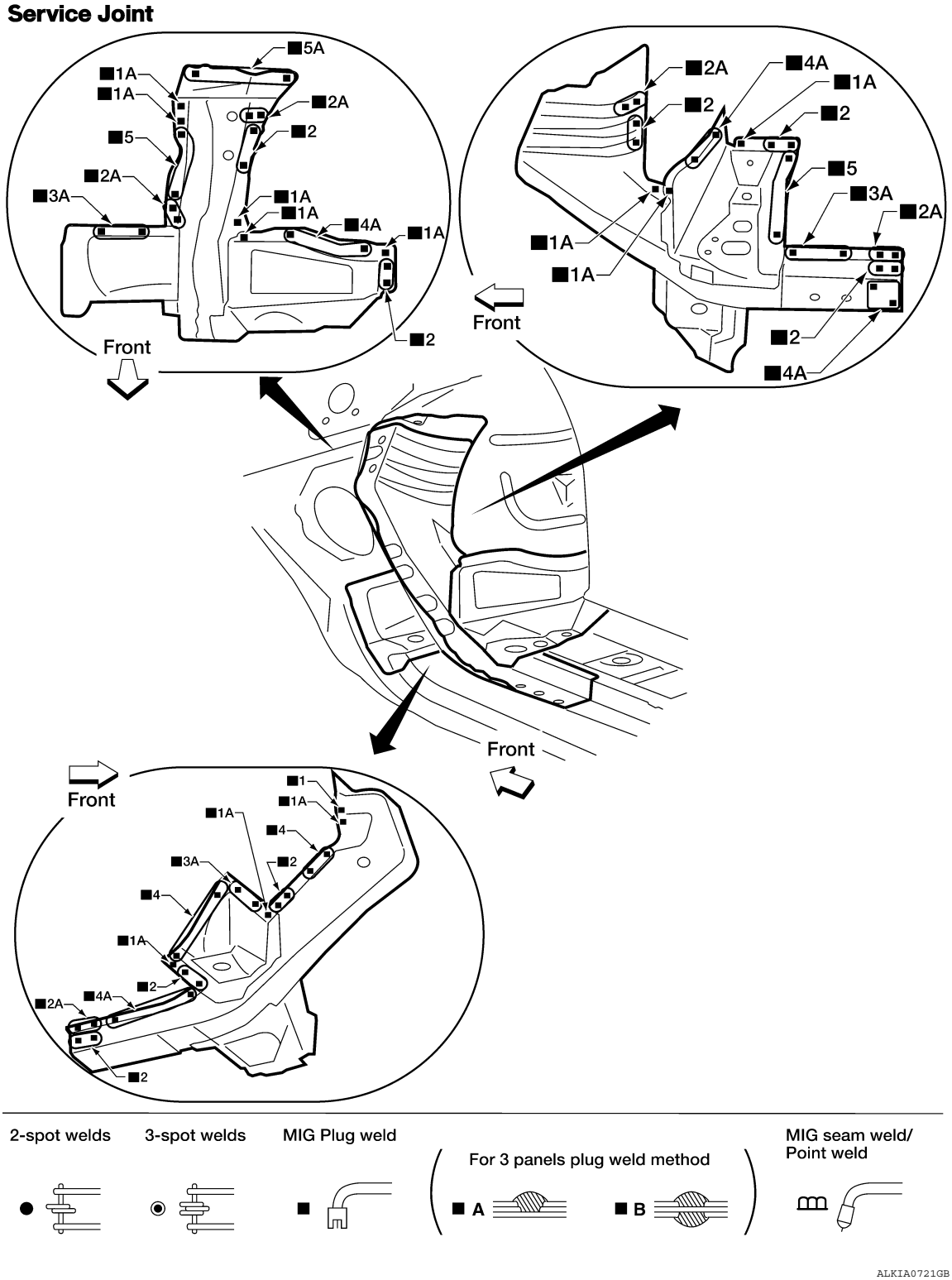
Change parts

- Front side member front assembly
- Front side member front closing plate
- Radiator core side support

Front Side Member

INFOID:0000000005433494

- Work after front side member front assembly has been removed.



Change parts

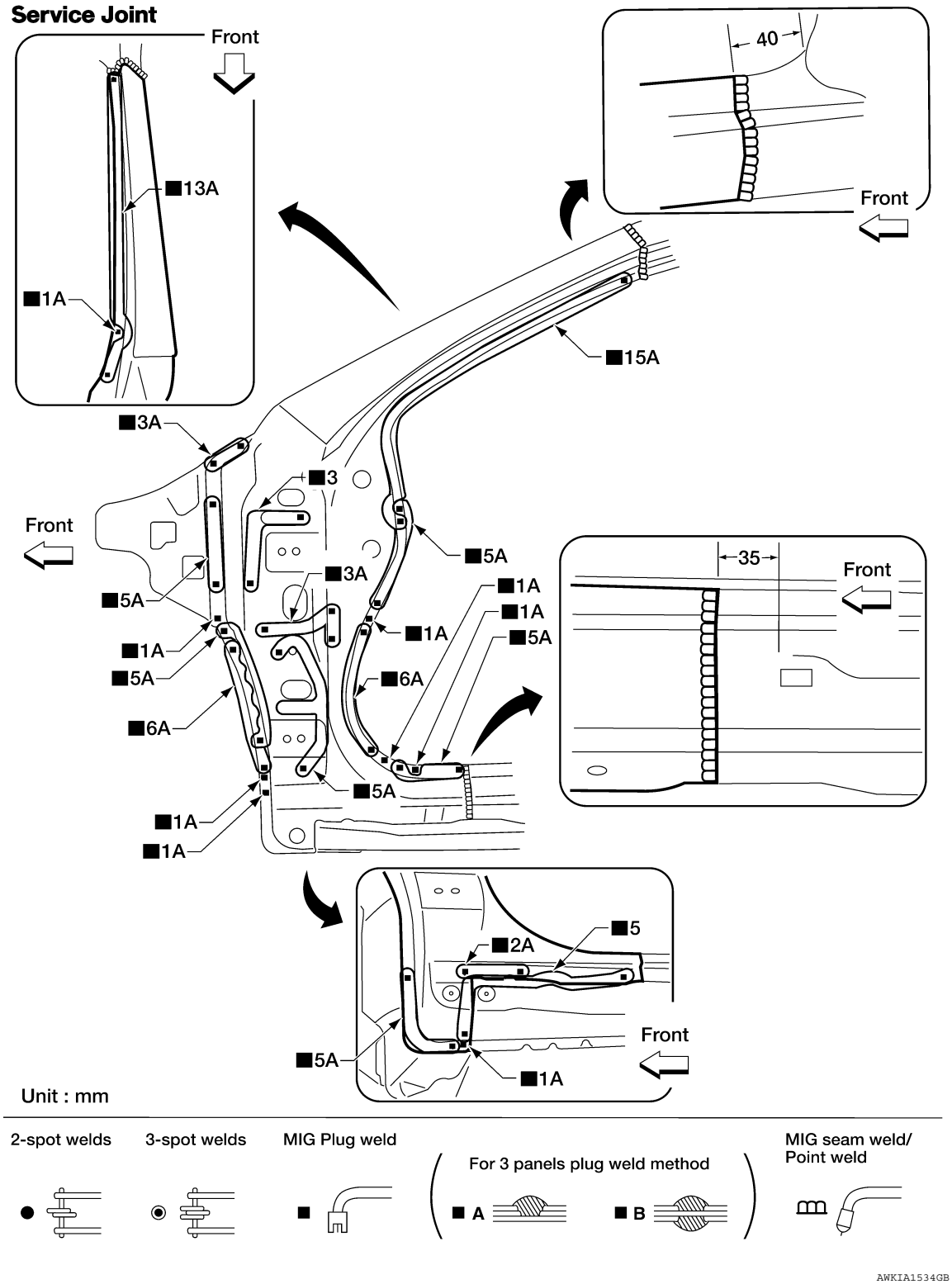
- Front side member assembly

Front Pillar

INFOID:0000000005433495

OUTER

- Work after the hoodledge and hoodledge reinforcement rear have been removed.



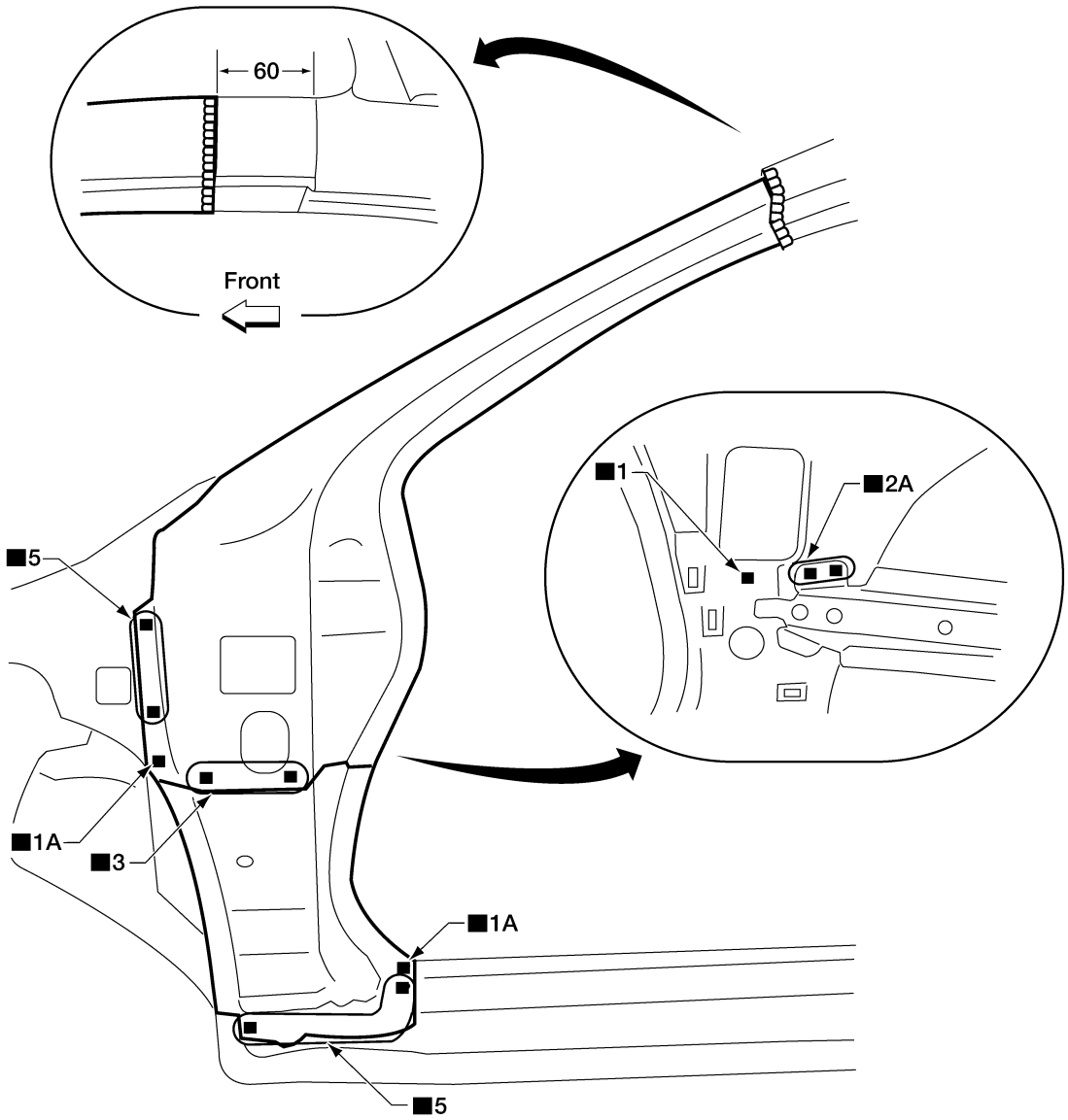
Change parts

- Front pillar section of body side outer

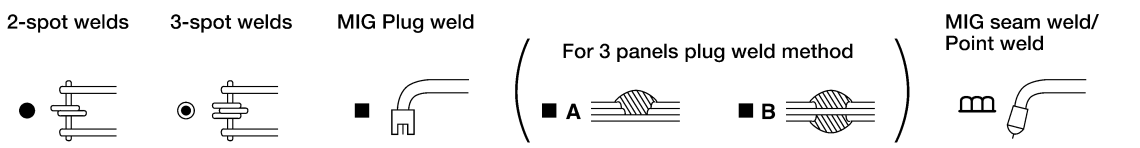
REINFORCEMENT

• Work after the front pillar section of the body side outer has been removed.

Service Joint



Unit : mm



ALKIA0723GB

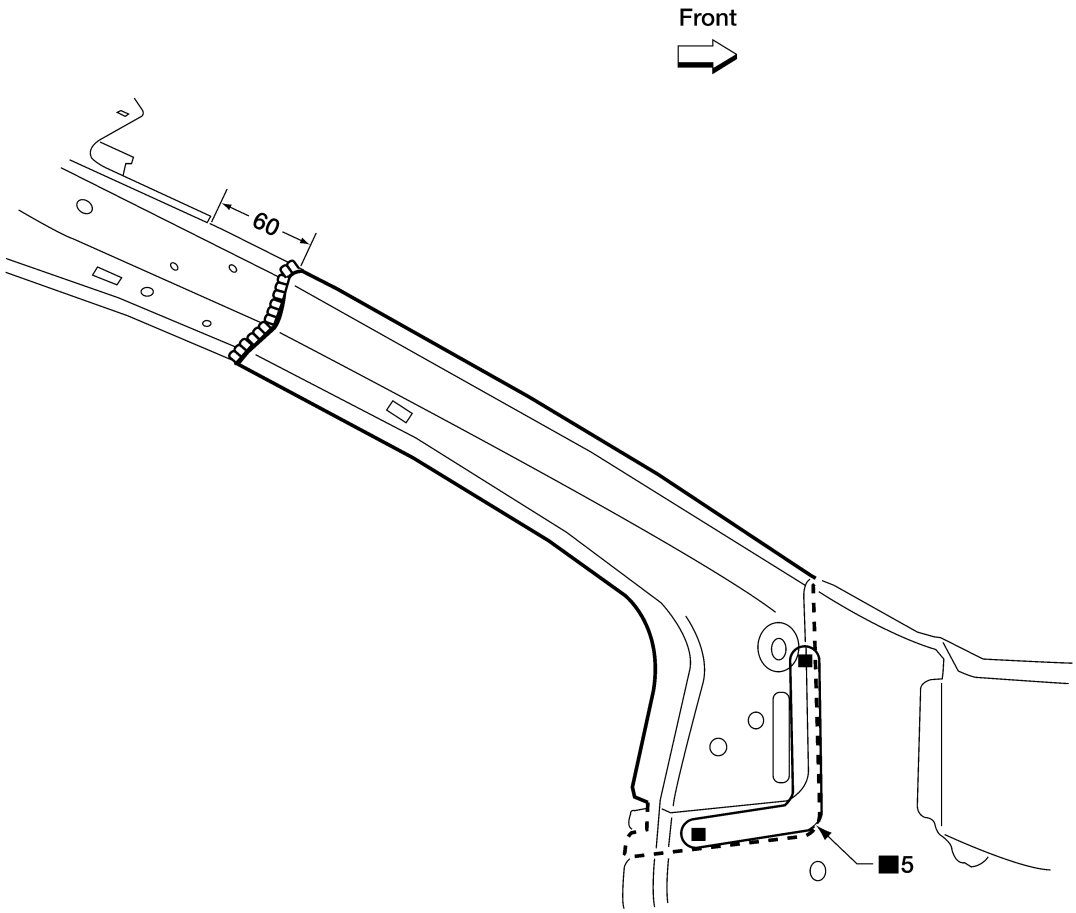
Change parts

- Hinge pillar upper reinforcement
- Hinge pillar lower reinforcement

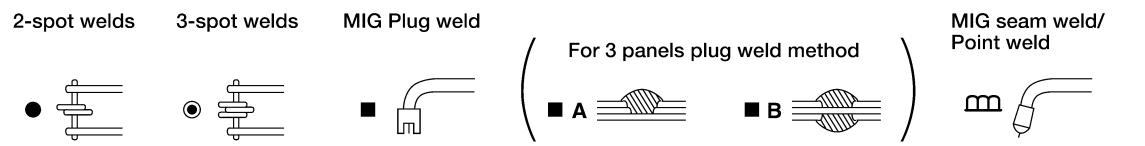
INNER

• Work after the hinge pillar upper and lower reinforcements have been removed.

Service Joint



Unit : mm



ALKIA0724GB

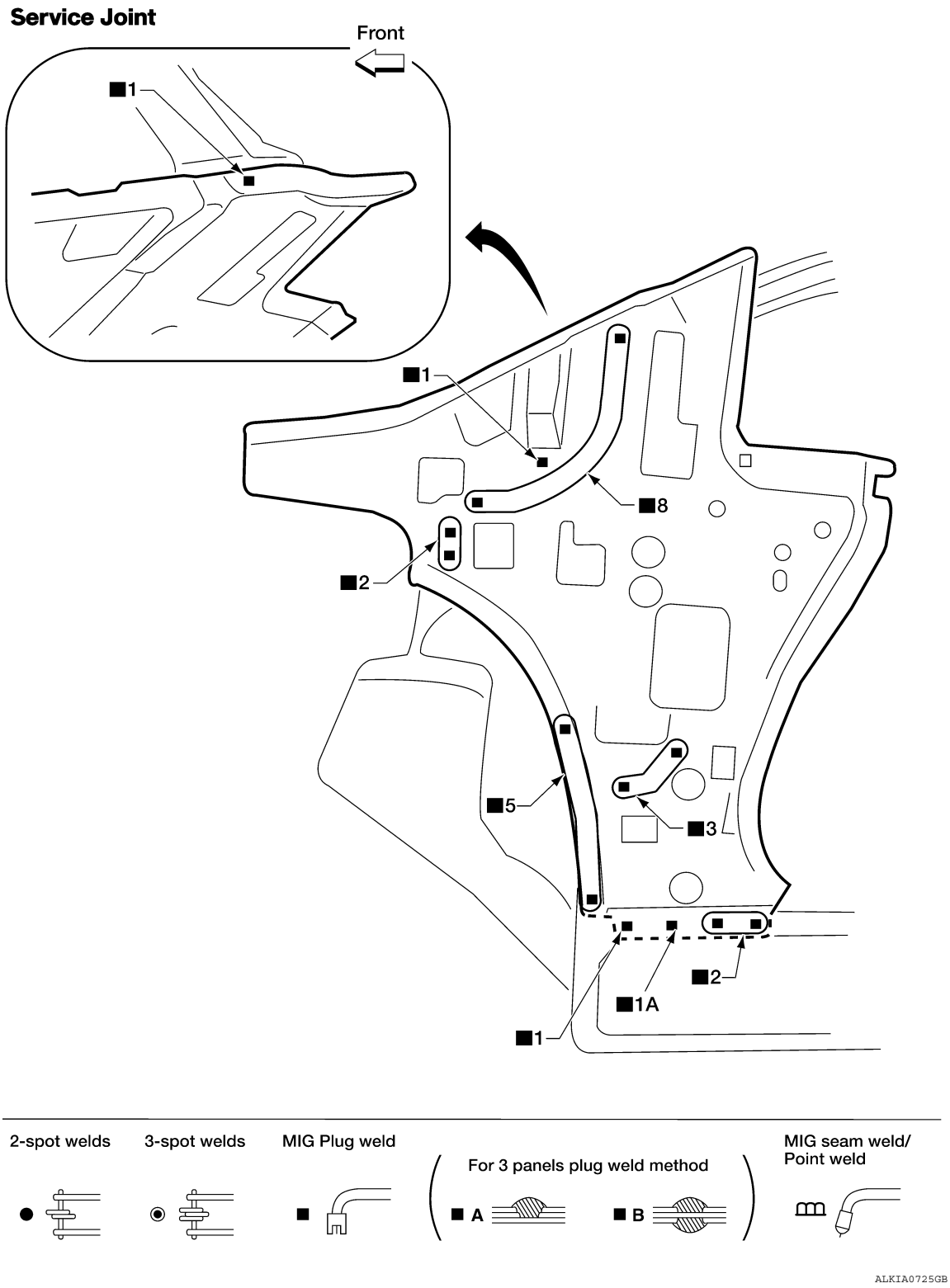
Change parts

- Front pillar inner reinforcement

Dash Side

INFOID:0000000005433496

Work with the front pillar inner reinforcement removed.



Change parts

- Dash side

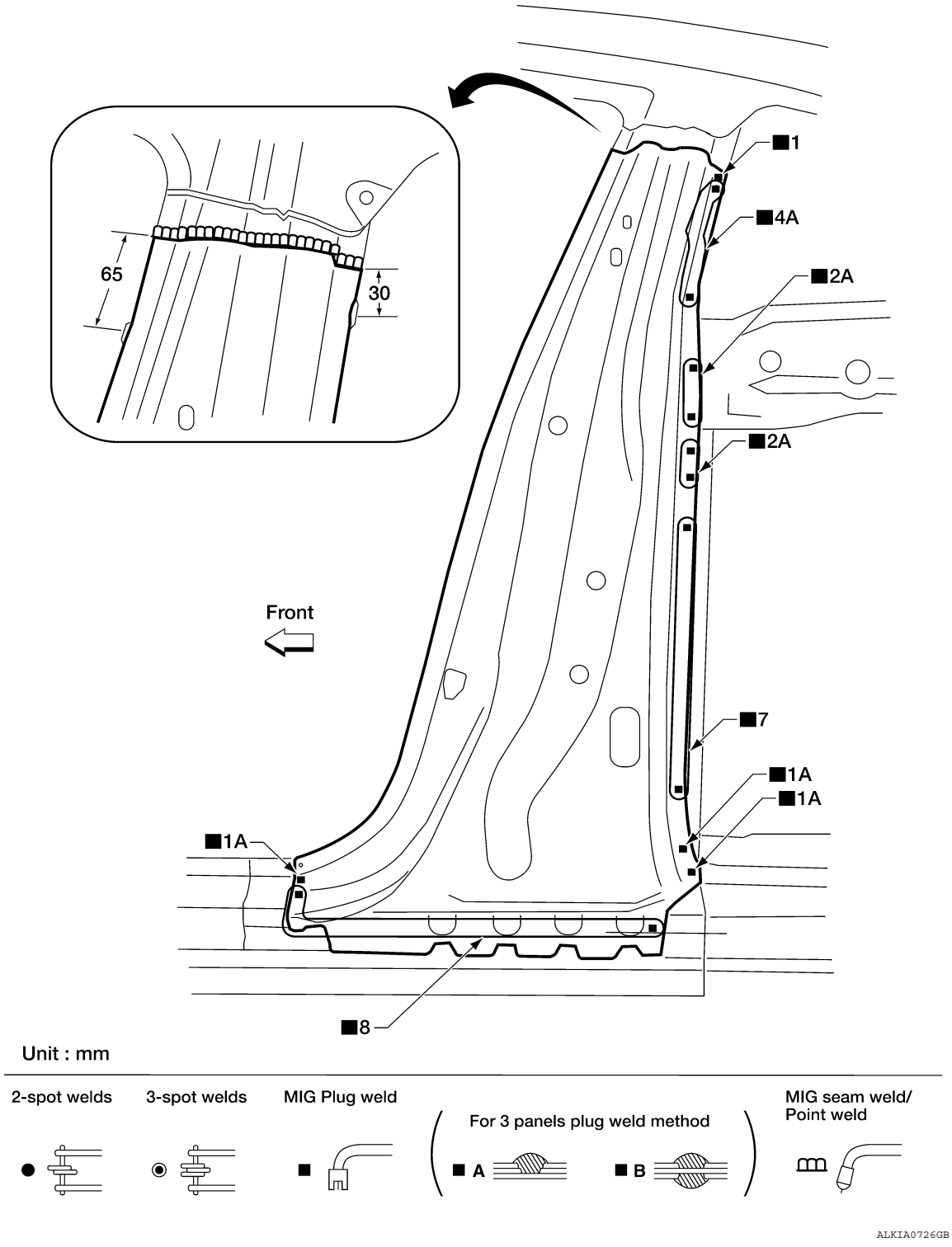
Center Pillar

INFOID:0000000005433497

REINFORCEMENT

Work after the rear fender has been removed.

Service Joint



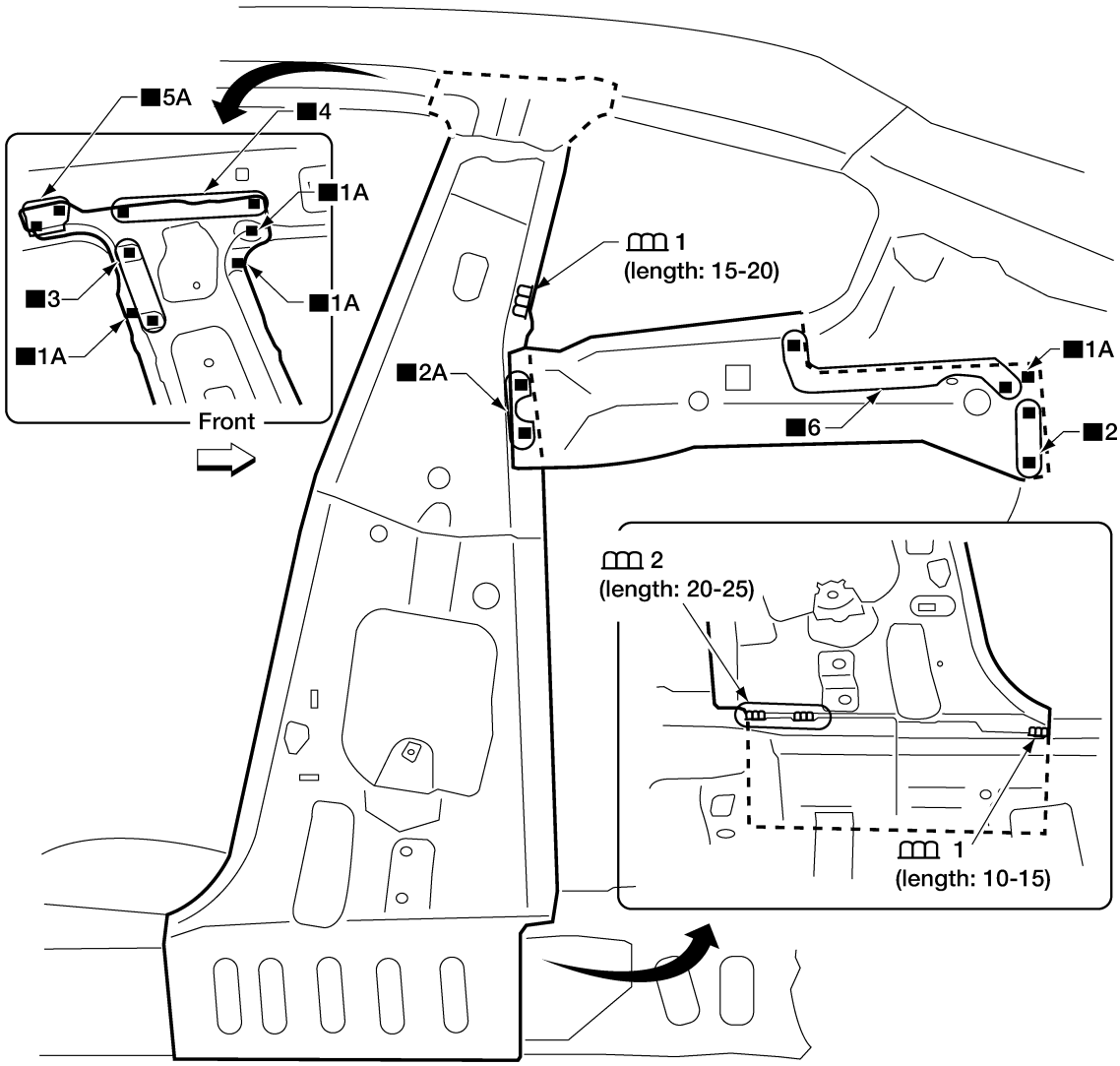
Change parts

- Lock pillar reinforcement

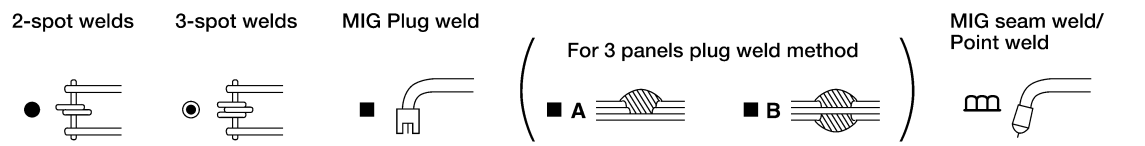
INNER

Work after the lock pillar reinforcement and outer sill have been removed.

