

SECTION **BRM**
 BODY REPAIR

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BODY EXTERIOR PAINT COLOR

< FEATURES OF NEW MODEL >

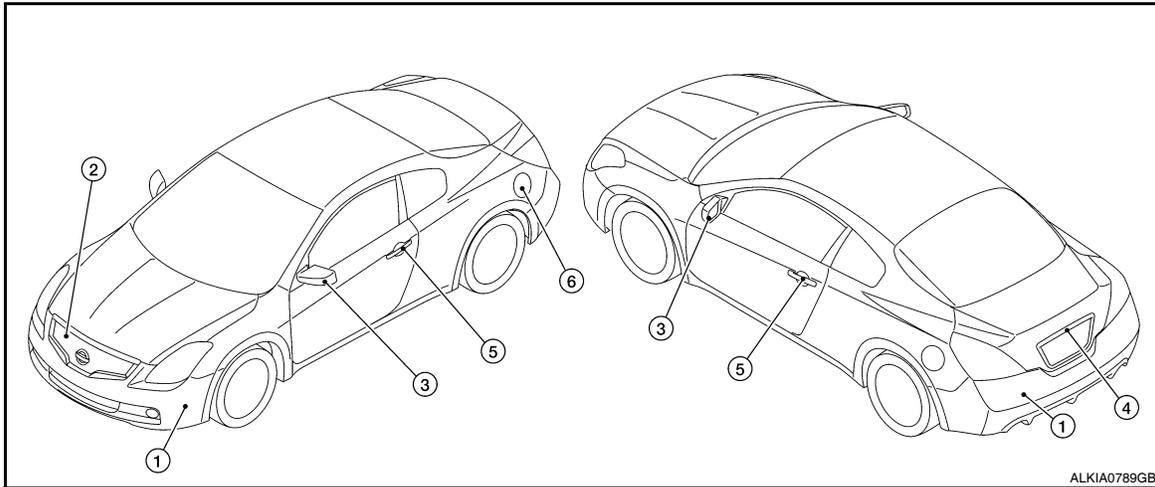
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FEATURES OF NEW MODEL

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

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Component		Color code	A20	B54	K12	K50	KH3	QX3	W40	
		Description	Red	Blue	Silver	Dark Grey	Black	White	Medium Grey	
		Paint type	M	M	M	M	S	M	M	
		Hard clear coat	×	×	×	-	-	-	-	
1	Bumper fascia	Body color	A20	B54	K12	K50	KH3	QX3	W40	
2	Front grille	Surround	Body color	A20	B54	K12	K50	KH3	QX3	W40
		Slats	Black	—	—	—	—	—	—	—
		Base	chromium-plate	Cr	Cr	Cr	Cr	Cr	Cr	Cr
3	Door outside mirror	Case	Body color	A20	B54	K12	K50	KH3	QX3	W40
		Base	Black	—	—	—	—	—	—	—
4	License plate finisher	Body color	A20	B54	K12	K50	KH3	QX3	W40	
5	Door outside handle	Body color	A20	B54	K12	K50	KH3	QX3	W40	
6	Fuel filler lid	Body color	A20	B54	K12	K50	KH3	QX3	W40	

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

HANDLING PRECAUTIONS FOR PLASTICS

< PRECAUTION >

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PRECAUTION

HANDLING PRECAUTIONS FOR PLASTICS

Precautions For Plastics

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Abbreviation	Material name	Heatresisting temperature °C(°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60(140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Poly Vinyl Chloride	80(176)	Same as above.	Poison gas is emitted when burned.
EPM/EPDM	Ethylene Propylene (Diene) copolymer	80(176)	Same as above.	Flammable
TPO/TPR	Thermoplastic Olefine/ Thermoplastic rubber	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.	
PPC	Polypropylene Composite	115 (239)	Same as above	Flammable
POM	Poly Oxymethylene	120(248)	Same as above.	Avoid battery acid.
PBT+PC	Poly Butylene Terephthalate + Polycarbonate	120(248)	Same as above.	Flammable
PA	Polyamide (Nylon)	140(284)	Same as above.	Avoid immersing in water.
PBT	Poly Butylene Terephthalate	140(284)	Same as above.	
PET	Polyester	180(356)	Same as above.	
PEI	Polyetherimide	200(392)	Same as above.	

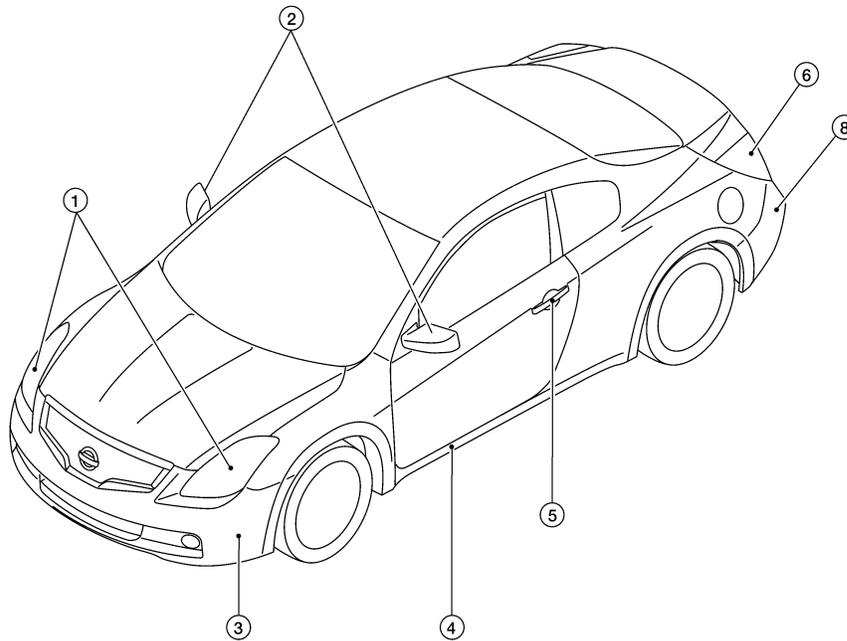
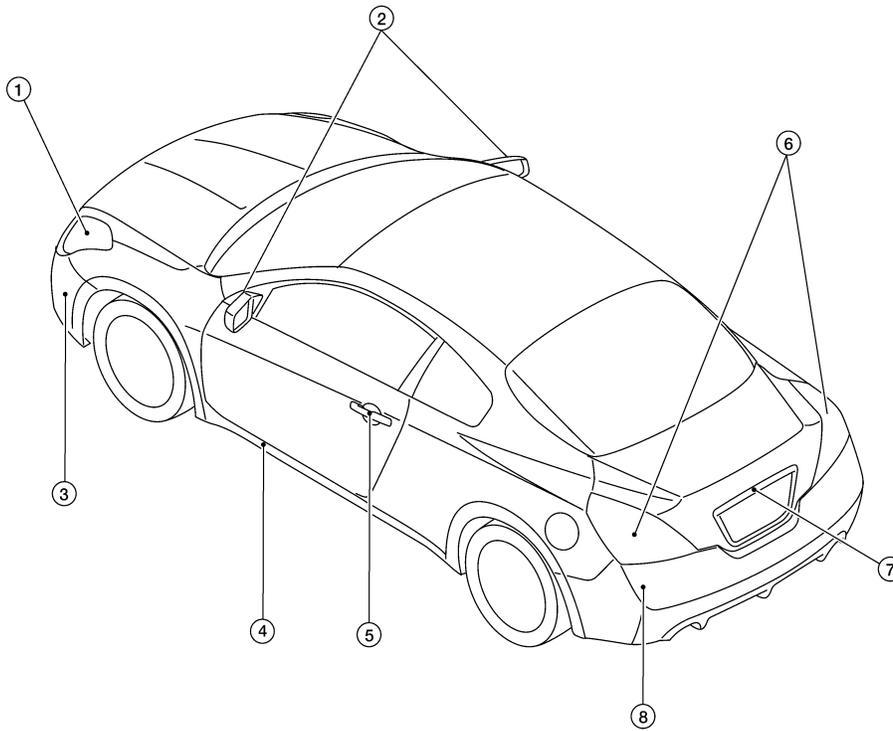
1. When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.
2. Plastic parts should be repaired and painted using methods suiting the materials' characteristics.

HANDLING PRECAUTIONS FOR PLASTICS

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LOCATION OF PLASTIC PARTS



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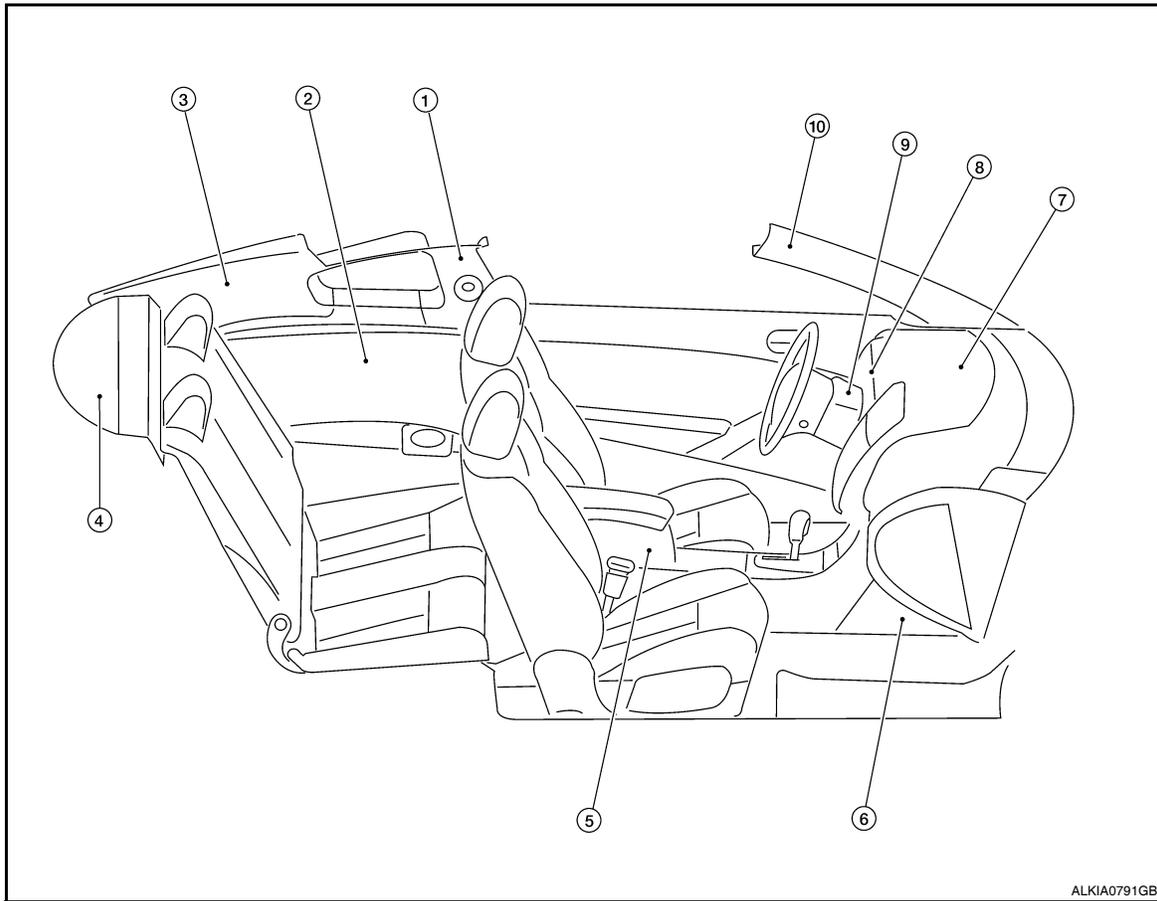
Item	Component	Abbreviation	Material
1.	Front combination lamp	Lens	PC Polycarbonate
		Housing	PP Polypropylene
2.	Door Mirror	Case	ASA Acrylonitrile Styrene Acrylate
		Skull cap	ABS Acrylonitrile Butadiene Styrene

HANDLING PRECAUTIONS FOR PLASTICS

[COUPE]

< PRECAUTION >

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



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

HANDLING PRECAUTIONS FOR PLASTICS

< PRECAUTION >

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

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BODY COMPONENT PARTS

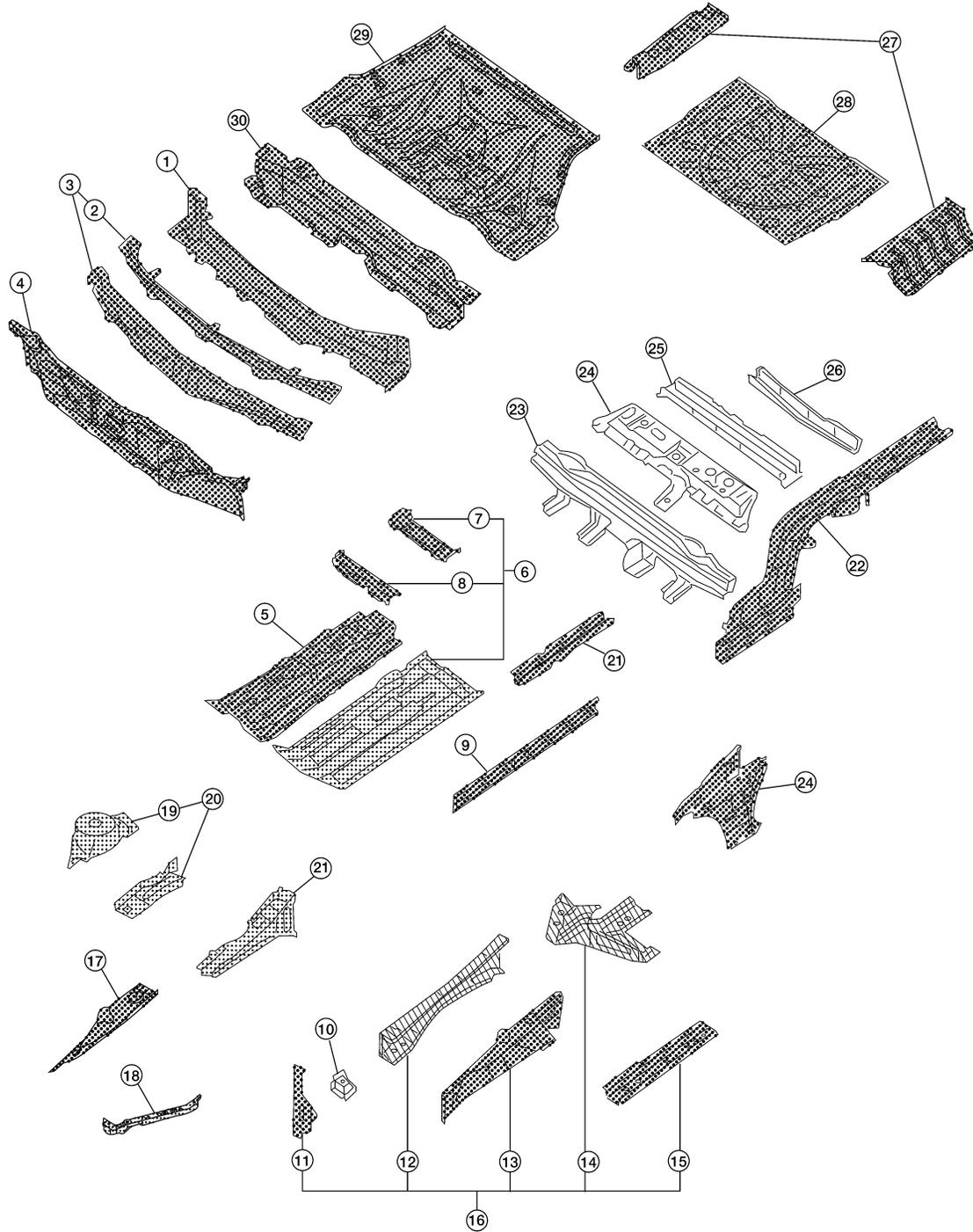
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ON-VEHICLE REPAIR BODY COMPONENT PARTS

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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BODY COMPONENT PARTS

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

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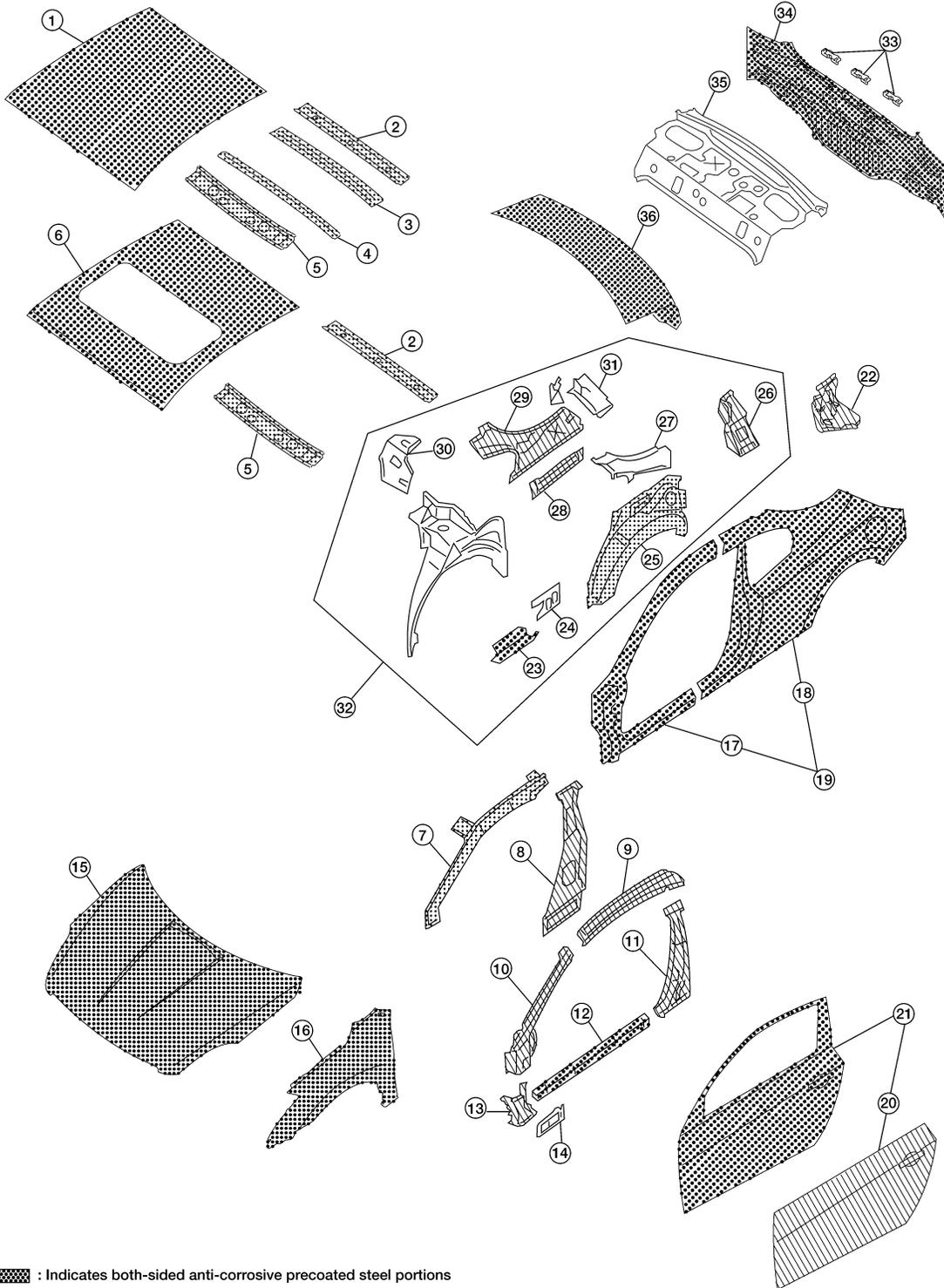
BODY COMPONENT PARTS

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Body Component Parts

INFOID:000000004205847



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

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

BODY COMPONENT PARTS

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

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CORROSION PROTECTION

Description

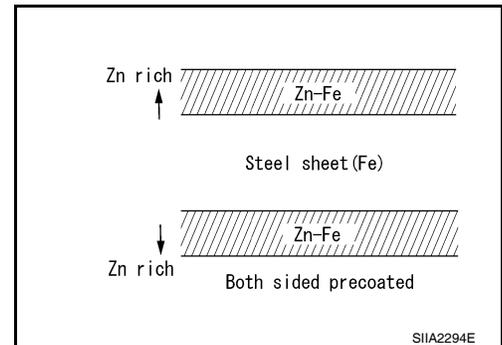
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To provide improved corrosion prevention, the following anti-corrosive measures have been implemented in NISSAN production plants. When repairing or replacing body panels, it is necessary to use the same anti-corrosive measures.

