

SECTION **BRM**
BODY REPAIR

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BODY EXTERIOR PAINT COLOR

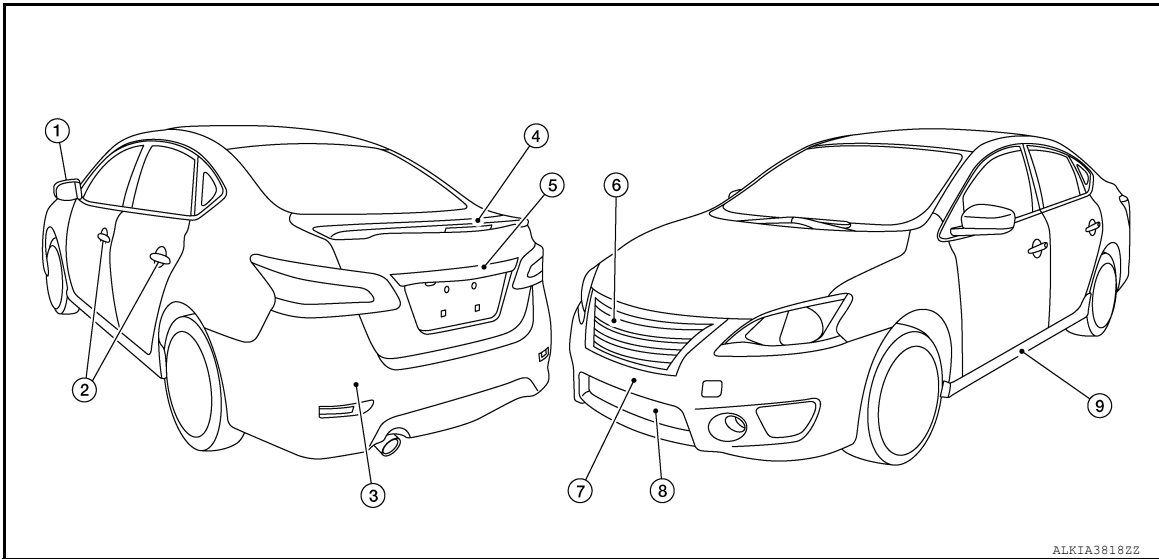
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VEHICLE INFORMATION

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:000000011538062



Component	Color code	A20	B17	K23	KAC	KAD	KBD	KH3	NAH	QAC	QM1	RAQ
	Description	Red	Bright blue	Silver	Light gray	Gray	Dark gray	Black	Red	White	White	Dark blue / Teal
	Paint type	2S	PM	M	M	M	PM	2S	PM	2P	2S	M
	Hard clear coat	t	t	t	t	t	t	t	t	t	t	t
1. Door mirror finisher	Body color	A20	B17	K23	KAC	KAD	KBD	KH3	NAH	QAB	QM1	RAQ
2. Door outside handles	Chromium plate	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
3. Rear bumper fascia	Body color	A20	B17	K23	KAC	KAD	KBD	KH3	NAH	QAB	QM1	RAQ
4. Rear Spoiler (If equipped)	Body color	A20	B17	K23	KAC	KAD	KBD	KH3	NAH	QAB	QM1	RAQ
5. License plate finisher	Chromium plate	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
6. Front grille	Chromium plate	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
7. Front bumper fascia	Body color	A20	B17	K23	KAC	KAD	KBD	KH3	NAH	QAB	QM1	RAQ
8. Lower front grille	Black	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3
9. Sill Spoiler (If equipped)	Body color	A20	B17	K23	KAC	KAD	KBD	KH3	NAH	QAB	QM1	RAQ

M = Metallic, 2S = Solid and Clear, 2P = 2-Coat Pearl, 3P = 3-Coat Pearl, PM = Pearl Metallic, CR = Chrome, 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"

INFOID:000000011677830

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. 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 three minutes before performing any service.

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PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

< PRECAUTION >

PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:000000011538064

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:

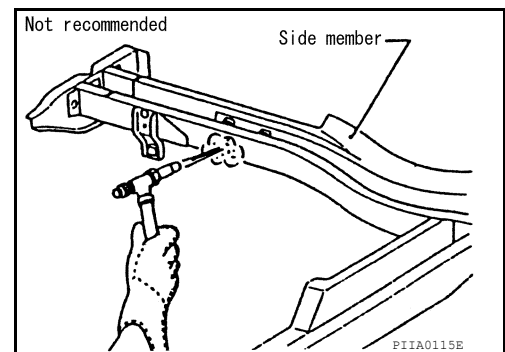
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm ² (38kg/mm ² ,54klb/sq in)	SP130	<ul style="list-style-type: none"> • Front side member assembly • Hoodledge assembly • Upper dash • Front pillar reinforcement assembly • Rear side member assembly • Other reinforcements

SP130 is the most commonly used HSS.

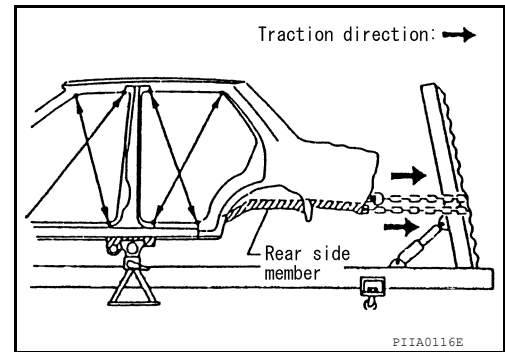
Read the following precautions when repairing HSS:

1. Additional points to consider

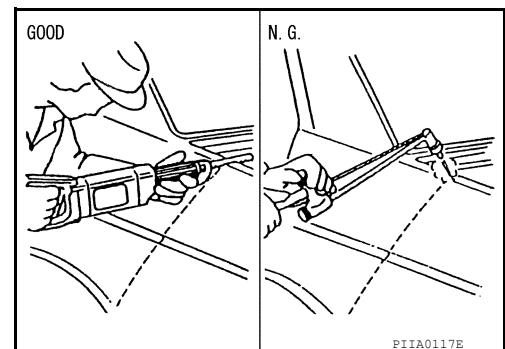
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F). Verify heating temperature with a thermometer. (Crayon-type and other similar type thermometer are appropriate.)



- 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.



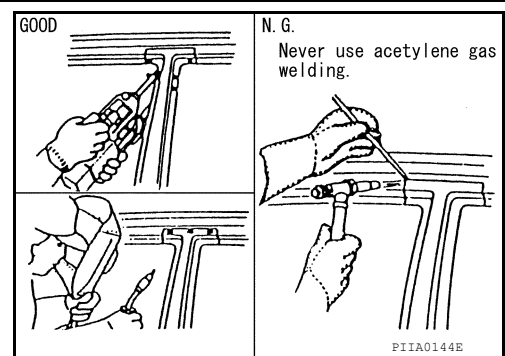
- When cutting HSS panels, avoid gas (torch) cutting if possible. Instead, use a saw to avoid weakening surrounding areas due to heat. If gas (torch) cutting is unavoidable, allow a minimum margin of 50 mm (1.97in).



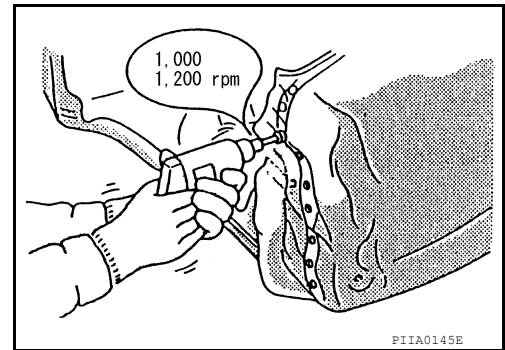
PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

< 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.



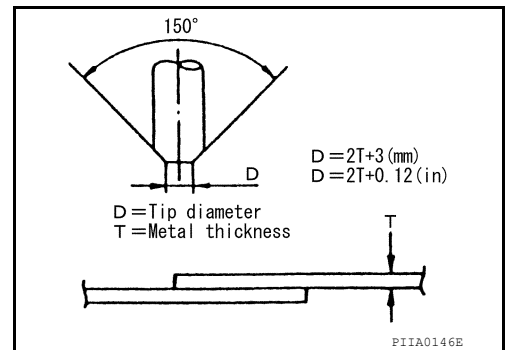
- The spot weld on HSS panels is harder than that of an ordinary steel panel. Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



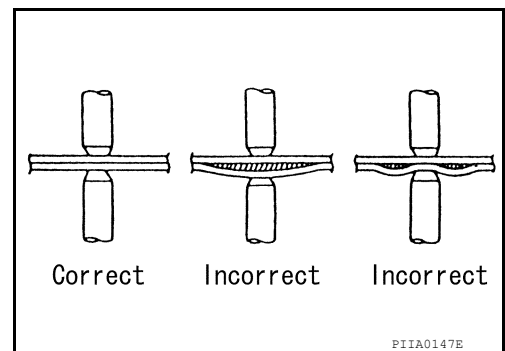
2. Precautions in spot welding HSS

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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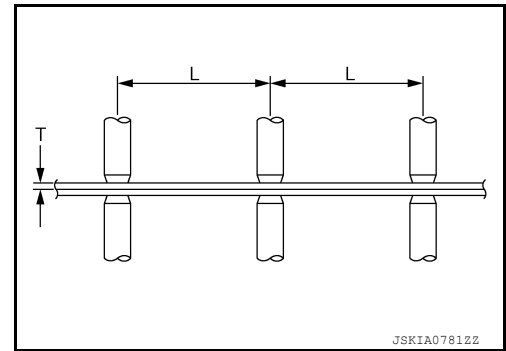
PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

< PRECAUTION >

- Follow the specifications for the proper welding pitch.

Unit: mm (in)

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



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

< PREPARATION >

PREPARATION

HANDLING PRECAUTIONS FOR PLASTICS

Precautions For Plastics

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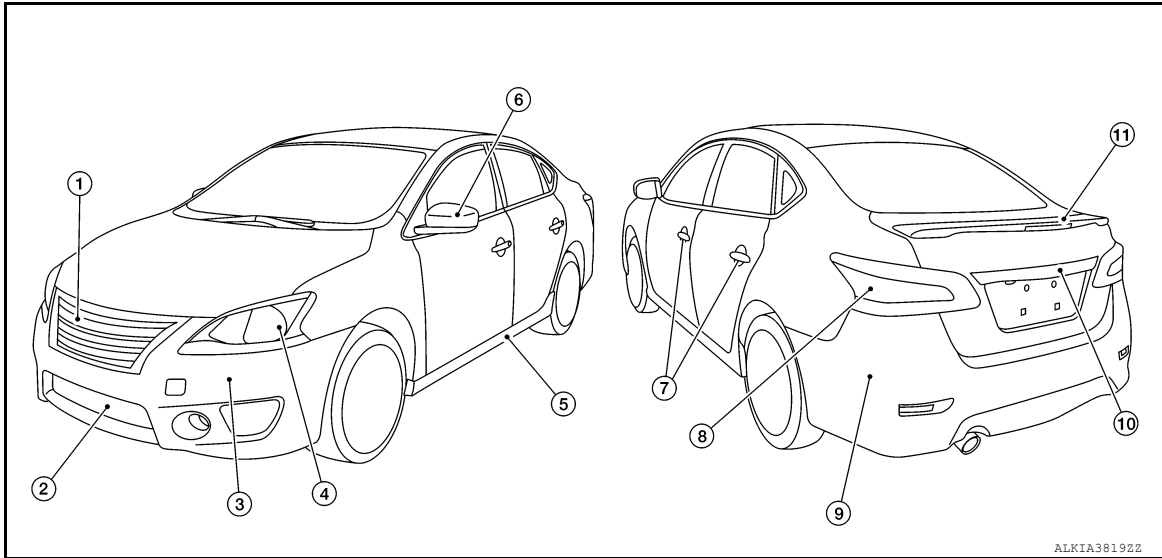
Abbreviation	Material name	Heatresisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Poly Vinyl Chloride	80(176)	Same as above.	Poison gas is emitted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

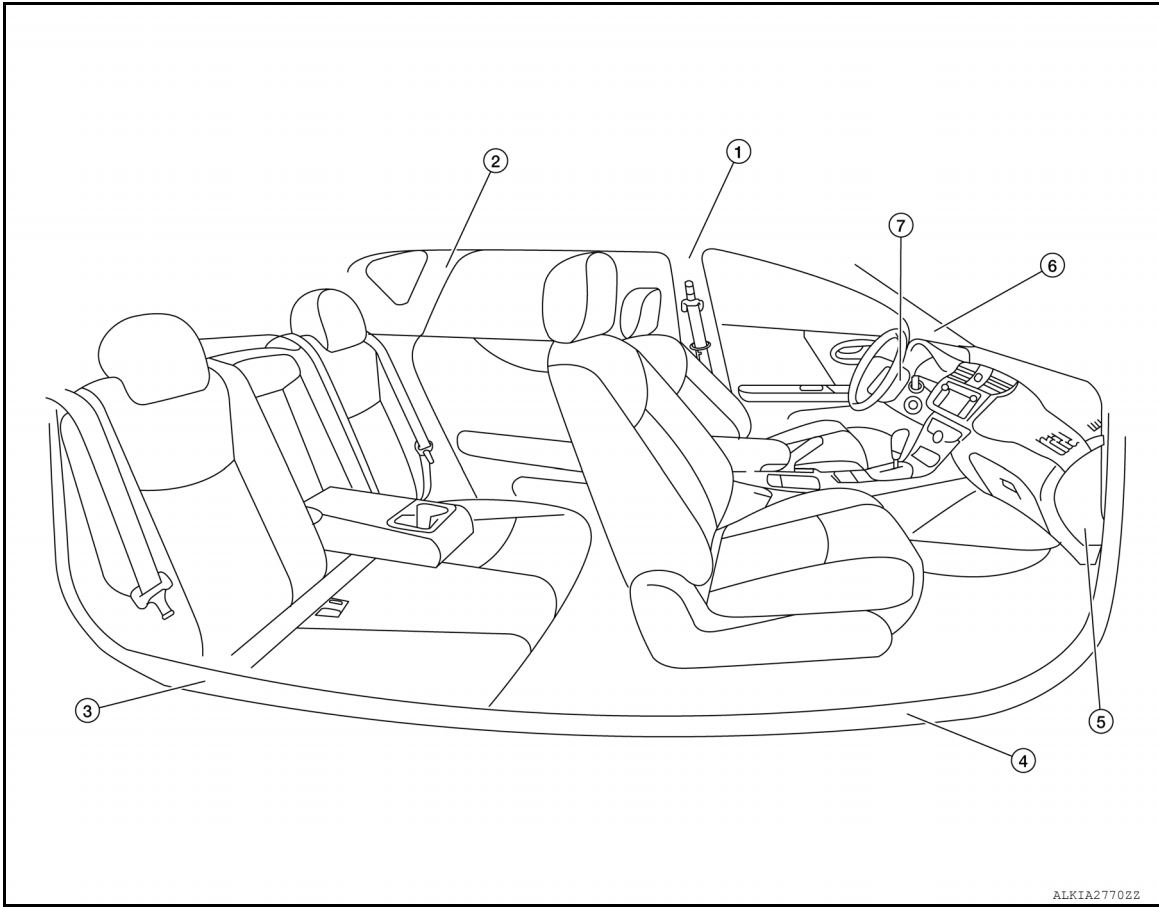
< PREPARATION >



Item	Component	Abbreviation	Material
1.	Front Grille	ABS+ASA+PC	Acrylonitrile Butadiene Styrene + Acronitrile Butadiene Acrylate + Polycarbonate
2.	Front lower grille	PP	Polypropylene
3.	Front bumper fascia	PP + EPM	Polypropylene + Ethylene Propylene (Diene) copolymer
4.	Front combination lamp	Lens	PC Polycarbonate
		Housing	PP Polypropylene
5.	Sill spoiler	PP	Polypropylene
6.	Door Mirror	Case	ASA Acronitrile Styrene Acrylate
		Skull cap	ABS Acrylonitrile Butadiene Styrene
7.	Outside door handle	Grip	PC Polycarbonate
		Escutcheon	PA Polyamide (Nylon)
8.	Rear combination lamp	Lens	PMMA Poly Methyl Methacrylate
		Housing	ABS Acrylonitrile Butadiene Styrene
9.	Rear bumper fascia	PP + EPM	Polypropylene + Ethylene Propylene (Diene) copolymer
10.	Trunk lid finisher	ABS + PC	Acronitrile Butadiene Acrylate + Polycarbonate
11.	Rear air spoiler	PC + ABS	Polycarbonate + Acrylonitrile Butadiene Styrene

HANDLING PRECAUTIONS FOR PLASTICS

< PREPARATION >



Item	Component	Abbreviation	Material
1.	Upper center pillar trim	PP	Polypropylene
2.	Rear finisher	PP	Polycarbonate
3.	Rear kicking plate	PP	Polypropylene
4.	Front kicking plate	PP	Polypropylene
5.	Instrument panel side finisher	PP	Polypropylene
6.	Front pillar finisher	PP	Polypropylene
7.	Steering column covers	PP	Polypropylene

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REPAIRING MATERIAL

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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>

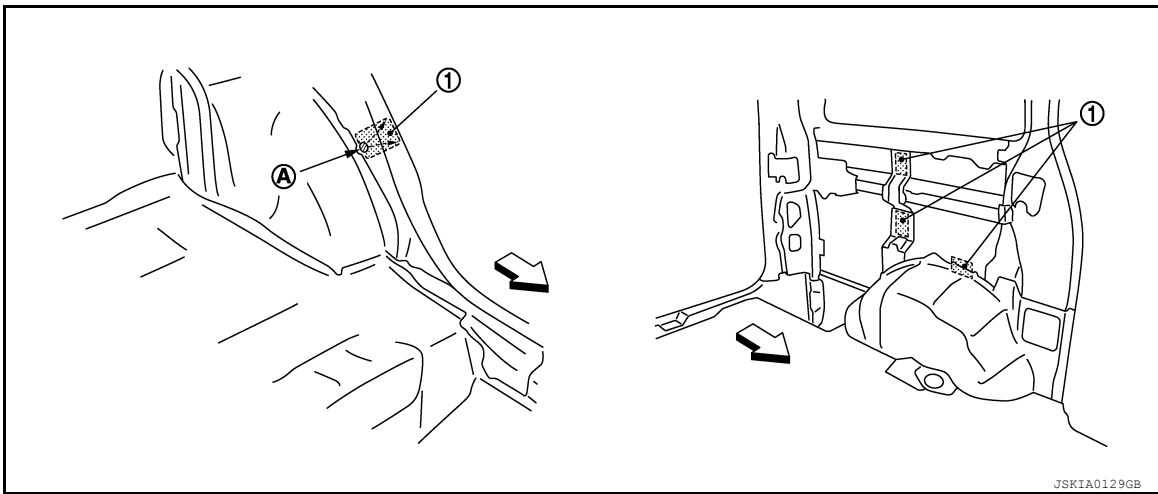
3M™ Automix™ Flexible Foam 08463 or equivalent

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.

1. Urethane foam

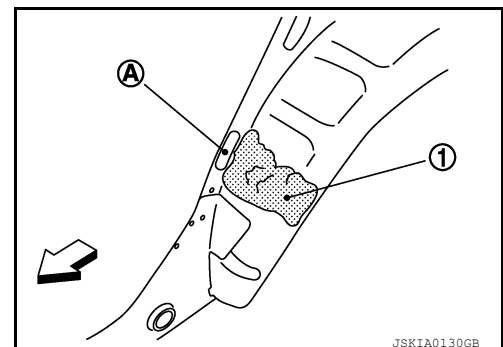
A. Fill while avoiding flange area

← Front

- d. Install service part.