Service Joint



Unit : mm



ALKIA0727GB

Change parts

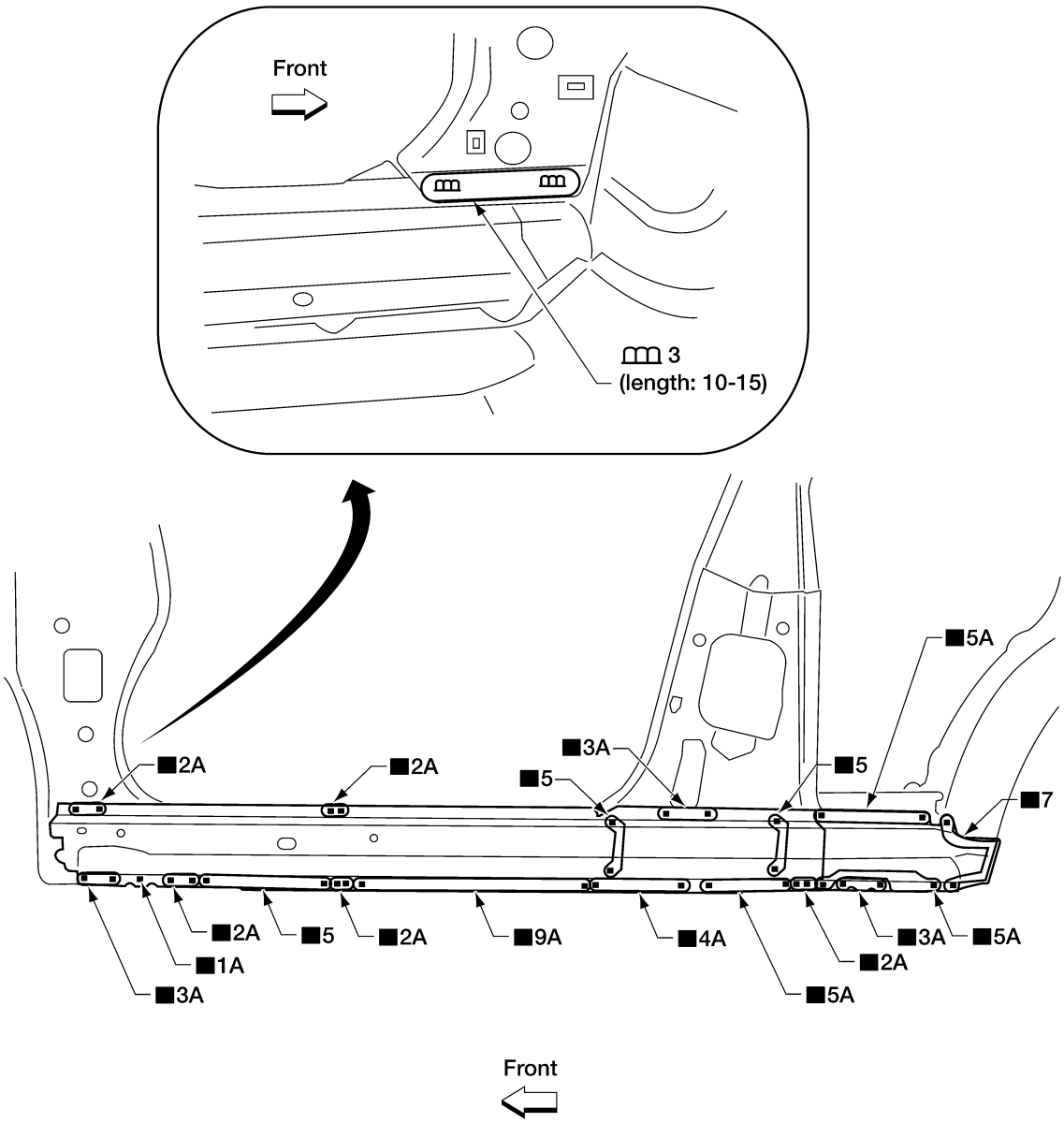
- Lock pillar inner
- Rear pillar inner

Outer Sill Reinforcement

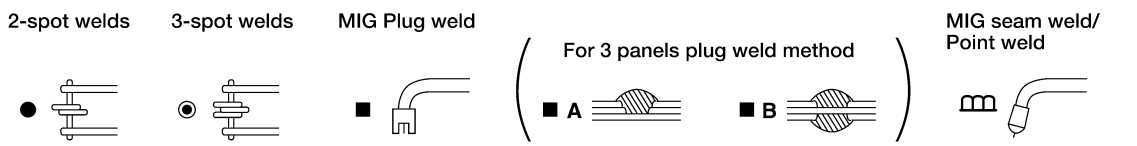
INFOID:0000000005433498

Work after the front pillar lower reinforcement and lock pillar reinforcement have been removed.

Service Joint



Unit : mm



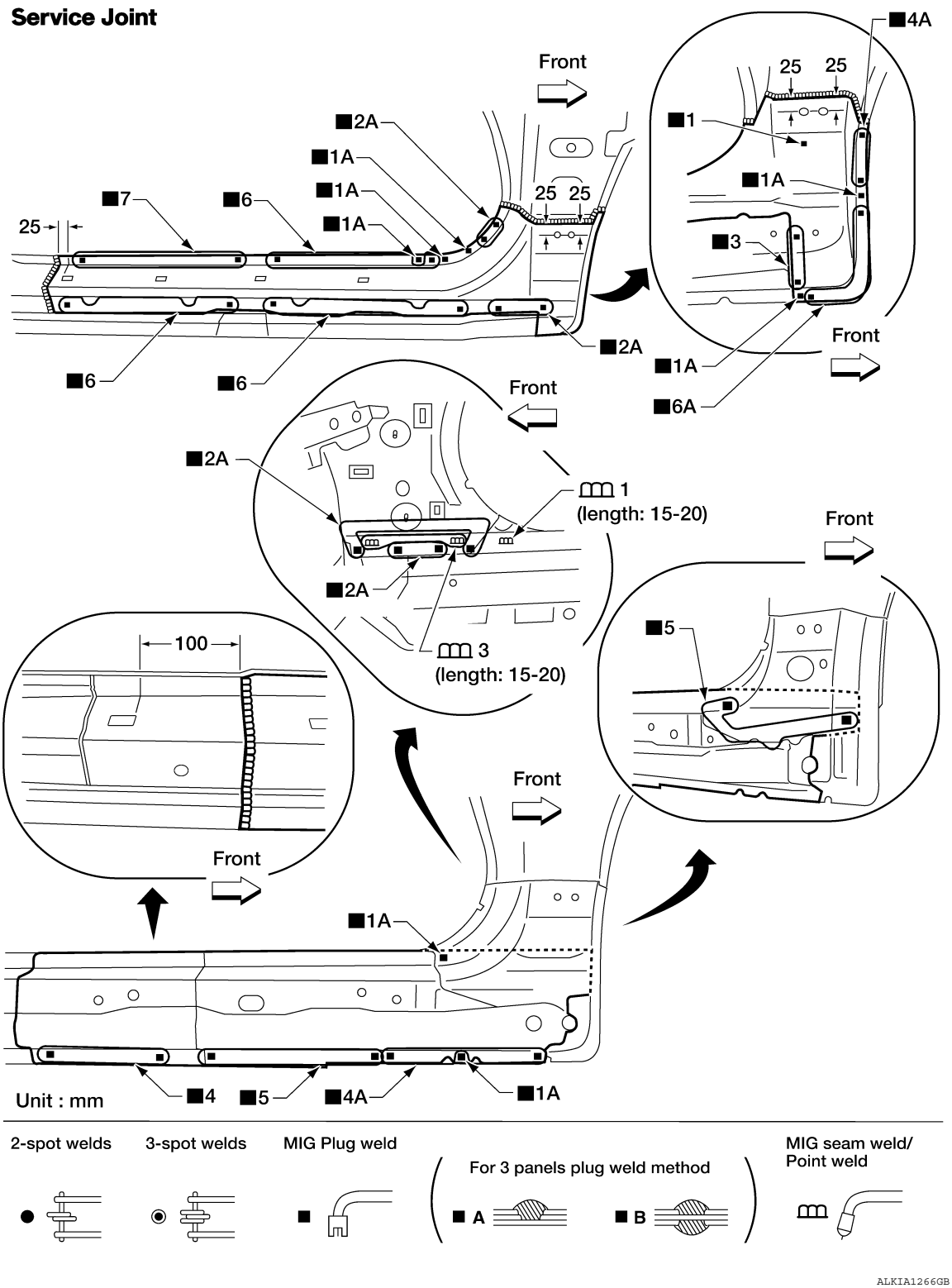
ALKIA0728GB

Change parts

- Outer sill reinforcement

Sill Partial

INFOID:0000000005433499



Change parts

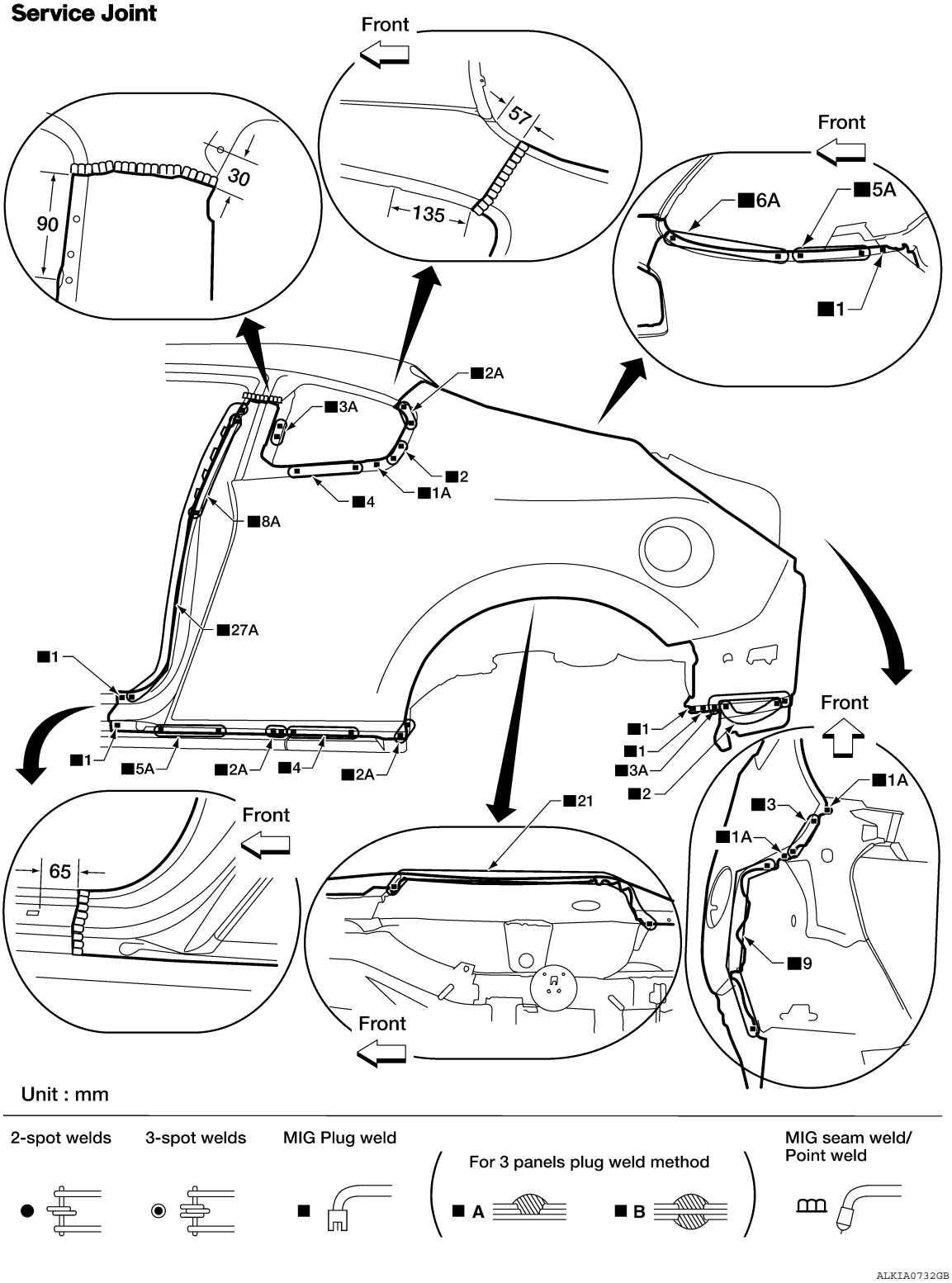
- Sill portion of body side outer
- Front portion of outer sill reinforcement

Rear Fender

INFOID:0000000005433500

- The rear panel assembly to rear fender welds must be separated prior to removal.

Service Joint



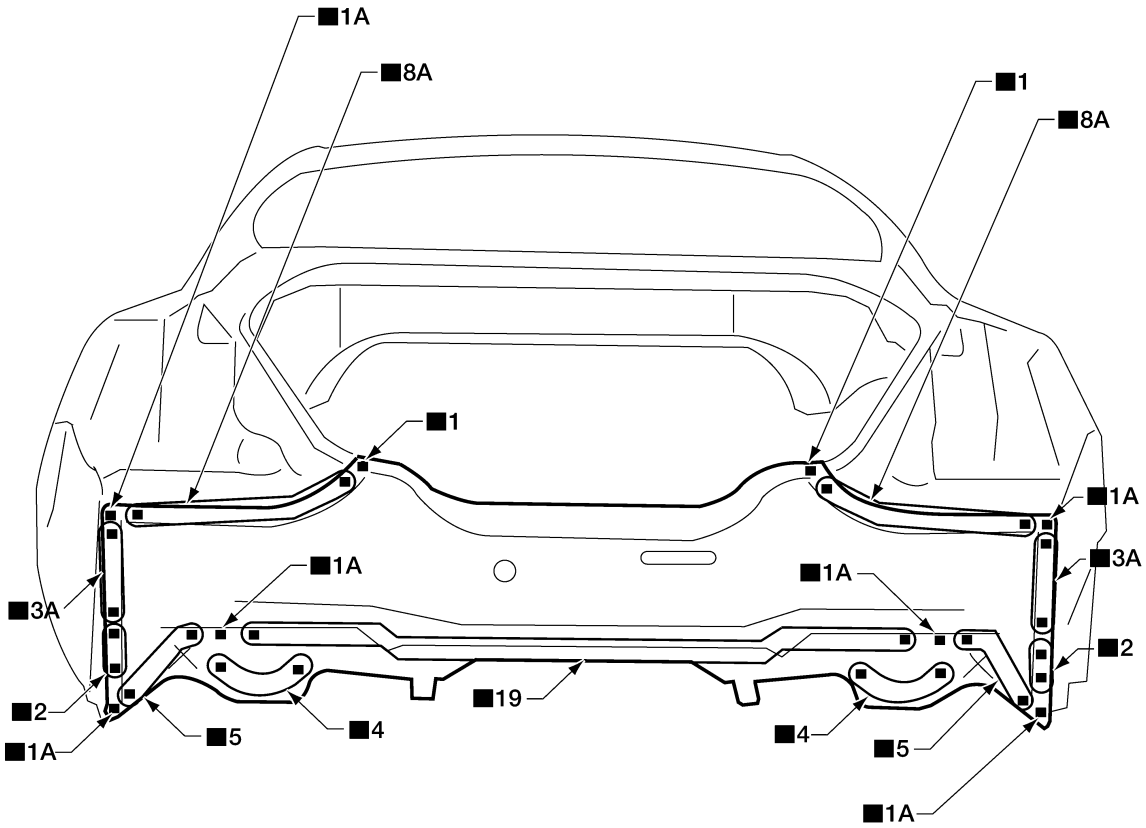
Change parts

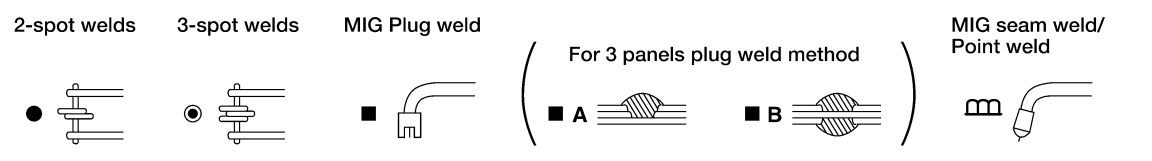
- Rear fender

Rear Panel

INFOID:0000000005433501

Service Joint





ALKIA0729GB

Change parts

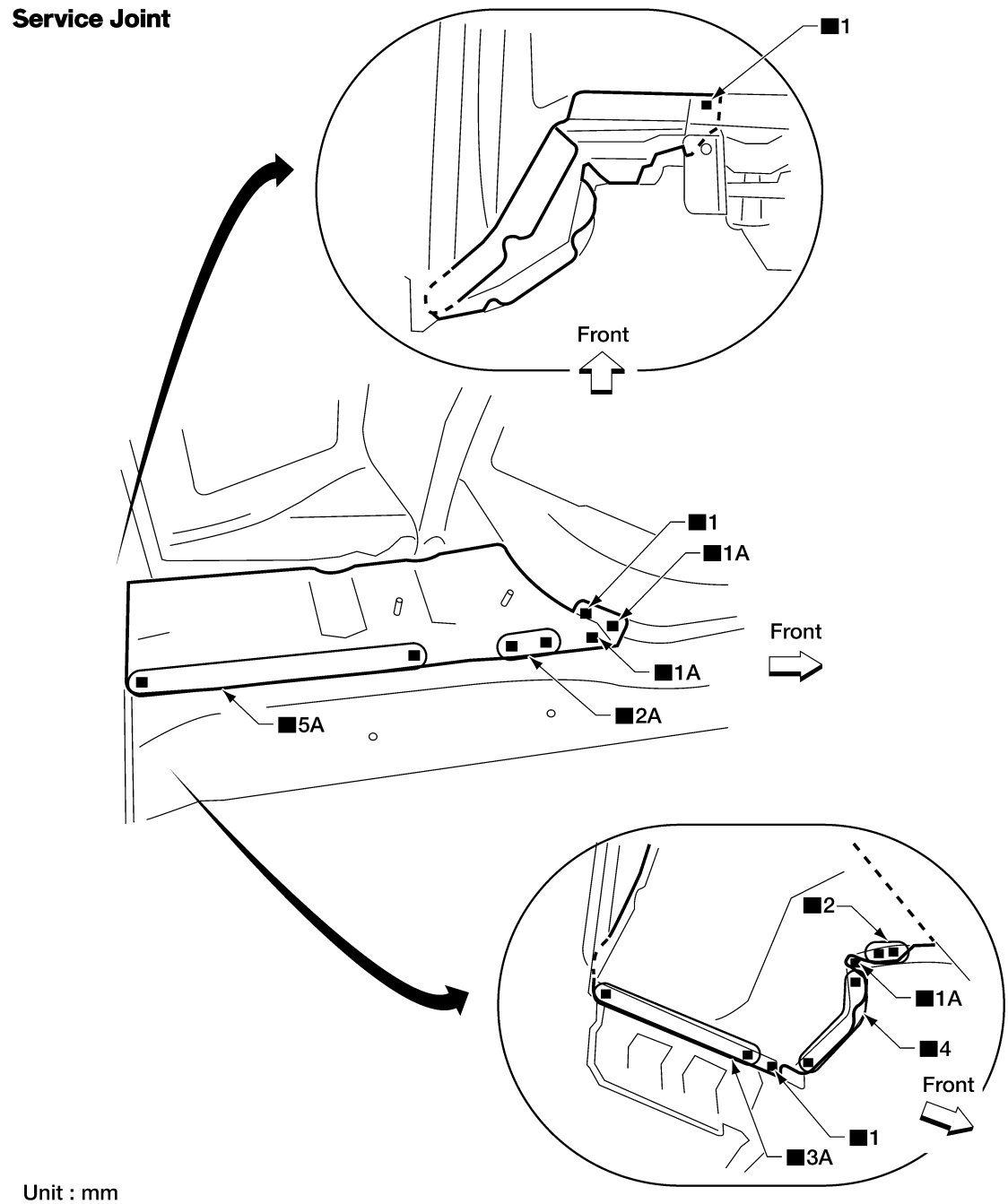
- Rear panel assembly

Rear Floor Rear LH

INFOID:0000000005433502

- Work after rear panel assembly has been removed.

Service Joint



Change parts

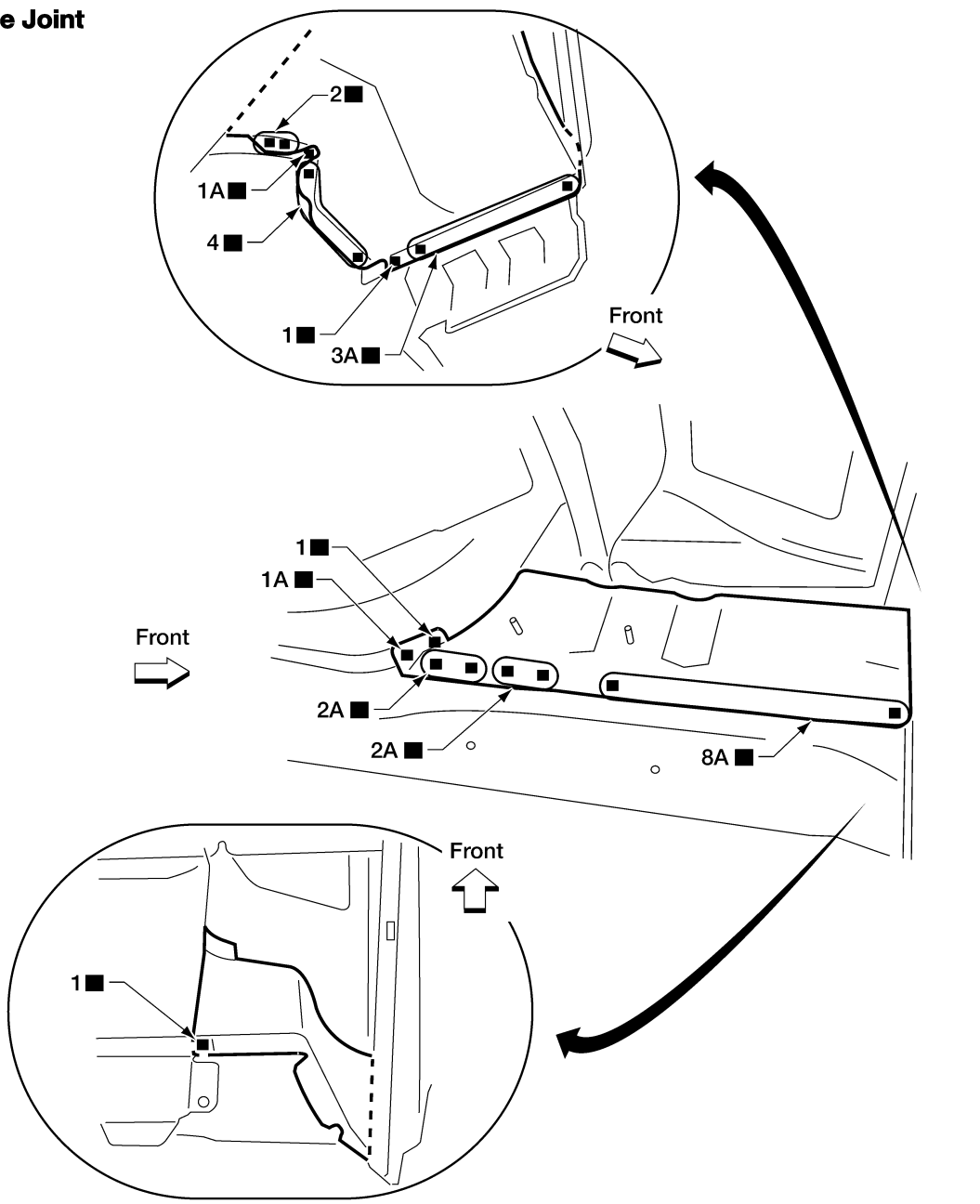
- Rear floor rear LH

Rear Floor Rear RH

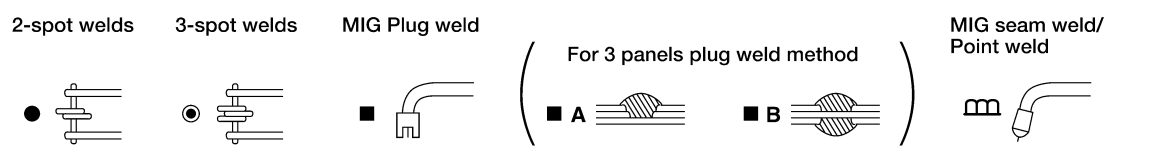
INFOID:0000000005433503

- Work after rear panel assembly has been removed.

Service Joint



Unit : mm



ALKIA0731GB

Change parts

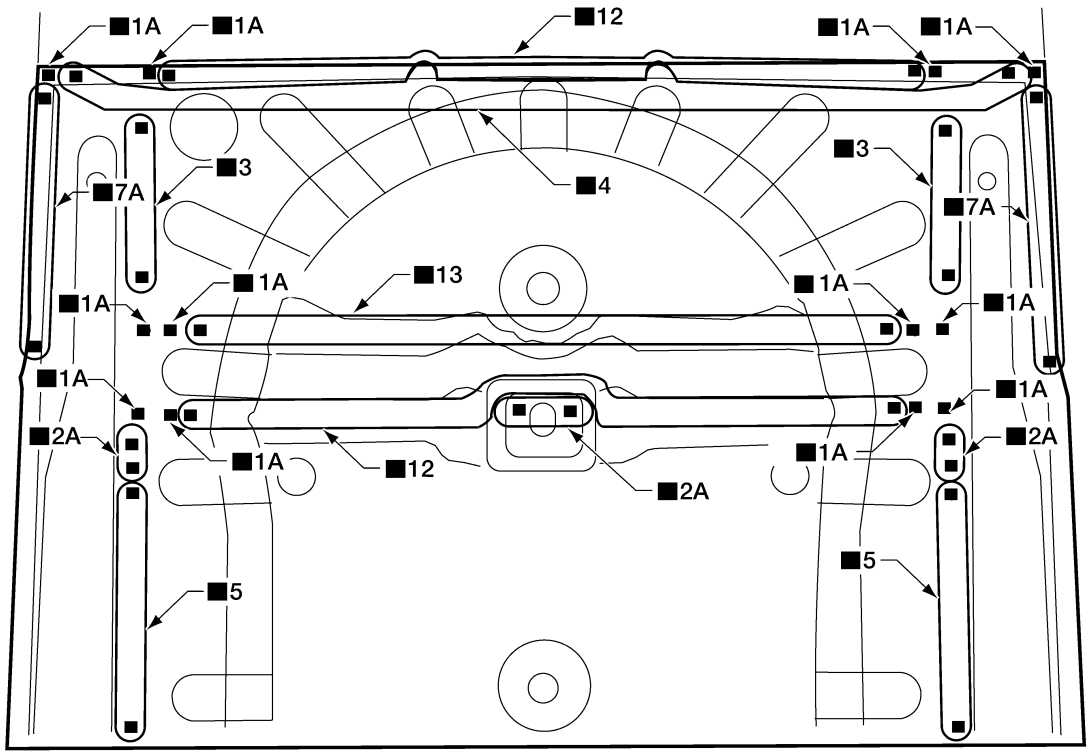
- Rear floor rear RH

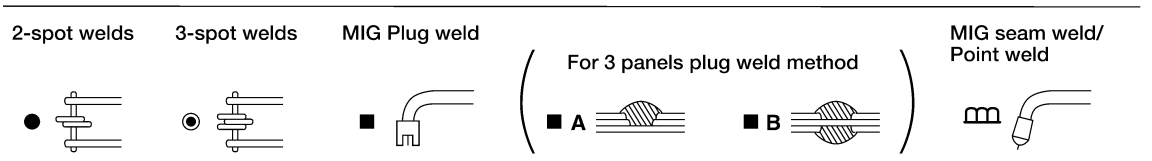
Rear Floor Rear

INFOID:0000000005433504

- Work after rear panel assembly, rear floor rear LH, and rear floor rear RH have been removed.

