

SECTION **BRM**  
BODY REPAIR

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# BODY EXTERIOR PAINT COLOR

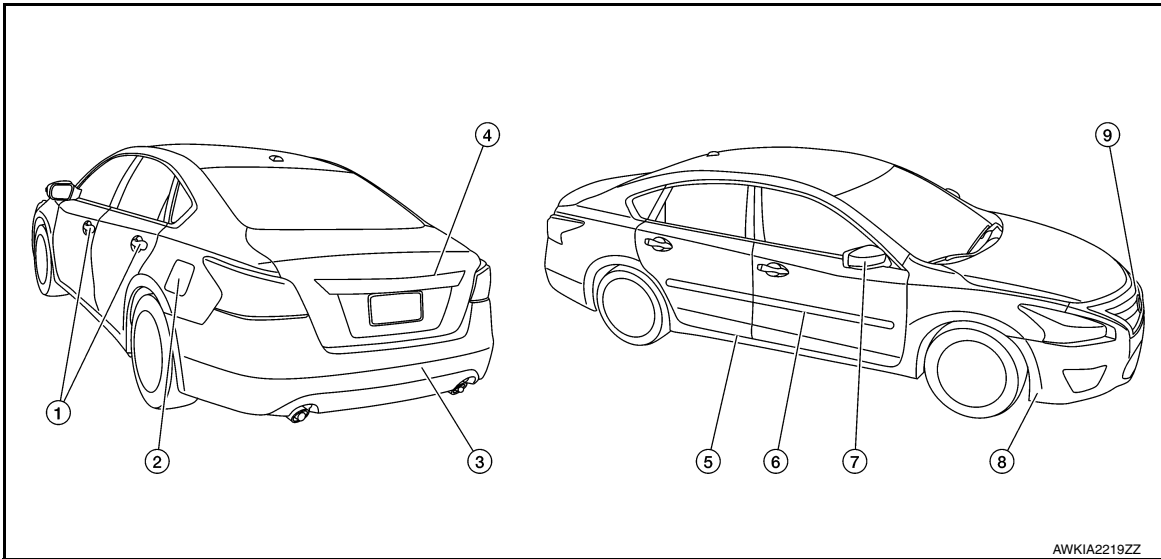
< VEHICLE INFORMATION >

## VEHICLE INFORMATION

### BODY EXTERIOR PAINT COLOR

#### Body Exterior Paint Color

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Component		Color code	CAJ	K23	KAH	KH3	NAH	QAB	RBD	KAD	
		Description	Brown	Silver	Beige	Black	Red	White	Blue	Grey	
		Paint type	M	M	M	S	M	P	M	M	
		Hard clear coat	t	t	t	t	t	t	t	t	t
1.	Outside door handle	Chromium plate	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	
2.	Fuel filler lid	Body color	CAJ	K23	KAH	KH3	NAH	QAB	RBD	KAD	
3.	Rear bumper fascia	Body color	CAJ	K23	KAH	KH3	NAH	QAB	RBD	KAD	
4.	License lamp finisher	Chromium plate	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	
5.	Lower rocker finisher	Body color	CAJ	K23	KAH	KH3	NAH	QAB	RBD	KAD	
6.	Body side molding	Chromium plate	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	
7.	Door mirror	Finisher	Body color	CAJ	K23	KAH	KH3	NAH	QAB	RBD	KAD
8.	Front bumper fascia	Body color	CAJ	K23	KAH	KH3	NAH	QAB	RBD	KAD	
9.	Front grille	Center	Black	KH3	KH3	KH3	KH3	KH3	KH3	KH3	
		Surround	Chromium plate	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P

M = Metallic, S = Solid, 2S = Solid and Clear, 2P = 2-Coat Pearl, 3P = 3-Coat Pearl, PM = Pearl Metallic, t = Primerless Diamond Clear coat, Cr2P = Chromium plate, Black is solvent based, all others are water based.

# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000009951573

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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# HANDLING PRECAUTIONS FOR PLASTICS

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## HANDLING PRECAUTIONS FOR PLASTICS

### Precautions For Plastics

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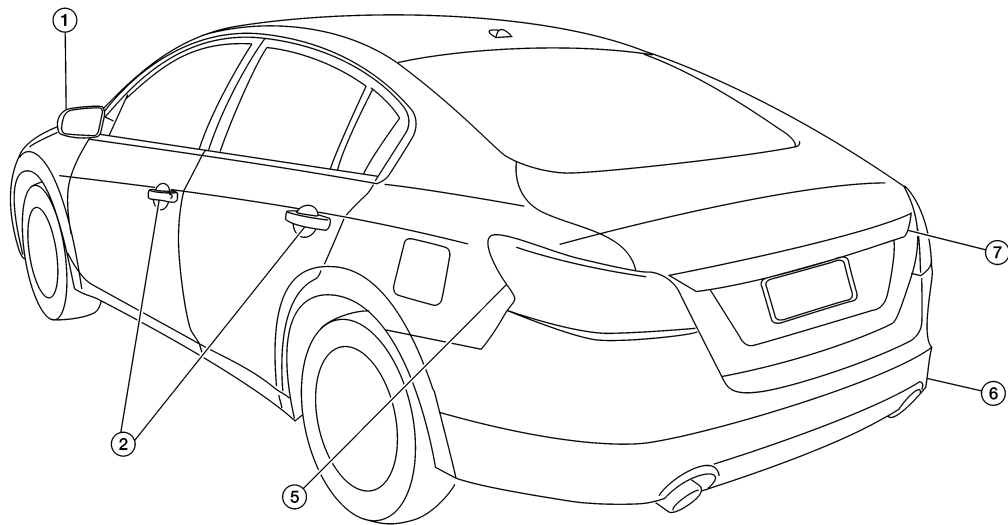
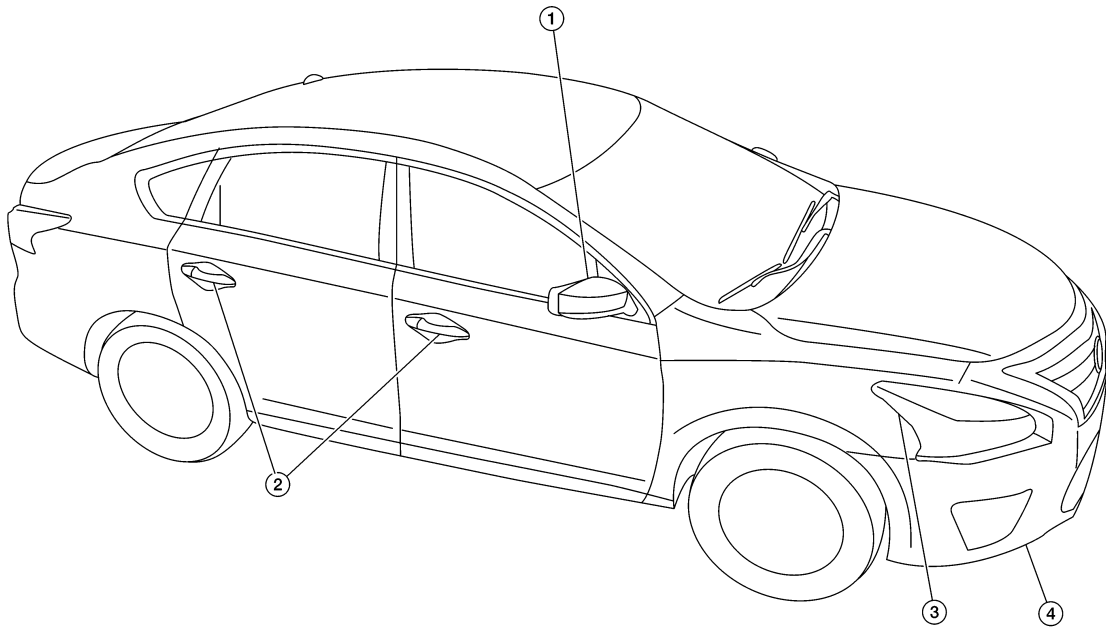
Abbreviation	Material name	Heatresisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Poly Vinyl Chloride	80(176)	Same as above.	Poison gas is emitted 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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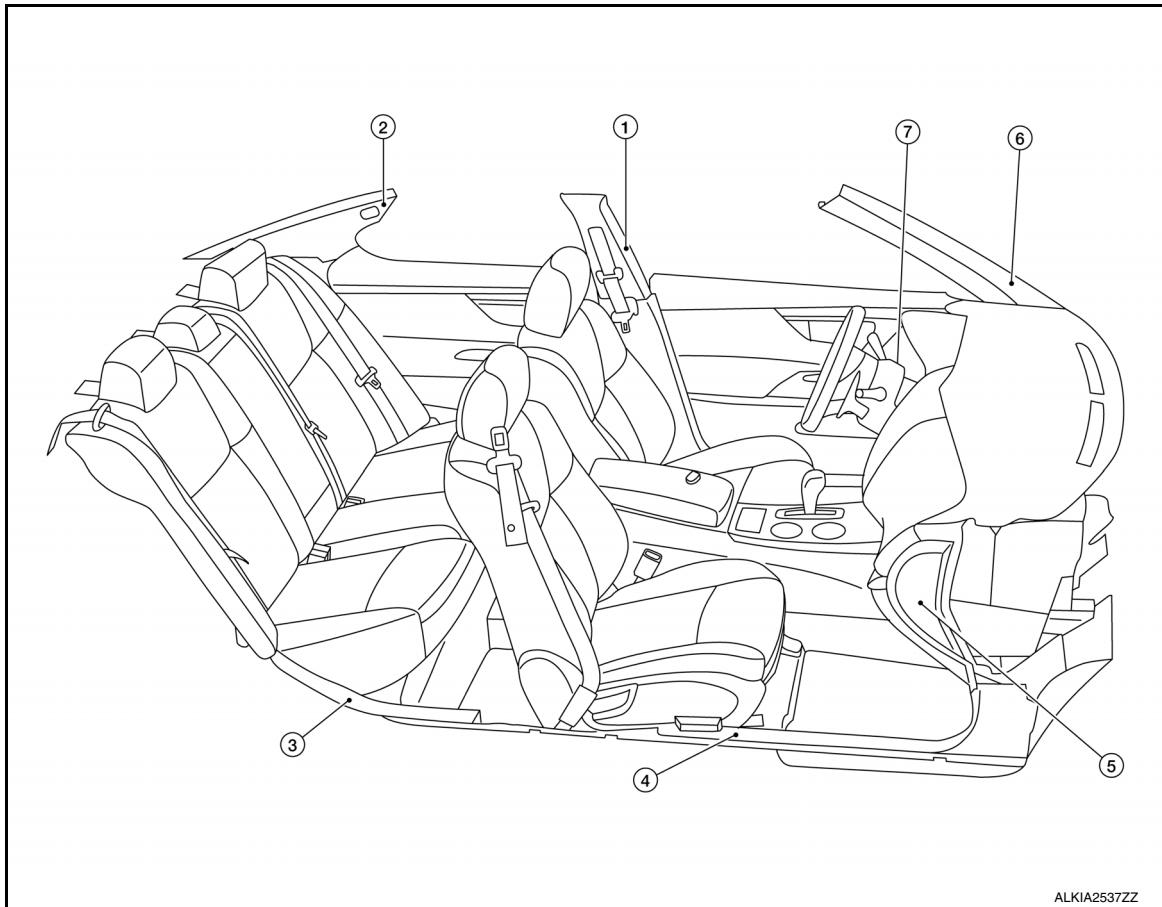
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Item	Component	Abbreviation	Material
1.	Door Mirror	Case	ASA Acronitrile Styrene Acrylate
		Skull cover	ABS Acronitrile Butadiene Acrylate
2.	Outside door handle	Grip	PC Polycarbonate
		Escutcheon	PA Polyamide (Nylon)

## 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.	License lamp finisher	ABS + PC	Acronitrile Butadiene Acrylate + Polycarbonate



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

# PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

< PRECAUTION >

## 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:

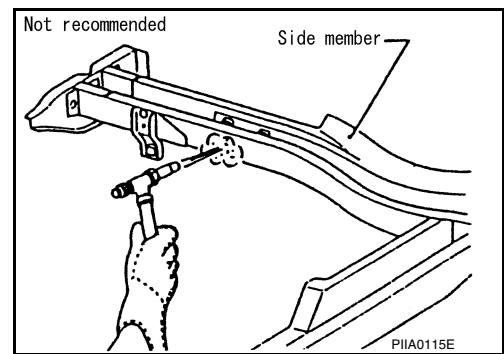
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm <sup>2</sup> (38kg/mm <sup>2</sup> ,54klb/sq in)	SP130	<ul style="list-style-type: none"> <li>• Front side member assembly</li> <li>• Hoodledge assembly</li> <li>• Upper dash</li> <li>• Front pillar reinforcement assembly</li>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

SP130 is the most commonly used HSS.

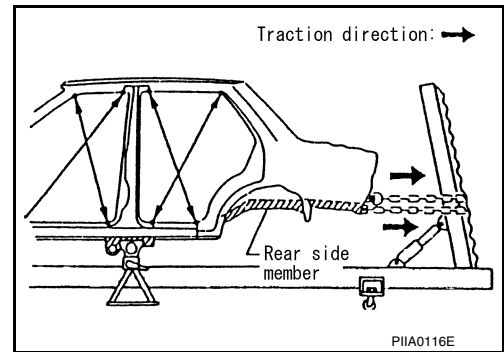
Read the following precautions when repairing HSS.

1. Additional points to consider

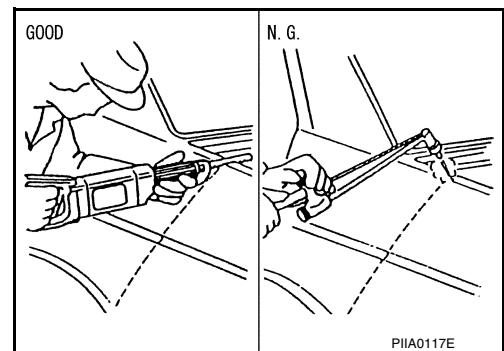
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F). Verify heating temperature with a thermometer. (Crayon-type and other similar type thermometer are appropriate.)



- 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).

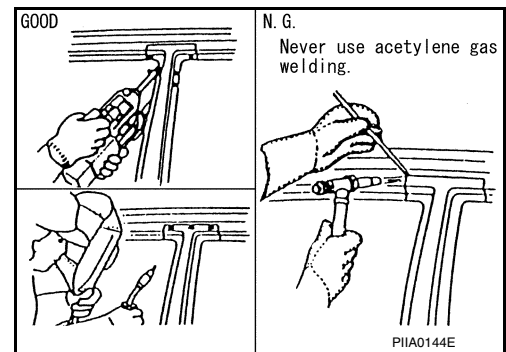


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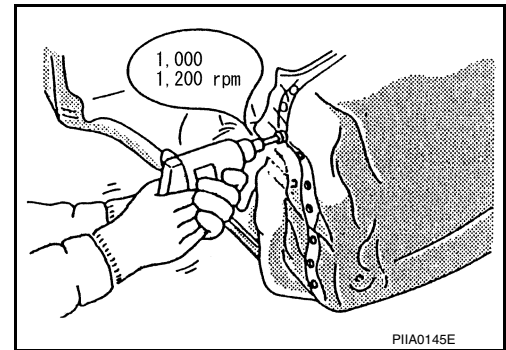
# PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

## < 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.



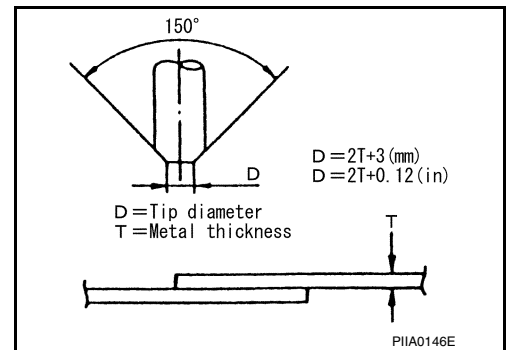
- The spot weld on HSS panels is harder than that of an ordinary steel panel. Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



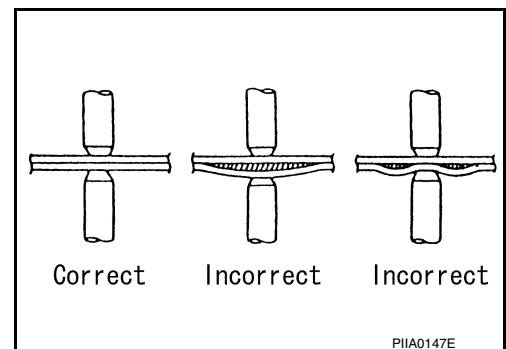
## 2. Precautions in spot welding HSS.

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.





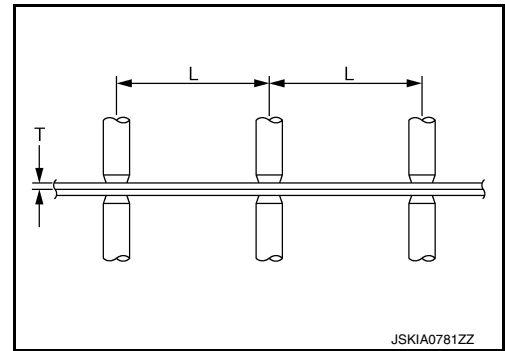
# PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

## < 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.

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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.

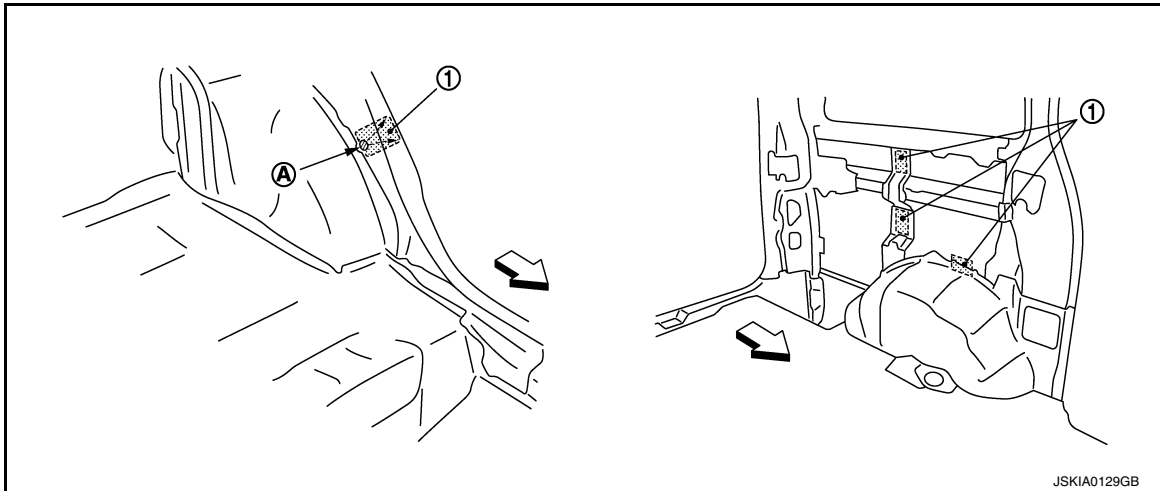
**<Urethane foam for foaming agent> 3M™ Automix™ Flexible Foam 08463 or equivalent**

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

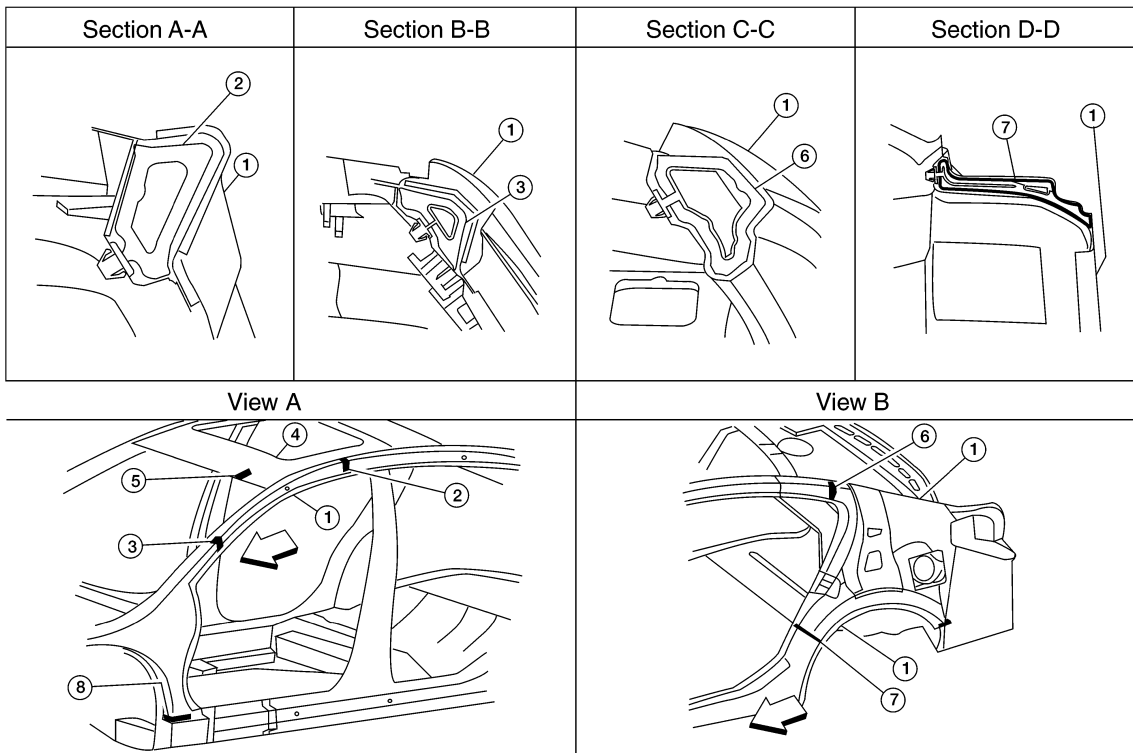
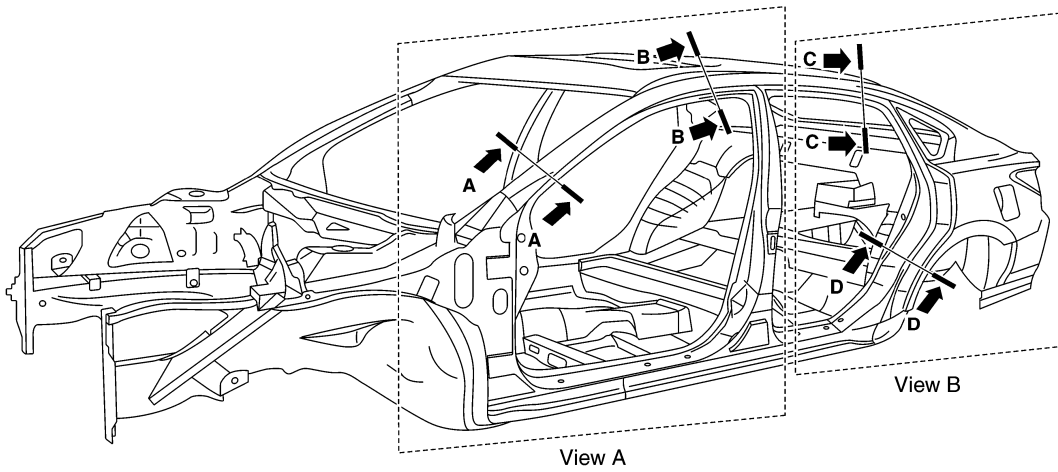
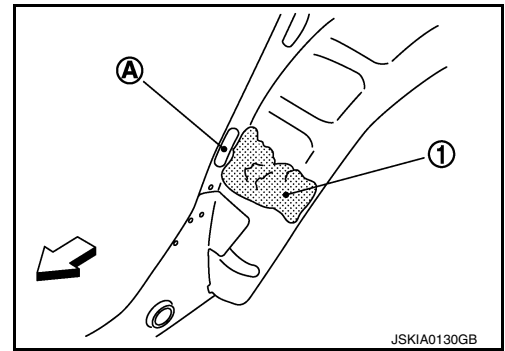
## < PREPARATION >