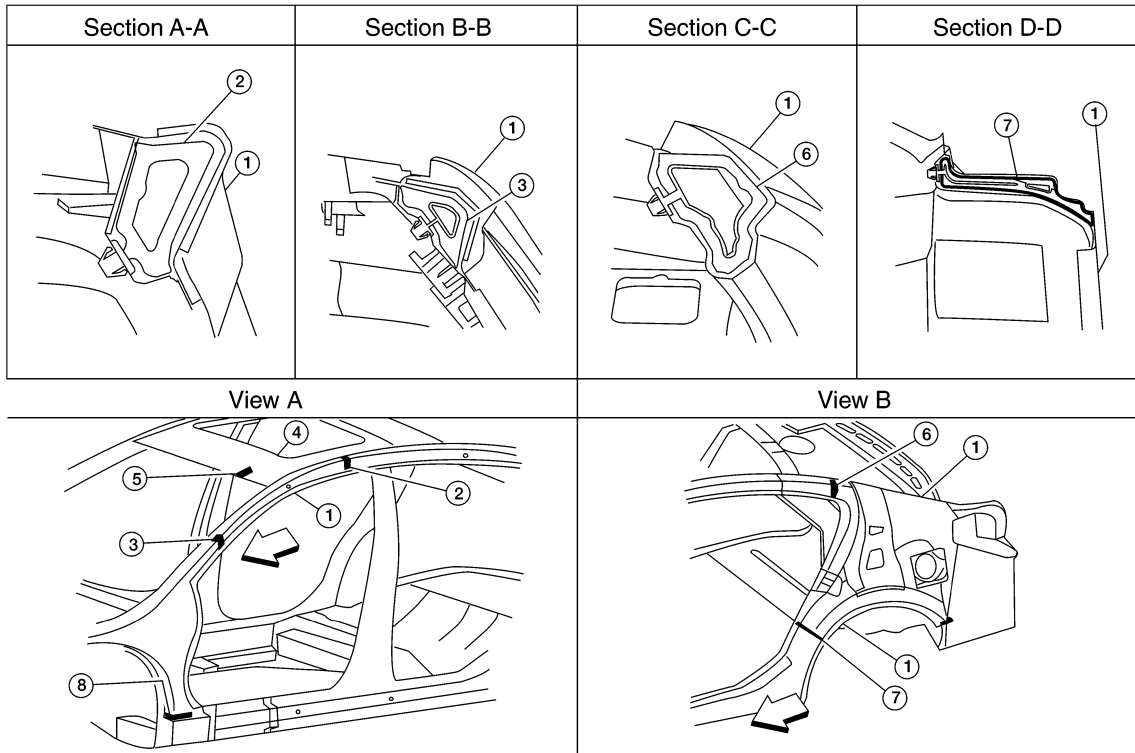
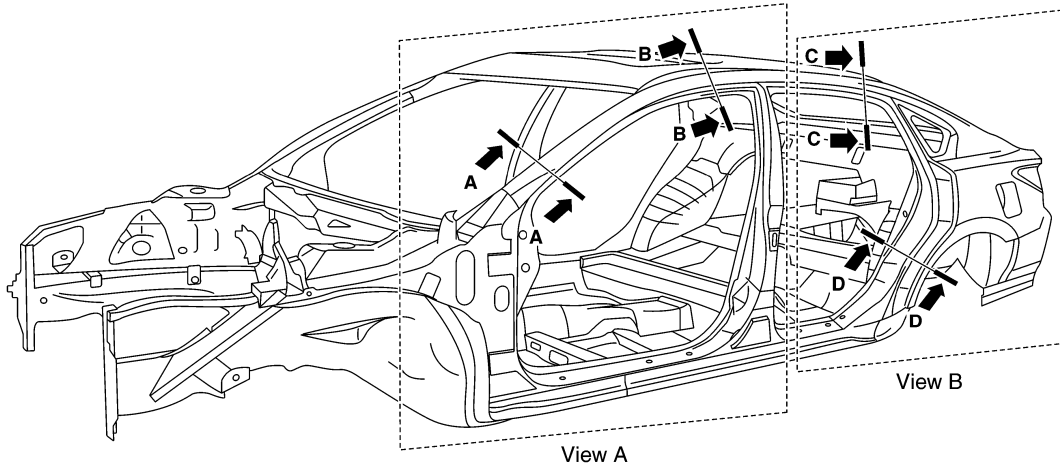
NOTE:

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



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 | |

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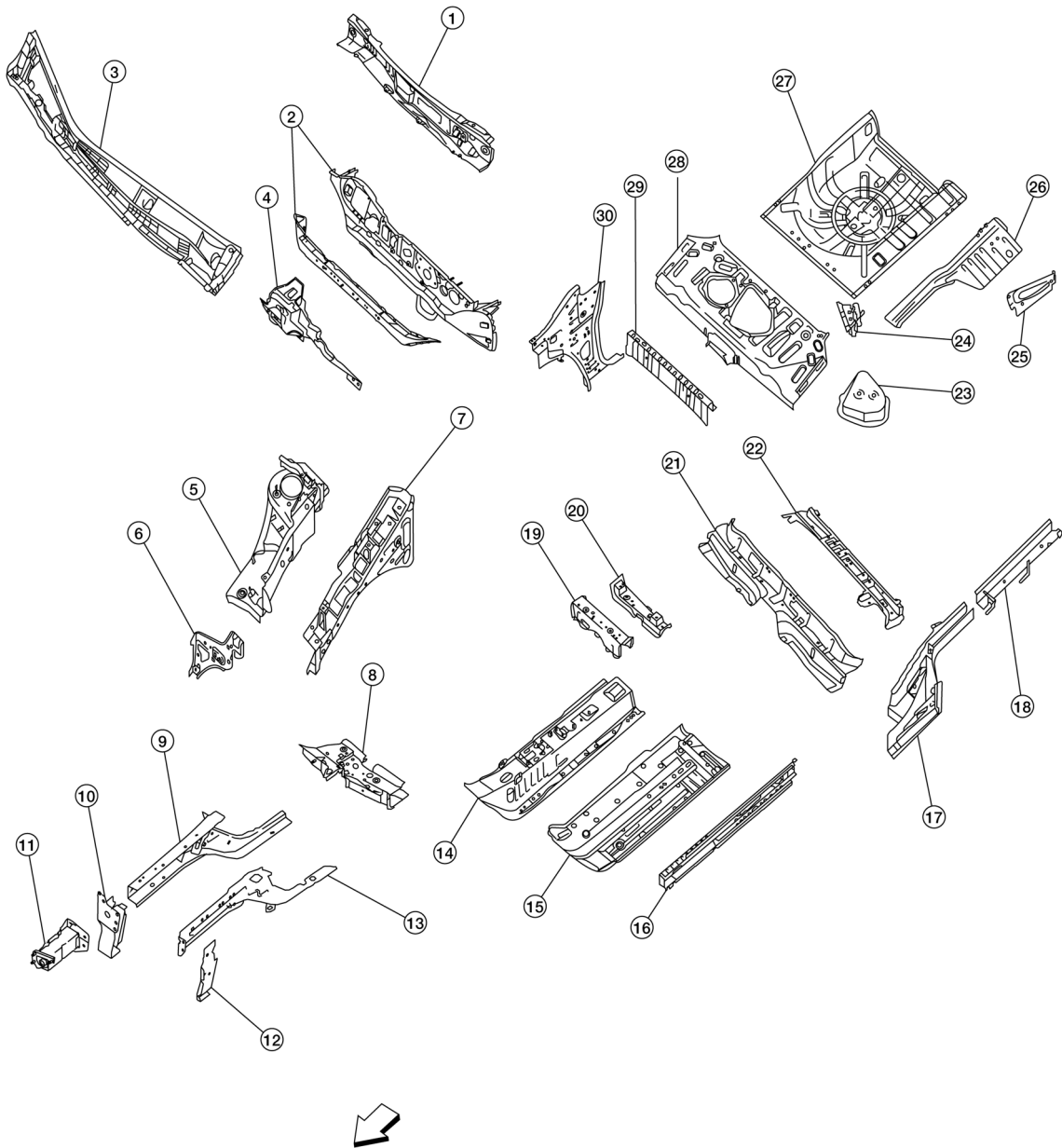
BODY COMPONENT PARTS

< PREPARATION >

BODY COMPONENT PARTS

Underbody Component Parts

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- 1. Upper dash assembly
- 4. Air box assembly

- 2. Lower dash assembly
- 5. Strut housing (RH, LH)

- 3. Cowl assembly
- 6. Radiator core upper side support (RH, LH)

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BODY COMPONENT PARTS

< PREPARATION >

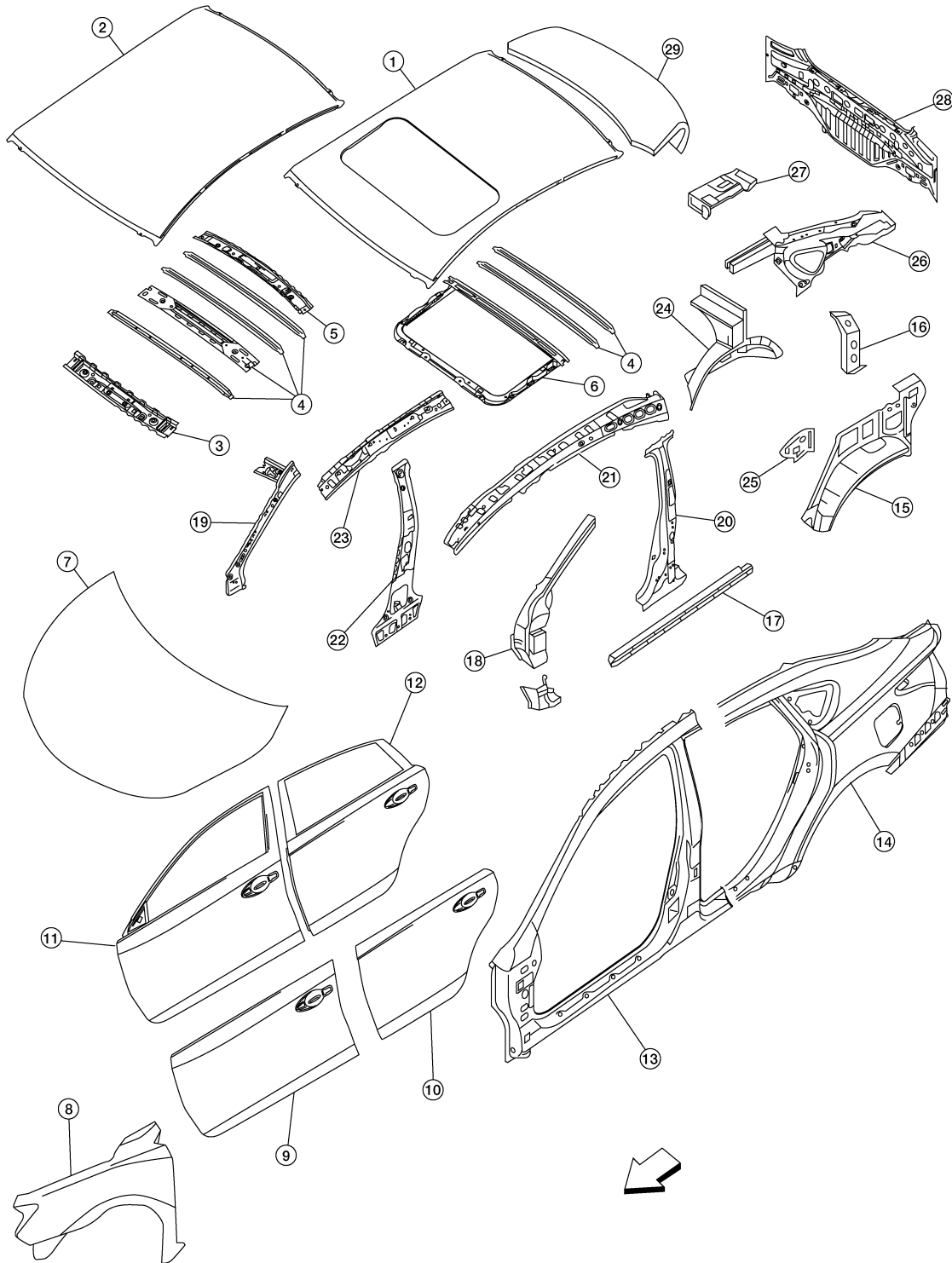
7. Hoodledge (RH, LH)	8. Front suspension mounting bracket (RH, LH)	9. Closing plate inner assembly (RH, LH)	A
10. Radiator core inner side support (RH, LH)	11. Front member extension assembly (RH, LH)	12. Radiator core outer side support (RH, LH)	
13. Closing plate front outer assembly (RH, LH)	14. Floor front center	15. Floor front assembly (RH, LH)	B
16. Sill reinforcement (RH, LH)	17. Rear side member (RH, LH)	18. Rear side member extension (RH, LH)	
19. Front crossmember (RH, LH)	20. Rear crossmember (RH, LH)	21. Rear seat crossmember assembly	C
22. Rear center crossmember	23. Rear floor cover	24. Floor mount bracket assembly	
25. Rear floor rear extension (RH, LH)	26. Rear floor rear side (RH, LH)	27. Rear floor rear	D
28. Rear floor front	29. Rear seat upper crossmember	30. Dash side (RH, LH)	
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BODY COMPONENT PARTS

< PREPARATION >

Body Component Parts

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|------------------------------------|-----------------------------------|---------------------------------------|
| 1. Moonroof panel assembly | 2. Roof panel assembly | 3. Front roof rail |
| 4. Roof rail | 5. Rear roof rail | 6. Moonroof frame assembly |
| 7. Hood assembly | 8. Front fender (RH, LH) | 9. Outer front door panel (RH, LH) |
| 10. Outer rear door panel (RH, LH) | 11. Front door assembly (RH, LH) | 12. Rear door assembly (RH, LH) |
| 13. Front body side outer (RH, LH) | 14. Rear body side outer (RH, LH) | 15. Rear wheel housing outer (RH, LH) |

BODY COMPONENT PARTS

< PREPARATION >

- | | | |
|---|--|---|
| 16. Rear pillar reinforcement (RH, LH) | 17. Outer sill reinforcement (RH, LH) | 18. Front pillar reinforcement (RH, LH) |
| 19. Front pillar reinforcement (RH, LH) | 20. Center pillar reinforcement (RH, LH) | 21. Roof side rail reinforcement (RH, LH) |
| 22. Center pillar inner (RH, LH) | 23. Roof inner side rail (RH, LH) | 24. Rear wheel housing inner (RH, LH) |
| 25. Rear inner sill extension (RH, LH) | 26. Rear panel assembly (RH, LH) | 27. Rear parcel shelf extension (RH, LH) |
| 28. Rear panel | 29. Trunk lid assembly | ⇐ Front |

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CORROSION PROTECTION

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

CORROSION PROTECTION

Description

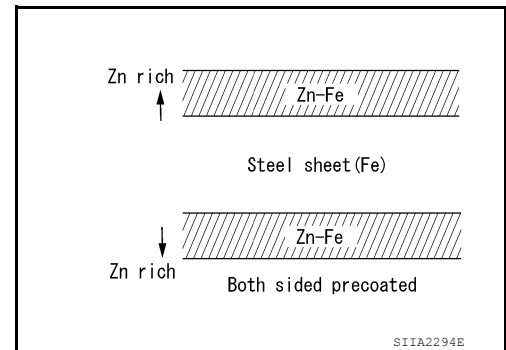
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To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

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.



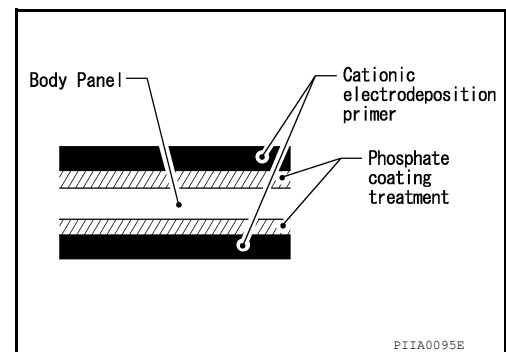
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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.

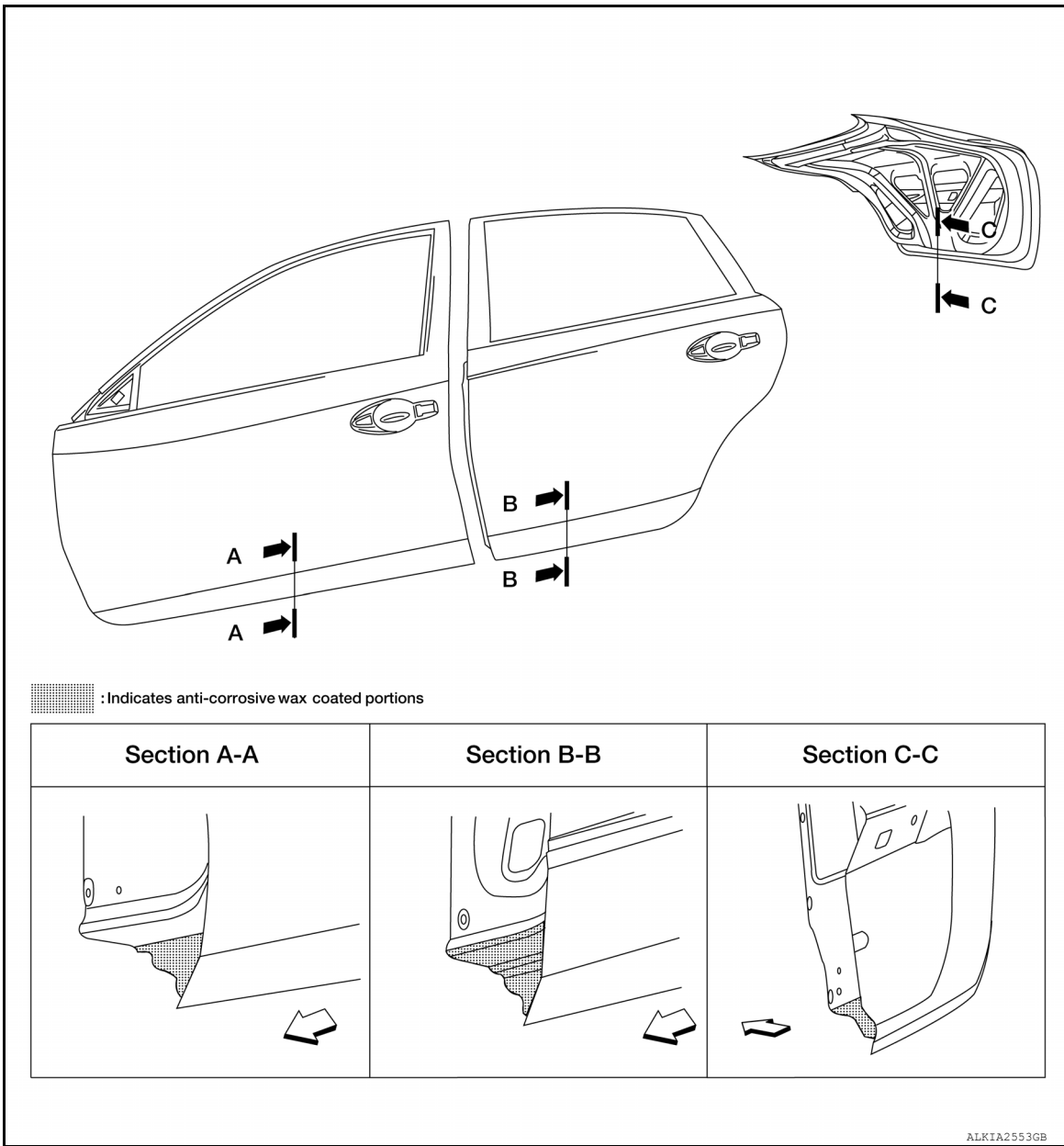
Anti-Corrosive Wax

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

CORROSION PROTECTION

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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.