Service Joint





ALKIA0734GB

Change parts

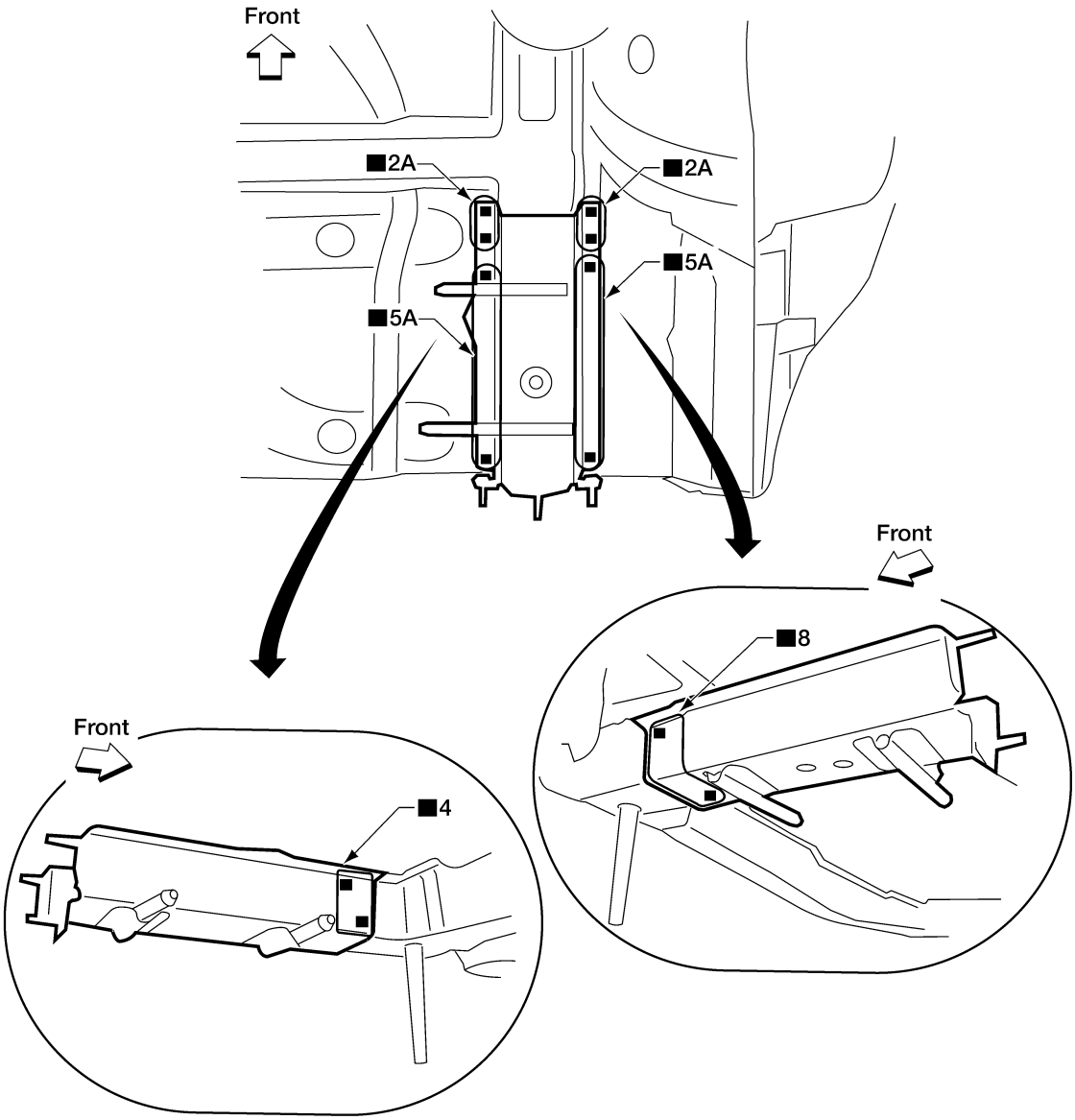
- Rear floor rear

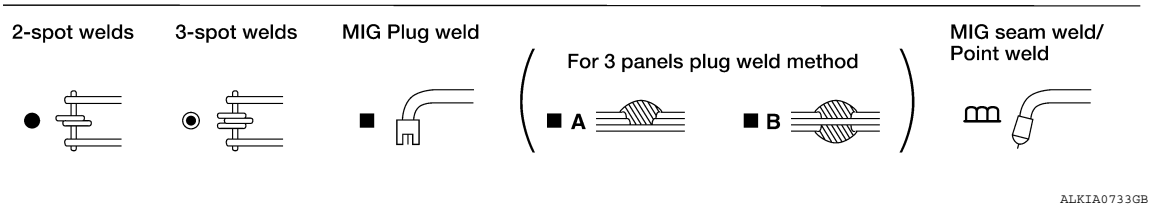
Rear Side Member Extension

INFOID:0000000005433505

- Work after rear panel assembly has been removed.

Service Joint





ALKIA0733GB

Change parts

- Rear side member extension

Foam Repair

INFOID:0000000005433506

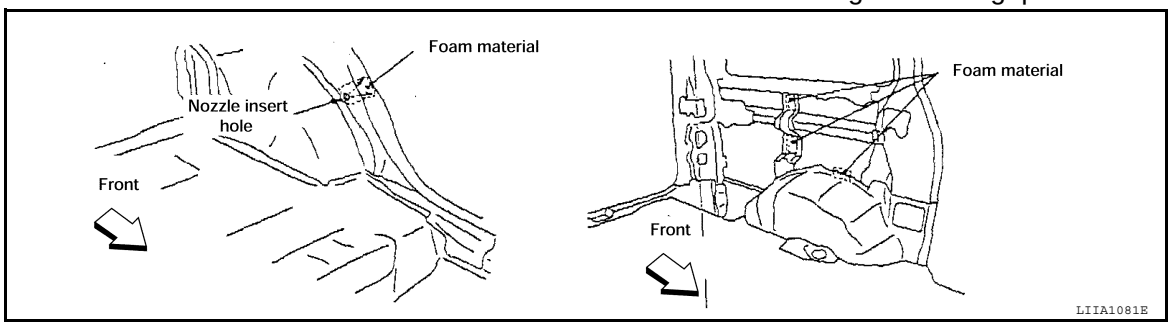
During factory assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

URETHANE FOAM APPLICATIONS

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

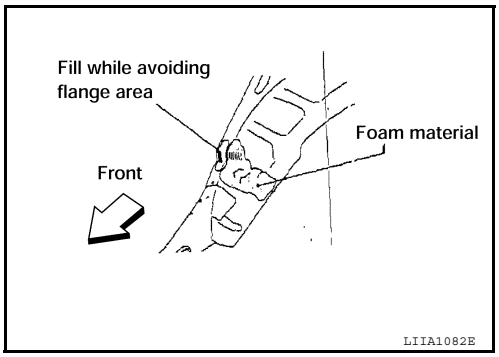
FILL PROCEDURES

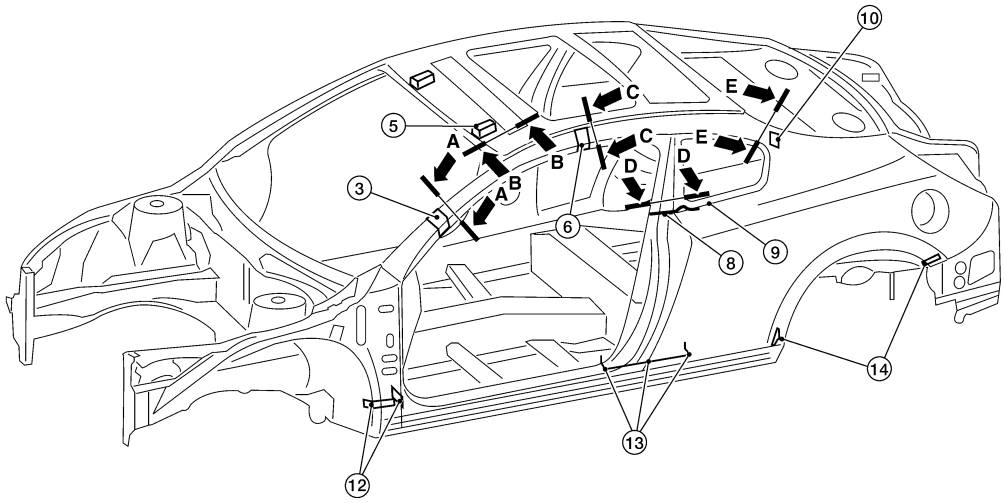
1. Fill procedures after installation service part.
   - Remove foam material remaining on vehicle side.
   - Clean area in which foam was removed.
   - Install service part.
   - Insert nozzle into hole near fill area and fill foam material or fill in enough to close gap with service part.

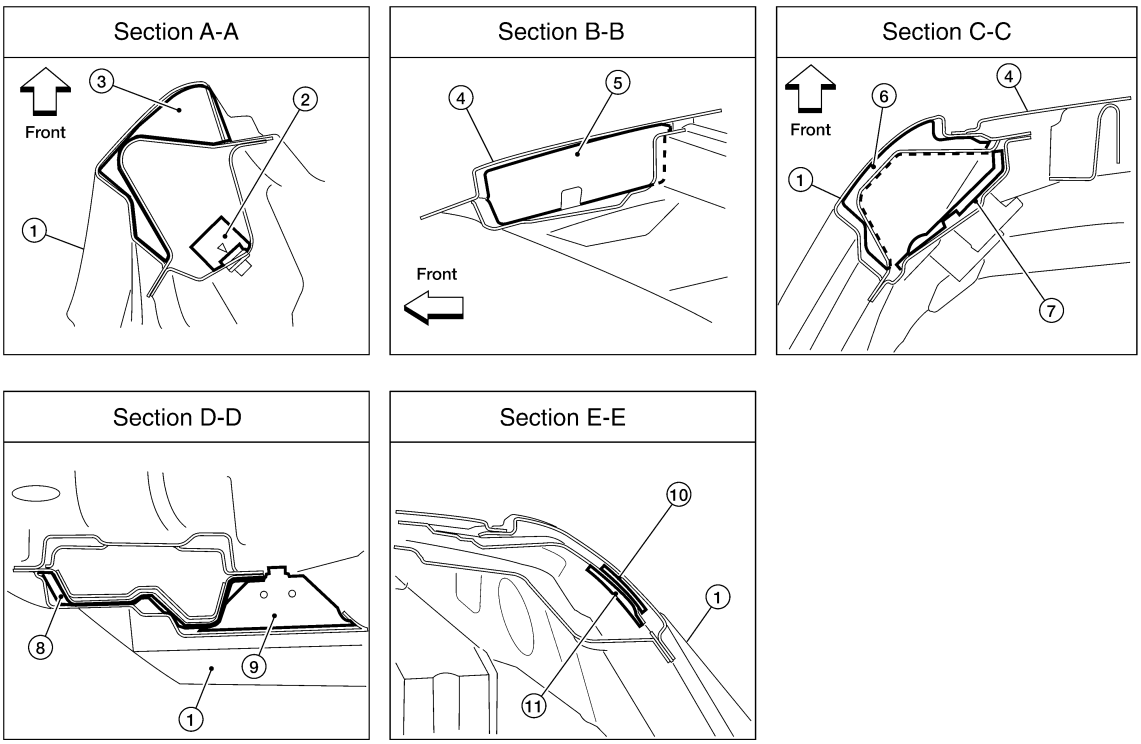


2. Fill procedures before installation service part

- Remove foam material remaining on vehicle side.
- Clean area in which 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.







ALKIA0809GB

1. Body side outer
2. Body side insulation (expanding foam baffle) upper front pillar
3. Body side insulation (expanding foam tape) front pillar
4. Roof panel assembly
5. Roof panel insulation (expanding foam baffle) front roof rail
6. Body side insulation (expanding foam tape) rear pillar
7. Body side insulation (expanding foam baffle) roof side
8. Body side insulation (expanding foam tape) lock pillar upper
9. 9.Body side insulation (expanding foam baffle) lock pillar upper
10. Body side insulation (expanding foam tape) upper rear pillar
11. Body side insulation (expanding foam tape) inner upper rear pillar
12. Body side insulation (expanding foam tape) hinge pillar lower
13. body side insulation (expanding foam tape) lock pillar lower
14. Body side insulation (expanding foam tape) rear wheel well

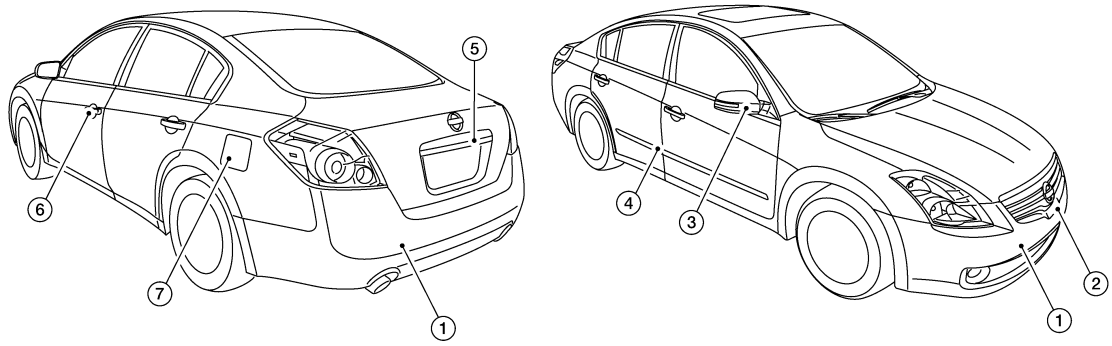
FEATURES OF NEW MODEL

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:0000000005433507

SEC. 620 • 680 • 760 • 780 • 800 • 820 • 960



AWKIA1257ZZ

Component			Color code	HAB	K12	K50	KH3	NAD	QX3	RAB	RAP
			Description	Beige	Silver	Dark Grey	Black	Red	White	Blue	Medium Grey
			Paint type	M	M	PM	S	PM	3P	PM	M
			Hard clear coat	×	×	-	-	×	-	×	-
1	Bumper fascia		Body color	HAB	K12	K50	KH3	NAD	QX3	RAB	RAP
2	Front grille		Chromium-plate + Smoke clear	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09	Cr + HFM-09
3	Door outside mirror	Case	Body color	HAB	K12	K50	KH3	NAD	QX3	RAB	RAP
4	Body side molding		Body color	HAB	K12	K50	KH3	NAD	QX3	RAB	RAP
5	License plate finisher		Chromium plate + Body color	Cr + HAB	Cr + K12	Cr + K50	Cr + KH3	Cr + NAD	Cr + QX3	Cr + RAB	Cr + RAP
6	Door outside handle		Body color	HAB	K12	K50	KH3	NAD	QX3	RAB	RAP
7	Fuel filler lid		Body color	HAB	K12	K50	KH3	NAD	QX3	RAB	RAP

M = Metallic, S = Solid, 2S = Solid and Clear, 2P = 2-stage Pearl, 3P = 3-Stage pearl, PM = Pearl metallic, Black is solvent based, all others are water based.

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000005796908

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

HANDLING PRECAUTIONS FOR PLASTICS

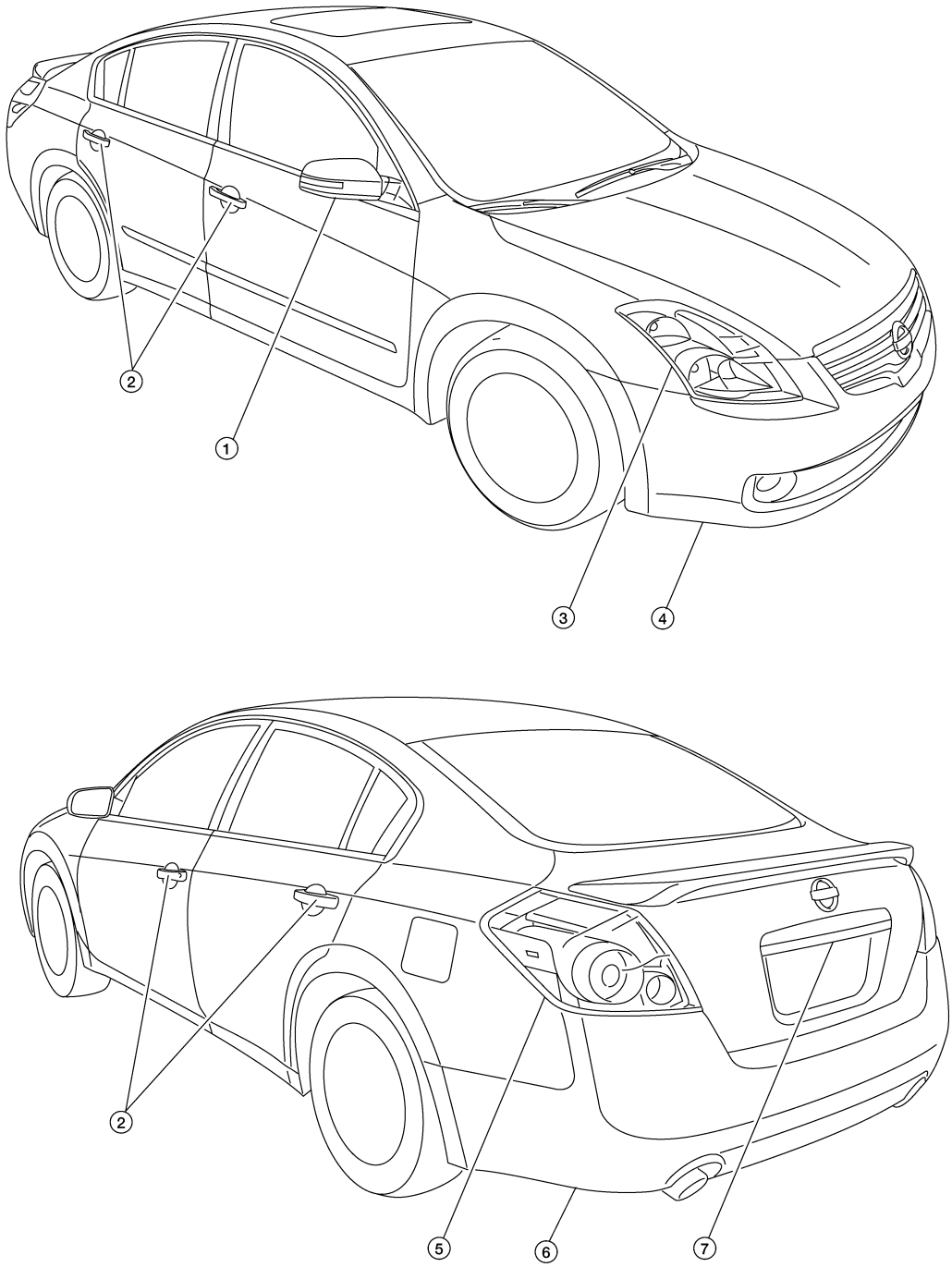
Precautions For Plastics

INFOID:0000000005433508

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
PP	Polypropylene	90(194)	Same as above.	Flammable, avoid battery acid.
UP	Unsaturated Polyester	90(194)	Same as above.	Flammable
PS	Polystyrene	80(176)	Avoid solvents.	Flammable
ABS	Acrylonitrile Butadiene Styrene	80(176)	Avoid gasoline and solvents.	
PMMA	Poly Methyl Methacrylate	85(185)	Same as above.	
EVAC	Ethylene Vinyl Acetate	90(194)	Same as above.	
ASA	Acrylonitrile Styrene Acrylate	100(222)	Same as above.	Flammable
PPE	Poly Phenylene Ether	110(230)	Same as above.	
PC	Polycarbonate	120(248)	Same as above.	
PAR	Polyarylate	180(356)	Same as above.	
PUR	Polyurethane	90(194)	Same as above.	
POM	Poly Oxymethylene	120(248)	Same as above.	Avoid battery acid.
PBT+ PC	Poly Butylene Terephthalate + Polycarbonate	120(248)	Same as above.	Flammable
PA	Polyamide	140(284)	Same as above.	Avoid immersing in water.
PBT	Poly Butylene Terephthalate	140(284)	Same as above.	
PET	Polyester	180(356)	Same as above.	
PEI	Polyetherimide	200(392)	Same as above.	

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

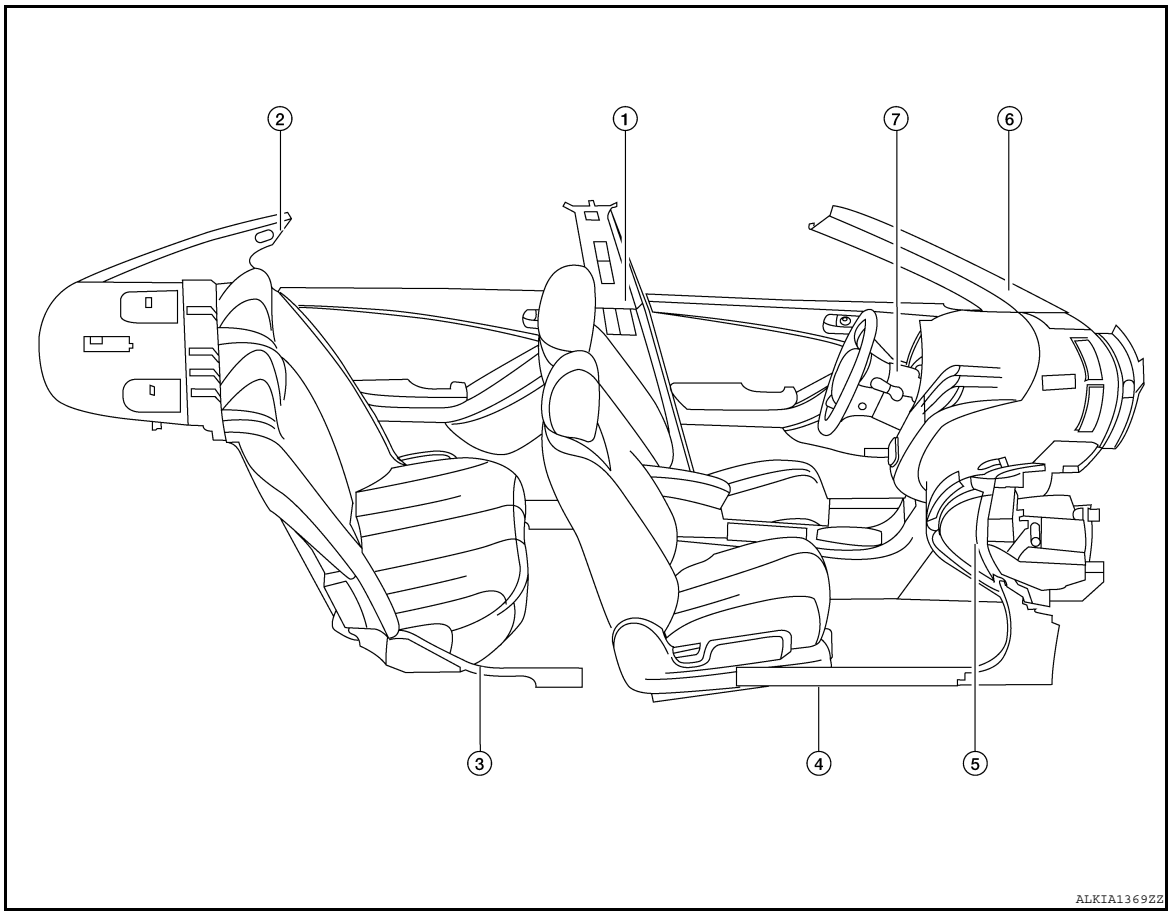
LOCATION OF PLASTIC PARTS



ALKIA1368ZZ

Item	Component		Abbreviation	Material
1.	Door Mirror	Case	ASA	Acronitrile Styrene Acrylate
		Skull cap	ABS	Acronitrile Butadiene Acrylate
2.	Outside door handle	Grip	PC	Polycarbonate
		Escutcheon	PA	Polyamide (Nylon)

Item	Component		Abbreviation	Material
3.	Front combination lamp	Lens	PC	Polycarbonate
		Housing	PP	Polypropylene
4.	Front bumper fascia		PP + EPM	Polypropylene + Ethylene Propylene (Diene) copolymer
5.	Rear combination lamp	Lens	PMMA	Poly Methyl Methacrylate
		Housing	ABS	Acronitrile Butadiene Acrylate
6.	Rear bumper fascia		PP + EPM	Polypropylene + Ethylene Propylene (Diene) copolymer
7.	Trunk lid finisher		ABS + PC	Acronitrile Butadiene Acrylate + Polycarbonate



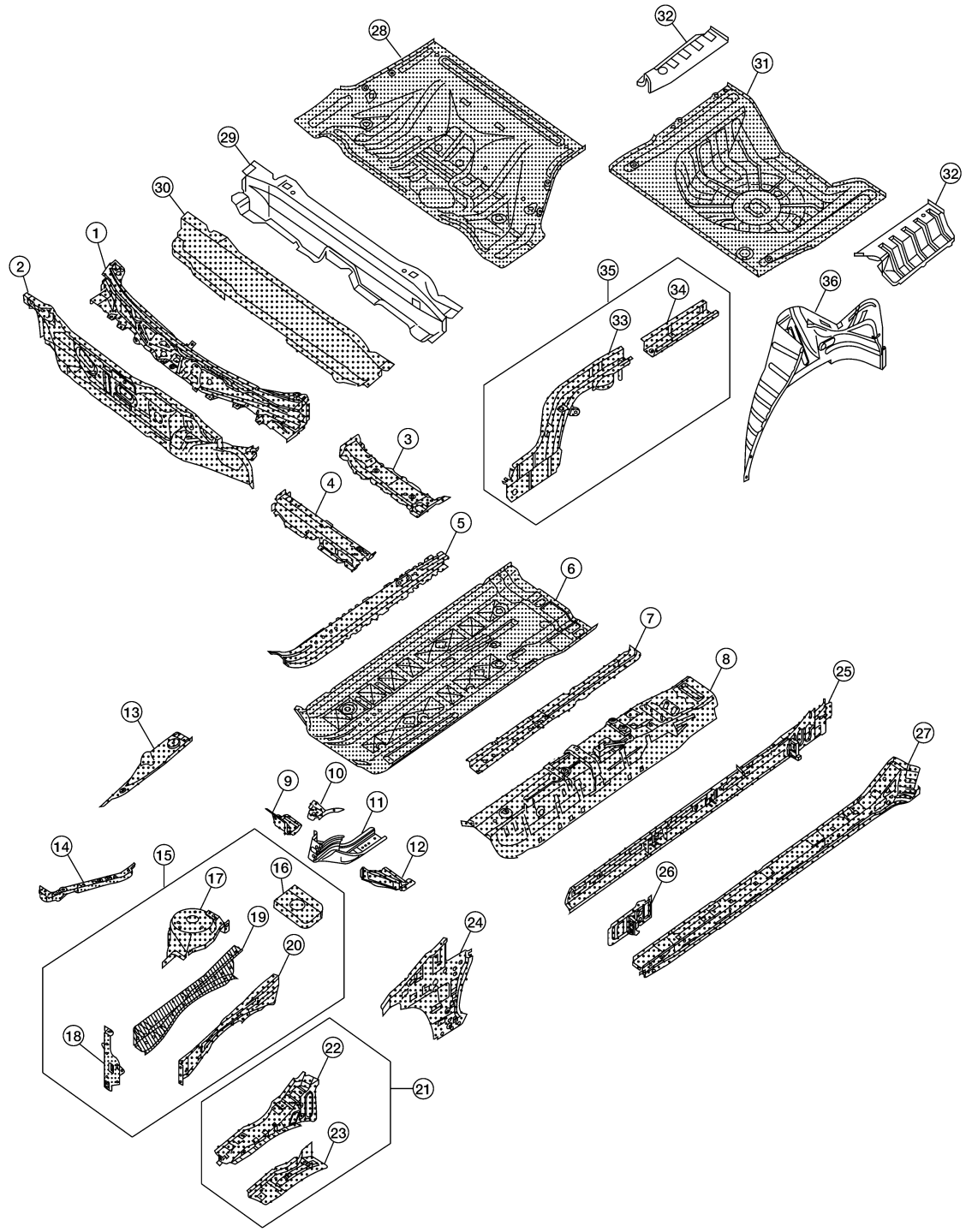
Item	Component	Abbreviation	Material
1.	Center pillar trim	PP	Polypropylene
2.	Upper quarter trim	PP	Polycarbonate
3.	Rear inner kicking plate	PP	Polypropylene
4.	Front inner kicking plate	PP	Polypropylene
5.	Dash side finisher	PP	Polypropylene
6.	Front pillar garnish	PP	Polypropylene
7.	Steering column covers	PP	Polypropylene

