

SECTION **BRM**  
BODY REPAIR

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# BODY EXTERIOR PAINT COLOR

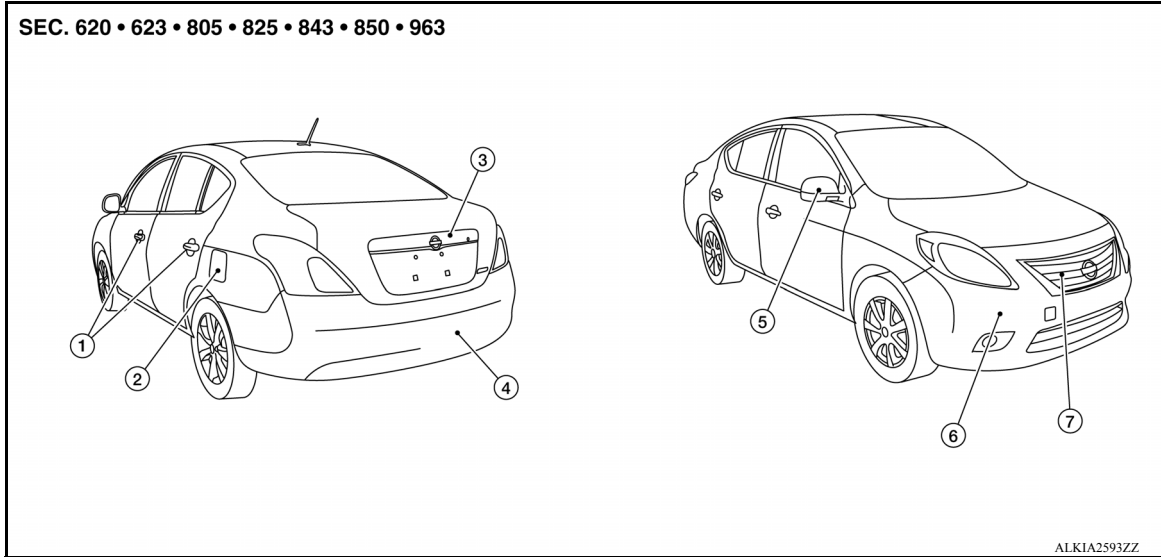
< VEHICLE INFORMATION >

## VEHICLE INFORMATION

### BODY EXTERIOR PAINT COLOR

#### Body Exterior Paint Color

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Component		Color code	B17	B23	KAC	KH3	K23	K36	NAC	QM1
		Description	Blue	Blue	Brown	Black	Silver	Gray	Red	White
		Paint type	M	M	M	S	M	M	M	S
		Hard clear coat	t	t	t	t	t	t	t	t
1	Outside door handles	Black	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3
		Chromium plate	CR2P	CR2P	CR2P	CR2P	CR2P	CR2P	CR2P	CR2P
2	Fuel filler lid	Body color	B17	B23	KAC	KH3	K23	K36	NAC	QM1
3	License plate finisher	Body color	B17	B23	KAC	KH3	K23	K36	NAC	QM1
4	Rear bumper fascia	Body color	B17	B23	KAC	KH3	K23	K36	NAC	QM1
5	Door mirror finisher	Body color	B17	B23	KAC	KH3	K23	K36	NAC	QM1
		Black	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3
6	Front bumper fascia	Body color	B17	B23	KAC	KH3	K23	K36	NAC	QM1
7	Front grille	Black	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3
		Chromium plate	CR2P	CR2P	CR2P	CR2P	CR2P	CR2P	CR2P	CR2P

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

# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

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

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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.

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# PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

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## PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

### High Strength Steel (HSS)

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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 <sup>2</sup> (38kg/mm <sup>2</sup> ,54klb/sq in)	SP130	<ul style="list-style-type: none"> <li>• Front side member assembly</li> <li>• Hoodledge assembly</li> <li>• Upper dash</li> <li>• Front pillar reinforcement assembly</li> <li>• Rear side member assembly</li> <li>• Other reinforcements</li> </ul>

SP130 is the most commonly used HSS.

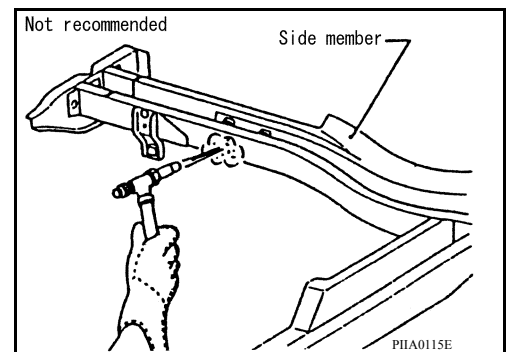
Read the following precautions when repairing HSS:

1. Additional points to consider

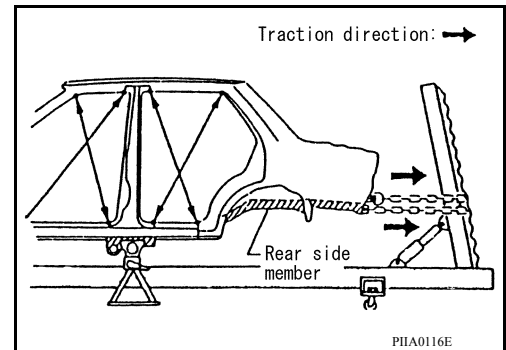
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).

Verify heating temperature with a thermometer.

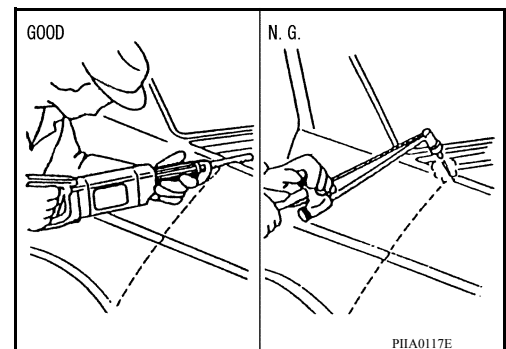
(Crayon-type and other similar type thermometer are appropriate.)



- 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).

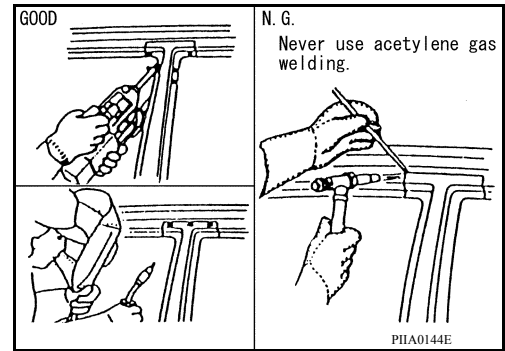




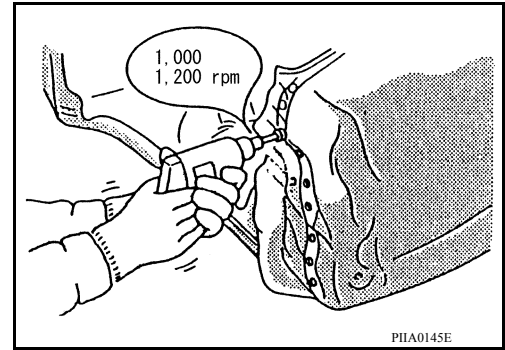
# PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

## < PRECAUTION >

- 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.



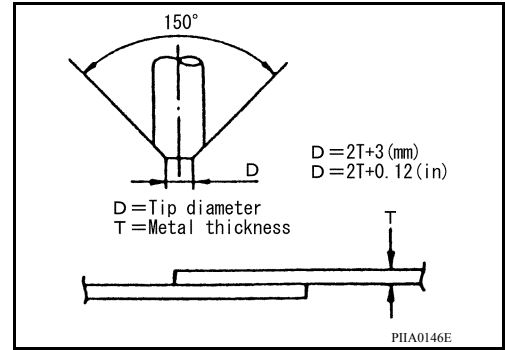
- The spot weld on HSS panels is harder than that of an ordinary steel panel. Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



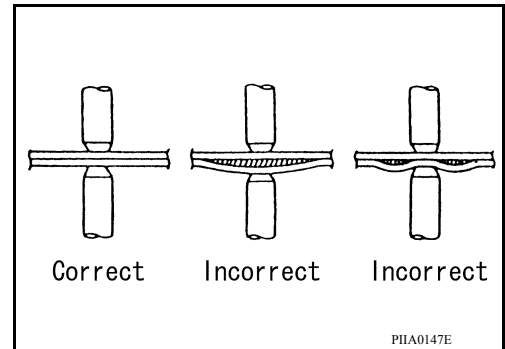
## 2. Precautions in spot welding HSS

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.



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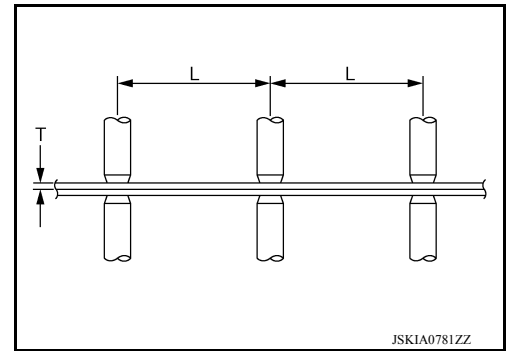
## PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

### < PRECAUTION >

- Follow the specifications for the proper welding pitch.

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

Unit: mm (in)



### Handling of Ultra High Strength Steel Plate Parts

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#### PROHIBITION OF CUT AND CONNECTION

Do not cut and join the lower lock pillar reinforcement (center pillar reinforcement inside frame parts) because its material is high strength steel plate (ultra high strength steel plate).

The center pillar reinforcement must be replaced if this part is damaged.

# HANDLING PRECAUTIONS FOR PLASTICS

< PRECAUTION >

## HANDLING PRECAUTIONS FOR PLASTICS

### Precautions For Plastics

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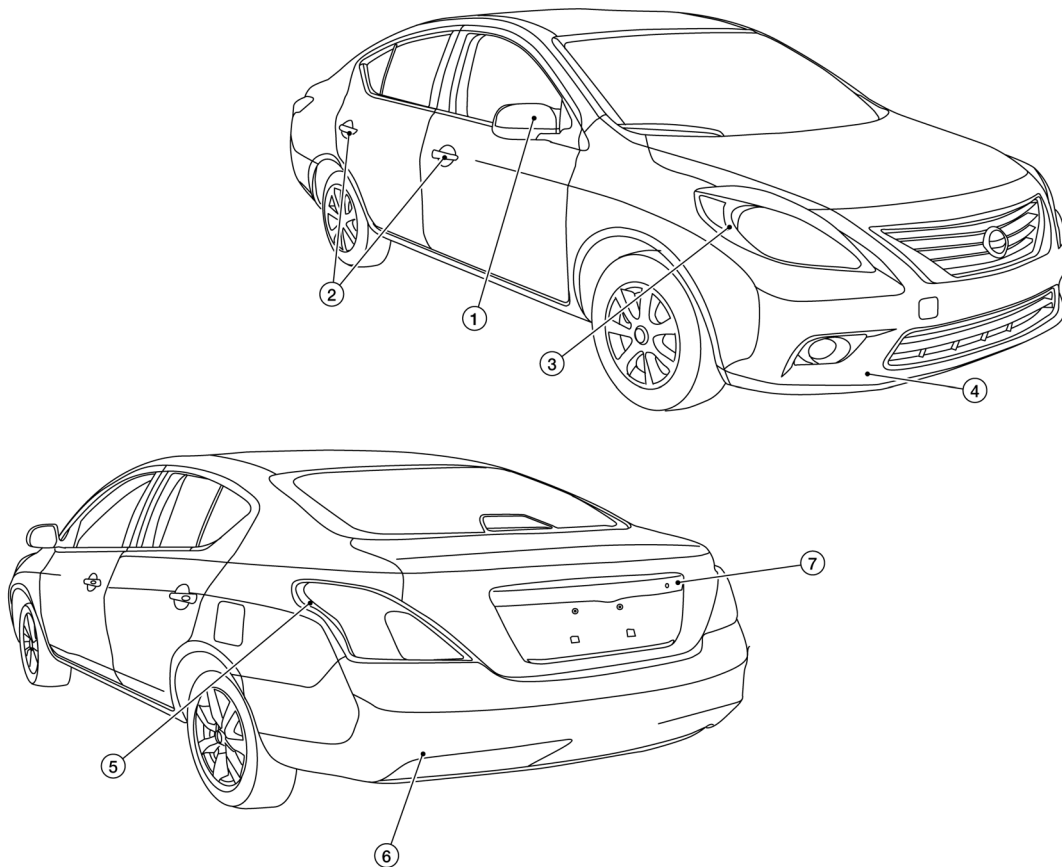
Abbreviation	Material name	Heatresisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Poly Vinyl Chloride	80(176)	Same as above.	Poison gas is emitted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

# HANDLING PRECAUTIONS FOR PLASTICS

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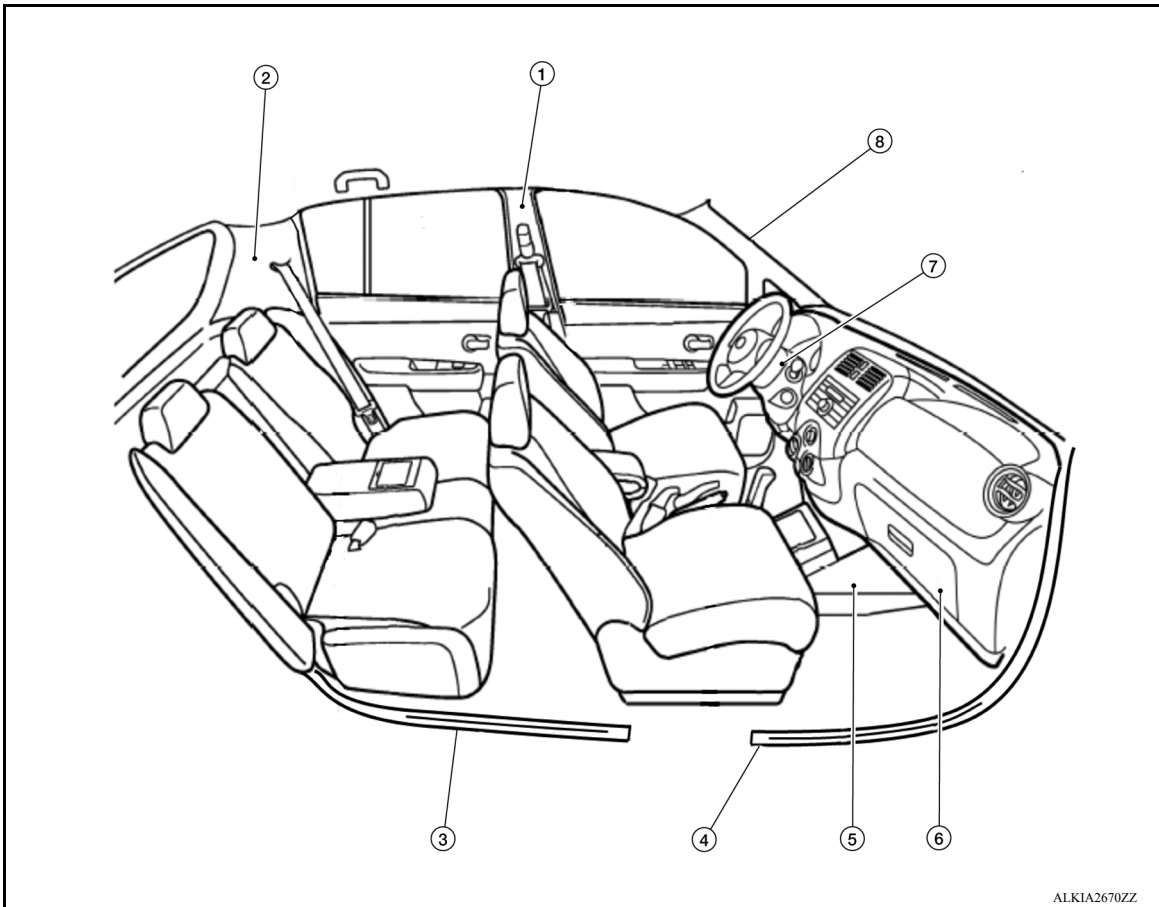
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Item	Component	Abbreviation	Material
1.	Door Mirror	Case	ASA Acronitrile Styrene Acrylate
		Skull cap	ABS Acronitrile Butadiene Acrylate
2.	Outside door handle	Grip	PC Polycarbonate
		Escutcheon	PA Polyamide (Nylon)

# HANDLING PRECAUTIONS FOR PLASTICS

## < PRECAUTION >

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.	Center console side finishers	PP	Polypropylene
6.	Glove box	PP	Polypropylene
7.	Steering column covers	PP	Polypropylene
8.	Front pillar garnish	PP	Polypropylene

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# REPAIRING MATERIAL

< PREPARATION >

## PREPARATION

### REPAIRING MATERIAL

#### Foam Repair

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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 Urethane foam for sealant (foam material) repair of material used on vehicle.