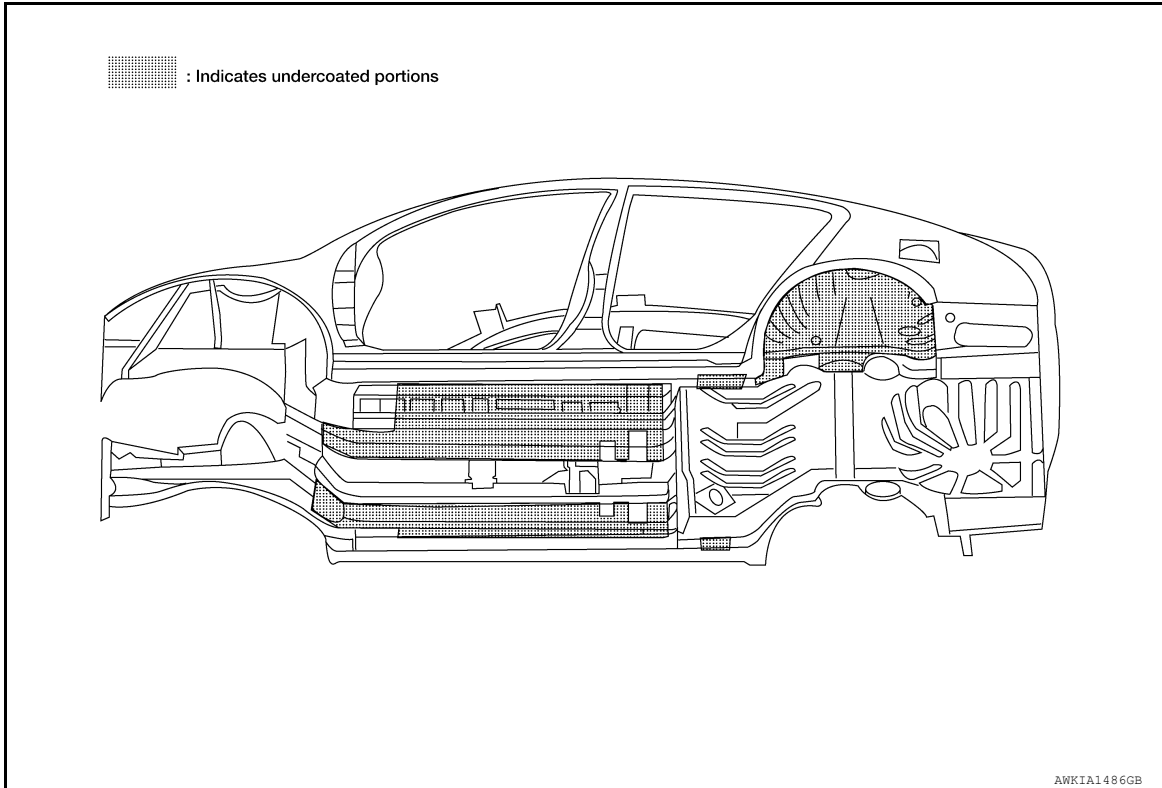
Precautions in Undercoating

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.



BODY SEALING

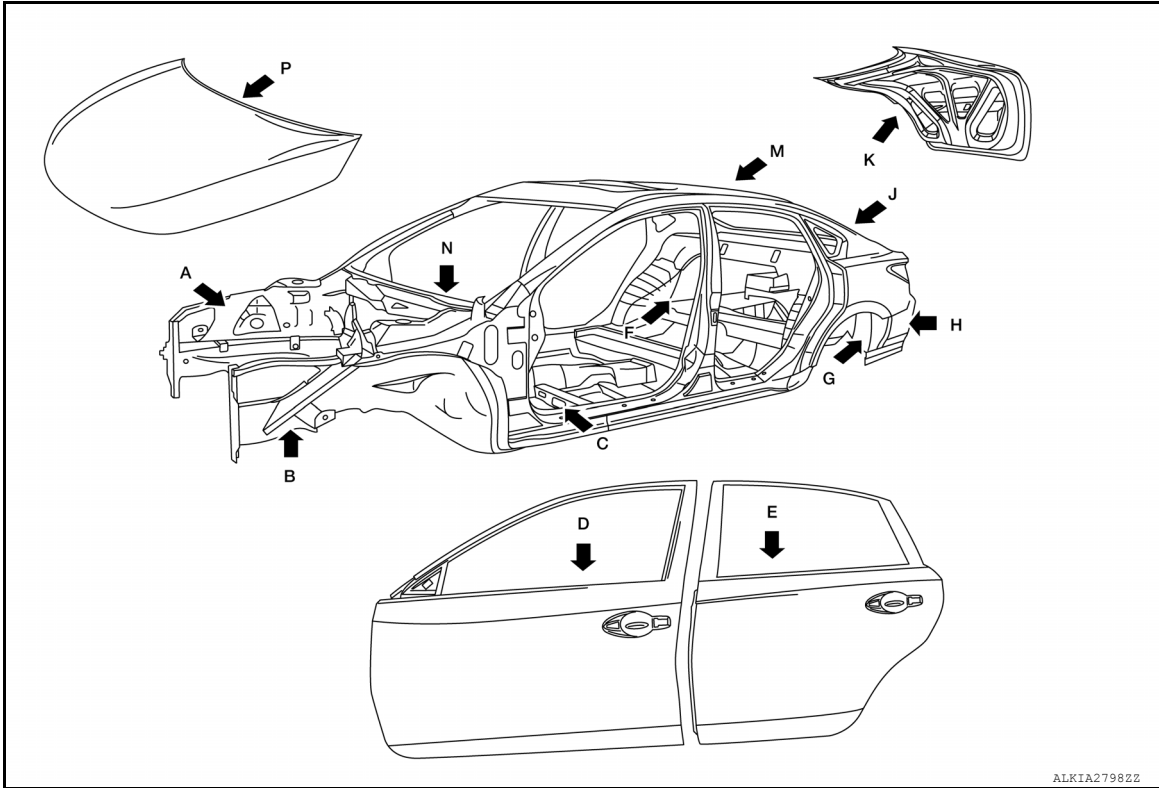
< REMOVAL AND INSTALLATION >

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.



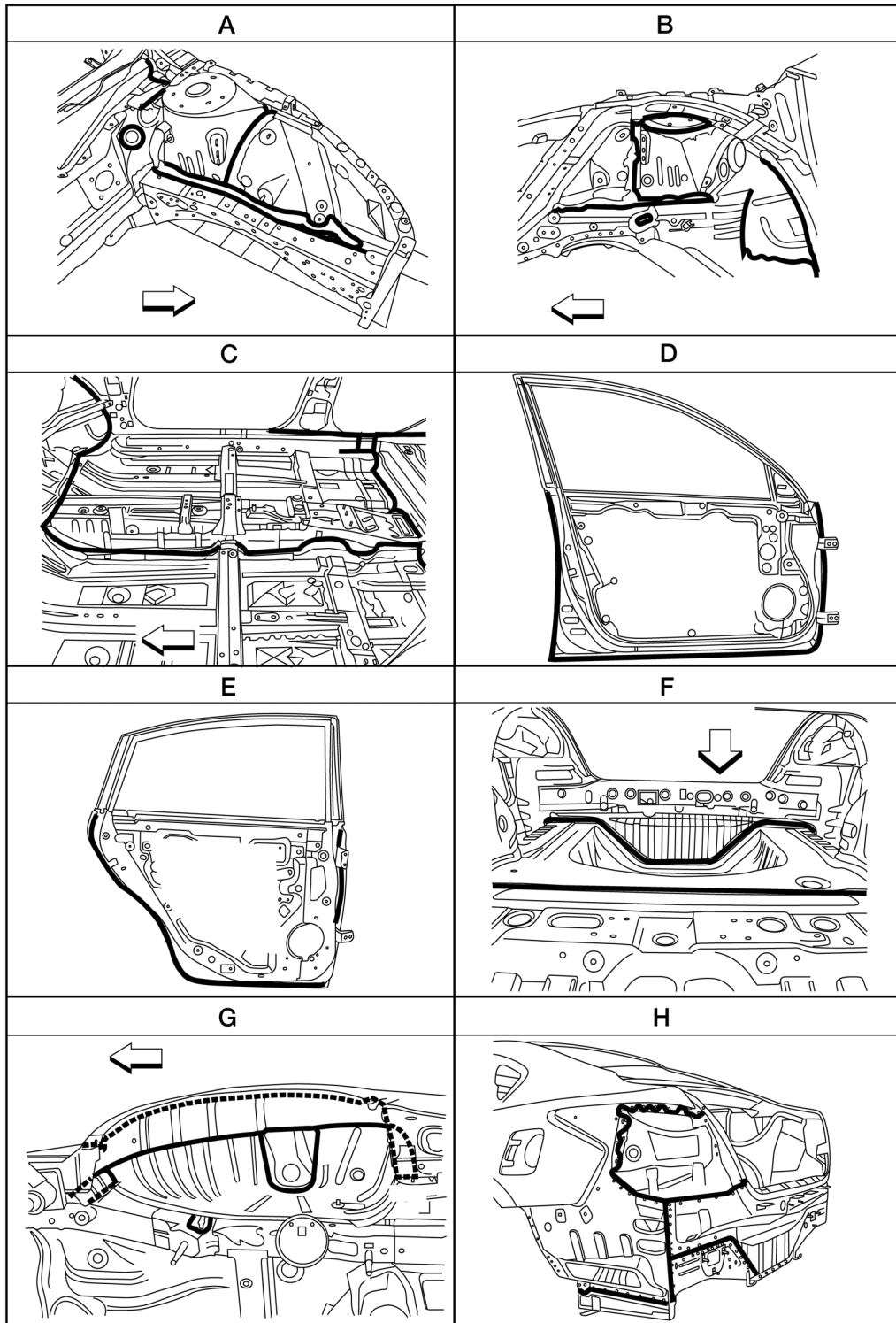
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BODY SEALING

< REMOVAL AND INSTALLATION >

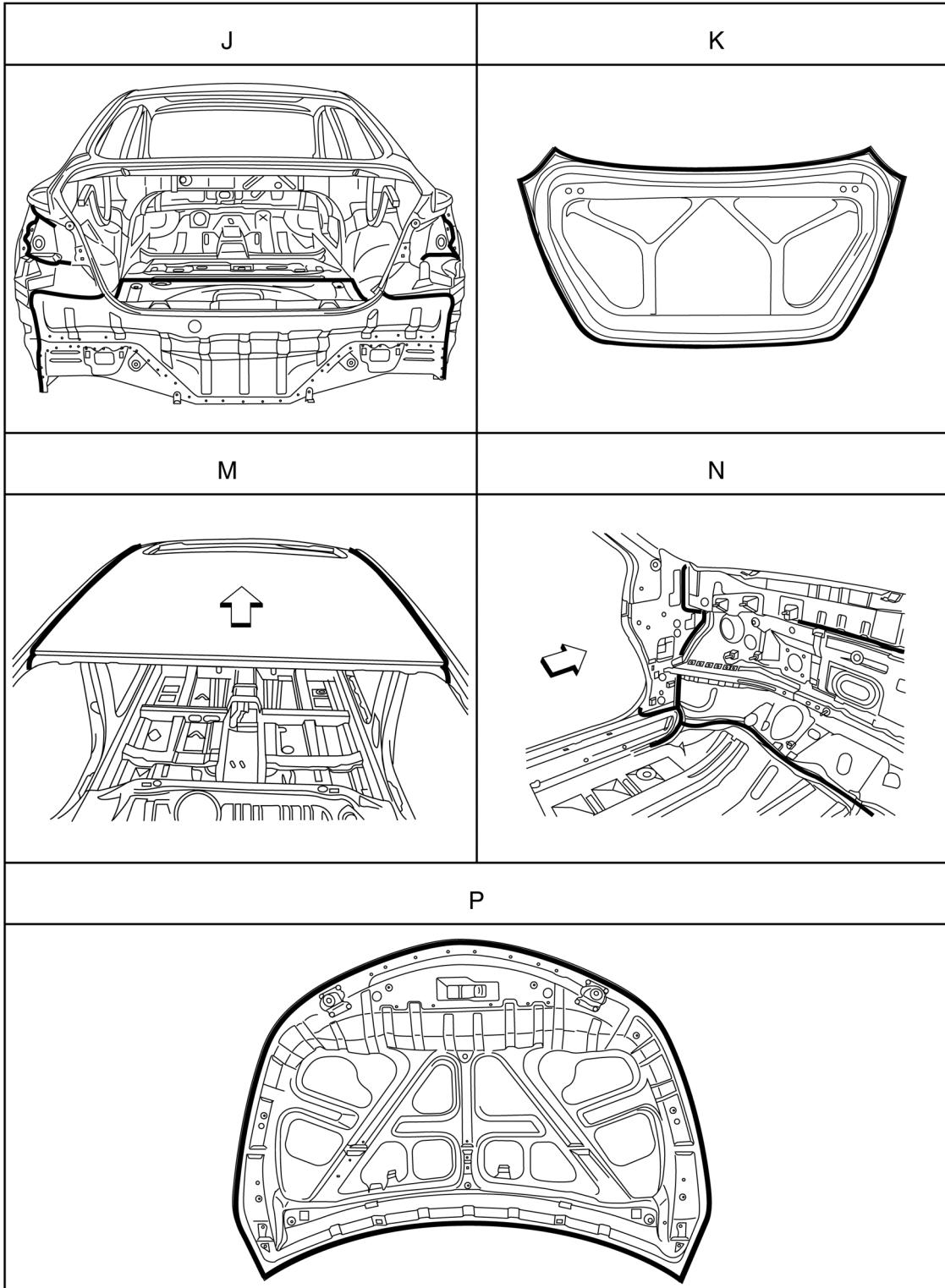


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BODY SEALING

< REMOVAL AND INSTALLATION >



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REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

REPLACEMENT OPERATIONS

Description

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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.


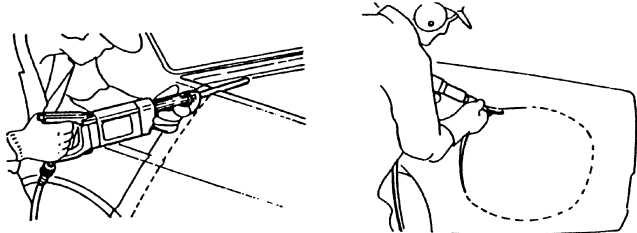



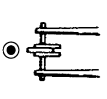





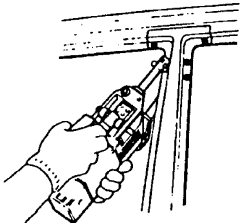
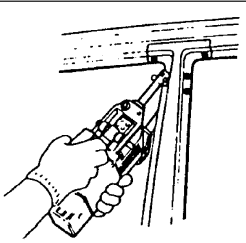



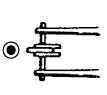













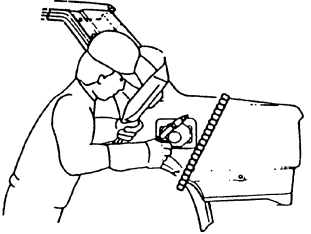

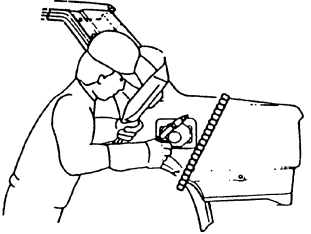

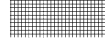
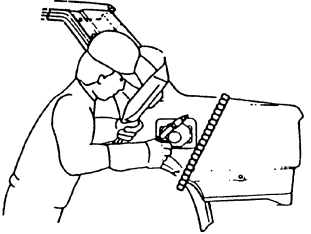

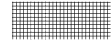
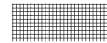
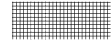
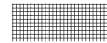

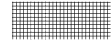
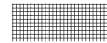




Technicians are also encouraged to read Body Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle can be maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warning, that are not including in this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

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="1"> <tr> <td data-bbox="305 470 375 604">Spot weld</td> <td data-bbox="375 470 638 604">  2-spot welds </td> <td data-bbox="532 506 638 604">  </td> </tr> <tr> <td data-bbox="305 604 375 709"></td> <td data-bbox="375 604 638 709">  3-spot welds </td> <td data-bbox="532 611 638 709">  </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="1"> <tr> <td data-bbox="305 716 375 835">MIG plug weld</td> <td data-bbox="375 716 638 835">  MIG plug weld </td> <td data-bbox="532 751 638 835">  </td> </tr> <tr> <td data-bbox="305 835 375 955">MIG seam weld/ Point weld</td> <td data-bbox="375 835 638 955">  MIG seam weld/ Point weld </td> <td data-bbox="532 871 638 955">  </td> </tr> </table>	MIG plug weld	 MIG plug weld		MIG seam weld/ Point weld	 MIG seam weld/ Point weld		
MIG plug weld	 MIG plug weld						
MIG seam weld/ Point weld	 MIG seam weld/ Point weld						
<table border="1"> <tr> <td data-bbox="305 961 375 1108">Brazing</td> <td data-bbox="375 961 638 1108">  Brazing </td> <td data-bbox="532 1060 638 1108">  </td> </tr> </table>	Brazing	 Brazing					
Brazing	 Brazing						
<table border="1"> <tr> <td data-bbox="305 1207 375 1354">Soldering</td> <td data-bbox="375 1207 638 1354">  Soldering </td> <td data-bbox="532 1312 638 1354">  </td> </tr> </table>	Soldering	 Soldering					
Soldering	 Soldering						
<table border="1"> <tr> <td data-bbox="305 1453 375 1600">Sealing</td> <td data-bbox="375 1453 638 1600">  Sealing </td> <td data-bbox="532 1558 638 1600"></td> </tr> </table>	Sealing	 Sealing					
Sealing	 Sealing						

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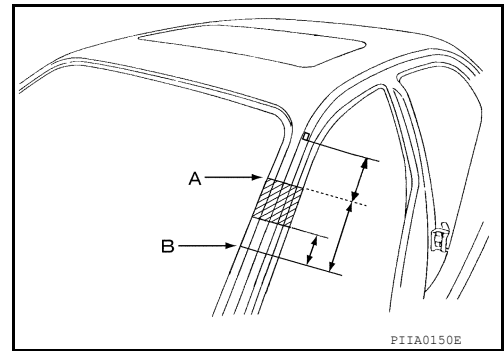
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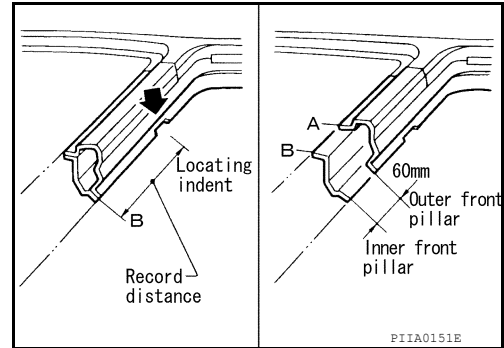
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

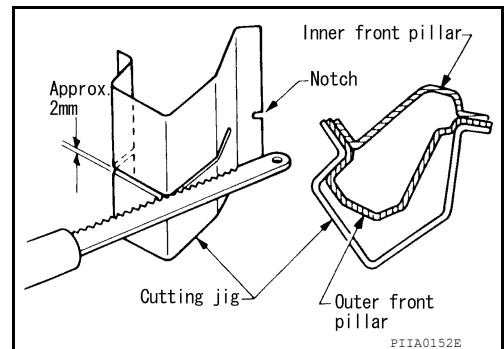
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- 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.

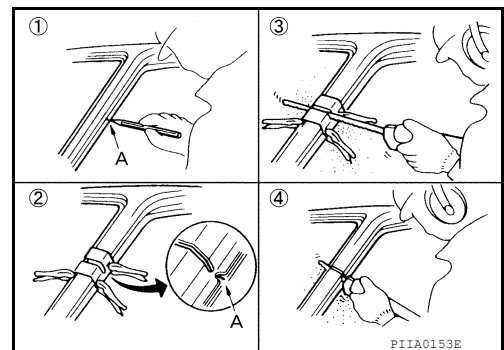


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- 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.