ON-VEHICLE REPAIR

BODY COMPONENT PARTS

Underbody Component Parts

INFOID:0000000005433509

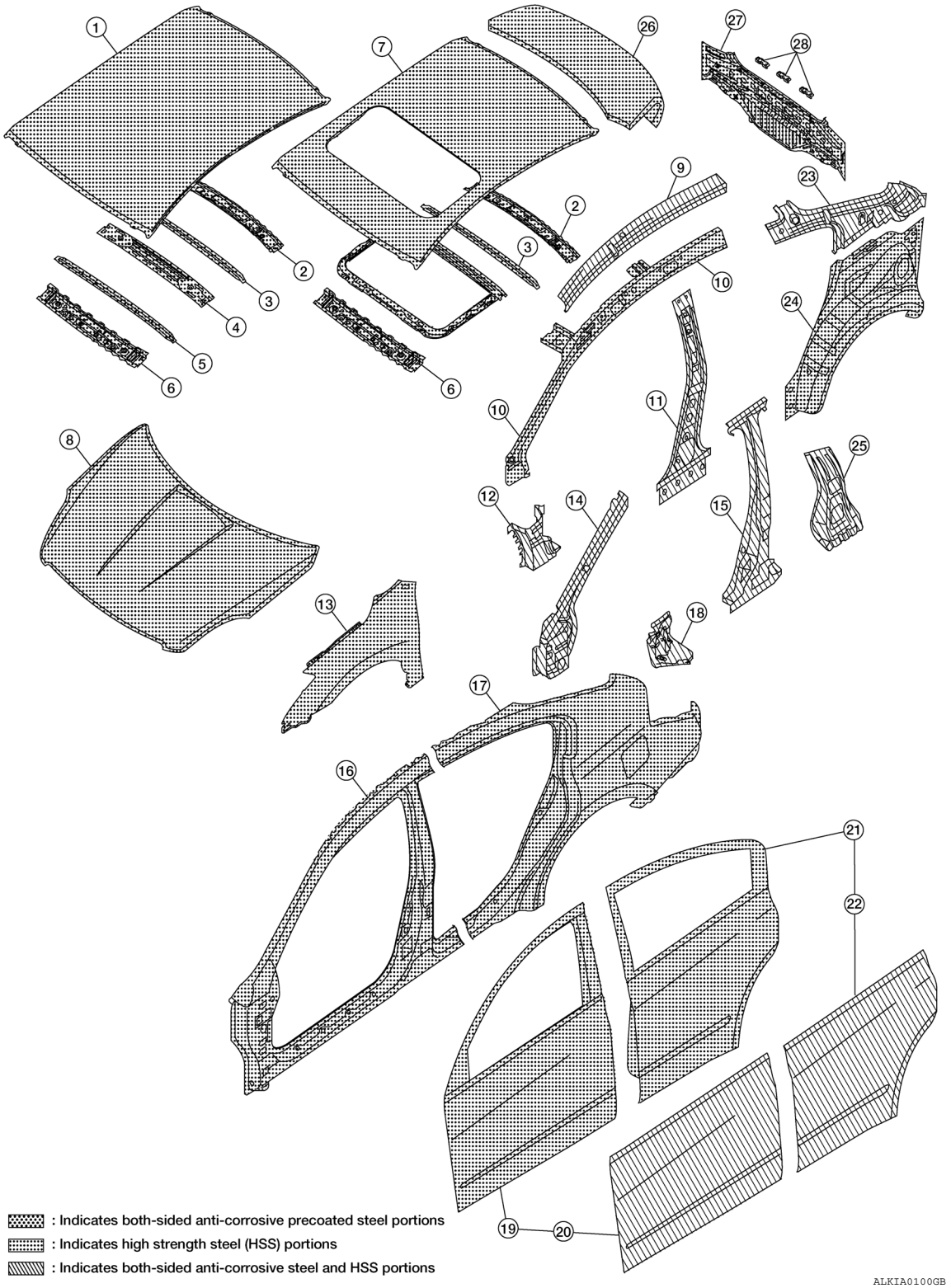


1. Upper dash assembly
2. Lower dash crossmember reinforcement
3. Rear crossmember (RH, LH)
25. Inner sill (RH, LH)
26. Outer sill support bracket (RH, LH)
27. Outer sill (RH, LH)

4. Front crossmember (RHLH)
5. Front sidemember reinforcement upper (RHLH)
6. Front floor assembly (RHLH)
7. Front sidemember reinforcement lower
8. Front floor center
9. Front suspension member plate (RH, LH)
10. Front sidemember cap (RH, LH)
11. Front sidemember (RH, LH)
12. Outrigger (RH, LH)
13. Lower hoodledge support (RH, LH)
14. Radiator core support (RH, LH)
15. Front sidemember assembly (RH, LH)
16. Strut housing bracket (RH, LH)
17. Strut housing (RH, LH)
18. Radiator core support side (RH, LH)
19. Front sidemember extension (RH, LH)
20. Closing plate (RH, LH)
21. Hoodledge assembly (RH, LH)
22. Upper hoodledge (RH, LH)
23. Upper hoodledge lower (RH, LH)
24. Dash side (RH, LH)
28. Rear floor front
29. Rear seat crossmember
30. Rear seat crossmember lower
31. Rear floor rear
32. Rear floor rear side (RH, LH)
33. Rear side member (RH, LH)
34. Rear side member extension (RH, LH)
35. Rear side member assembly (RH, LH)
36. Rear wheel housing outer (RH, LH)

Body Component Parts

INFOID:0000000005433510



1. Roof panel assembly
2. Rear roof rail
3. 3rd roof rail
4. 2nd roof rail
5. 1st roof rail
6. Front roof rail
21. Rear door assembly (RH, LH)
22. Outer rear door panel (RH, LH)
23. Rear roof rail reinforcement (RH, LH)
24. Rear wheel well housing outer (RH, LH)
25. Rear pillar inner reinforcement (RH, LH)
26. Trunk lid assembly (RH, LH)

7. Sun roof panel assembly
8. Hood assembly
9. Roof side rail reinforcement (RH, LH)
10. Outer roof side rail (RH, LH)
11. Inner center pillar (RH,LH)
12. Front pillar reinforcement (RHLH)
13. Fender (RH, LH)
14. Front pillar inner (RH, LH)
15. Center pillar reinforcement (RH, LH)
16. Side body (RH, LH)
17. Rear fender (RH, LH)
18. Rear fender corner (RH, LH)
19. Front door assembly (RH, LH)
20. Outer front door panel (RH, LH)
27. Rear panel assembly
28. Rear bumper fascia center bracket (RH, LH)

CORROSION PROTECTION

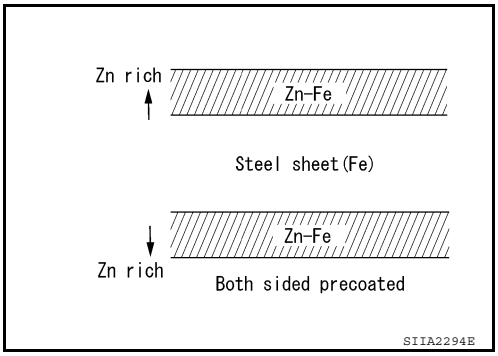
Description

INFOID:0000000005433511

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

Anti-Corrosive Precoated Steel (Galvannealed Steel)

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



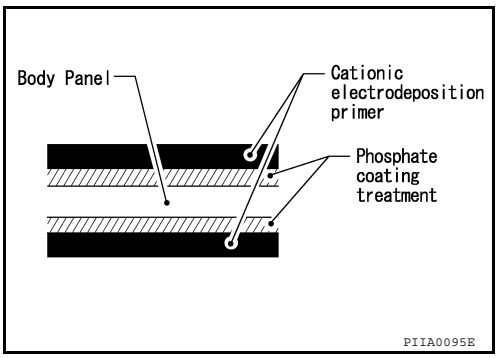
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

Phosphate Coating Treatment and Cationic Electrodeposition Primer

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

CAUTION:

Confine paint removal during welding operations to an absolute minimum.



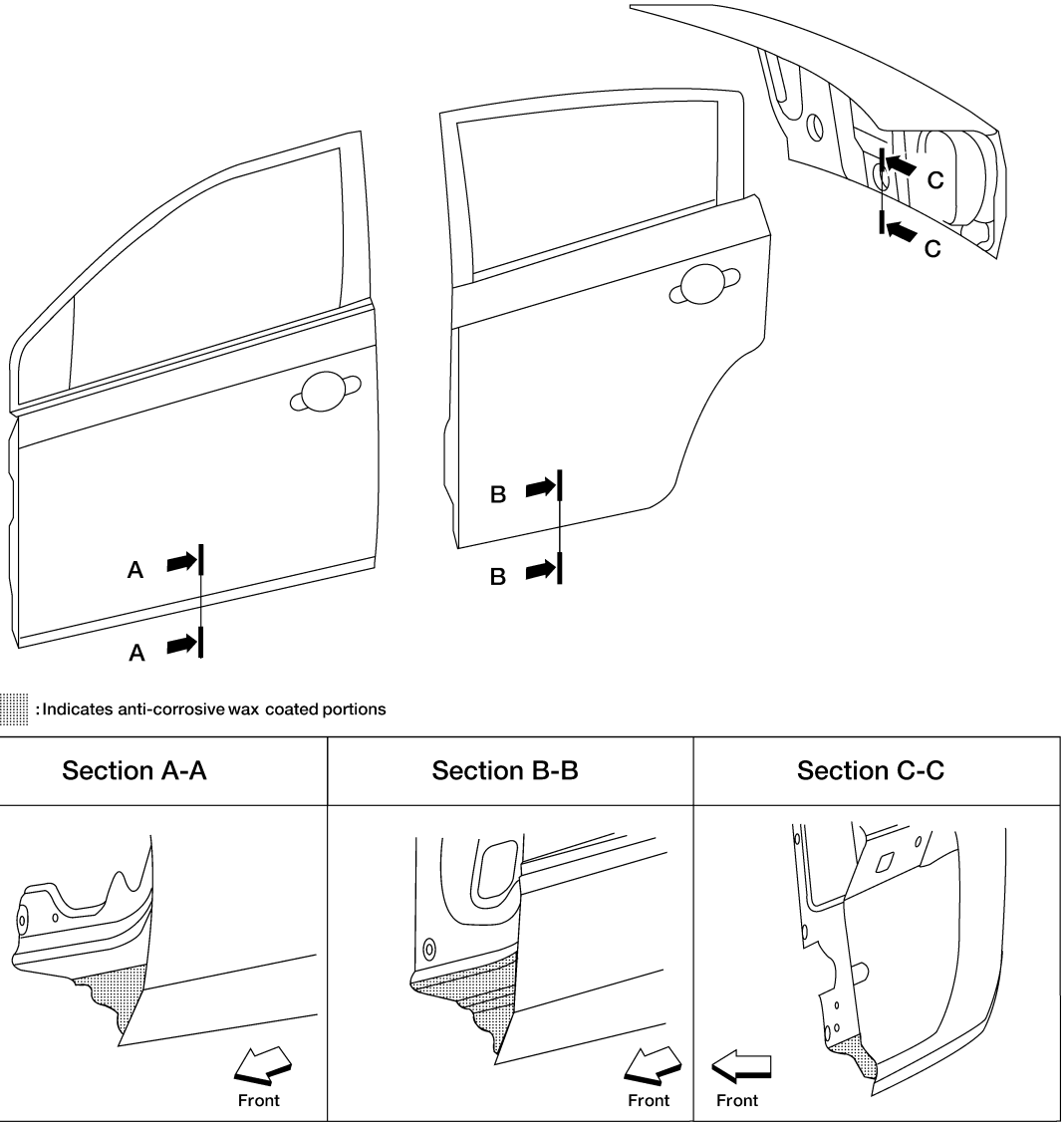
Nissan Genuine Service Parts are also treated in the same manner. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain anti-corrosive performance built into the vehicle at the factory.

Anti-Corrosive Wax

INFOID:0000000005433512

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.



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Undercoating

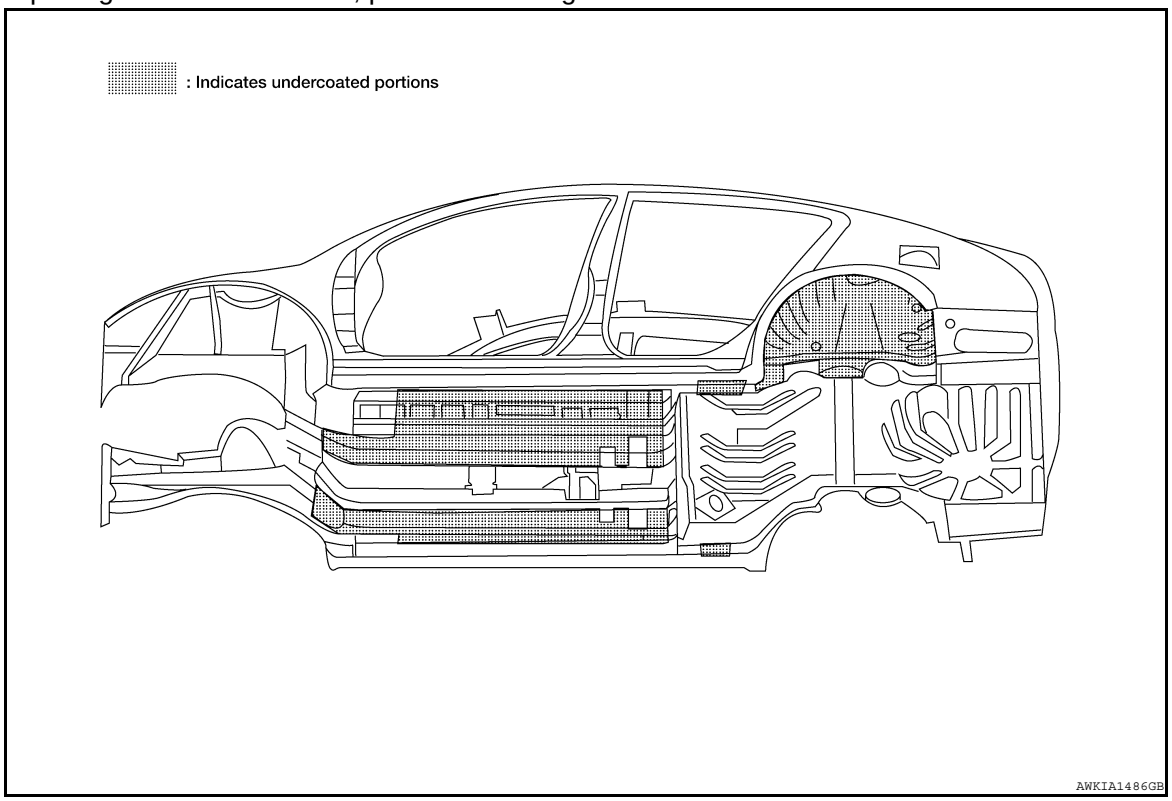
INFOID:0000000005433513

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

Precautions in Undercoating

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

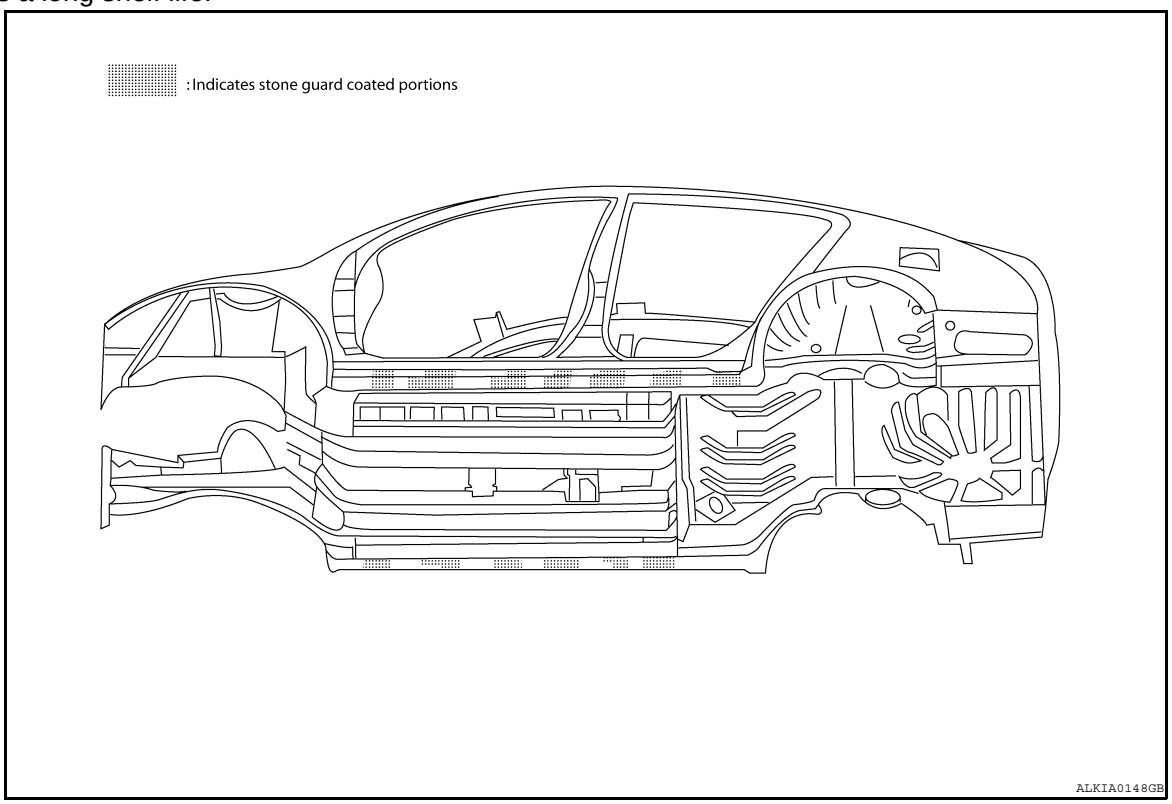
5. After putting seal on the vehicle, put undercoating on it.



Stone Guard Coat

INFOID:0000000005433514

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.

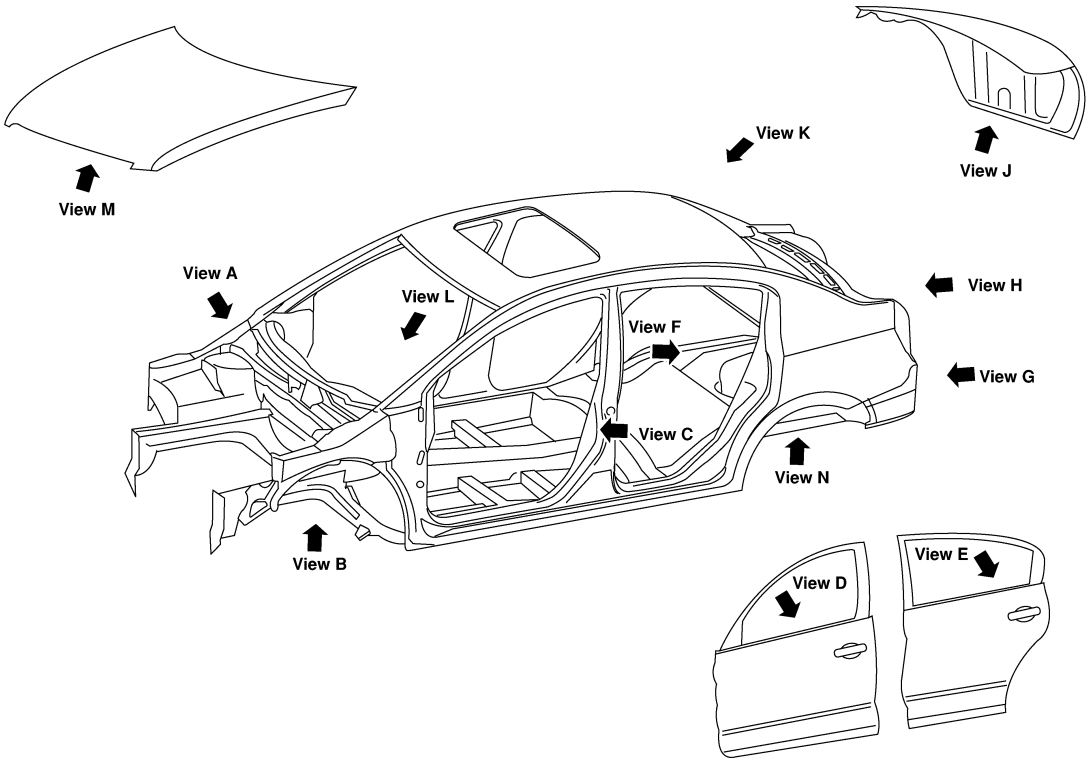


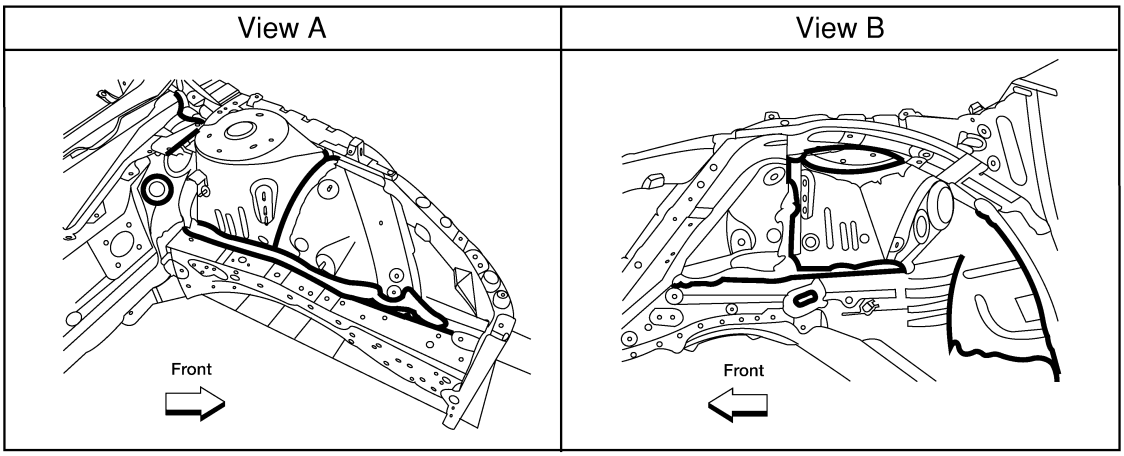
BODY SEALING

Description

INFOID:0000000005433515

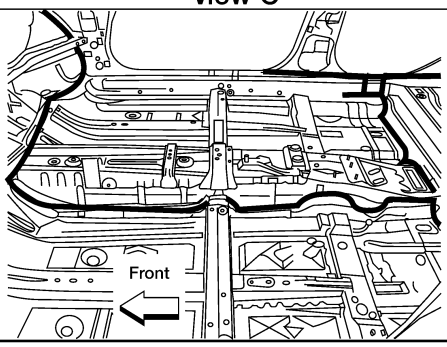
The following figure shows the areas which are sealed at the factory. Sealant which has been applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.



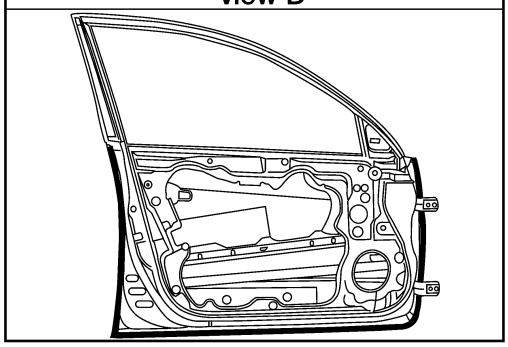


AWKIA1227GB

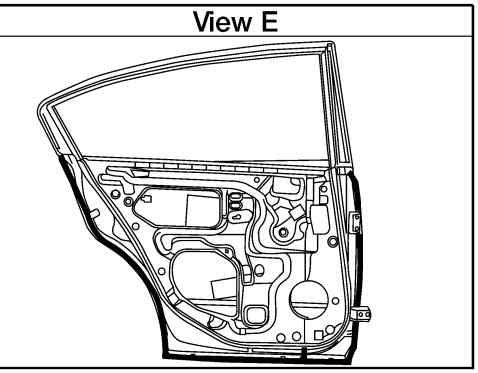
View C



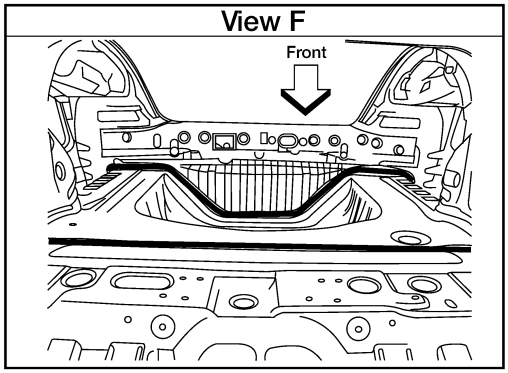
View D



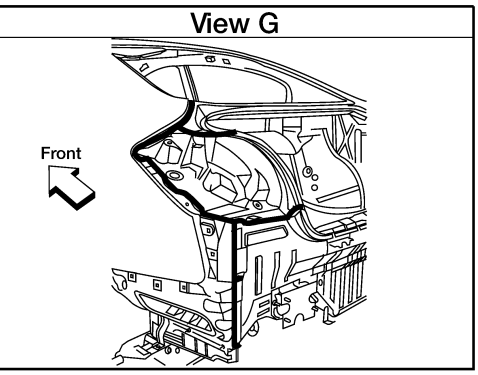
View E



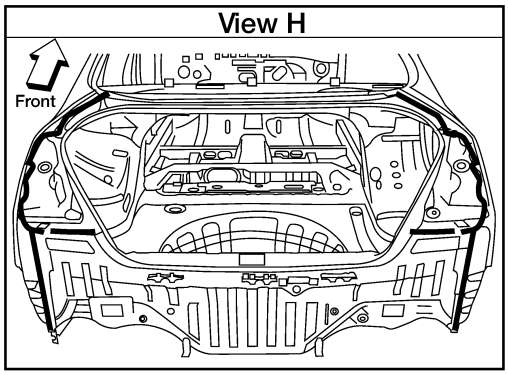
View F



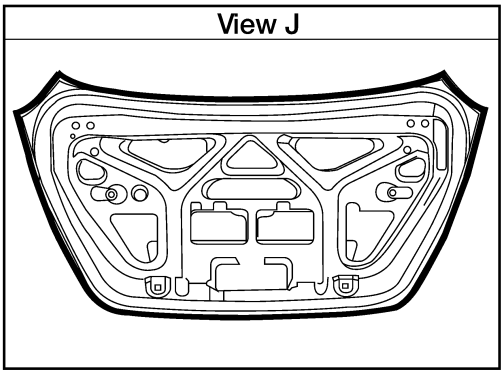
View G



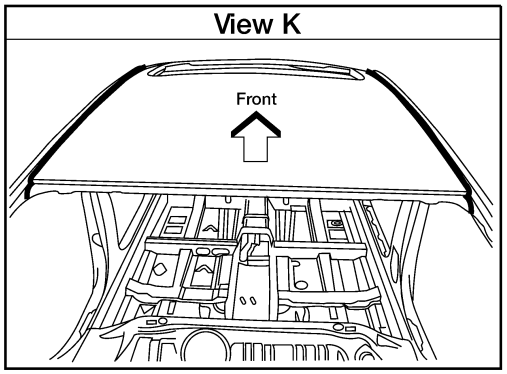
View H



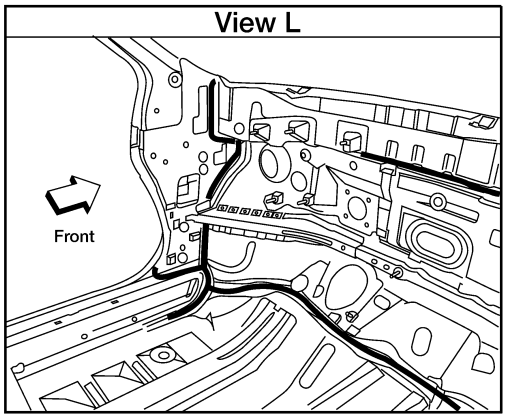
View J

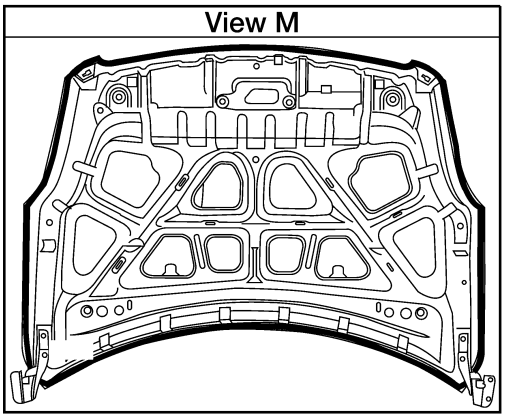


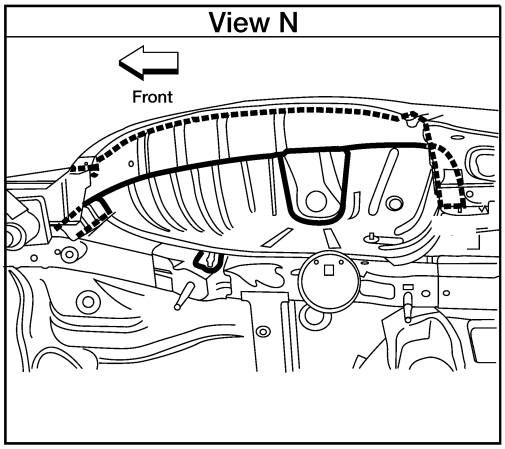
View K



AWKIA0001GB





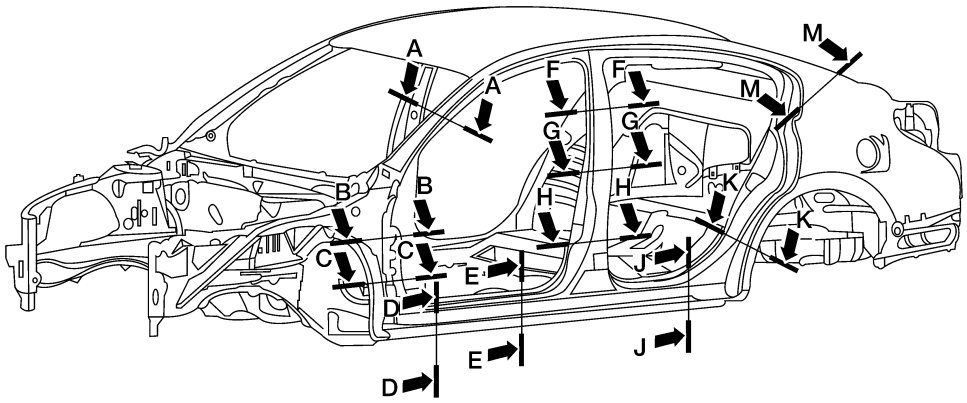


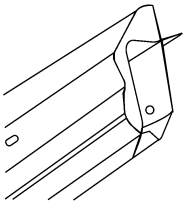
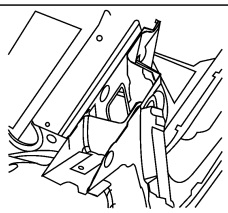
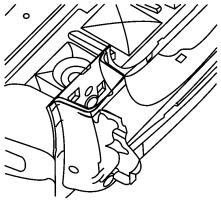
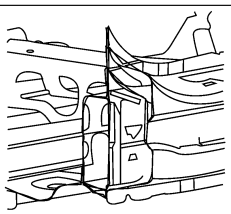
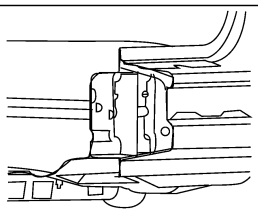
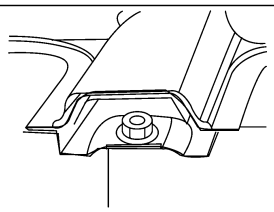
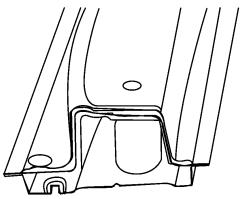
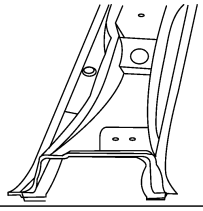
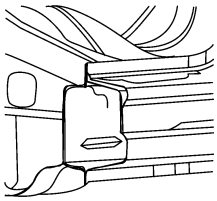
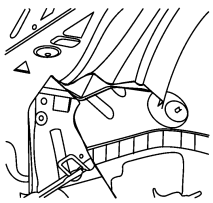
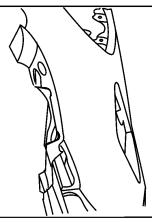
AWKIA0002GB