- 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                                     |  |

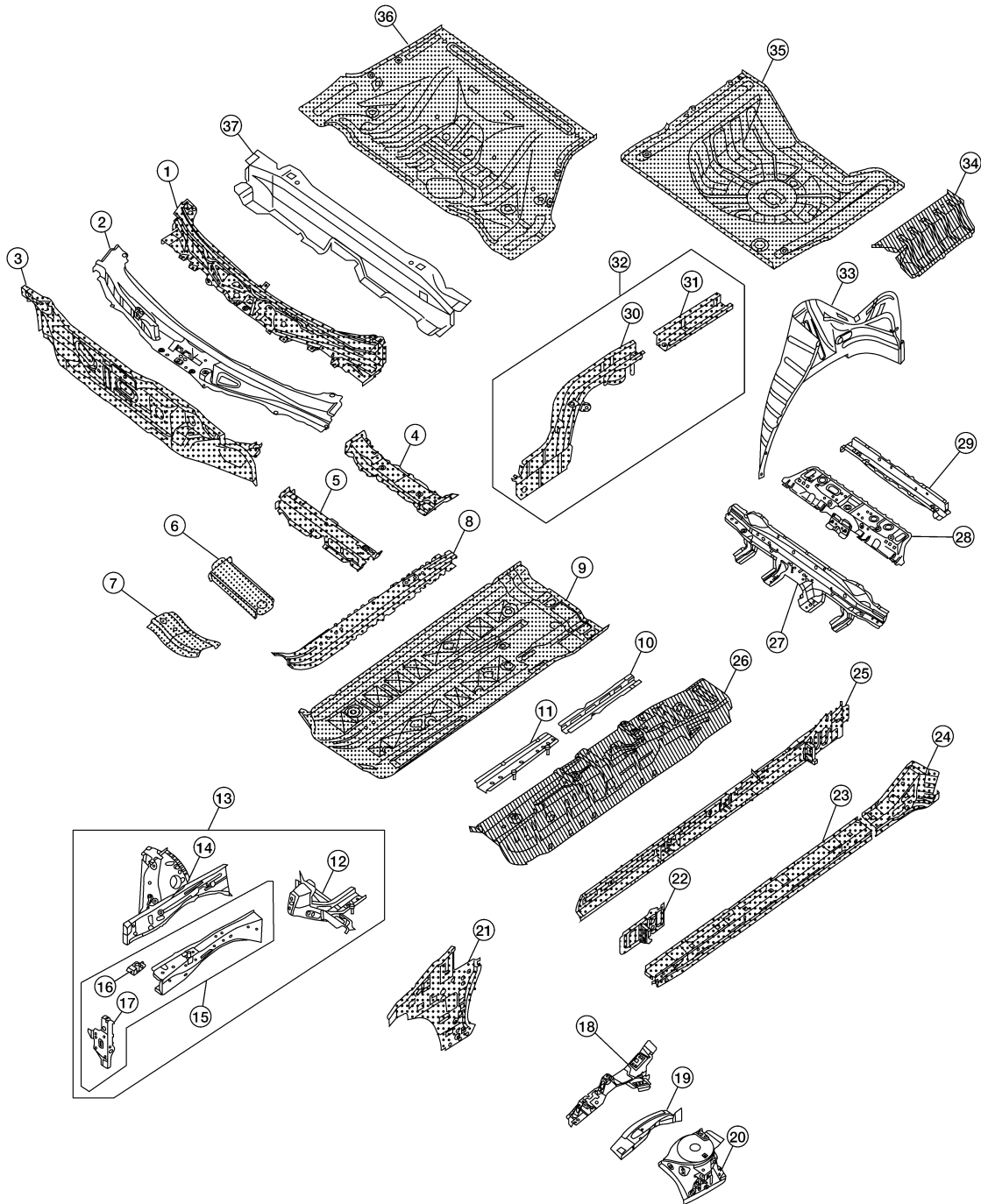
# BODY COMPONENT PARTS




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## BODY COMPONENT PARTS

### Underbody Component Parts

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

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- |                               |                                |  |
|-------------------------------|--------------------------------|--|
| 1. Dash assembly upper        | 2. Air box assembly            | 3. Dash assembly lower                           |
| 4. Rear crossmember (LH / RH) | 5. Front crossmember (LH / RH) | 6. Half member bracket (late production models)* |

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## BODY COMPONENT PARTS

### < PREPARATION >

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| <ul style="list-style-type: none"> <li>7. Reinforcement bracket (late production models)*</li> <li>10. Front side member center extension (LH / RH)</li> <li>13. Front side member assembly (LH / RH)</li> <li>16. Front suspension mounting bracket (LH / RH)</li> <li>19. Hoodledge upper (LH / RH)</li> <li>22. Outer floor member reinforcement (LH / RH) (late production models)*</li> <li>25. Outer sill (LH / RH)</li> <li>28. Front floor center</li> <li>31. Rear center crossmember</li> <li>34. Rear side member extension (LH / RH)</li> <li>37. Rear floor rear</li> </ul> | <ul style="list-style-type: none"> <li>8. Front side member reinforcement upper (LH / RH)</li> <li>11. Front side member reinforcement lower (LH / RH)</li> <li>14. Closing plate assembly (LH / RH)</li> <li>17. Radiator core side support (LH / RH)</li> <li>20. Hoodledge assembly lower rear</li> <li>23. Inner floor member reinforcement (LH / RH) (late production models)*</li> <li>26. Rear sill outer reinforcement (LH / RH)</li> <li>29. Rear seat crossmember assembly</li> <li>32. Rear side member assembly (LH / RH)</li> <li>35. Rear wheel housing outer (LH / RH)</li> <li>38. Rear floor front</li> </ul> | <ul style="list-style-type: none"> <li>9. Front floor assembly (LH / RH)</li> <li>12. Front side member rear extension (LH / RH)</li> <li>15. Front side member sub-assembly (LH / RH)</li> <li>18. Hoodledge reinforcement assembly (LH / RH)</li> <li>21. Dash side (LH / RH)</li> <li>24. Outer sill support bracket (LH / RH)</li> <li>27. Inner sill (LH / RH)</li> <li>30. Rear seat lower crossmember</li> <li>33. Rear side member (LH / RH)</li> <li>36. Rear floor rear side (LH / RH)</li> <li>39. Rear center crossmember</li> </ul> |
|--|--|--|

\*: Late Production Models

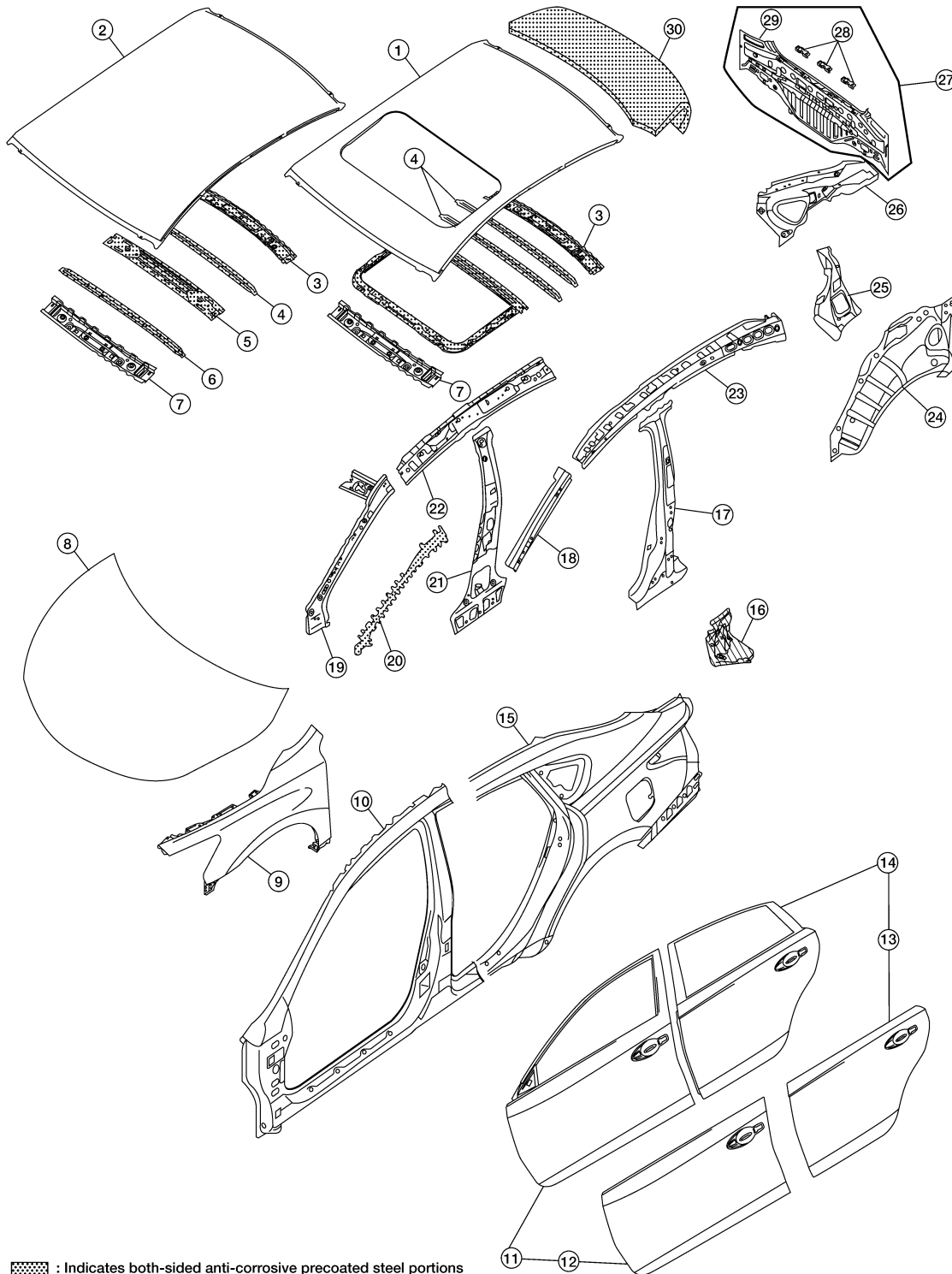
Manufacturing Plant	Smyrna: built on 10/25/2012 or later
	Canton: built on 11/07/2012 or later




# BODY COMPONENT PARTS

< PREPARATION >

## Body Component Parts

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

- |                                     |                                   |                                      |
|-------------------------------------|-----------------------------------|--------------------------------------|
| 1. Moonroof panel assembly          | 2. Roof panel assembly            | 3. Roof rear rail                    |
| 4. Roof 3rd rail                    | 5. Roof 2nd rail                  | 6. Roof 1st rail                     |
| 7. Roof front rail                  | 8. Hood assembly                  | 9. Fender (LH / RH)                  |
| 10. Body side outer front (LH / RH) | 11. Door assembly front (LH / RH) | 12. Front door panel outer (LH / RH) |
| 13. Rear door panel outer (LH / RH) | 14. Rear door assembly (LH / RH)  | 15. Rear body side outer (LH / RH)   |

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## BODY COMPONENT PARTS

### < PREPARATION >

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| 16. Rear fender corner (LH / RH)                | 17. Center pillar reinforcement (LH / RH)                                | 18. Front pillar outer reinforcement (LH / RH) |
| 19. Front pillar inner (LH / RH)                | 20. Front pillar inner reinforcement (LH / RH) (late production models)* | 21. Center pillar inner (LH / RH)              |
| 22. Roof side rail inner (LH / RH)              | 23. Roof side rail reinforcement (LH / RH)                               | 24. Rear wheel well housing outer (LH / RH)    |
| 25. Rear pillar reinforcement (LH / RH)         | 26. Rear pillar inner reinforcement (LH / RH)                            | 27. Rear panel assembly                        |
| 28. Rear bumper fascia bracket (LH, center, RH) | 29. Rear panel   | 30. Trunk lid assembly                         |

\*: Late Production Models

Manufacturing Plant	Smyrna: built on 10/25/2012 or later
	Canton: built on 11/07/2012 or later



# CORROSION PROTECTION

< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### CORROSION PROTECTION

#### Description

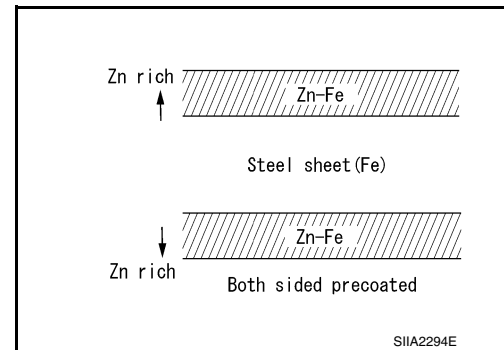
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To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

#### 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.



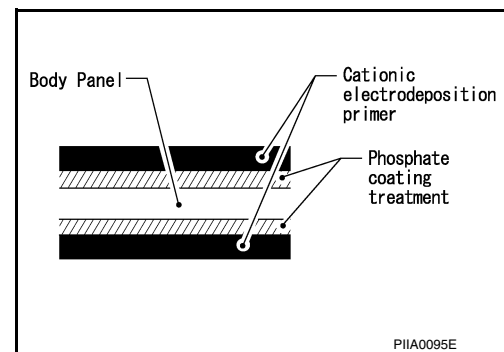
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

#### 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.

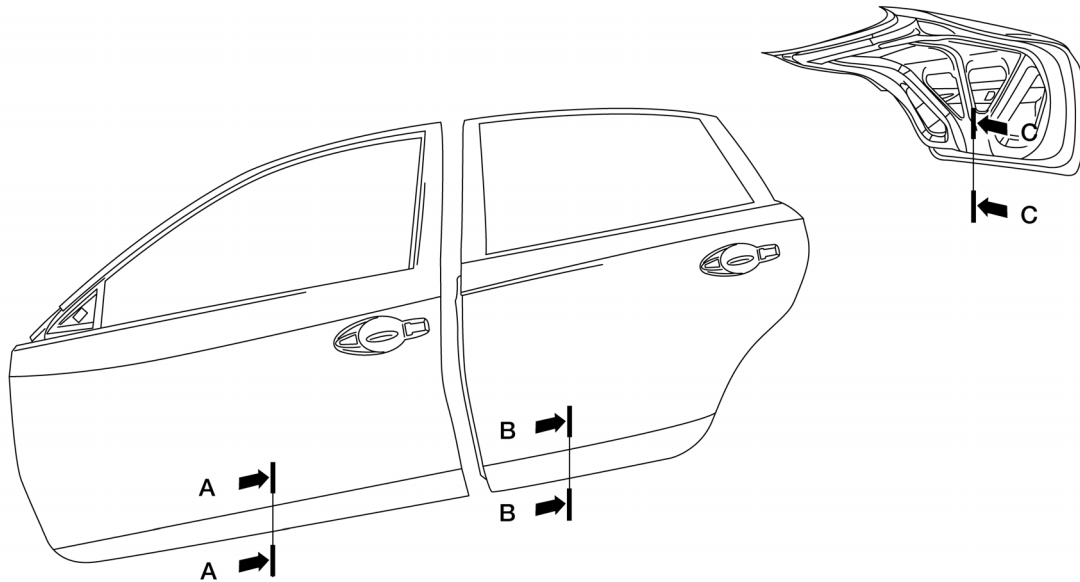
#### Anti-Corrosive Wax


INFOID:000000009464970

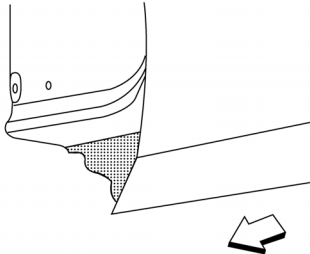
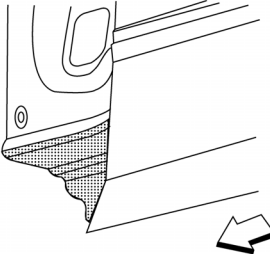
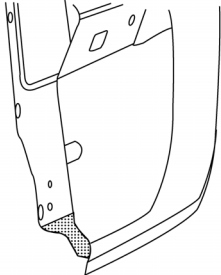
To improve corrosion resistance, anti-corrosive wax is applied inside the body sill and inside other closed sections. Accordingly, when replacing these parts, be sure to apply anti-corrosive wax to the appropriate areas of the new parts. Select an excellent anti-corrosive wax which will penetrate after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

# CORROSION PROTECTION

< REMOVAL AND INSTALLATION >



 : Indicates anti-corrosive wax coated portions

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

ALKIA2553GB

↩ Front

## Undercoating

INFOID:000000009464971

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

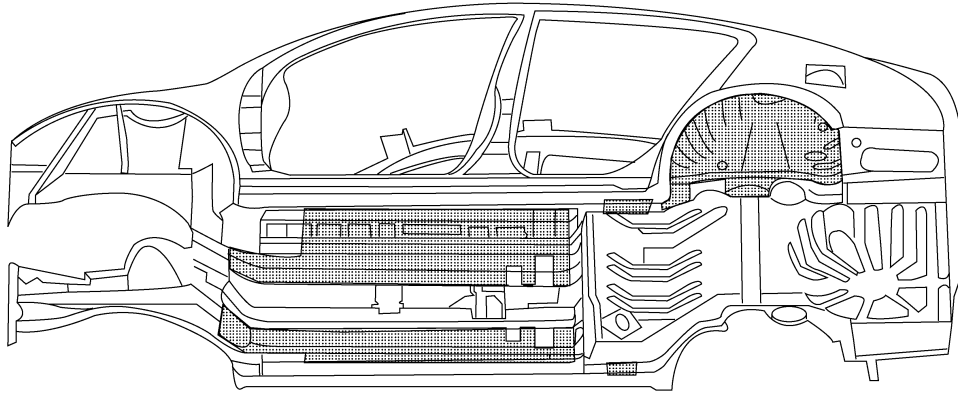
1. Do not apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst which are subjected to heat).
2. Do not undercoat the exhaust pipe or other parts which become hot.
3. Do not undercoat rotating parts.
4. Apply bitumen wax after applying undercoating.