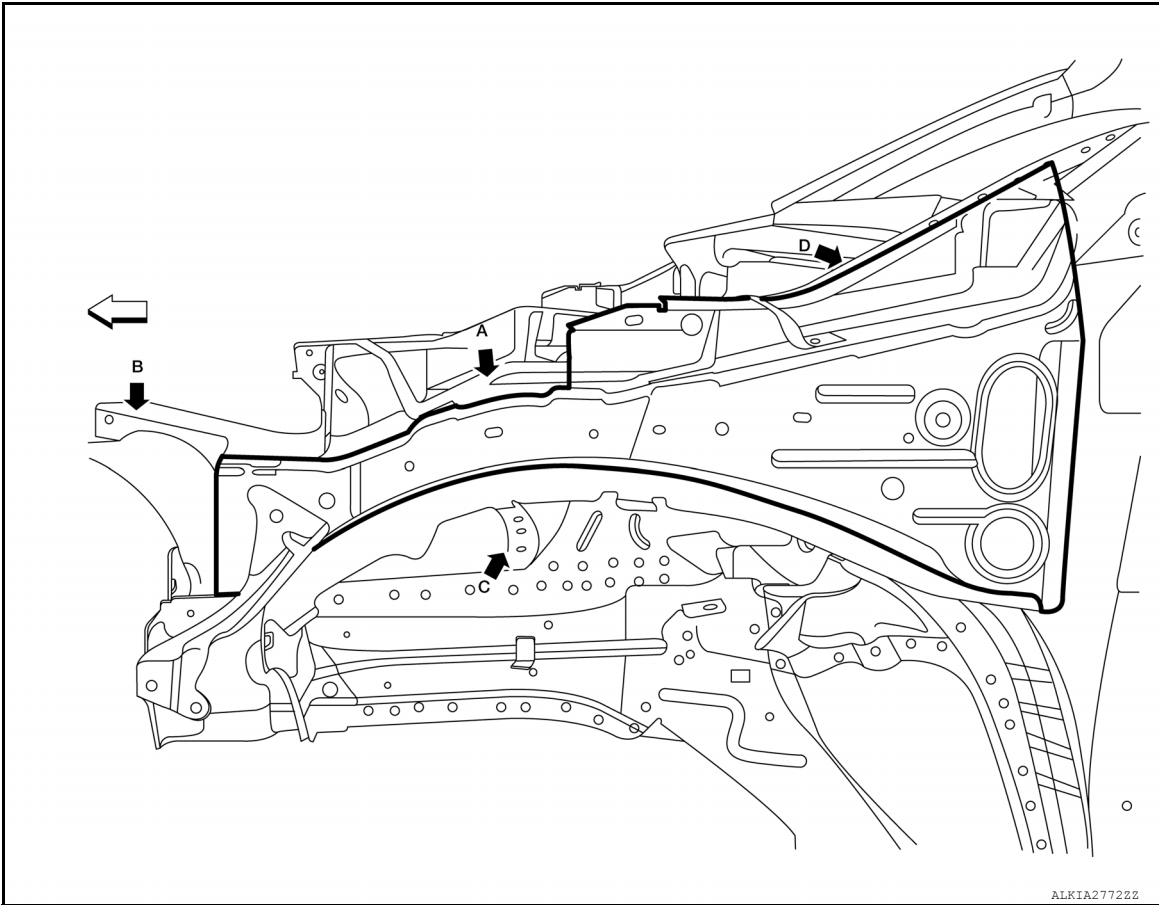


REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Hoodledge

INFOID:000000011538074



Change parts

A. Front hoodledge

B. Radiator core support upper

C. Front strut housing (LH)

D. Hoodledge connector

↔ Front

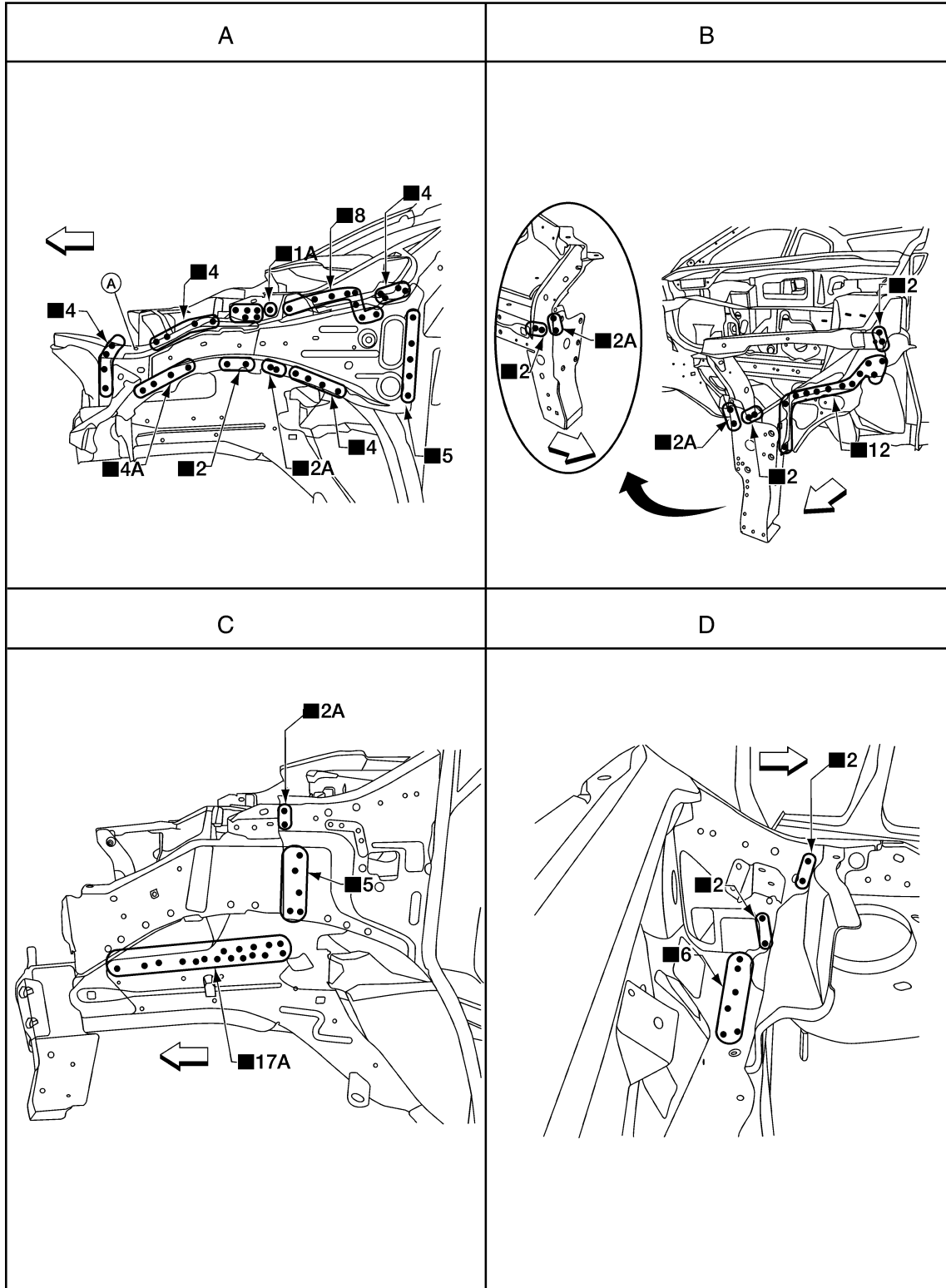
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REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



← Front

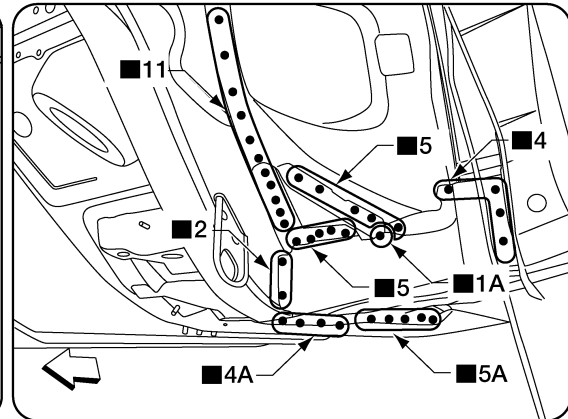
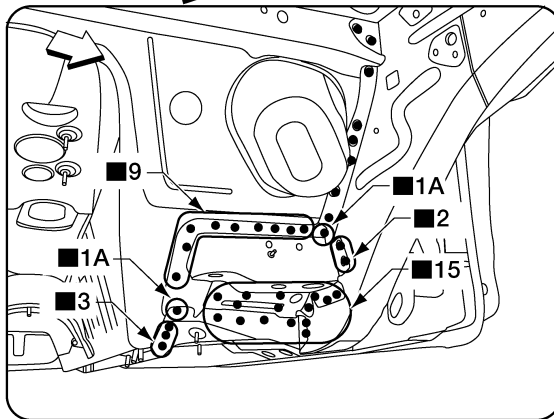
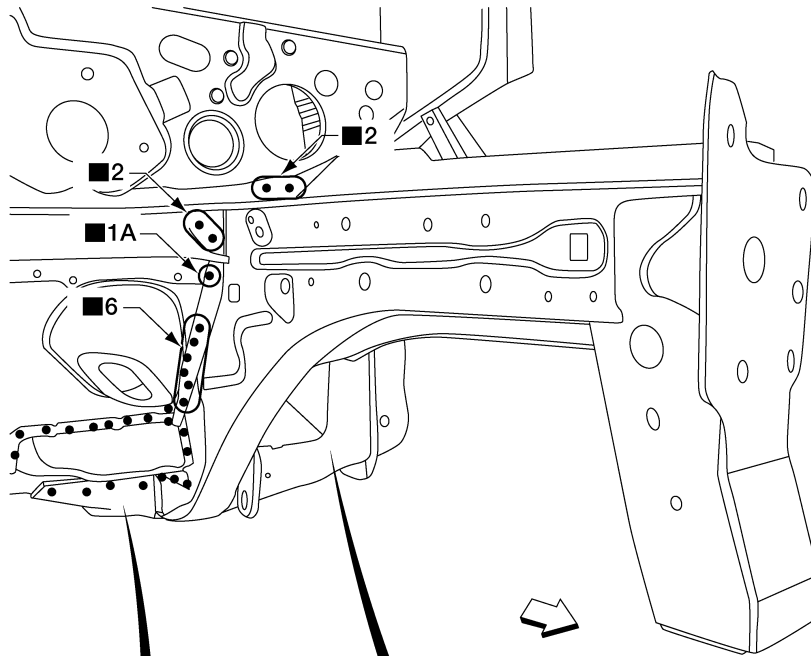
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Front Side Member

INFOID:000000011538075

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Change parts

- Front side member front assembly

← Front

Front Pillar

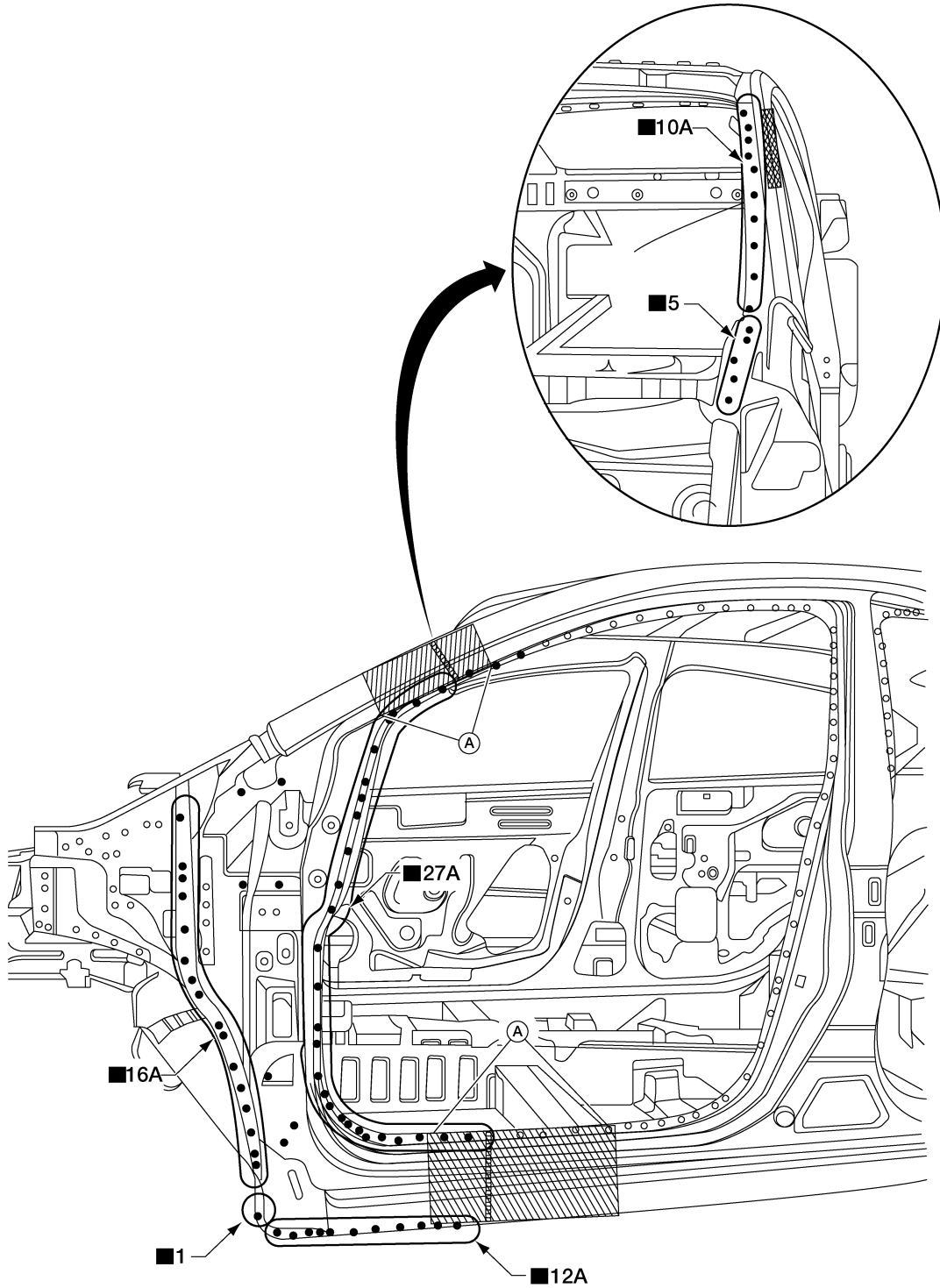
INFOID:000000011538076

OUTER

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

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



ALKIA27812Z

Change parts

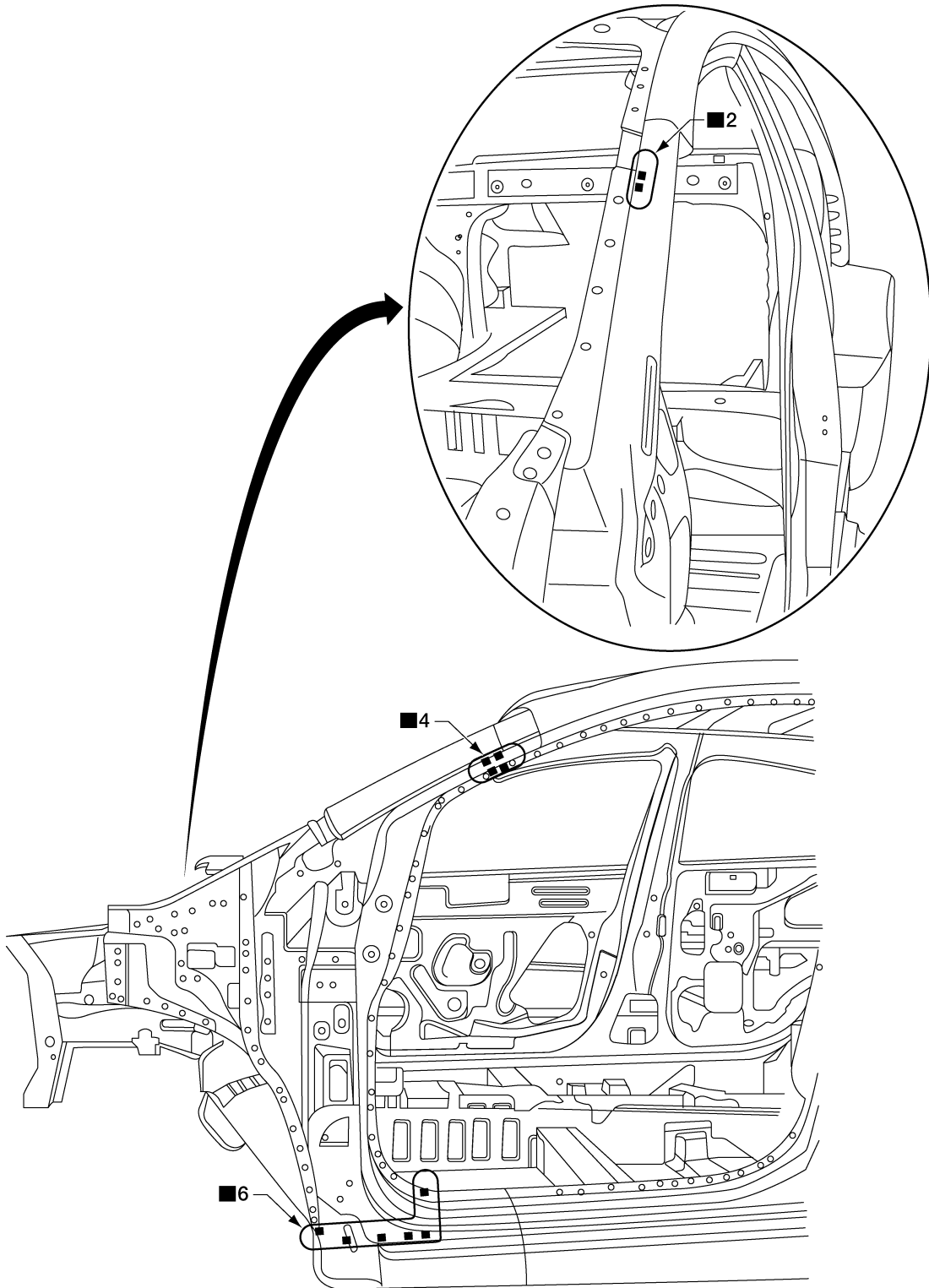
- Front pillar section of body side outer
- A. Recommended sectioning location

REINFORCEMENT

- Work after front pillar outer has been removed.

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



Change parts

- Front pillar reinforcement

INNER

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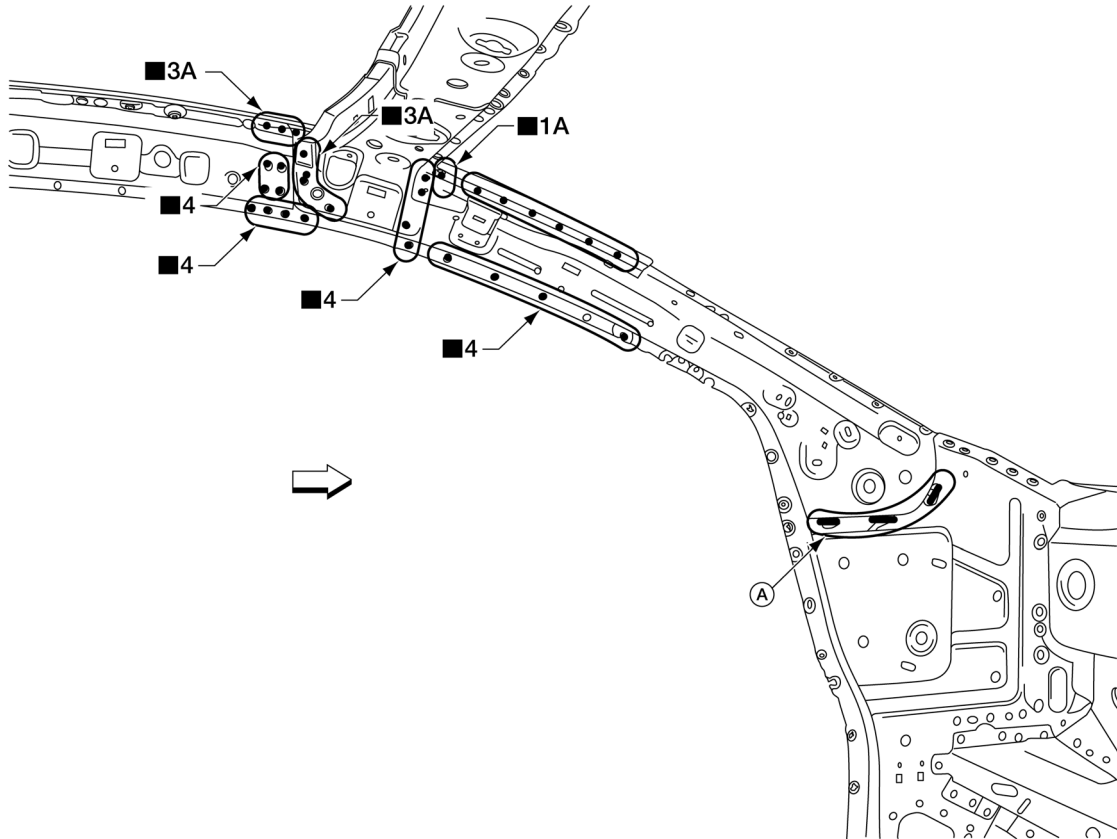
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ALKIA27832Z

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

- Work after front pillar reinforcement has been removed.