<Urethane foam for foaming agent>

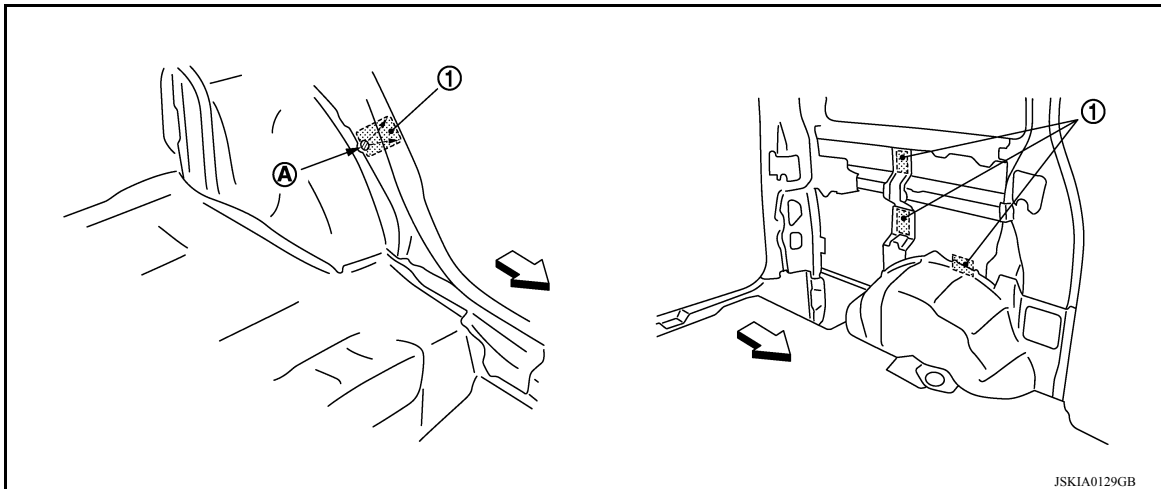
**3M™ Automix™ Flexible Foam 08463 or equivalent**

Read instructions on product for fill procedures.

#### FILL PROCEDURES

Example of foaming agent filling operation procedure:

1. Fill procedures after installation of service part.
  - a. Eliminate foam material remaining on vehicle side.
  - b. Clean area after eliminating form insulator and foam material.
  - c. Install service part.
  - d. Insert nozzle into hole (A) near fill area and fill foam material (1) or fill enough to close gap with the service part.



1. Urethane foam

A. Nozzle insert hole

← Front

2. Fill procedures before installation of service part:
  - a. Eliminate foam material remaining on vehicle side.
  - b. Clean area after eliminating foam insulator and foam material.
  - c. Fill with enough foam material on the wheelhouse outer side to close the gap with the service part while avoiding the flange area.

# REPAIRING MATERIAL

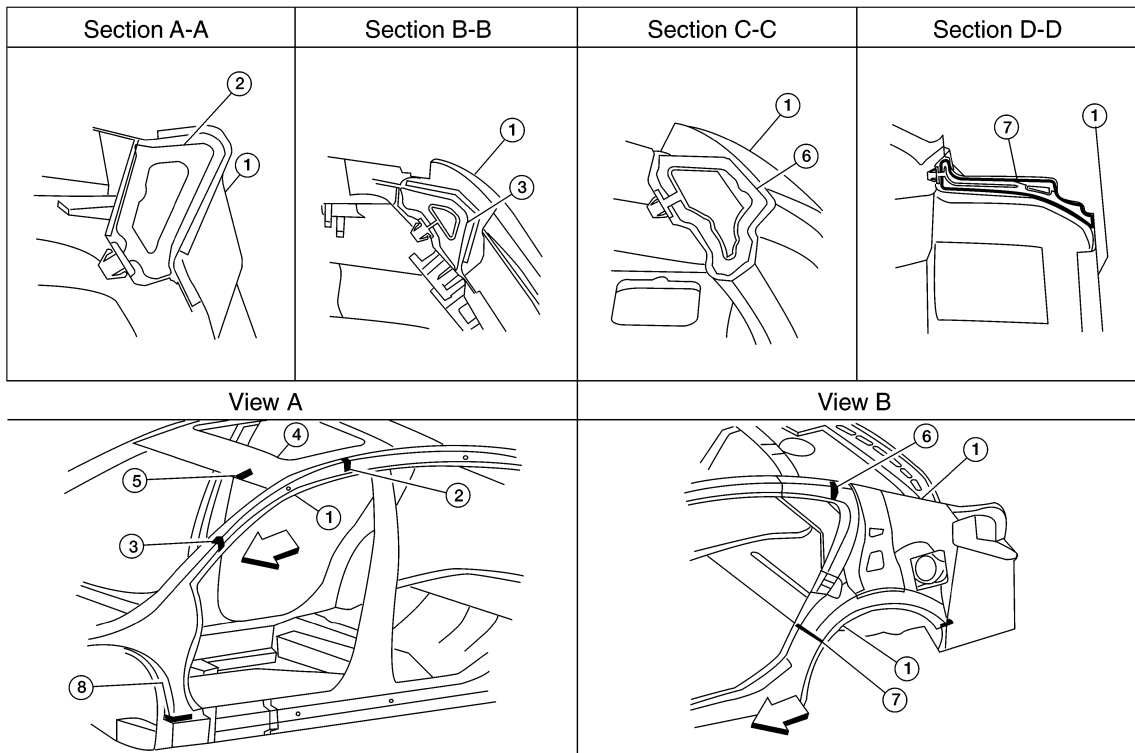
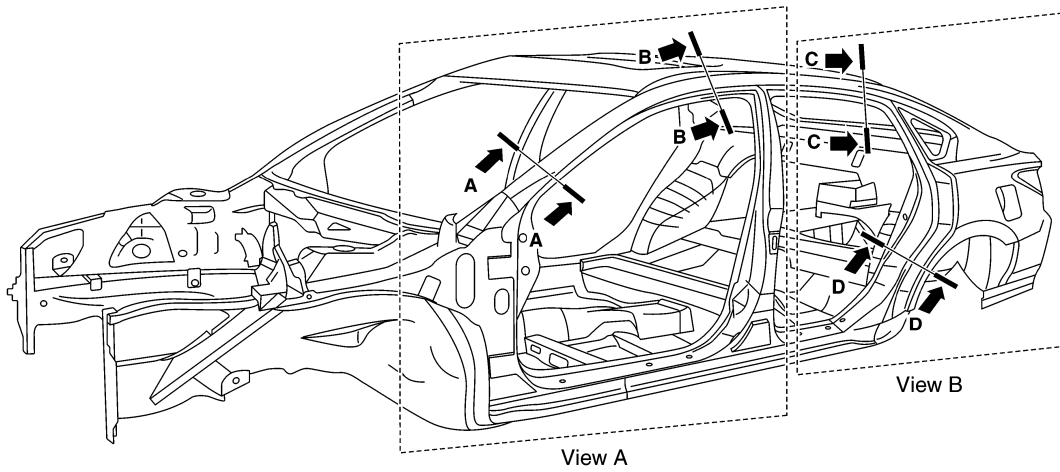
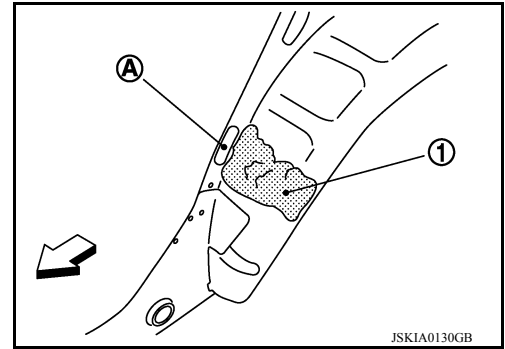
## < PREPARATION >

- 1. Urethane foam
  - A. Fill while avoiding flange area
- ←: Front

d. Install service part.

**NOTE:**

Refer to the label on the urethane foam container for information on working times.



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# REPAIRING MATERIAL

## < PREPARATION >

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|---|---|--|
| 1. Body side outer  | 2. Body side insulation (foam) front pillar | 3. Body side insulation (foam) roof side rail    |
| 4. Roof panel assembly  | 5. Body side insulation (foam) rear pillar  | 6. Body side insulation (foam) rear pillar lower |
| 7. Body side insulation strip, front pillar lower reinforcement | ⇐ Front                                     |  |



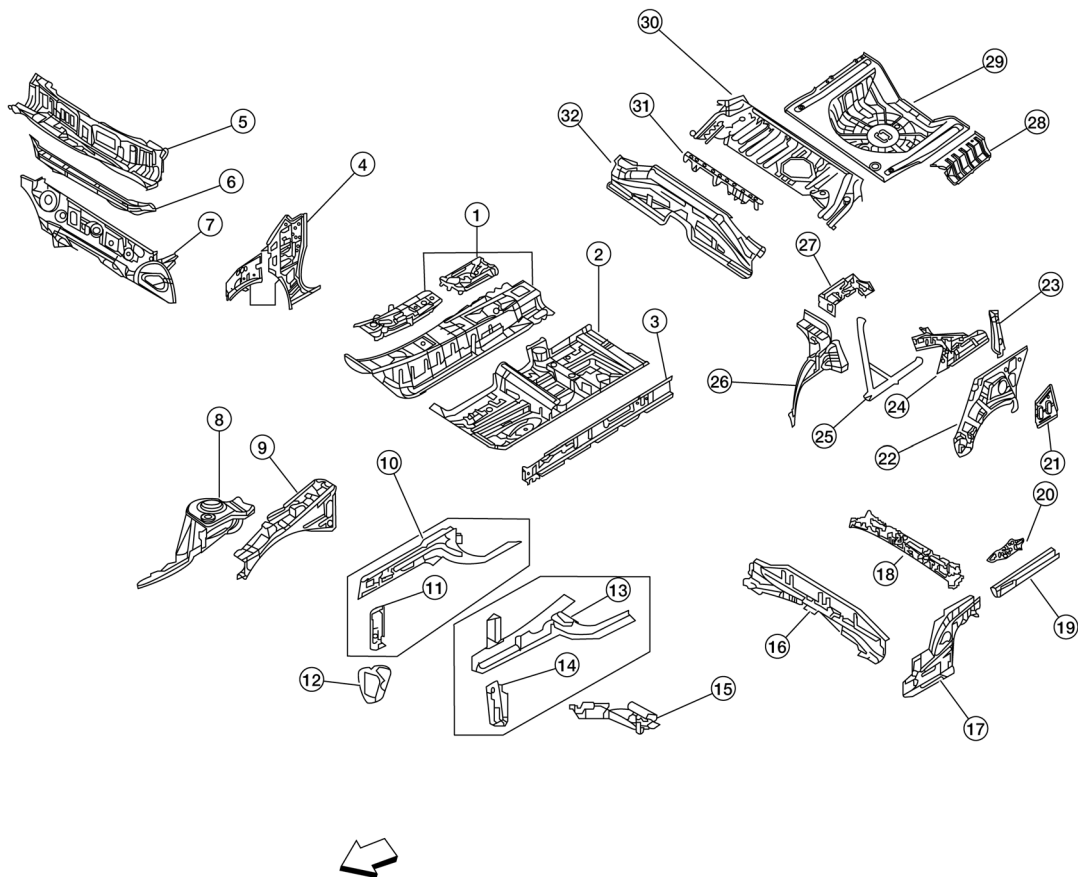
# BODY COMPONENT PARTS

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## BODY COMPONENT PARTS

### Underbody Component Parts

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| 1. Front floor center  | 2. Front floor assembly (LH/RH) | 3. Sill reinforcement (LH/RH) |
| 4. Dash side (LH/RH)   | 5. Upper dash assembly          | 6. Member dash lower cross    |
| 7. Lower dash assembly | 8. Strut housing (LH/RH)        | 9. Hood ledge (LH/RH)         |

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## BODY COMPONENT PARTS

### < PREPARATION >

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10. Closing plate inner assembly (LH/RH)	11. Radiator core inner side support (LH/RH)	12. Member assembly front side front (LH/RH)
13. Closing plate front outer assembly (LH/RH)	14. Radiator core outer side support	15. Front suspension mounting bracket (LH/RH)
16. Rear center crossmember assembly	17. Hood ledge reinforcement assembly (LH/RH)	18. Rear seat crossmember assembly
19. Outer sill support bracket (LH/RH)	20. Towing hook bracket	21. Extension rear wheel house outer (LH/RH)
22. Rear wheel housing outer (LH/RH)	23. Rear pillar inner reinforcement (LH/RH)	24. Rear inner pillar (LH/RH)
25. Rear seatback support brace (LH/RH)	26. Rear wheel housing inner (LH/RH)	27. Parcel shelf side (LH/RH)
28. Rear floor rear side (LH/RH)	29. Rear floor rear	30. Rear floor front
31. Rear seat upper crossmember	32. Rear floor front extension	⇐ Front

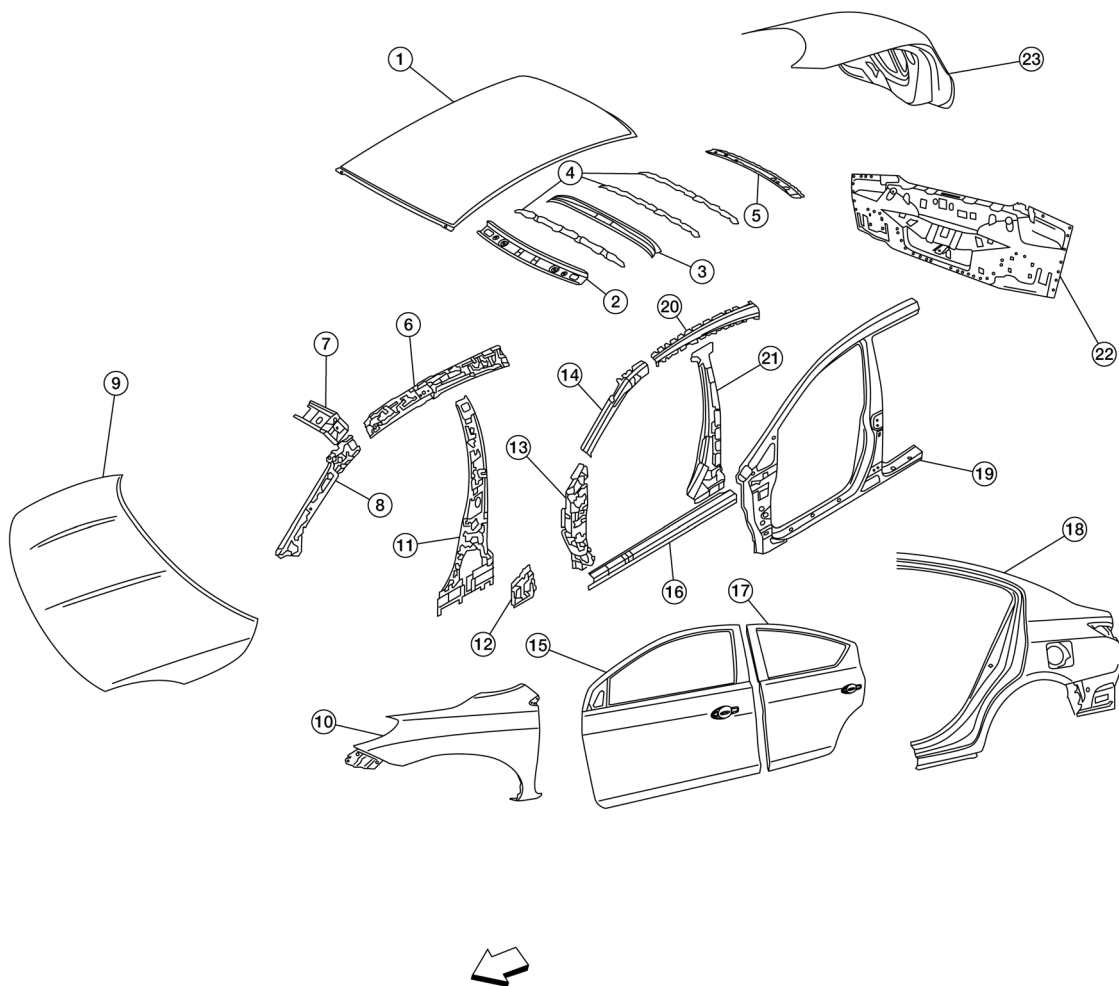
# BODY COMPONENT PARTS

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## Body Component Parts

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| 1. Roof panel assembly           | 2. Front roof rail              | 3. Roof reinforcement           |
| 4. Roof rail                     | 5. Rear roof rail               | 6. Roof inner side rail (LH/RH) |
| 7. Front roof rail brace (LH/RH) | 8. Front pillar inner (LH/RH)   | 9. Hood assembly                |
| 10. Front fender (LH/RH)         | 11. Center pillar inner (LH/RH) | 12. Rear fender corner (LH/RH)  |

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## BODY COMPONENT PARTS

### < PREPARATION >

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| 13. Front pillar lower hinge brace (LH/RH) | 14. Front pillar reinforcement (LH/RH)   | 15. Front door assembly (LH/RH)  |
| 16. Inner sill reinforcement (LH/RH)       | 17. Rear door assembly (LH/RH)           | 18. Rear body side outer (LH/RH) |
| 19. Front body side outer (LH/RH)          | 20. Roof side rail reinforcement (LH/RH) | 21. Center pillar reinforcement  |
| 22. Rear panel assembly                    | 23. Trunk lid assembly                   | ⇐ Front                          |

# CORROSION PROTECTION

< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### CORROSION PROTECTION

#### Description

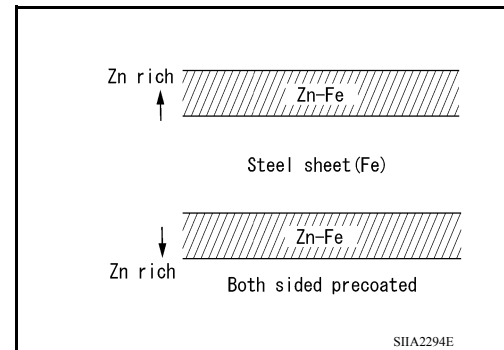
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To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

#### 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.



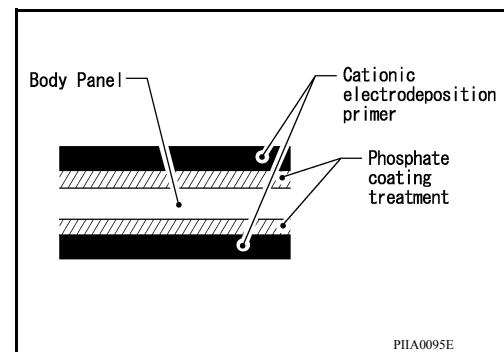
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