# CORROSION PROTECTION

## < REMOVAL AND INSTALLATION >

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

 : Indicates undercoated portions



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**BRM**

# BODY SEALING

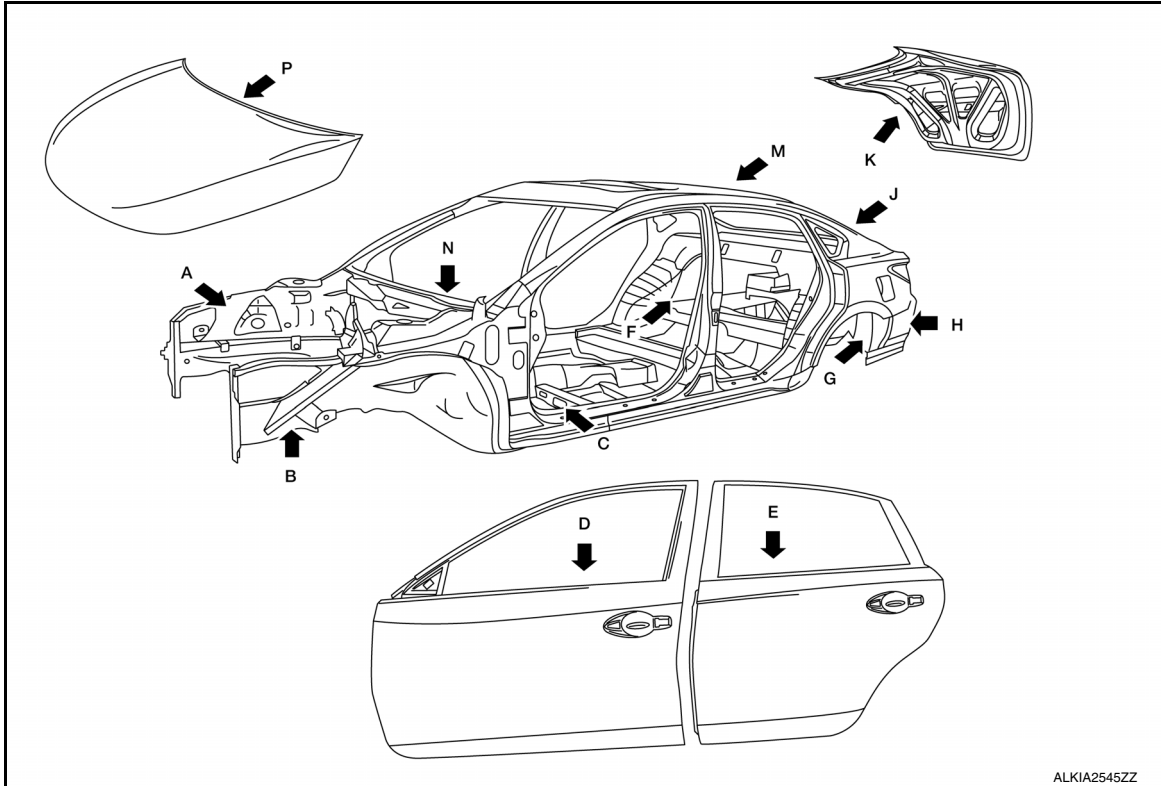
< REMOVAL AND INSTALLATION >

## BODY SEALING

### Description

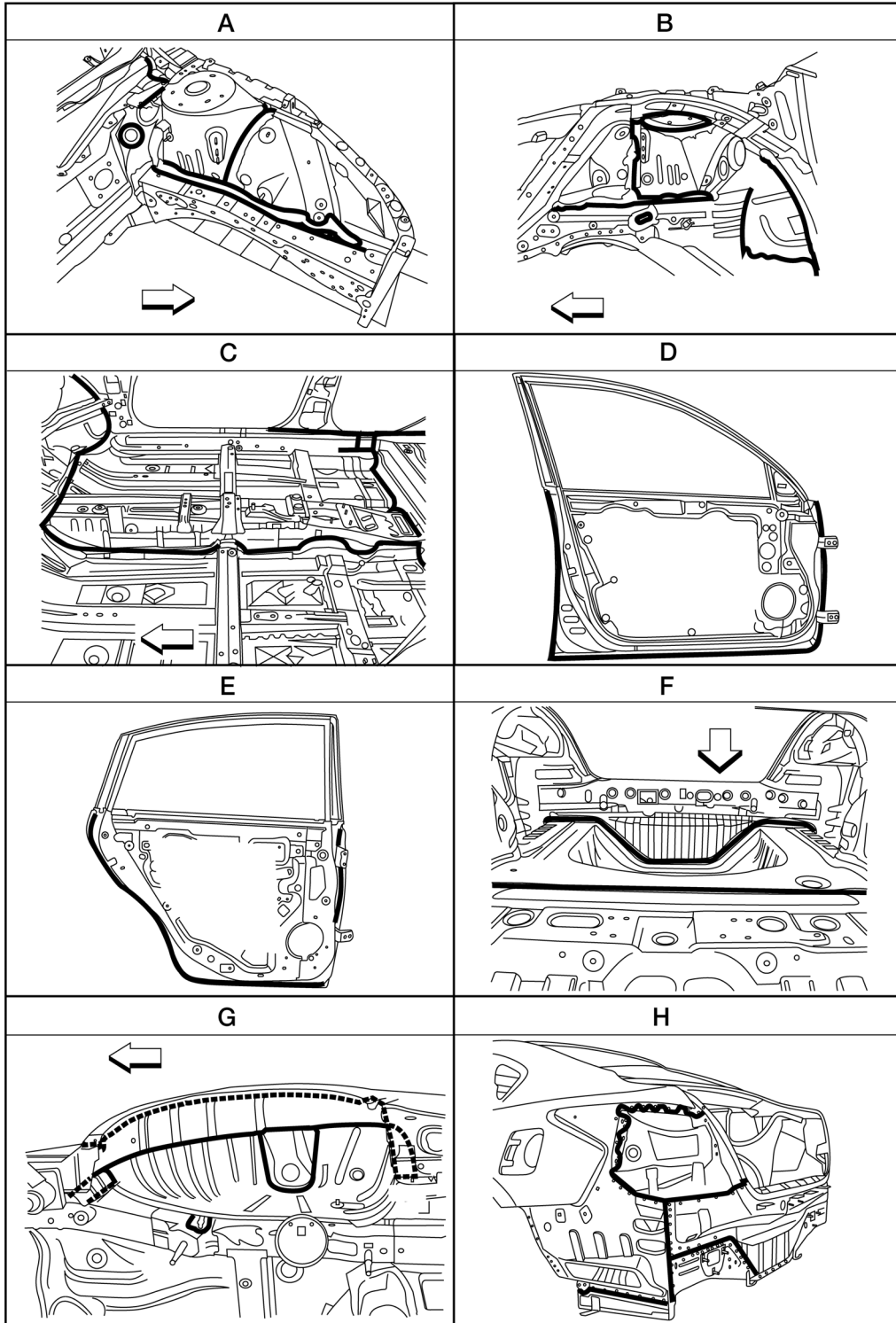
INFOID:000000009464972

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 >



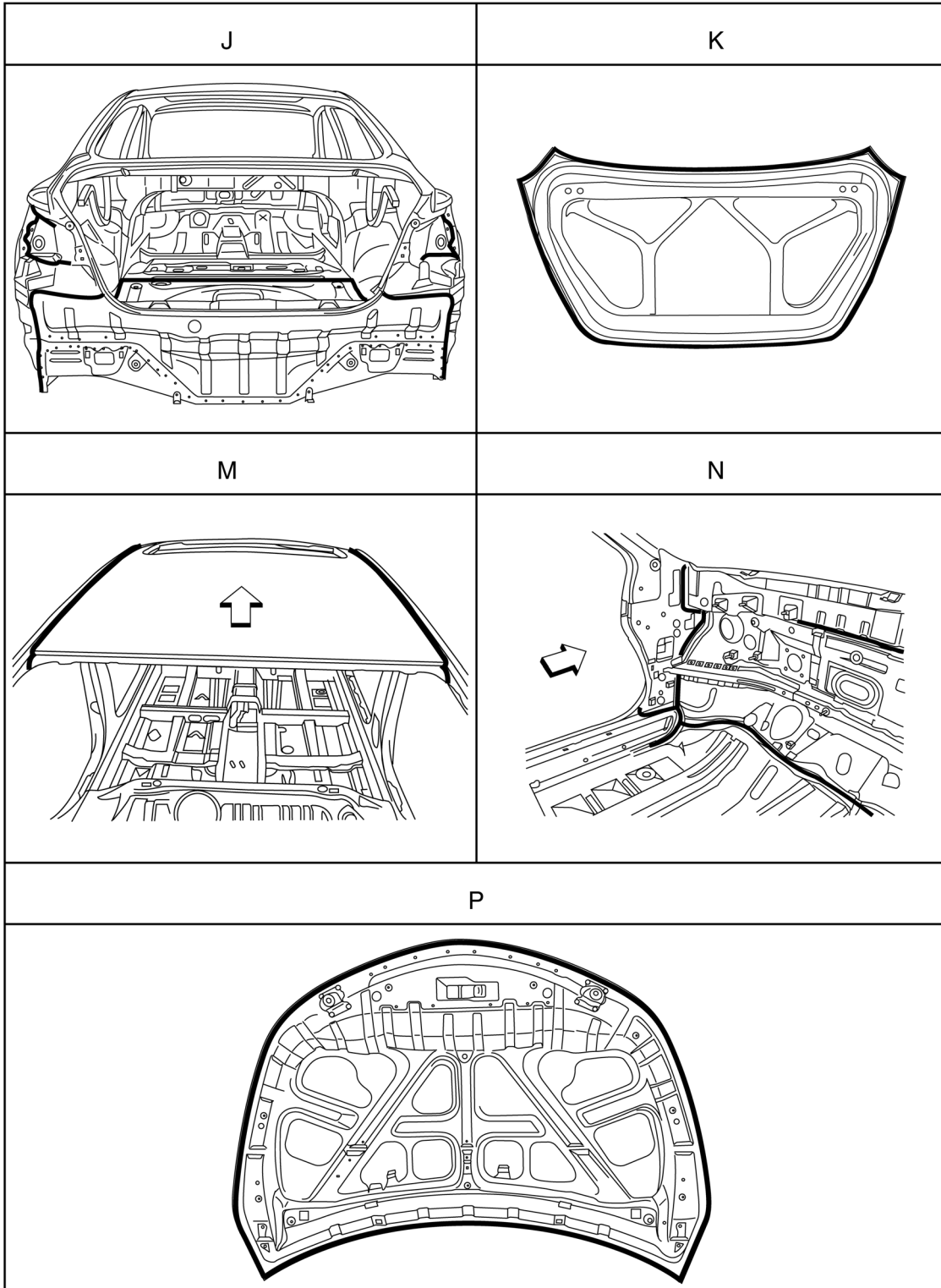
ALKIA2562ZZ

← Front

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# BODY SEALING

< REMOVAL AND INSTALLATION >



ALKIA2563ZZ

← Front

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## REPLACEMENT OPERATIONS

### Description

INFOID:000000009464973

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.


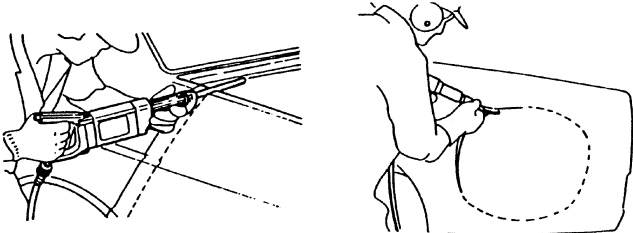



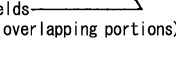
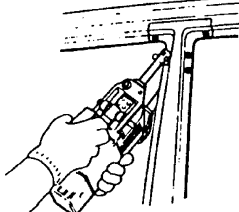


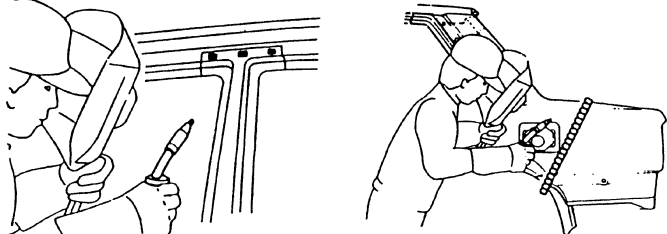


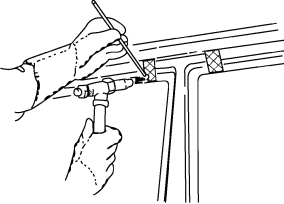
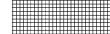

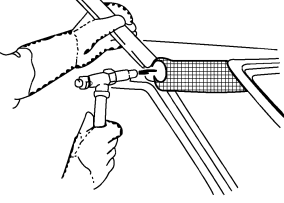
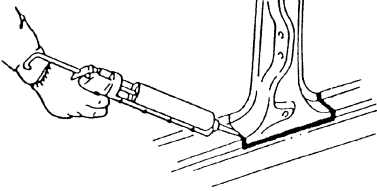
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**BRM**

# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

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

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

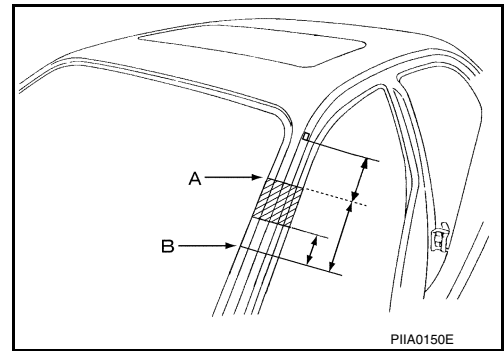
PIIA0149E



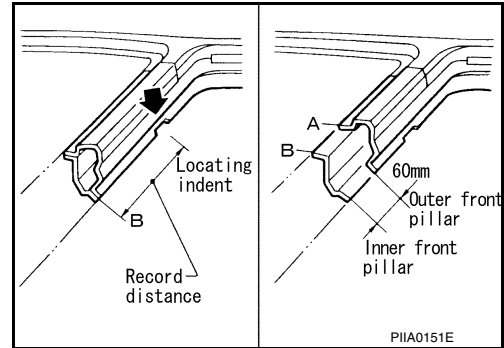
# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

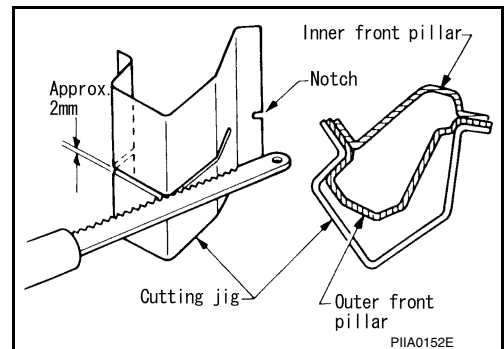
- Front pillar butt joint can be determined anywhere within shaded area as shown. The best location for the butt joint is at position (A) due to the construction of the vehicle. Refer to the front pillar section.



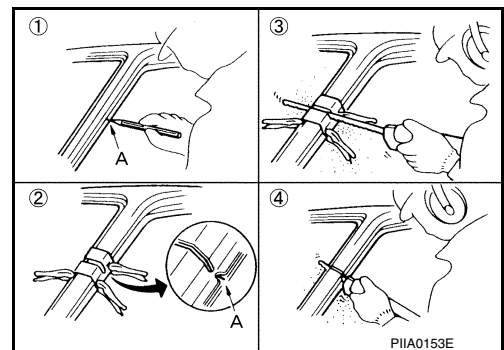
- Determine cutting position and record distance from the locating indent. Use this distance when cutting the service part. Cut outer front pillar over 60 mm above inner front pillar cut position.



- 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. Position of outer pillar (A) on cut line and 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 in the same manner.



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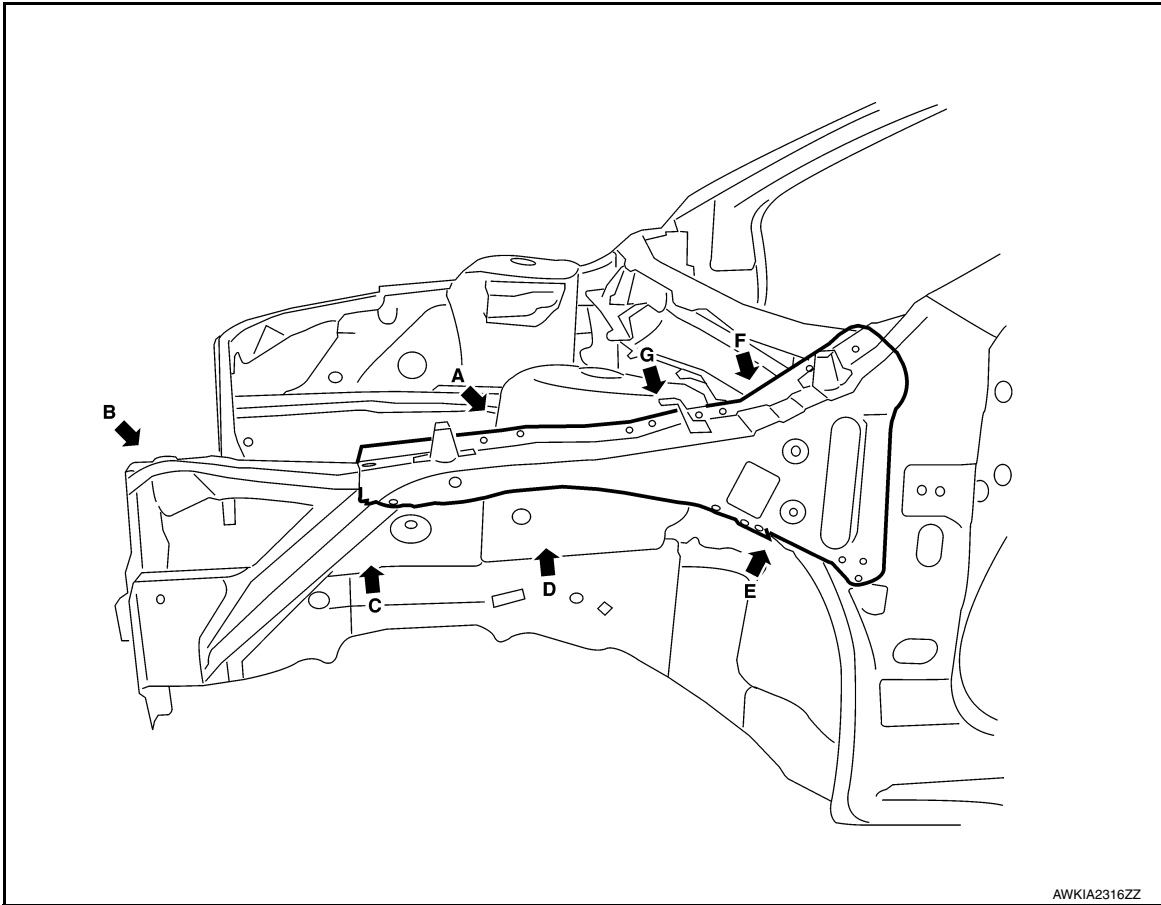
BRM

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Hoodledge

INFOID:000000009464974



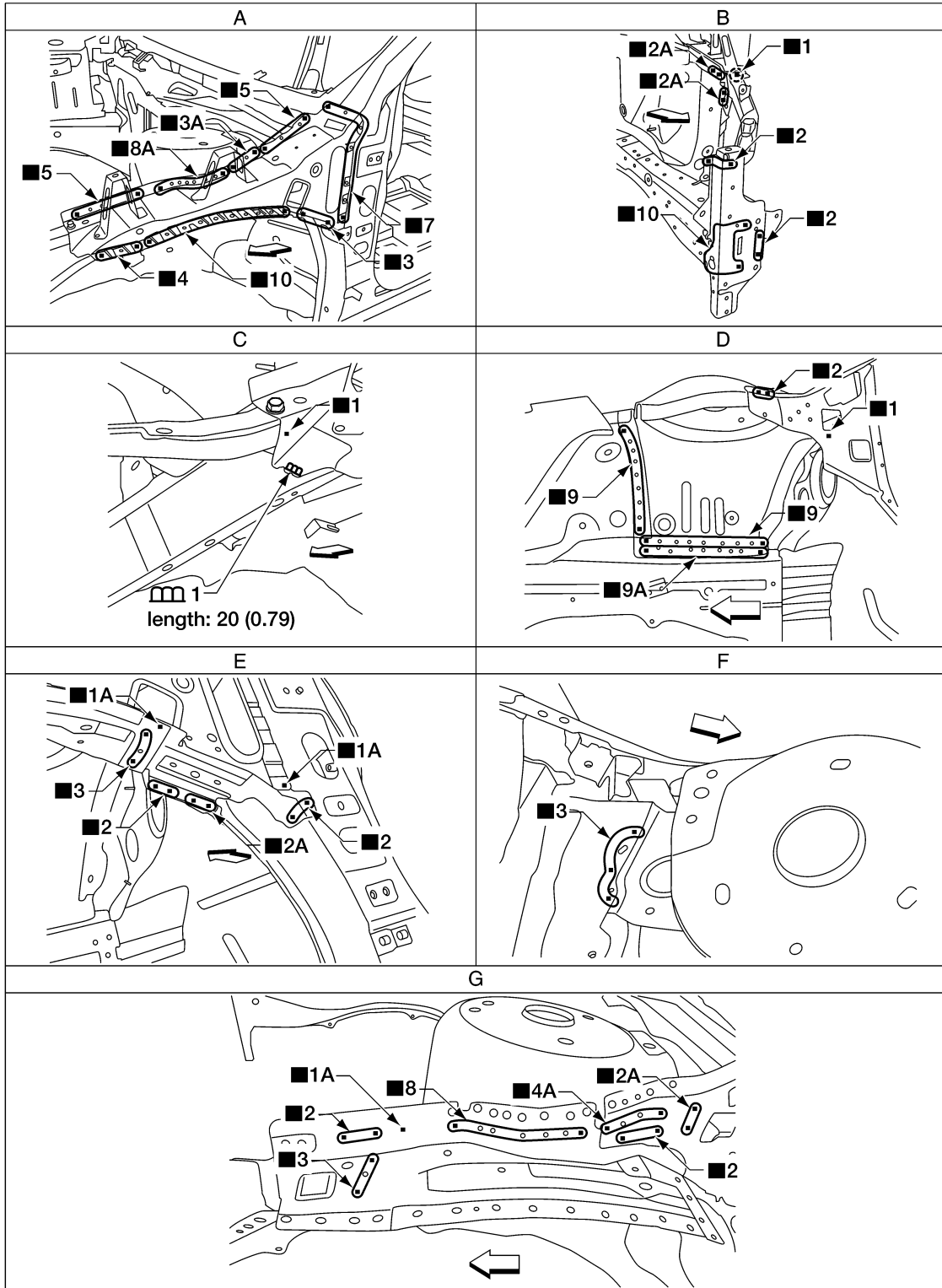
AWKIA2316ZZ

### Change parts

- A. Hoodledge upper front
- B. Core support upper
- C. Strut housing (LH)
- D. Hoodledge connector
- E. Hoodledge reinforcement
- D G. Strut housing (RH)
- F. Hoodledge reinforcement rear

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



AWKIA222ZZ

Unit: mm (in)

← Front

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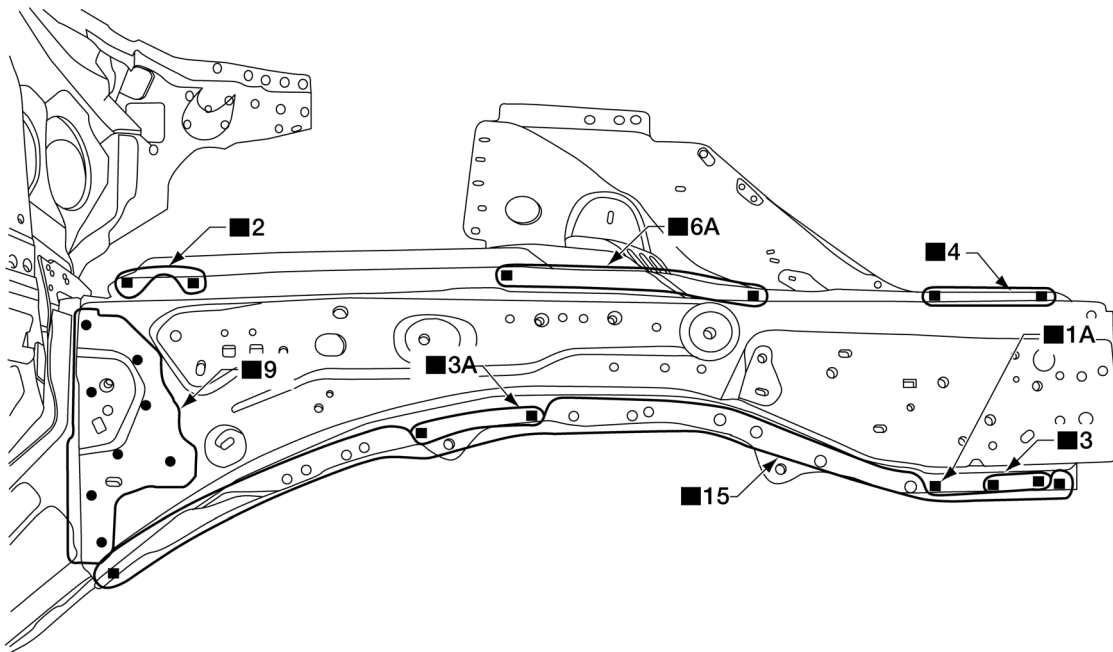
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# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Front Side Member (Partial Replacement)

INFOID:000000009464975



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Change parts

- Front side member front assembly

## Front Pillar

INFOID:000000009464976

## FRONT PILLAR OUTER - EARLY PRODUCTION MODELS

# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

Early Production Models

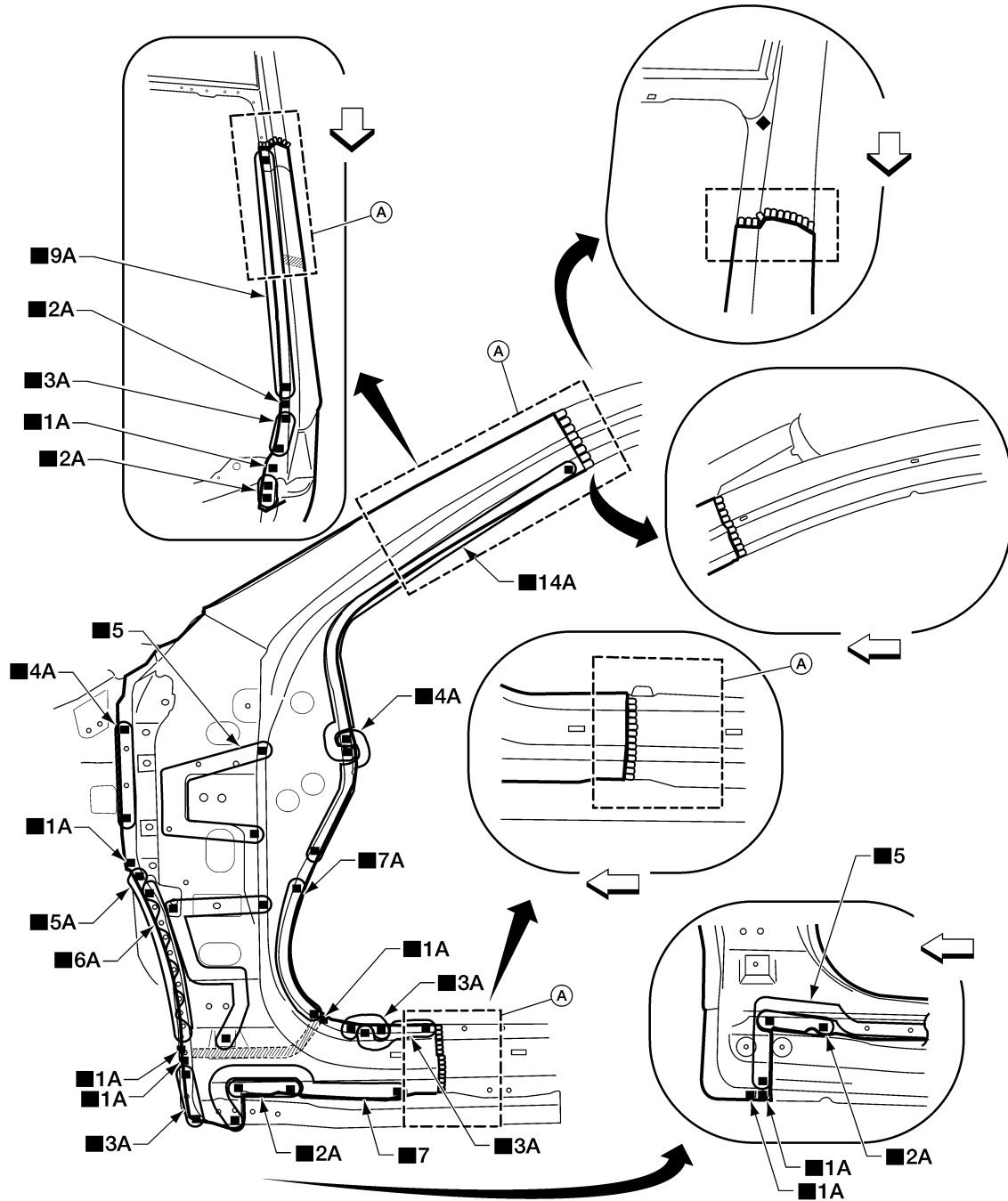
Manufacturing Plant

Smyrna: built before 10/25/2012

Canton: built before 11/07/2012

Work after hoodledge and hoodledge reinforcement rear has been removed.