ALKIA27862Z

Change parts

- Front pillar inner reinforcement

A. Stitch mig welds

← Front

Dash Side

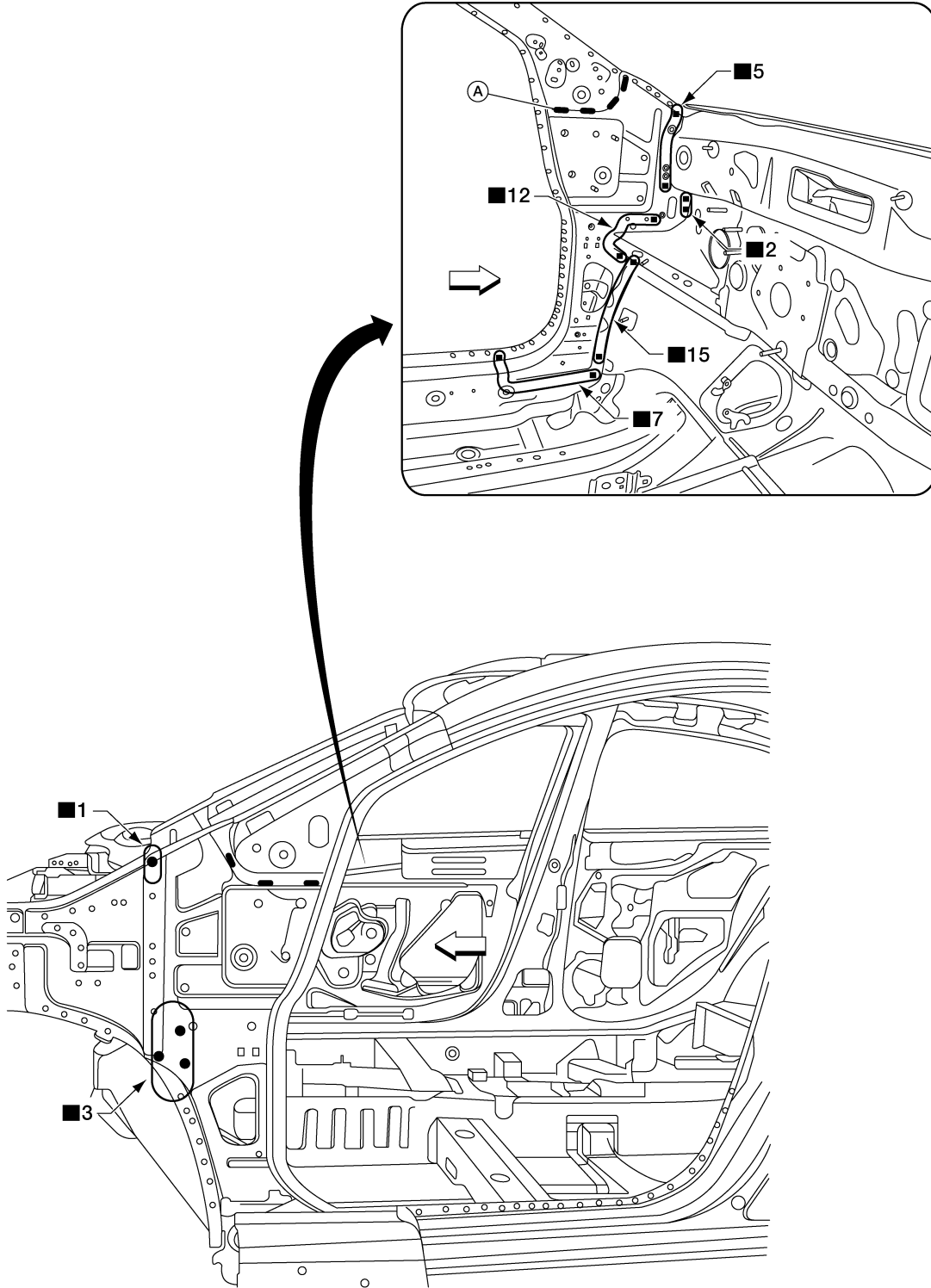
INFOID:000000011538077

Work with front pillar reinforcement removed.

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

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Change parts
● Dash side

A Stitch mig weld

⇐ Front

Center Pillar

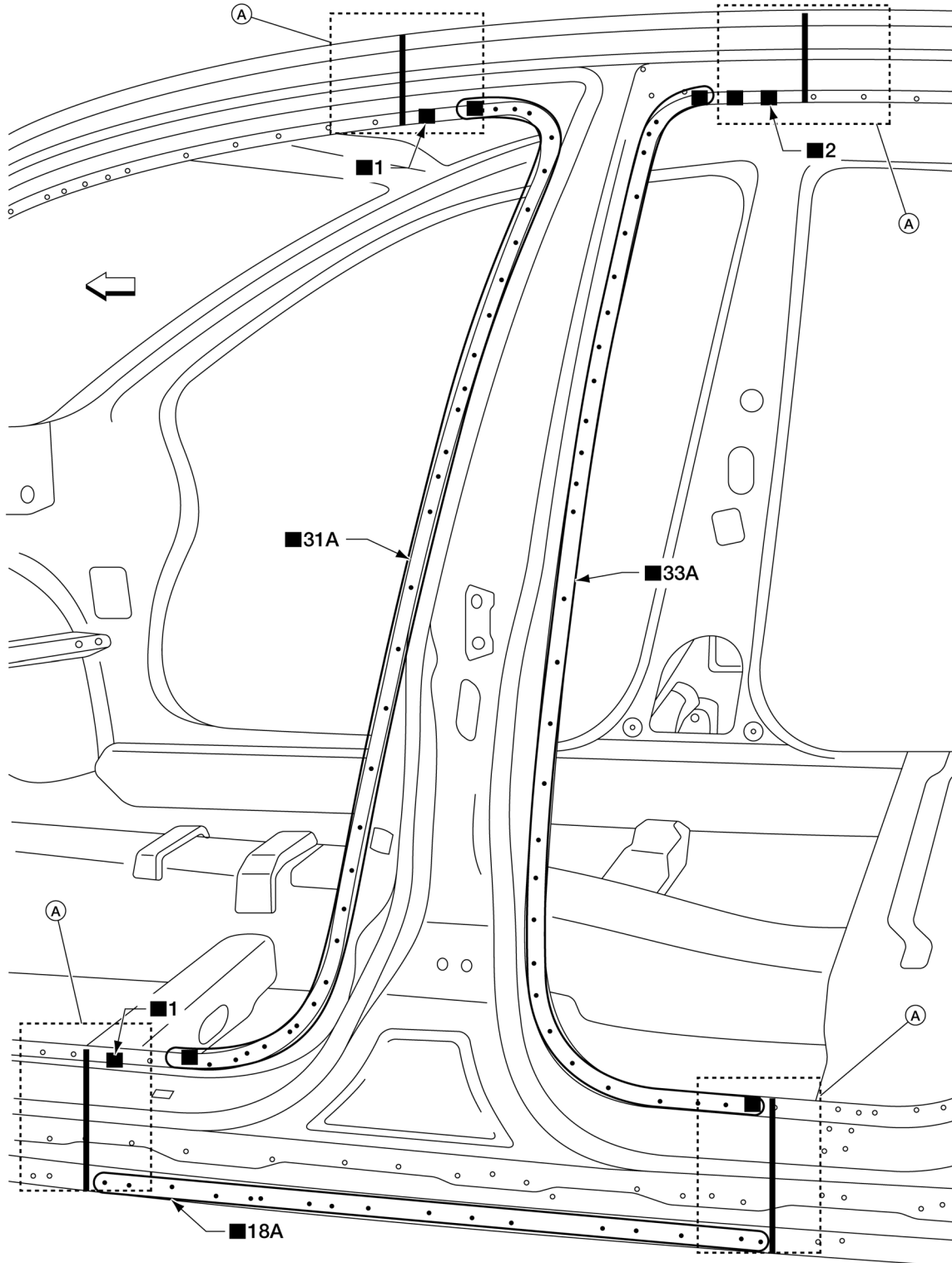
OUTER

ALKIA38212Z

INFOID:000000011538078

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



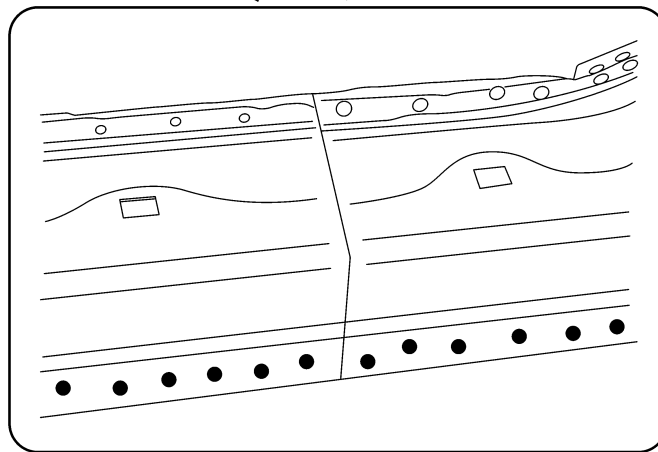
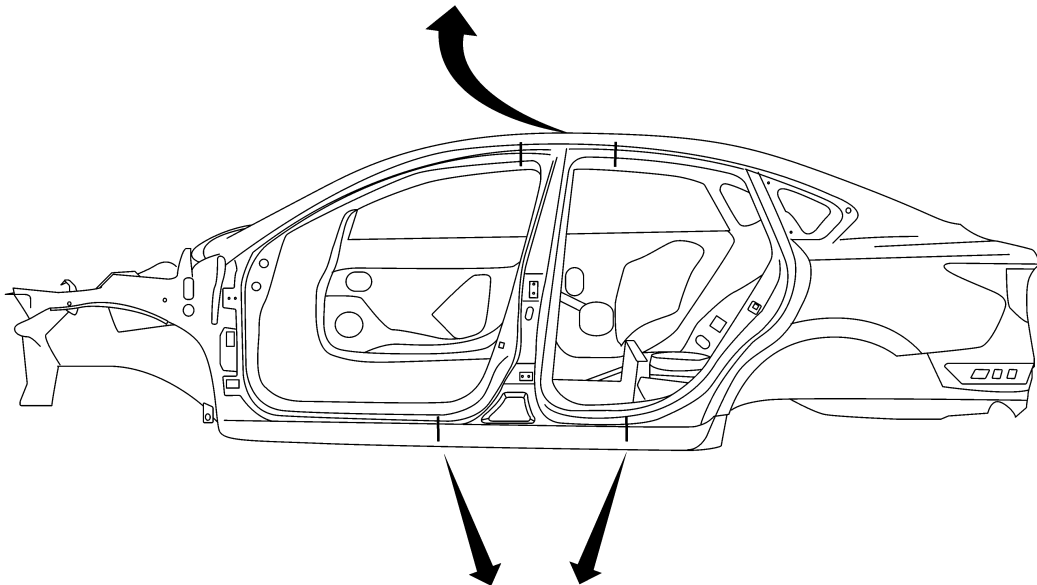
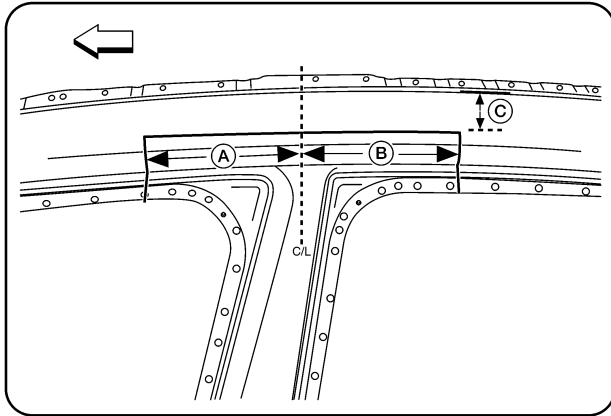
ALKIA27892Z

Change parts

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

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



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ALKIA27902Z

Change parts

A. 165 mm (6.5 in)

B. 140 mm (5.5 in)

C. 45 mm (1.8 in)

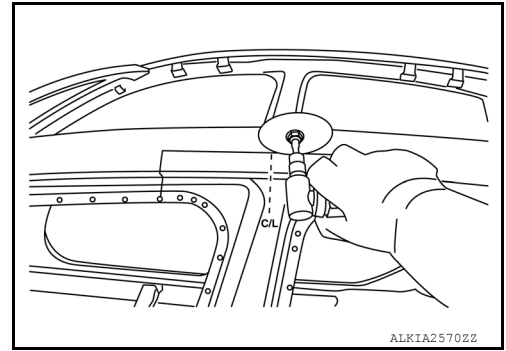
← Front

Removal

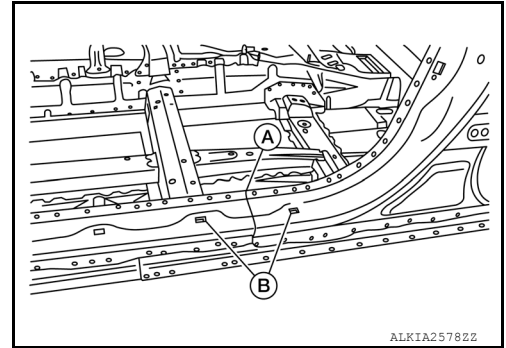
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

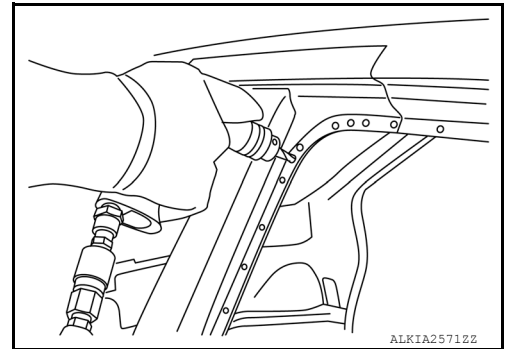
1. Use a cut off wheel to make pre-measured cut in upper center pillar outer body side.



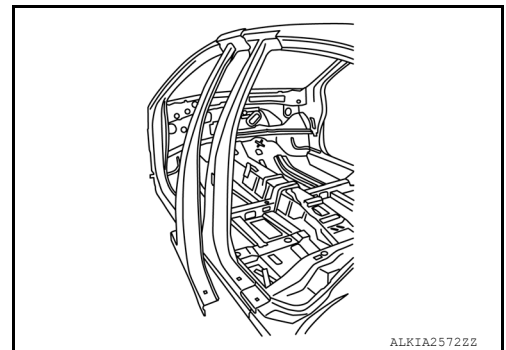
2. Cut the sill area (A) between the sill plate holes (B) on the lower center pillar outer body side.



3. Drill spot welds that attach the center pillar outer body side. Only drill through the outer panel.



4. Remove the center pillar outer body side.



Installation

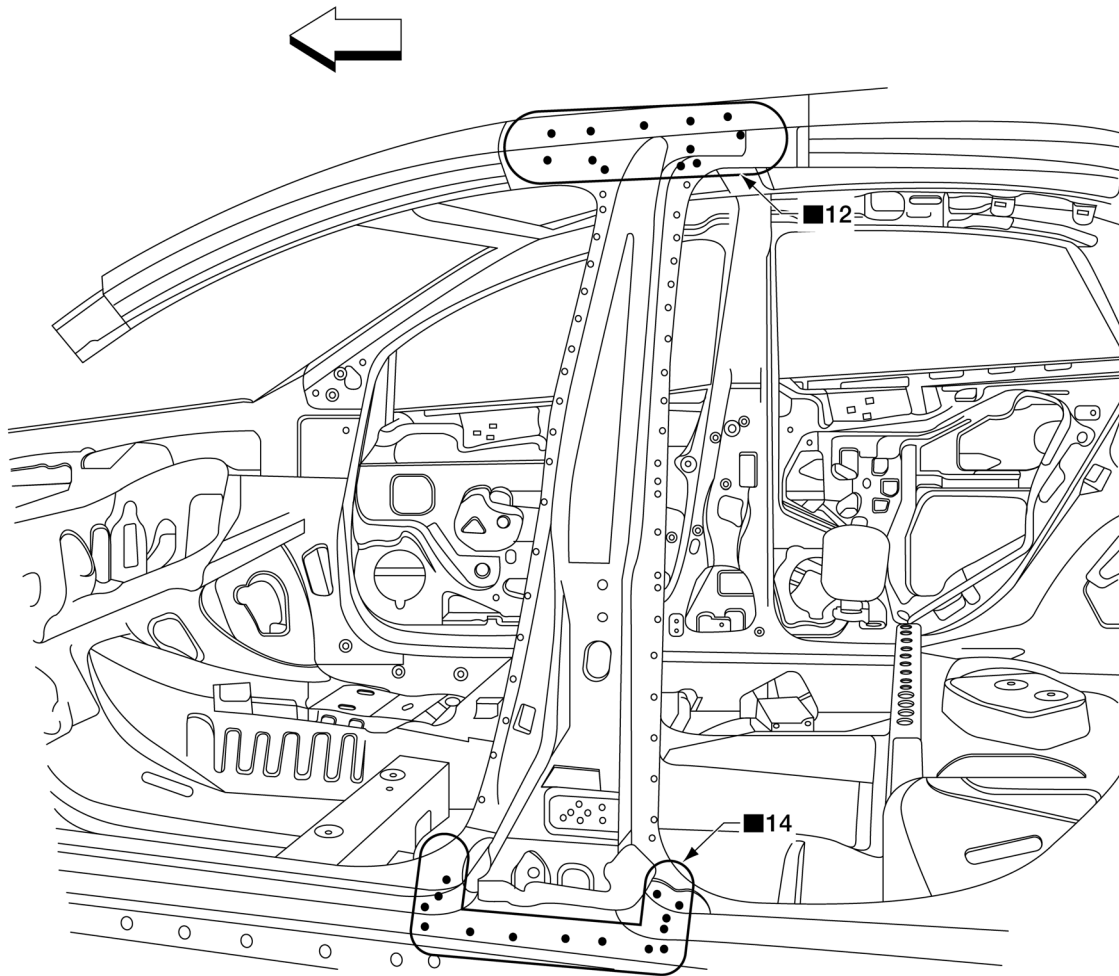
Match welds locations from removed part onto new panel and weld into place.

REINFORCEMENT

Work after center pillar outer has been removed.