BODY CONSTRUCTION

Body Construction

INFOID:0000000005433516



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 J-J**
		
Section K-K	**Section M-M**	
		

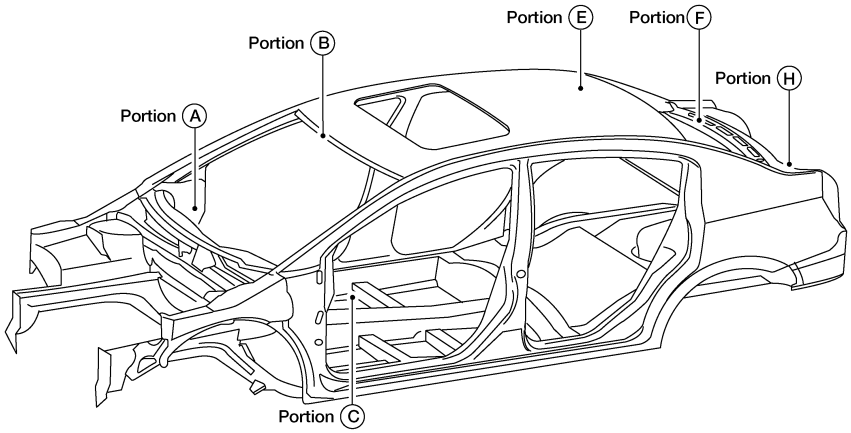
ALKIA0150GB

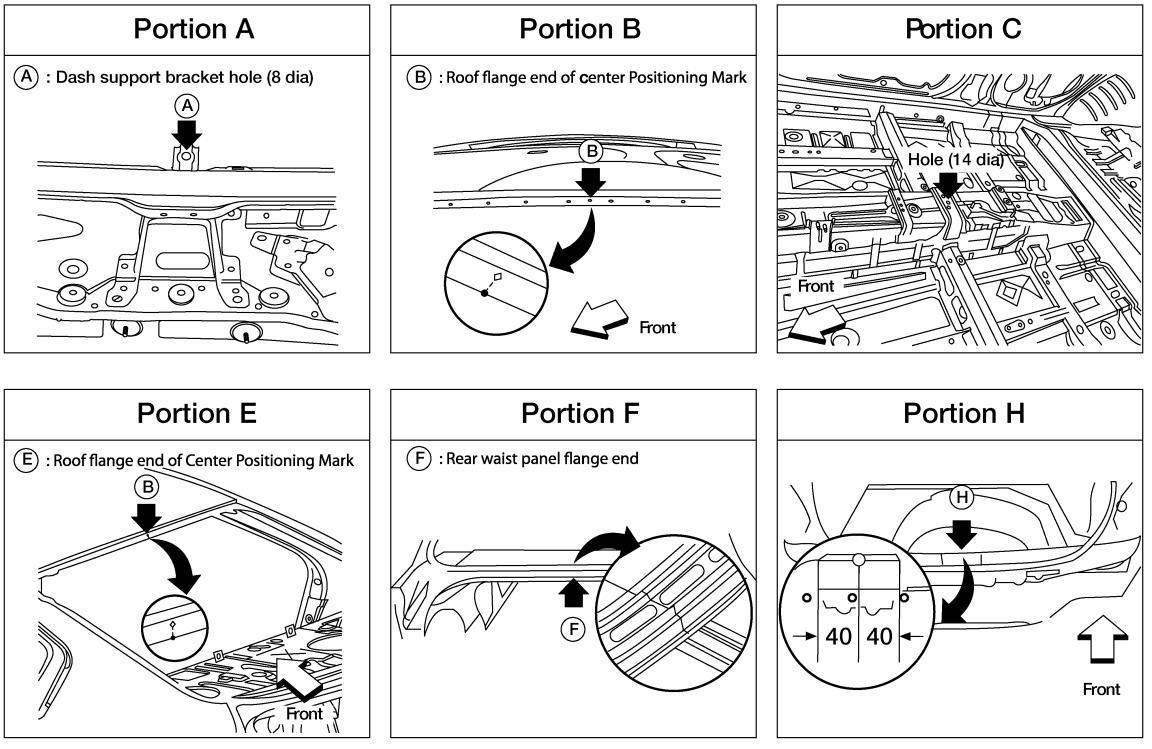
BODY ALIGNMENT

Body Center Marks

INFOID:0000000005433517

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.



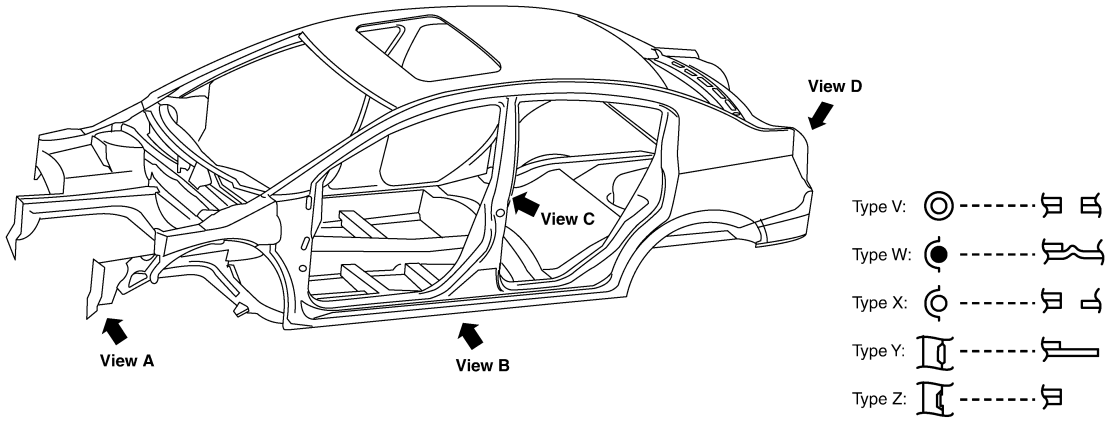


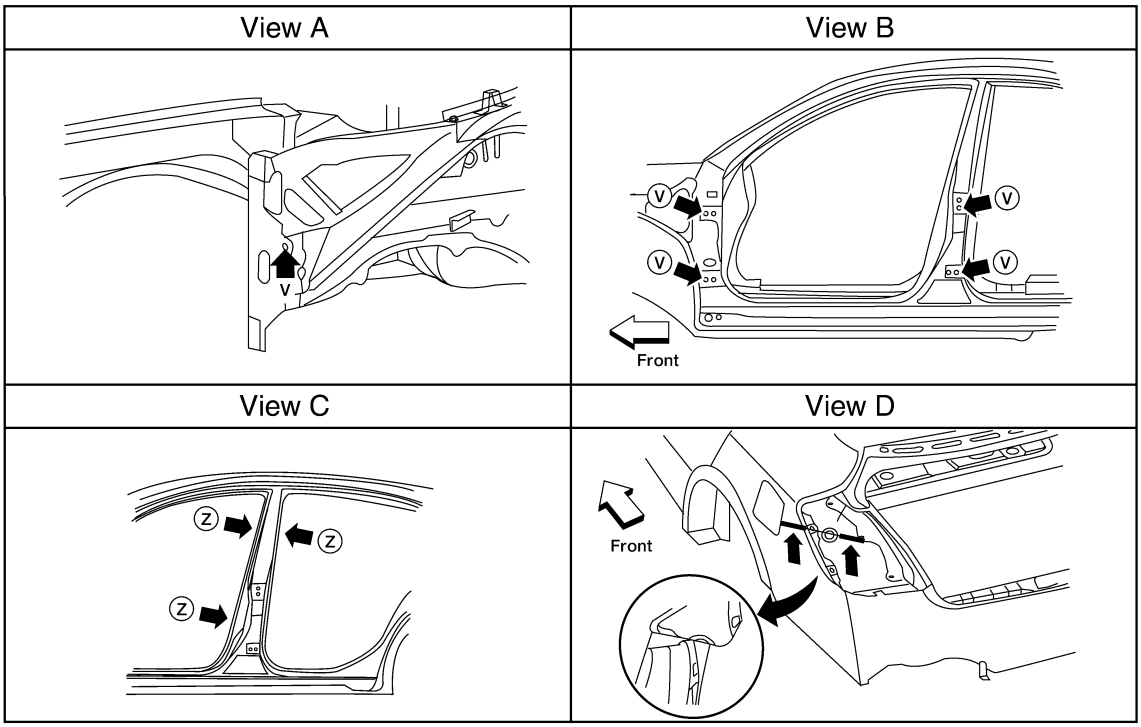
ALKIA0151GB

Panel Parts Matching Marks

INFOID:0000000005433518

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.



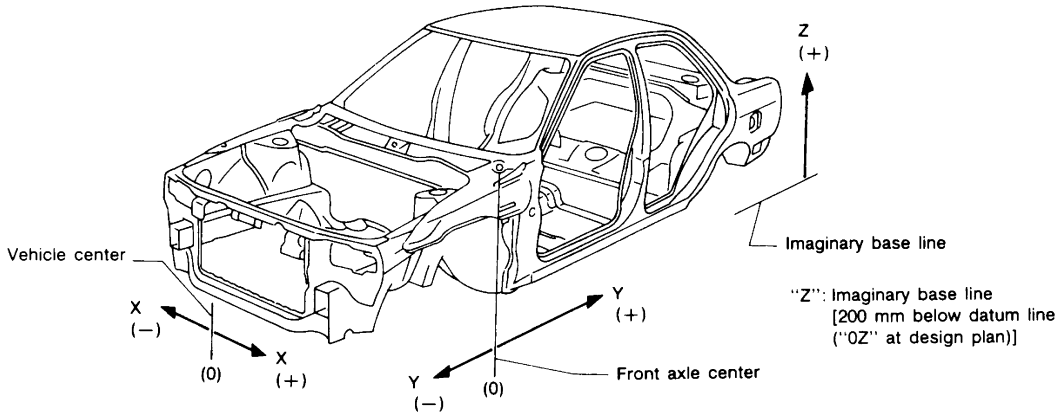


ALKIA0159GB

Description

INFOID:0000000005433519

- 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".


Z
(+)
Imaginary base line
"Z": Imaginary base line
[200 mm below datum line
("0Z" at design plan)]
Vehicle center
X
(−)
X
(+)
(0)
Y
(+)
Y
(−)
(0)
Front axle center

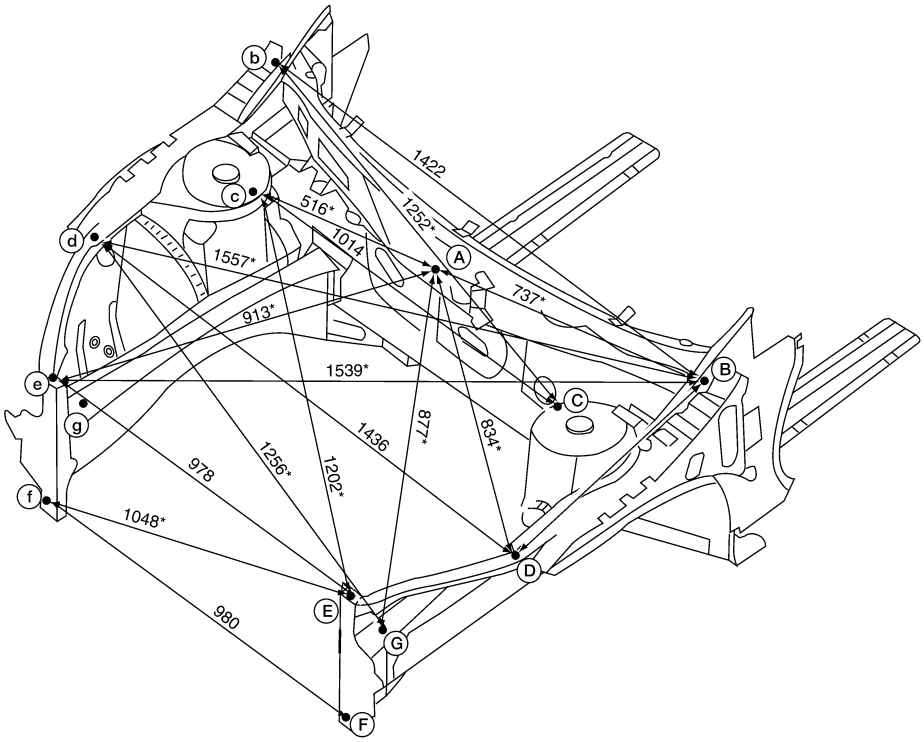
PIIA0104E

Engine Compartment

INFOID:0000000005433520

Measurement

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

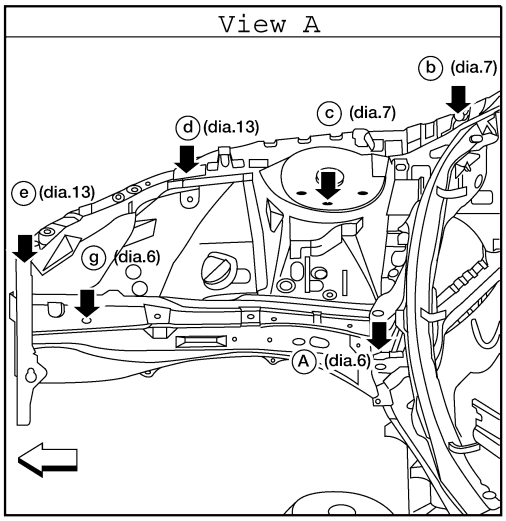


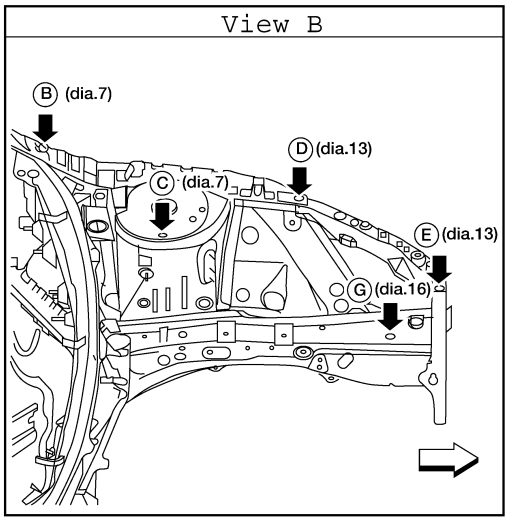
Point	Dimension
Ⓑ ~ Ⓓ	617*
Ⓑ ~ Ⓔ	989*
Ⓑ ~ Ⓖ	1512*
Ⓒ ~ Ⓑ	1268*
Ⓒ ~ Ⓓ	389*
Ⓒ ~ Ⓔ	673*
Ⓒ ~ Ⓖ	630*
Ⓒ ~ ⓖ	1182*
Ⓓ ~ Ⓖ	394*
Ⓔ ~ Ⓖ	201*
Ⓖ ~ ⓖ	990

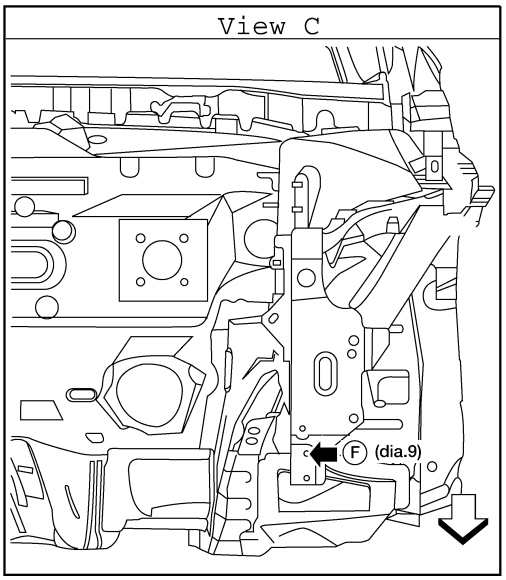
Unit : mm

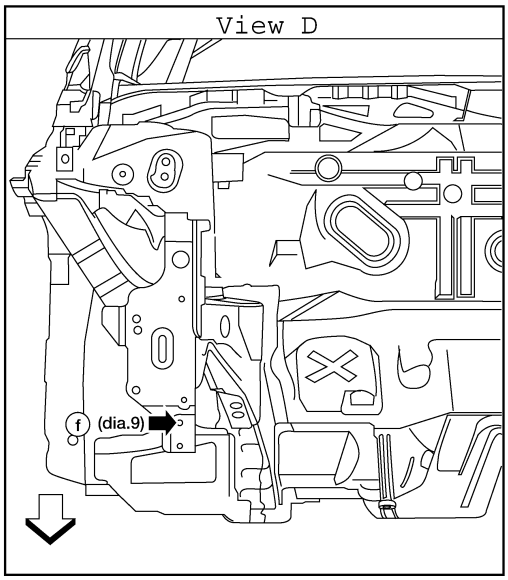
ALKIA0168GB

Measurement Points









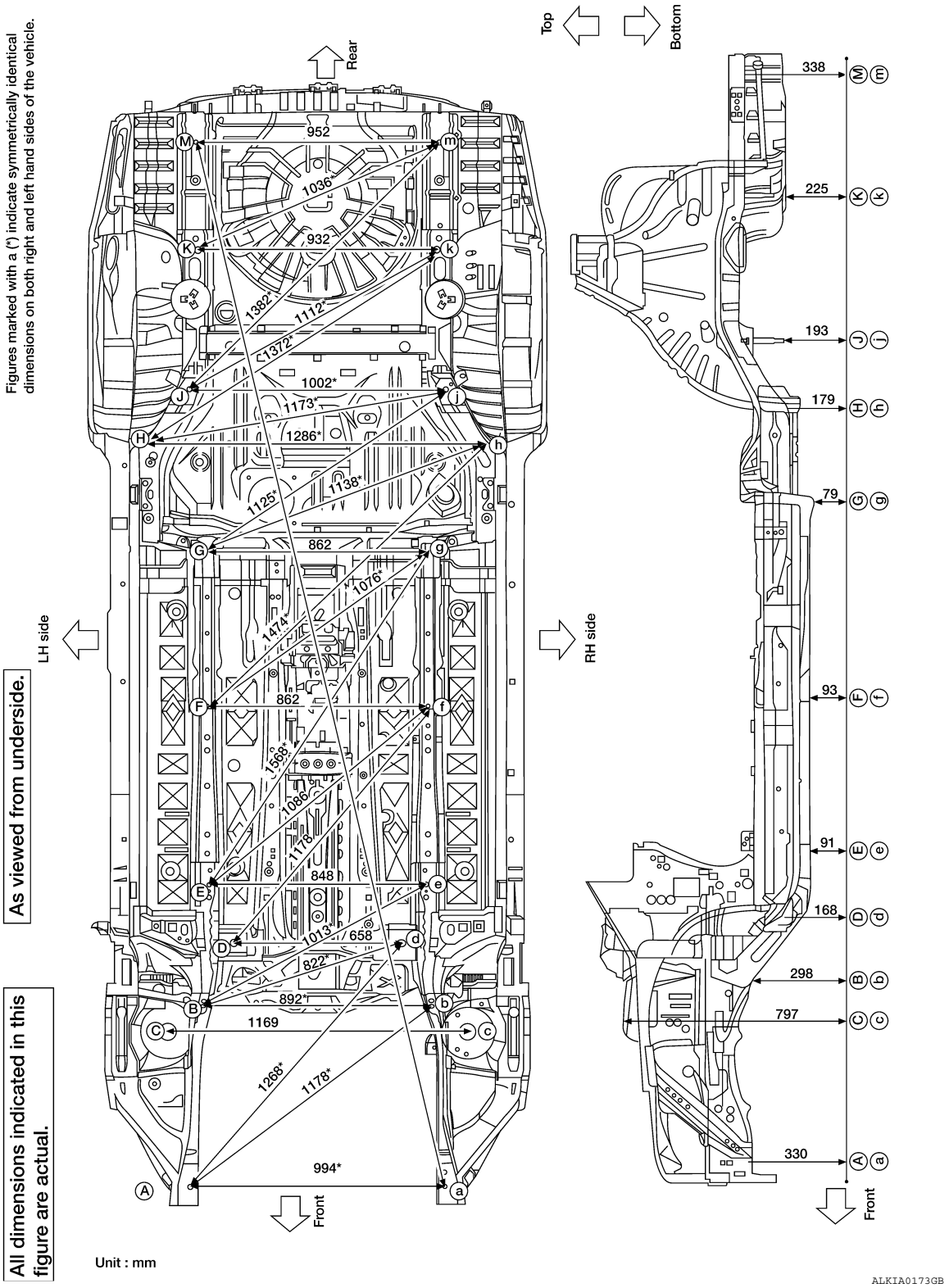
Unit : mm

AWKIA0389GB

Underbody

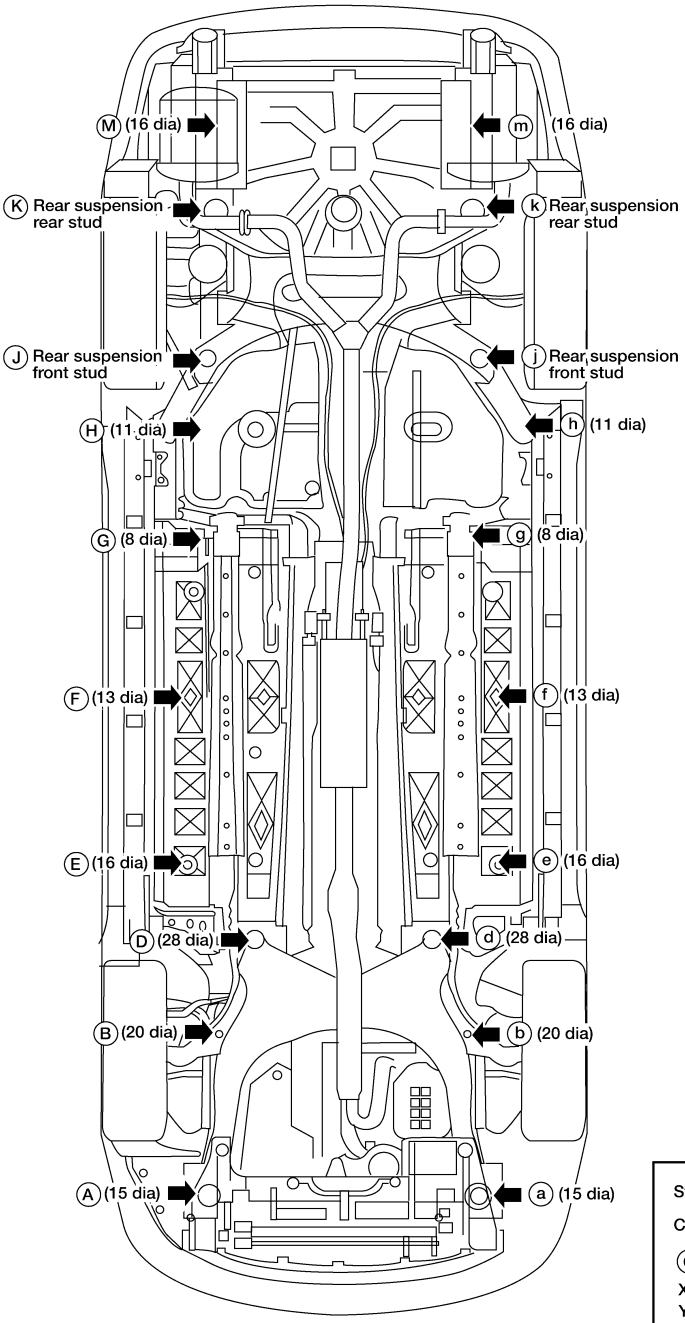
INFOID:0000000005433521

Measurement



ALKIA0173GB

Measurement Points



Ⓐ ⓐ
X : ±497
Y : -566
Z : 330

Ⓑ ⓑ
X : ±446
Y : 149
Z : 298

Ⓓ ⓓ
X : ±327
Y : 395
Z : 168

Ⓔ ⓔ
X : ±424
Y : 624
Z : 91

Ⓕ ⓕ
X : ±431
Y : 1294
Z : 93

Ⓖ ⓖ
X : ±431
Y : 1938
Z : 79

Ⓗ ⓗ
X : ±643
Y : 2301
Z : 179

Ⓙ ⓙ
X : ±501
Y : 2558
Z : 193

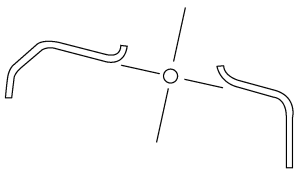
Ⓚ ⓚ
X : ±466
Y : 3107
Z : 225

Ⓜ ⓜ
X : ±476
Y : 3525
Z : 338

Strut tower centers

Coordinates

Ⓒ ⓒ Front
X : ±585
Y : 49
Z : 797



Unit : mm

AWKIA1489GB

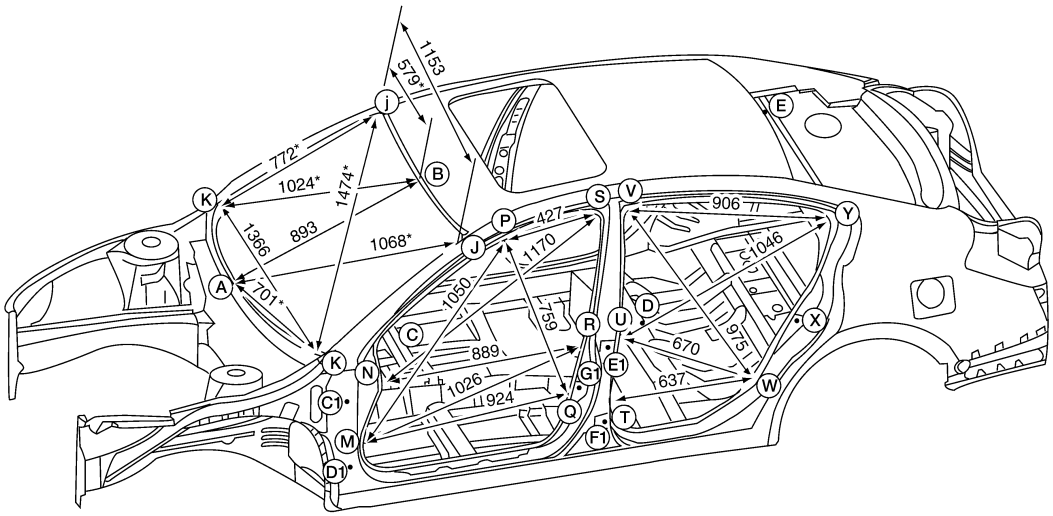
Passenger Compartment

INFOID:0000000005433522

Measurement

Unit : mm

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



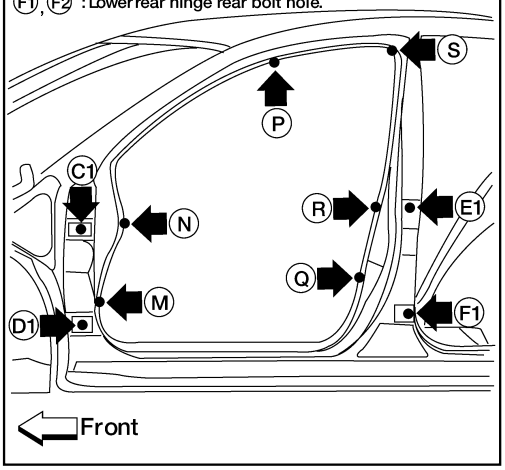
Point	Dimension	Point	Dimension	Point	Dimension	Point	Dimension
Ⓐ ~ Ⓒ	1044	Ⓓ ~ Ⓣ	742	Ⓖ1 ~ Ⓧ	987	Ⓢ ~ Ⓠ	779
Ⓐ ~ Ⓓ	1890	Ⓓ ~ ⓣ	904	Ⓜ ~ ⓜ	1464	Ⓢ ~ ⓢ	1143
Ⓐ ~ Ⓕ	3134	Ⓓ ~ ⓤ	973	Ⓜ ~ Ⓟ	1050	Ⓣ ~ ⓣ	1471
Ⓑ ~ Ⓒ	972	Ⓓ ~ Ⓤ	823	Ⓜ ~ ⓠ	1735*	Ⓣ ~ Ⓥ	840
Ⓒ ~ Ⓔ	1796*	Ⓓ ~ ⓥ	1148	Ⓜ ~ ⓡ	1794*	Ⓣ ~ ⓨ	1823*
Ⓒ ~ ⓜ	912*	Ⓓ ~ Ⓥ	1054	Ⓜ ~ ⓢ	1896*	Ⓣ ~ Ⓨ	1212
Ⓒ ~ ⓝ	928*	Ⓓ ~ ⓦ	883	Ⓜ ~ Ⓢ	1386	Ⓤ ~ ⓤ	1479
Ⓒ ~ ⓟ	1100*	Ⓓ ~ Ⓦ	715	Ⓝ ~ ⓝ	1442	Ⓥ ~ ⓣ	1544*
Ⓒ ~ ⓠ	860*	Ⓓ ~ ⓨ	1234	Ⓝ ~ Ⓟ	803	Ⓥ ~ ⓥ	1139
Ⓒ ~ ⓡ	970*	Ⓓ ~ Ⓨ	1137	Ⓝ ~ ⓡ	1710*	Ⓥ ~ ⓦ	1624*
Ⓒ ~ ⓢ	1249*	Ⓓ1 ~ Ⓔ1	1223	Ⓟ ~ ⓟ	1181	Ⓦ ~ ⓣ	1607*
Ⓒ1 ~ Ⓔ1	1167	Ⓓ1 ~ Ⓕ1	1147	Ⓠ ~ ⓝ	1686*	Ⓦ ~ ⓤ	1624*
Ⓒ1 ~ Ⓕ1	1181	Ⓓ1 ~ Ⓖ1	1068	Ⓠ ~ ⓟ	1521*	Ⓦ ~ ⓦ	1480
Ⓒ1 ~ Ⓖ1	1064	Ⓓ1 ~ Ⓧ	2054	Ⓠ ~ ⓠ	1471	Ⓦ ~ ⓨ	1564*
Ⓒ1 ~ Ⓧ	2029	Ⓔ1 ~ Ⓧ	867	Ⓠ ~ ⓢ	1513*	Ⓦ ~ Ⓨ	762
Ⓓ ~ Ⓔ	1102	Ⓕ1 Ⓧ	931	Ⓡ ~ ⓡ	1480	Ⓨ ~ ⓨ	1261