Early Production Models



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# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

---

Change parts

- Front pillar section of body side outer

A. Recommended sectioning location      ⇐ Front

## FRONT PILLAR OUTER - LATE PRODUCTION MODELS

Late Production Models

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Manufacturing Plant	Smyrna: built on 10/25/2012 or later
	Canton: built on 11/07/2012 or later

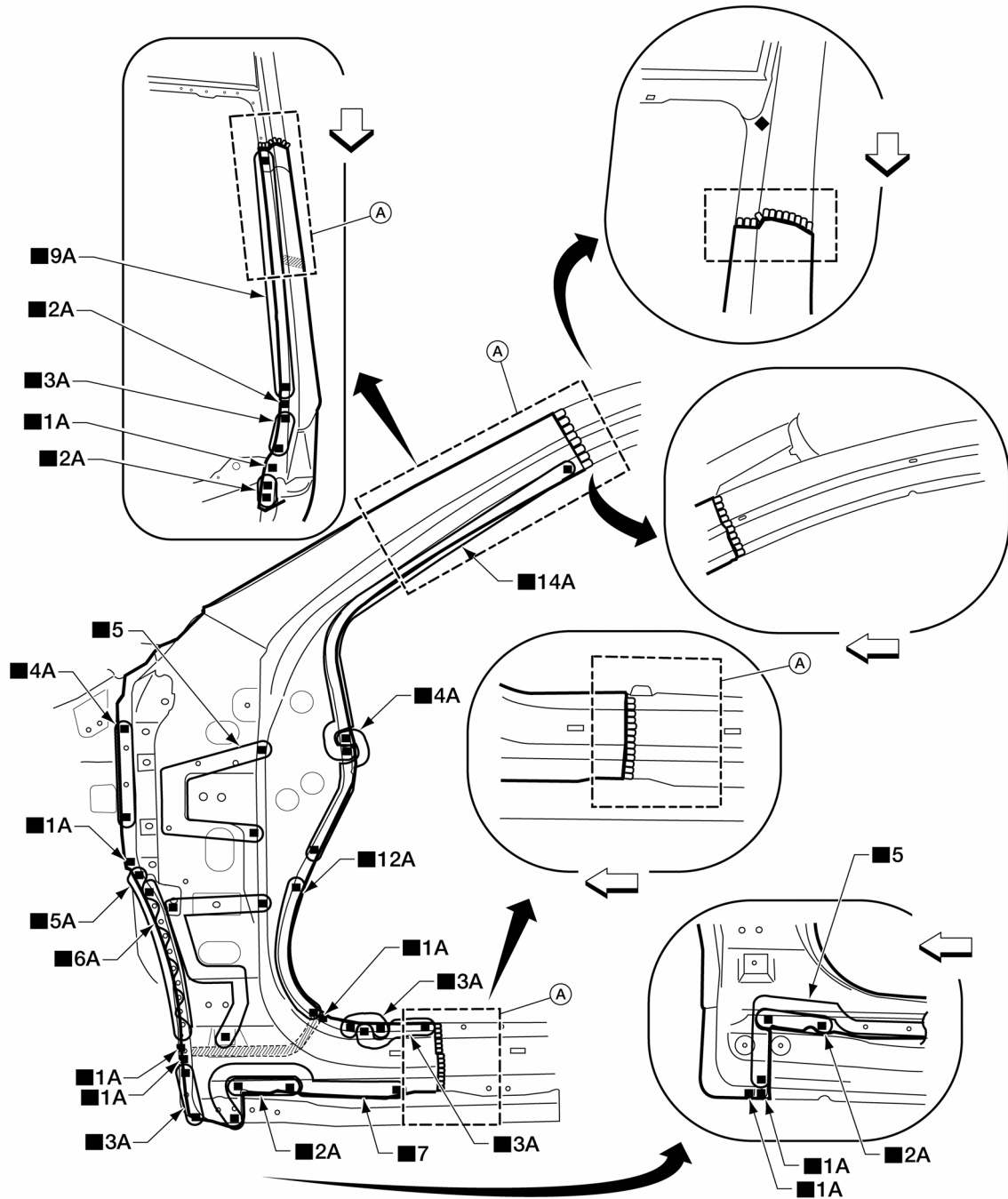
---

Work after hoodledge and hoodledge reinforcement rear has been removed.

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Late Production Models



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Change parts

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

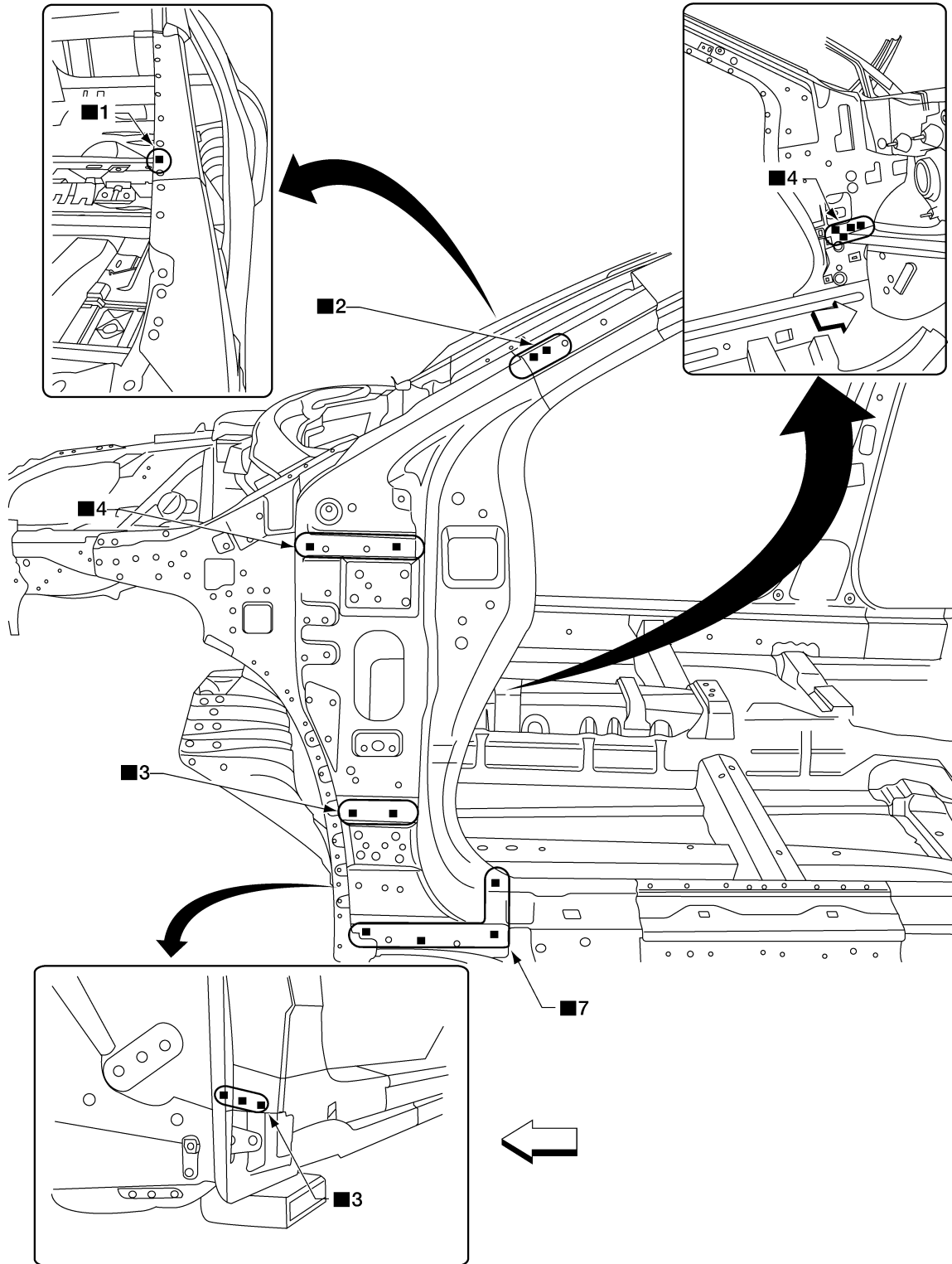
## FRONT PILLAR REINFORCEMENT

Work after front pillar outer has been removed.

AWKIA2458ZZ

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



AWKIA2225ZZ

Change parts

● Front pillar reinforcement

⇐ Front

FRONT PILLAR INNER - EARLY PRODUCTION MODELS



# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

Early Production Models

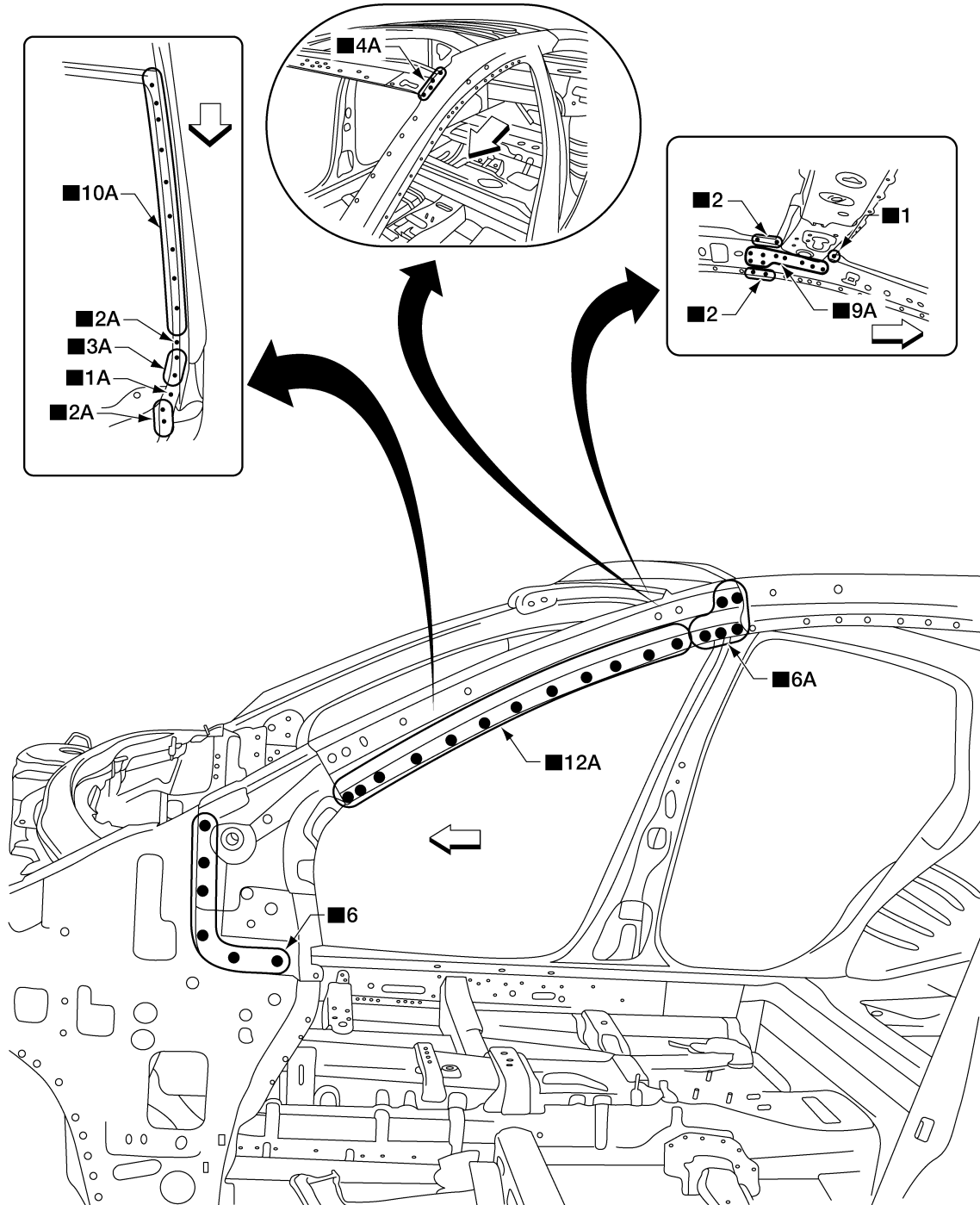
Manufacturing Plant

Smyrna: built before 10/25/2012

Canton: built before 11/07/2012

Work after front pillar reinforcement has been removed.

Early Production Models



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# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

---

Change parts

- Front pillar reinforcement

⇐ Front

## FRONT PILLAR INNER - LATE PRODUCTION MODELS

Late Production Models

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Manufacturing Plant	Smyrna: built on 10/25/2012 or later
	Canton: built on 11/07/2012 or later

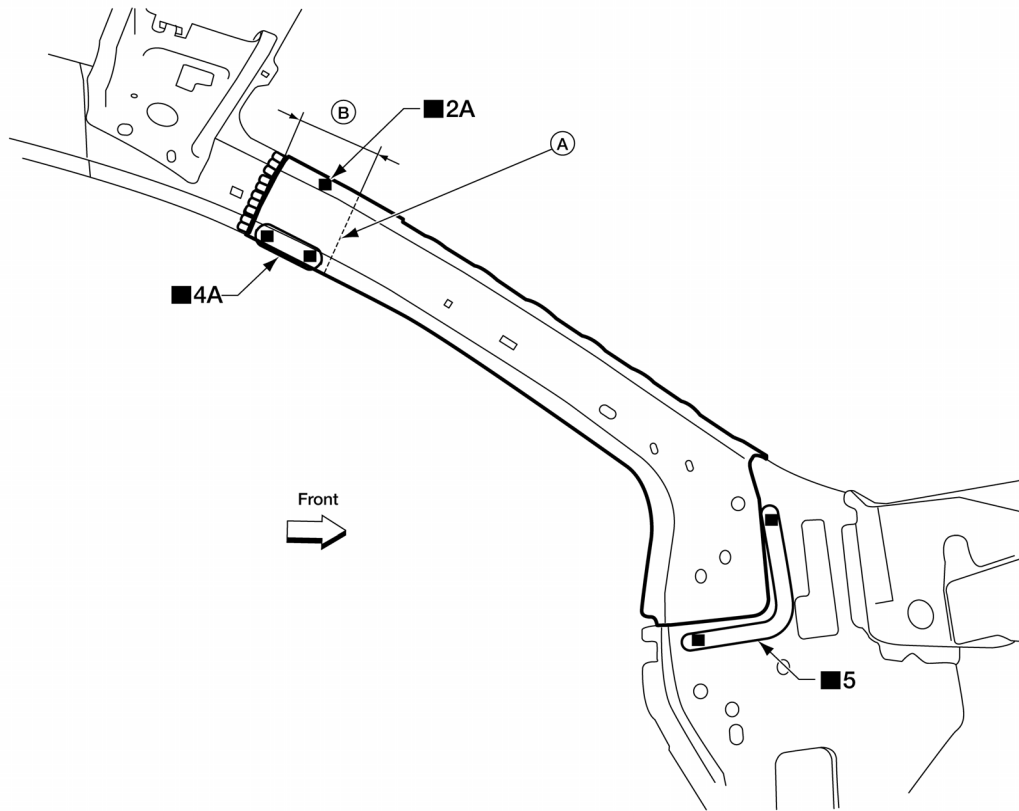
---

Work after front pillar reinforcement has been removed.

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Late Production Models



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AWKIA2033ZZ

Change parts

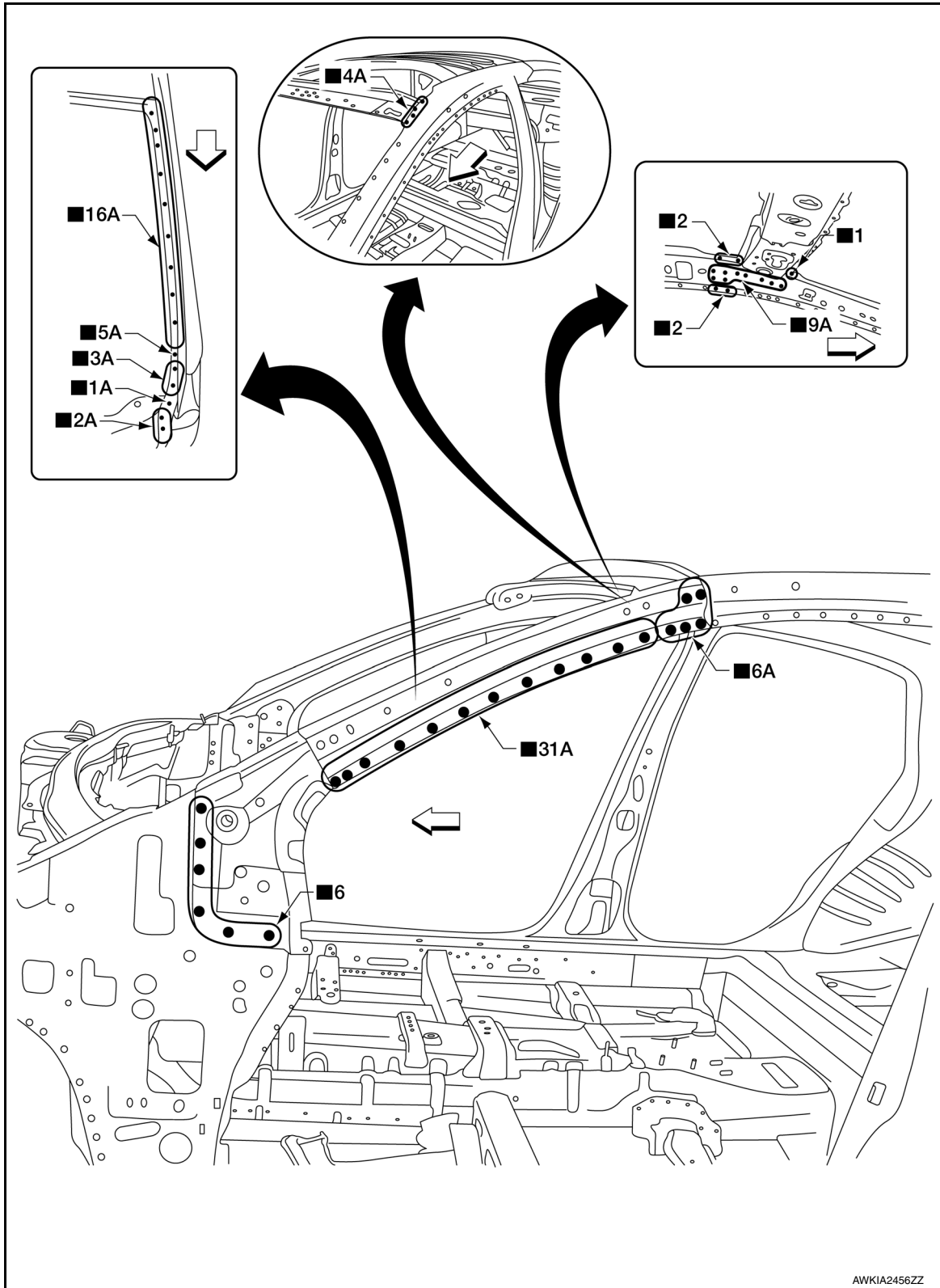
- Front pillar inner reinforcement

A. Recommended sectioning location      B. 75 mm (2.95 in)

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Late Production Models



Change parts

● Front pillar reinforcement and inner reinforcement

⇐ Front

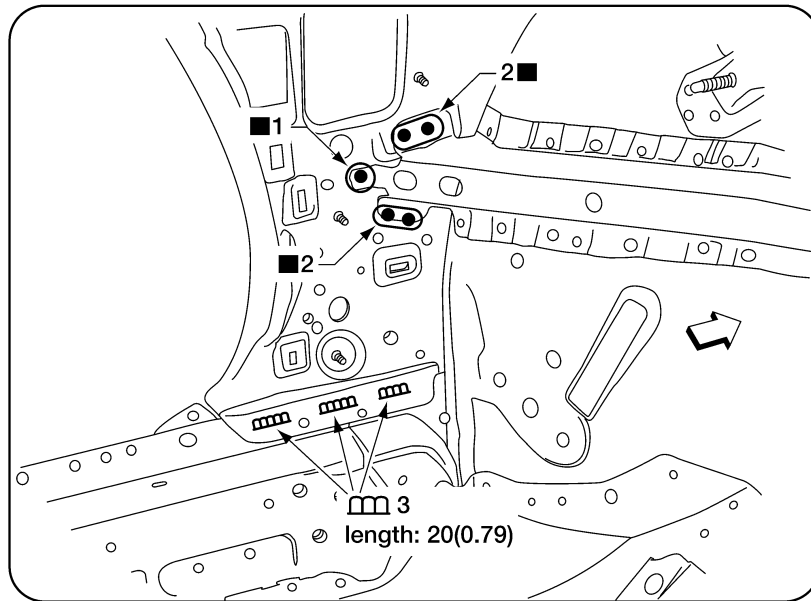
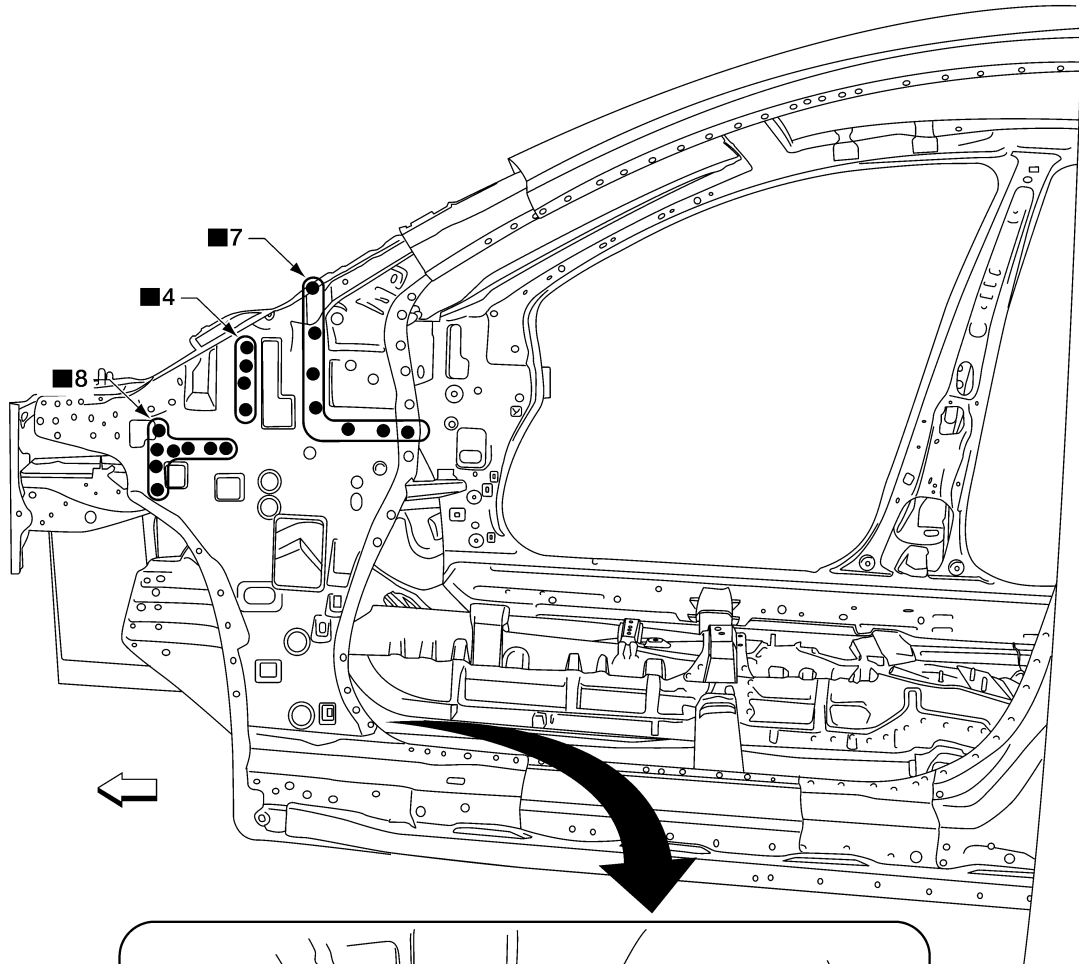
Dash Side

INFOID:000000009464977

Work with front pillar reinforcement removed.