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



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Change parts

- Center pillar reinforcement

⇐ Front

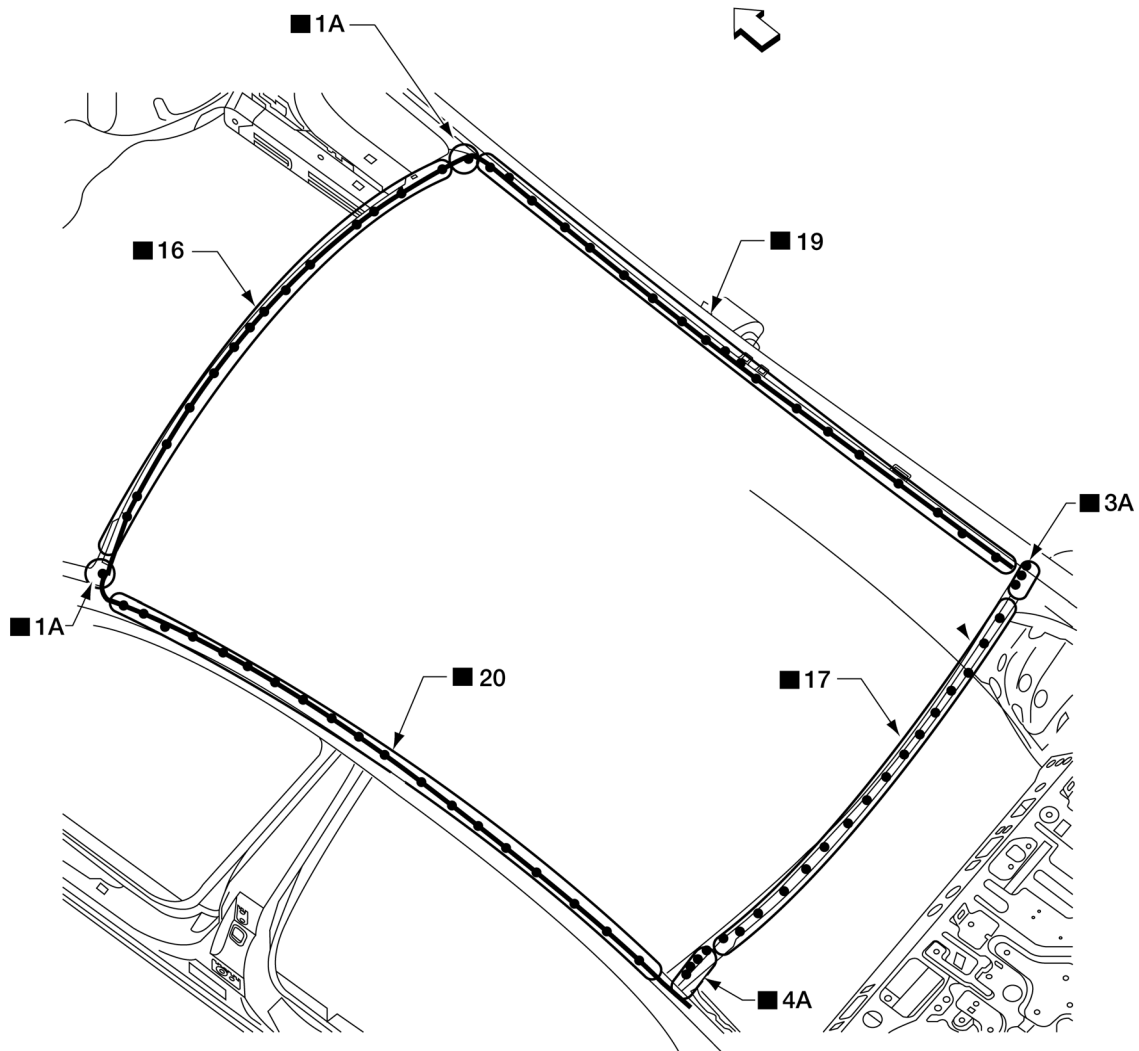
ALKIA27912Z

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Roof

INFOID:000000011538079



Replacement parts

- Roof panel

⇐ Front

REMOVAL

1. Remove the headlining. Refer to [INT-40, "Removal and Installation"](#).

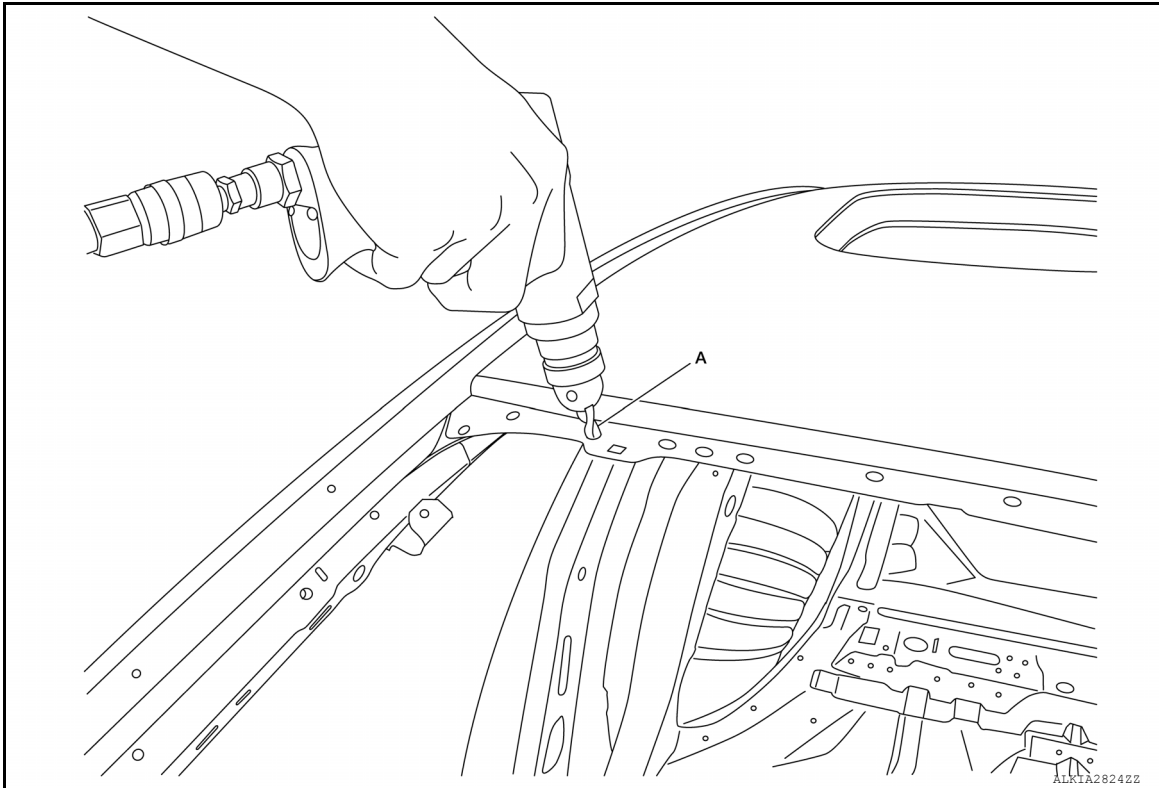
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

2. Remove the roof side moldings (RH/LH). Refer to [EXT-33, "Removal and Installation"](#).
3. Remove the windshield glass. Refer to [GW-12, "Removal and Installation"](#).
4. Remove the rear window glass. Refer to [GW-26, "Removal and Installation"](#).
5. Drill out spot welds using a 8.0 mm (0.31 in) spot weld removing bit (A) on the windshield and rear window glass flanges.

NOTE:

Only drill through the first layer of metal (the roof outer panel)



6. Use an angle head grinder and a 3.18 mm (0.125 in) cutting wheel (A) to grind through the first layer only.

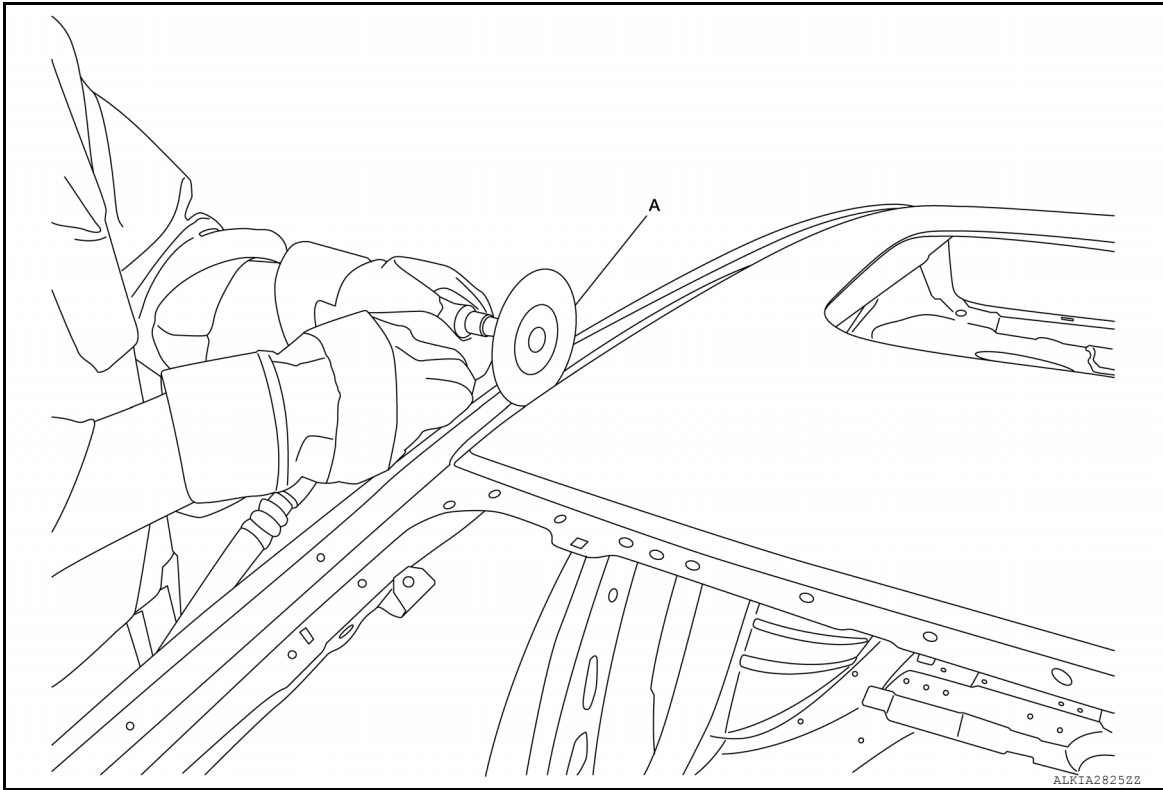
NOTE:

Only grind through the first layer of metal (the roof outer panel)

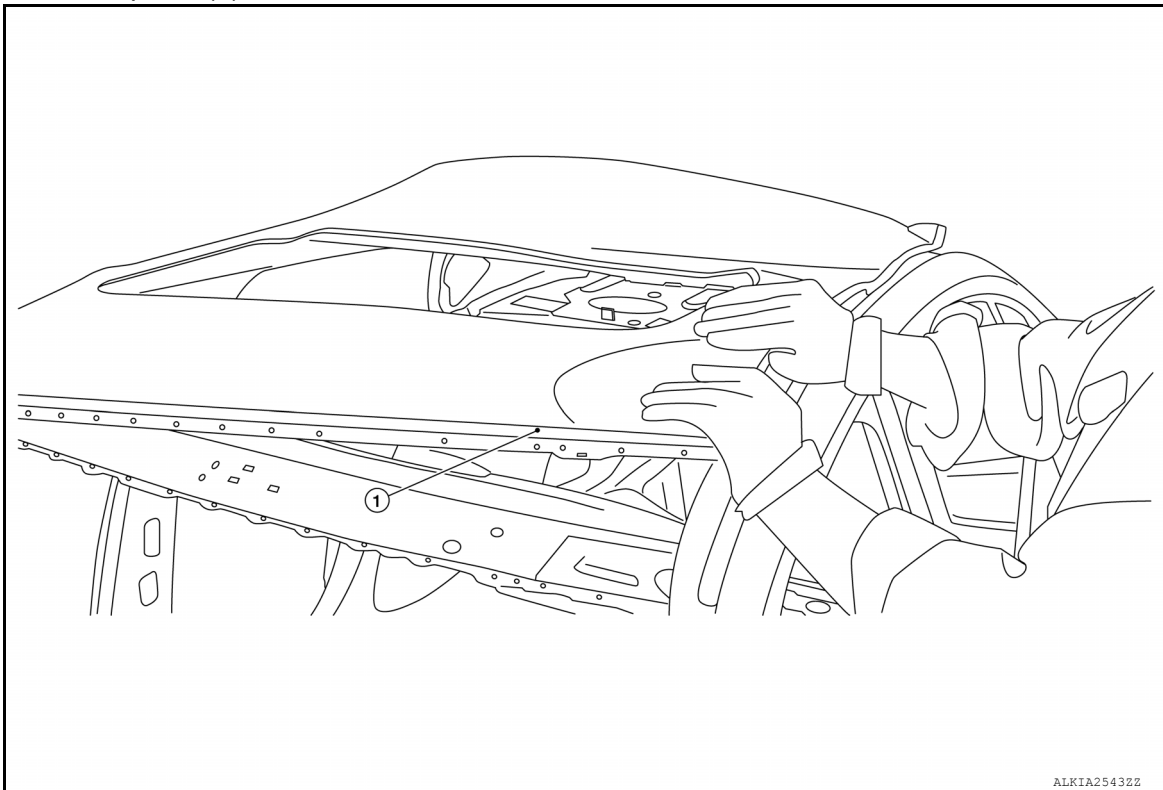
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REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



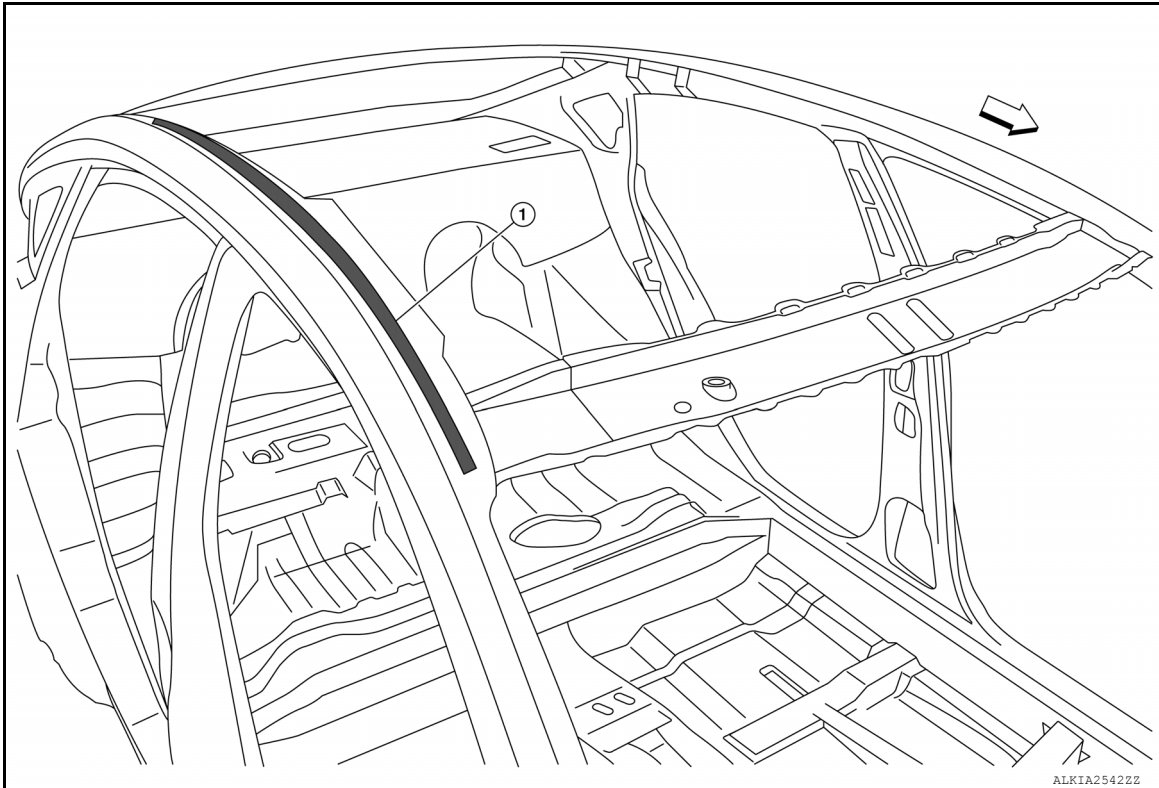
7. Remove roof panel (1).



PREPARATION

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



1. Weld through primer ⇐ Front

1. Grind all mating surfaces around the roof flanges.
2. Test panel for proper alignment and fit.
3. Remove panel.
4. Compare to the removed panel, then drill 8.0 mm (0.31 in) holes in the same location on the new roof panel.
5. Use 3M weld through primer to prime body side upper and the front and rear window flanges

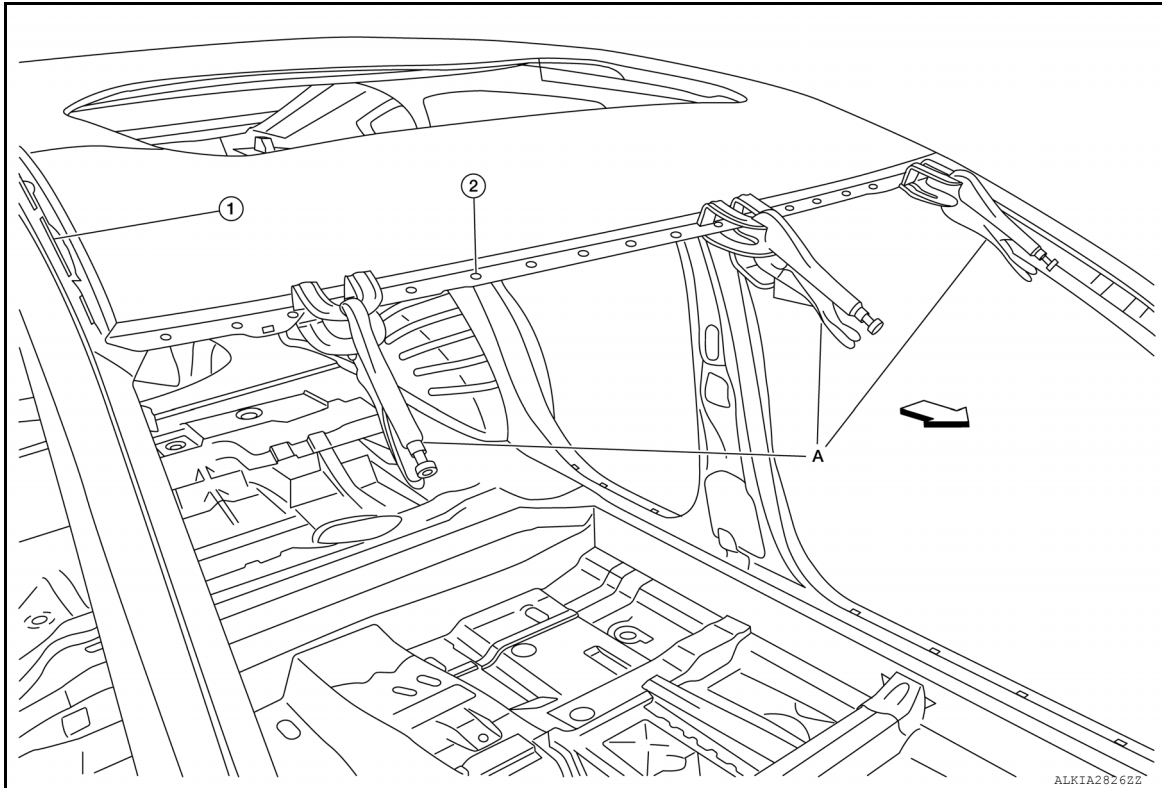
INSTALLATION

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REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



1. Body side upper spot welds

2. Plug welds

A. Clamping pliers

⇐ Front

1. Check the dimensions and fit.
2. Use clamping pliers to retain the roof panel to the front and rear window flanges.
3. Plug weld as necessary.
4. Dress welds as necessary to allow proper glass fit.
5. Refer to NISSAN approved panel refinishing.
6. Install the headlining. Refer to [INT-40, "Removal and Installation"](#).
7. Install rear window glass. Refer to [GW-26, "Removal and Installation"](#).
8. Install windshield glass. Refer to [GW-12, "Removal and Installation"](#).
9. Install roof side moldings (RH/LH). Refer to [EXT-33, "Removal and Installation"](#).