#### 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

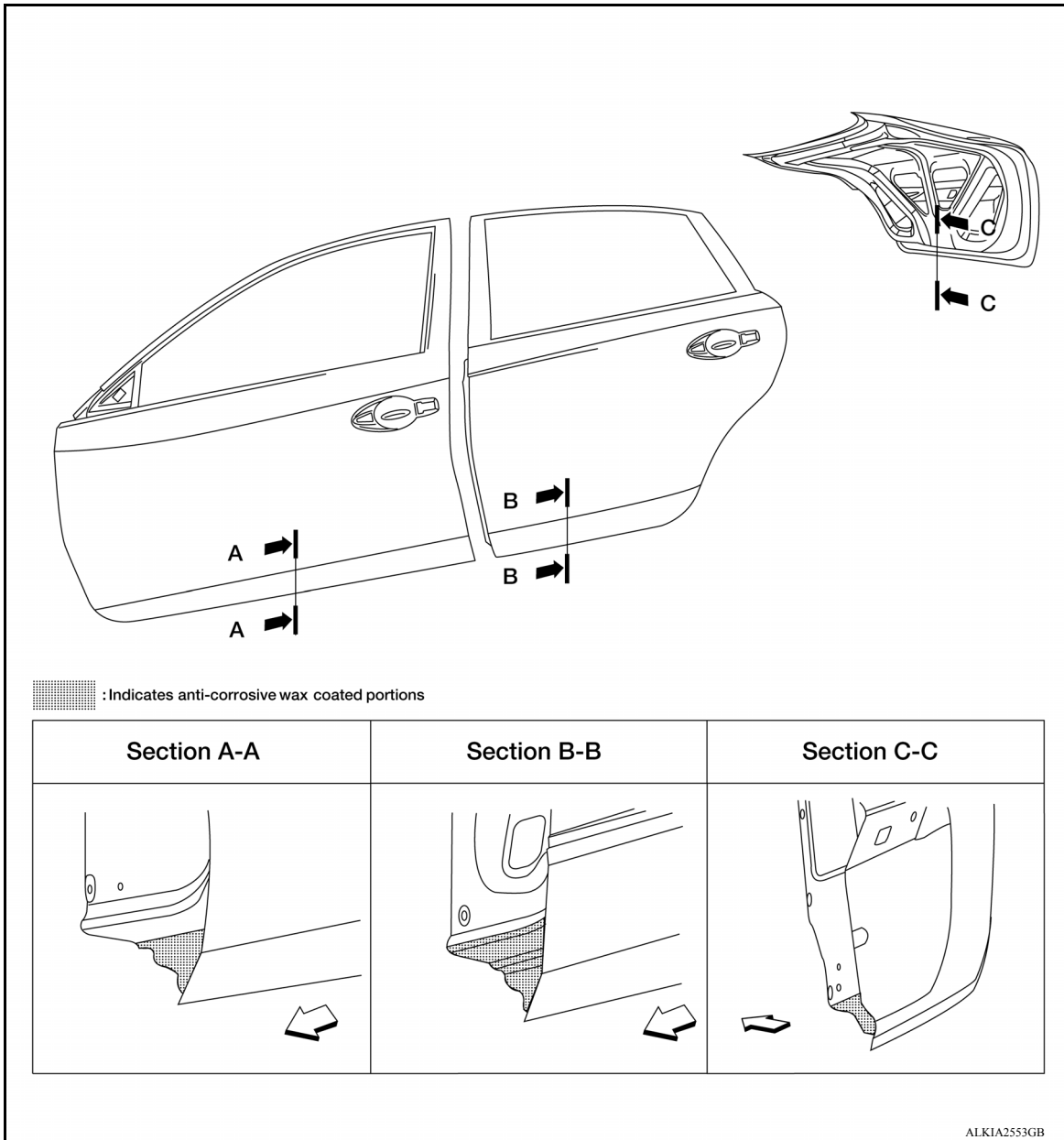
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To improve corrosion resistance, anti-corrosive wax is applied inside the body sill and inside other closed sections. Accordingly, when replacing these parts, be sure to apply anti-corrosive wax to the appropriate areas of

# CORROSION PROTECTION

## < REMOVAL AND INSTALLATION >

the new parts. Select an excellent anti-corrosive wax which will penetrate after application and has a long shelf life.



↔ Front

## Undercoating

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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.

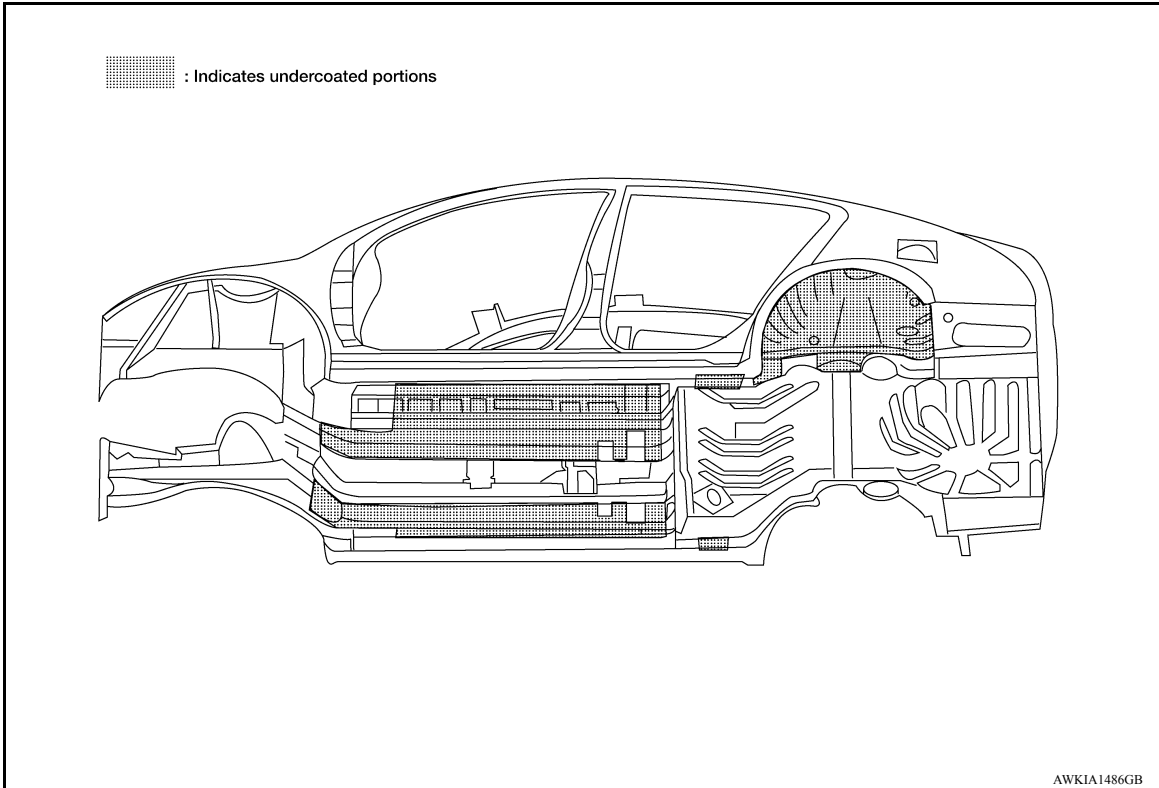
### Precautions in Undercoating

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.

# CORROSION PROTECTION

## < REMOVAL AND INSTALLATION >

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



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# BODY SEALING

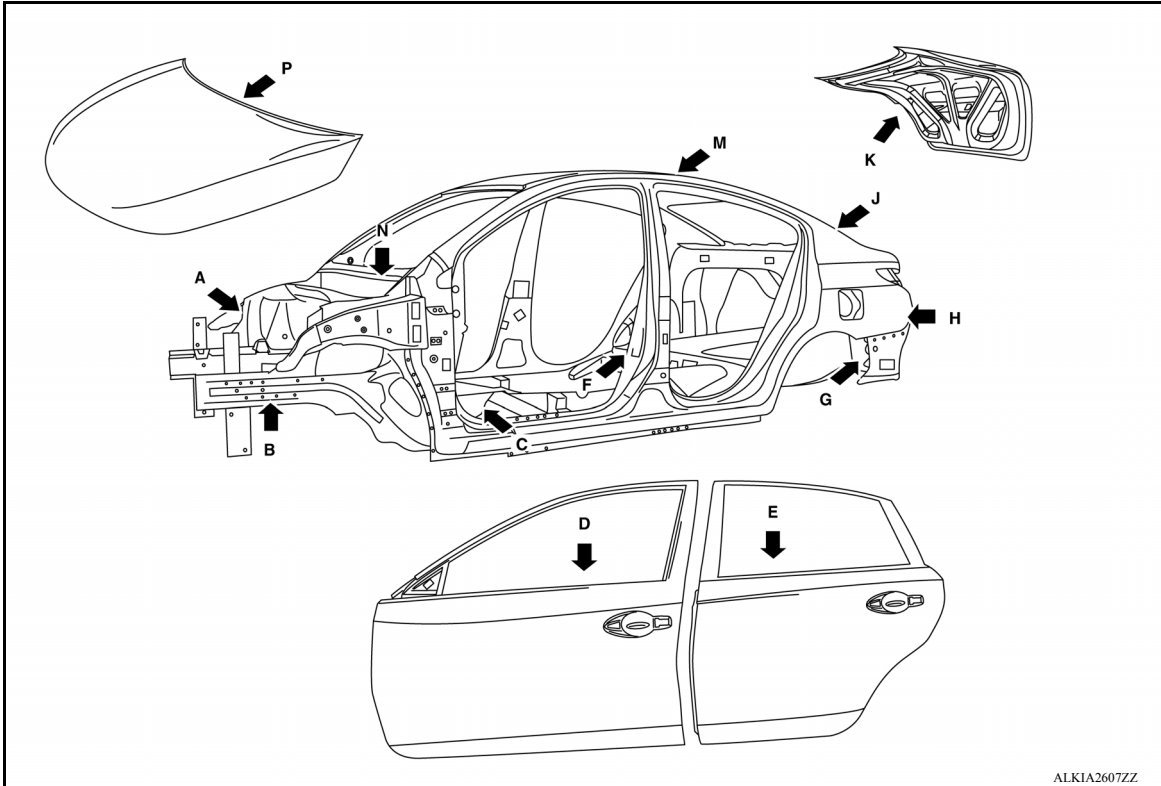
< REMOVAL AND INSTALLATION >

## BODY SEALING

### Description

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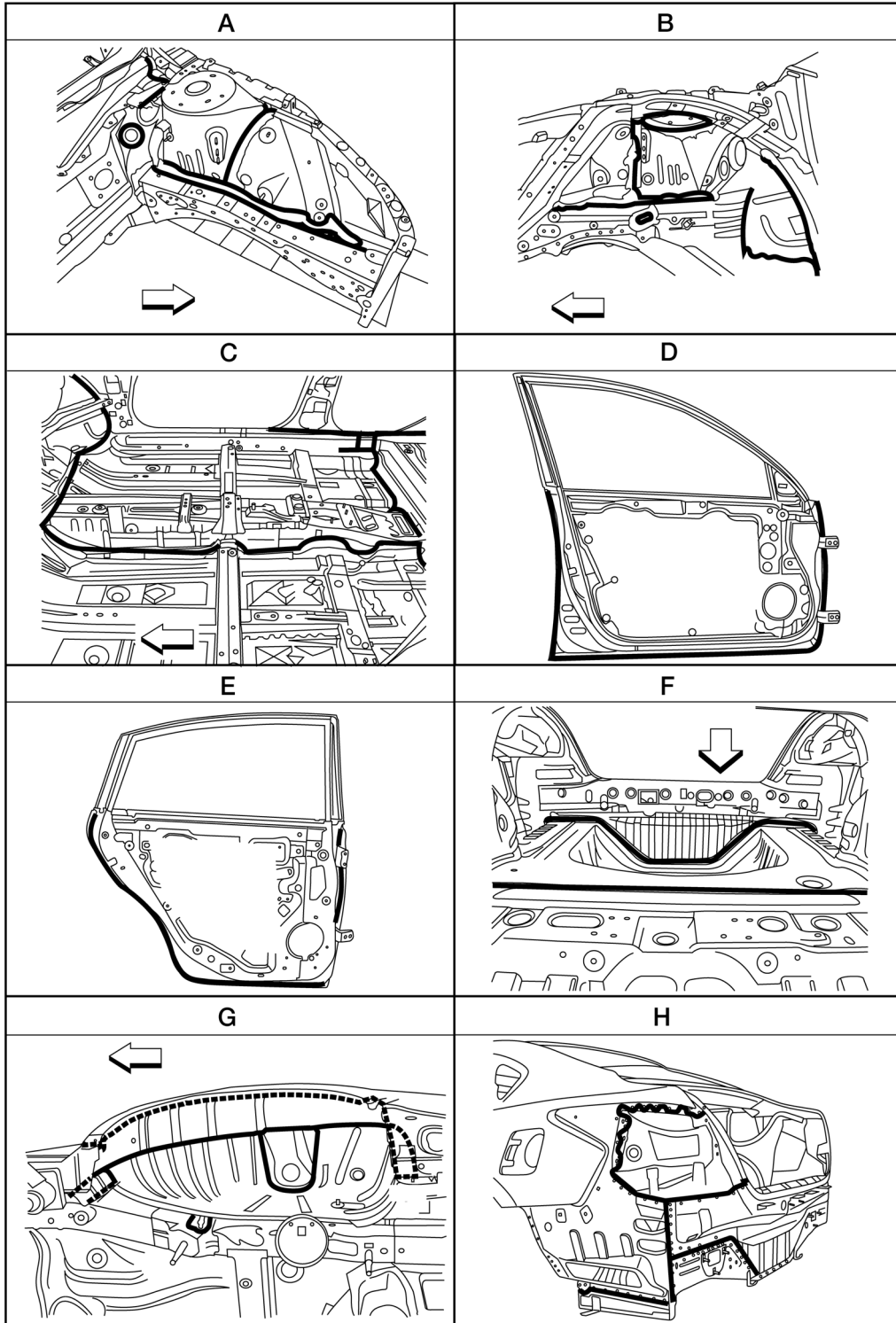
The following figure shows the areas which are sealed at the factory. Sealant which has been applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.





# BODY SEALING

## < REMOVAL AND INSTALLATION >

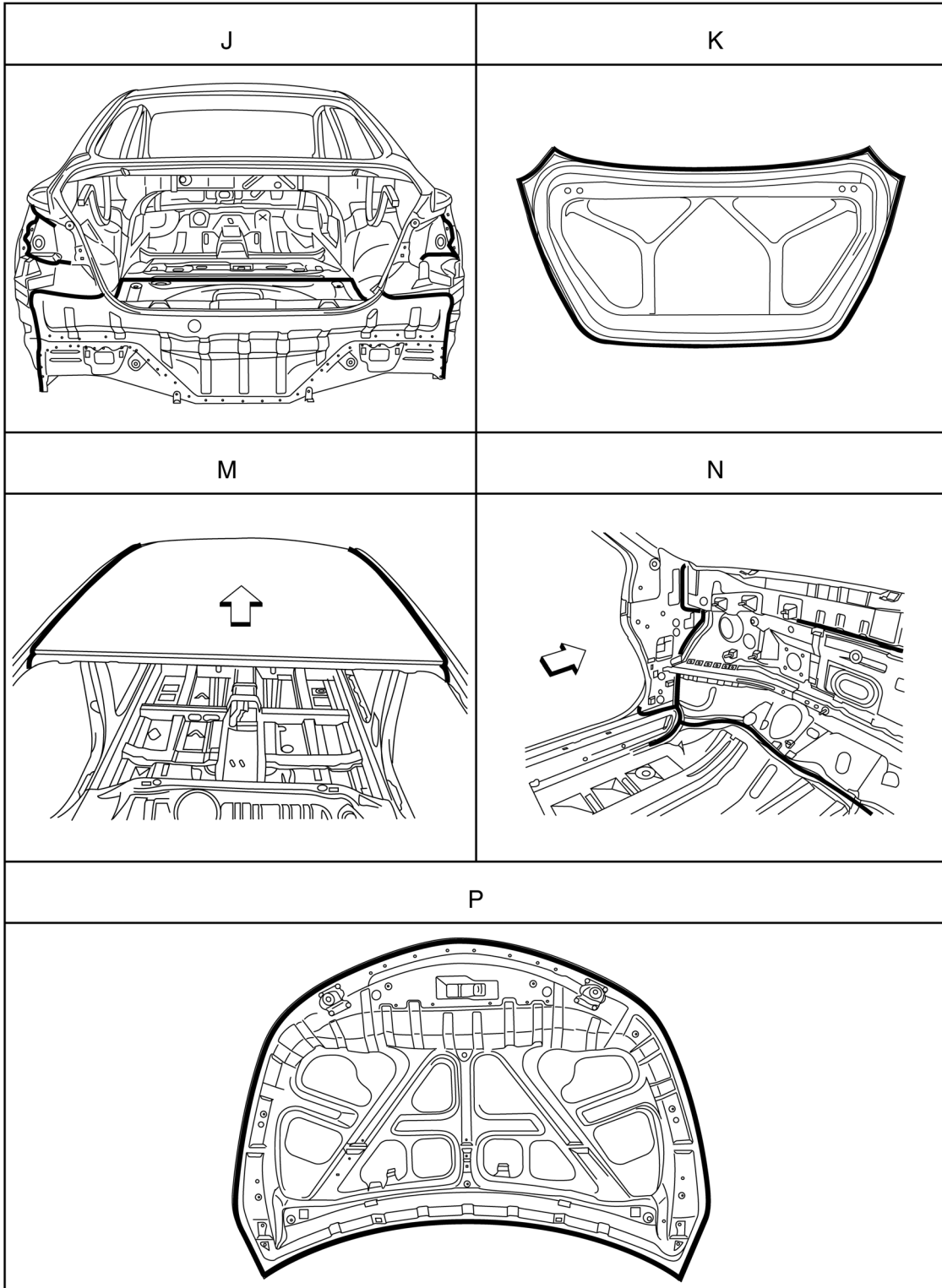


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ALKIA2562ZZ

# BODY SEALING

< REMOVAL AND INSTALLATION >



ALKIA2804ZZ

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## REPLACEMENT OPERATIONS

### Description

INFOID:000000009268583

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.