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



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**BRM**

Change parts  
● Dash side

⇐ Front

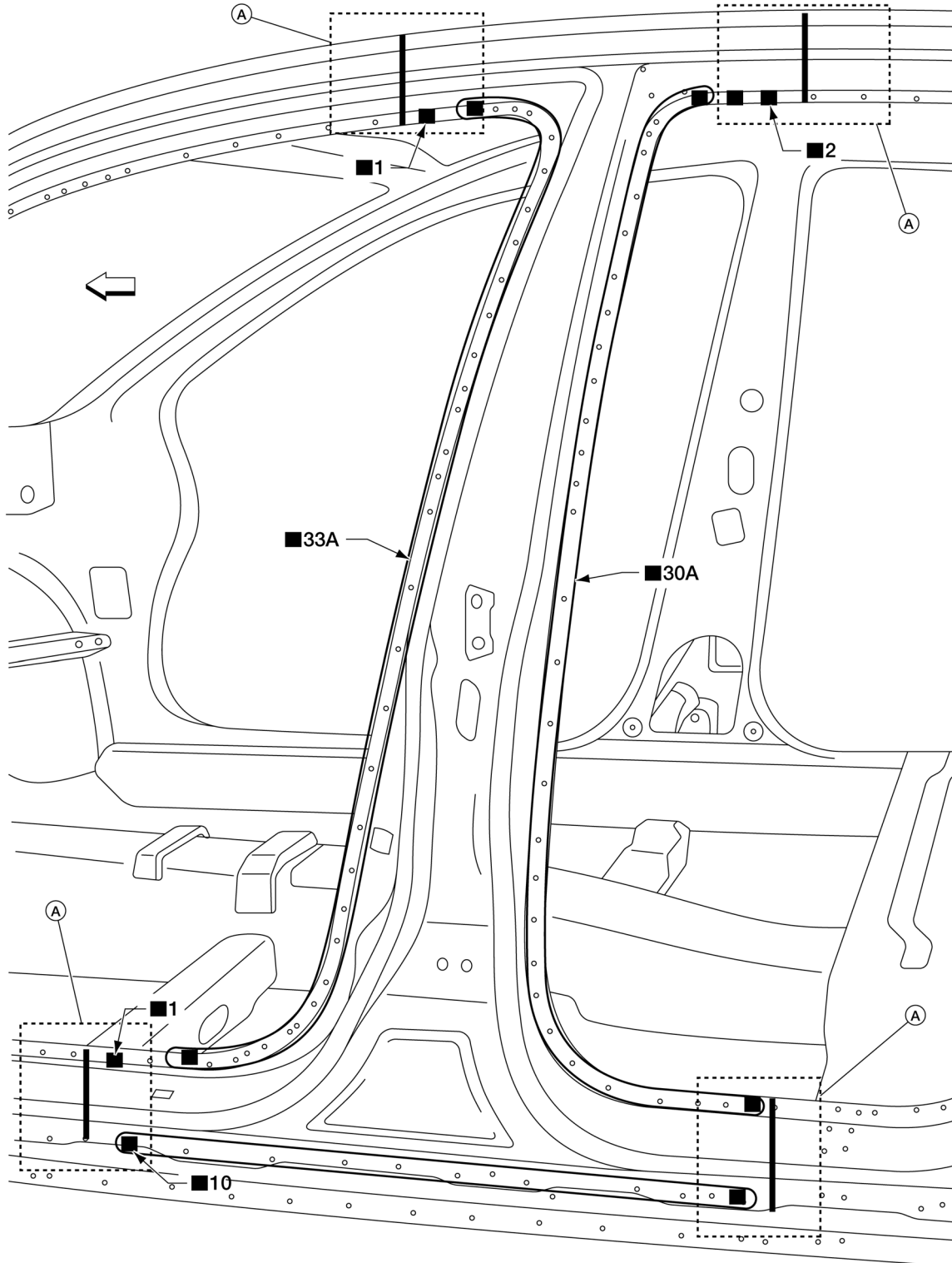
ALKIA3019ZZ  
Unit: mm (in)

Center Pillar  
OUTER

INFOID:000000009464978

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



ALKIA2568ZZ

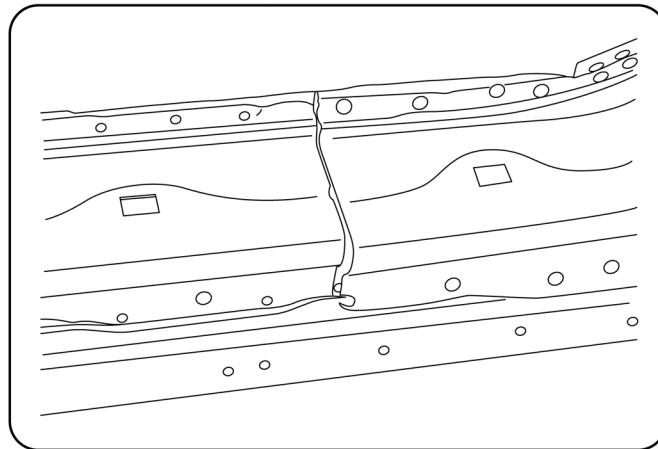
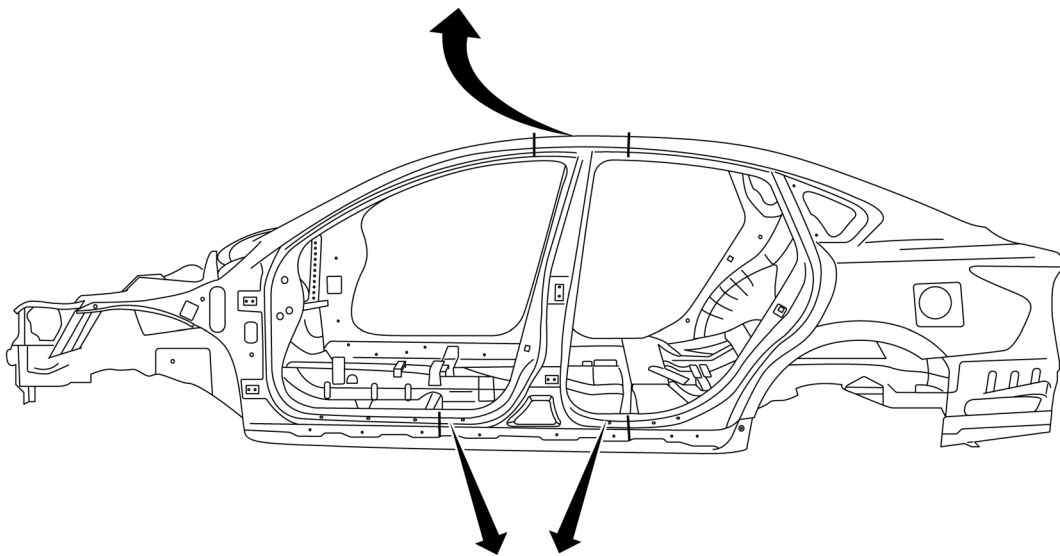
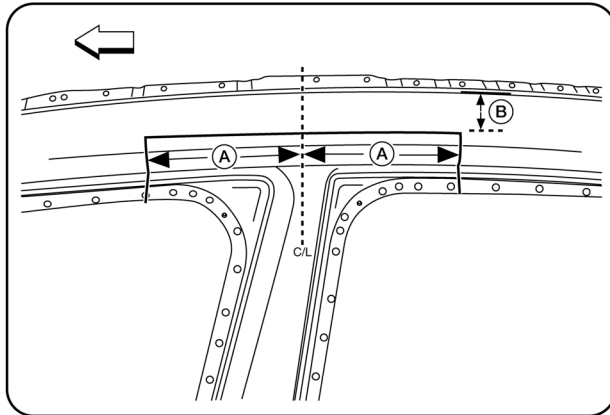
Change parts

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

← Front

# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >



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ALKIA2569ZZ

Unit: mm (in)

Change parts

A. 140 mm (5.51)

B. 45 mm (1.77)

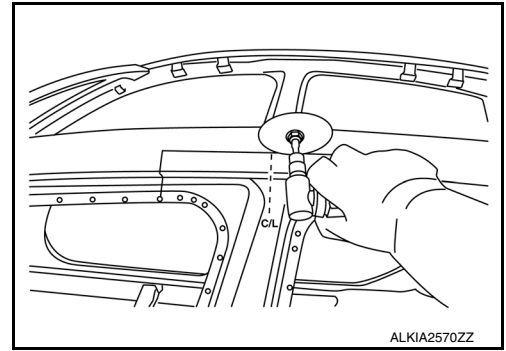
↔ Front

Removal

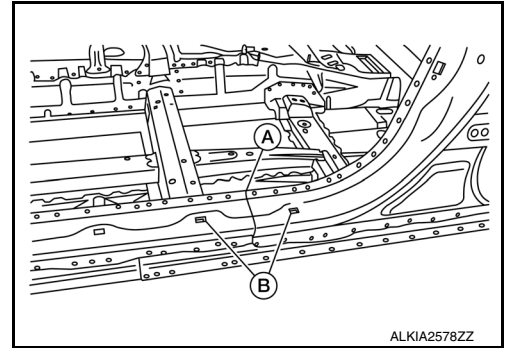
# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

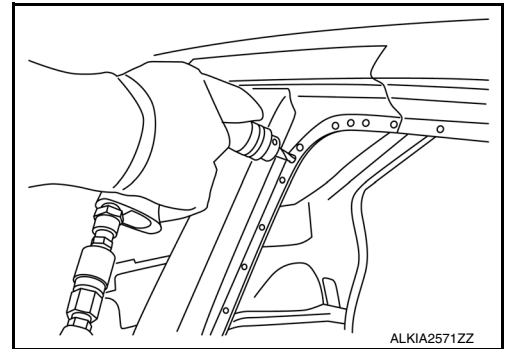
1. Use a cut off wheel to make pre-measured cut in upper center pillar outer body side.



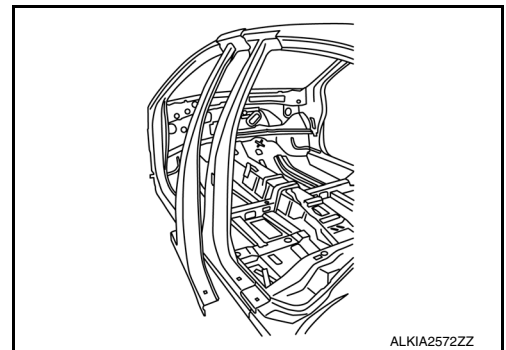
2. Cut the rocker area (A) between the sill plate holes (B) on the lower center pillar outer body side.



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.

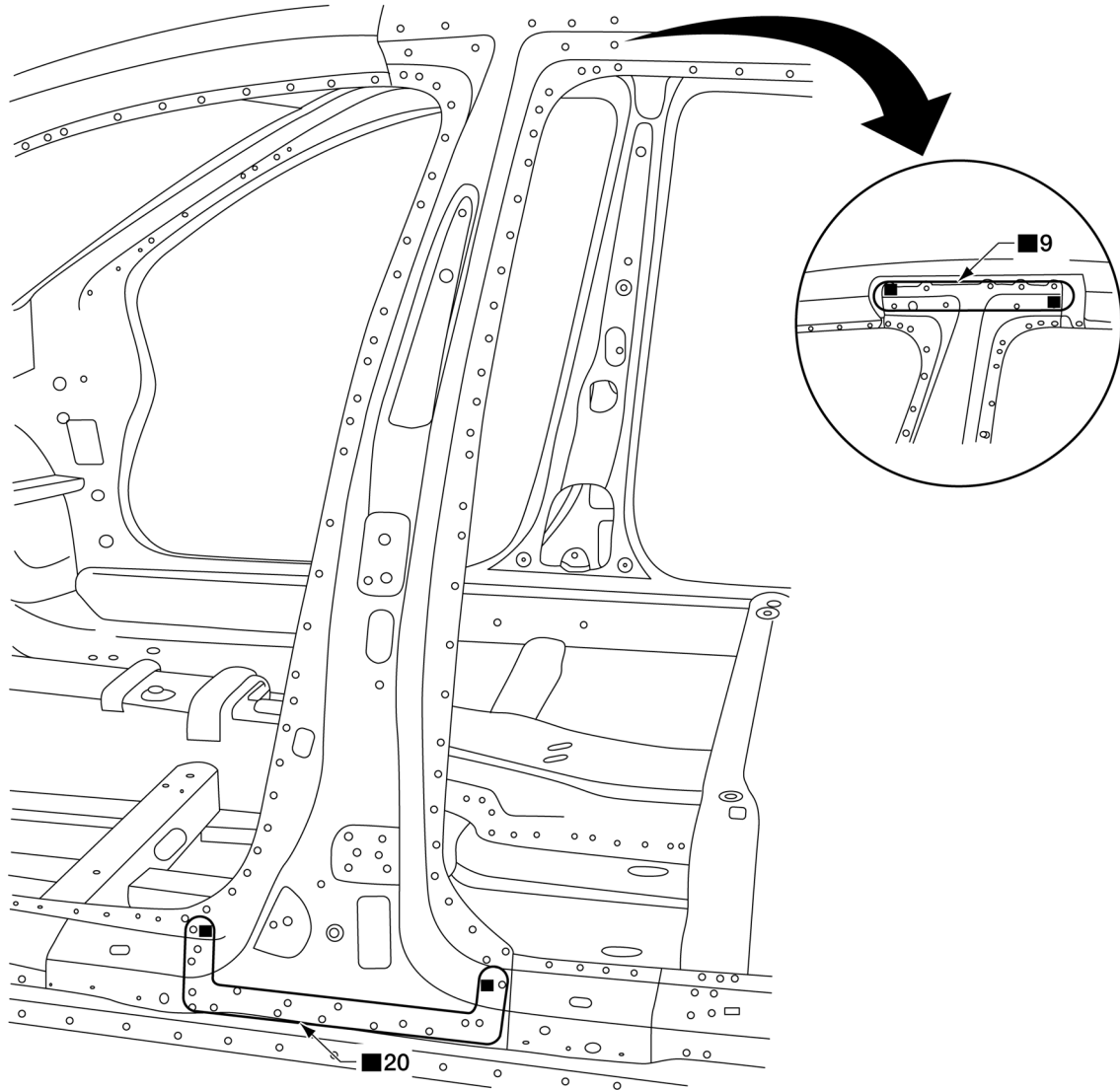
### REINFORCEMENT

Work after center pillar outer has been removed.



# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >



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Change parts

- Center pillar reinforcement

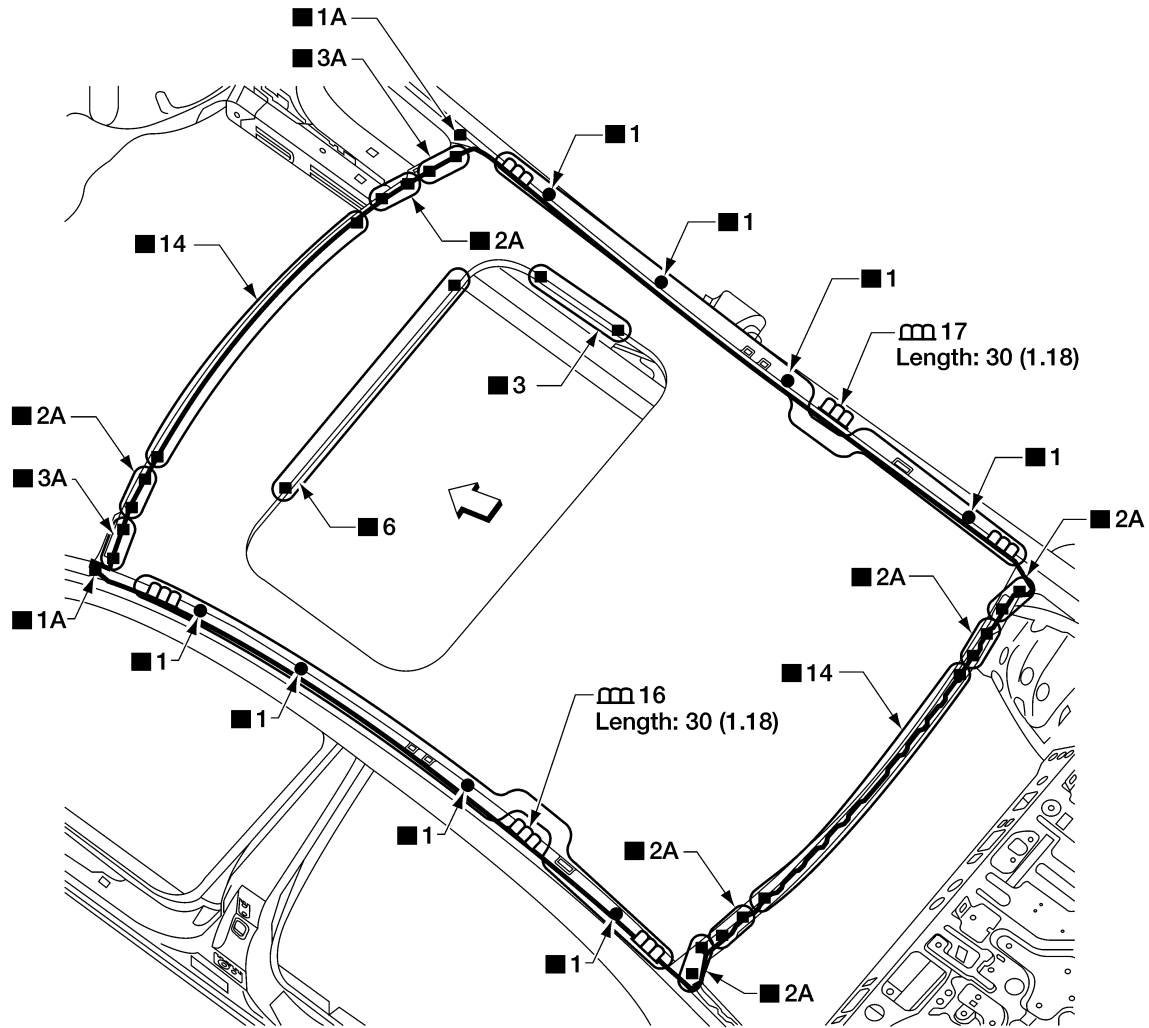
ALKIA2579ZZ

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Roof

INFOID:00000009464979



AWKIA2223ZZ

Unit: mm (in)