ALKIA0167GB

Measurement Points

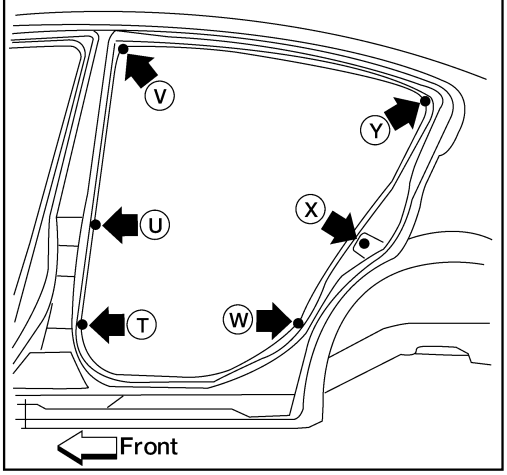
View A

Ⓢ, ⓢ : Top of center pillar raised dimple.
Ⓡ, Ⓠ : Lower center pillar raised dimple.
Ⓟ, ⓟ : Raised dimple near top of front pillar.
Ⓝ, ⓐ : Raised dimple near center of front pillar.
Ⓜ, ⓝ : Lower notch near lower front pillar.
Ⓒ1, Ⓒ2 : Rear upper front hinge bolt hole.
Ⓓ1, Ⓓ2 : Rear lower front hinge bolt hole.
Ⓔ1, Ⓔ2 : Upper rear hinge stud hole.
Ⓕ1, Ⓕ2 : Lower rear hinge rear bolt hole.



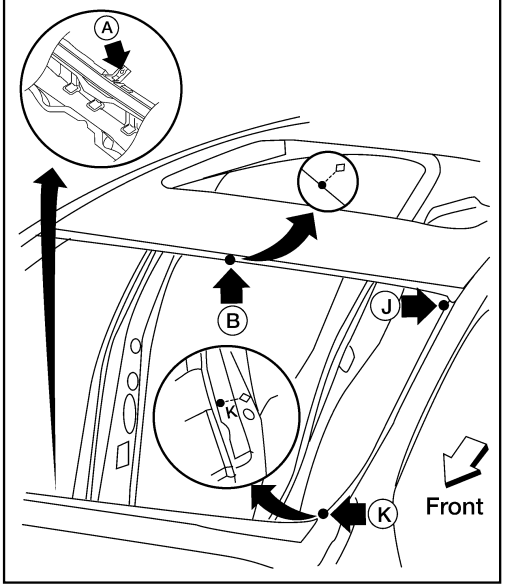
View B

ⓤ : Center rear pillar raised dimple.
Ⓥ, ⓥ, Ⓨ, ⓨ : Upper rear pillar raised dimple.
Ⓧ, ⓧ : Door switch hole.
Ⓣ, ⓣ, Ⓦ, ⓦ : Lower rear pillar raised dimple.



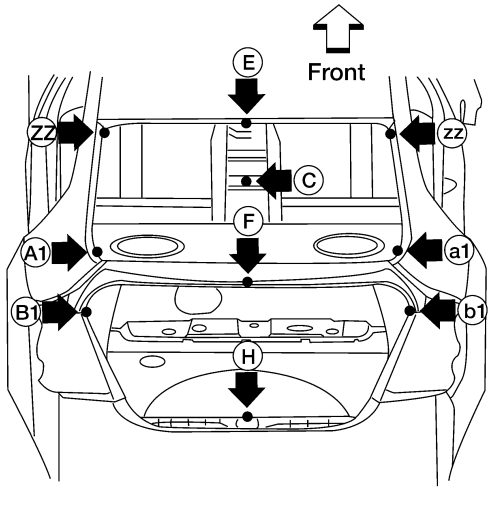
View C

Ⓐ : Cowl bracket center hole
Ⓑ : Roof flange end of center positioning.
Ⓙ, ⓙ : Raised dimple on front pillar rear top.
Ⓚ, ⓚ : Lower corner of windshield opening.



View D

Ⓒ : 14 diameter hole.
Ⓔ : Roof flange end of center positioning mark.
Ⓗ : Trunk striker flange center positioning.
ⓏⓏ, ⓩⓩ : Upper corner of rear window.
Ⓐ1, ⓐ1 : Lower corner of rear window.
Ⓑ1, ⓑ1 : Upper trunk flange.



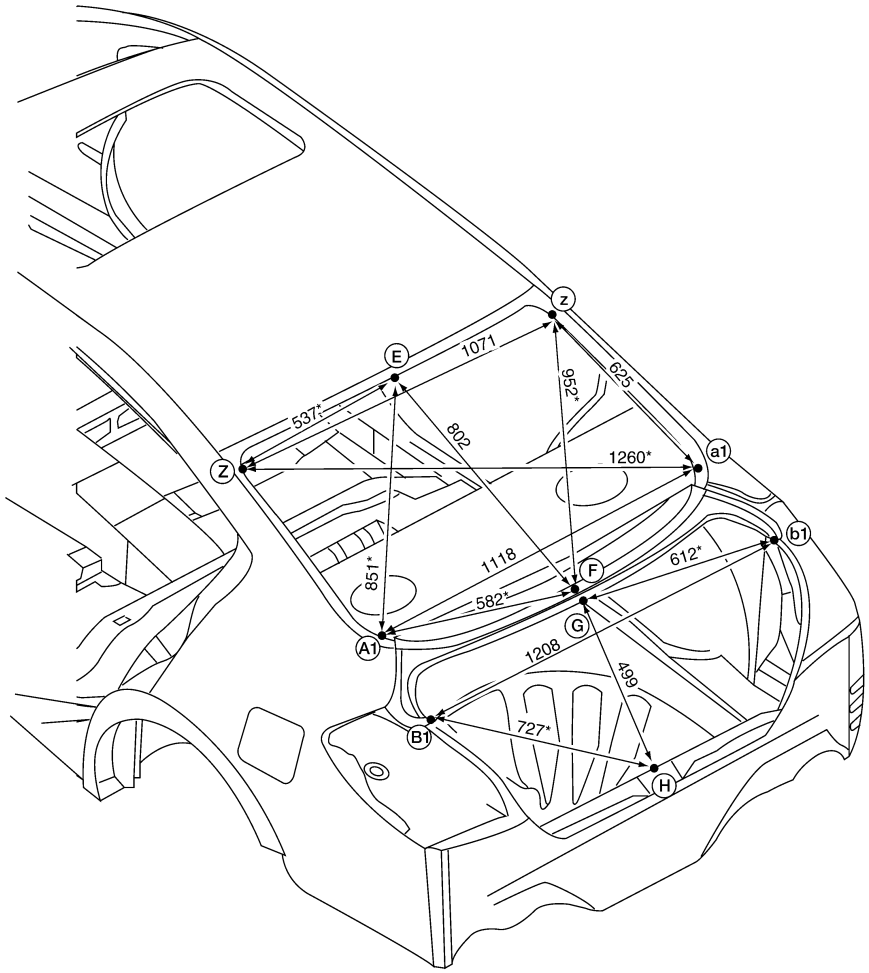
AWKIA1487GB

Rear Body

INFOID:0000000005433523

Measurement

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

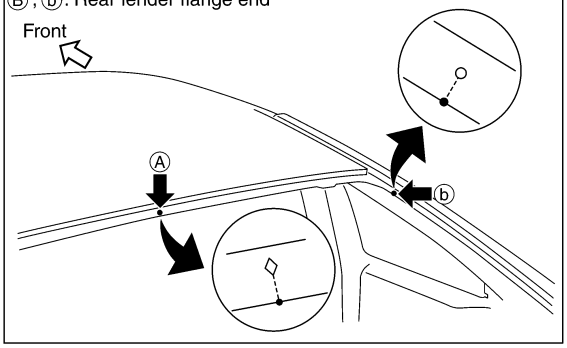


Unit : mm

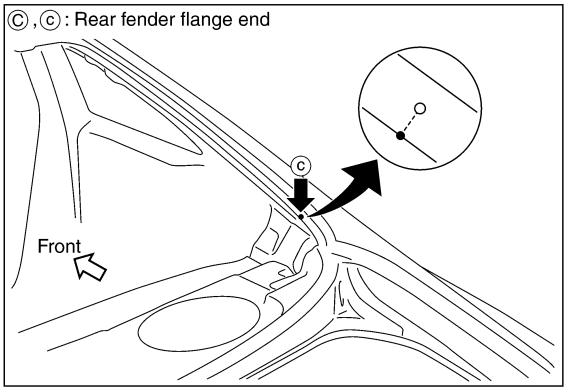
ALKIA0169GB

Measurement Points

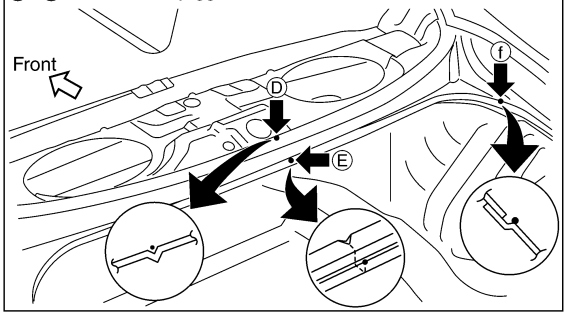
Ⓐ : Rear roof flange end of center positioning mark
Ⓑ , ⓑ : Rear fender flange end



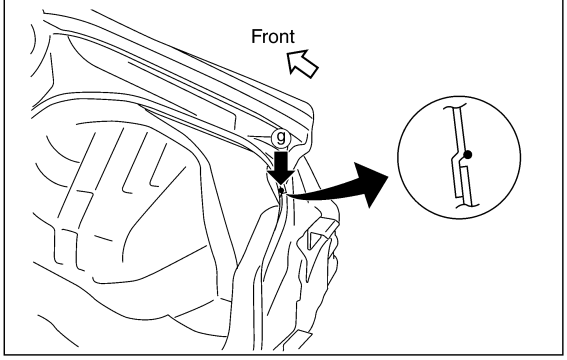
Ⓒ , ⓒ : Rear fender flange end



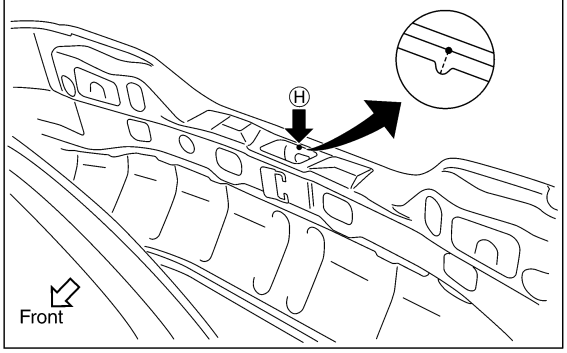
Ⓓ : Parcel shelf positioning mark center of center positioning mark
Ⓔ : Parcel shelf flange end of center positioning mark
Ⓕ , ⓕ : Rear fender joggle



Ⓖ , ⓖ : Rear fender joggle



Ⓗ : Rear panel rainforcement of center positioning mark



SIIA2147E

PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:0000000005433524

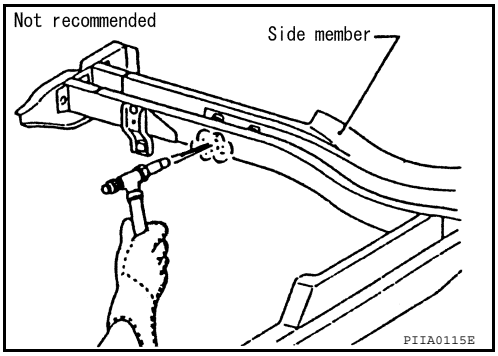
High strength steel is used for body panels in order to reduce vehicle weight.
Accordingly, precautions in repairing automotive bodies made of high strength steel are described below:

Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm^2 (38kg/mm^2,54klb/sq in)	SP130	• Front side member assembly • Hoodledge assembly • Upper dash • Front pillar reinforcement assembly • Rear side member assembly • Other reinforcements

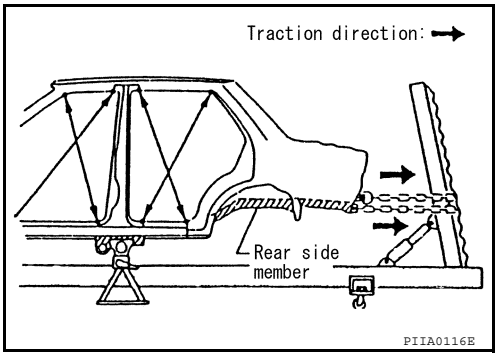
SP130 is the most commonly used HSS.

Read the following precautions when repairing HSS:

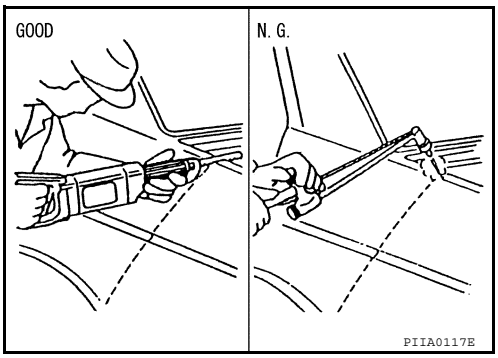
1. Additional points to consider
   - The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).
     Verify heating temperature with a thermometer.
     (Crayon-type and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



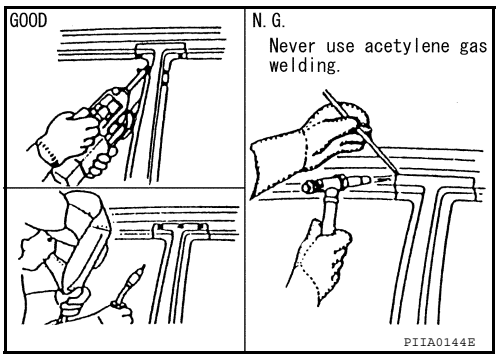
   - When straightening body panels, use caution in pulling any HSS panel. Because HSS is very strong, pulling may cause deformation in adjacent portions of the body. In this case, increase the number of measuring points, and carefully pull the HSS panel.



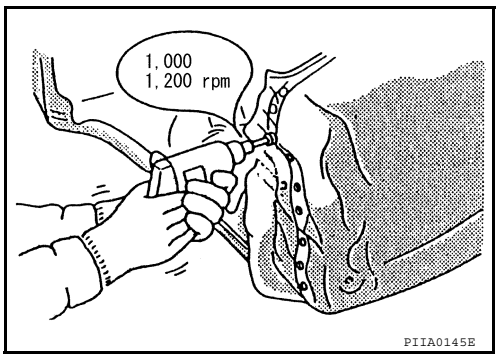
   - When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



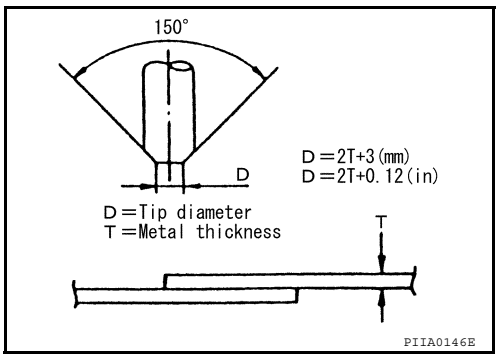
- When welding HSS panels, use spot welding whenever possible in order to minimize weakening surrounding areas due to heat.
  If spot welding is impossible, use M.I.G. welding. Do not use gas (torch) welding because it is inferior in welding strength.



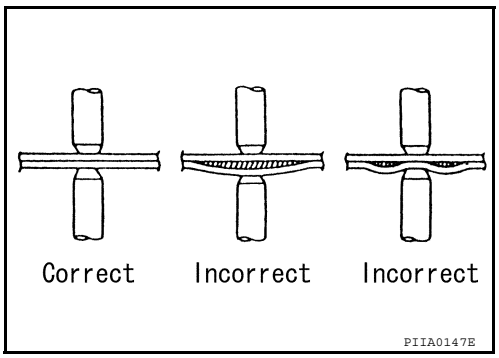
- The spot weld on HSS panels is harder than that of an ordinary steel panel.
  Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



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



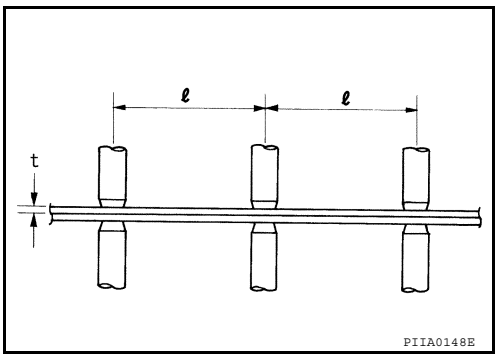
- The panel surfaces must fit flush to each other, leaving no gaps.



- Follow the specifications for the proper welding pitch.

Unit:mm

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



REPLACEMENT OPERATIONS

Description

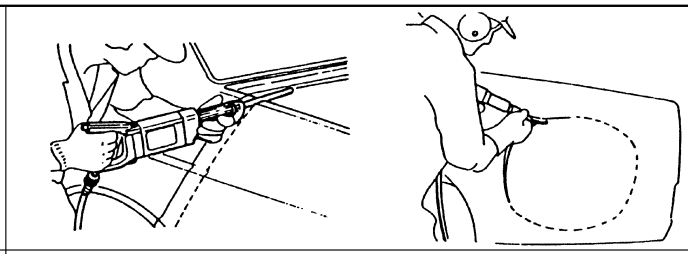
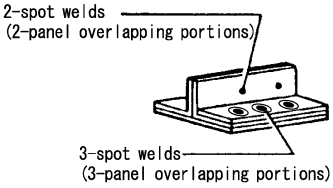
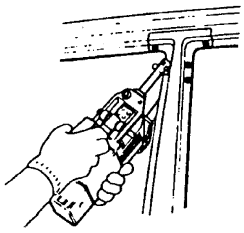
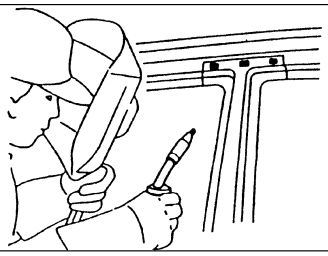
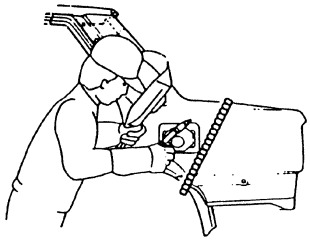
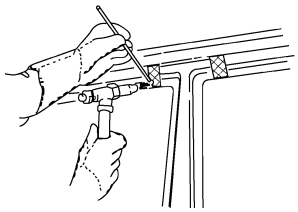
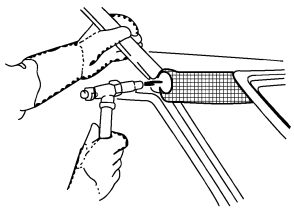
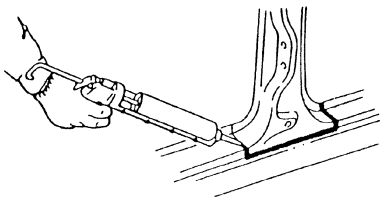
INFOID:0000000005433525

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

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

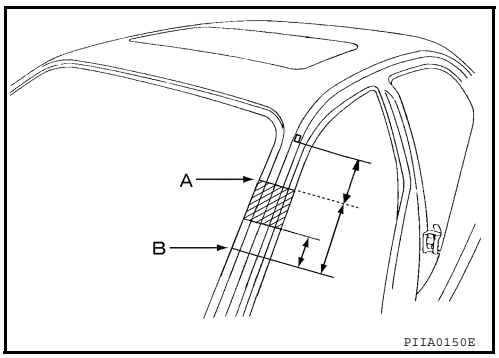
Please note that these information are prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

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

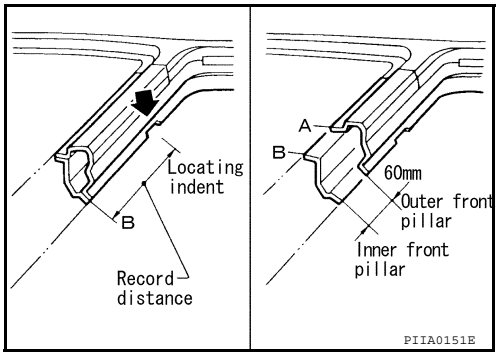
Saw cut or air chisel cut	
Spot weld: 2-spot welds	 
Spot weld: 3-spot welds	
MIG plug weld	 
MIG seam weld/ Point weld	
Brazing	
Soldering	
Sealing	

PIIA0149E

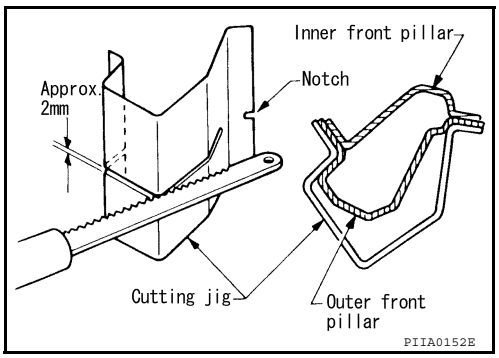
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



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

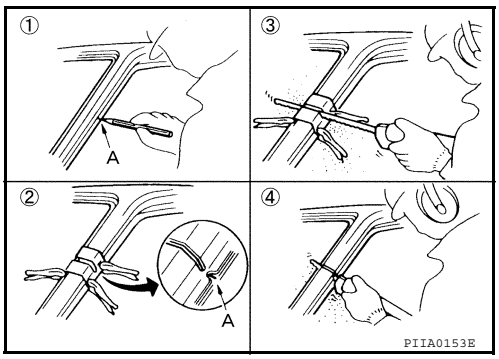


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



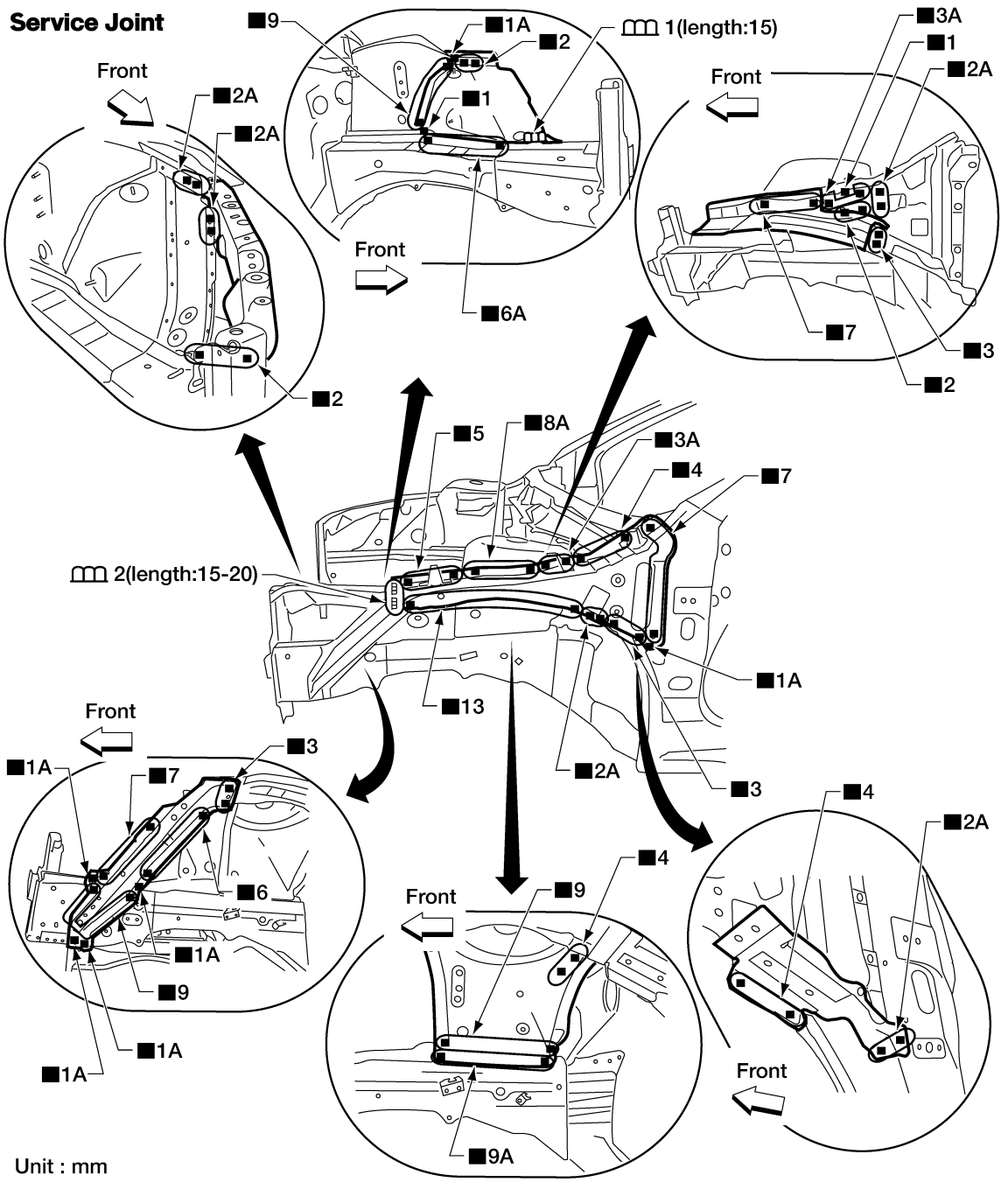
- An example of cutting operation using a cutting jig is as follows.