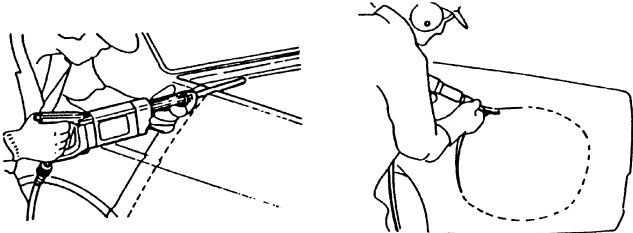

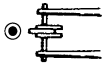



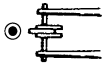


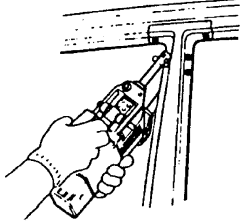

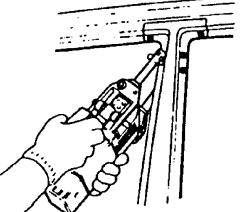

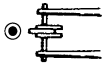










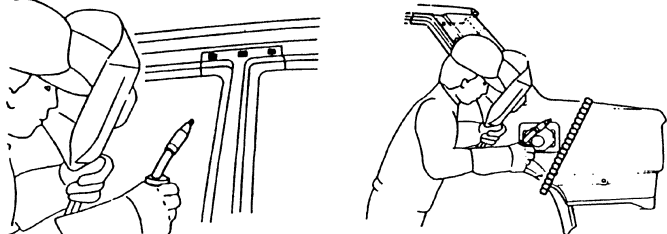












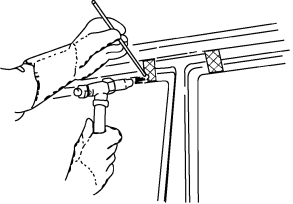












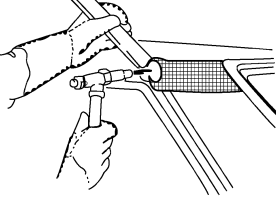








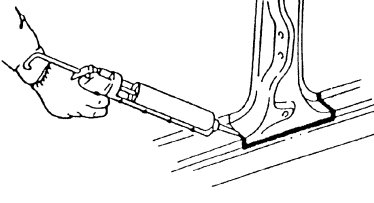


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**BRM**

# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

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

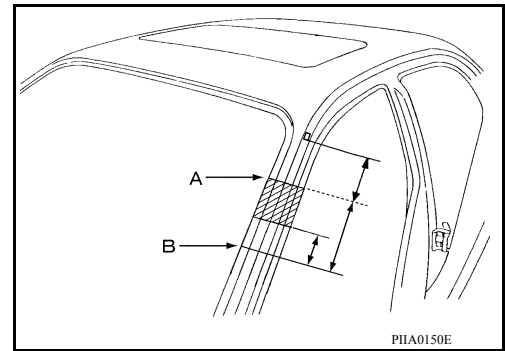
 Saw cut or air chisel cut							
<table border="0"> <tr> <td data-bbox="300 562 349 611" rowspan="2">Spot weld</td> <td data-bbox="386 485 467 562">             2-spot welds         </td> <td data-bbox="532 510 630 569">  </td> </tr> <tr> <td data-bbox="386 604 467 682">             3-spot welds         </td> <td data-bbox="532 630 630 688">  </td> </tr> </table>	Spot weld	 2-spot welds		 3-spot welds		<p>2-spot welds (2-panel overlapping portions)</p>  <p>3-spot welds (3-panel overlapping portions)</p> 	
Spot weld		 2-spot welds					
	 3-spot welds						
<table border="0"> <tr> <td data-bbox="300 762 349 810" rowspan="2">MIG weld</td> <td data-bbox="386 730 467 810">             MIG plug weld         </td> <td data-bbox="532 756 630 814">  </td> </tr> <tr> <td data-bbox="386 846 467 926">             MIG seam weld/ Point weld         </td> <td data-bbox="532 871 630 930">  </td> </tr> </table>	MIG weld	 MIG plug weld		 MIG seam weld/ Point weld			
MIG weld		 MIG plug weld					
	 MIG seam weld/ Point weld						
<table border="0"> <tr> <td data-bbox="300 972 349 1020" rowspan="2">Brazing</td> <td data-bbox="386 972 467 1020">  </td> <td data-bbox="532 1020 630 1079">  </td> </tr> <tr> <td data-bbox="386 1056 467 1136">  </td> <td data-bbox="532 1104 630 1163">  </td> </tr> </table>	Brazing						
Brazing							
							
<table border="0"> <tr> <td data-bbox="300 1218 349 1266" rowspan="2">Soldering</td> <td data-bbox="386 1218 467 1266">  </td> <td data-bbox="532 1266 630 1325">  </td> </tr> <tr> <td data-bbox="386 1308 467 1388">  </td> <td data-bbox="532 1356 630 1415">  </td> </tr> </table>	Soldering						
Soldering							
							
<table border="0"> <tr> <td data-bbox="300 1463 349 1512">Sealing</td> <td data-bbox="386 1463 467 1512">  </td> <td data-bbox="532 1512 630 1570">  </td> </tr> </table>	Sealing						
Sealing							

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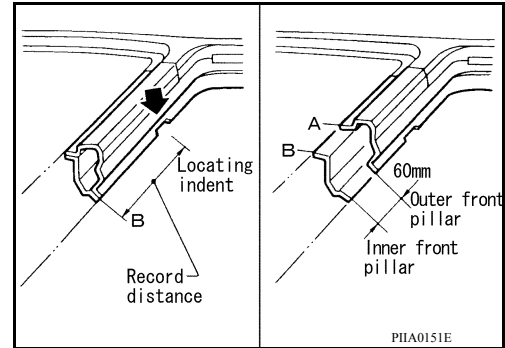
# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

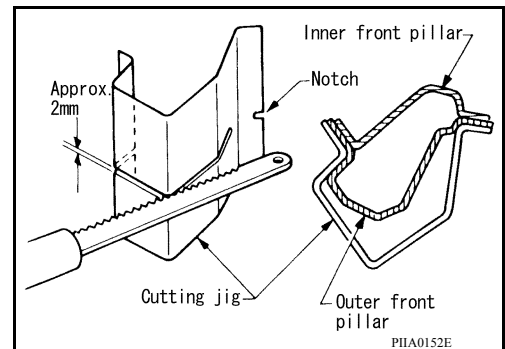
- Front pillar butt joint can be determined anywhere within shaded area A as shown. The best location for the butt joint is at position B due to the construction of the vehicle. Refer to the front pillar section.



- 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.

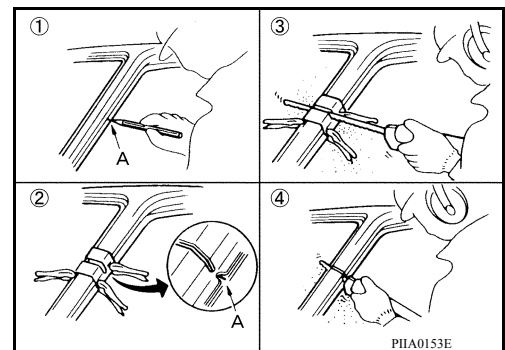


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- 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.



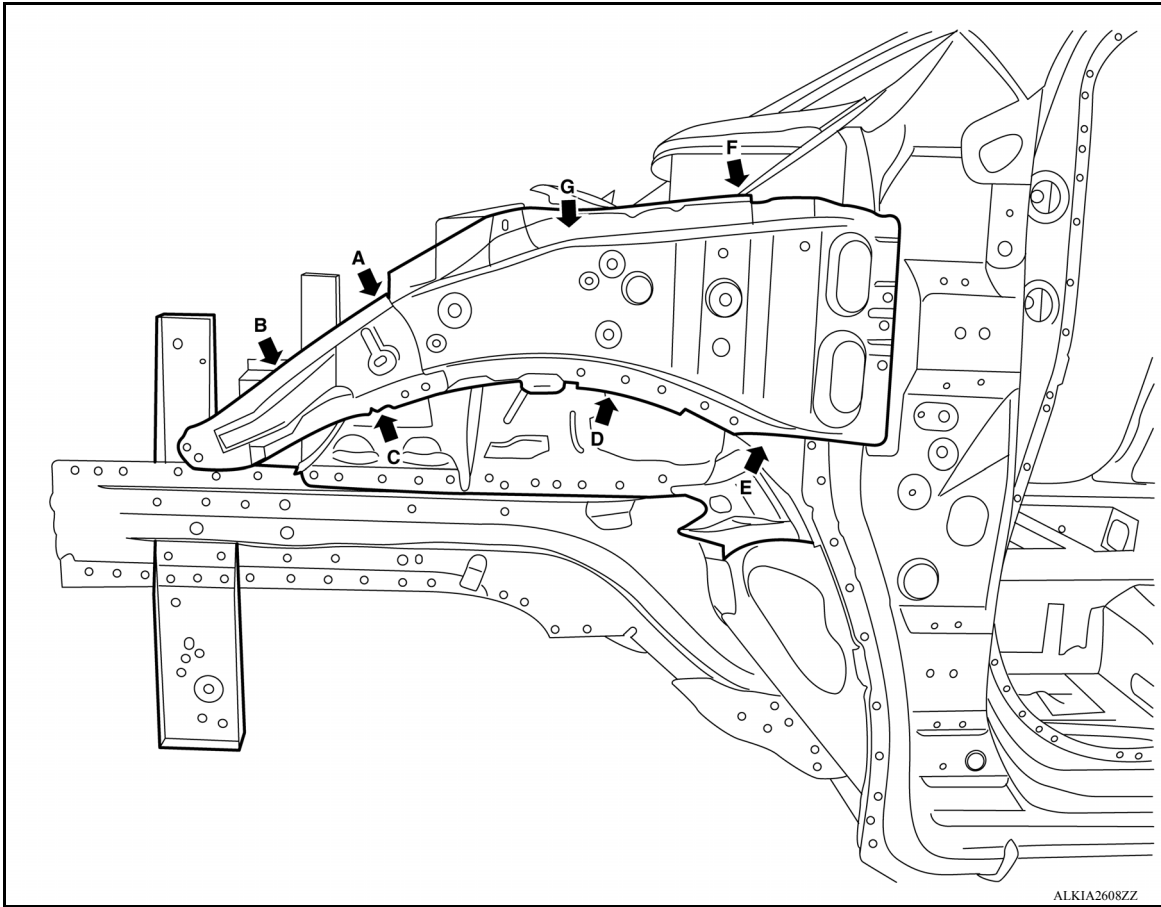
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# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Hoodledge

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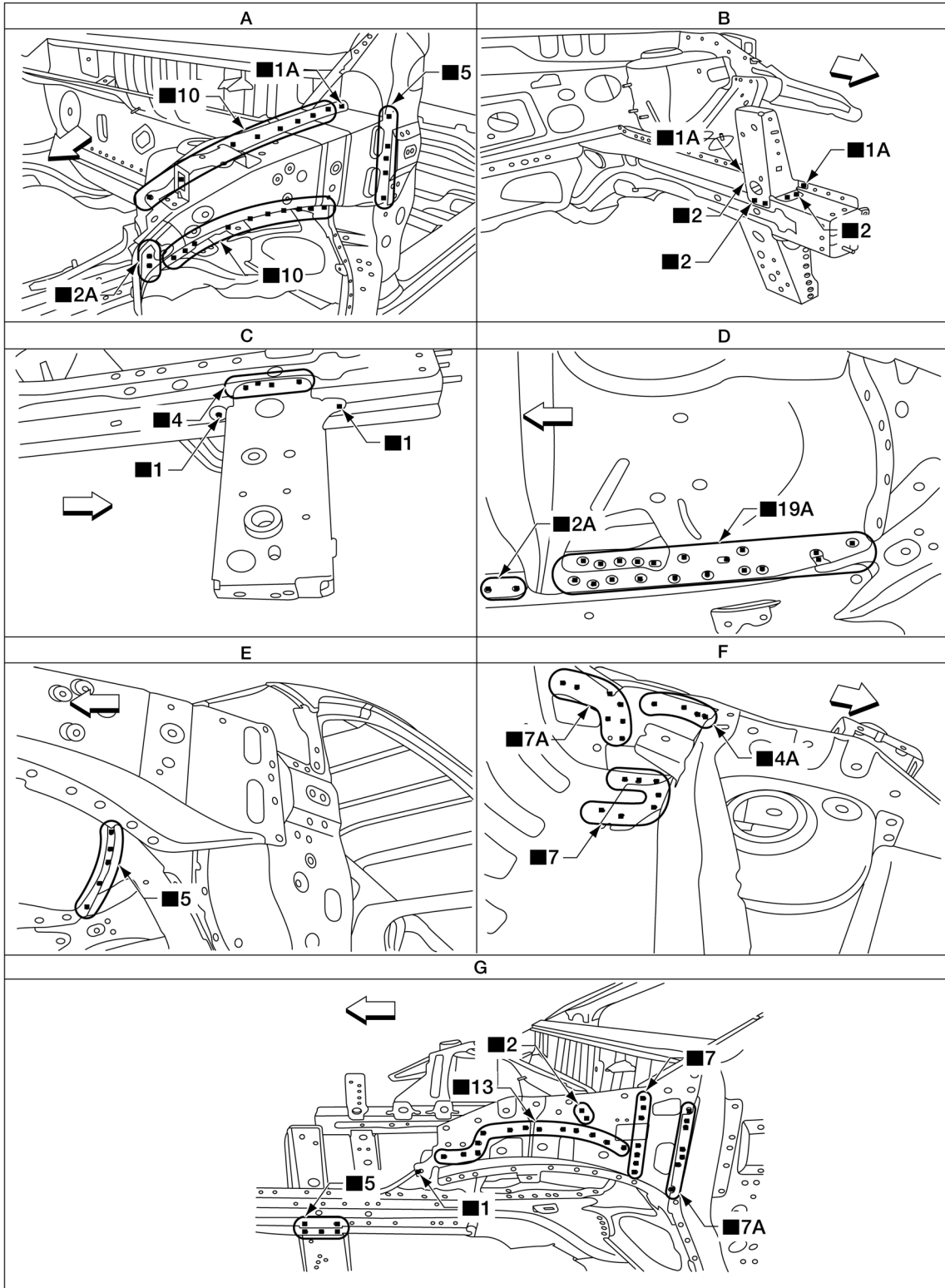


### Change parts

- |                             |                                |                                 |
|-----------------------------|--------------------------------|---------------------------------|
| A. Front strut housing (LH) | B. Upper front hoodledge       | C. Hoodledge reinforcement      |
| D. Hoodledge connector      | E. Radiator core support upper | F. Hoodledge reinforcement rear |
| G. Dash side extension      |                                |                                 |

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



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↔ Front

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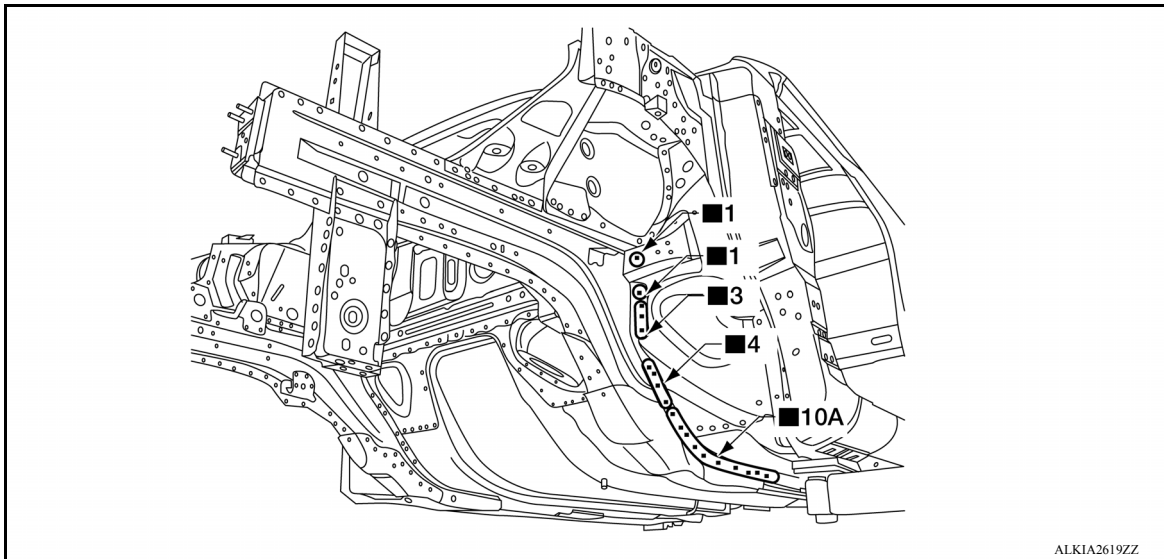
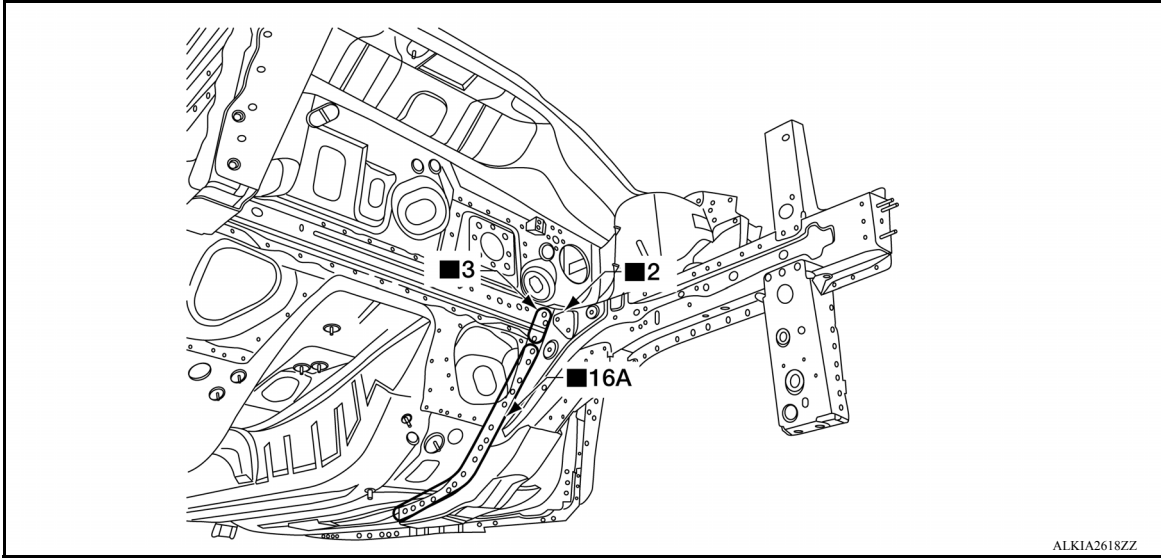
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# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Front Side Member