Replacement parts

- Moonroof panel

⇐ Front

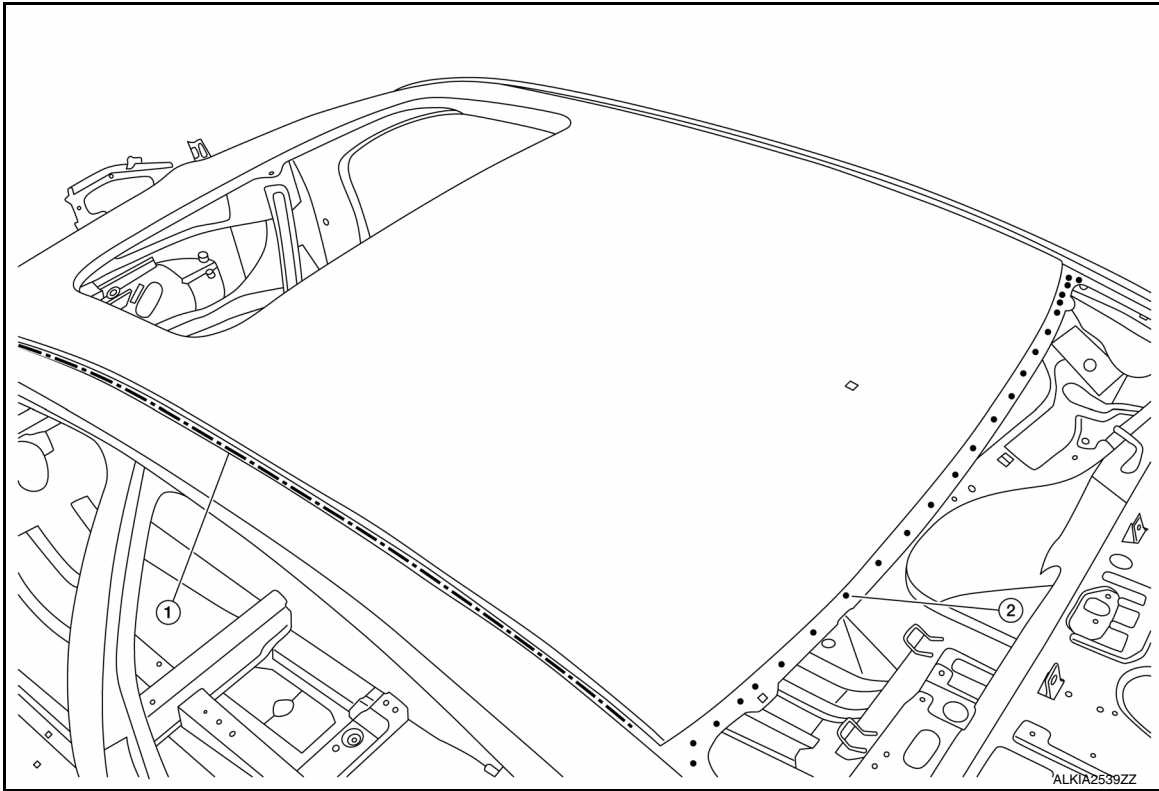
## REMOVAL

1. Remove the headlining. Refer to. [INT-30, "Removal and Installation"](#).

# REPLACEMENT OPERATIONS

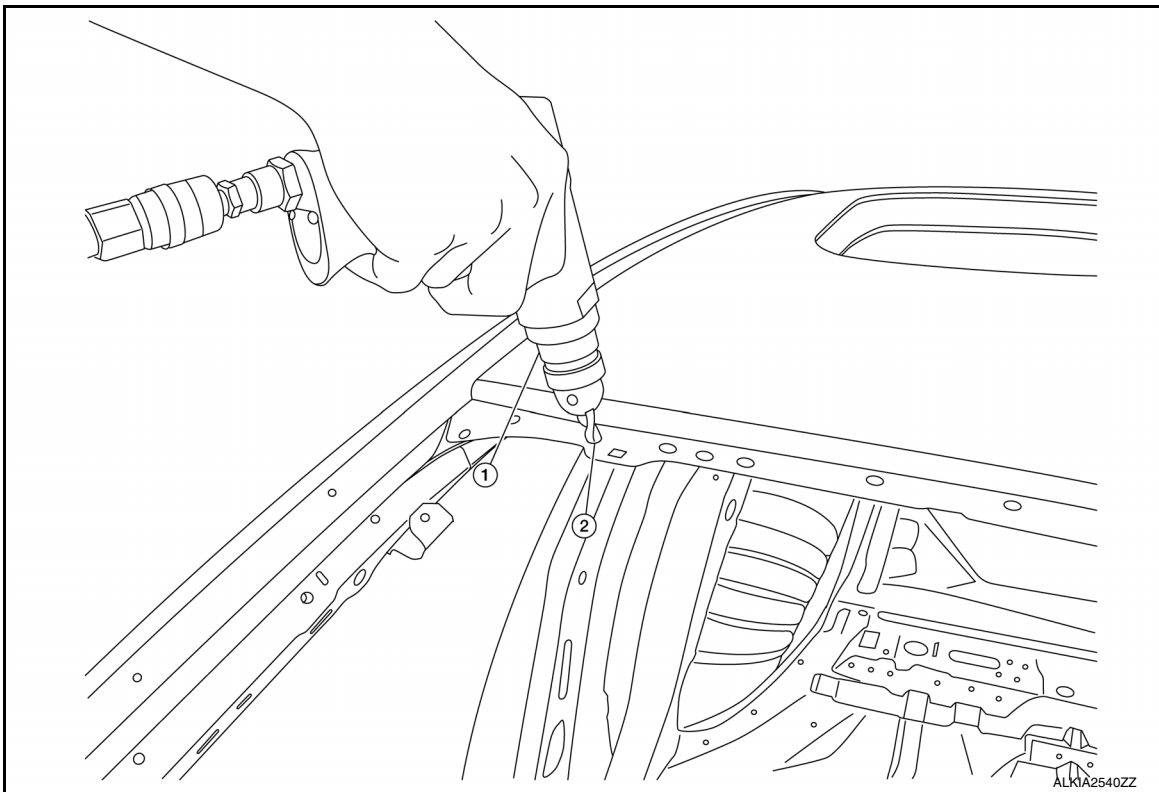
## < REMOVAL AND INSTALLATION >

2. Remove the rear window glass. Refer to [GW-25, "Removal and Installation"](#).



1. Laser welds

2. Spot welds



1. Air or electric drill

2. 8 (0.31in) spot weld removal drill bit

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## REPLACEMENT OPERATIONS

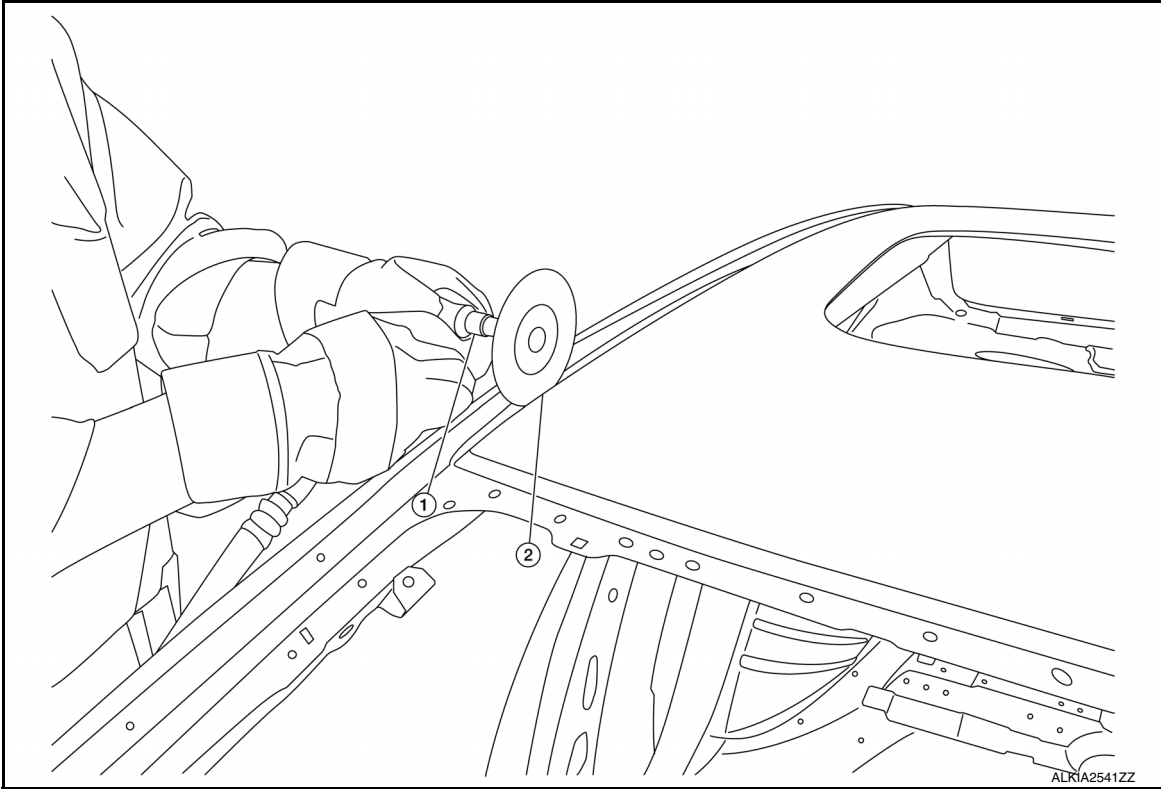
### < REMOVAL AND INSTALLATION >

---

**NOTE:**

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

3. Drill out spot welds using a 8 mm (0.31in) spot weld removing bit on the windshield and rear window glass flanges.



1. Air or electric angle head grinder

2. Cutting wheel

**NOTE:**

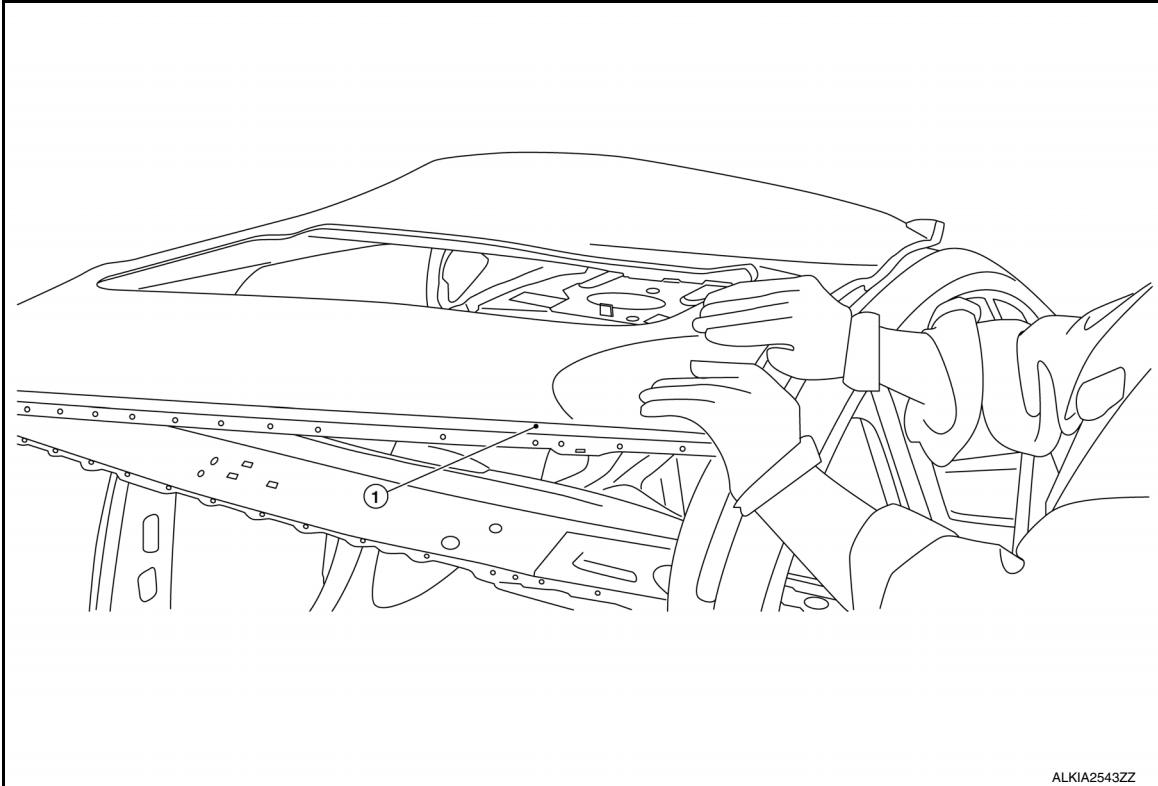
Only grind through the first layer of metal (the roof outer panel)

4. Using an angle head grinder or cutting wheel to grind through the first layer only on the laser welded areas (roof panel sides) to release the weld.

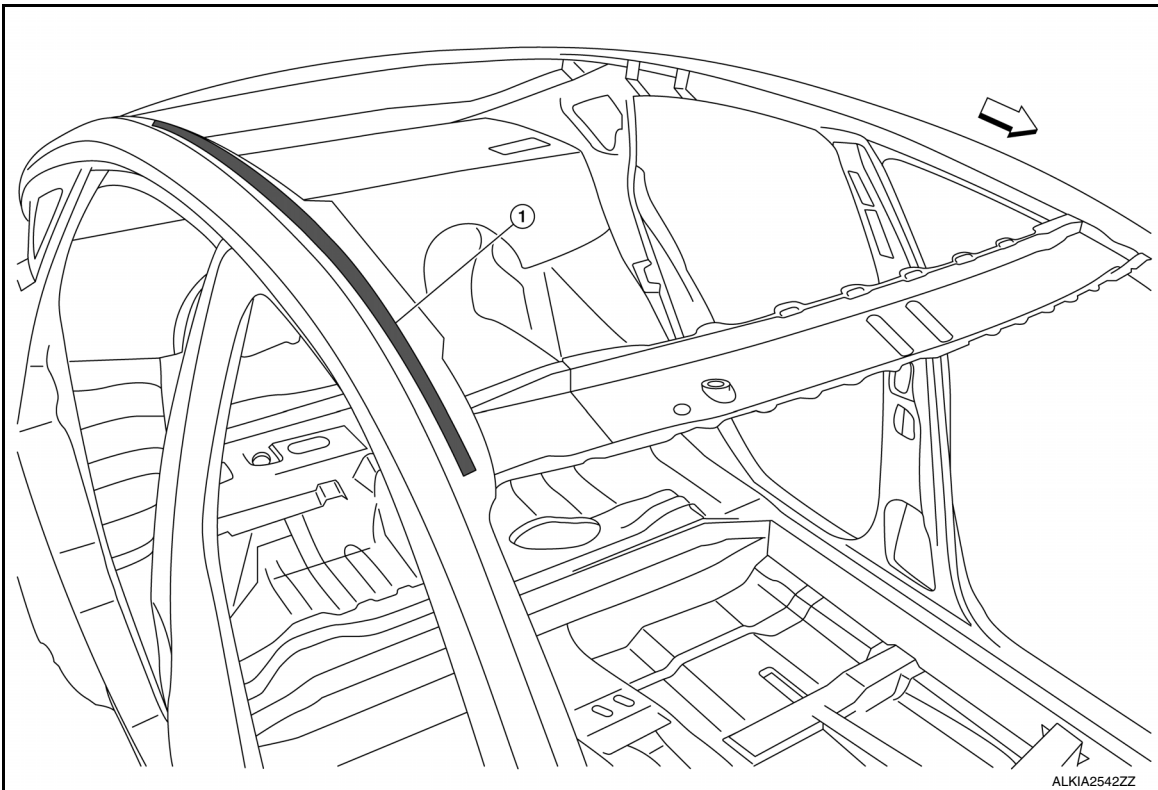
# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

5. Remove roof panel (1).



## PREPARATION



1. Weld through primer

← Front

1. Grind all mating surfaces around the roof flanges.
2. Test panel for proper alignment and fit.

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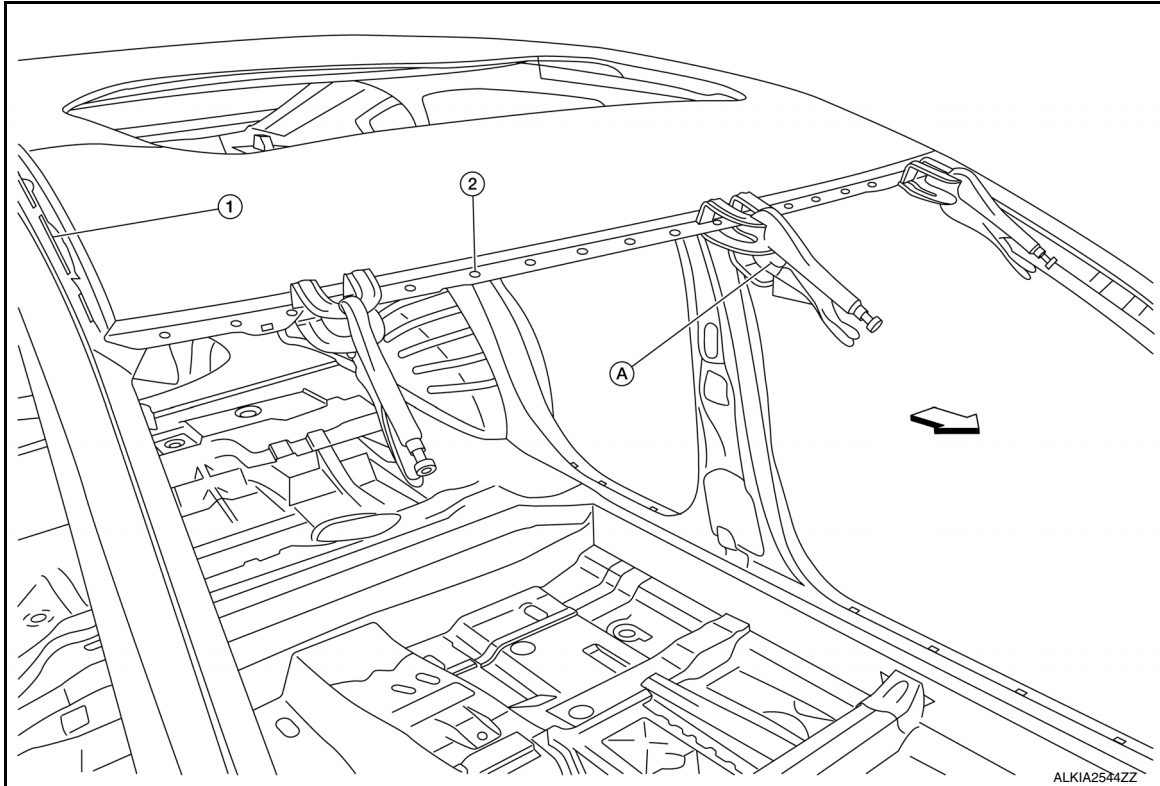
**BRM**

# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

3. Remove panel.
4. Compare to the removed panel, then drill 8mm (0.31in) holes in the same location on the new service roof panel.
5. Use 3M weld through primer to prime the front and rear window flanges

## INSTALLATION



1. Panel bonding area

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. Use panel bonding adhesive in place of the laser welds along the roof side flanges.
5. Dress welds as necessary to allow proper glass fit.
6. Refer to NISSAN approved panel refinishing.
7. Install the headlining. Refer to [INT-30, "Removal and Installation"](#).
8. Install rear window glass. Refer to [GW-25, "Removal and Installation"](#).
9. Install windshield glass. Refer to [GW-12, "Removal and Installation"](#).

## Outer Sill

INFOID:000000009464980

## OUTER SILL - EARLY PRODUCTION MODELS

Early Production Models

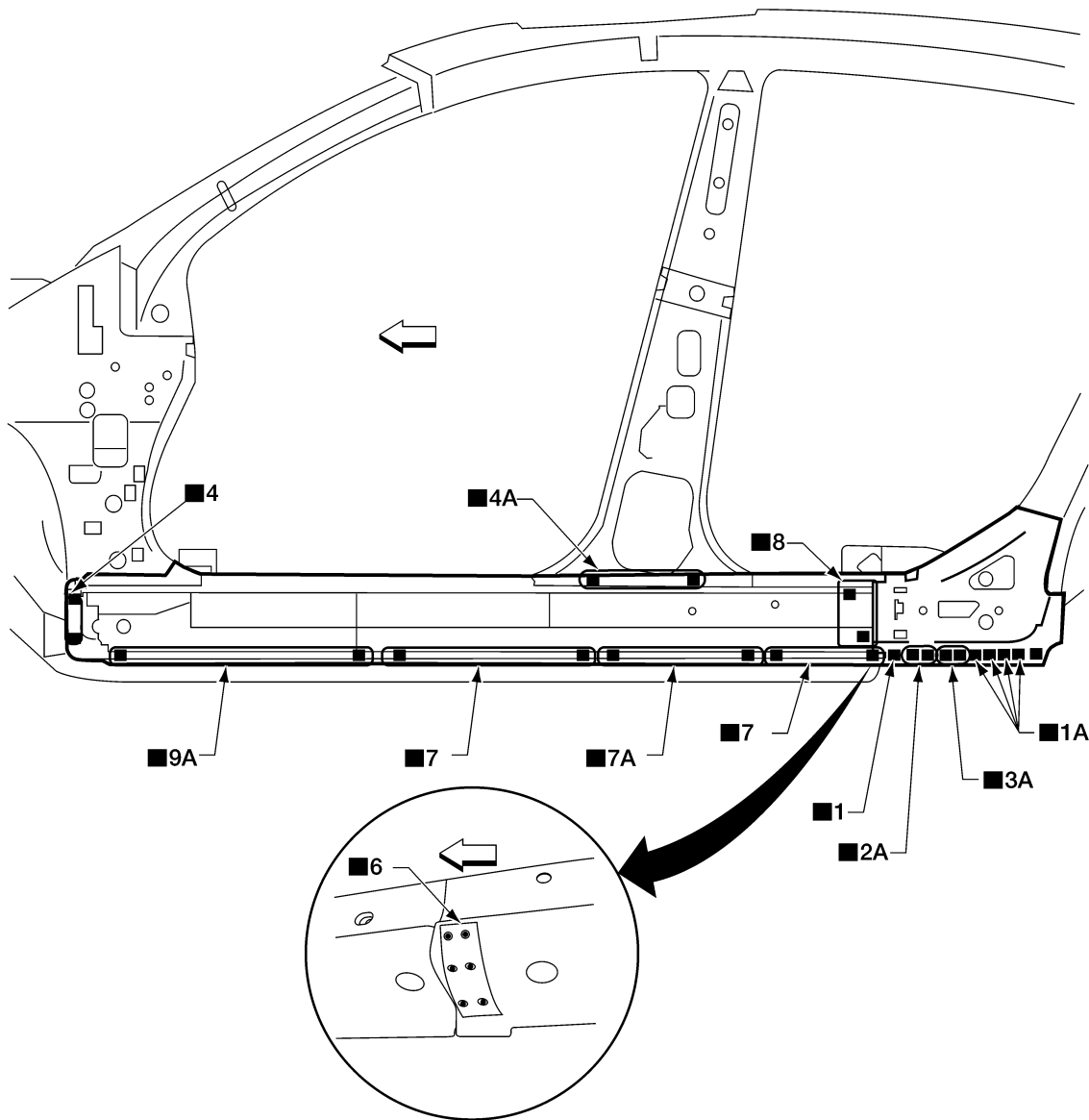
Manufacturing Plant	Smyrna: built before 10/25/2012
	Canton: built before 11/07/2012