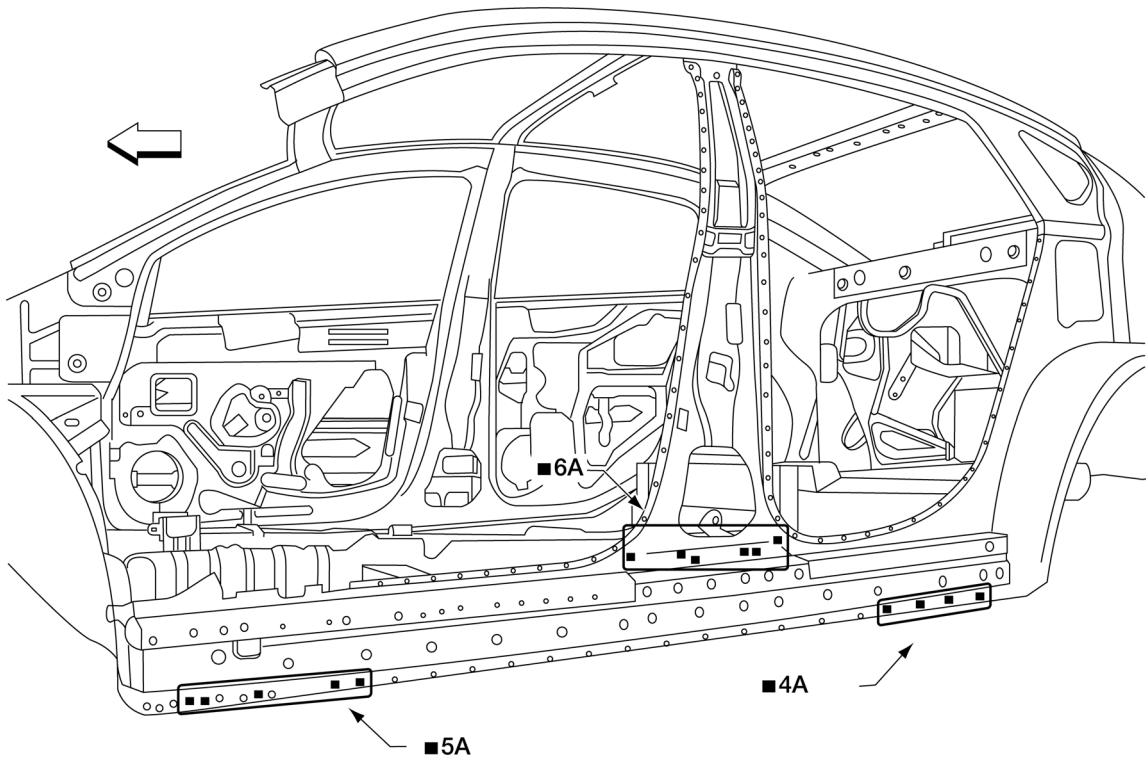
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Outer Sill

INFOID:000000011538080

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



Change parts

- Outer sill reinforcement

← Front

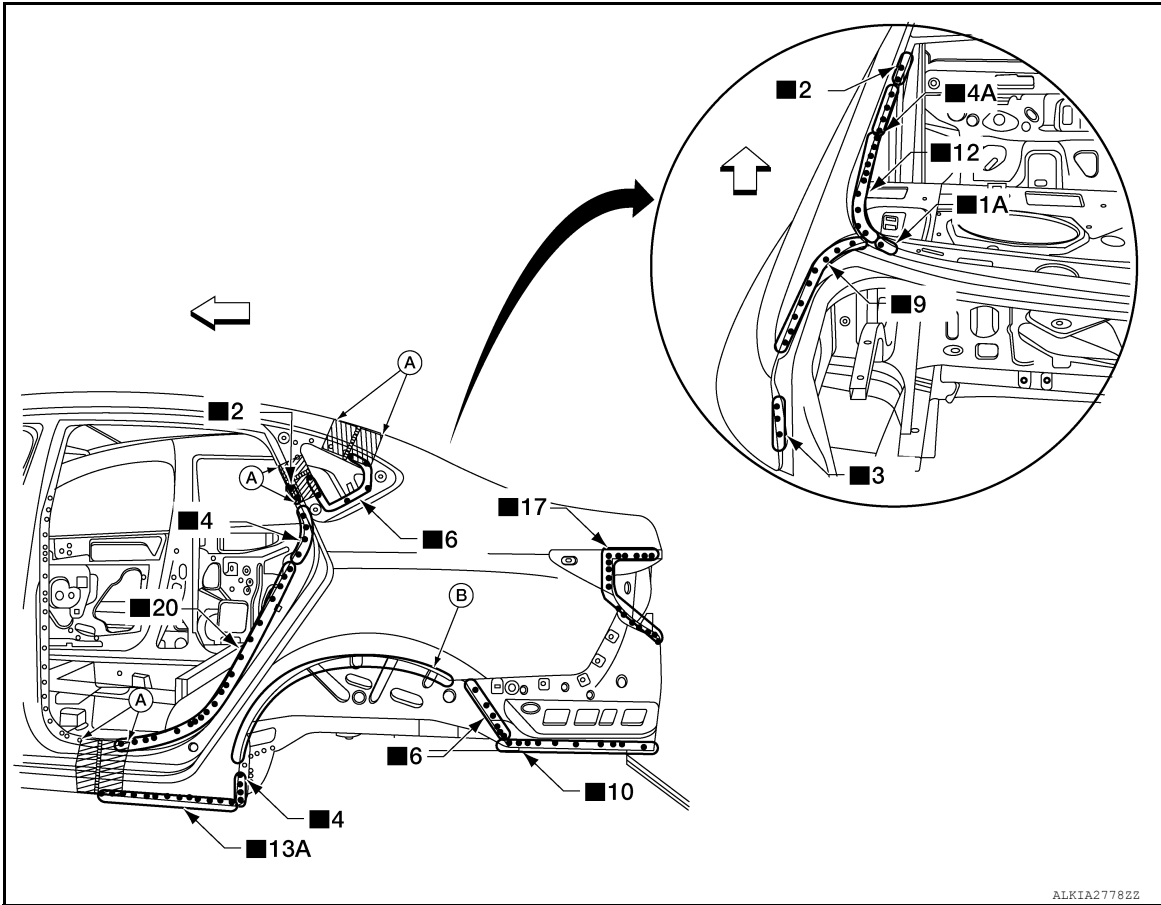
ALKIA2795ZZ

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Rear Fender

INFOID:000000011538081



ALKIA27782Z

Change parts

A. Recommended cut zone

B. Bonded hem flange

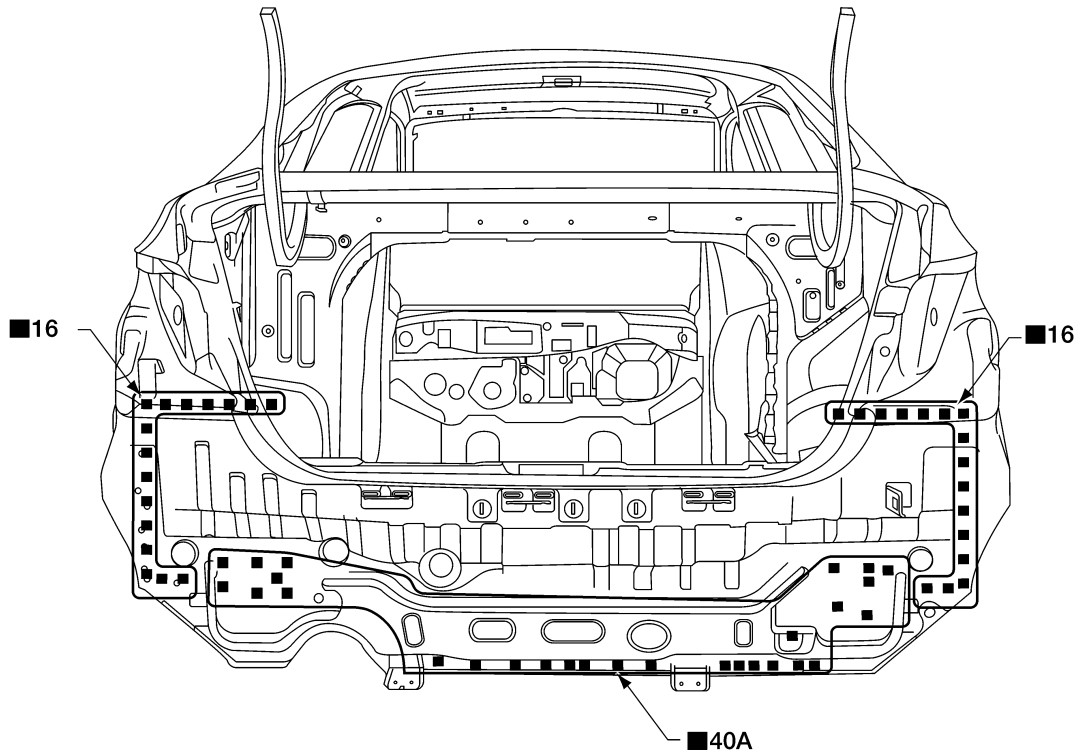
← Front

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Rear Panel

INFOID:000000011538082



Change parts

- Rear panel assembly

Rear Floor Rear

INFOID:000000011538083

- Work after rear panel assembly has been removed.

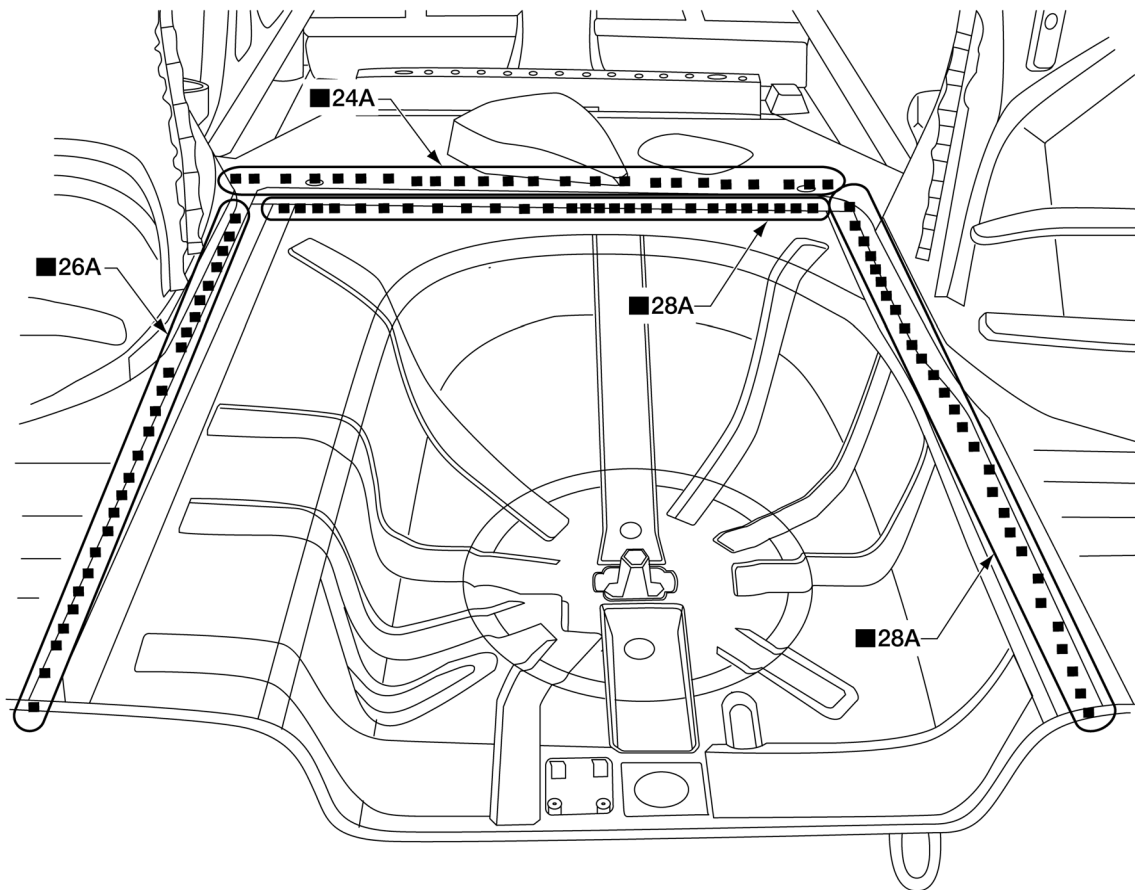
Revision: December 2014

BRM-43

2015 Sentra NAM

REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



ALKIA27762Z

Change parts

- Rear floor rear

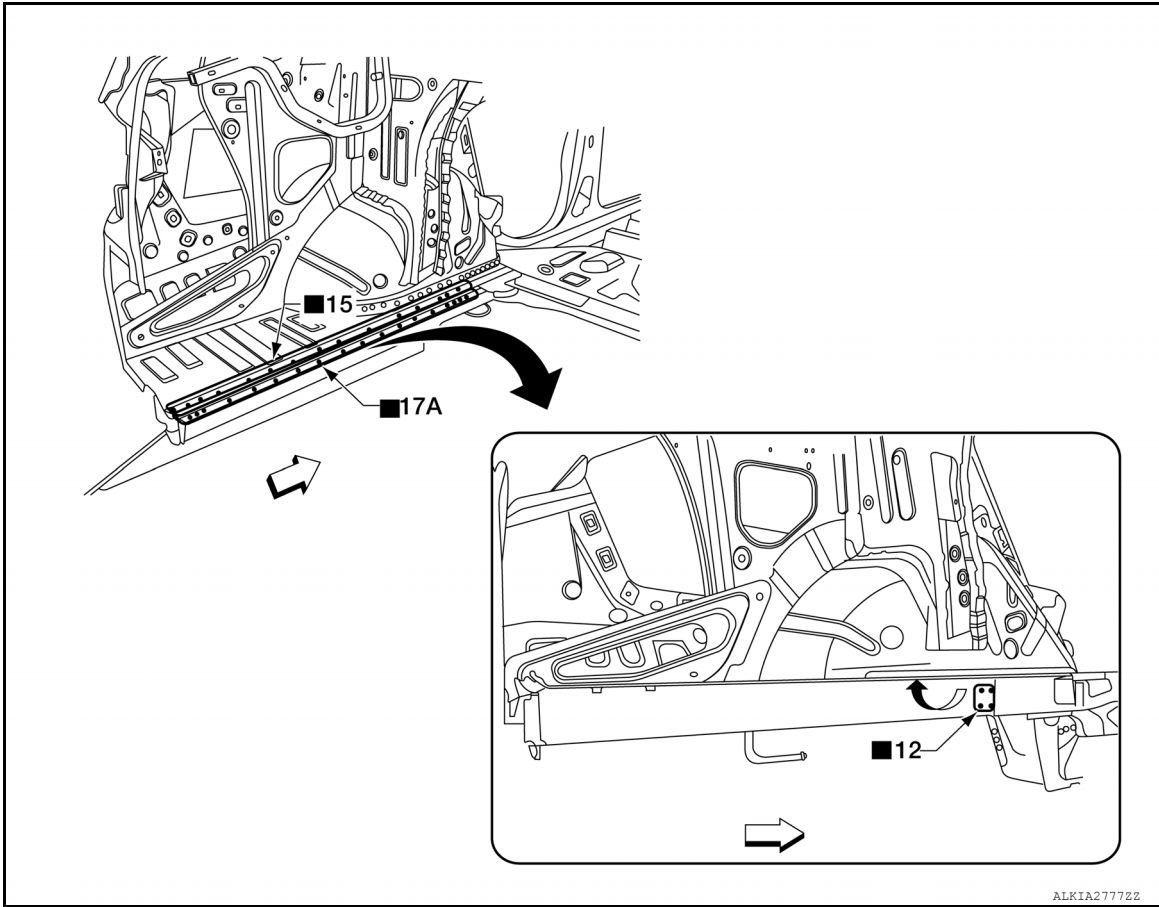
REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Rear Side Member Extension

INFOID:000000011538084

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



Change parts

- Rear side member extension ← Front

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BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

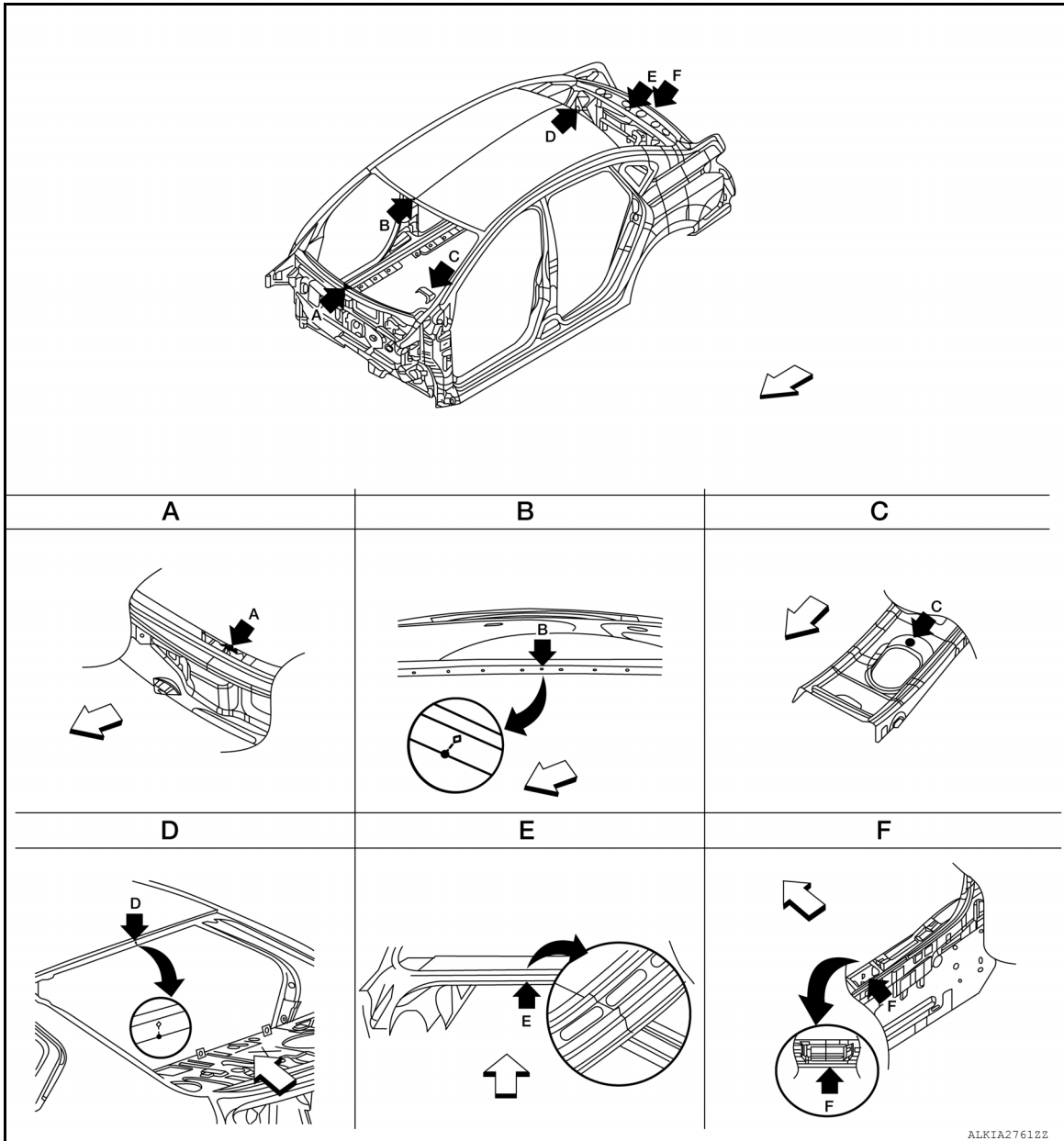
SERVICE DATA AND SPECIFICATIONS (SDS)

BODY ALIGNMENT

Body Center Marks

INFOID:000000011538085

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

Unit: mm (in)

Position	Portion	Mark	Measurement
A	Cowl top extension	Raised dimple	7 (0.3)
B	Front roof position mark for alignment	Raised dimple	—
C	Shift selector bracket center	Hole	14 (0.6)

BODY ALIGNMENT

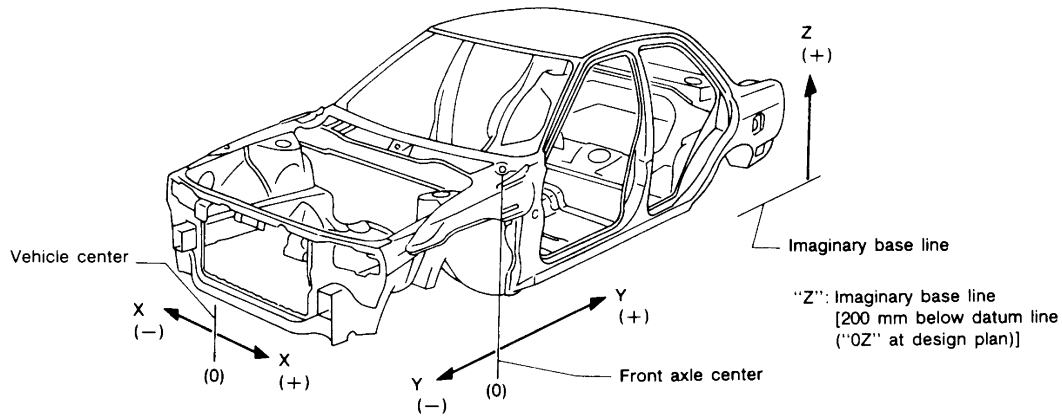
< SERVICE DATA AND SPECIFICATIONS (SDS)

Position	Portion	Mark	Measurement
D	Rear roof position mark for alignment	Raised dimple	—
E	Rear waist flange	Raised dimple	—
F	Rear panel upper	Notch	—

Description

INFOID:000000011538086

- All dimensions indicated in the figures are actual.
- When using a tram 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.
- 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".