INFOID:000000009268585



Change parts

- Front side member front assembly

## Front Pillar

INFOID:000000009268586

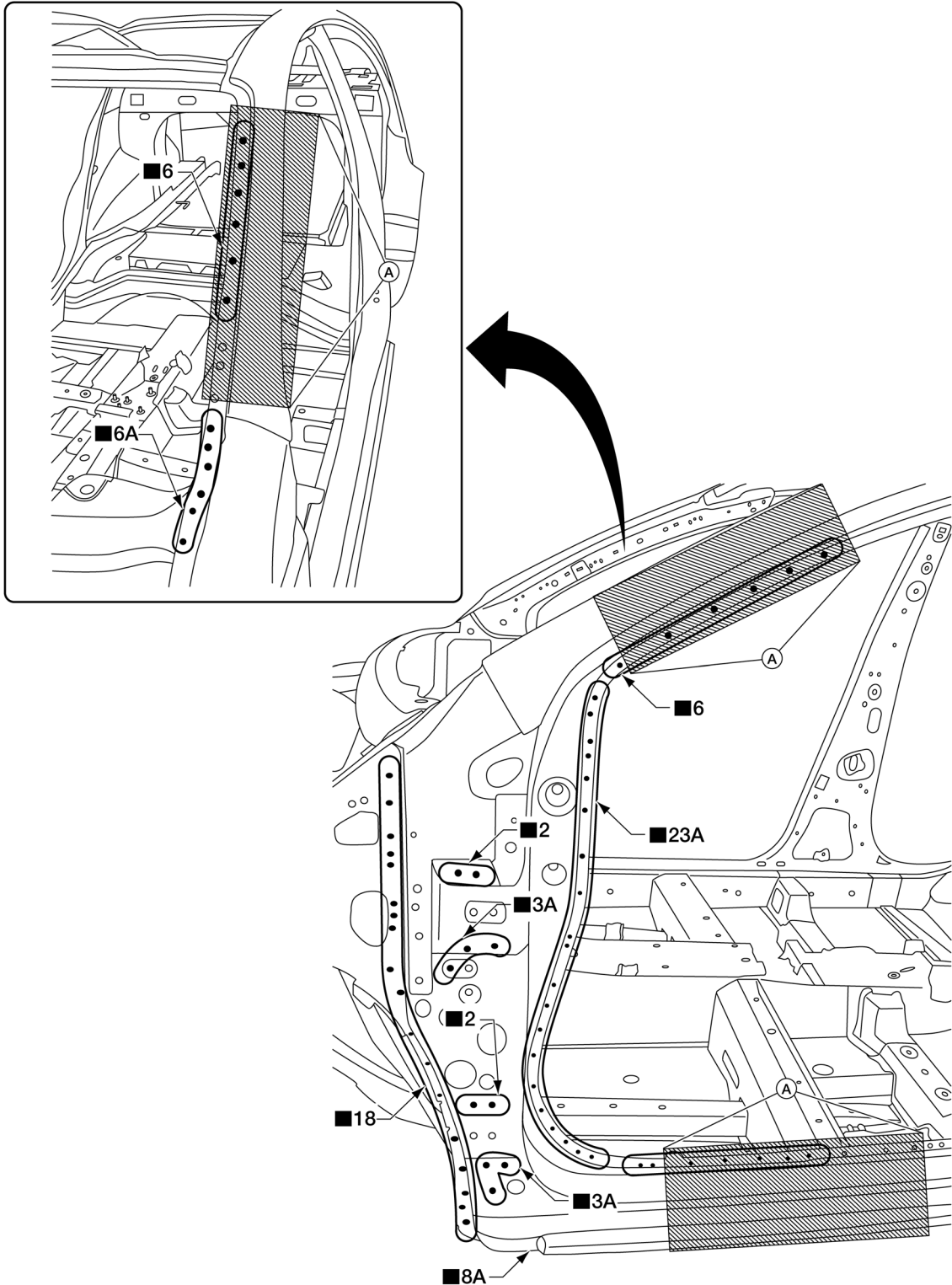
### OUTER

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



# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



ALK1A2621ZZ

Change parts

- Front pillar section of body side outer A. Recommended sectioning location

## REINFORCEMENT

- Work after front pillar outer has been removed.

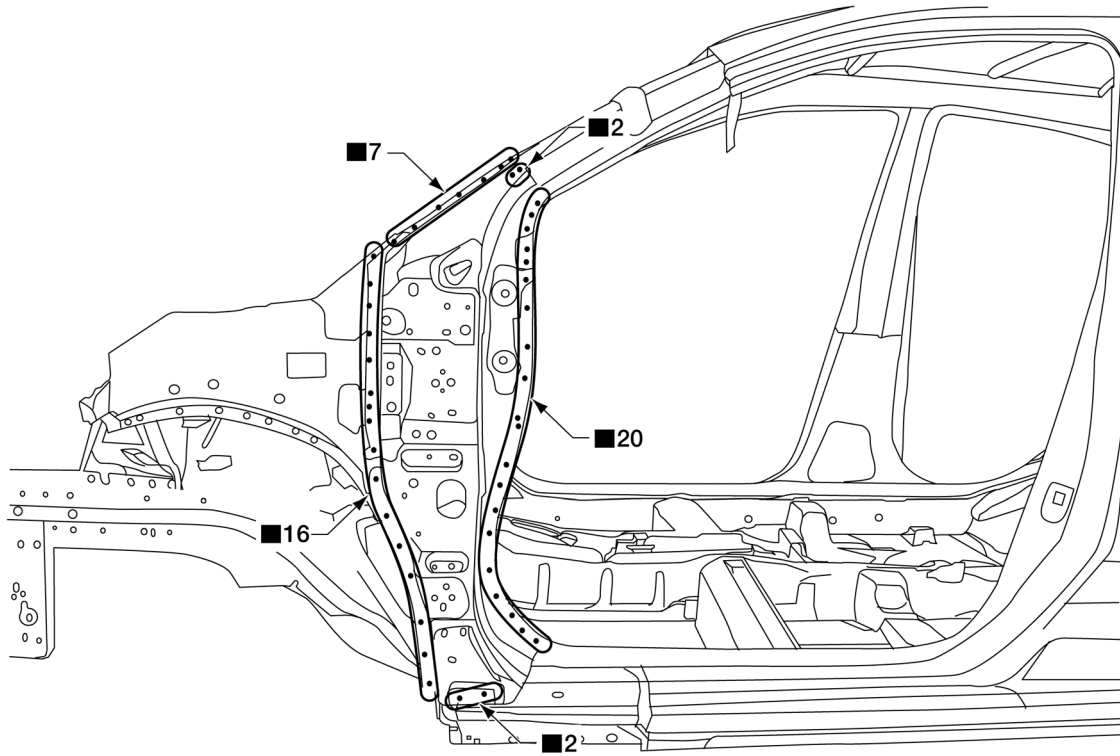
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# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

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ALKIA2622ZZ

Change parts

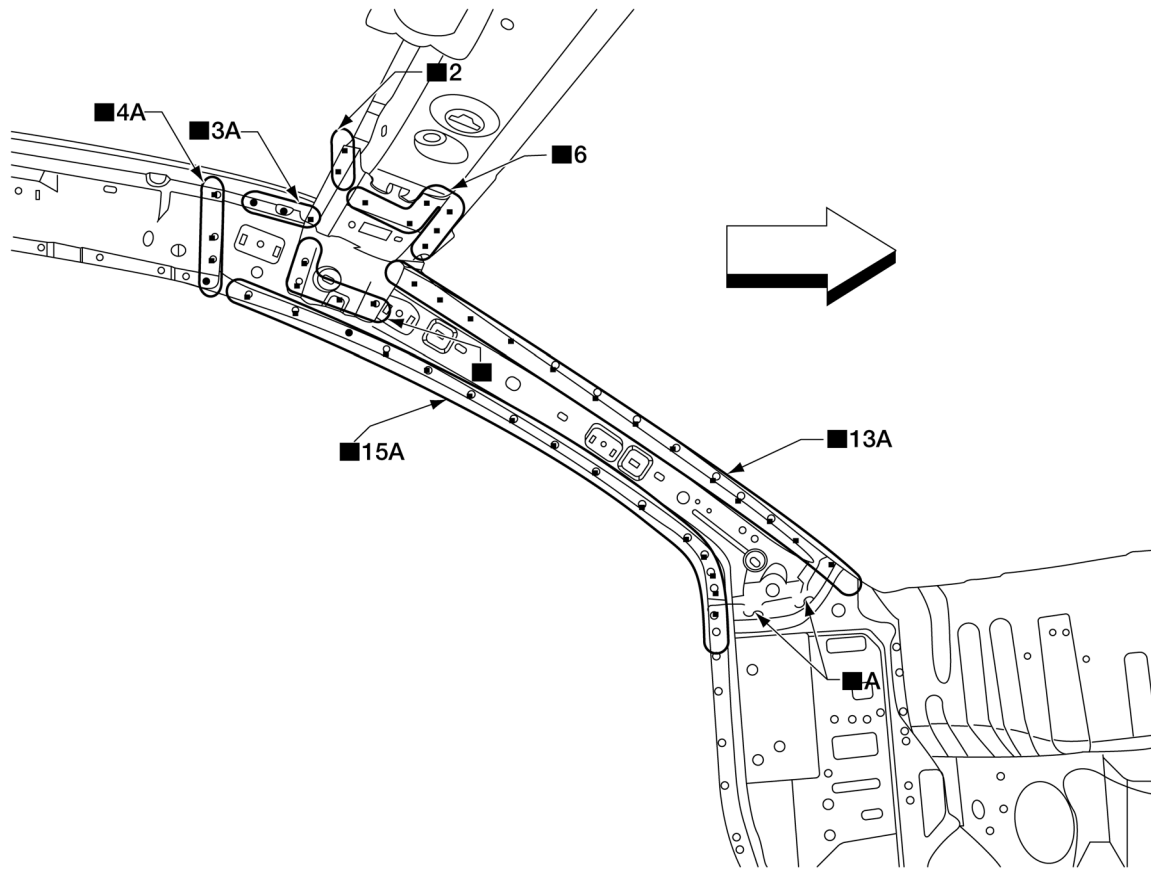
- Front pillar reinforcement

INNER

- Work after front pillar reinforcement has been removed.

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



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Change parts

- Front pillar inner reinforcement

A. Mig welds

← Front

## Dash Side

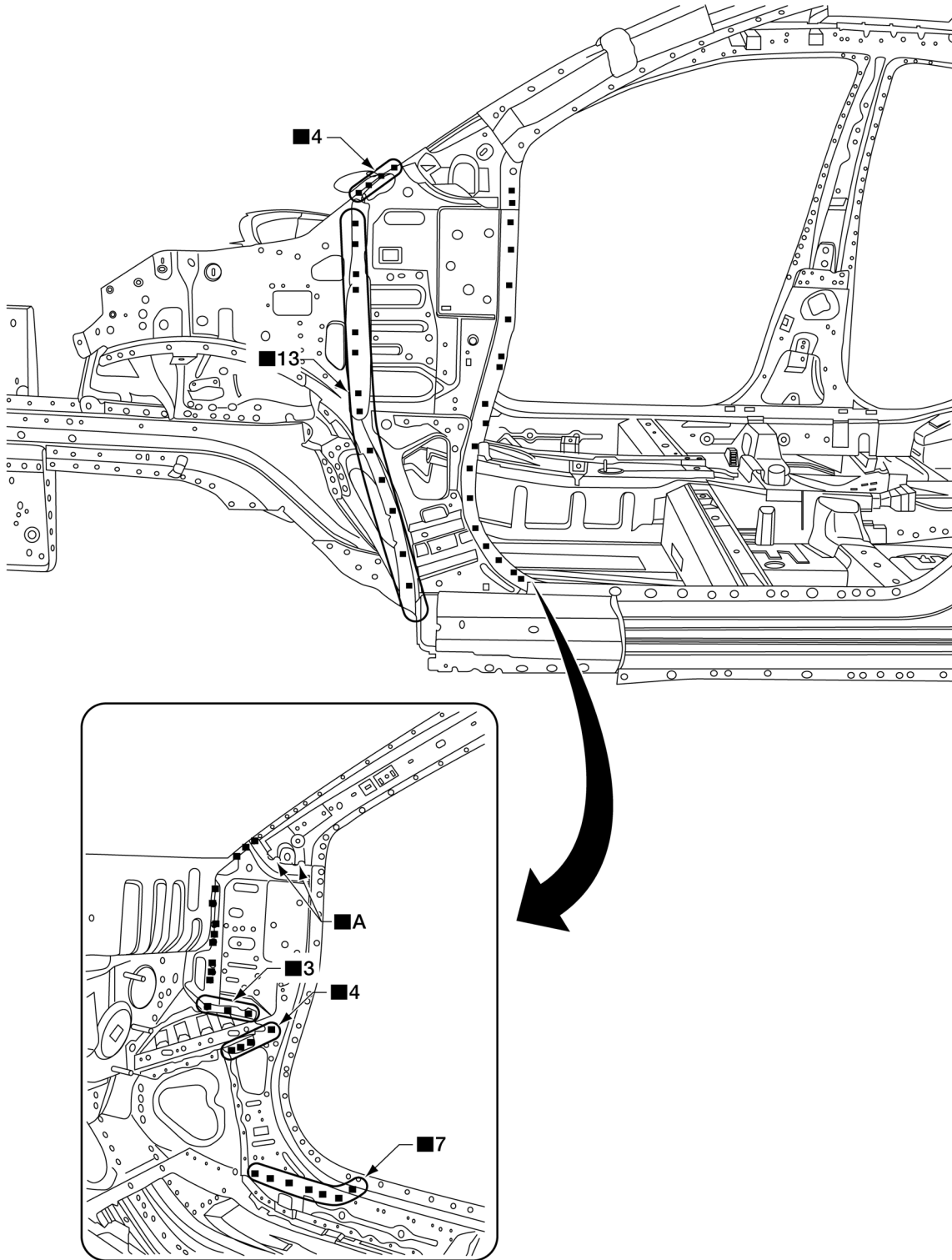
Work with front pillar reinforcement removed.

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INFOID:000000009268587

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



ALKIA2627ZZ

Change parts

● Dash side

A. Mig welds

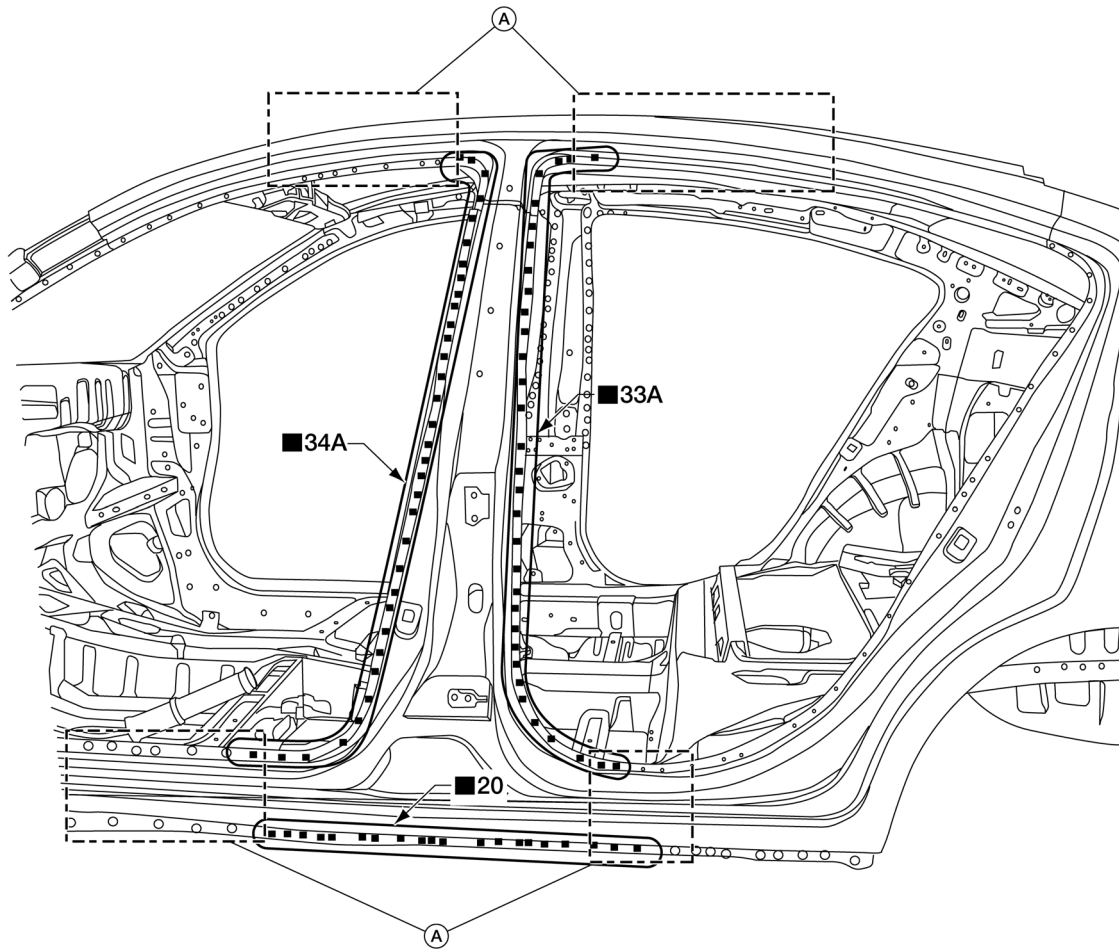
Center Pillar

INFOID:00000009268588

OUTER

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



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Change parts

- A. Center pillar portion of body side outer recommended sectioning area.