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

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

Early Production Models



Change parts

● Outer sill reinforcement

← Front

AWKIA2234ZZ

## OUTER SILL - LATE PRODUCTION MODELS

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

BRM

# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

Late Production Models

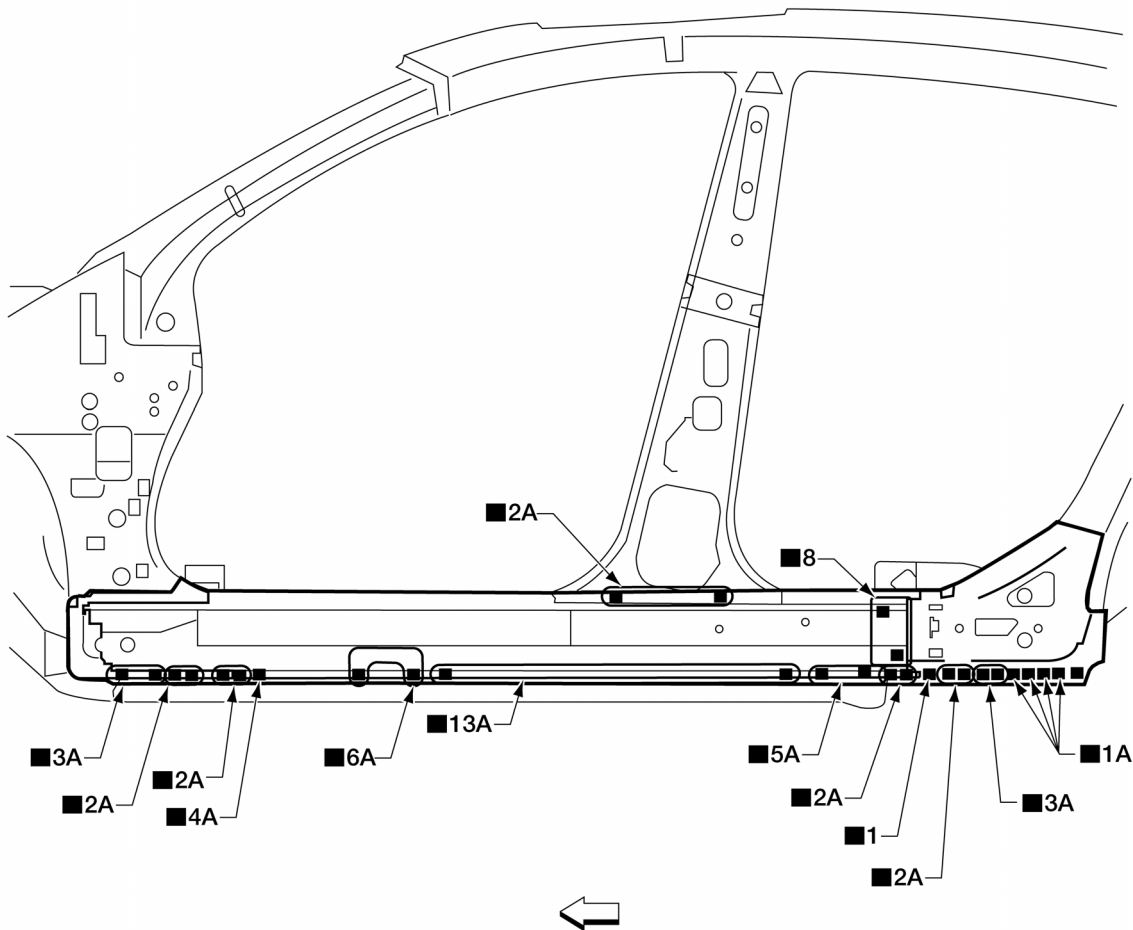
Manufacturing Plant

Smyrna: built on 10/25/2012 or later

Canton: built on 11/07/2012 or later

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

Late Production Models



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# REPLACEMENT OPERATIONS

## < REMOVAL AND INSTALLATION >

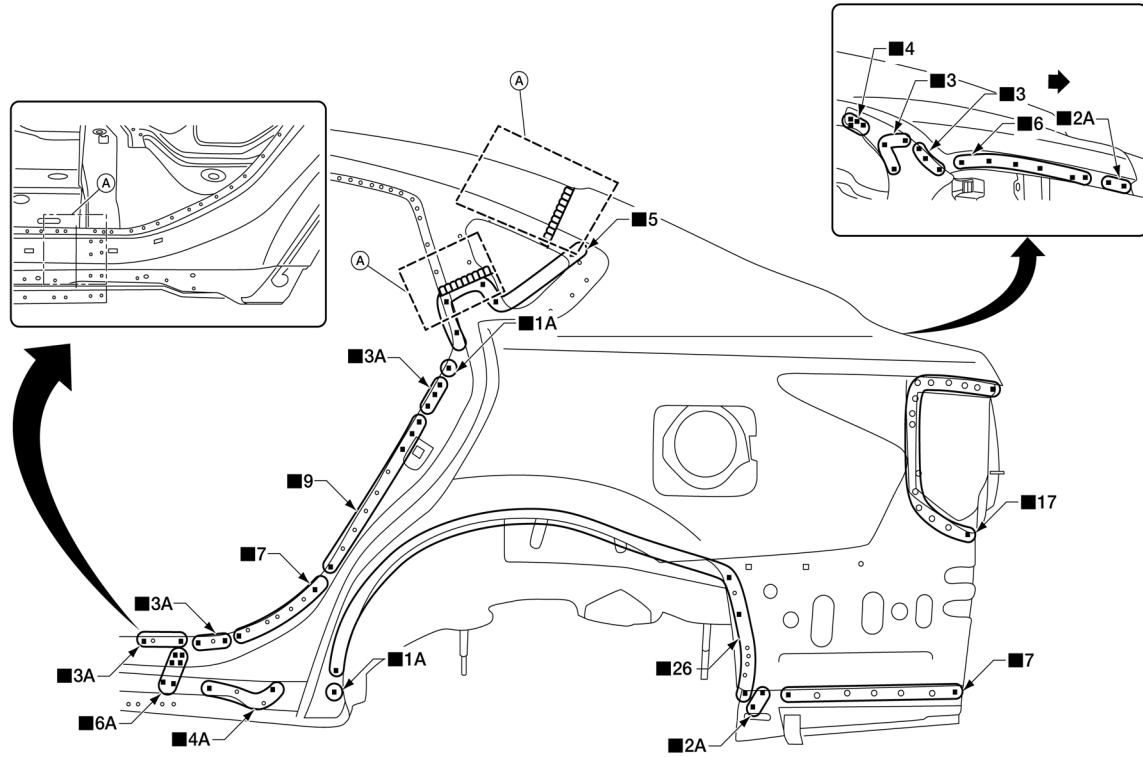
Change parts

● Outer sill reinforcement

⇐ Front

### Rear Fender

INFOID:000000009464981



ALKIA2565ZZ

Change parts

A Recommended cut zone

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

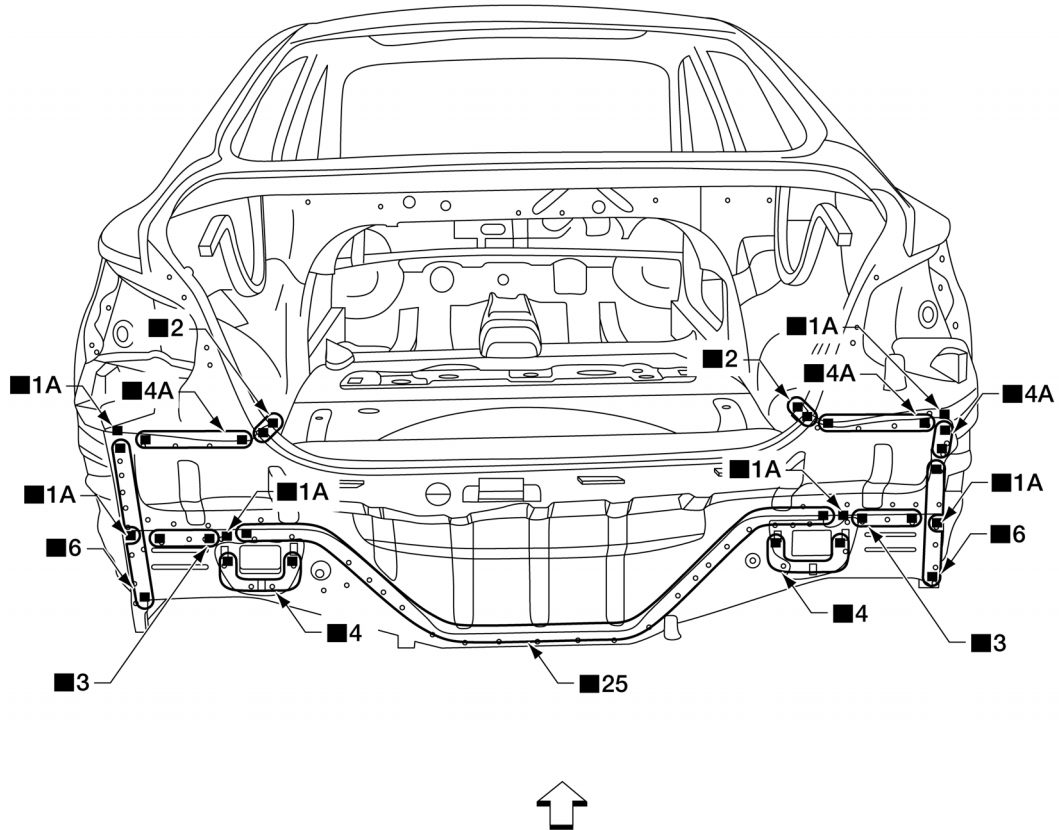
**BRM**

# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Rear Panel

INFOID:00000009464982



ALKIA2548ZZ

Change parts

- Rear panel assembly

← Front

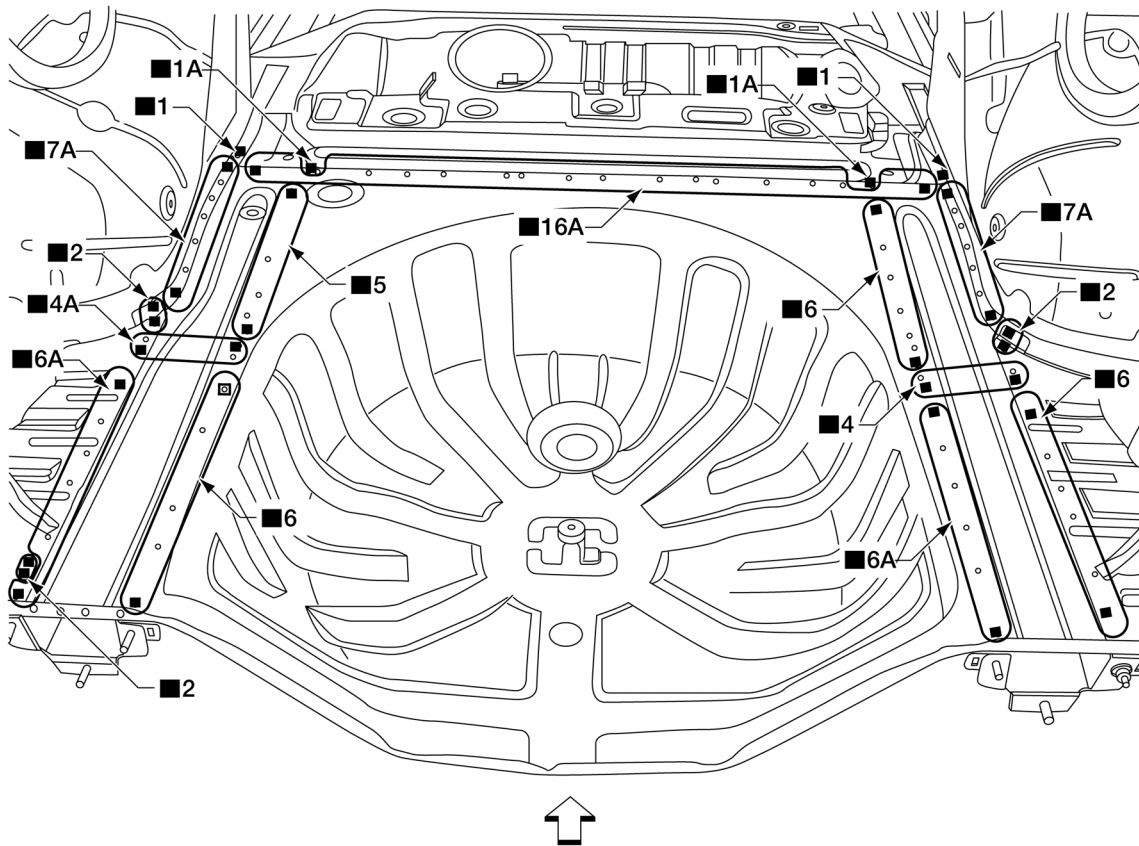
# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Rear Floor Rear

INFOID:000000009464983

- Work after rear panel assembly has been removed.



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

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Change parts

- Rear floor rear

← Front

ALKIA2547ZZ

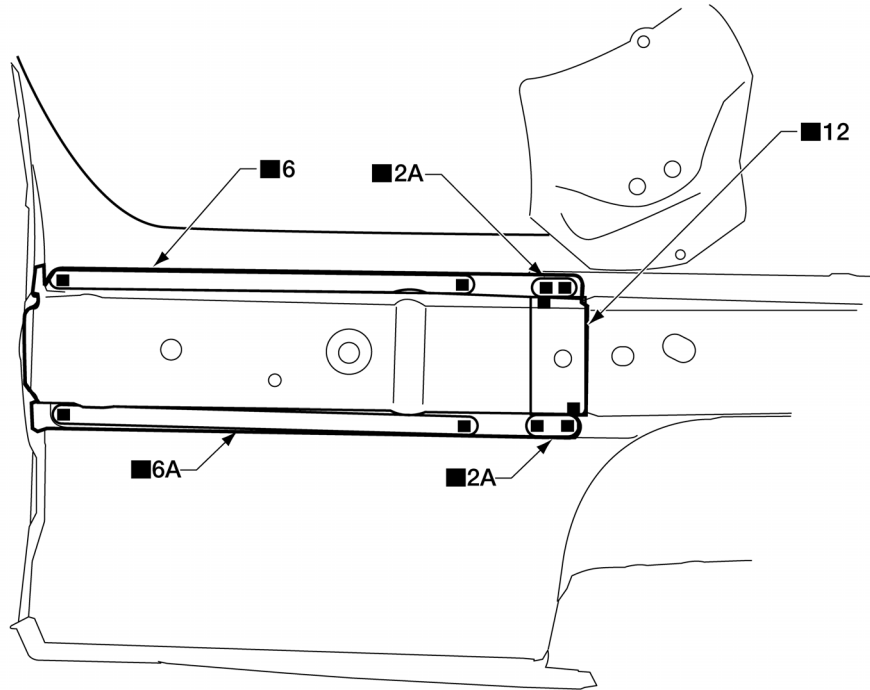
# REPLACEMENT OPERATIONS

< REMOVAL AND INSTALLATION >

## Rear Side Member Extension

INFOID:000000009464984

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



ALKIA2577ZZ

Change parts

- Rear side member extension

← Front

# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)

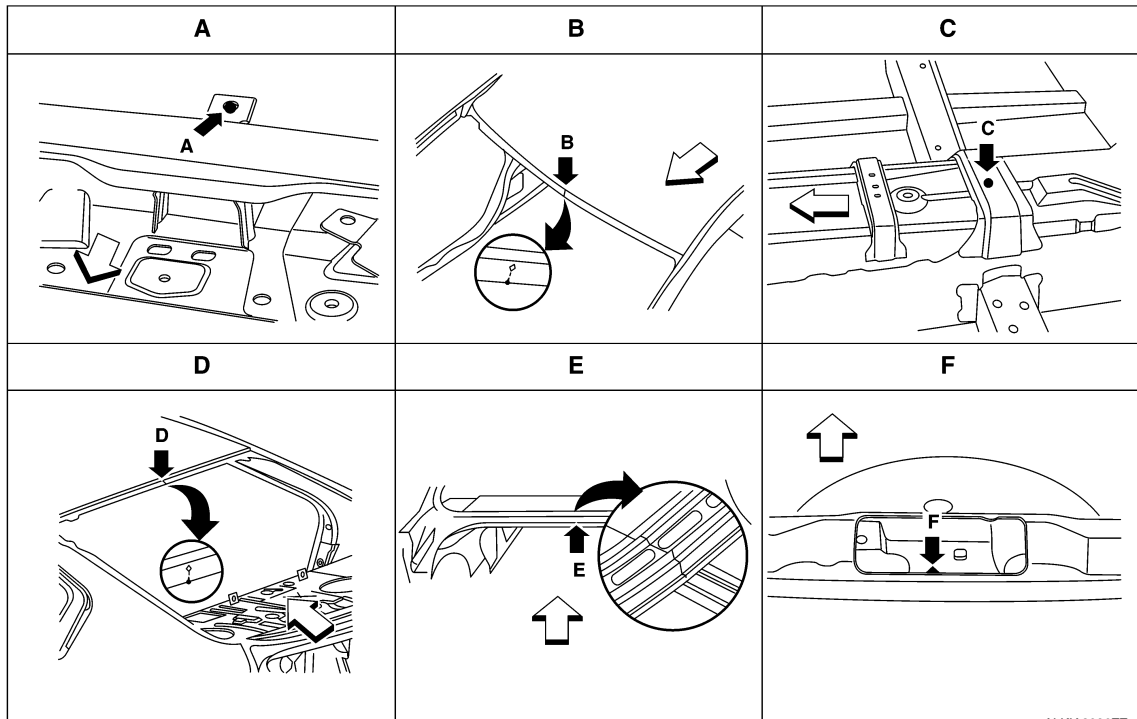
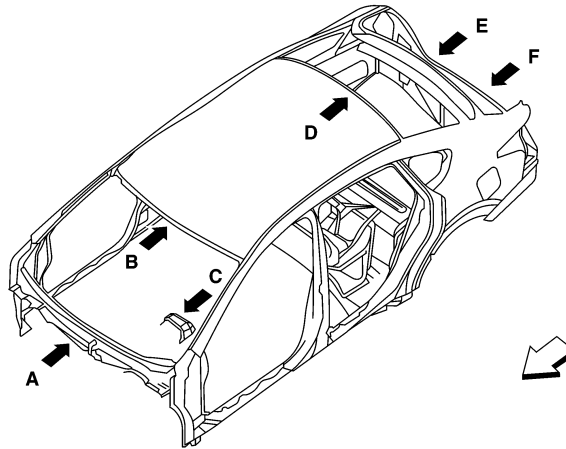
## SERVICE DATA AND SPECIFICATIONS (SDS)

### BODY ALIGNMENT

#### Body Center Marks

INFOID:000000009464985

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

Position	Description
A	Cowl top extension hole
B	Roof panel center mark for alignment
C	Shift selector bracket center hole
D	Rear roof position mark for alignment raised dimple

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

BRM

# BODY ALIGNMENT

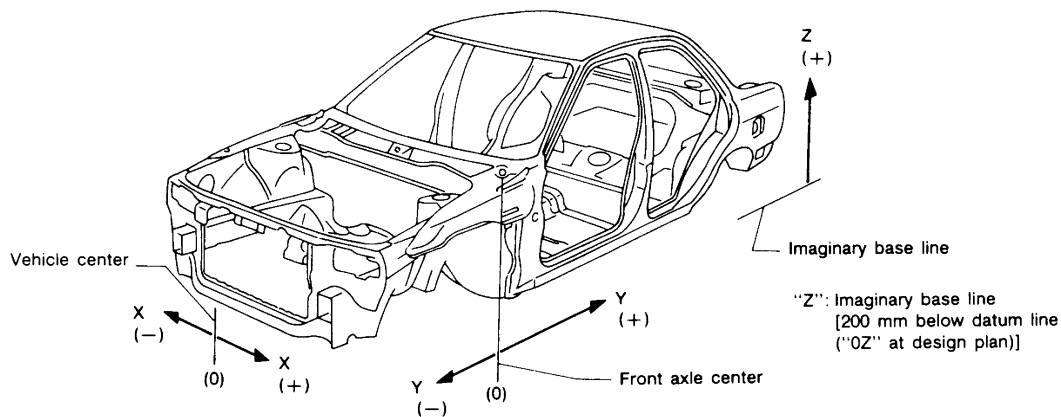
## < SERVICE DATA AND SPECIFICATIONS (SDS)

Position	Description
E	Raised dimple in rear waist flange
F	Rear panel upper notch

### Description

INFOID:000000009464986

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



PIIA0104E

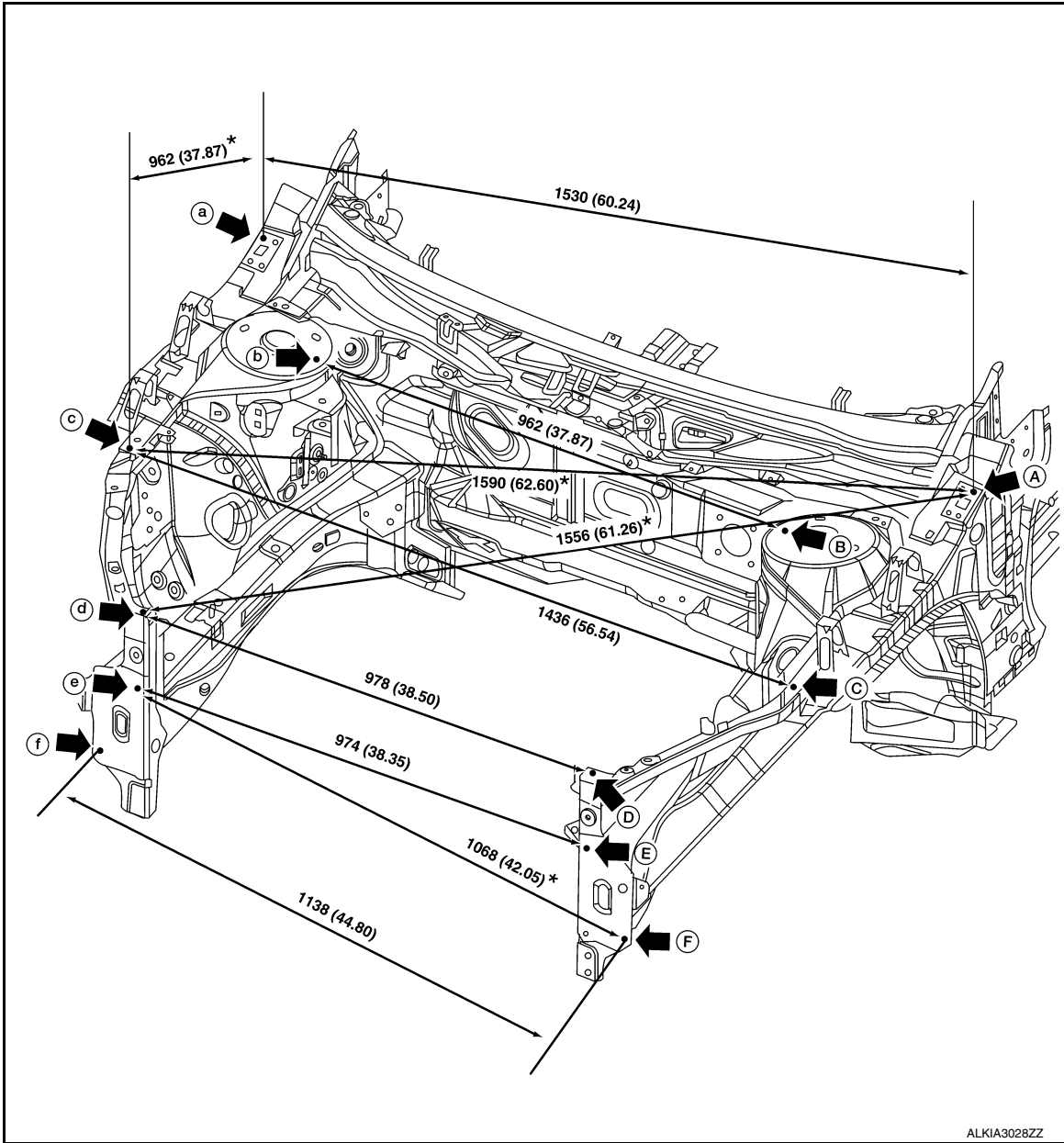
### Engine Compartment

INFOID:000000009464987

### Measurement

# BODY ALIGNMENT

## < SERVICE DATA AND SPECIFICATIONS (SDS)



Unit: mm (in)

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

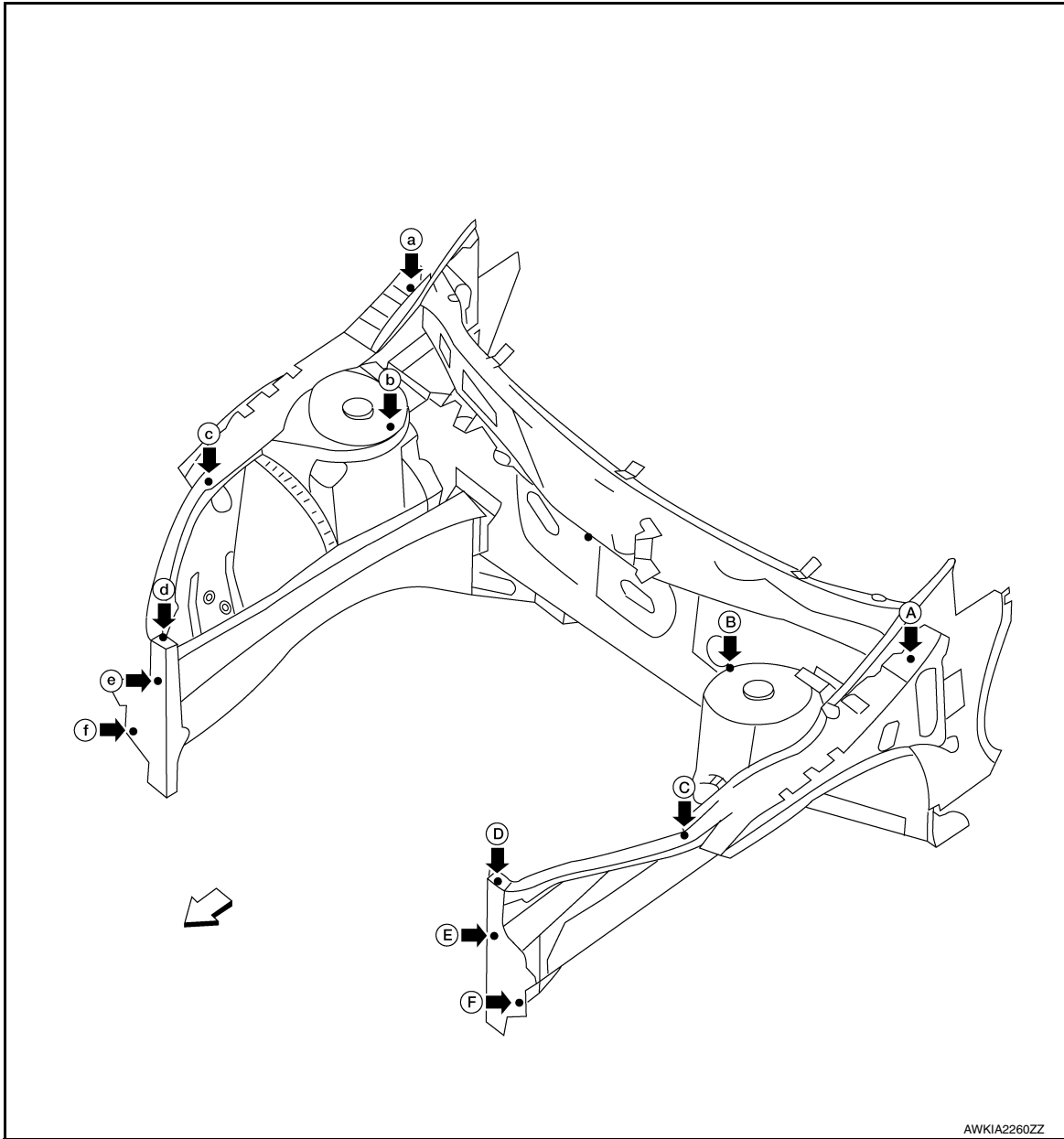
### Measurement Points

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

BRM

# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



← Front

Unit: mm (in)

Position	Description	Measurement
A - a.	Hood hinge hole	11 (0.43)
B - b.	Hole for cowl top extension	9 (0.35)
C - c.	Upper radiator core support hole	13 (0.51)
D - d.	Radiator core support body assembly hole	13 (0.51)
E - e.	Front bumper reinforcement hole upper	9 (0.35)
F - f.	Front bumper reinforcement clearance hole lower	14 (0.55)