Anti-Corrosive Precoated Steel (Galvannealed Steel)

To improve repairability and corrosion resistance, a new type of anti-corrosive precoated steel sheet has been adopted replacing conventional zinc-coated steel sheet.

Galvannealed steel is electroplated and heated to form Zinc-iron alloy, which provides excellent and long term corrosion resistance with cationic electrodeposition primer.



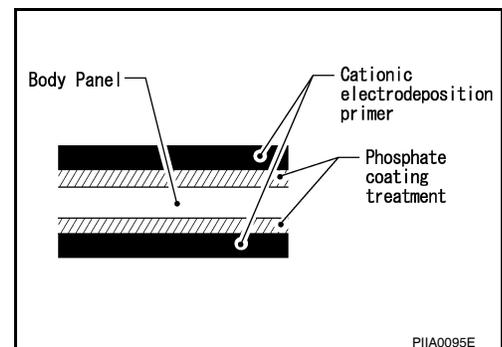
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

Phosphate Coating Treatment and Cationic Electrodeposition Primer

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

CAUTION:

Confine paint removal during welding operations to an absolute minimum.



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

Anti-Corrosive Wax

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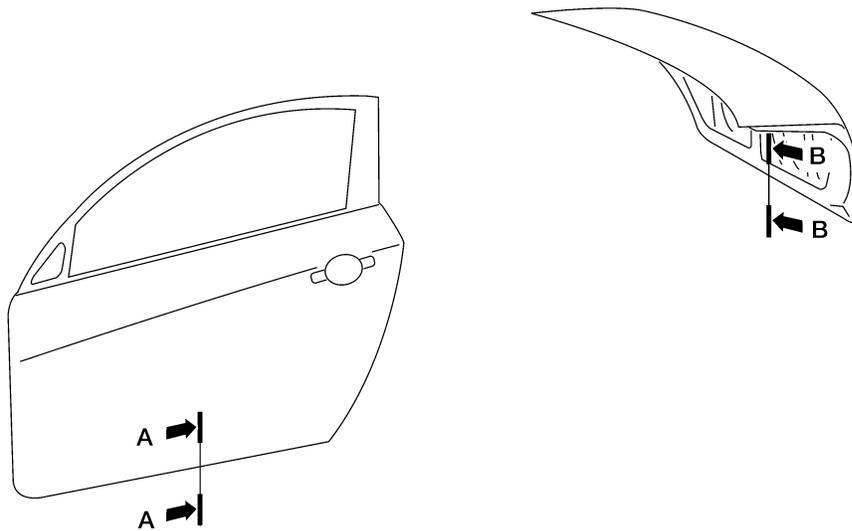
To improve corrosion resistance, anti-corrosive wax is applied inside the body sill and inside other closed sections. Accordingly, when replacing these parts, be sure to apply anti-corrosive wax to the appropriate areas of

CORROSION PROTECTION

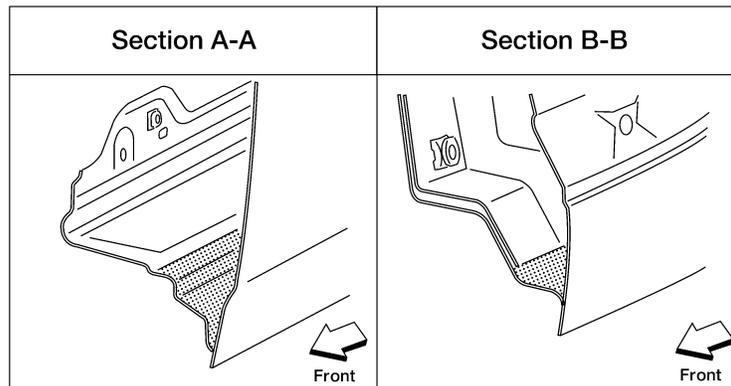
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the new parts. Select an excellent anti-corrosive wax which will penetrate after application and has a long shelf life.



 : Indicates anti-corrosive wax coated portions



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Undercoating

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.

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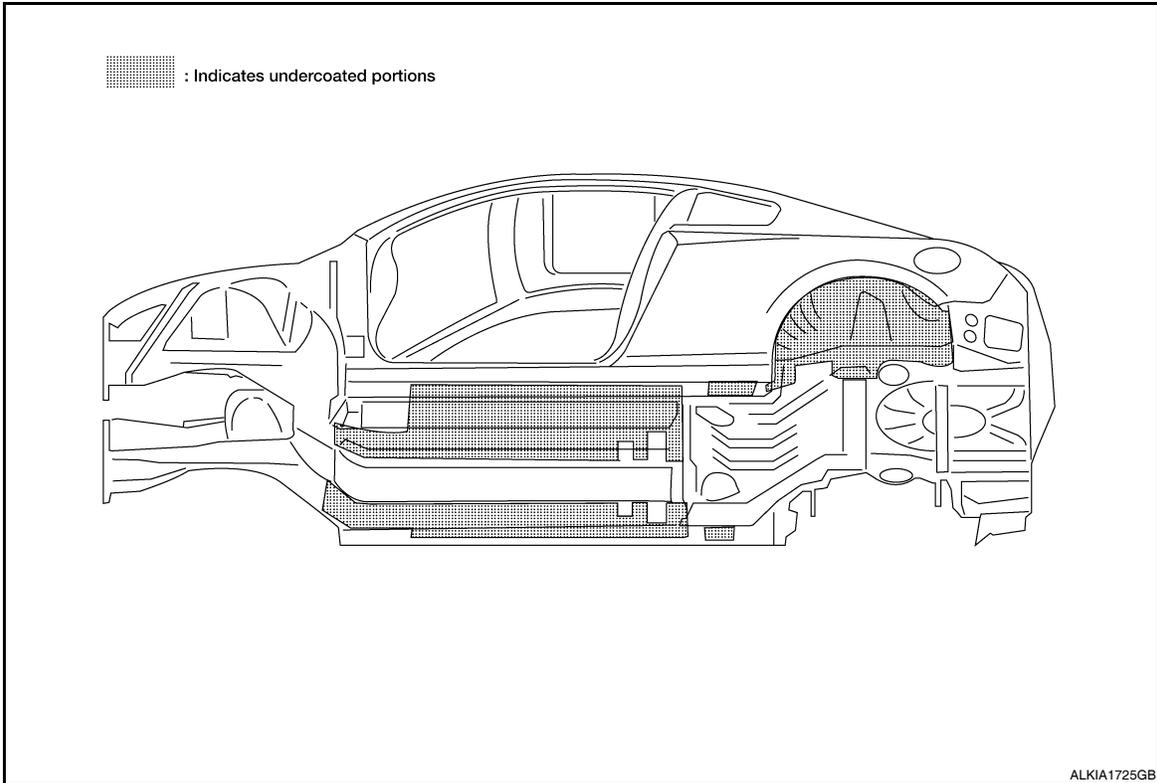
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CORROSION PROTECTION

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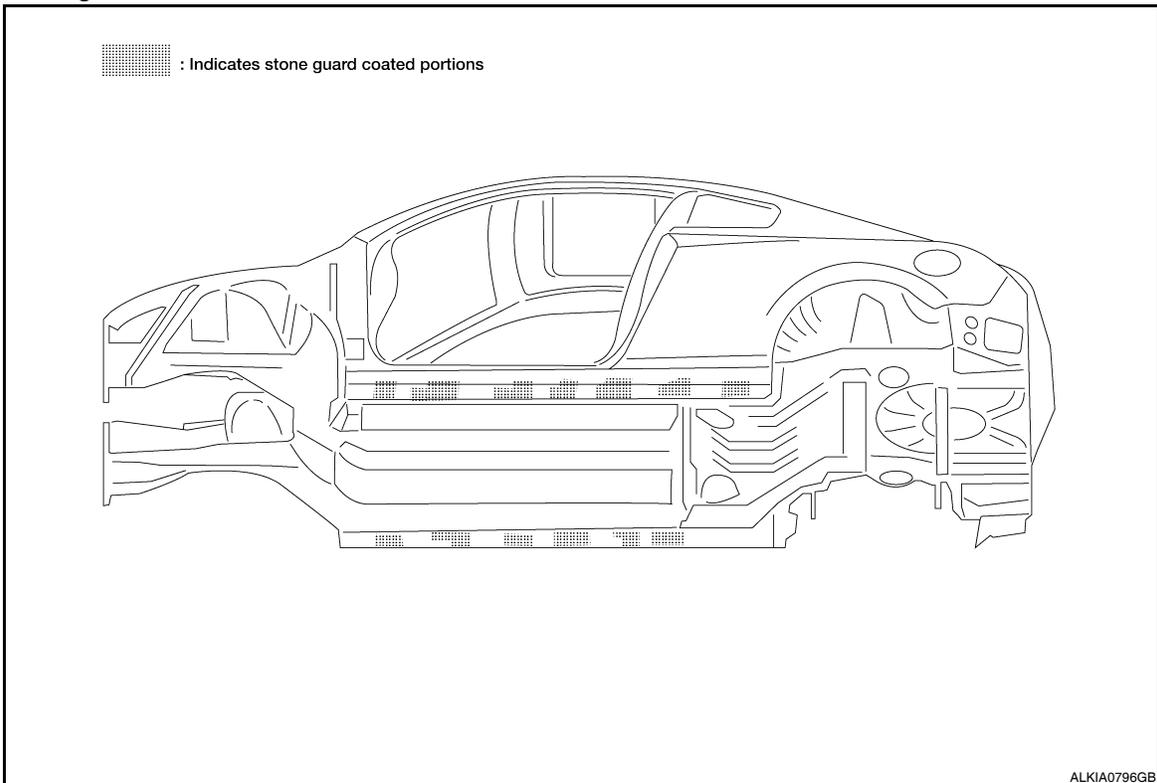
5. After putting seal on the vehicle, put undercoating on it.



Stone Guard Coat

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

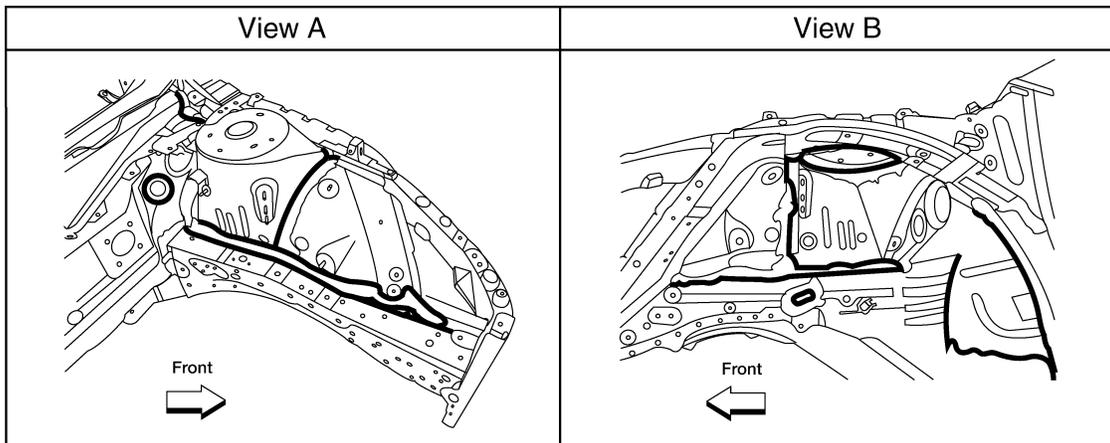
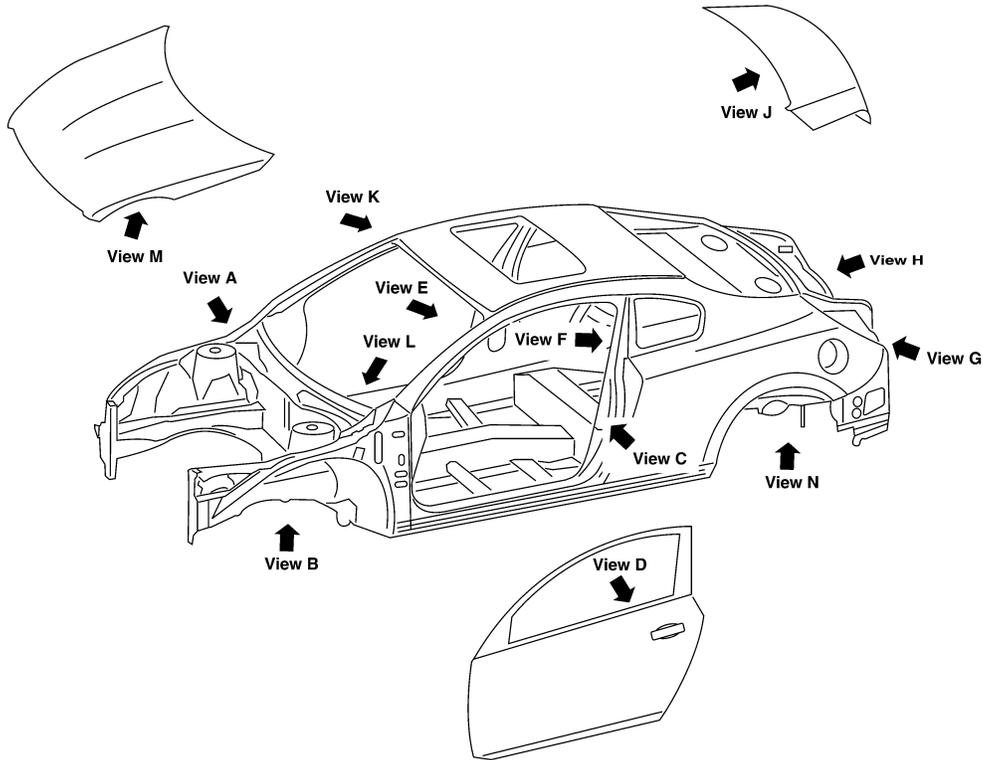


BODY SEALING

Description

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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.