Installation

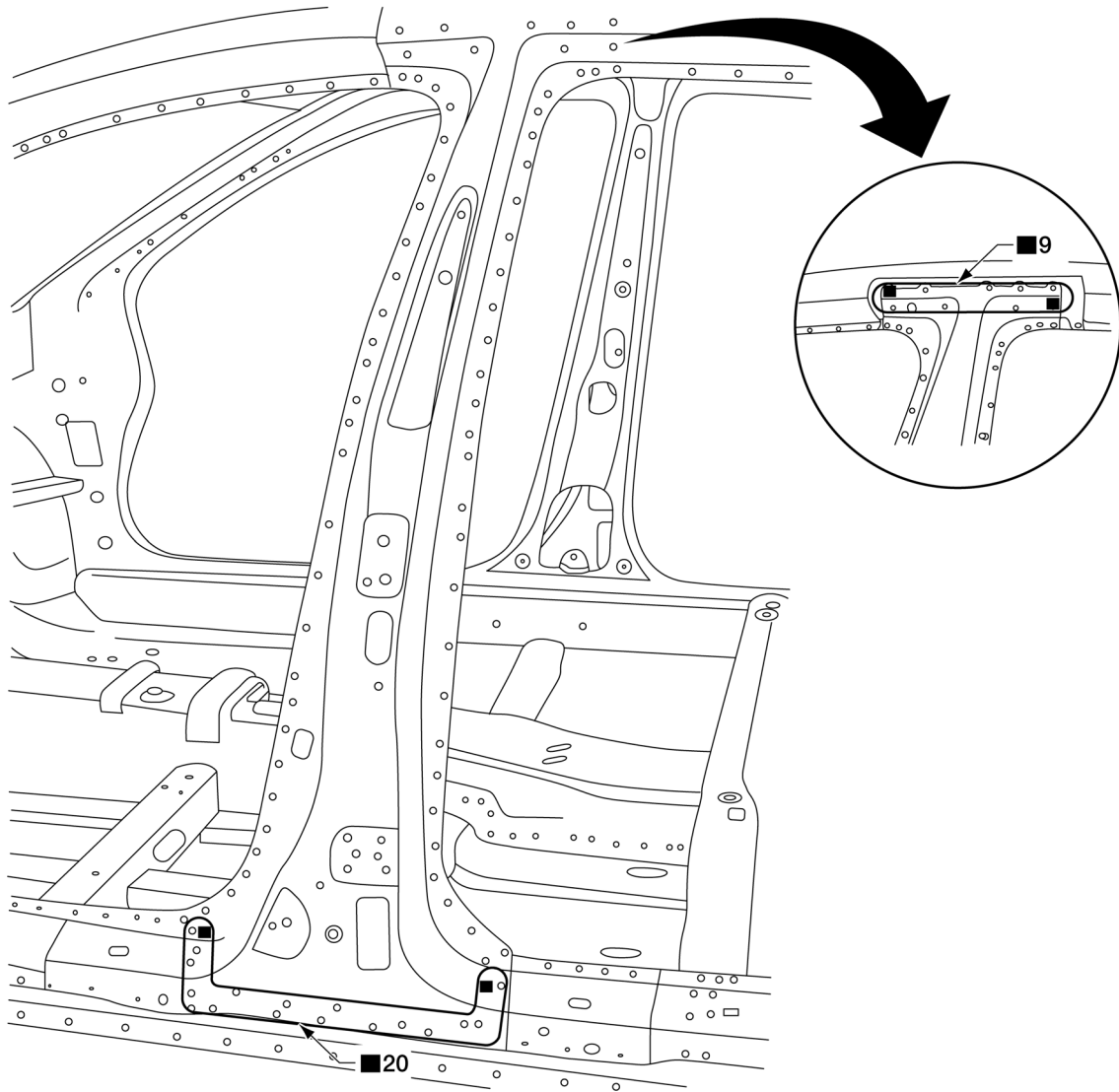
Match welds locations from removed part onto new panel and weld into place.

REINFORCEMENT

# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

Work after center pillar outer has been removed.



ALKIA2579ZZ

Change parts

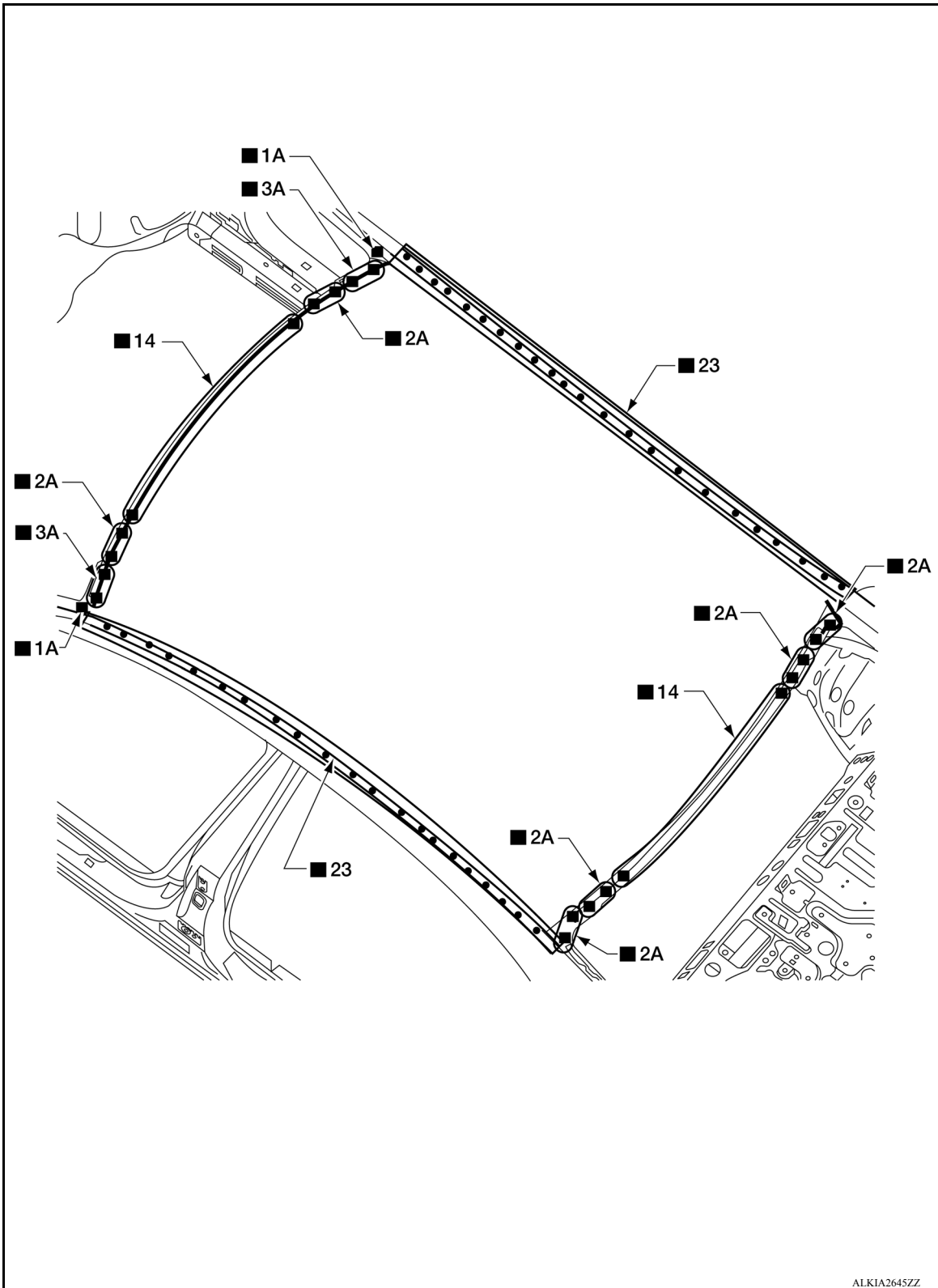
- Center pillar reinforcement

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Roof

INFOID:00000009268589



Replacement parts  
● Roof panel

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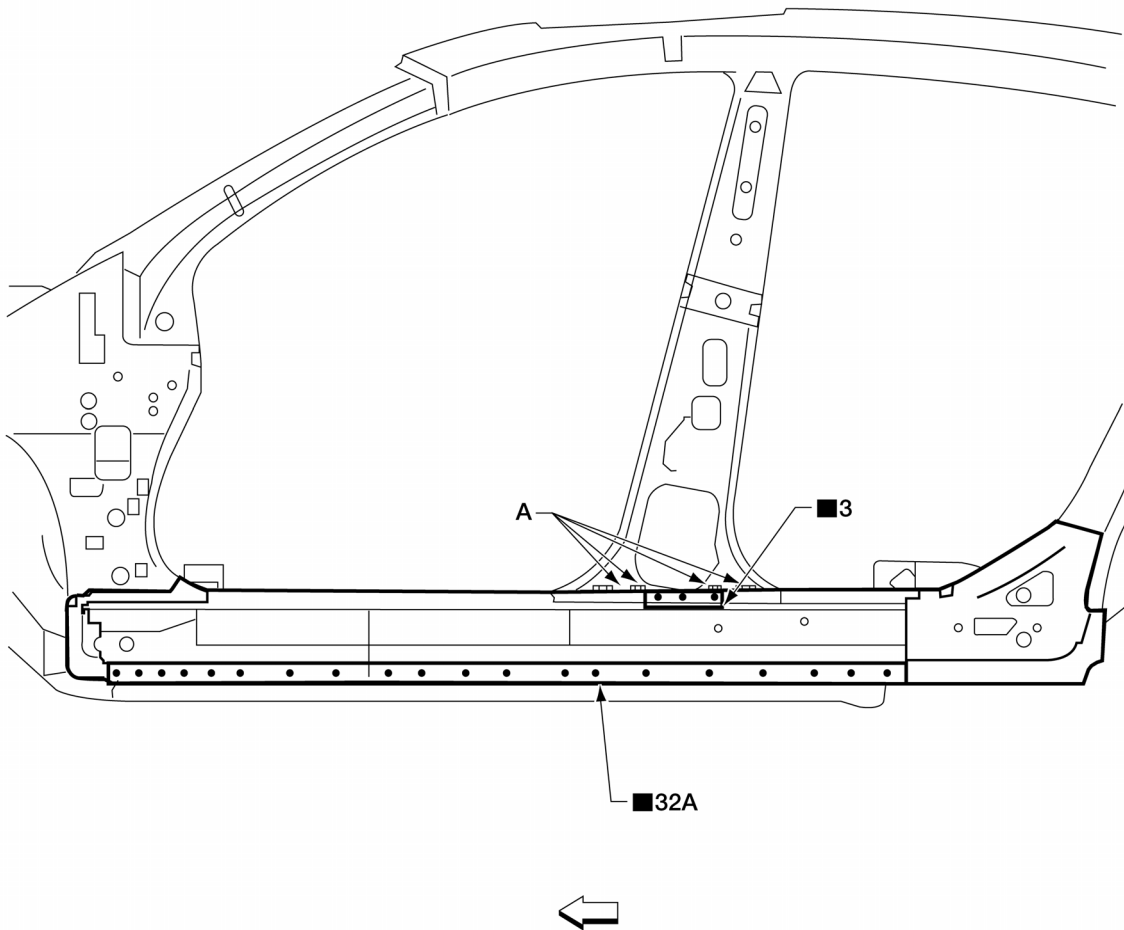
# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Outer Sill

INFOID:000000009268590

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



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Change parts

- Outer sill reinforcement

A. Mig stitch weld

← Front

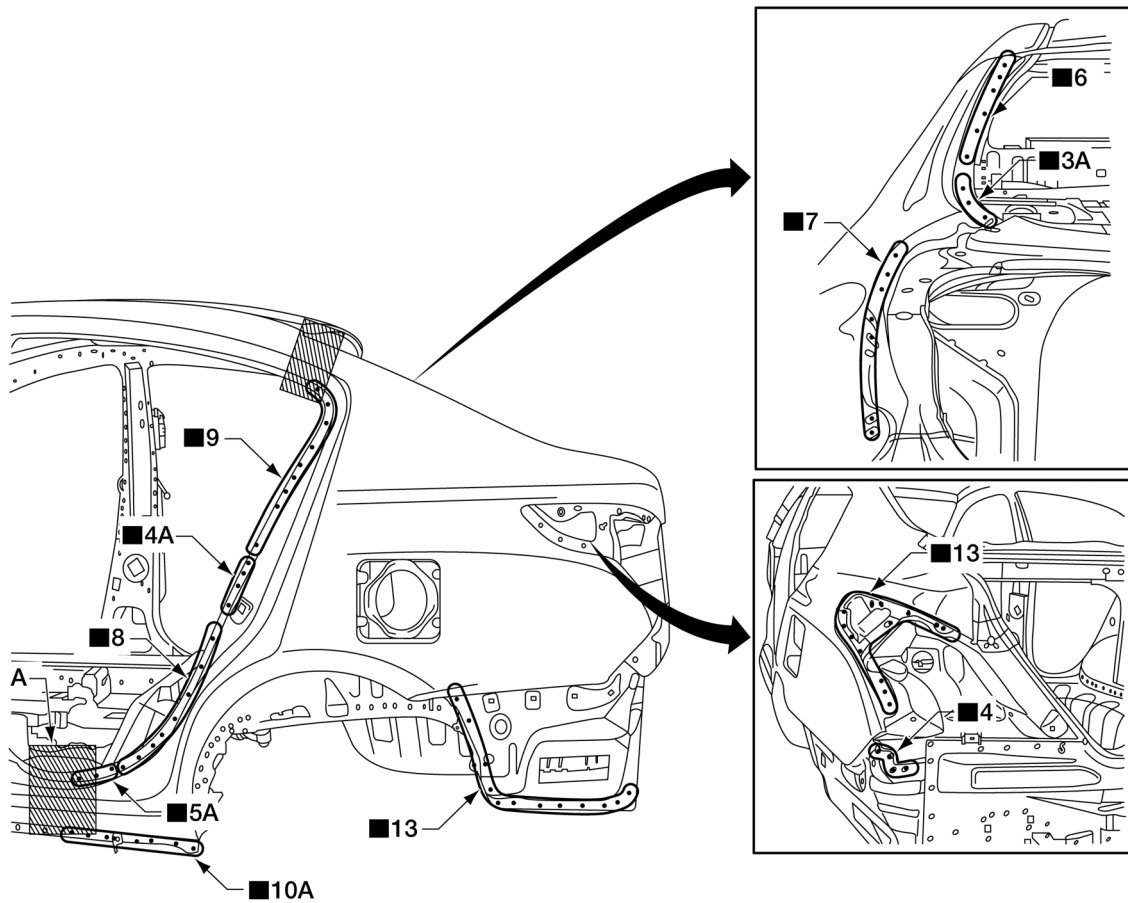


# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Rear Fender

INFOID:00000009268591



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Change parts  
A. Recommended cut zone