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



Hoodledge

INFOID:0000000005433526



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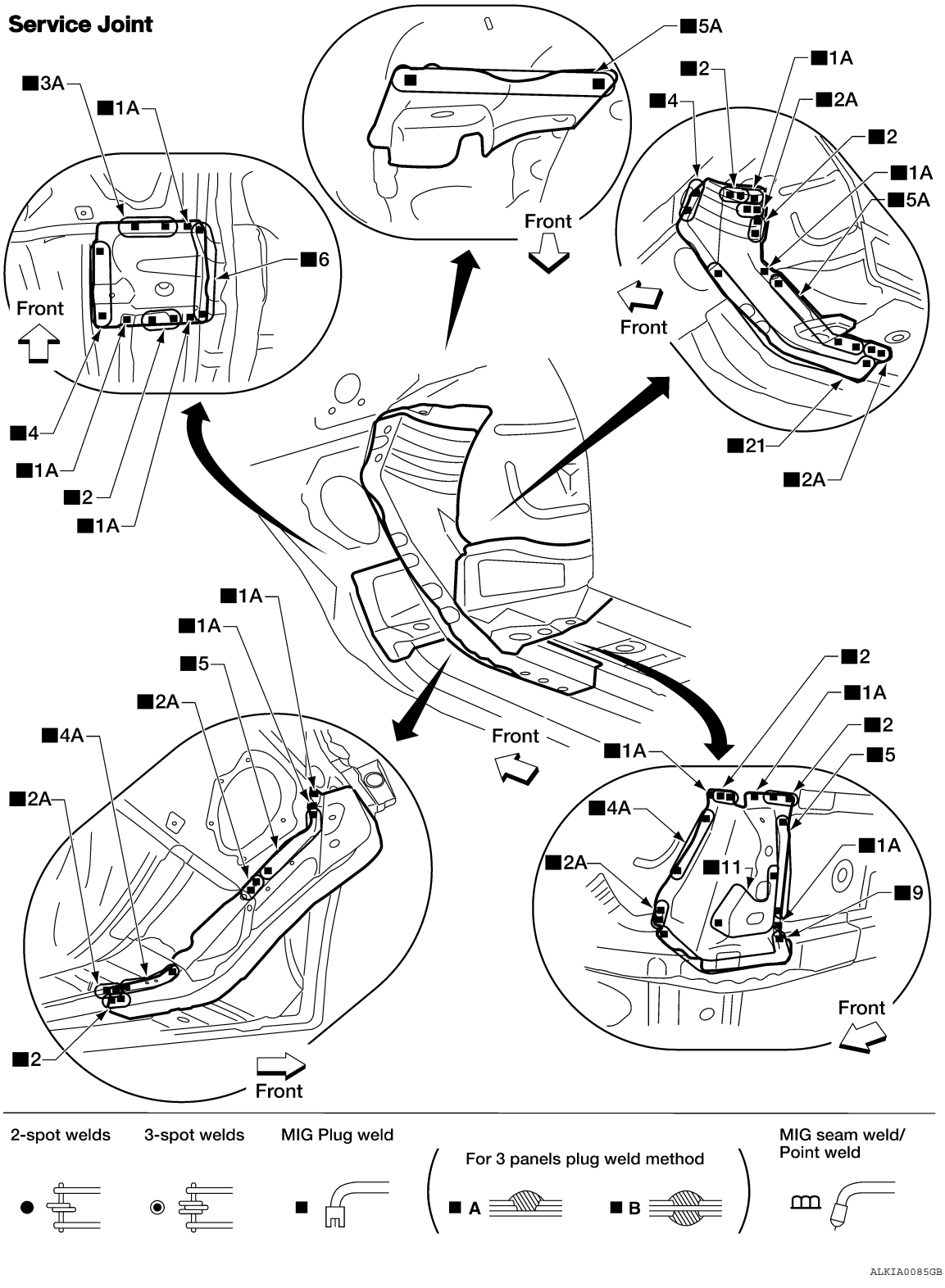
Change parts

- Front strut housing (LH)
- Hoodledge connector
- Upper front hoodledge
- Radiator core support upper
- Hoodledge reinforcement
- Hoodledge reinforcement rear

Front Side Member

INFOID:0000000005433527

- Work after hoodledge partial has been removed.

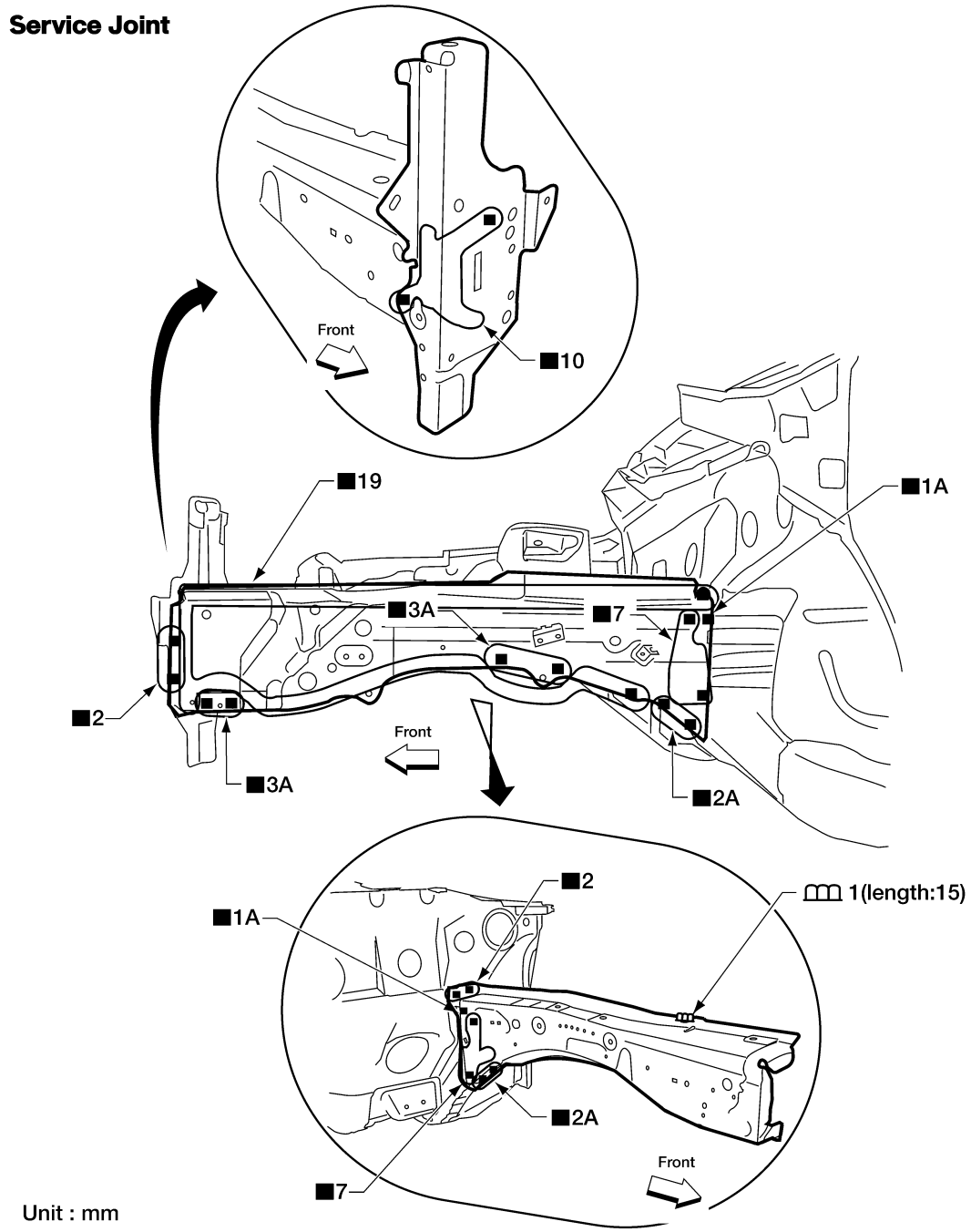


Change parts

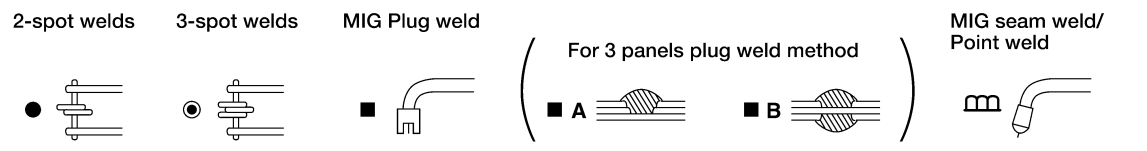
- Front side member rear assembly
- Front side member rear reinforcement
- Front suspension member plate
- Front side member outrigger assembly
- Front side member rear closing plate assembly

Front Side Member (Partial Replacement)

INFOID:0000000005433528



Unit : mm



ALKIA0086GB

Change parts

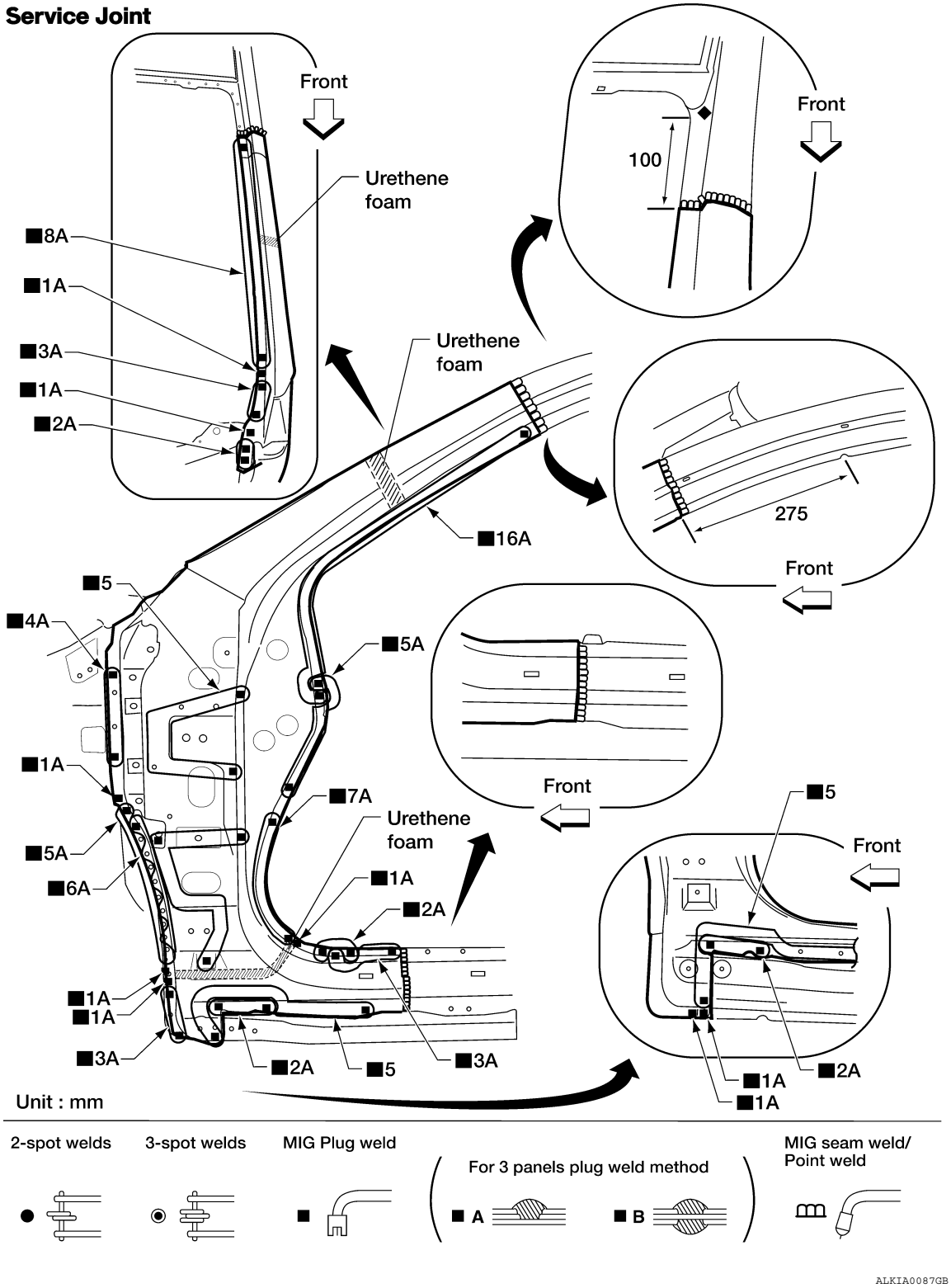
- Front side member front assembly
- Front side member front closing plate
- Radiator core side support

Front Pillar

INFOID:0000000005433529

OUTER

• Work after hoodledge and hoodledge reinforcement rear has been removed.



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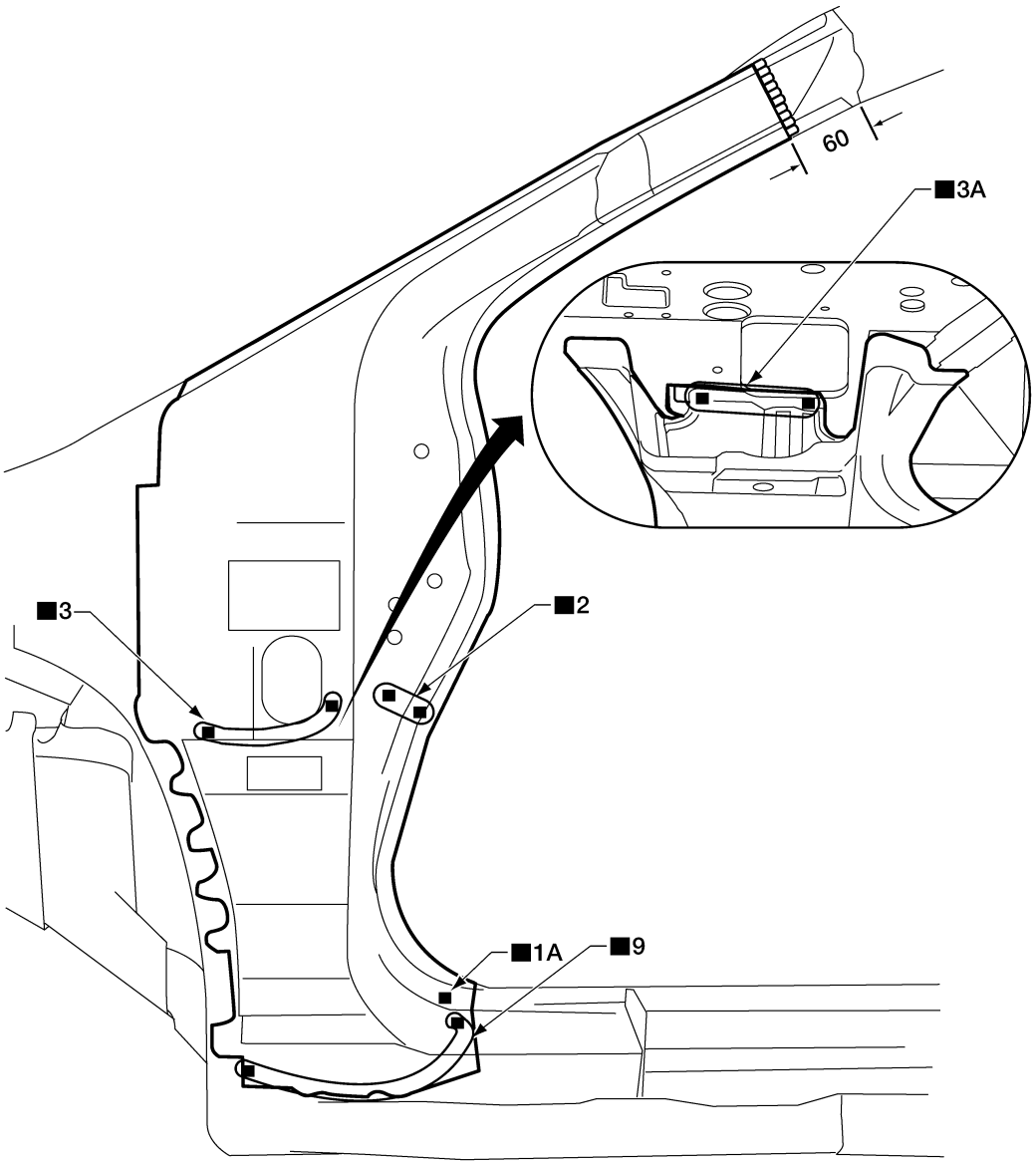
Change parts

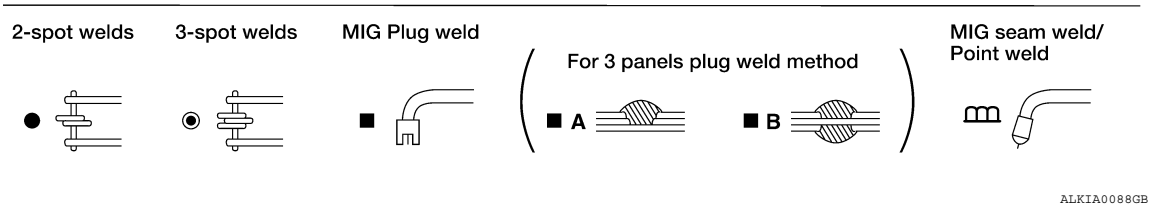
- Front pillar section of body side outer

REINFORCEMENT

• Work after front pillar outer has been removed.

Service Joint





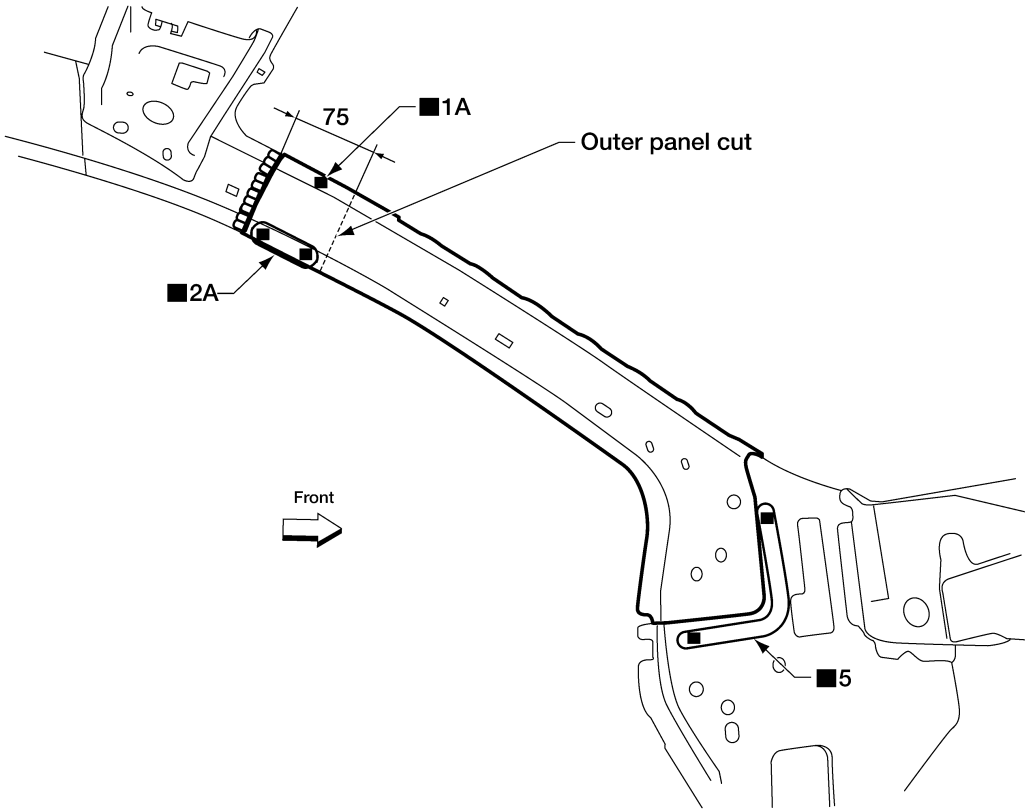
Change parts

- Front pillar upper reinforcement
- Front pillar lower reinforcement

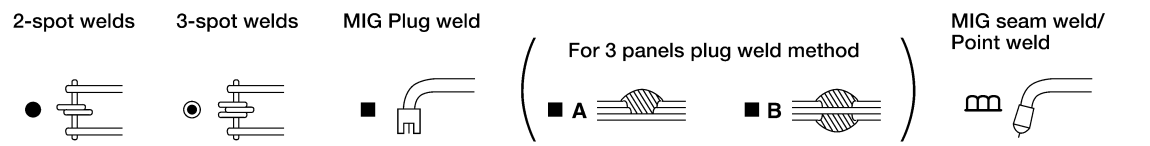
INNER

• Work after front pillar reinforcement has been removed.

Service Joint



Unit : mm



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Change parts

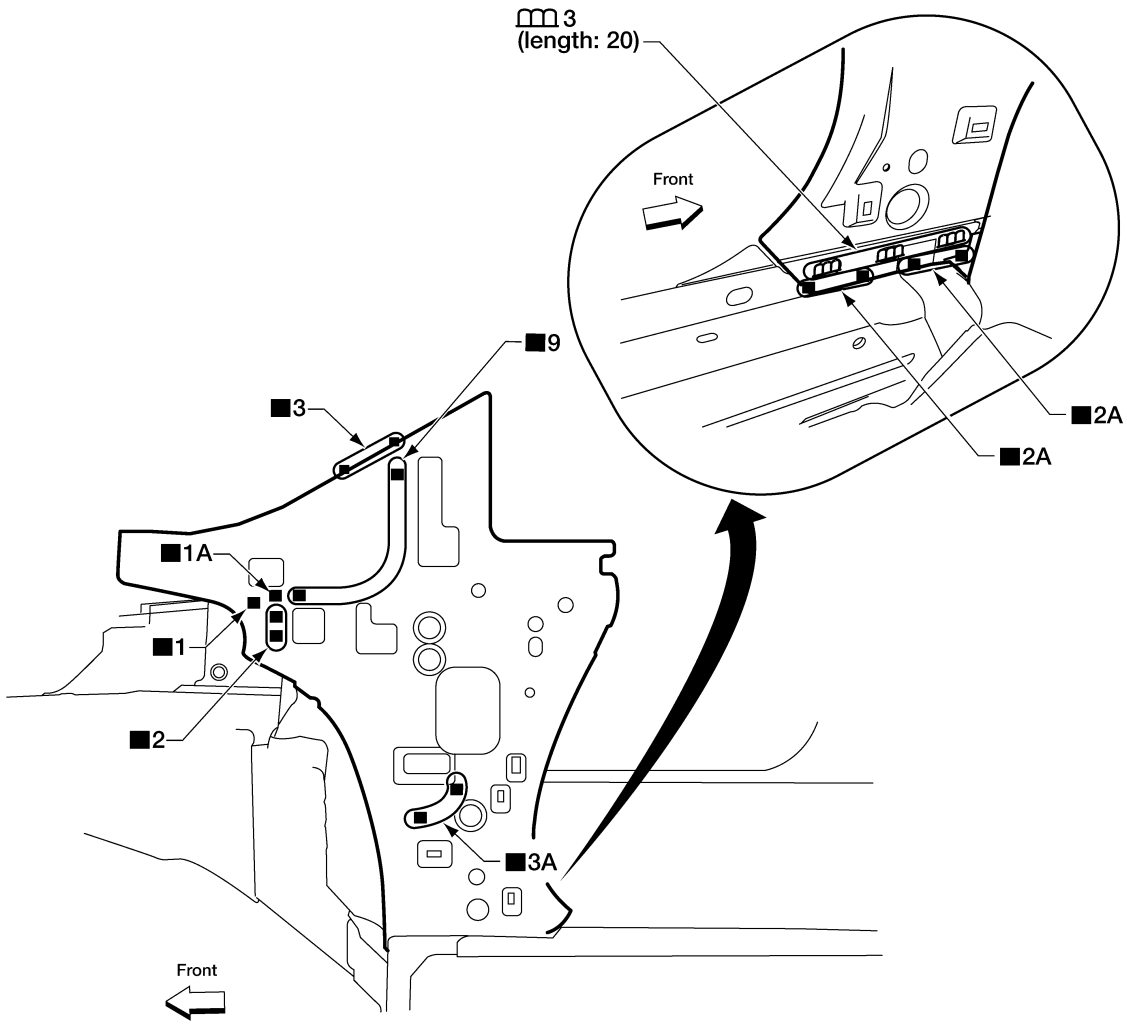
- Front pillar inner reinforcement

Dash Side

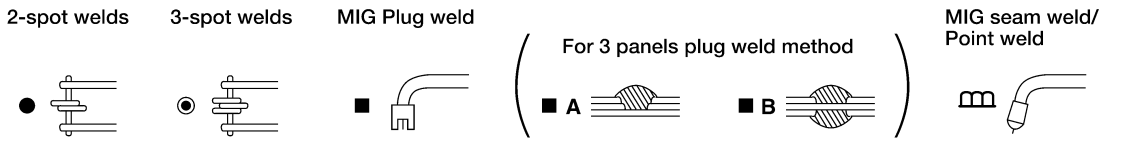
INFOID:0000000005433530

Work with front pillar reinforcement removed.

Service Joint



Unit : mm



ALKIA0091GB

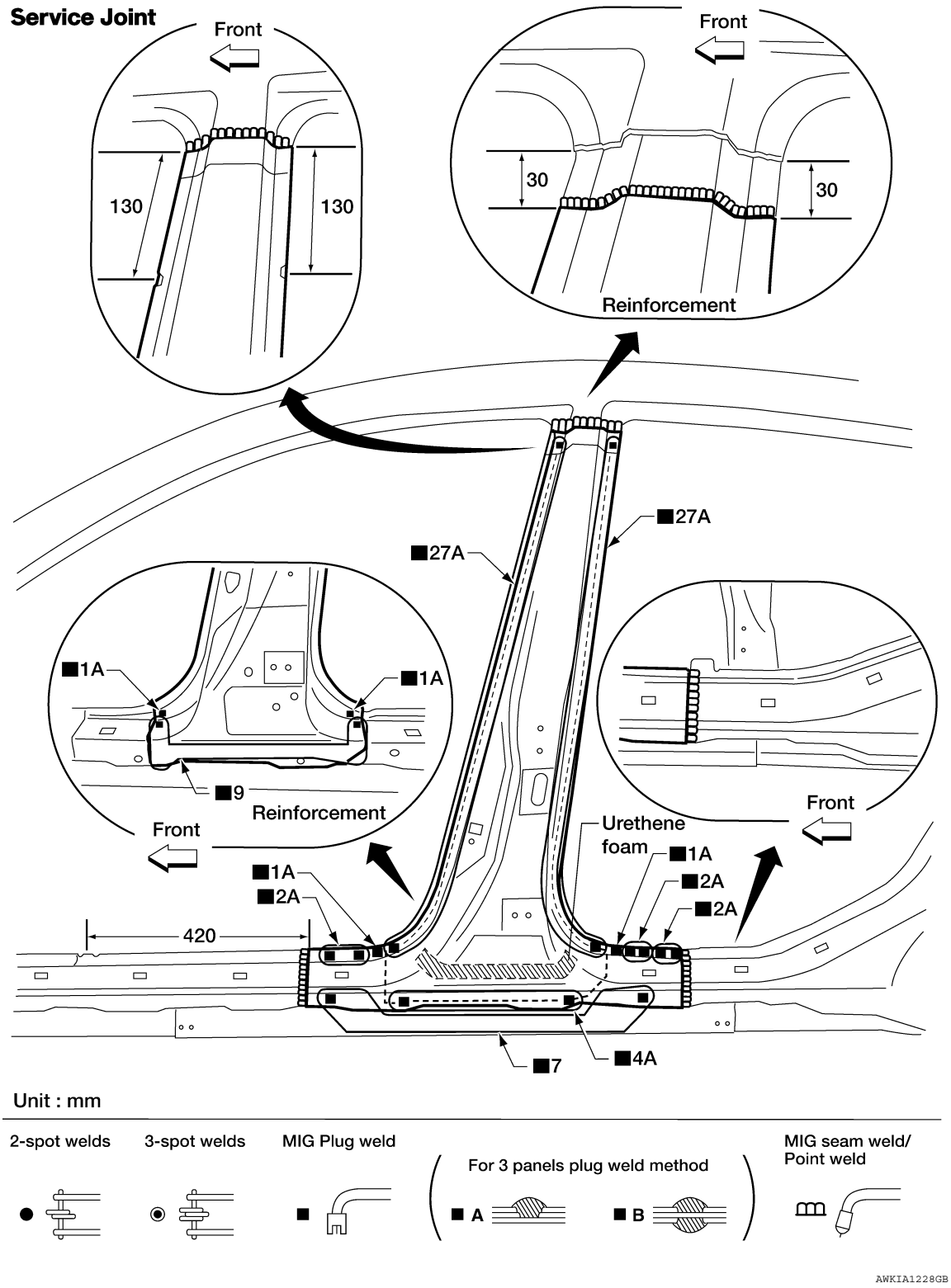
Change parts

- Dash side

Center Pillar

INFOID:0000000005433531

OUTER



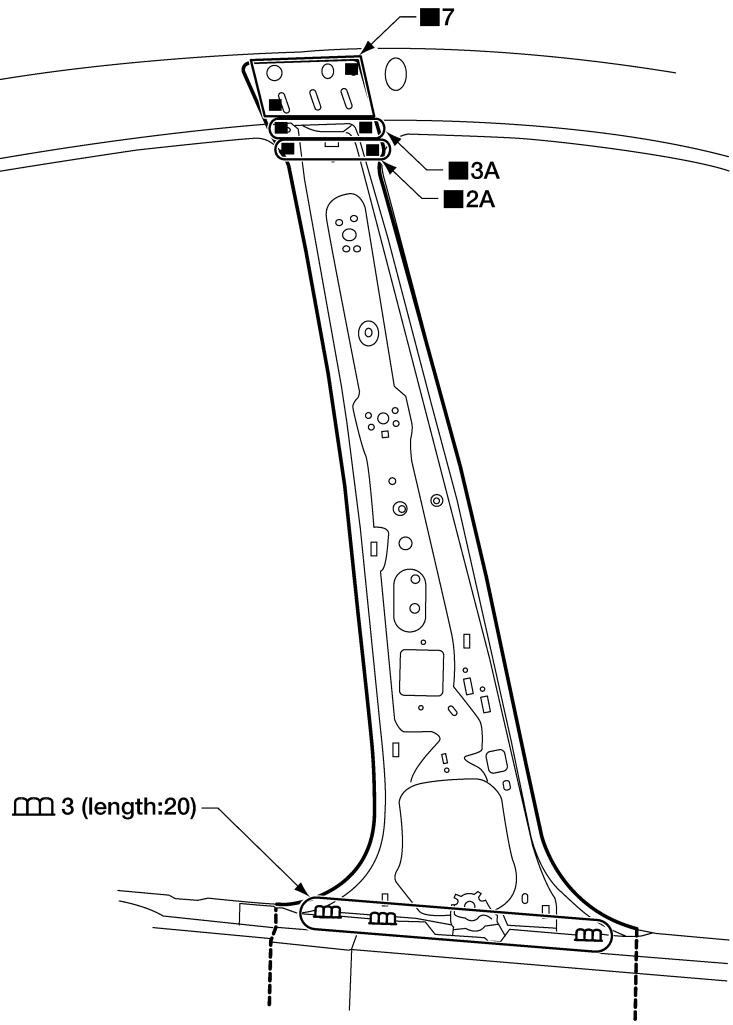
Change parts

- Center pillar portion of body side outer
- Center pillar reinforcement

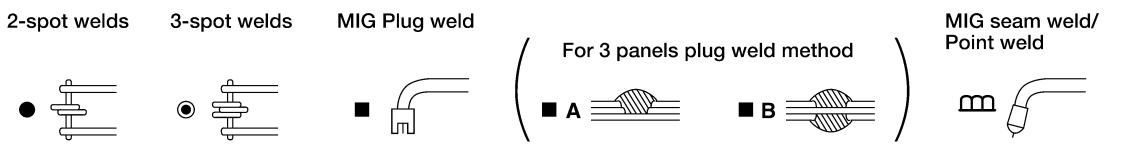
INNER

Work after center pillar outer and outer sill have been removed.