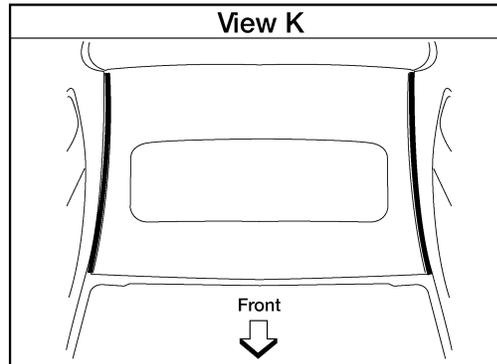
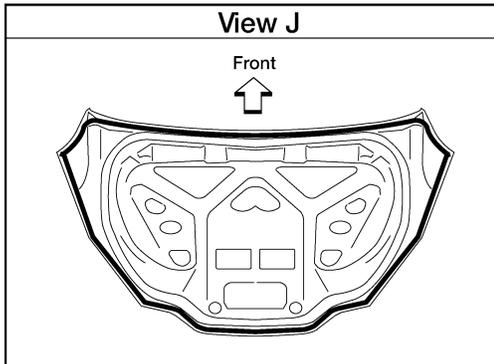
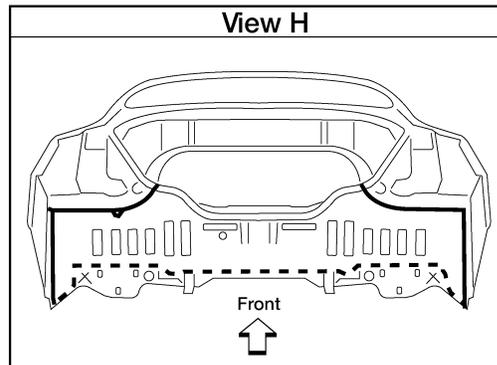
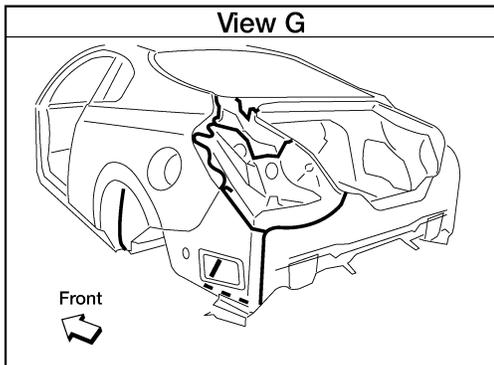
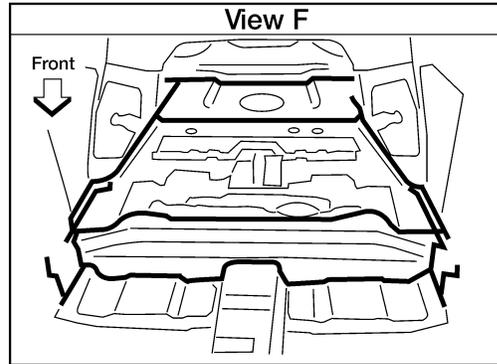
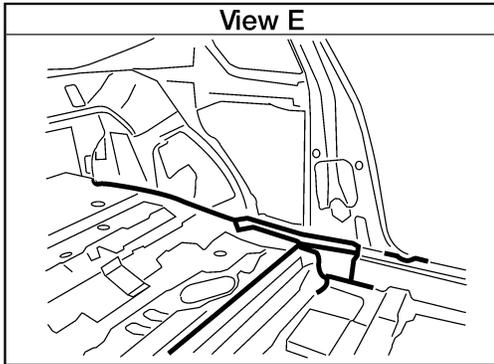
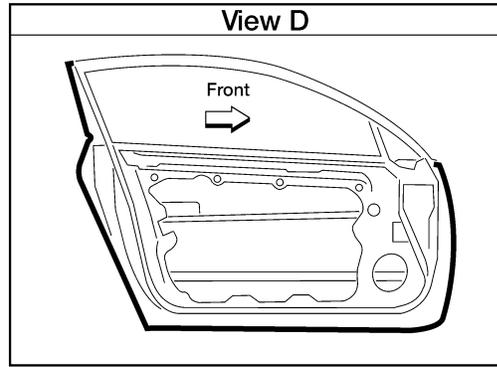
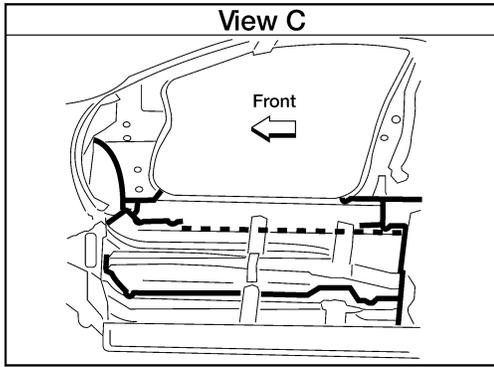
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BODY SEALING

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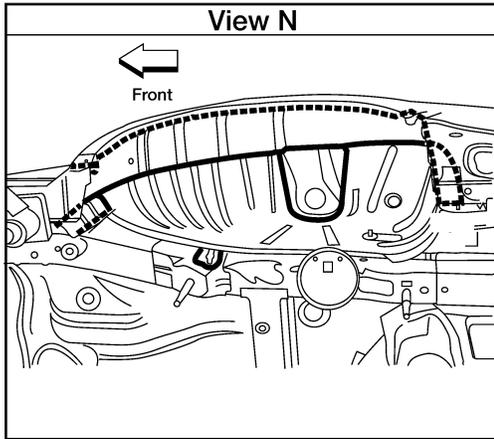
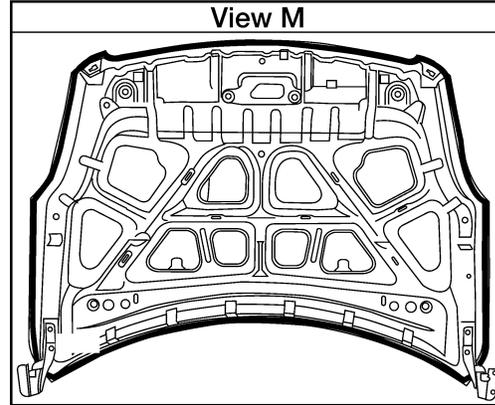
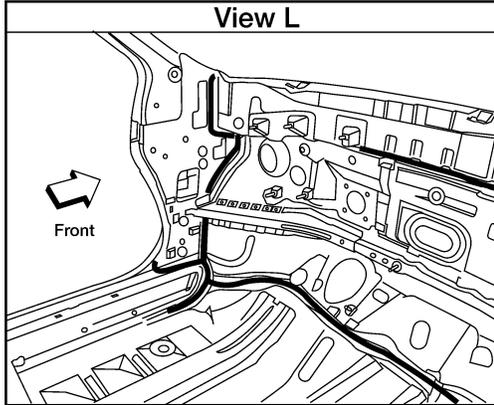


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BODY SEALING

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BODY CONSTRUCTION

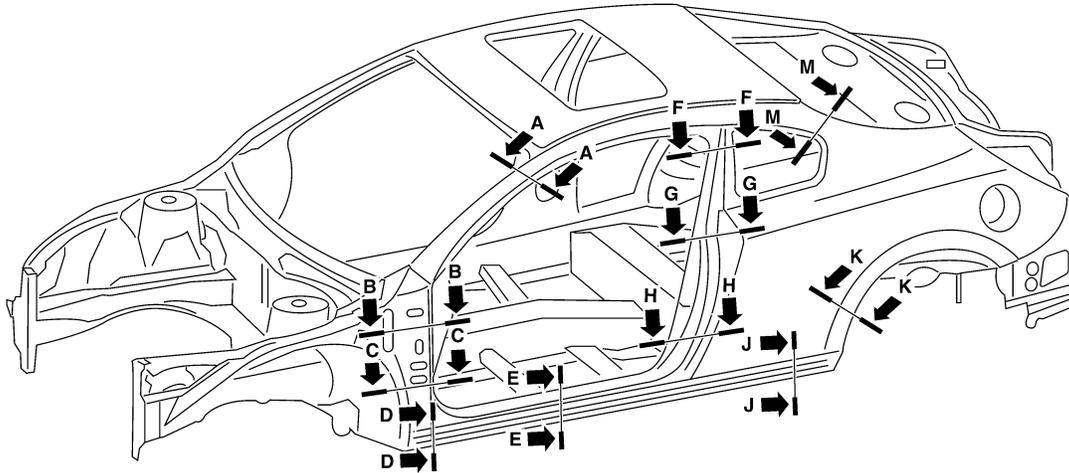
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BODY CONSTRUCTION

Body Construction

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Section A - A	Section B - B	Section C - C	Section D - D
 Front	 Front	 Front	 Front
Section E - E	Section F - F	Section G - G	Section H - H
 Front	 Front	 Front	 Front
Section J - J	Section K - K	Section M - M	
 Front	 Front	 Front	

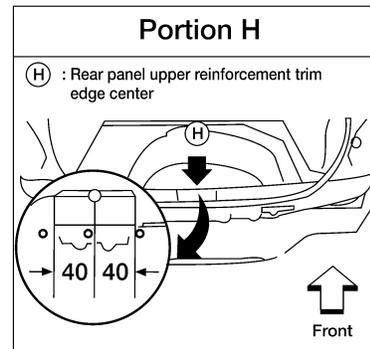
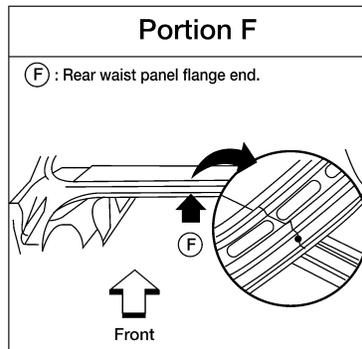
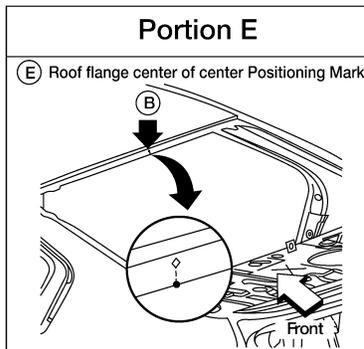
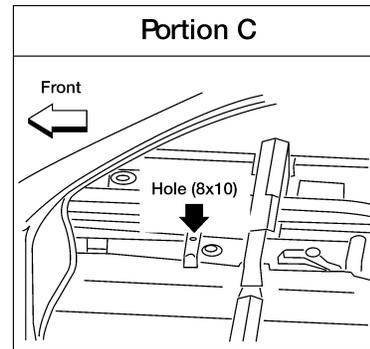
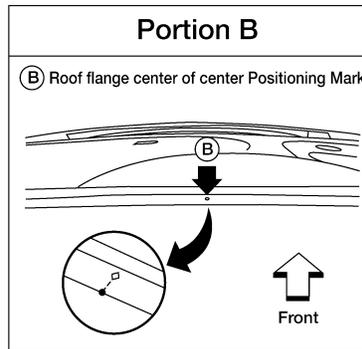
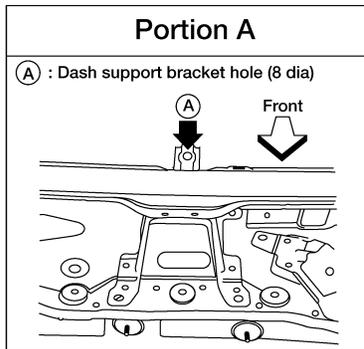
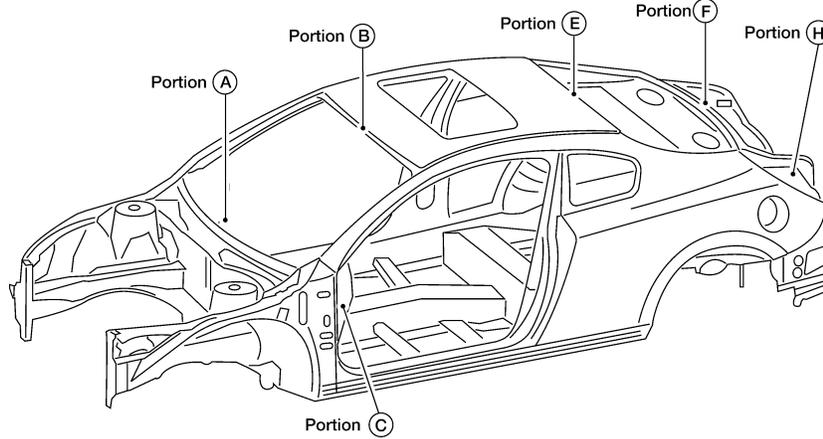
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BODY ALIGNMENT

Body Center Marks

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



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BODY ALIGNMENT

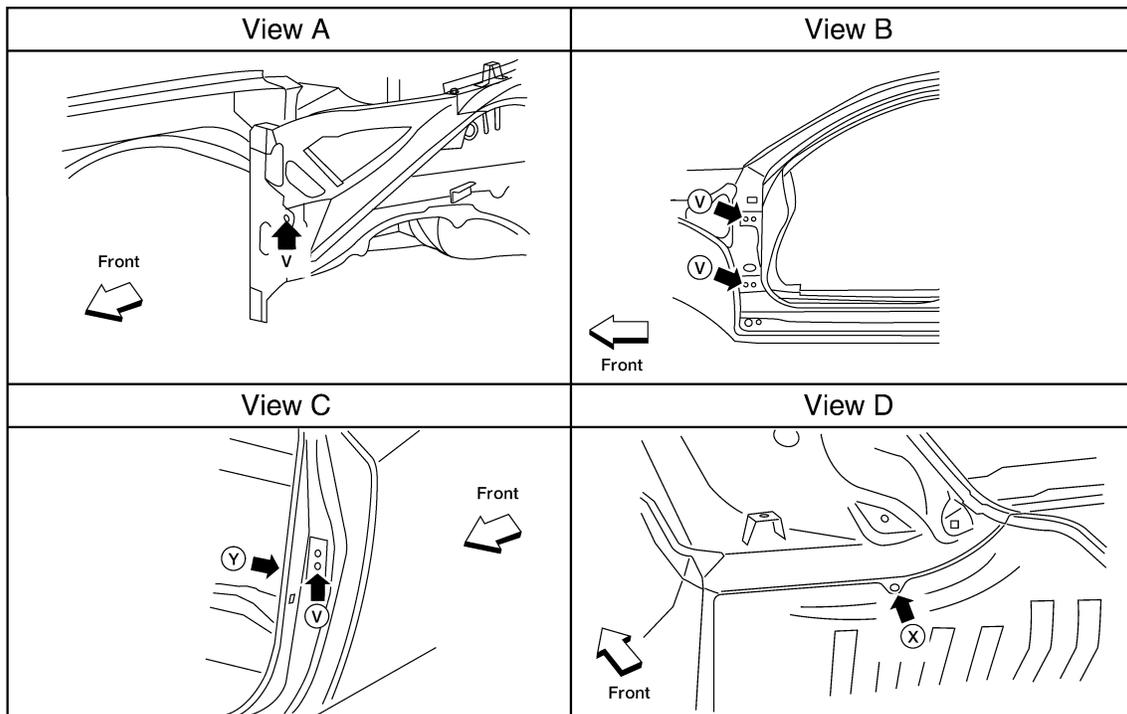
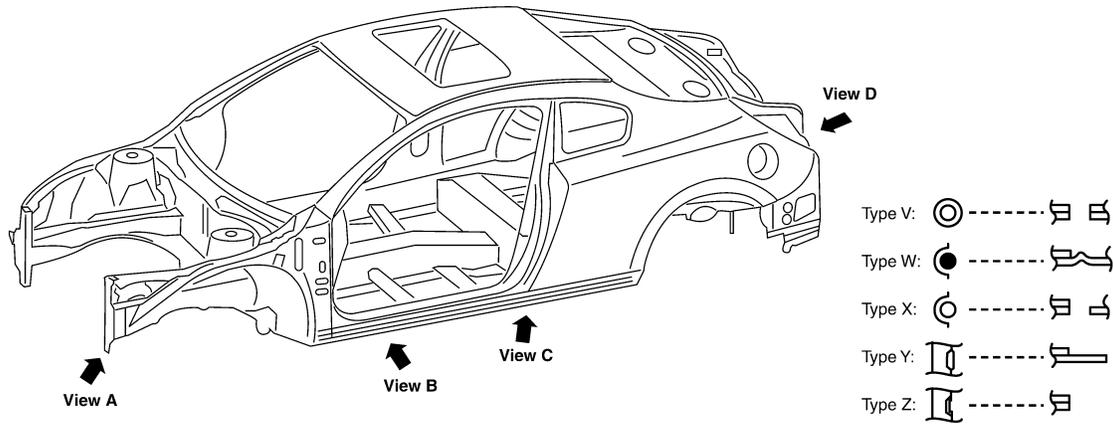
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Panel Parts Matching Marks

INFOID:000000004205855

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



ALKIA0801GB

Description

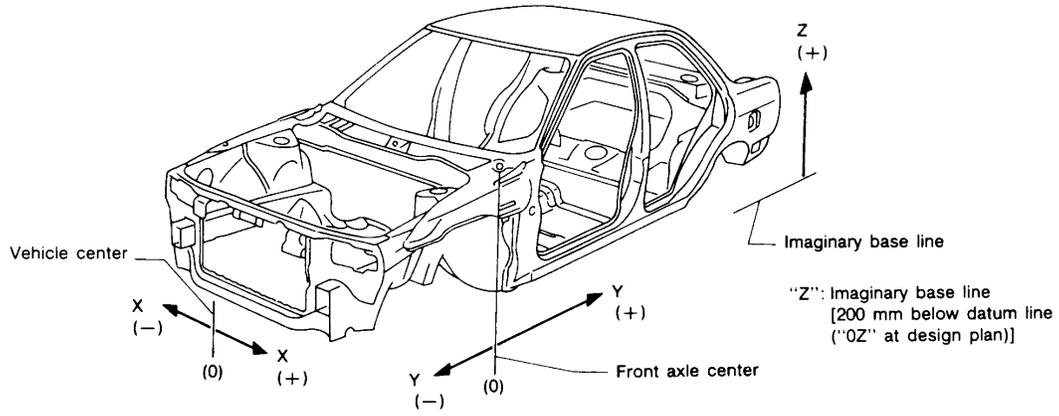
INFOID:000000004205856

- 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".