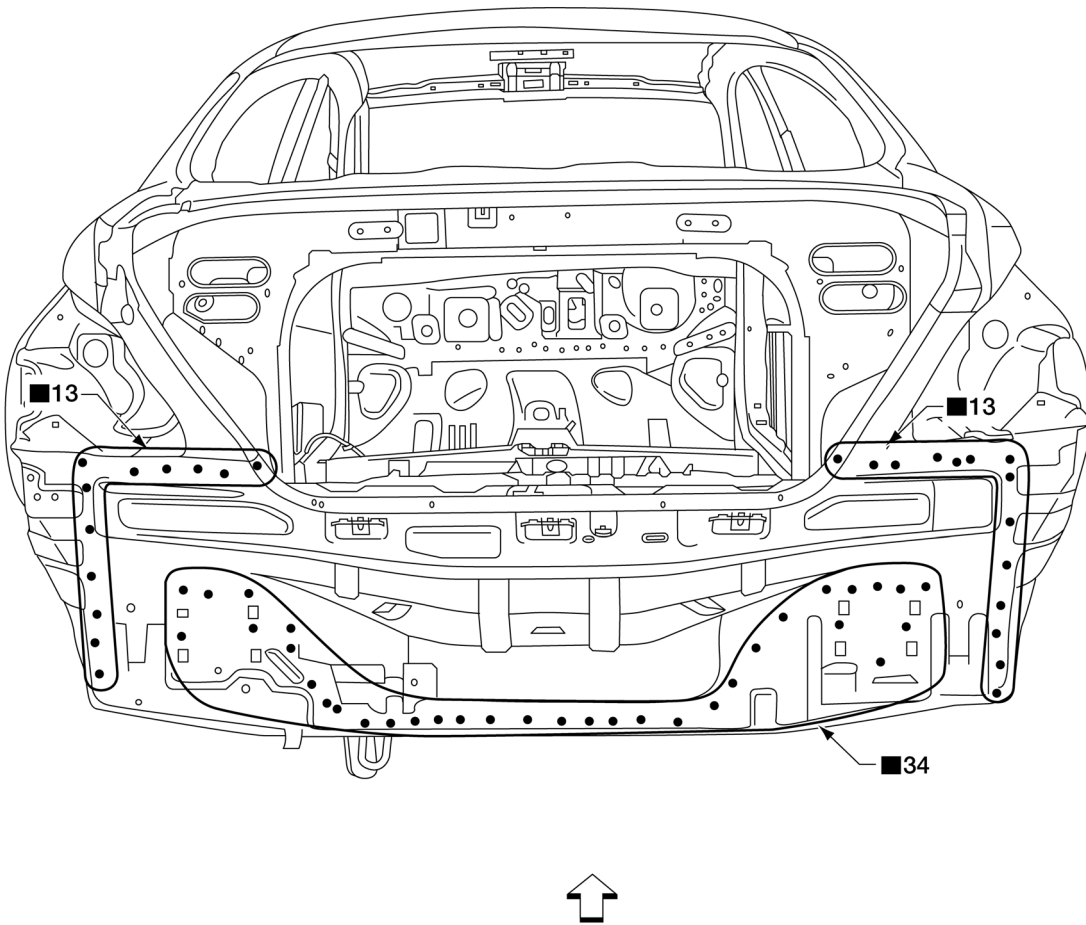
ALKIA2647ZZ

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Rear Panel

INFOID:000000009268592



ALKIA2650ZZ

Change parts

- Rear panel assembly

← Front

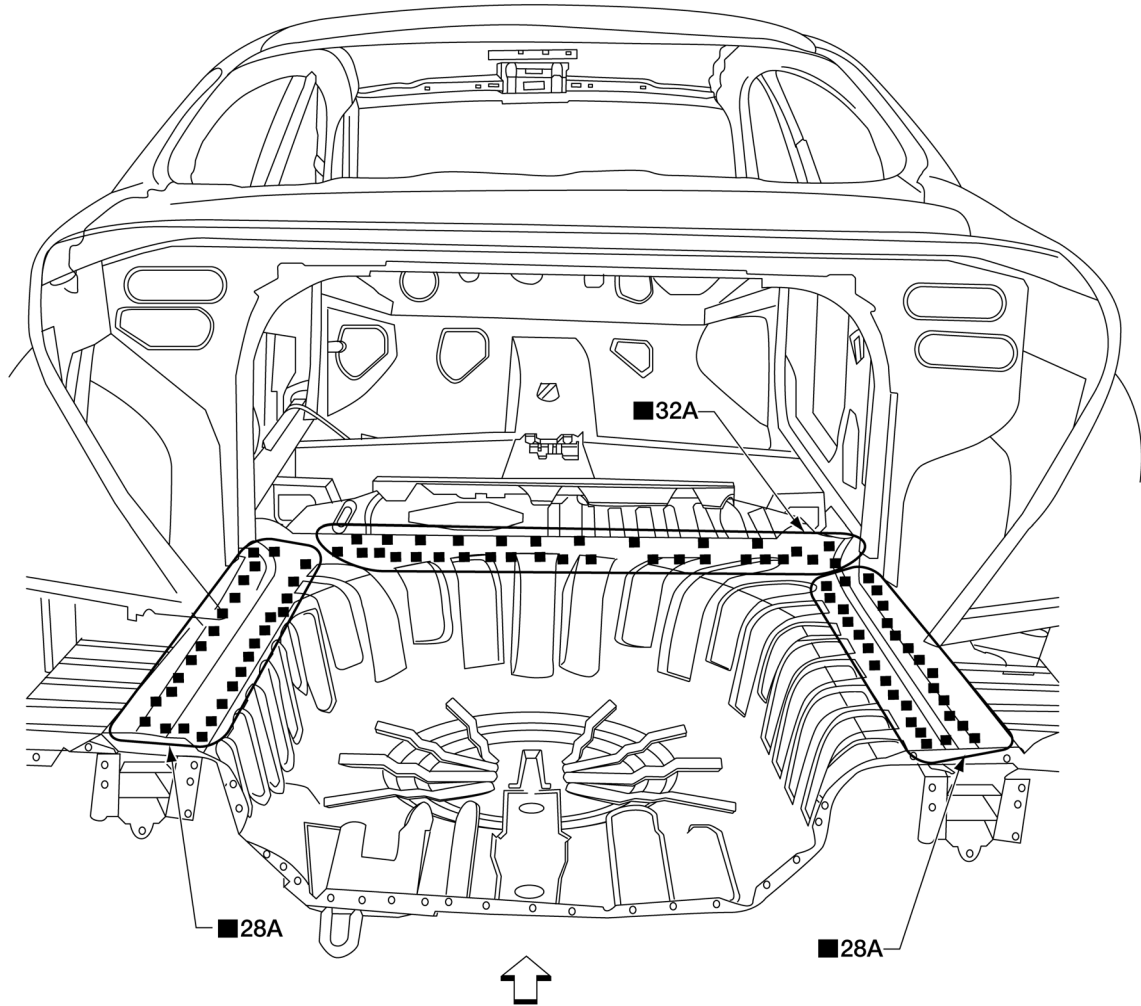
# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Rear Floor Rear

INFOID:00000009268593

- Work after rear panel assembly has been removed.



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Change parts

- Rear floor rear

← Front

ALKIA2651ZZ

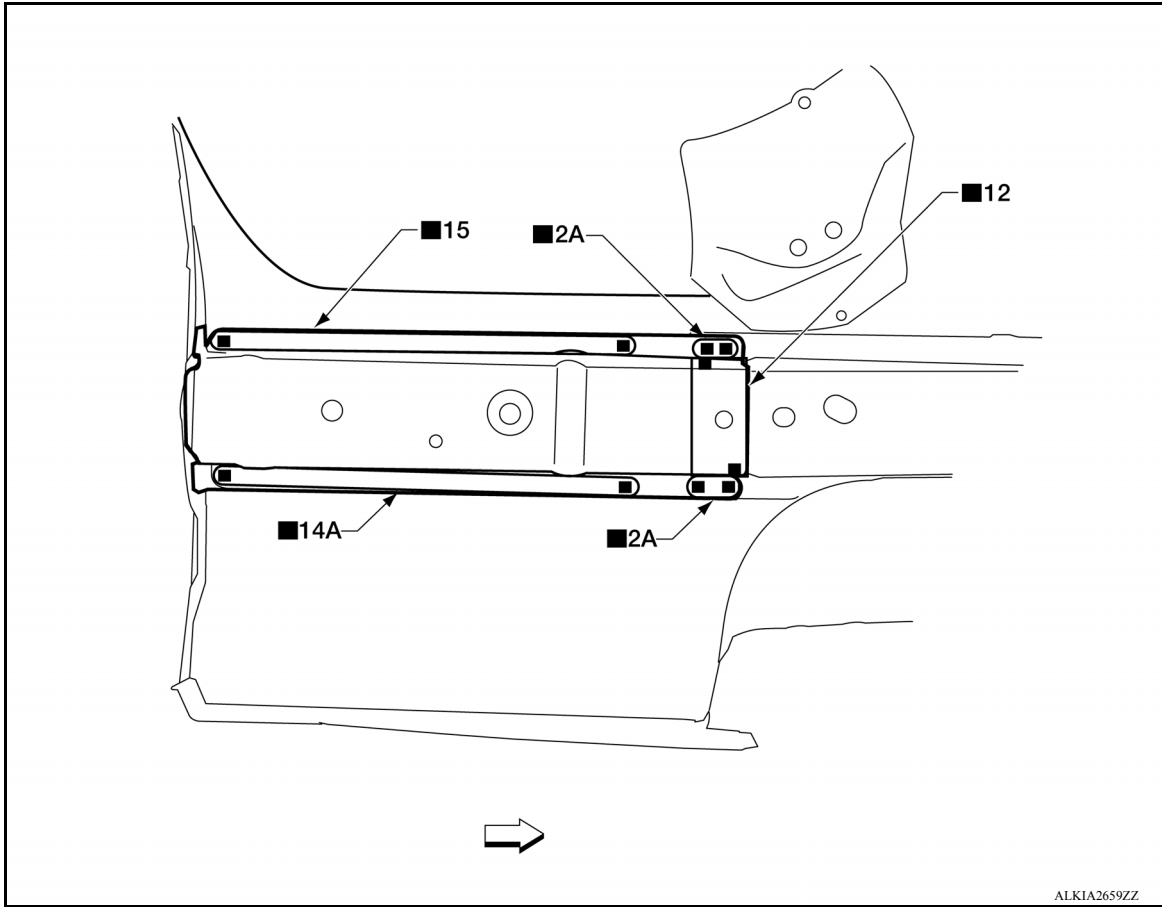
# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Rear Side Member Extension

INFOID:000000009268594

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



Change parts

- Rear side member extension

⇐ Front

# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

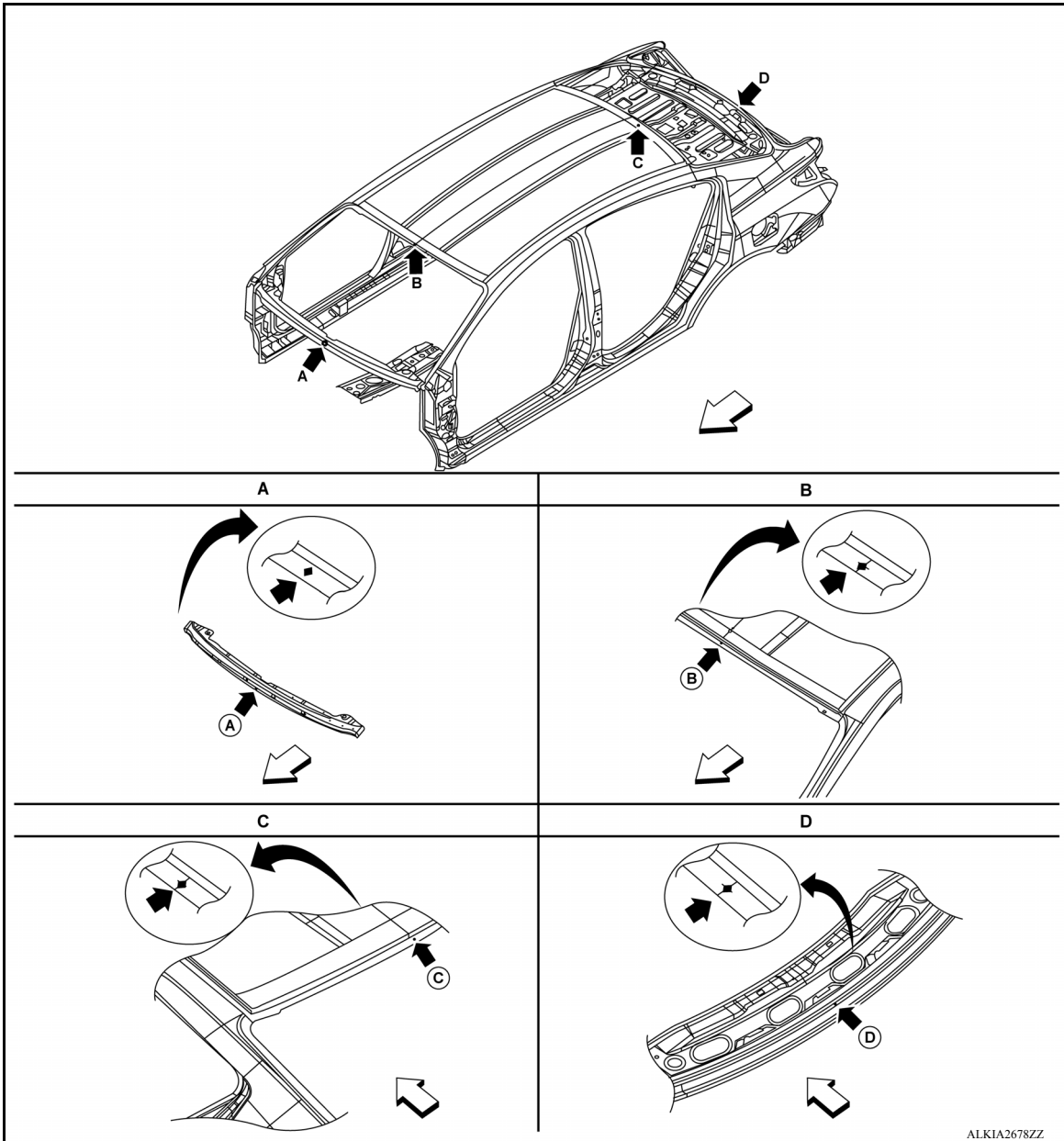
## SERVICE DATA AND SPECIFICATIONS (SDS)

### BODY ALIGNMENT

#### Body Center Marks

INFOID:000000009268595

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.



↩ Front

Point	Portion	Mark	Dimension
A	Cowl top extension	Raised dimple	—
B	Front roof position mark for alignment	Raised dimple	—
C	Rear roof position mark for alignment	Raised dimple	—
D	Rear waist flange position mark for alignment	Raised dimple	—

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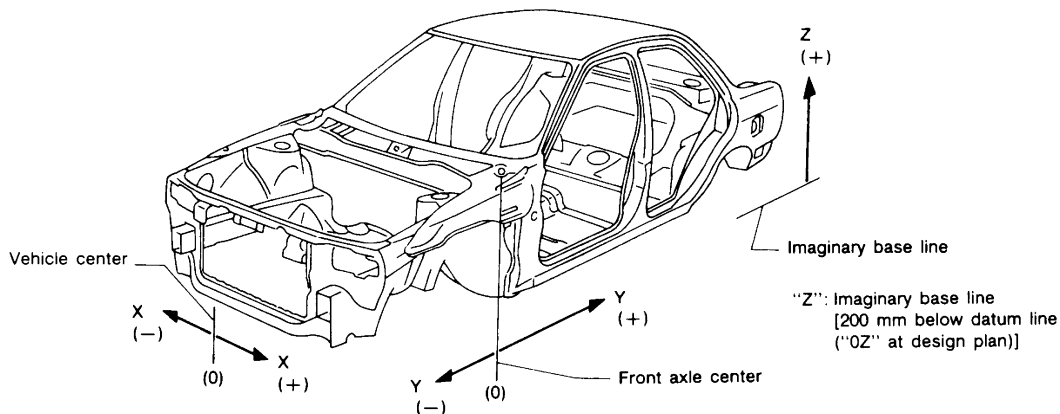
# BODY ALIGNMENT

## < SERVICE DATA AND SPECIFICATIONS (SDS)

### Description

INFOID:000000009268596

- All dimensions indicated as shown 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".



PIA0104E

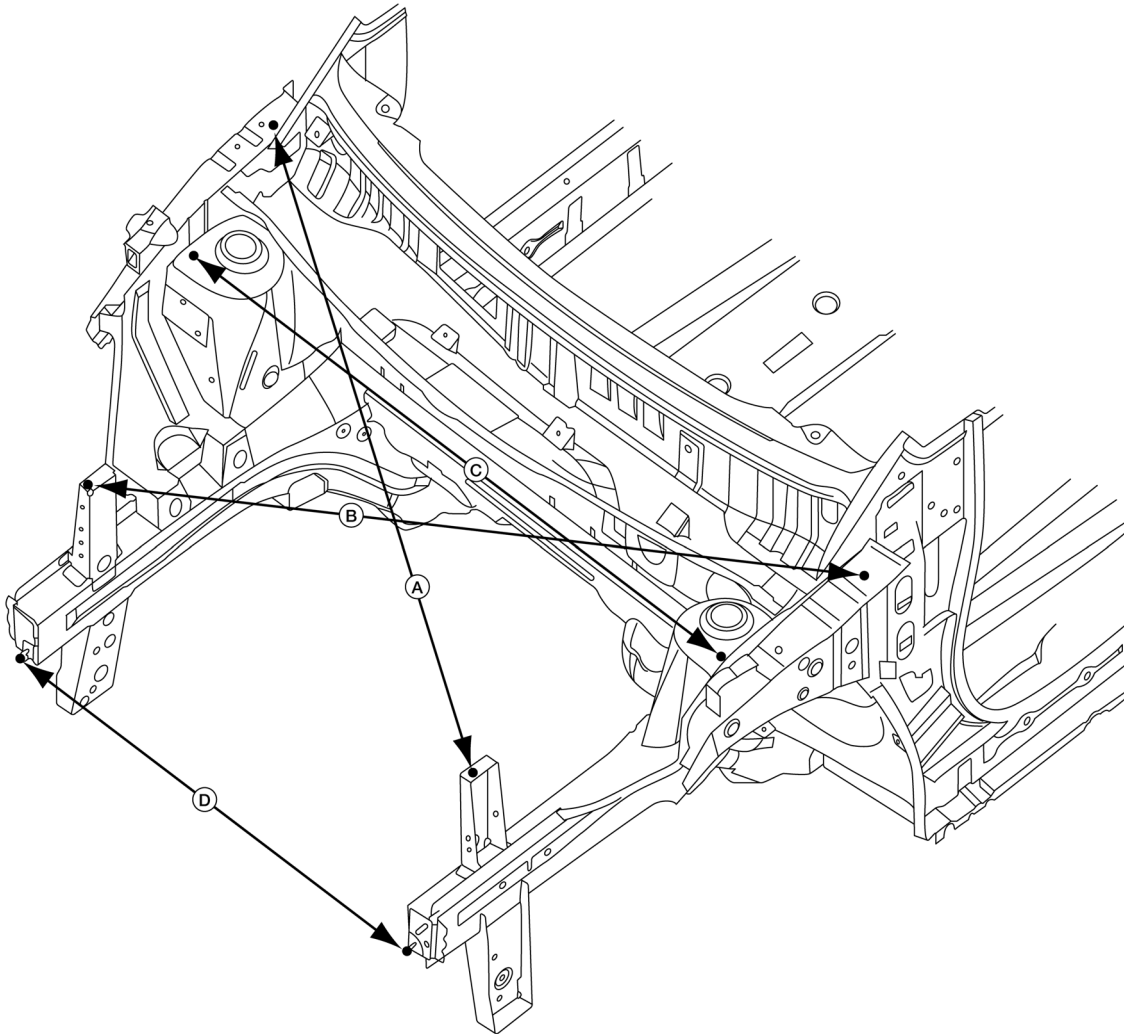
### Engine Compartment

INFOID:000000009268597

### Measurement

# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



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Unit: mm (in)

Position	Measurement	Description
A.	1321 (52.0)	Center of rear hood hinge hole to the front center of radiator support bolt hole.
B.	1321 (52.0)	Center of rear hood hinge hole to the front center of radiator support bolt hole.
C.	1228 (48.3)	Center of front strut hole to the center of the front strut bolt hole.
D.	904 (35.6)	Lower bumper reinforcement stud to lower bumper reinforcement stud.