Service Joint



Unit : mm



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Change parts

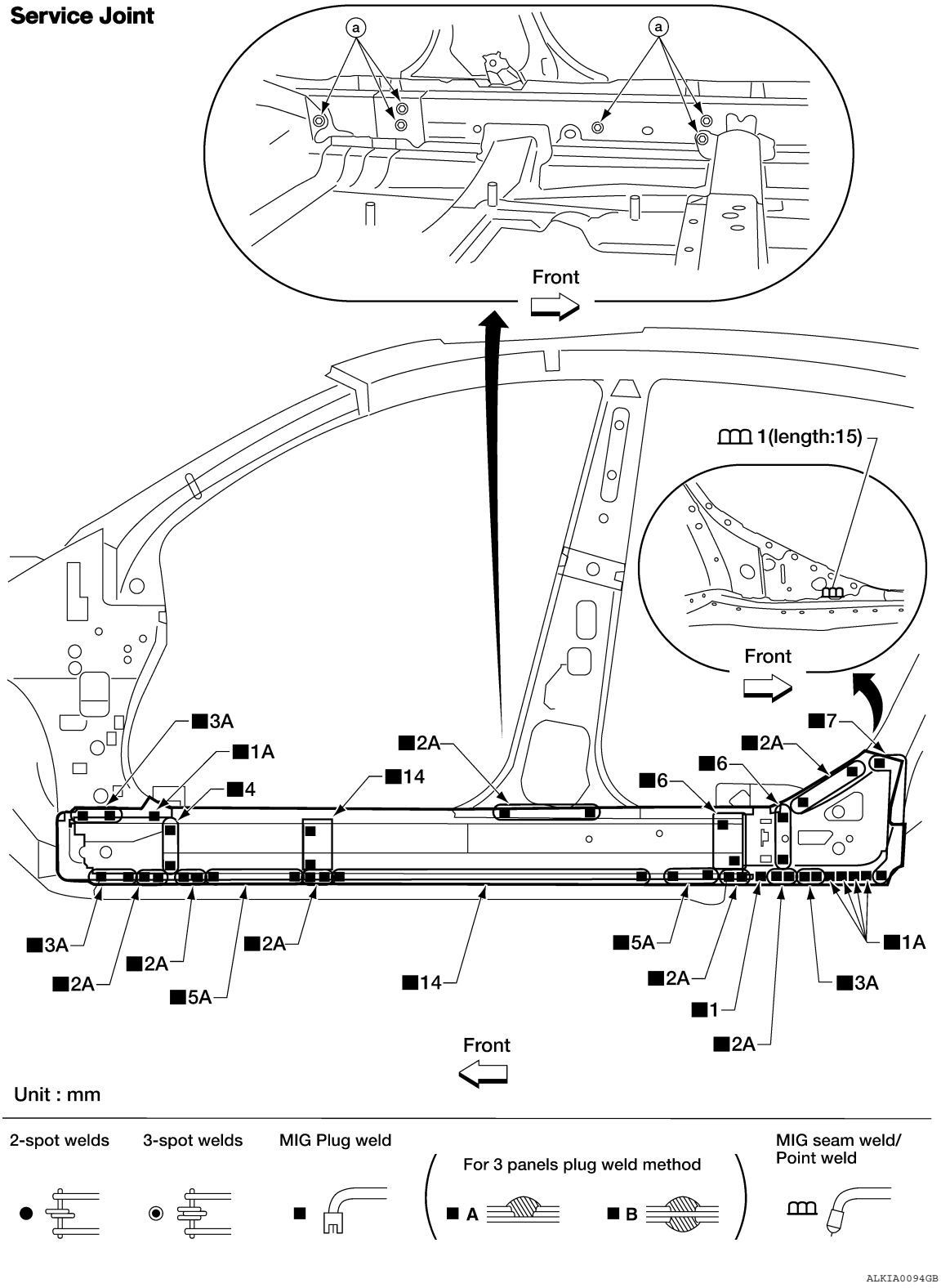
- Center pillar inner

Outer Sill

INFOID:0000000005433532

Work after the front pillar reinforcement, center pillar reinforcement, and rear fender have been removed.

Service Joint



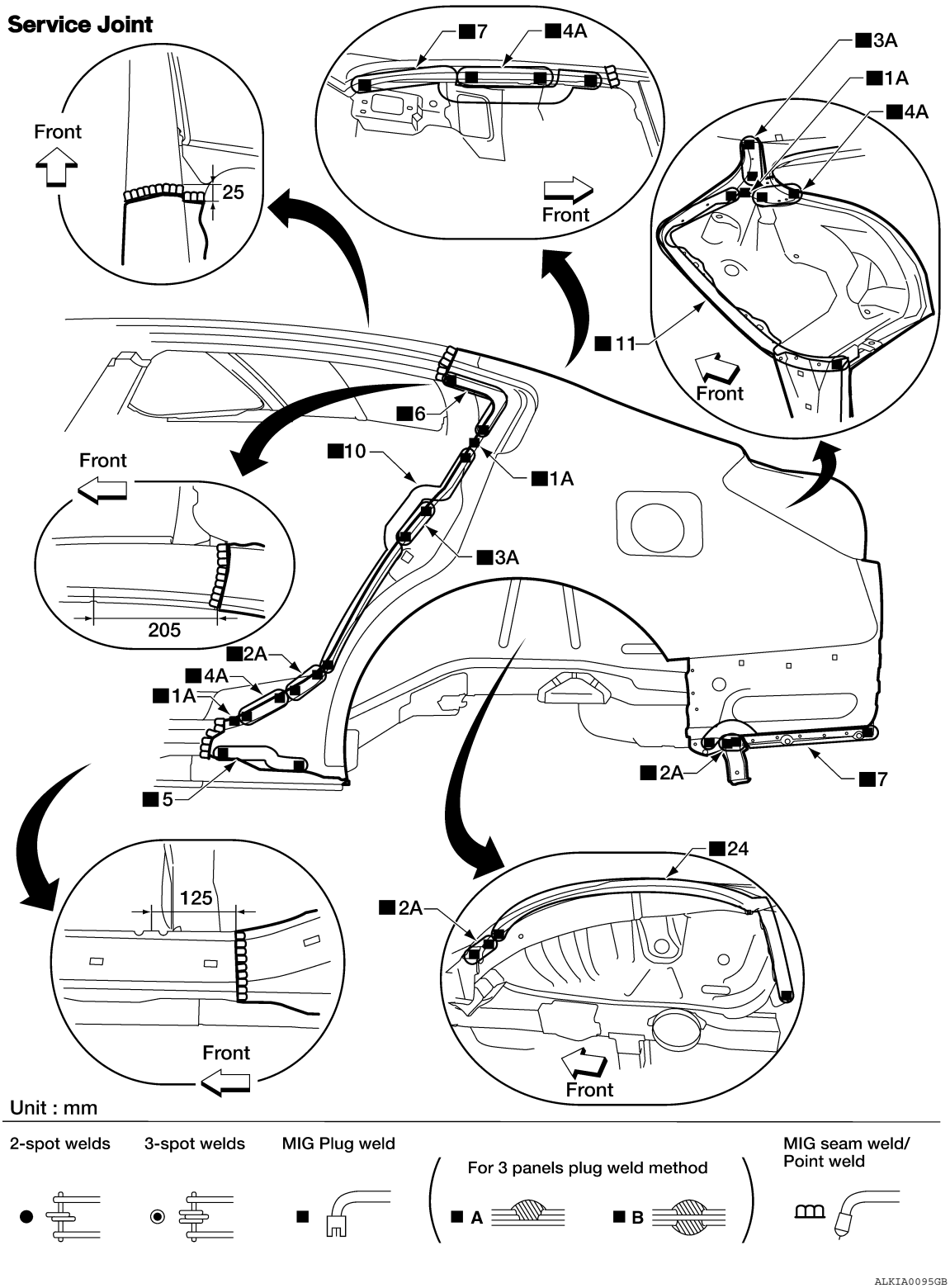
Change parts

- Outer sill reinforcement

A. 24Nm (2.4Kg-m, 18lb-ft)

Rear Fender

INFOID:0000000005433533



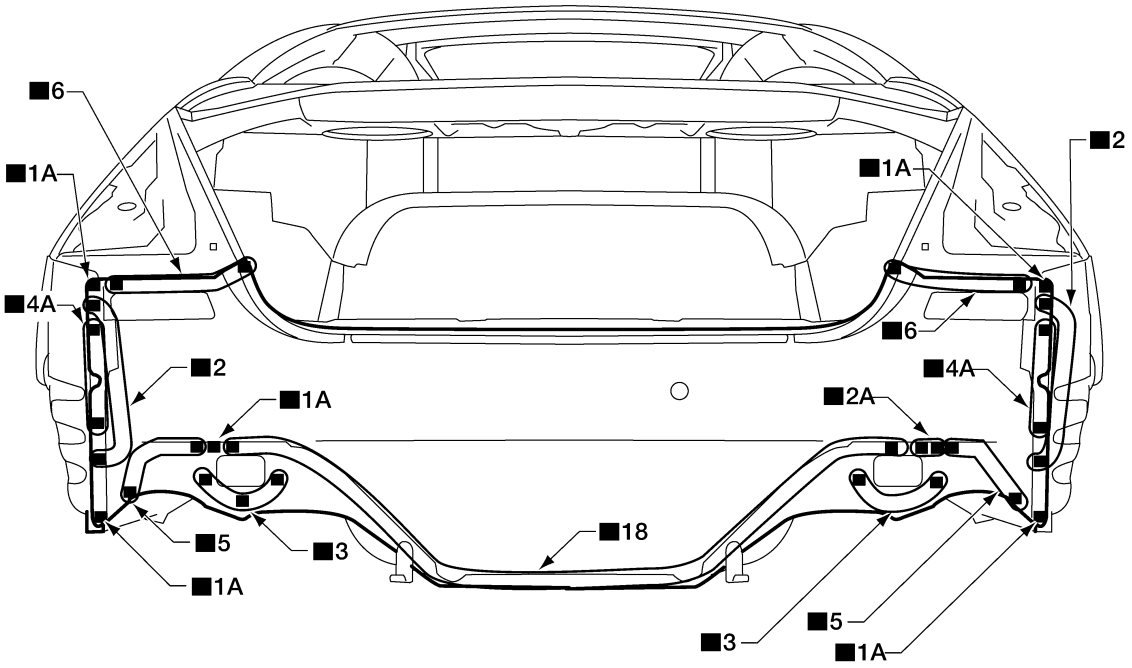
Change parts

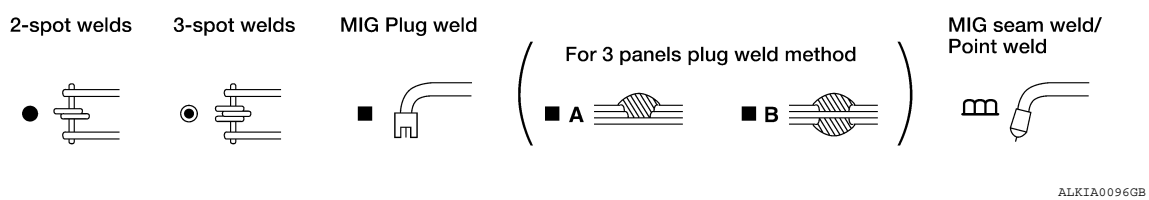
- Rear fender

Rear Panel

INFOID:0000000005433534

Service Joint





Change parts

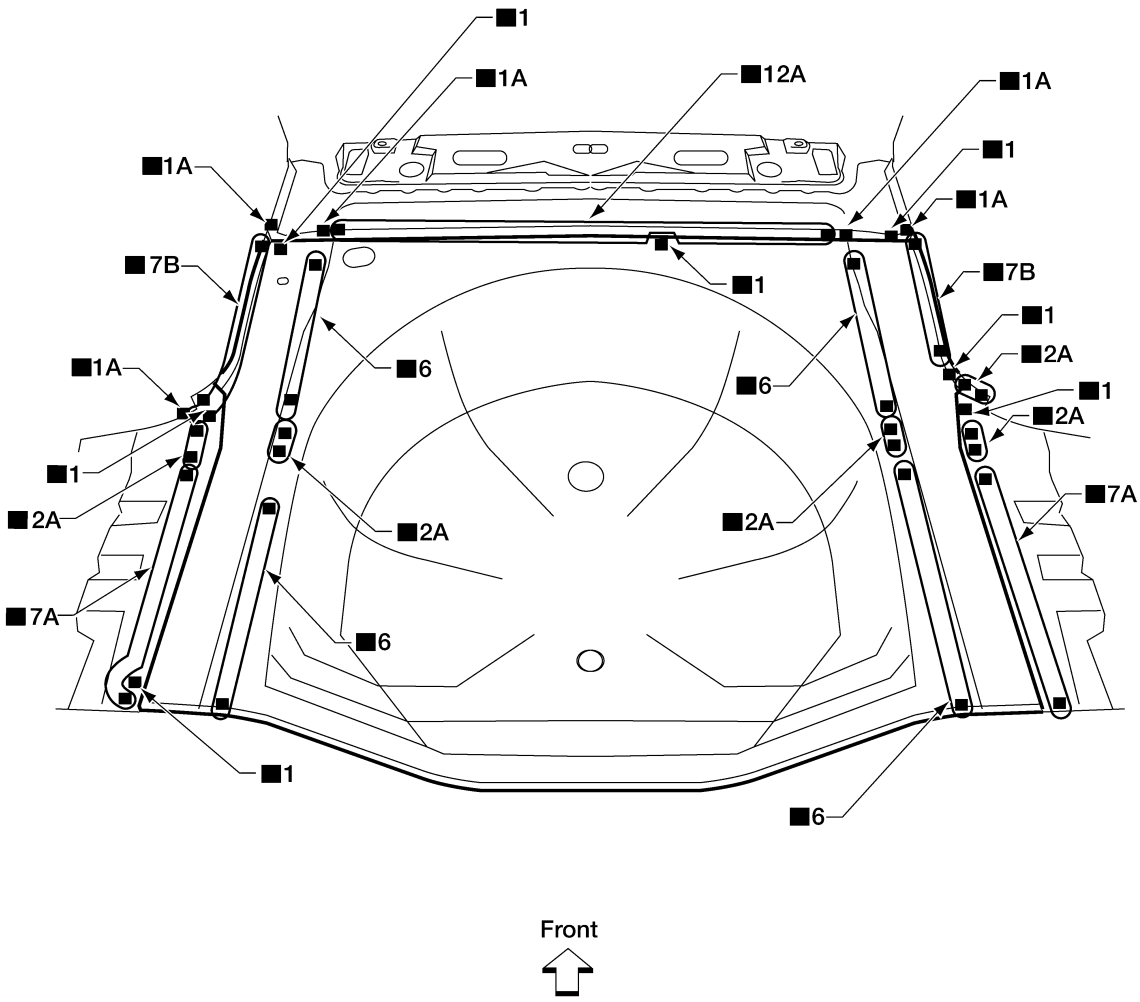
- Rear panel assembly

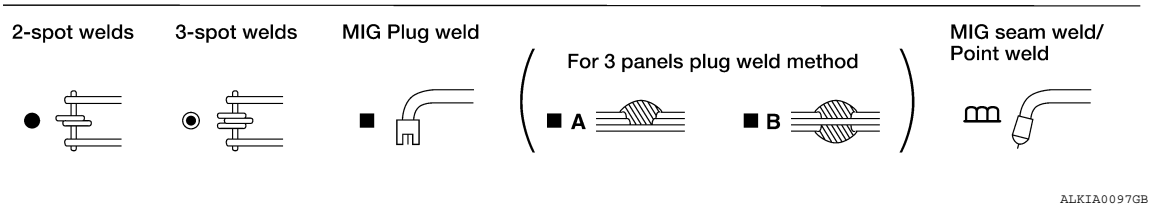
Rear Floor Rear

INFOID:0000000005433535

- Work after rear panel assembly has been removed.

Service Joint





Change parts

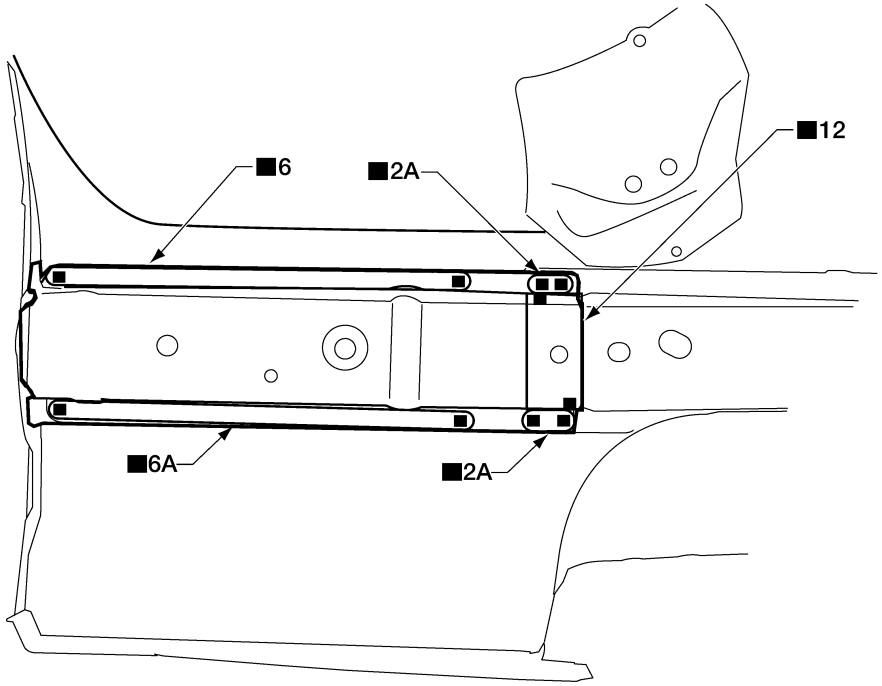
- Rear floor rear

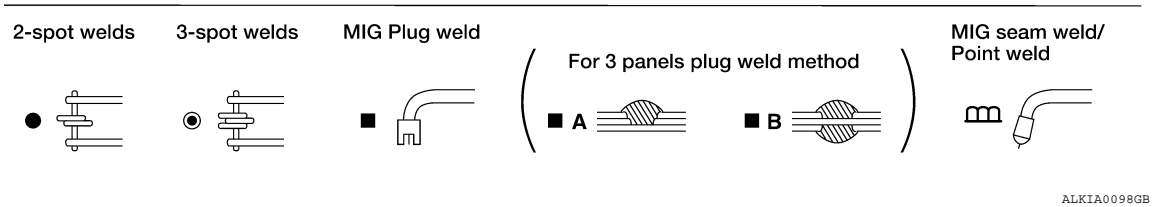
Rear Side Member Extension

INFOID:0000000005433536

- Work after rear panel assembly has been removed.

Service Joint





Change parts

- Rear side member extension

Foam Repair

INFOID:0000000005433537

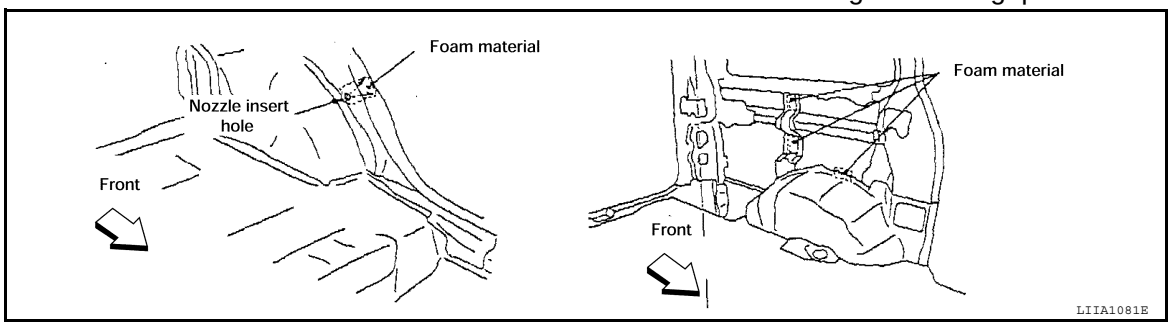
During factory assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

URETHANE FOAM APPLICATIONS

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

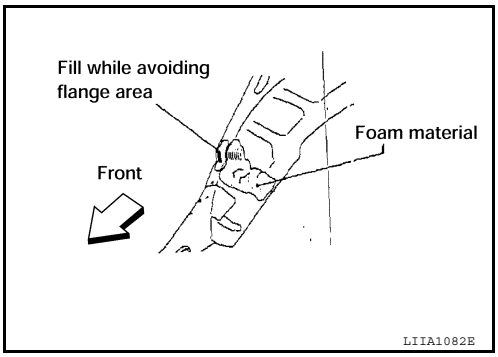
FILL PROCEDURES

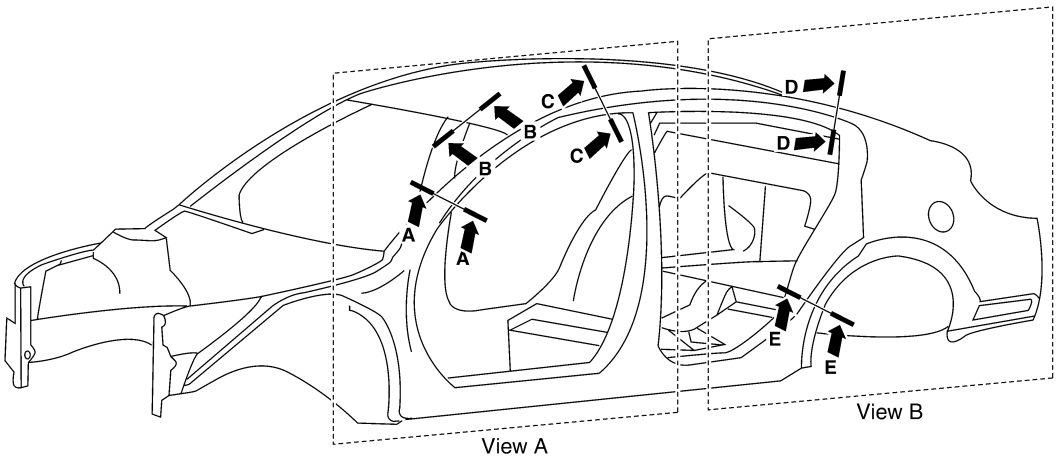
1. Fill procedures after installation service part.
   - Remove foam material remaining on vehicle side.
   - Clean area in which foam was removed.
   - Install service part.
   - Insert nozzle into hole near fill area and fill foam material or fill in enough to close gap with service part.

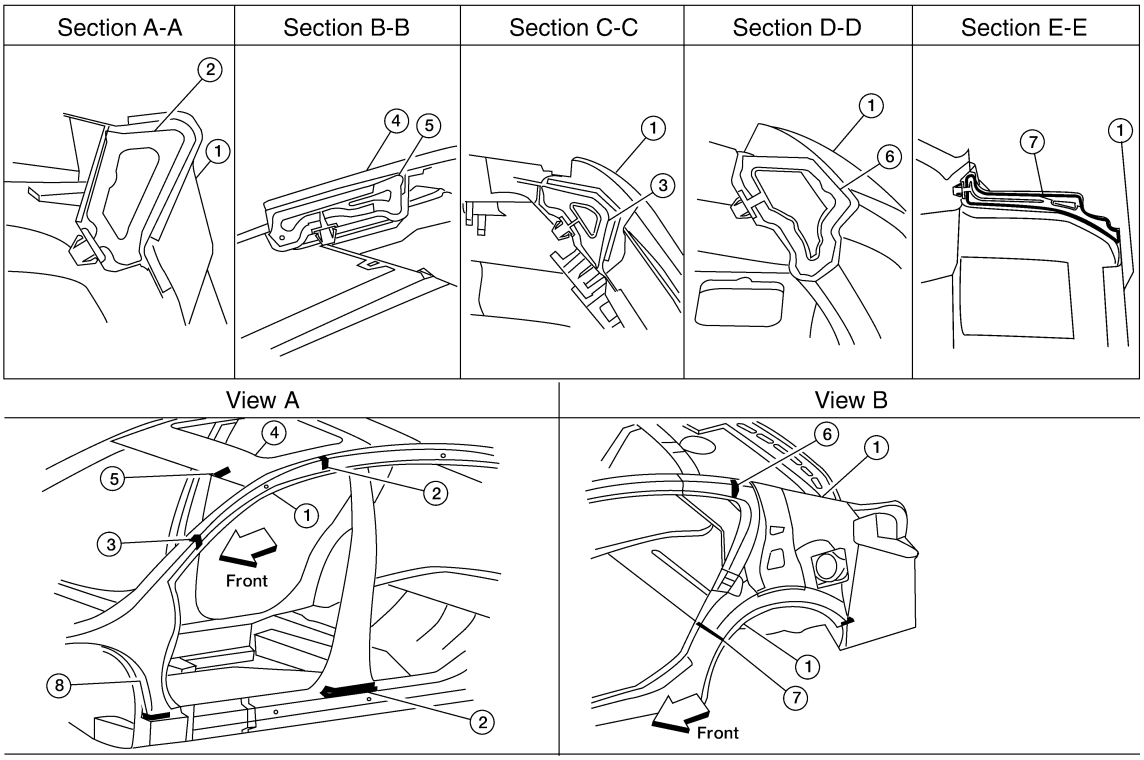


2. Fill procedures before installation service part

- Remove foam material remaining on vehicle side.
- Clean area in which 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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1. Body side outer
2. Body side insulation (foam) upper front pillar
3. Body side insulation (foam) front pillar
4. Roof panel assembly
5. Roof panel insulation (foam) front roof rail
6. Body side insulation (foam) rear pillar
7. Body side insulation (foam) rear pillar lower
8. Body side insulation strip, front pillar lower reinforcement