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[COUPE]



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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

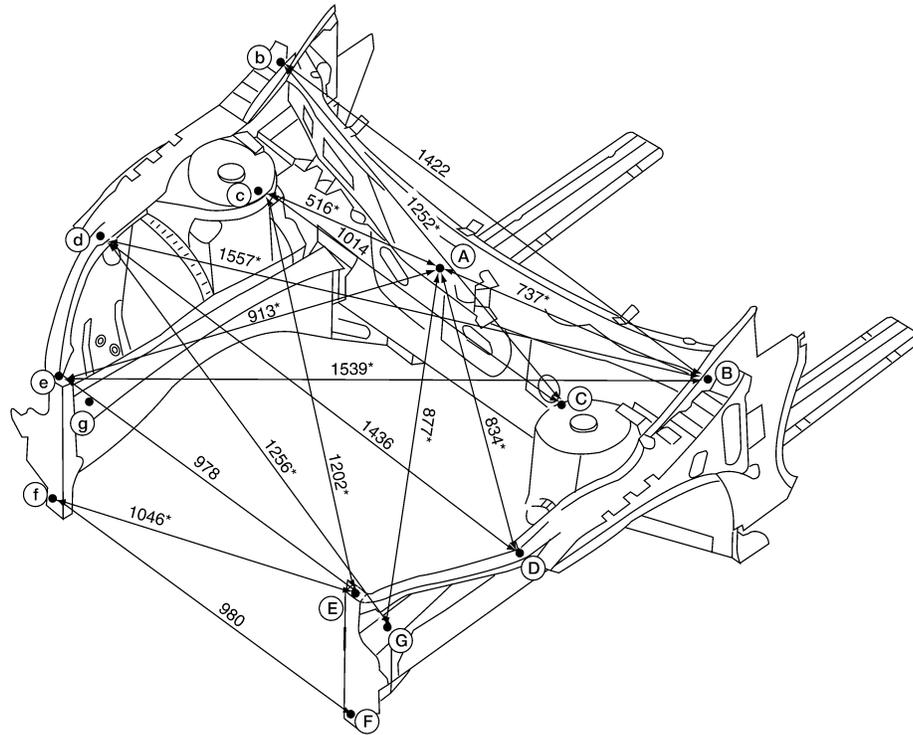
Engine Compartment

[COUPE]

INFOID:000000004205857

Measurement

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



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

Unit : mm

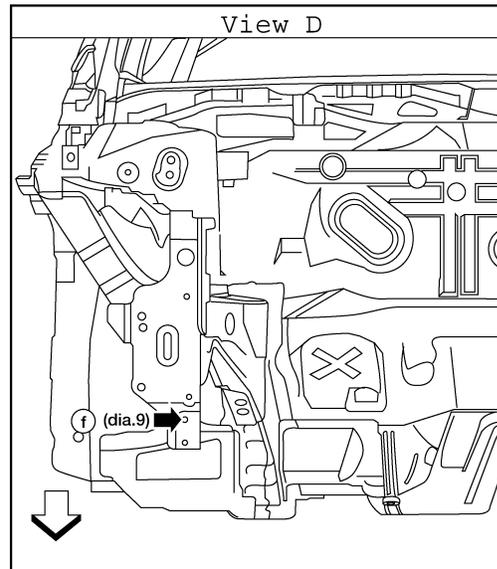
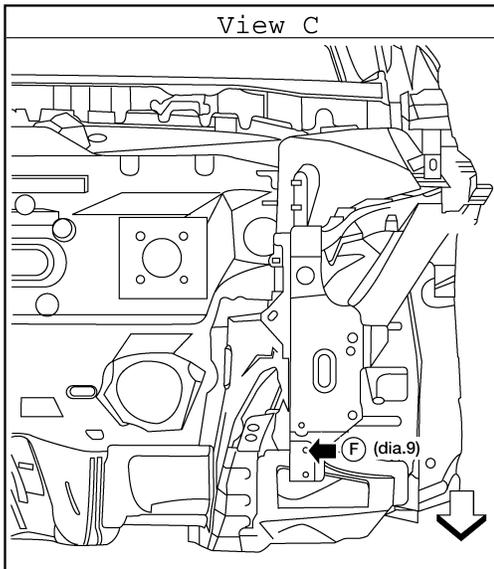
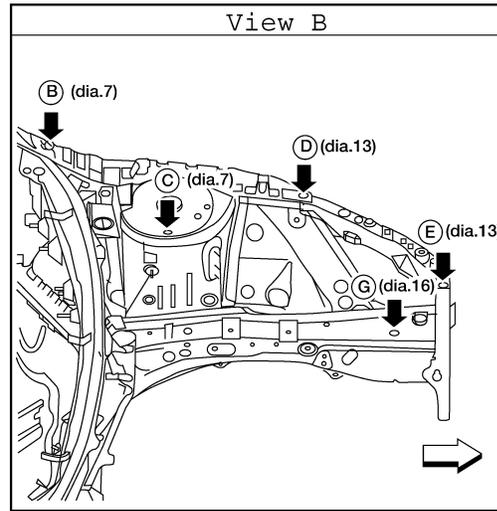
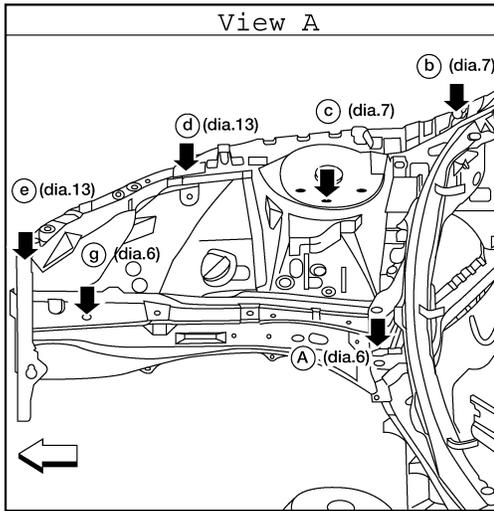
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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[COUPE]

Measurement Points



Unit : mm

AWKIA0389GB

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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[COUPE]

INFOID:000000004205858

Underbody

Measurement

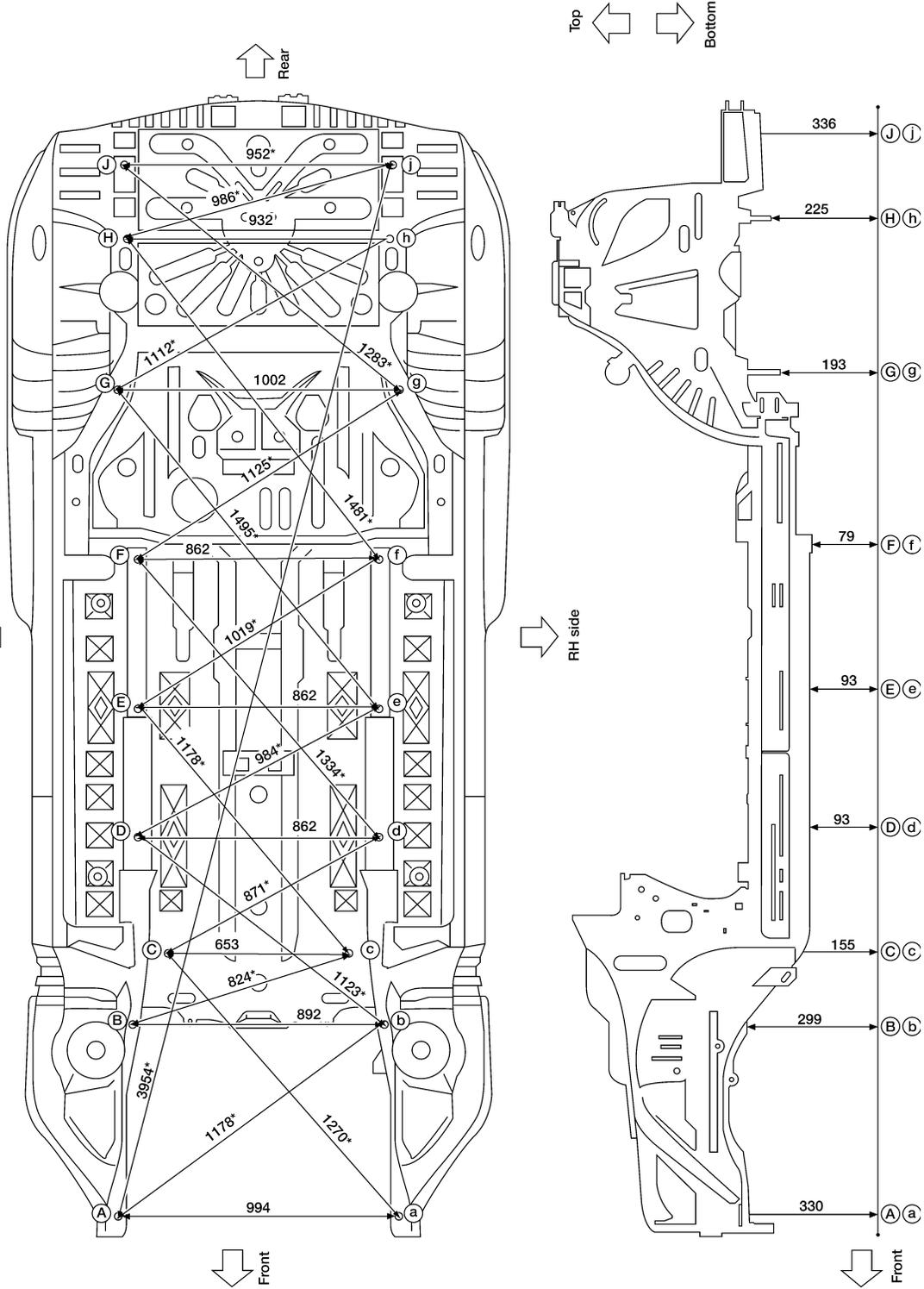
Figures marked with a (*) indicate symmetrically identical dimensions on both right and left hand sides of the vehicle.

LH side

As viewed from underside.

All dimensions indicated in this figure are actual.

Unit : mm



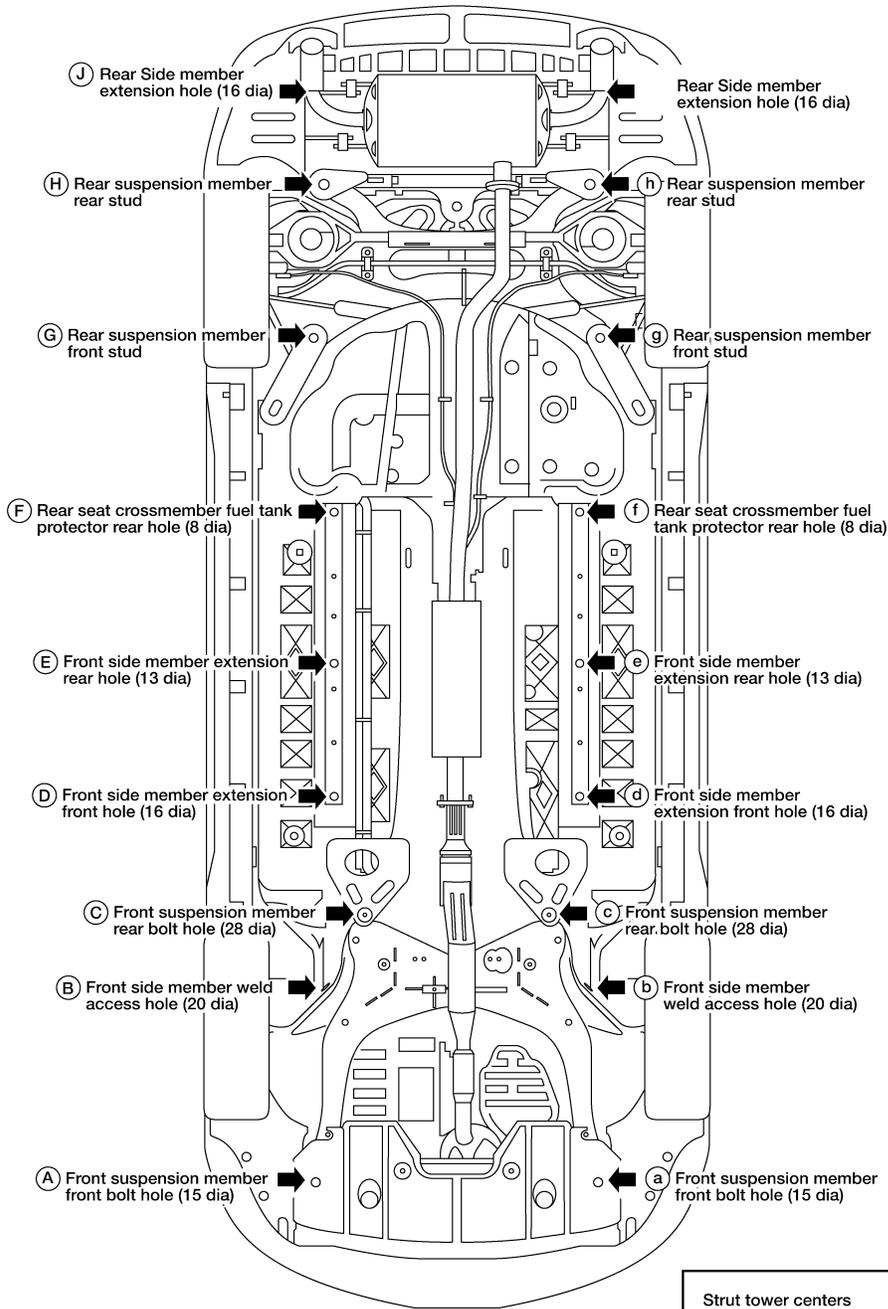
ALKIA0803GB

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[COUPE]

Measurement Points



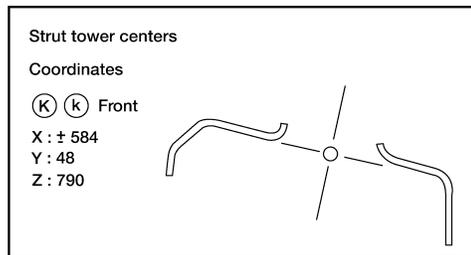
- (A) (a)
X : ±497
Y : -556
Z : 330
- (B) (b)
X : ±466
Y : 149
Z : 299
- (C) (c)
X : ±327
Y : 395
Z : 155
- (D) (d)
X : ±431
Y : 820
Z : 93
- (E) (e)
X : ±431
Y : 1294
Z : 93
- (F) (f)
X : ±431
Y : 1838
Z : 79
- (G) (g)
X : ±501
Y : 2458
Z : 193
- (H) (h)
X : ±466
Y : 3007
Z : 225
- (J) (j)
X : ±476
Y : 3276
Z : 336

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Unit : mm



AWKIA1485GB

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[COUPE]

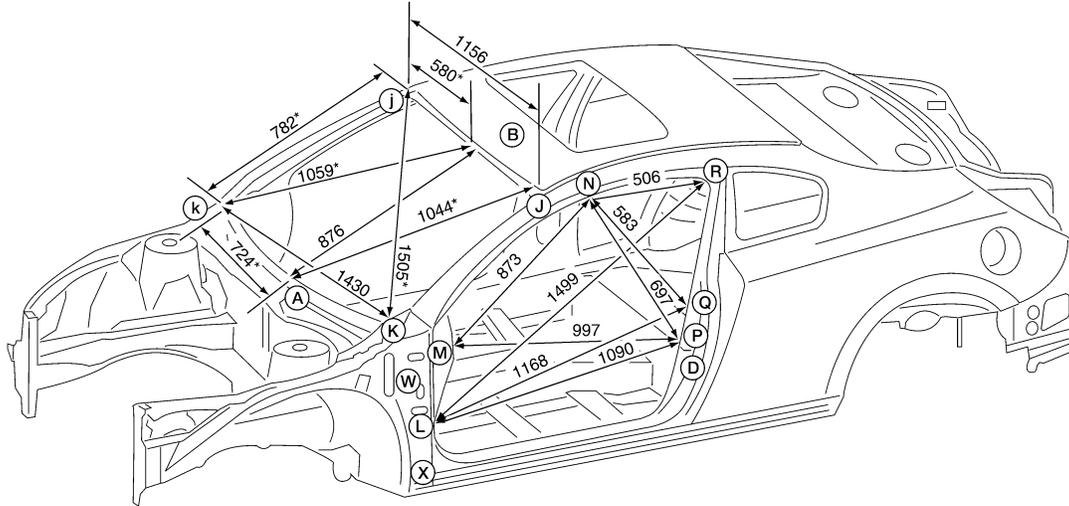
Passenger Compartment

INFOID:000000004205859

Measurement

Unit : mm

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



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

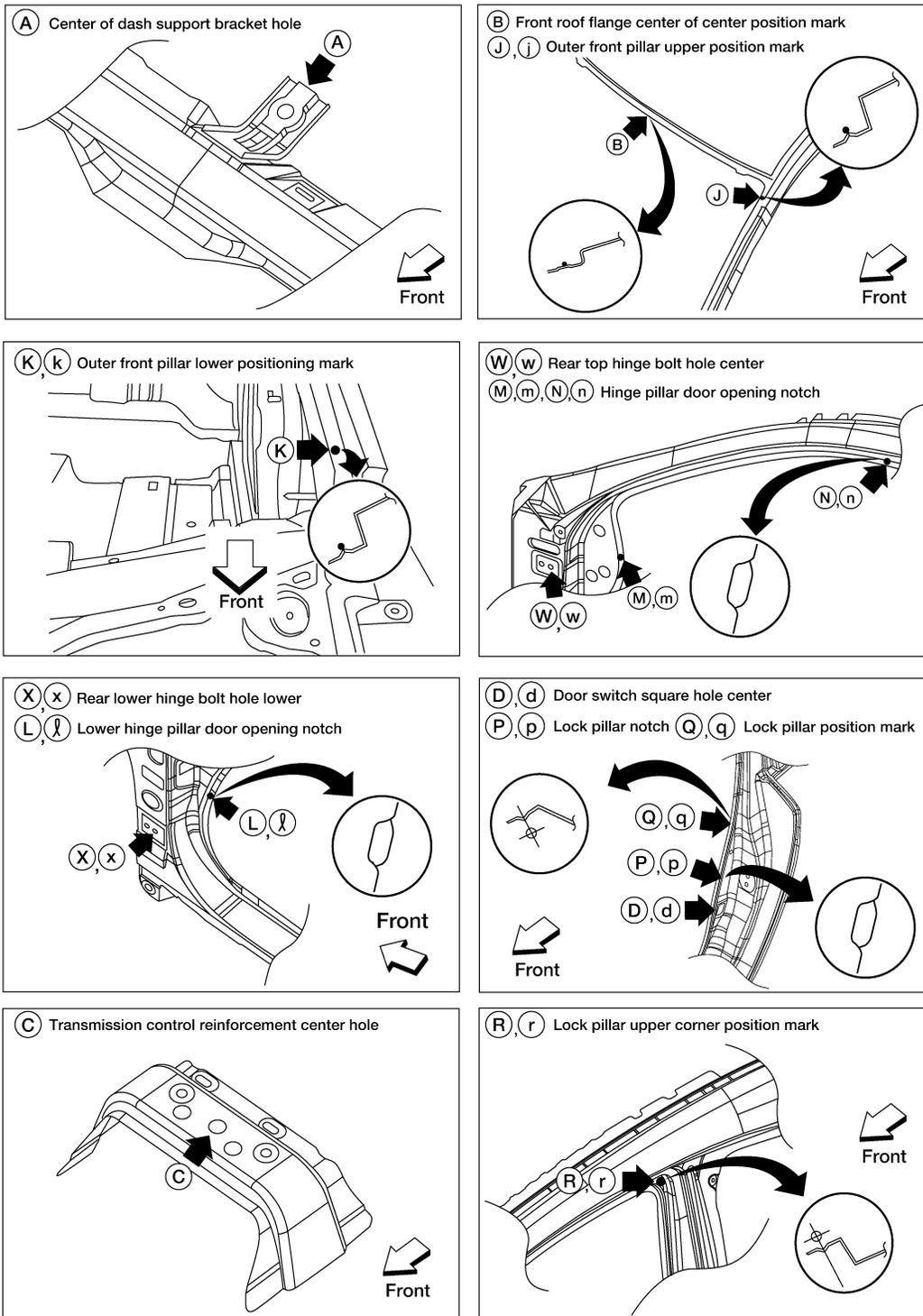
ALKIA0805GB

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[COUPE]