# BODY ALIGNMENT

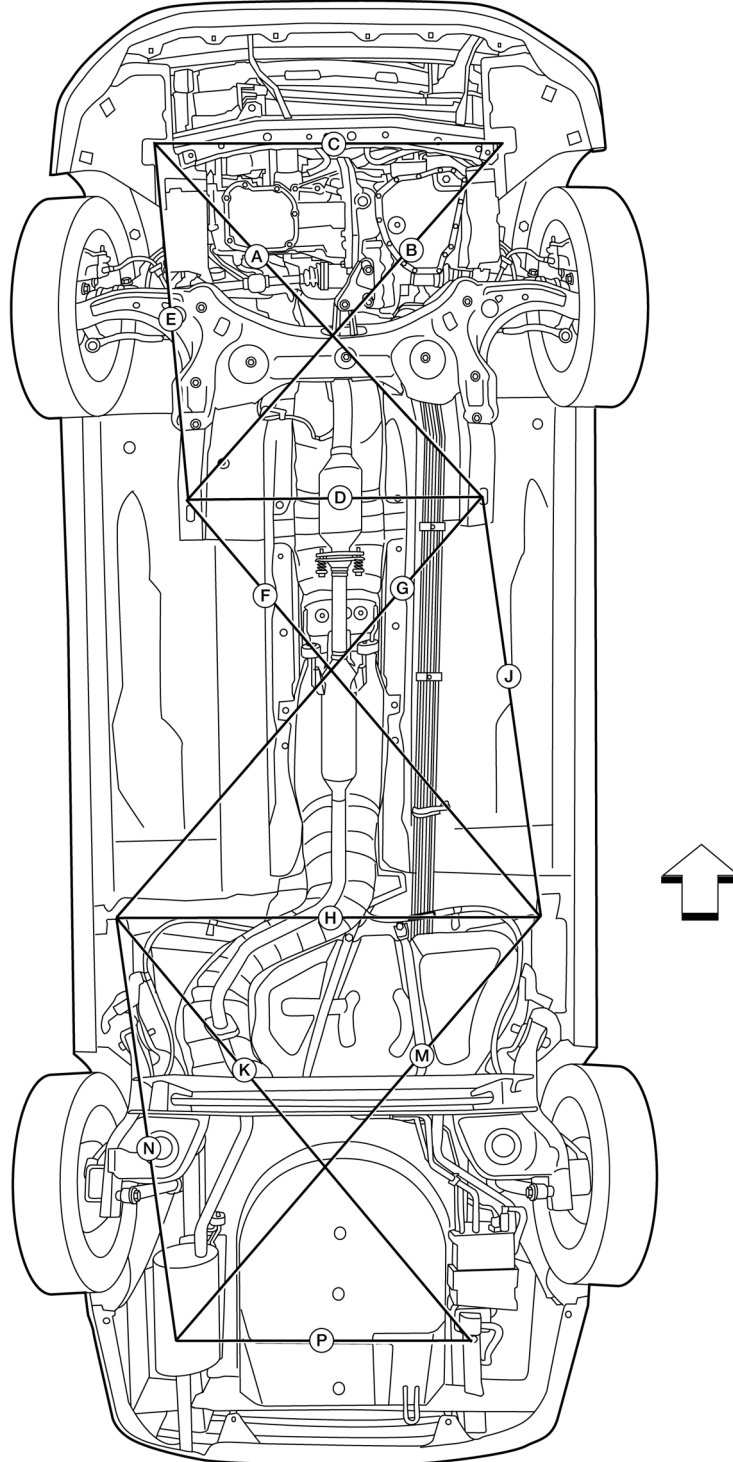
## < SERVICE DATA AND SPECIFICATIONS (SDS)

\* Figures marked with an \* indicate symmetrically identical dimensions on both RH and LH sides of the vehicle.

### Underbody

INFOID:000000009268598

### Measurement



ALKIA2697ZZ

← Front



# BODY ALIGNMENT

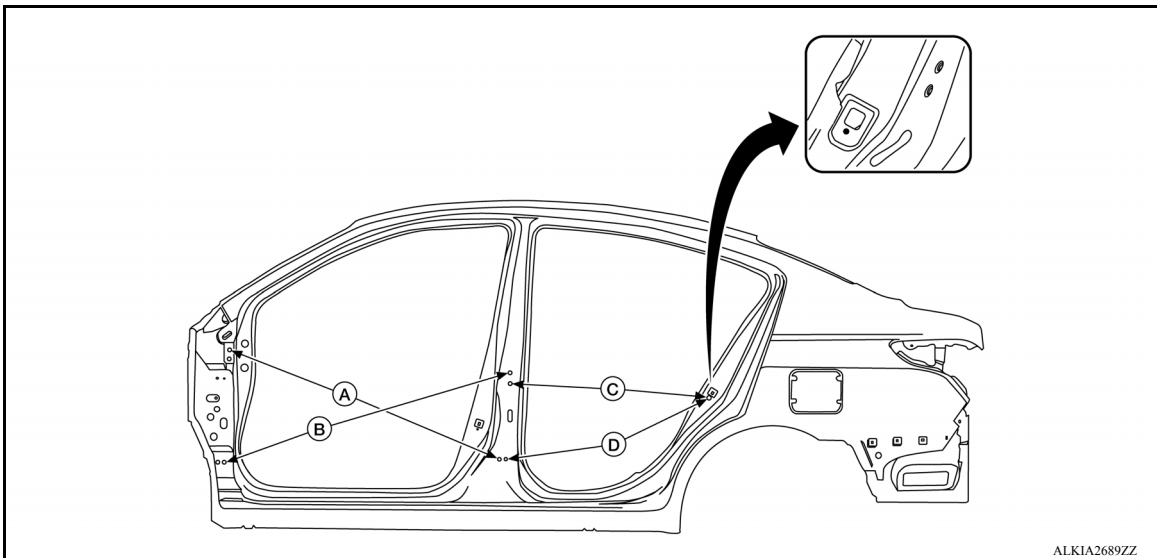
## < SERVICE DATA AND SPECIFICATIONS (SDS)

Position	Measurement	Description
A.	1310 (56.6)	Distance between lower radiator support bolt (outer) to 15 (0.59) locator hole.
B.	1310 (56.6)	Distance between lower radiator support bolt (outer) to 15 (0.59) locator hole
C.	990 (30.0)	Distance between lower radiator support bolts.
D.	815 (32.1)	Distance between LH and RH 15 (0.59) locator holes
E.	970 (38.2)	Distance between lower radiator support bolt (outer) to 15 (0.59) locator hole.
F.	1790 (70.5)	Distance between LH and RH 15 (0.59) locator holes.
G.	1790 (70.5)	Distance between LH and RH 15 (0.59) locator holes.
H.	1210 (48.0)	Distance between LH and RH 15 (0.59) locator holes.
J.	1485 (58.5)	Distance between 15 (0.59) locator holes.
K.	1580 (62.2)	Distance between 15 (0.59) locator holes.
M.	1580 (62.2)	Distance between center 15X17 (0.59X0.67) slot to 15 locator holes.
N.	1150 (45.3)	Distance between center 15X17 (0.59X0.67) slot to 15 locator holes.
P.	950 (37.4)	Distance between center 15X17 (0.59X0.67) slot to center of 15x17 (0.59X0.67) slot.

## Passenger Compartment

INFOID:000000009268599

## Measurement



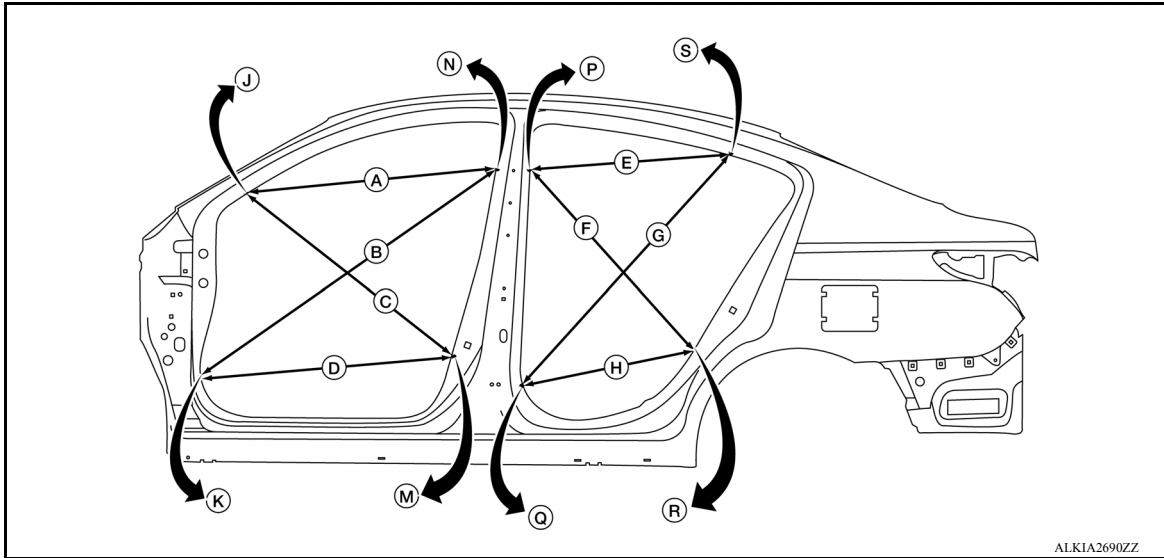
Unit: mm (in)

Position	Measurement	Description
A.	1155 (45.5)	Front door upper hinge bolt hole to rear door lower hinge front bolt hole.
B.	1196 (47.1)	Front door lower hinge rear bolt hole to rear door upper hinge top bolt hole.
C.	796 (31.3)	Rear door upper hinge lower bolt hole to the rear door switch retaining screw hole.
D.	847 (33.3)	Rear door lower hinge rear bolt hole to the rear door switch retaining screw hole.

\* The vehicle is symmetrically identical dimensions on both RH and LH sides of the vehicle.

# BODY ALIGNMENT

## < SERVICE DATA AND SPECIFICATIONS (SDS)



Unit: mm (in)

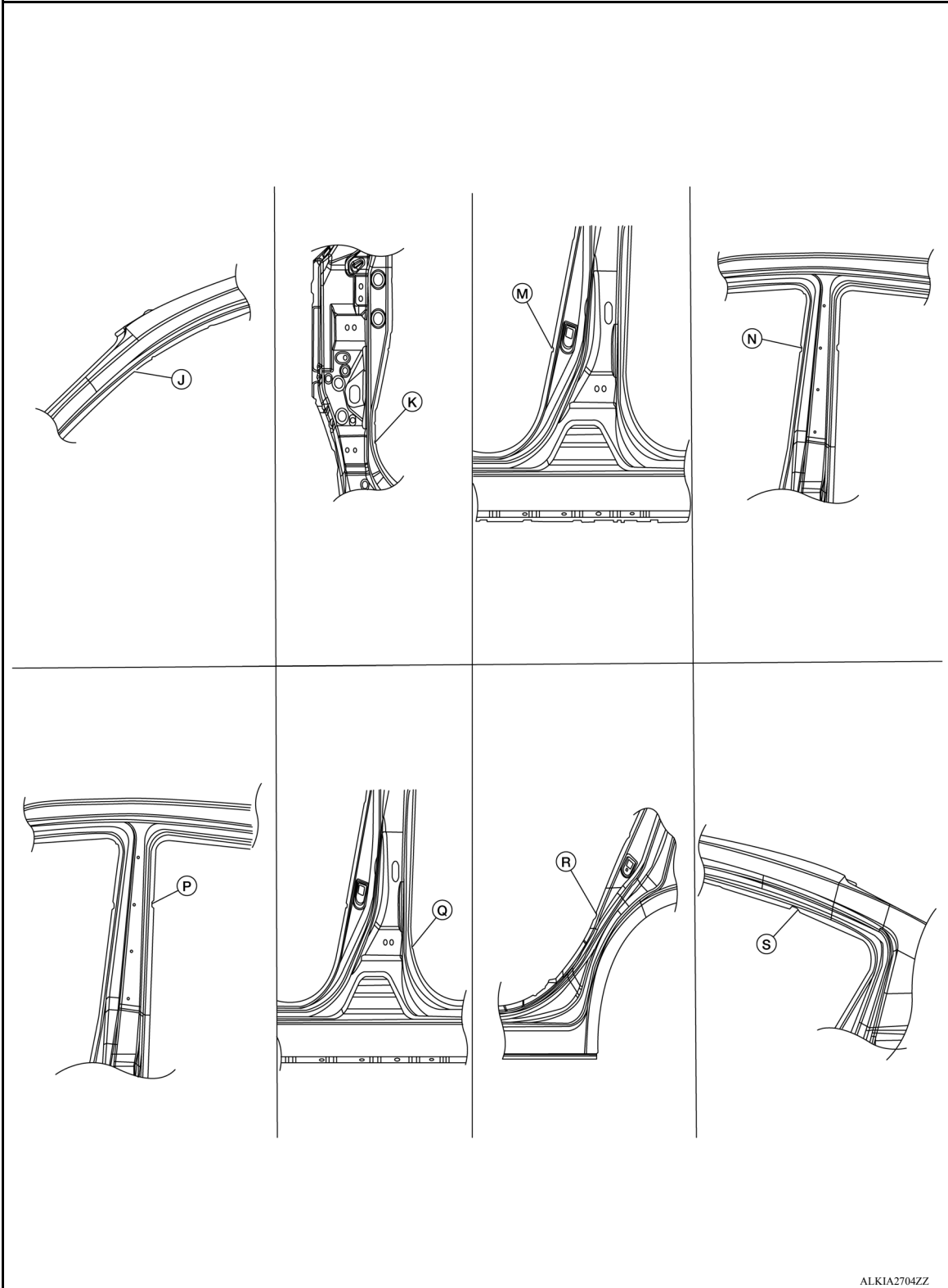
Position	Measurement	Position	Measurement
A.	884 (34.80)	E.	707 (27.8)
B.	1278 (50.3)	F.	862 (33.9)
C.	924 (36.4)	G.	1095 (43.1)
D.	895 (35.2)	H.	621 (24.4)

\* The vehicle is symmetrically identical dimensions on both RH and LH sides of the vehicle.

# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

## Measurement Points



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P

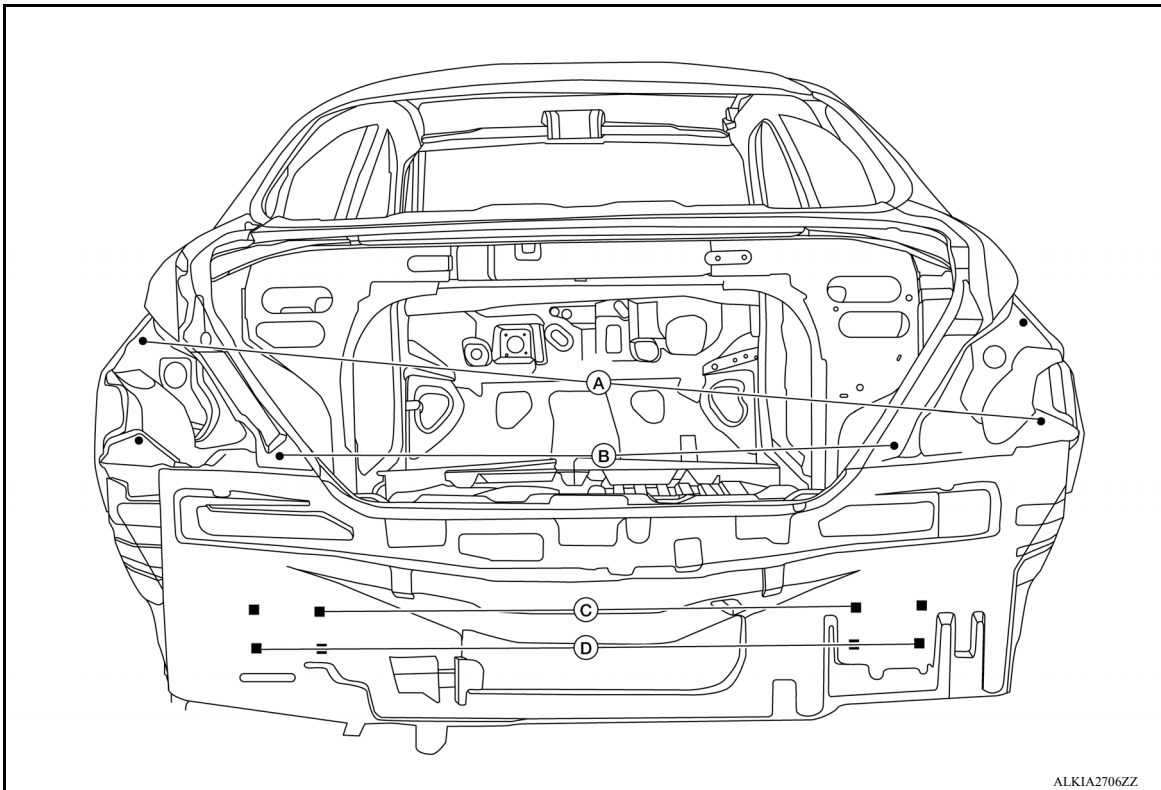
BRM

# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

## Rear End Panel

INFOID:000000009268600



Unit: mm (in)

Position	Measurement	Position	Measurement
A.	1425 (56.1)	C.	845 (33.3)
B.	920 (36.2)	D.	1055 (41.5)

\* The vehicle is symmetrically identical dimensions on both RH and LH sides of the vehicle.