P11A0104E

Engine Compartment

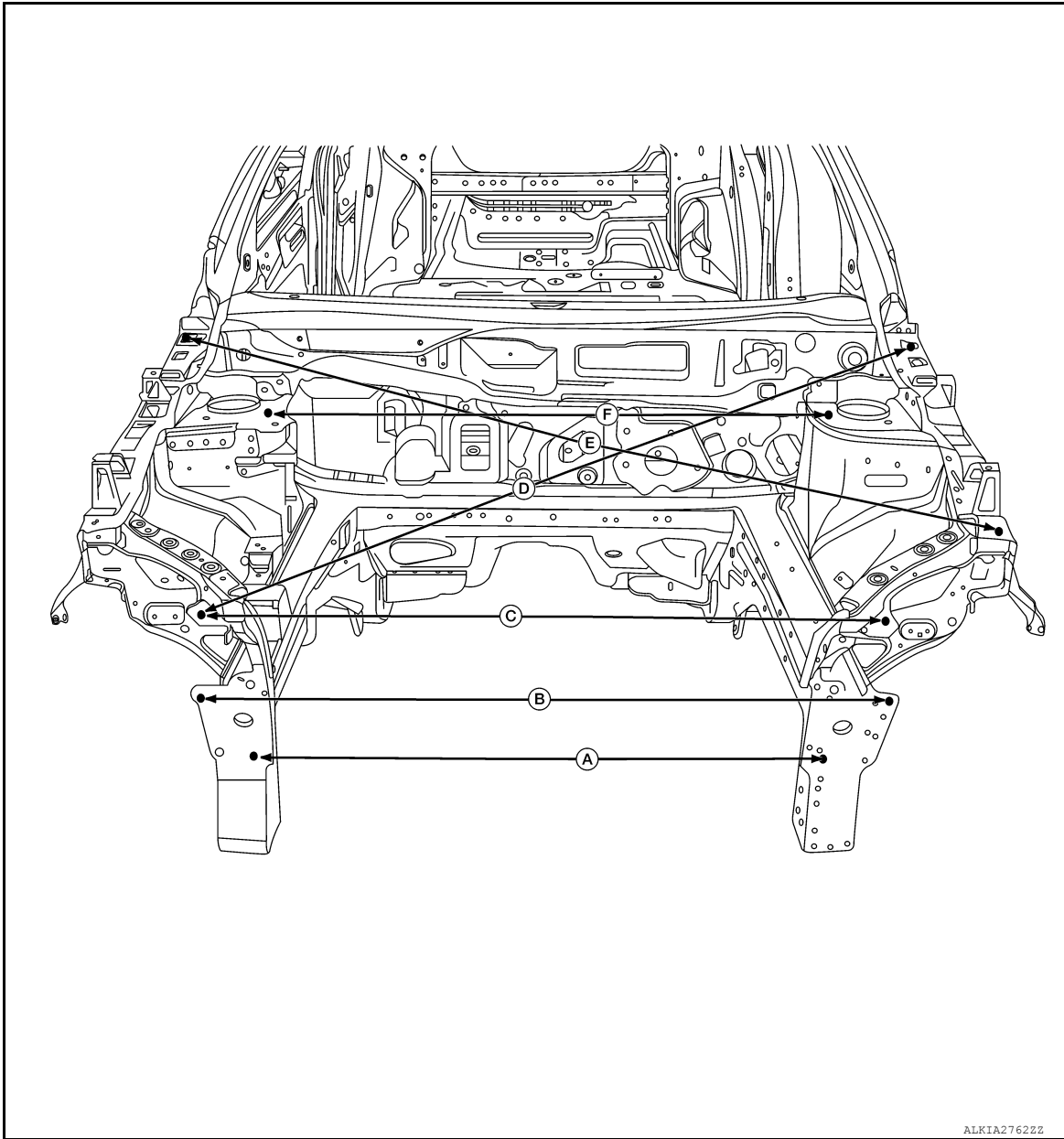
INFOID:000000011538087

Measurement

BRM

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



Unit: mm (in)

Position	Description	Measurement
A	Lower bumper reinforcement hole 10 (0.4).	950 (37.4)
B	Upper outer bumper reinforcement retaining hole 10 (0.4).	1090 (42.9)
C	Upper front radiator support retaining hole 8 (0.3).	990 (39.0)
D	Upper front radiator support retaining hole to rear hood hinge bolt hole 8 (0.3).	1480 (58.3)
E	Rear hood hinge bolt to front fender bolt 8 (0.3).	1590 (62.6)
F	Slotted inboard strut hole 15x10 (0.6x0.4).	1040 (40.9)

The dimensions are symmetrically identical on both the RH and LH sides of the vehicle.

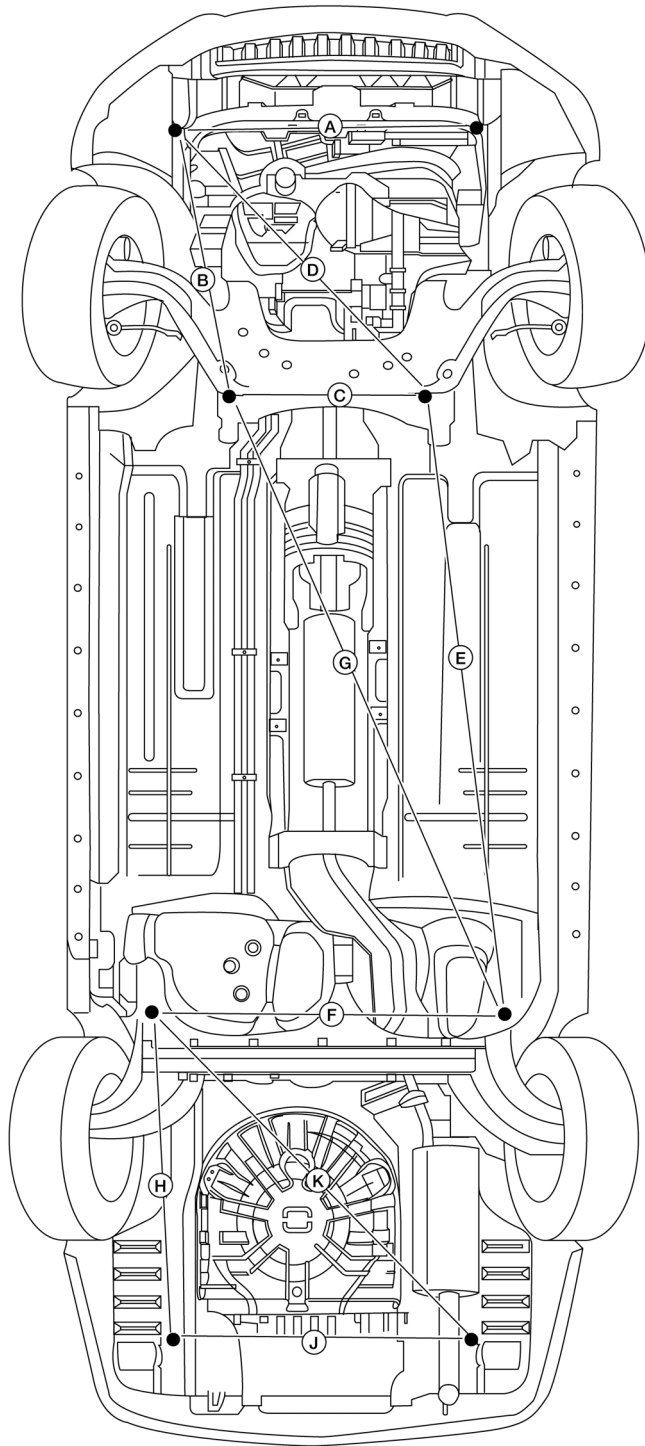
Underbody

INFOID:000000011538088

Measurement

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



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K
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BRM

⇐ Front

NOTE:

- All dimensions indicated in the figure are actual.
- As viewed from underside.

ALKIA27632Z

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

Unit: mm (in)

Position	Description	Measurement
A	Distance between both lower radiator bolts 10 (0.4) hole.	975 (38.4)
B	Distance between lower radiator bolt 10 (0.4) hole and front suspension member rear bolt 30 (1.2).	820 (32.3)
C	Distance between both front suspension member rear bolts 30 (1.2) hole.	610 (24.0)
D	Diagonal distance between lower radiator bolt 10 (0.4) and front suspension member rear bolt 30 (1.2) hole.	1145 (45.1)
E	Distance between front suspension member rear bolt 30 (1.2) and rear suspension member rear bolt 12 (0.5) hole.	2100 (82.7)
F	Distance between rear suspension member rear bolt 12 (0.5)	1080 (42.5)
G	Diagonal distance between front suspension member rear bolt 30 (1.2) hole and rear suspension member rear bolt 12 (0.5).	2160 (85.0)
H	Diagonal distance between front suspension member rear bolt 12 (0.5) and 15 (0.6) locator hole.	1050 (41.3)
J	Distance between 15 (0.6) locator hole.	1015 (40.0)
K	Distance between rear suspension member rear bolt 12 (0.5) and 15 (0.6) locator hole.	1460 (57.5)

The dimensions are symmetrically identical on both the RH and LH sides of the vehicle.

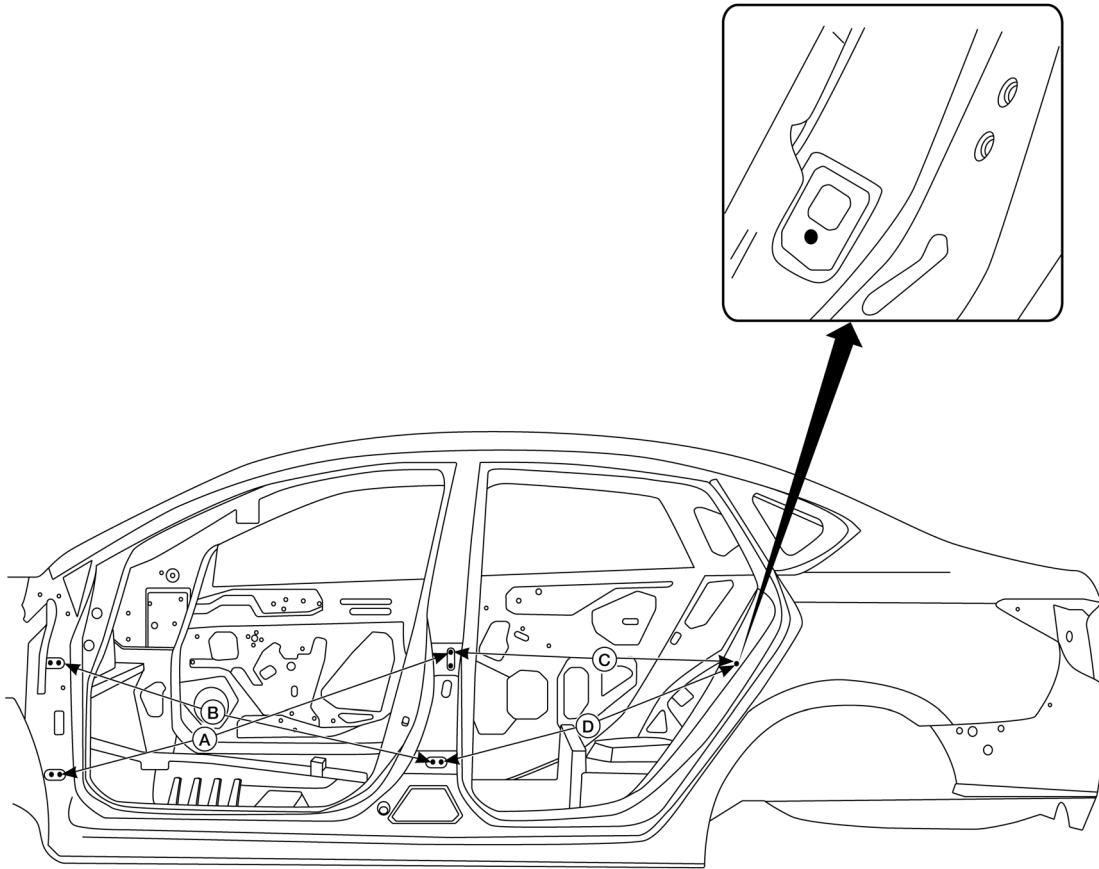
Passenger Compartment

INFOID:000000011538089

Measurement

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



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ALKIA27642Z

Unit: mm (in)

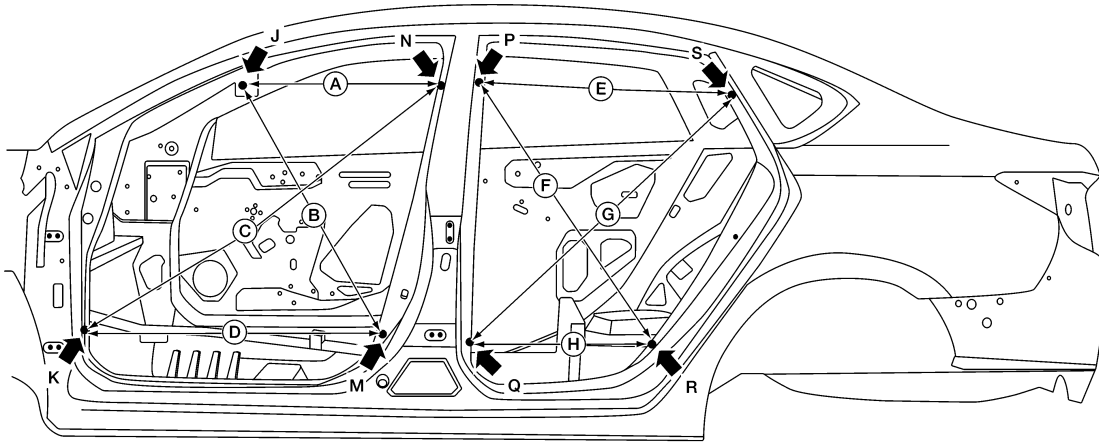
Position	Description	Measurement
A	Front door lower hinge rear bolt to rear door upper hinge bolt.	1190 (46.9)
B	Front door upper hinge rear bolt to rear door lower hinge front bolt.	1125 (44.3)
C	Rear door upper hinge bolt to rear door switch retaining screw.	810 (31.9)
D	Rear door lower hinge rear bolt to rear door switch retaining screw.	880 (34.6)

The dimensions are symmetrically identical on both the RH and LH sides of the vehicle.

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

Measurement Points



ALKIA27652Z

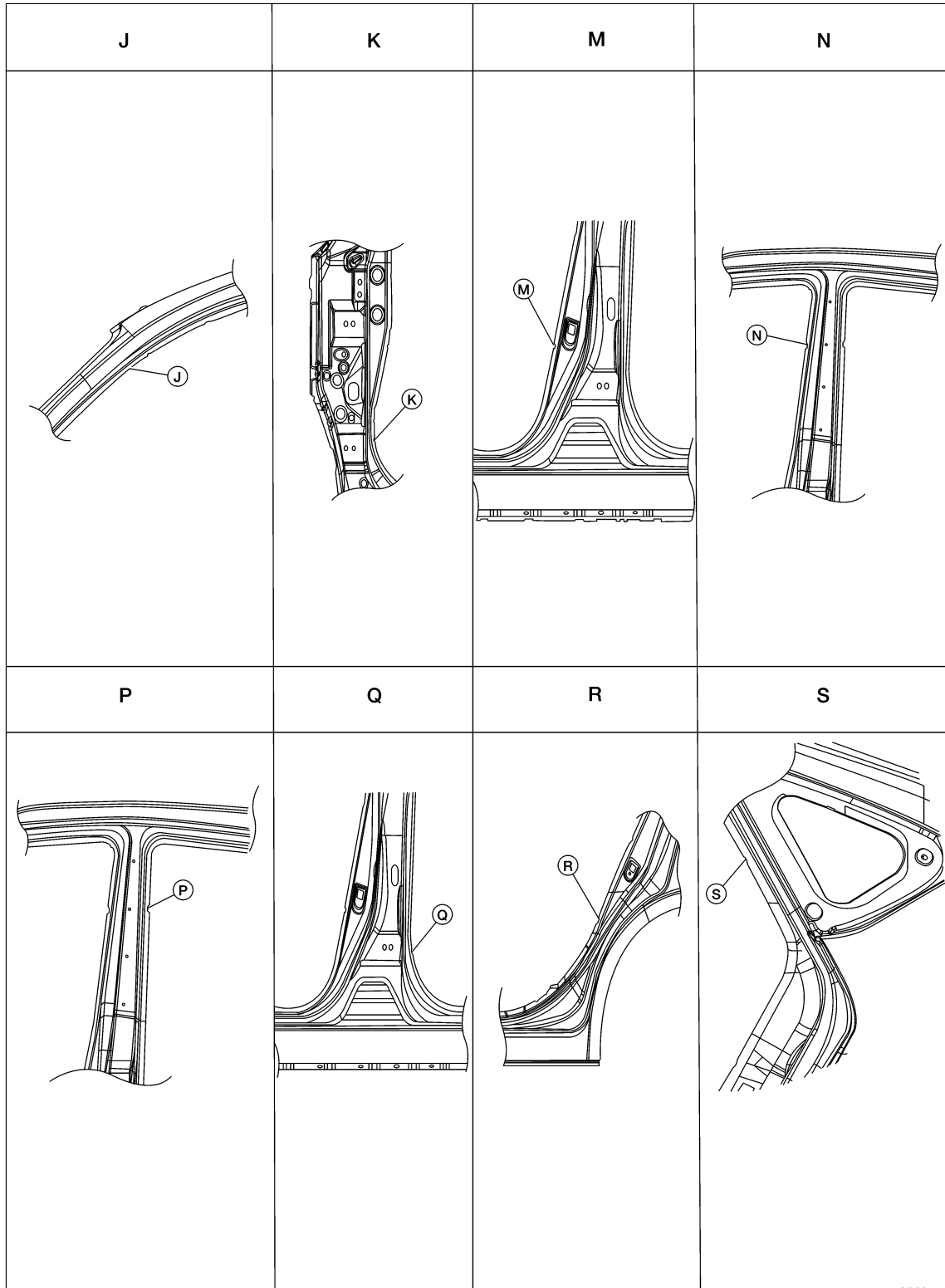
Unit: mm (in)

Position	Measurement	Position	Measurement
A	780 (30.7)	E	730 (28.7)
B	1280 (50.4)	F	920 (36.2)
C	850 (33.5)	G	1020 (40.2)
D	890 (35.0)		

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

The dimensions are symmetrically identical on both the RH and LH sides of the vehicle.



The dimensions are symmetrically identical on both the RH and LH sides of the vehicle.

Rear End Panel

INFOID:000000011538090

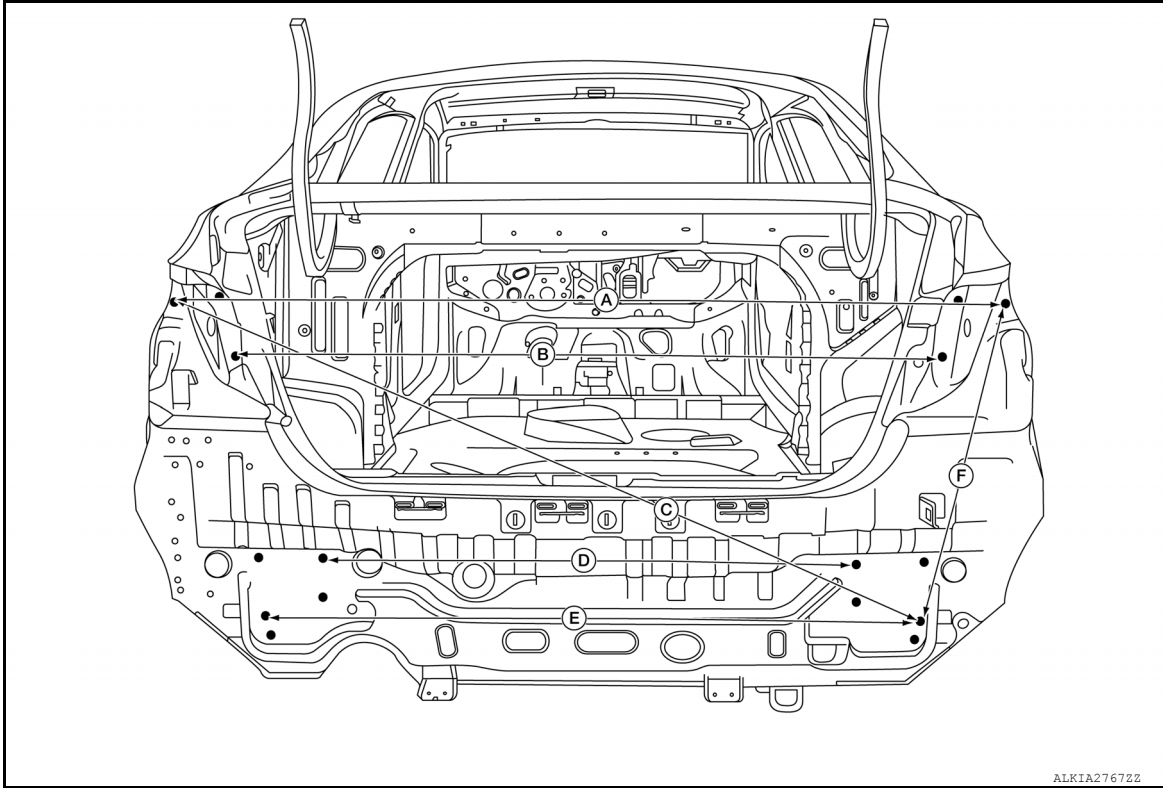
Measurement

A
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BRM

BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



Unit:mm (in)

Position	Measurement	Position	Measurement
A	1485 (58.5)	D	890 (35.0)
B	1190 (46.9)	E	1115 (43.9)
C	1425 (56.1)	F	570 (22.4)