Measurement Points



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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

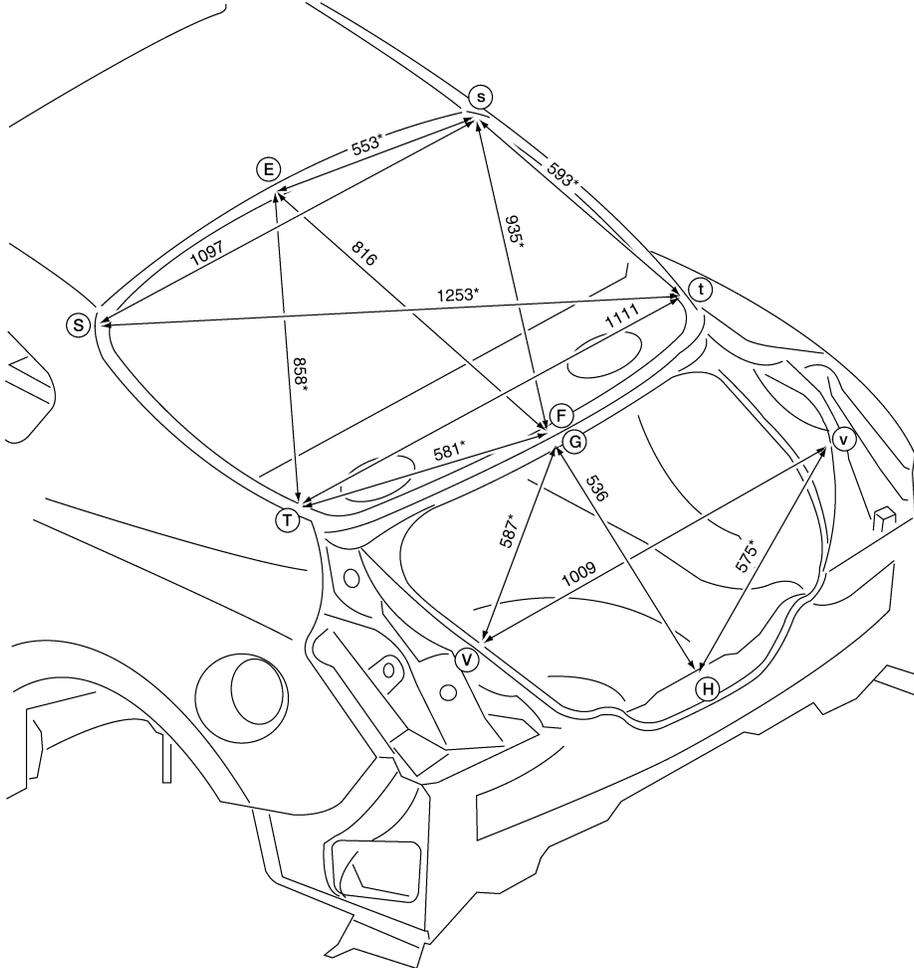
[COUPE]

Rear Body

INFOID:000000004205860

Measurement

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



Unit : mm

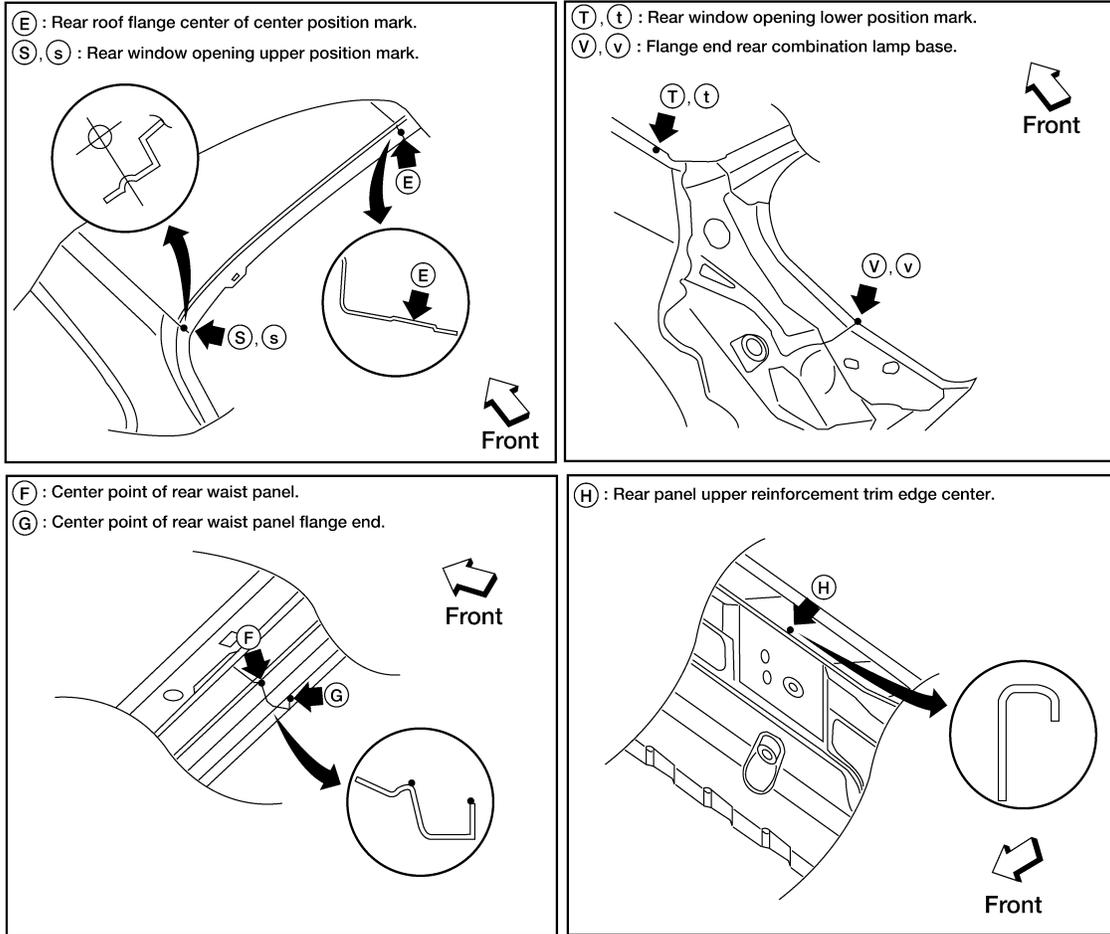
ALKIA0807GB

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[COUPE]

Measurement Points



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PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

< ON-VEHICLE REPAIR >

[COUPE]

PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:000000004205861

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:

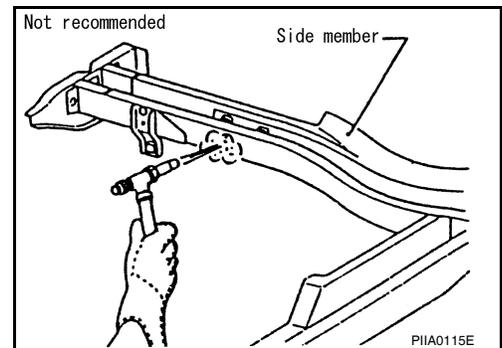
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm ² (38kg/mm ² ,54klb/sq in)	SP130	<ul style="list-style-type: none"> • Front side member assembly • Hoodledge assembly • Upper dash • Front pillar reinforcement assembly • Rear side member assembly • Other reinforcements

SP130 is the most commonly used HSS.

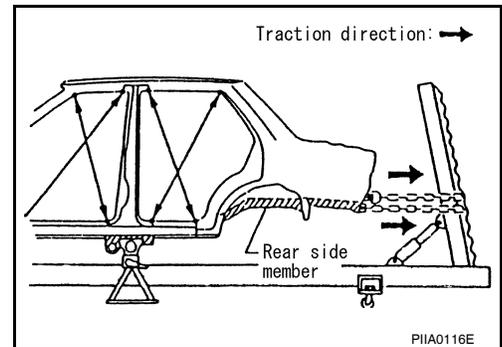
Read the following precautions when repairing HSS:

1. Additional points to consider

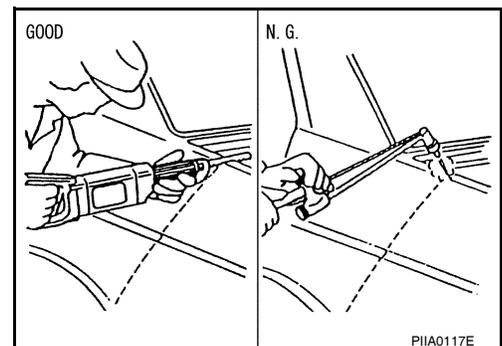
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F). Verify heating temperature with a thermometer. (Crayon-type and other similar type thermometer are appropriate.)



- 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).

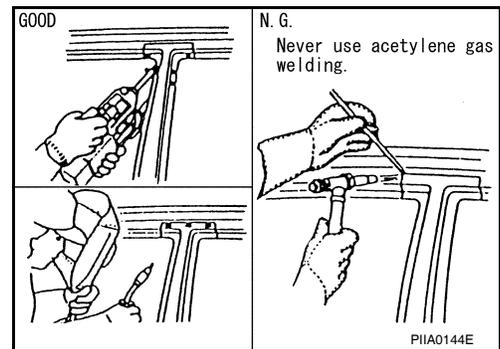


PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

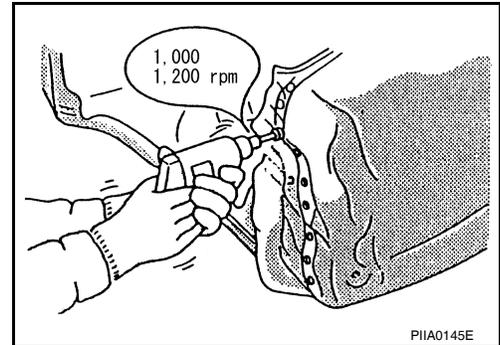
< ON-VEHICLE REPAIR >

[COUPE]

- 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.



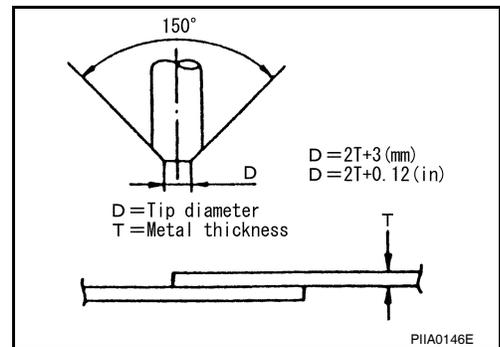
- The spot weld on HSS panels is harder than that of an ordinary steel panel. Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



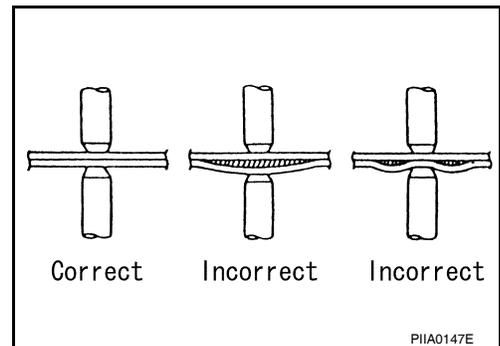
2. Precautions in spot welding HSS

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

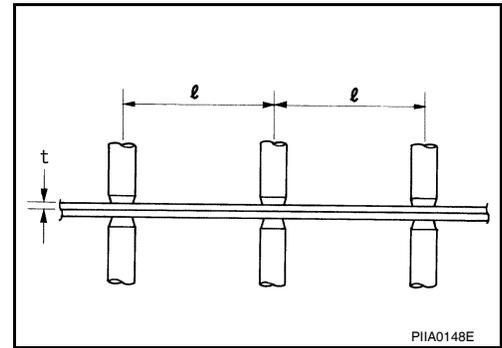
[COUPE]

< ON-VEHICLE REPAIR >

- Follow the specifications for the proper welding pitch.

Unit:mm

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



REPLACEMENT OPERATIONS

Description

INFOID:000000004205862

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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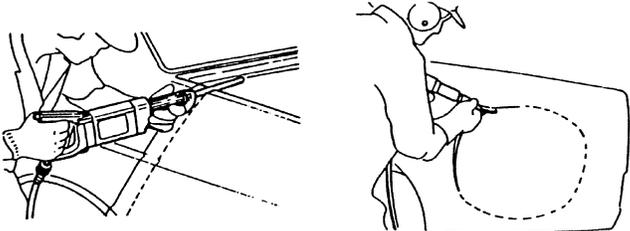
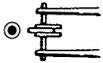
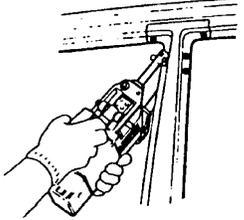
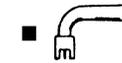
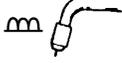
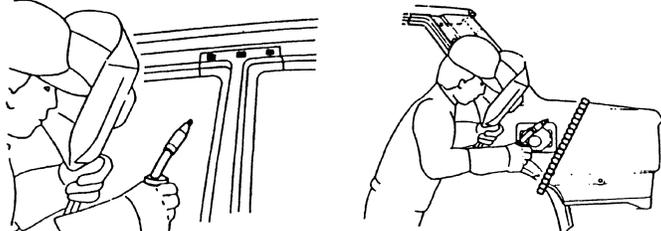
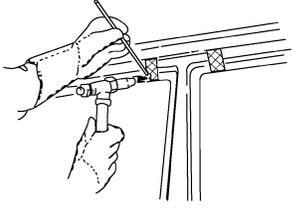
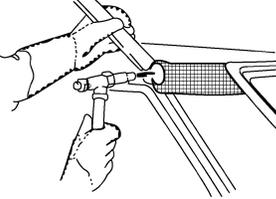
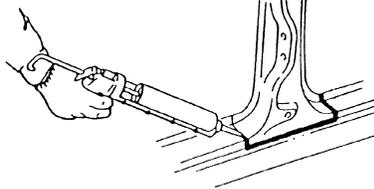
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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[COUPE]

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

 Saw cut or air chisel cut	
<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>	

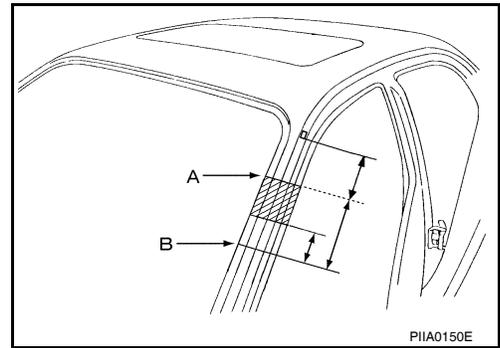
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REPLACEMENT OPERATIONS

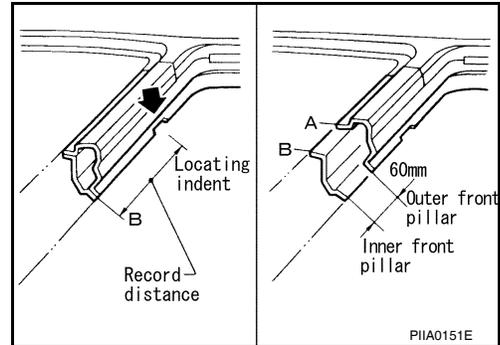
[COUPE]

< ON-VEHICLE REPAIR >

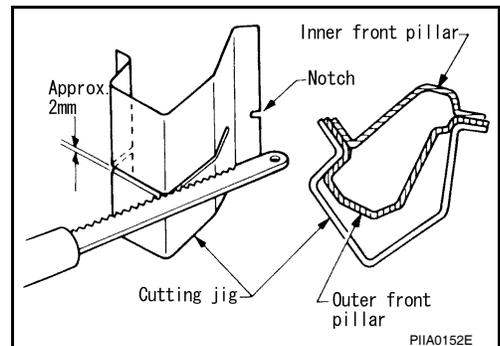
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- 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.

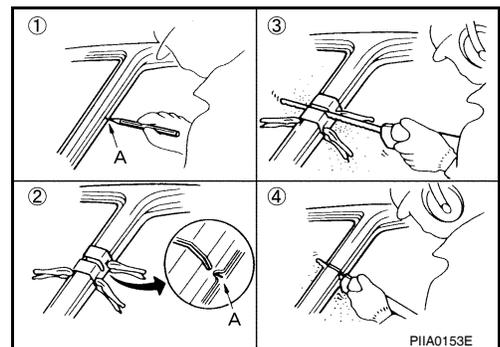


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- 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.