Underbody

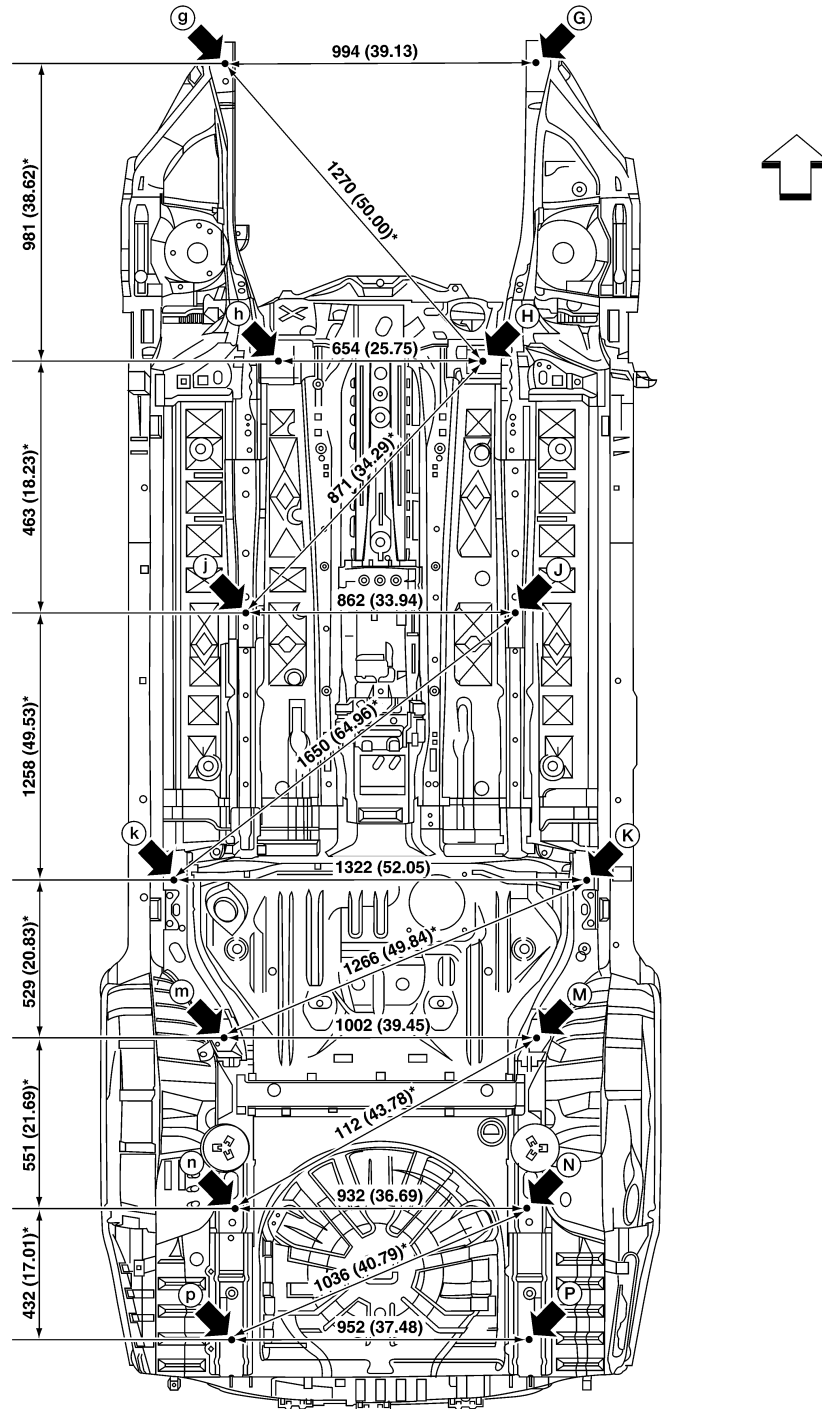
INFOID:000000009464988

Measurement



# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



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

BRM

ALKIA3031ZZ

← Front

**NOTE:**

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

- All dimensions shown are actual.
- As viewed from underside.

# BODY ALIGNMENT

## < SERVICE DATA AND SPECIFICATIONS (SDS)

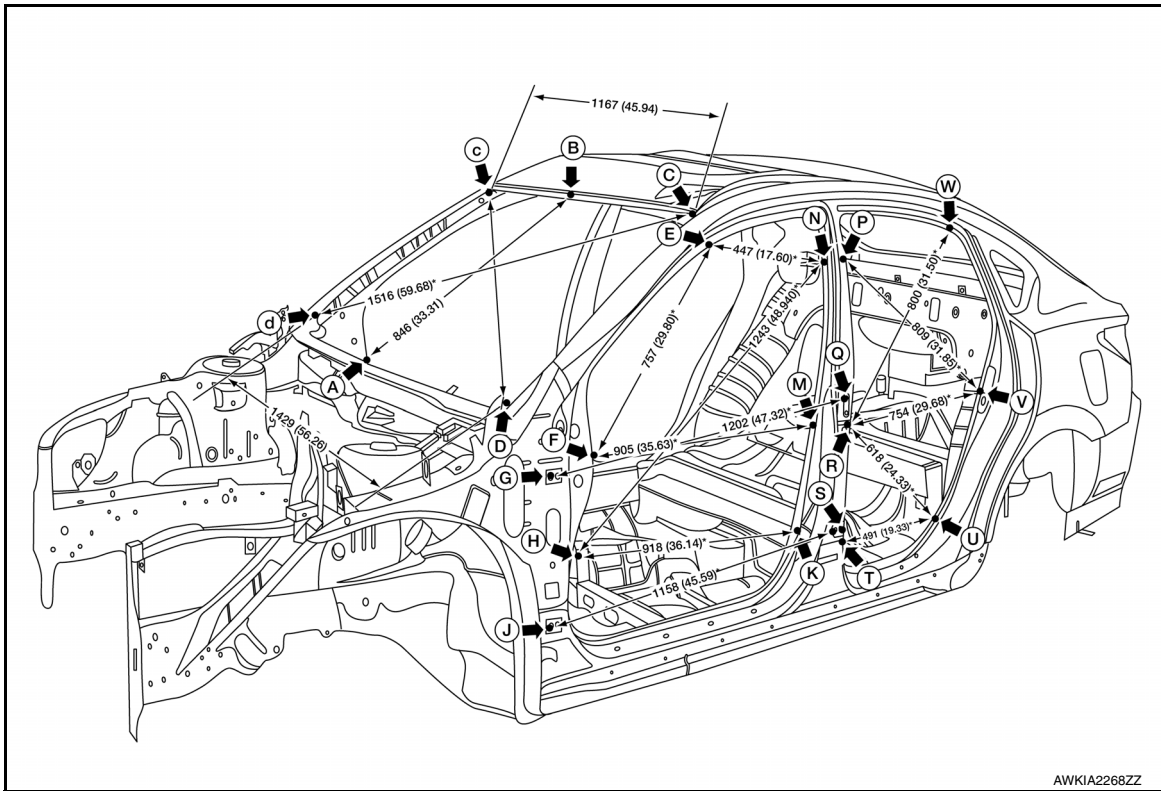
Unit: mm (in)

Position	Description
G, g	Front suspension member front weld nut hole 17 (0.67)
H, h	Front suspension member rear weld nut hole LH dia 28 (1.10) RH 28X33 (1.10 X 1.30)
J, j	Front side member center extension locating hole 20 x 16 (0.79 x 0.63)
K, k	Rear side member assembly hole 16 (0.79)
M, m	Rear suspension member front stud tip
N, n	Rear suspension member rear stud tip
P, p	Rear side member stamping hole 18 x 16 (0.7 x 0.6)

## Passenger Compartment

INFOID:000000009464989

## MEASUREMENTS



AWKIA2268ZZ

Unit: mm (in)

Position	Description
E - e	1218 (47.95)
F - f	1439 (56.65)
G - g	1589 (62.56)
H - h	1455 (57.28)
J - j	1625 (63.98)
K - k	1485 (58.46)
M - m	1463 (57.60)
N - n	1313 (51.69)
P - P	1312 (51.65)
Q - q	1582 (62.28)
R - r	1466 (57.72)
S - s	1624 (63.97)

# BODY ALIGNMENT

## < SERVICE DATA AND SPECIFICATIONS (SDS)

Position	Description
T - t	1473 (57.99)
U - u	1473 (57.99)
V - v	1450 (57.09)
W - w	1201 (47.28)

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

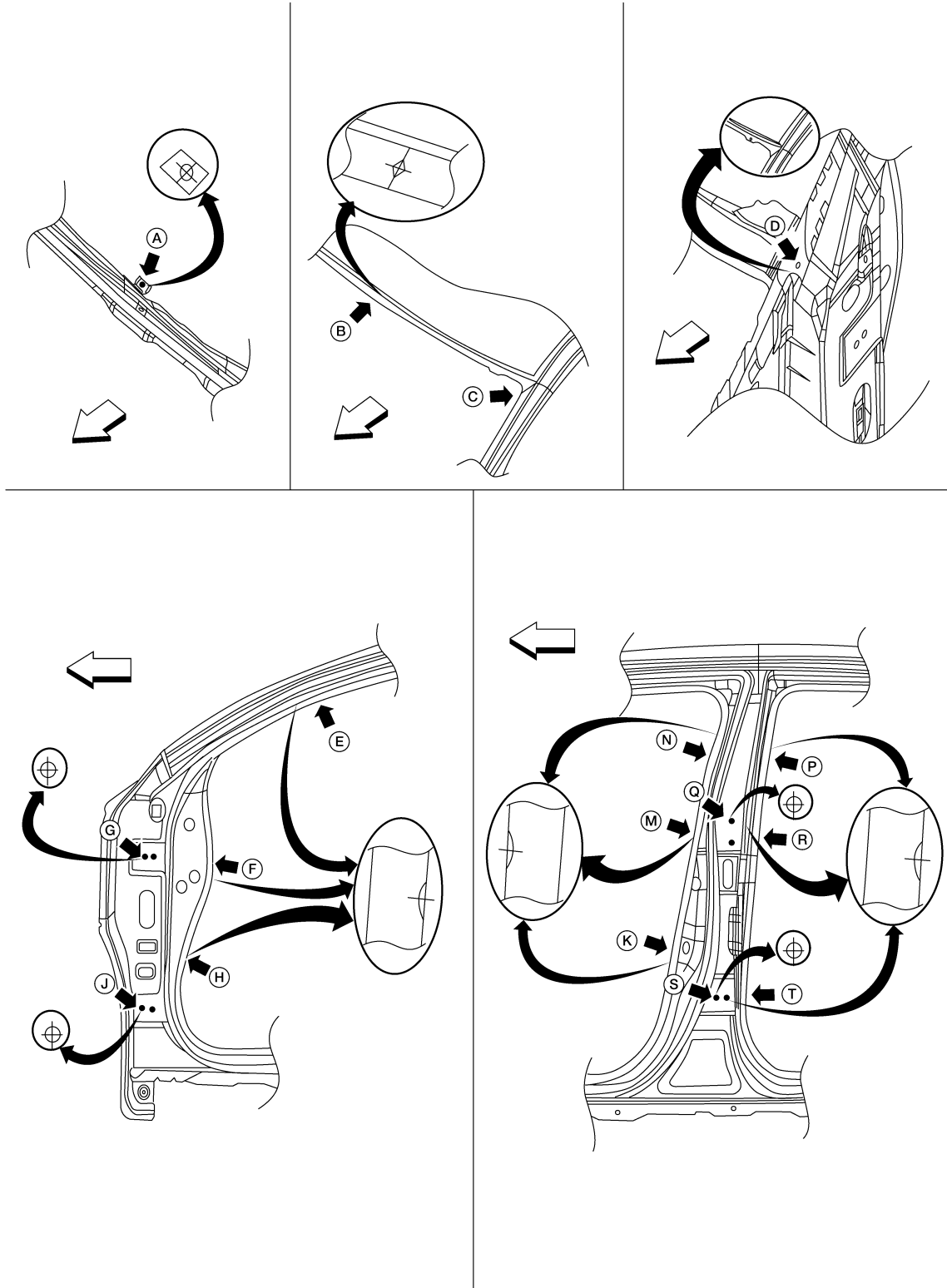
### Measurement Points

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

**BRM**

# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



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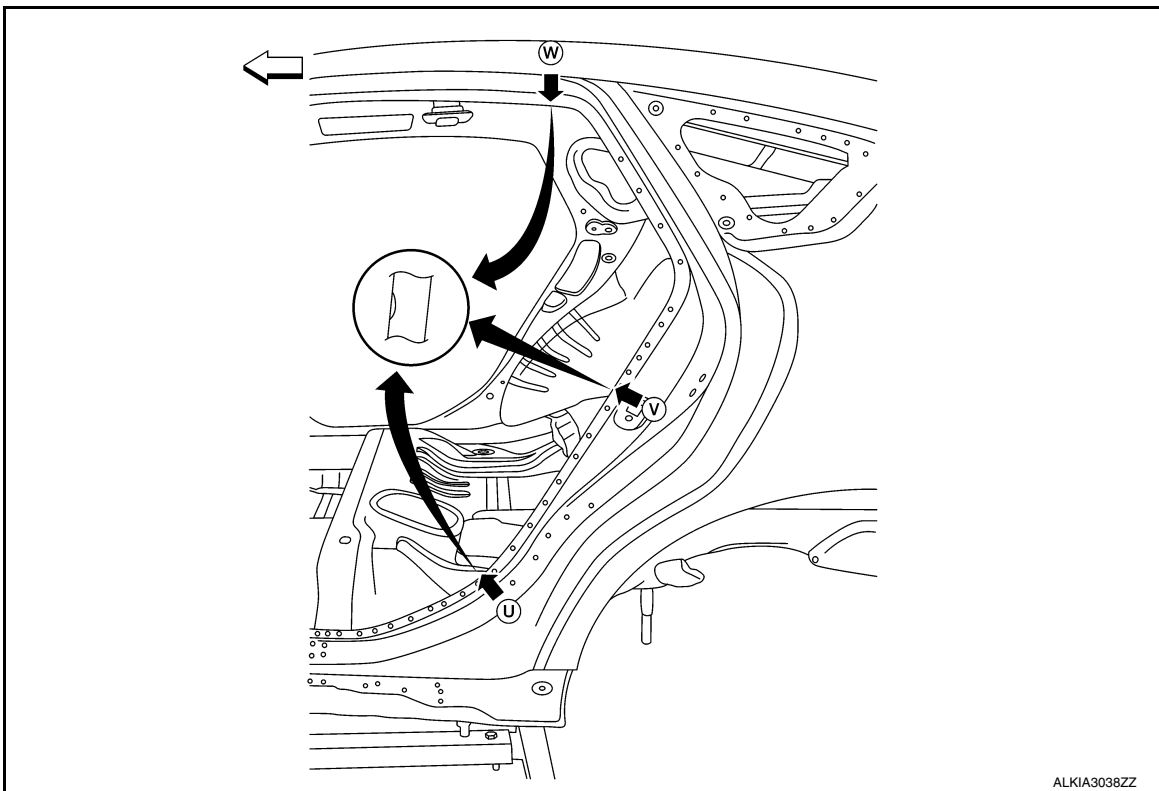
← Front

Position	Description
A.	Dash panel hole center
B.	Roof panel center mark
C - c	Body side outer corner

# BODY ALIGNMENT

## < SERVICE DATA AND SPECIFICATIONS (SDS)

Position	Description
D - d	Body side positioning mark
E - e	Body side outer notch for alignment
F - f	Body side outer notch for alignment
G - g	Body side hole for door hinge
H - h	Body side outer notch for alignment
J - j	Body side hole for door hinge
K - k	Body side outer notch for alignment
M - m	Body side outer notch for alignment
N - n	Body side outer notch for alignment
P - p	Body side outer notch for alignment
Q - q	Body side hole for door hinge
R - r	Body side outer notch for alignment
S - s	Body side hole for door hinge
T - t	Body side outer notch for alignment



← Front

Position	Description
U - u	Body side outer notch for alignment
V - v	Body side outer notch for alignment
W - w	Body side outer notch for alignment

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

**BRM**

# BODY ALIGNMENT

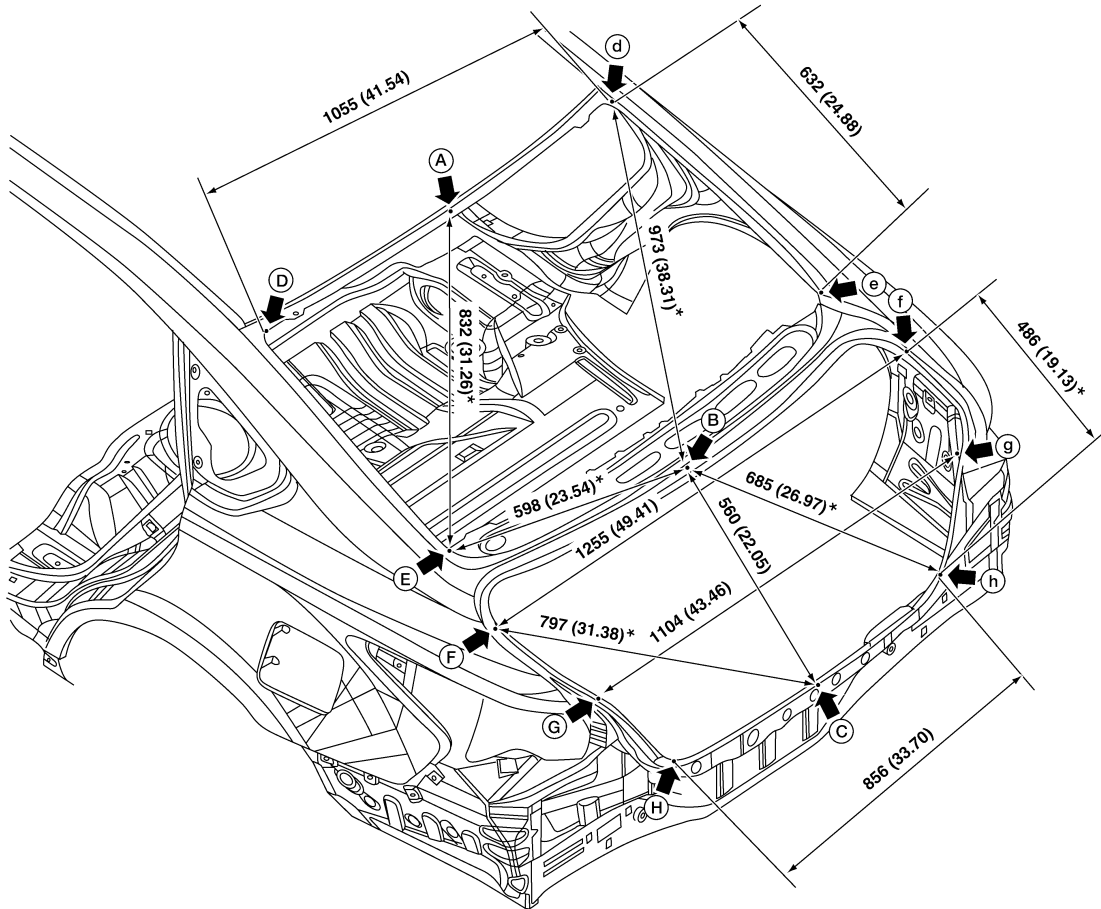
< SERVICE DATA AND SPECIFICATIONS (SDS)

## Rear Body

INFOID:000000009464990

### BODY CENTER MARKS

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

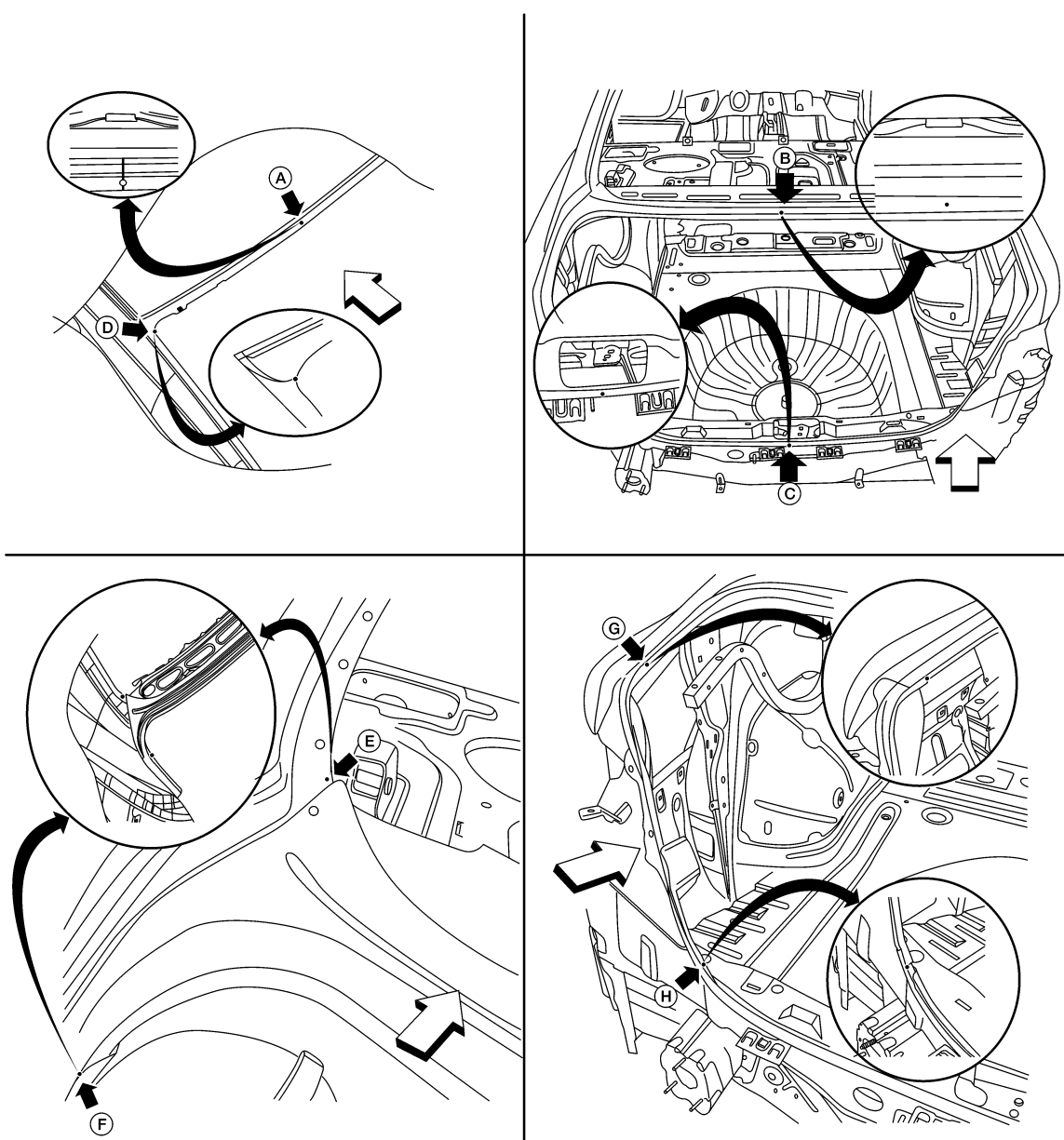


ALKIA3034ZZ

Unit: mm (in)

# BODY ALIGNMENT

< SERVICE DATA AND SPECIFICATIONS (SDS)



⇐ Front

Position	Description
A	Roof positioning mark for alignment
B	Waist rear flange mark
C	Rear end panel notch for alignment
D - d	Body side outer corner
E - e	Body side notch for alignment
F - f	Body side outer corner
G - g	Base rear combination lamp corner
H - h	Base rear combination lamp corner

A  
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D  
E  
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G  
H  
I  
J  
BRM  
L  
M  
N  
O  
P