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REPLACEMENT OPERATIONS

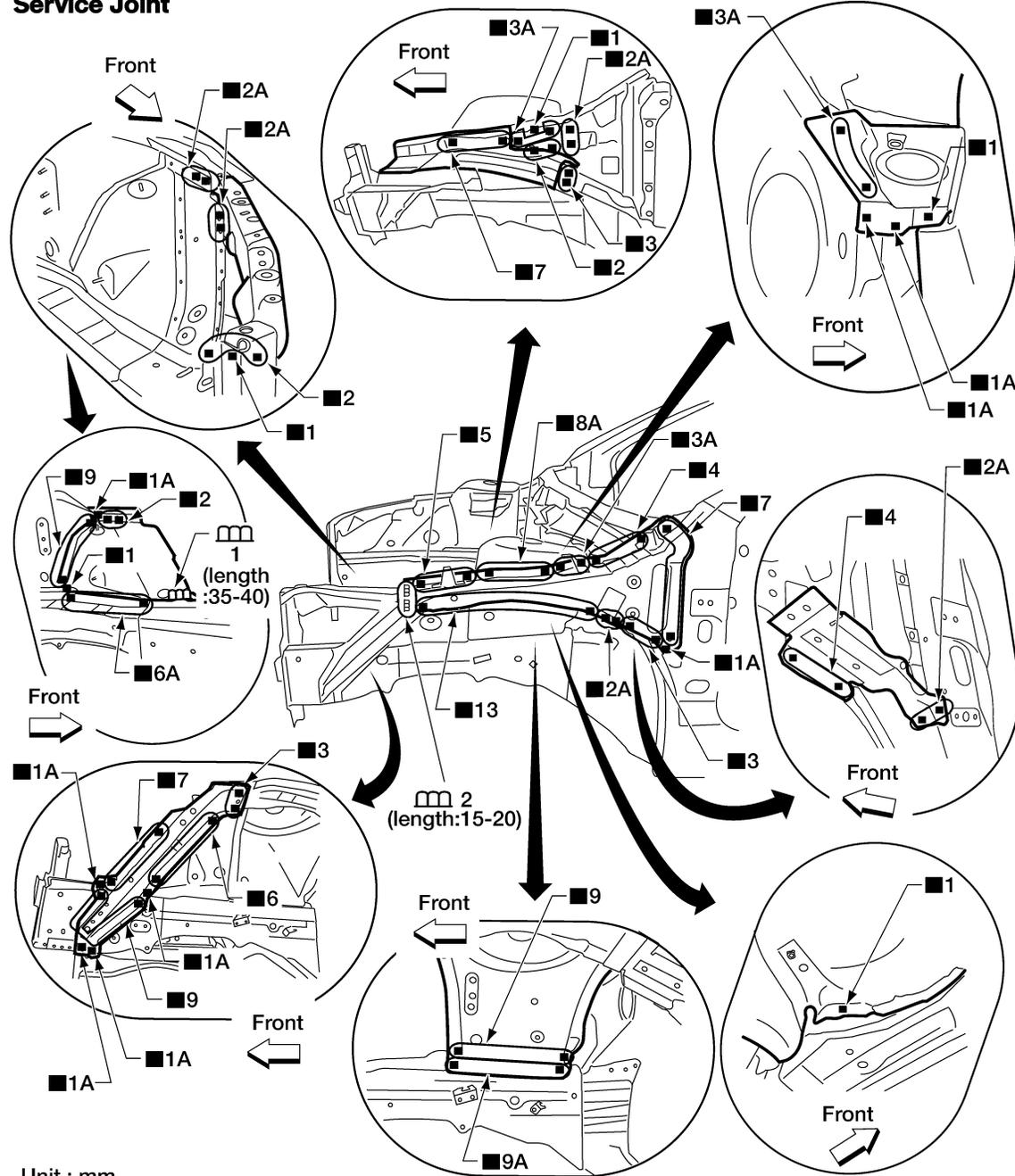
< ON-VEHICLE REPAIR >

[COUPE]

Hoodledge

INFOID:000000004205863

Service Joint



Unit : mm

2-spot welds

3-spot welds

MIG Plug weld

For 3 panels plug weld method

MIG seam weld/
Point weld



ALKIA0719GB

Change parts

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

Front Side Member Front Assembly

INFOID:000000004205864

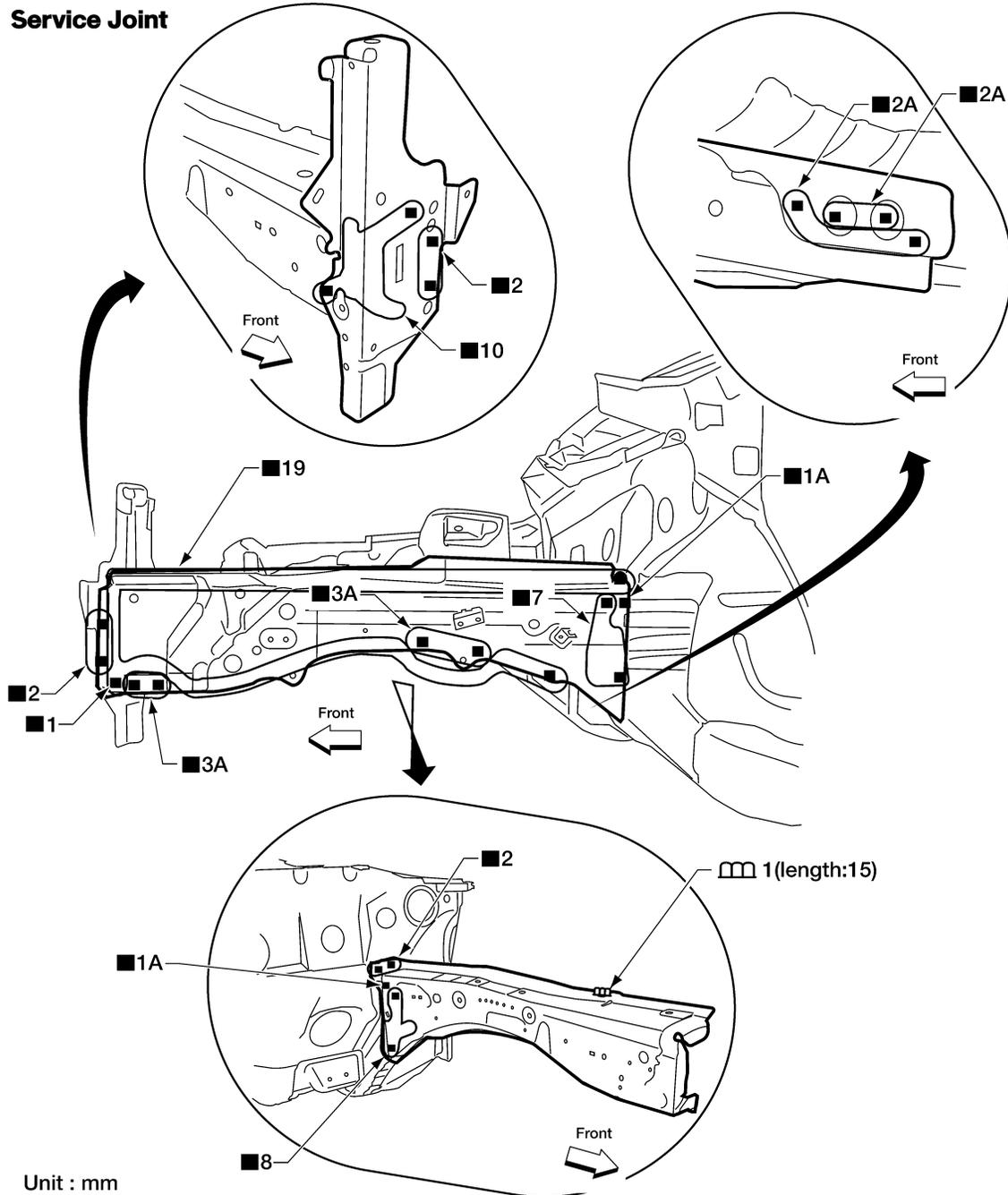
- Work after the hoodledge has been removed.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

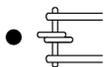
[COUPE]

Service Joint

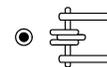


Unit : mm

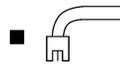
2-spot welds



3-spot welds



MIG Plug weld



For 3 panels plug weld method



MIG seam weld/
Point weld



ALKIA0720GB

Change parts

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

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REPLACEMENT OPERATIONS

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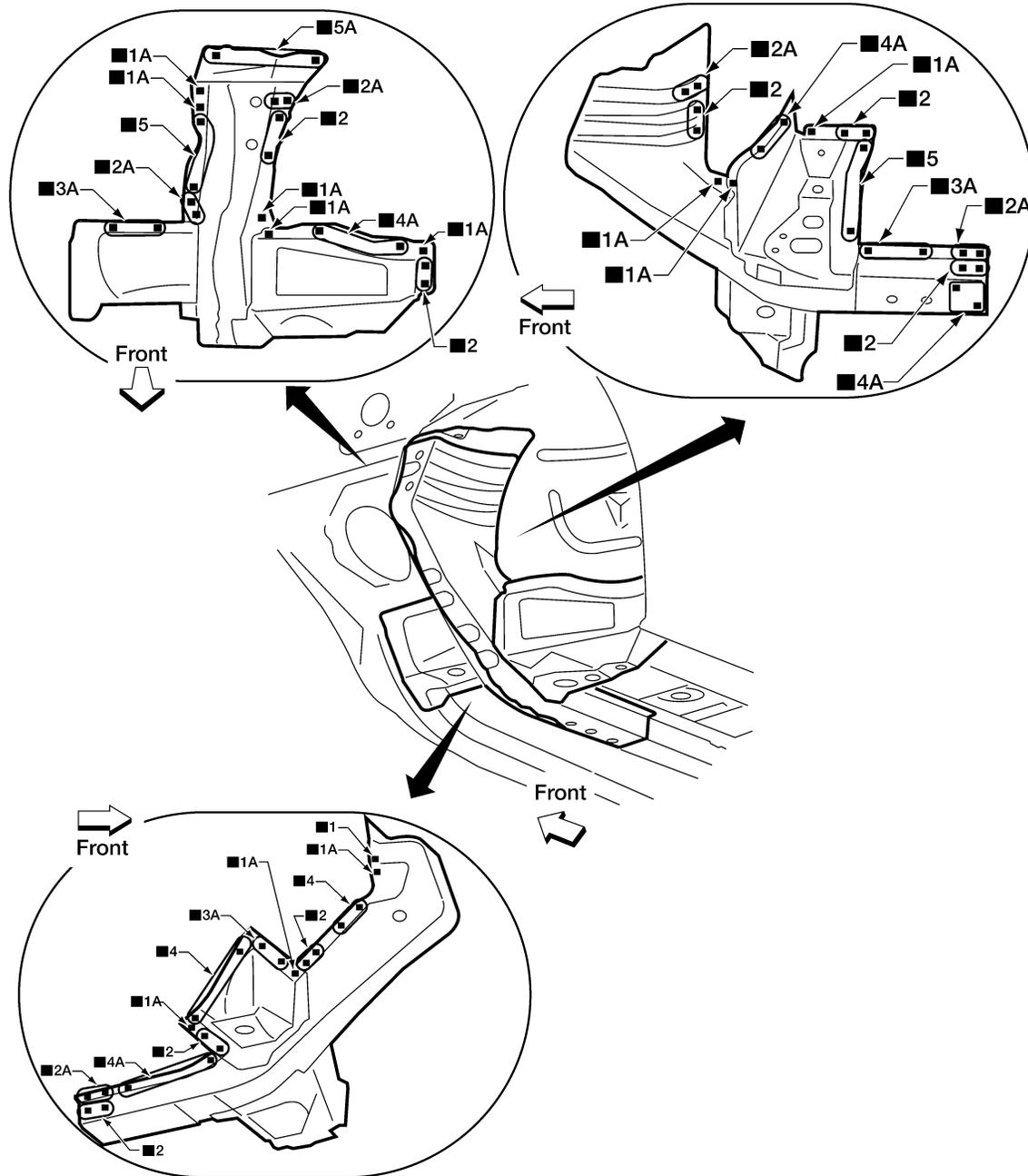
[COUPE]

Front Side Member

INFOID:000000004205865

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

Service Joint



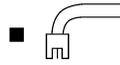
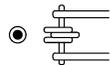
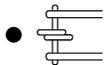
2-spot welds

3-spot welds

MIG Plug weld

(For 3 panels plug weld method)

MIG seam weld/
Point weld



ALKIA0721GB

Change parts

- Front side member assembly

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

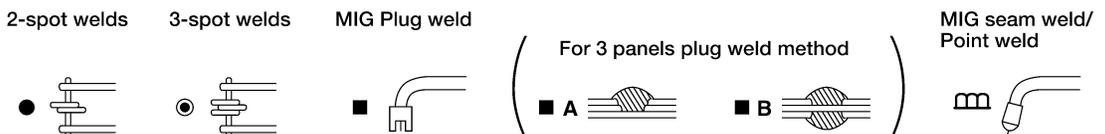
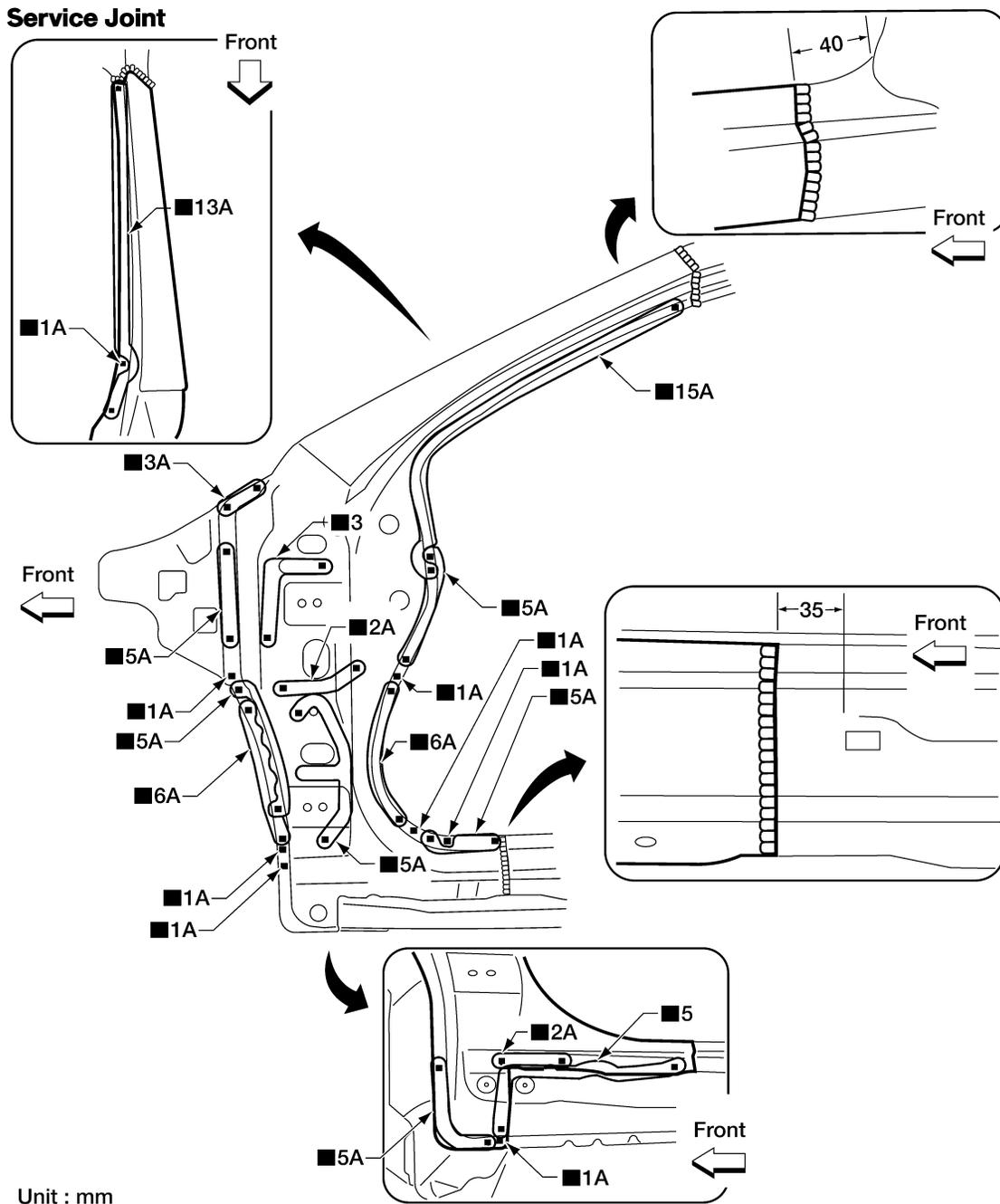
[COUPE]

Front Pillar

INFOID:00000004205866

OUTER

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



Change parts

- Front pillar section of body side outer

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REPLACEMENT OPERATIONS

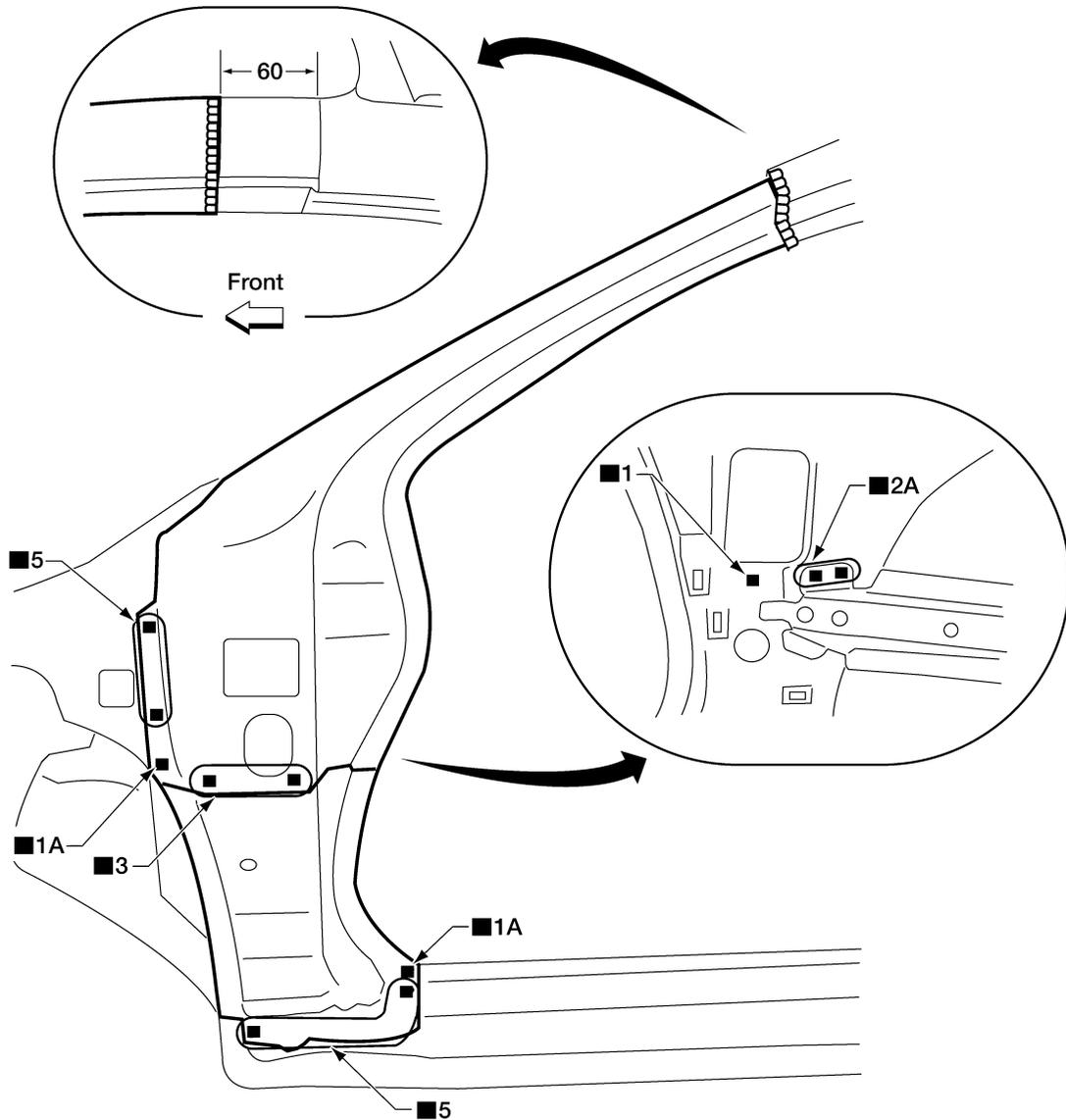
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< ON-VEHICLE REPAIR >

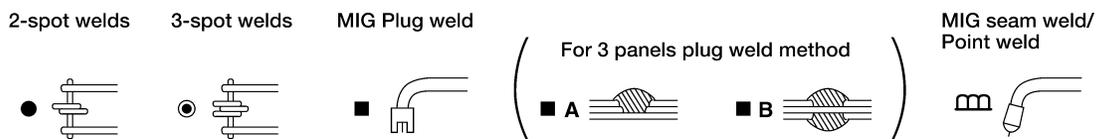
REINFORCEMENT

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

Service Joint



Unit : mm



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Change parts

- Hinge pillar upper reinforcement
- Hinge pillar lower reinforcement

INNER

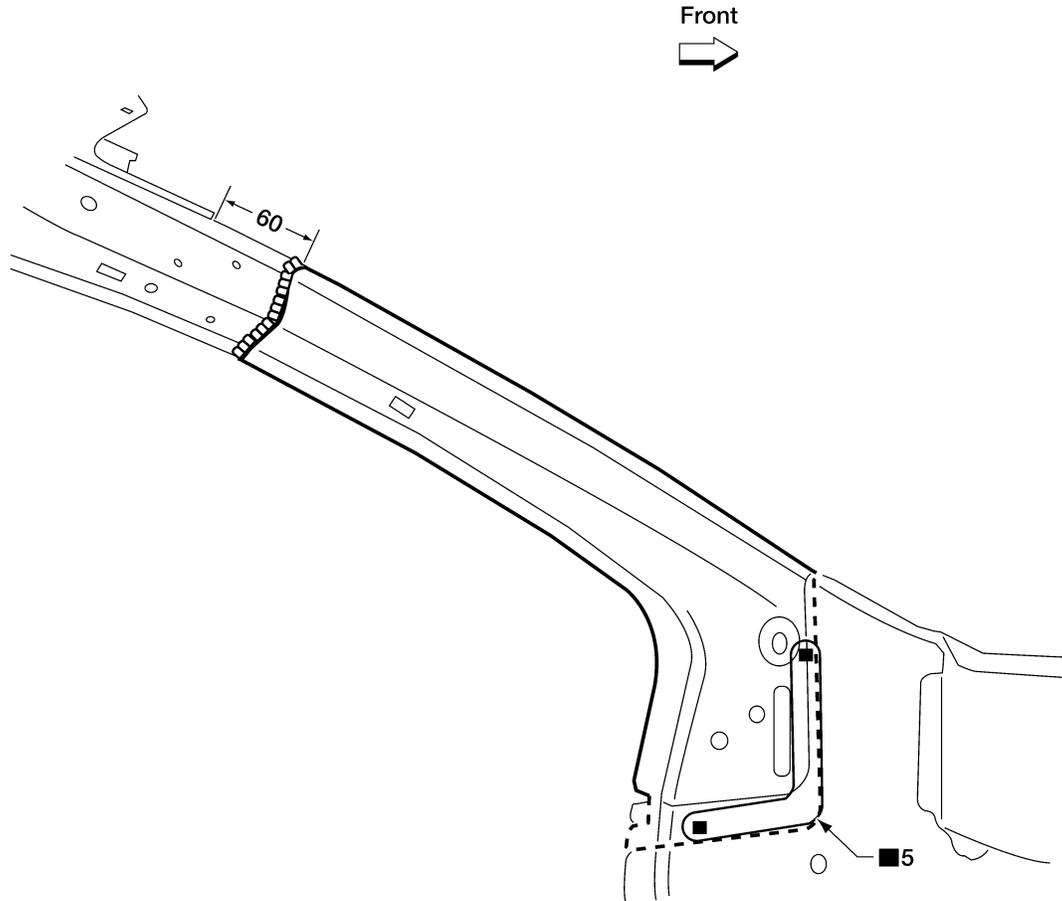
- Work after the hinge pillar upper and lower reinforcements have been removed.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[COUPE]

Service Joint

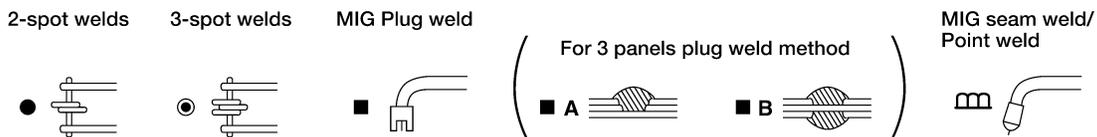


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Unit : mm



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Change parts

- Front pillar inner reinforcement

Dash Side

INFOID:000000004205867

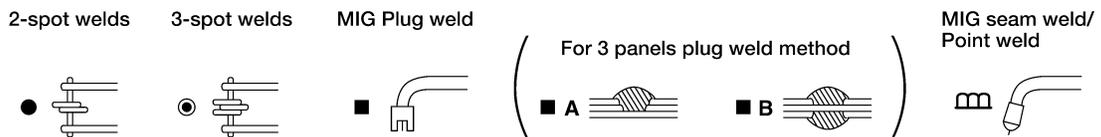
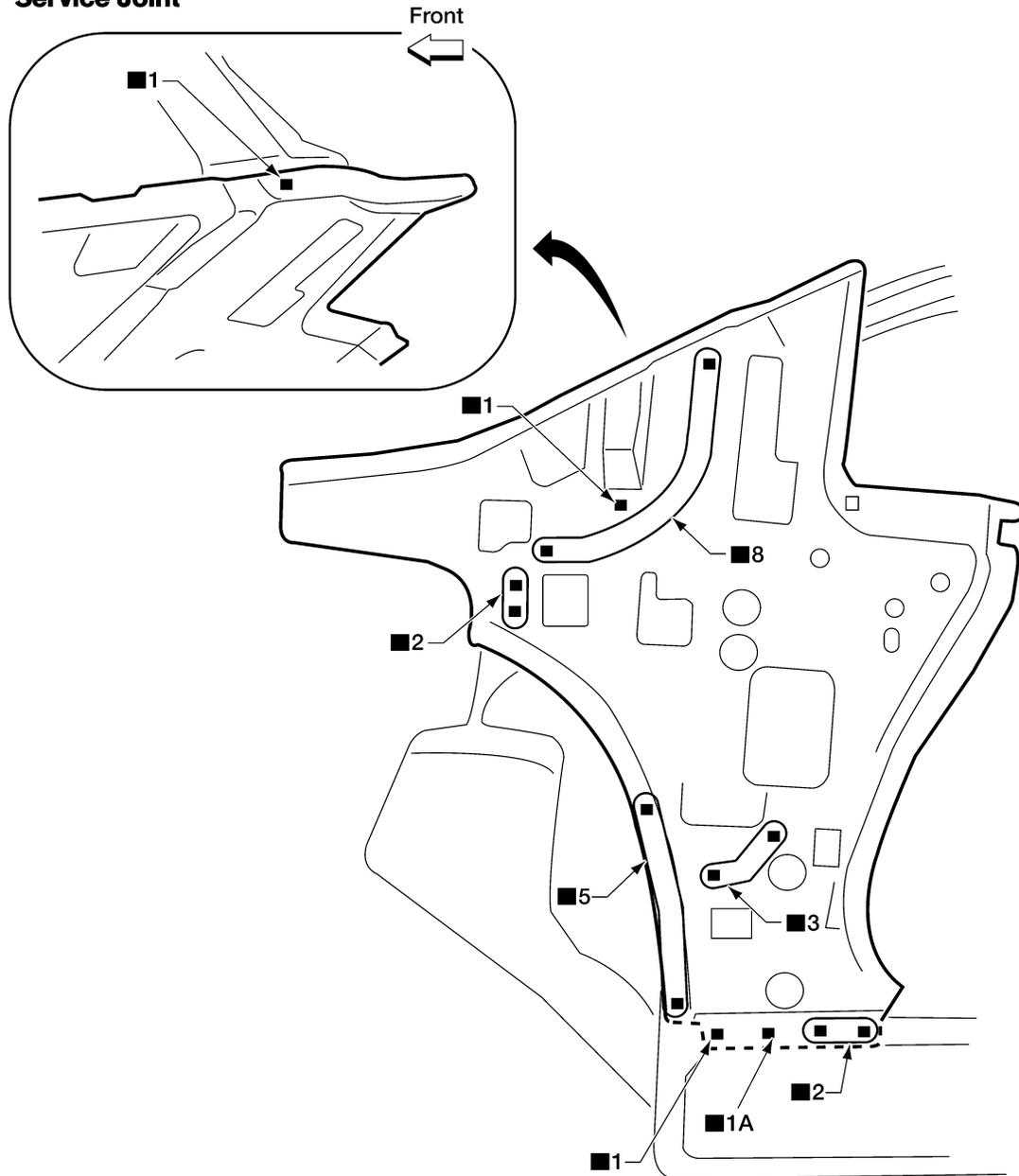
Work with the front pillar inner reinforcement removed.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[COUPE]

Service Joint



ALKIA0725GB

Change parts

● Dash side

Center Pillar

INFOID:000000004205868

REINFORCEMENT

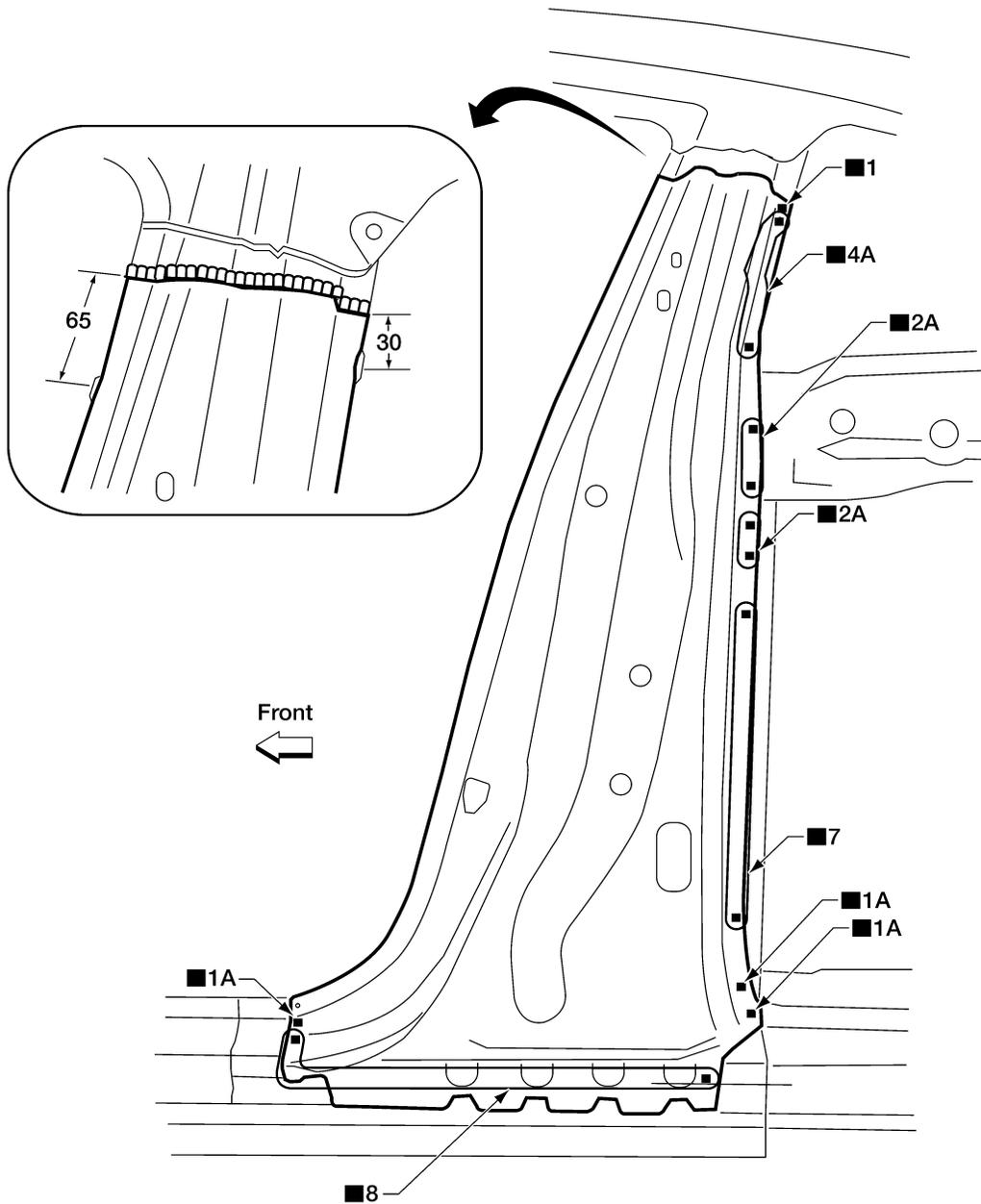
Work after the rear fender has been removed.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

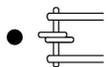
[COUPE]

Service Joint

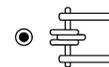


Unit : mm

2-spot welds



3-spot welds



MIG Plug weld



For 3 panels plug weld method



MIG seam weld/
Point weld



ALKIA0726GB

Change parts

- Lock pillar reinforcement

INNER

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

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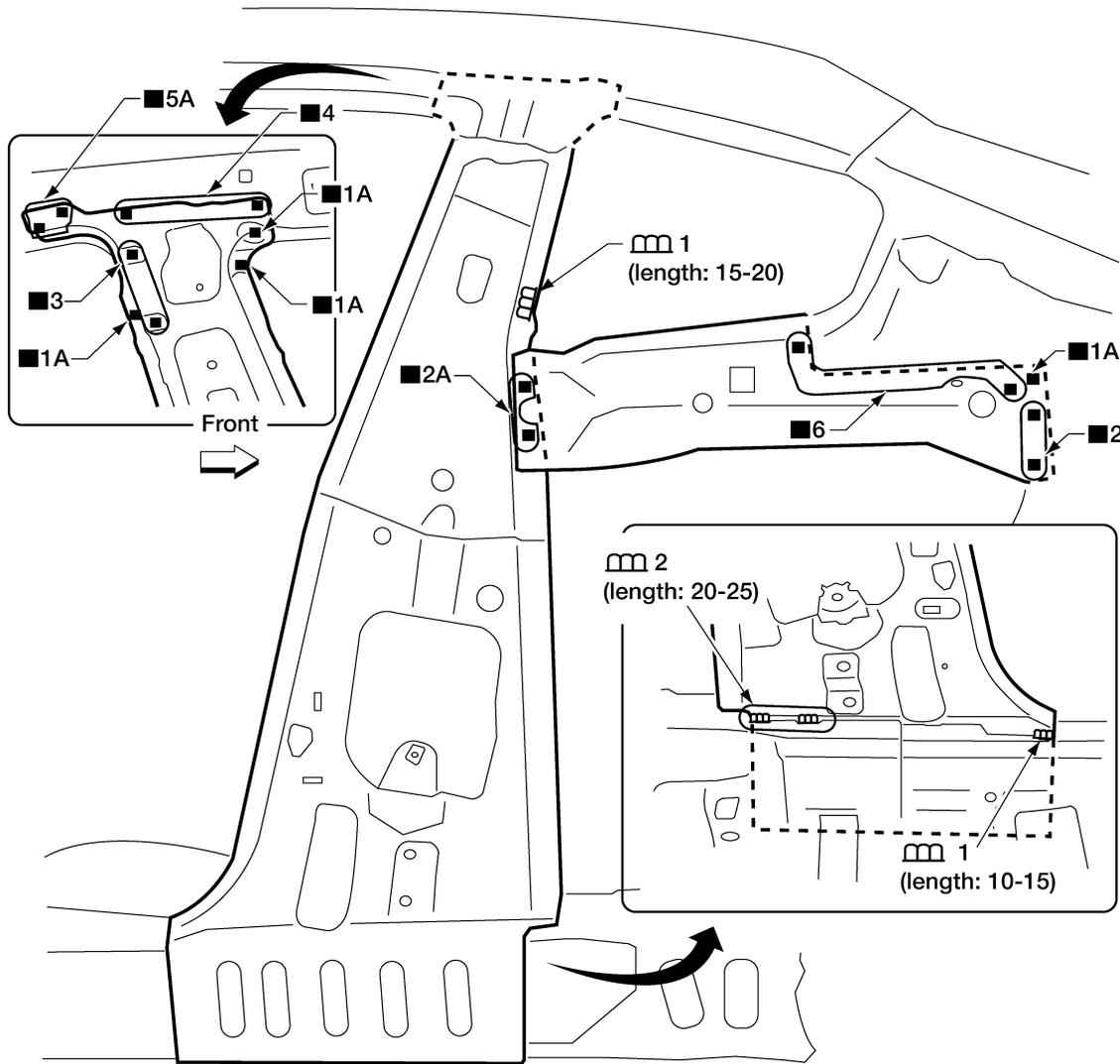
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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

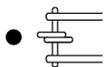
[COUPE]

Service Joint

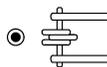


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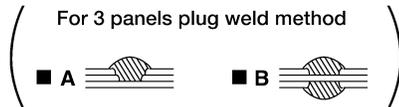
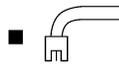
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld



ALKIA0727GB

Change parts

- Lock pillar inner
- Rear pillar inner

Outer Sill Reinforcement

INFOID:000000004205869

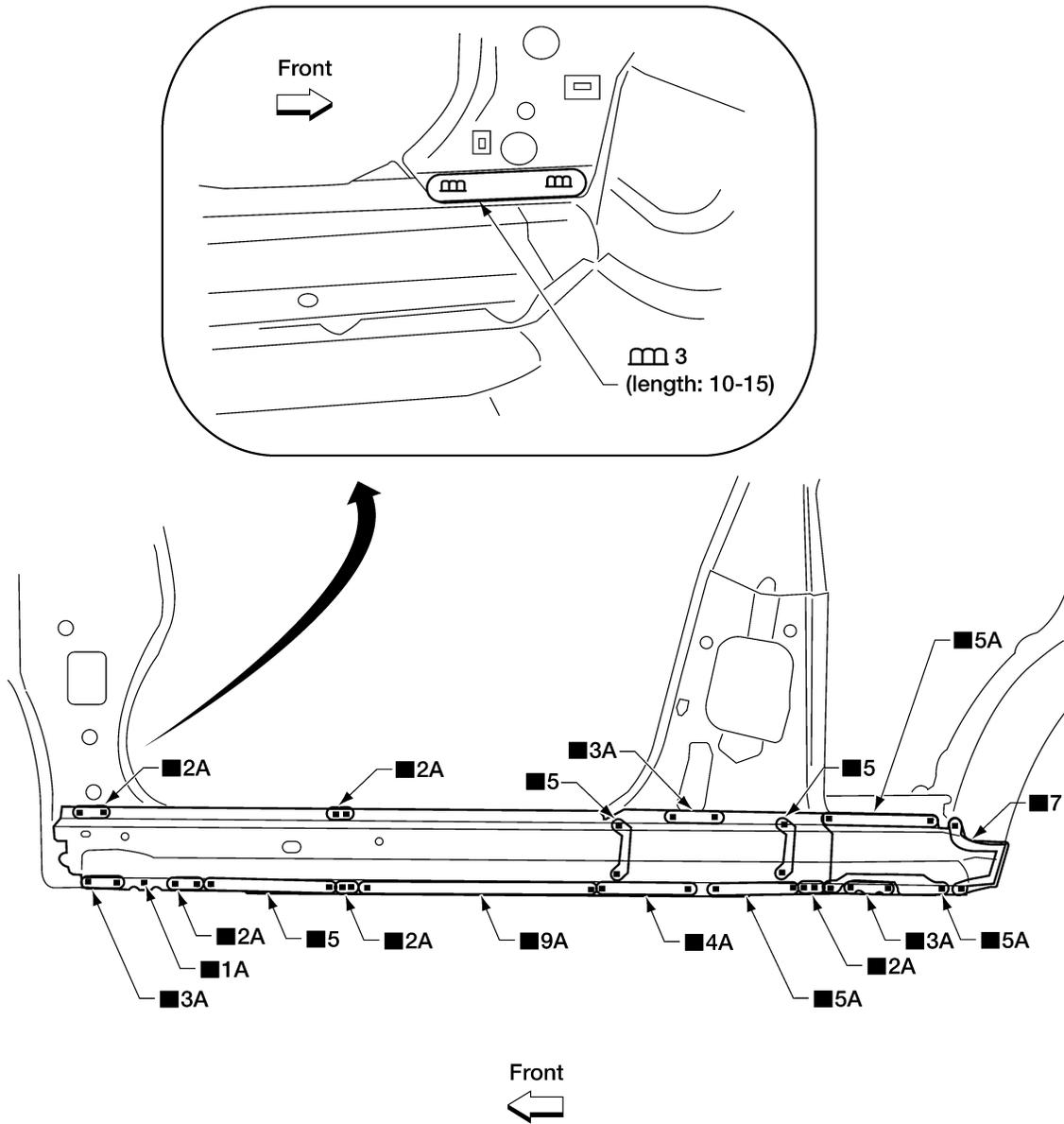
Work after the front pillar lower reinforcement and lock pillar reinforcement have been removed.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

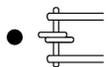
[COUPE]

Service Joint



Unit : mm

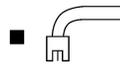
2-spot welds



3-spot welds



MIG Plug weld



For 3 panels plug weld method



MIG seam weld/
Point weld



ALKIA0728GB

Change parts

- Outer sill reinforcement

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REPLACEMENT OPERATIONS

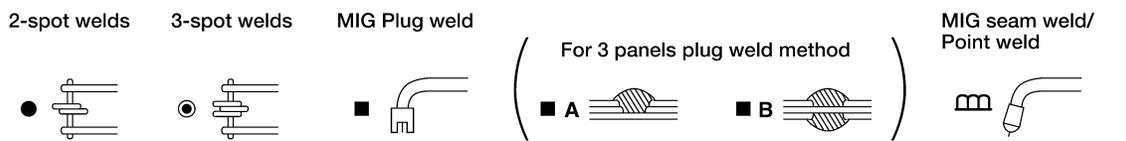
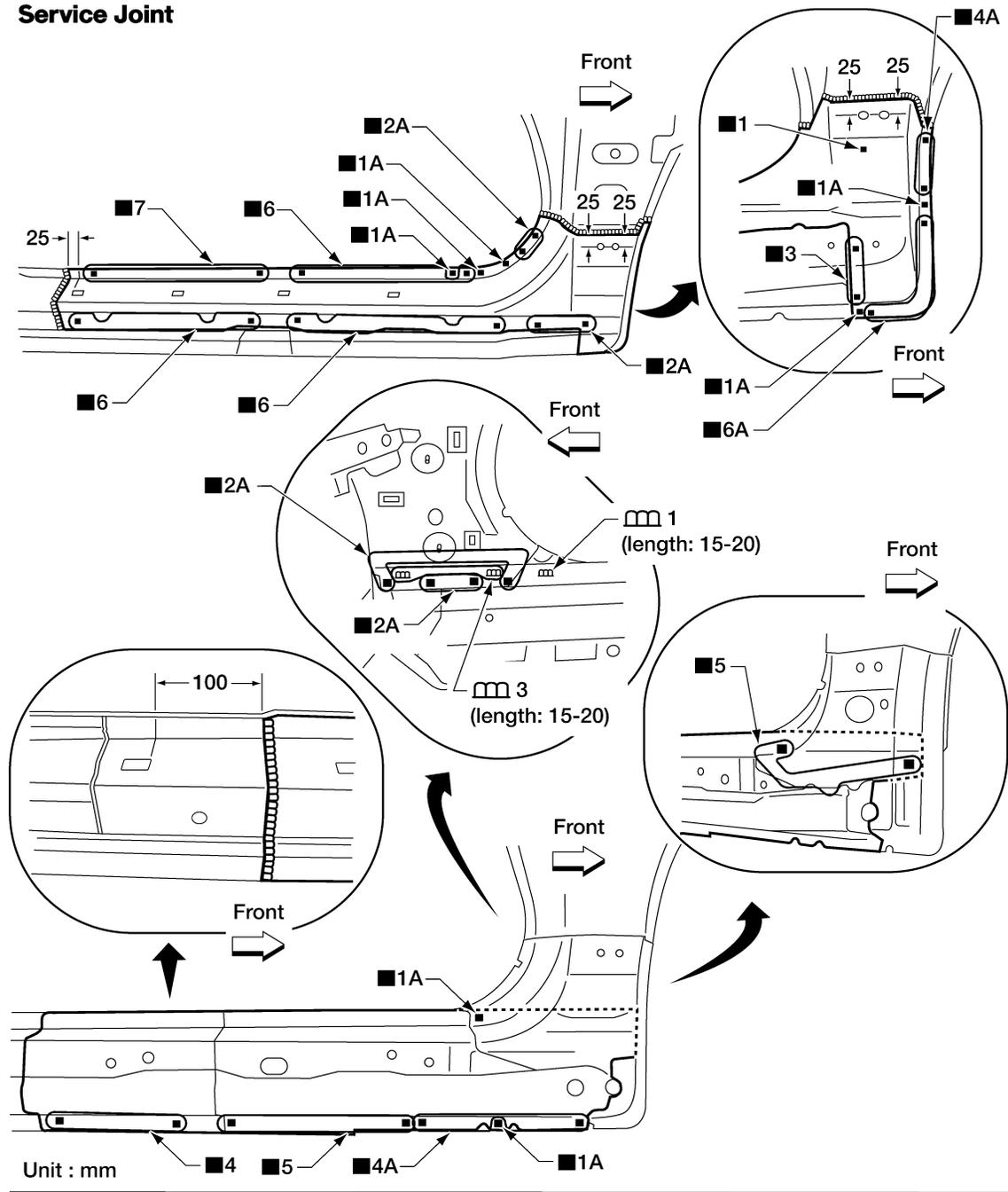
< ON-VEHICLE REPAIR >

[COUPE]

Sill Partial

INFOID:000000004205870

Service Joint



ALKIA1266GB

Change parts

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

Rear Fender

INFOID:000000004205871

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

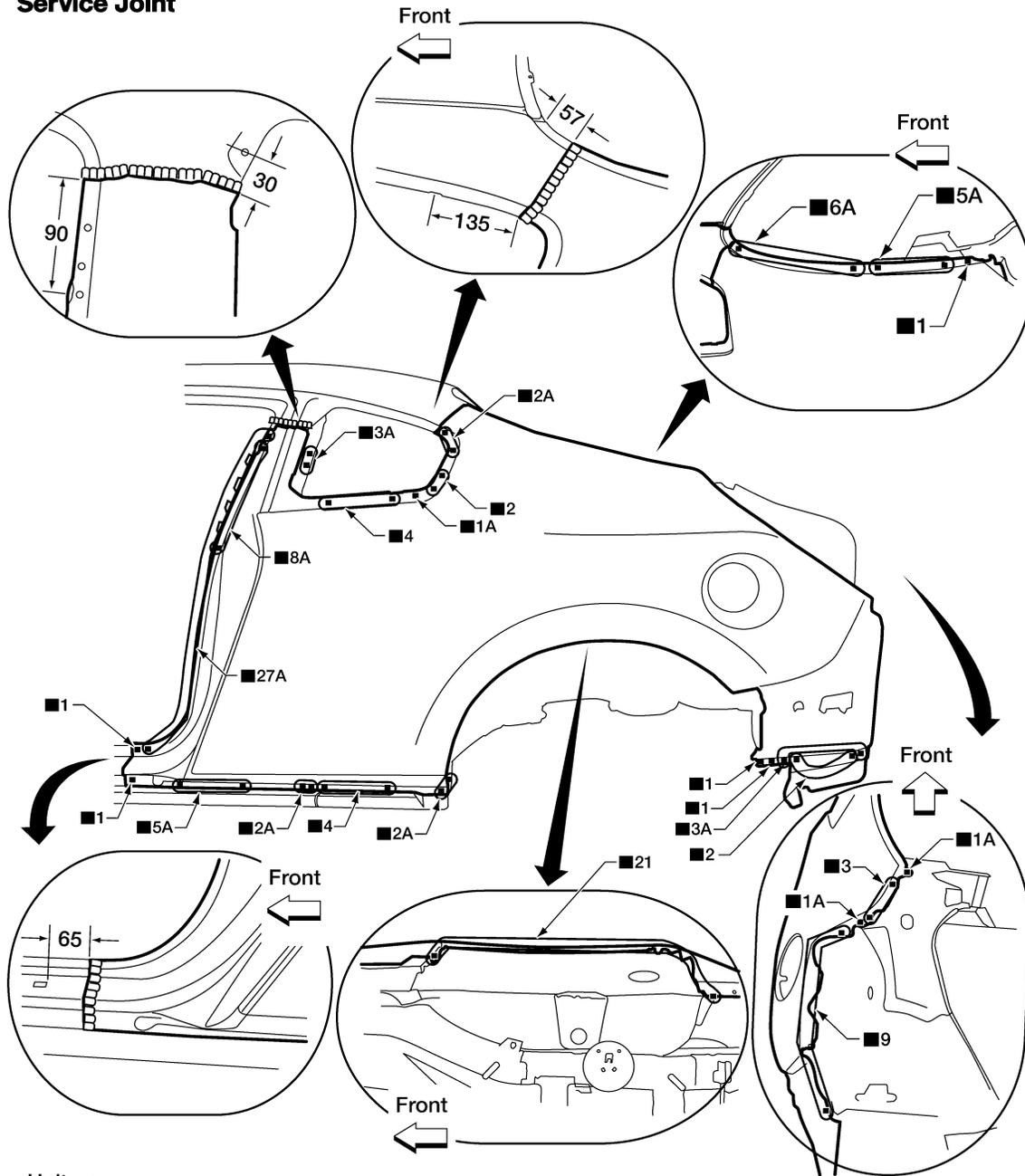
BRM-46

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

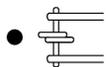
[COUPE]

Service Joint

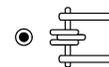


Unit : mm

2-spot welds



3-spot welds



MIG Plug weld



For 3 panels plug weld method



MIG seam weld/
Point weld



Change parts

- Rear fender

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ALKIA0732GB

REPLACEMENT OPERATIONS

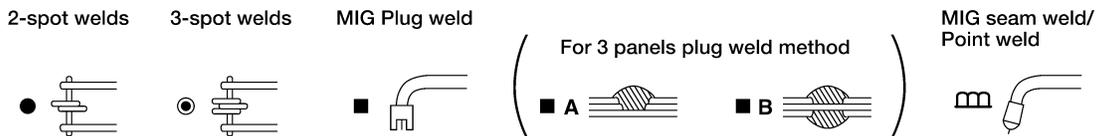
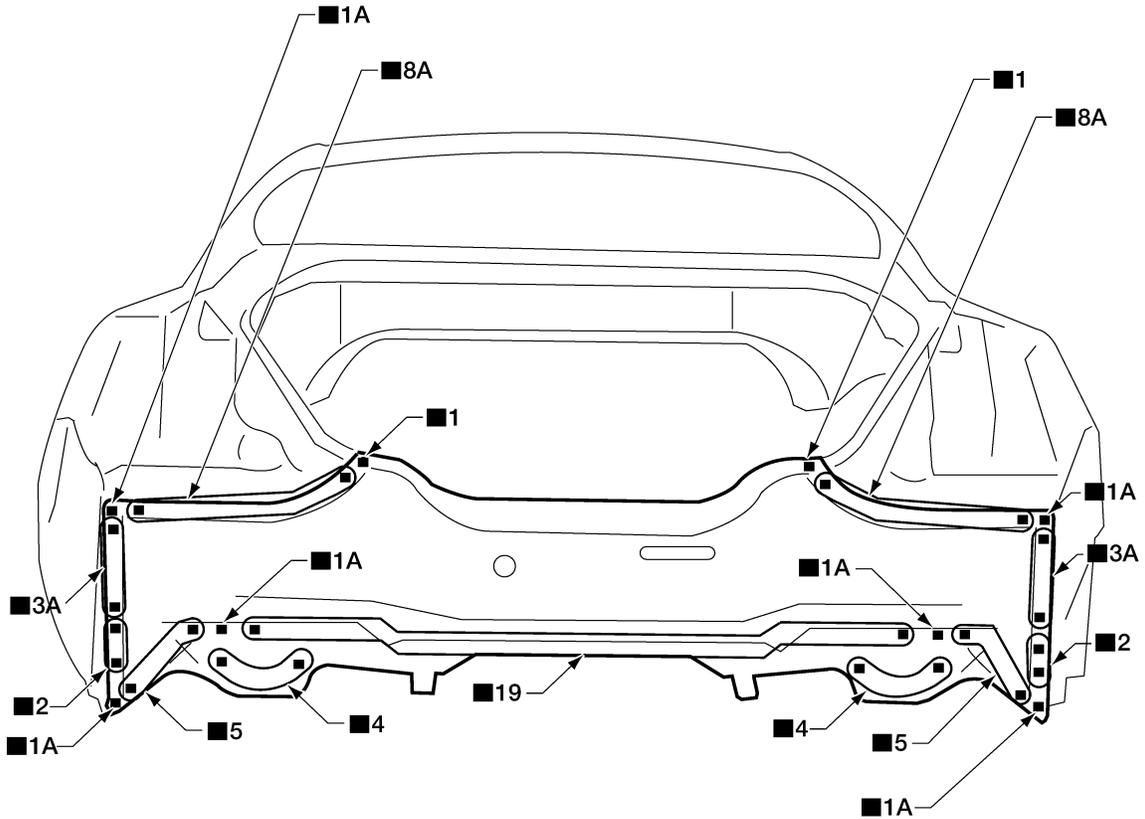
< ON-VEHICLE REPAIR >

[COUPE]

Rear Panel

INFOID:000000004205872

Service Joint



ALKIA0729GB

Change parts

- Rear panel assembly

REPLACEMENT OPERATIONS

[COUPE]

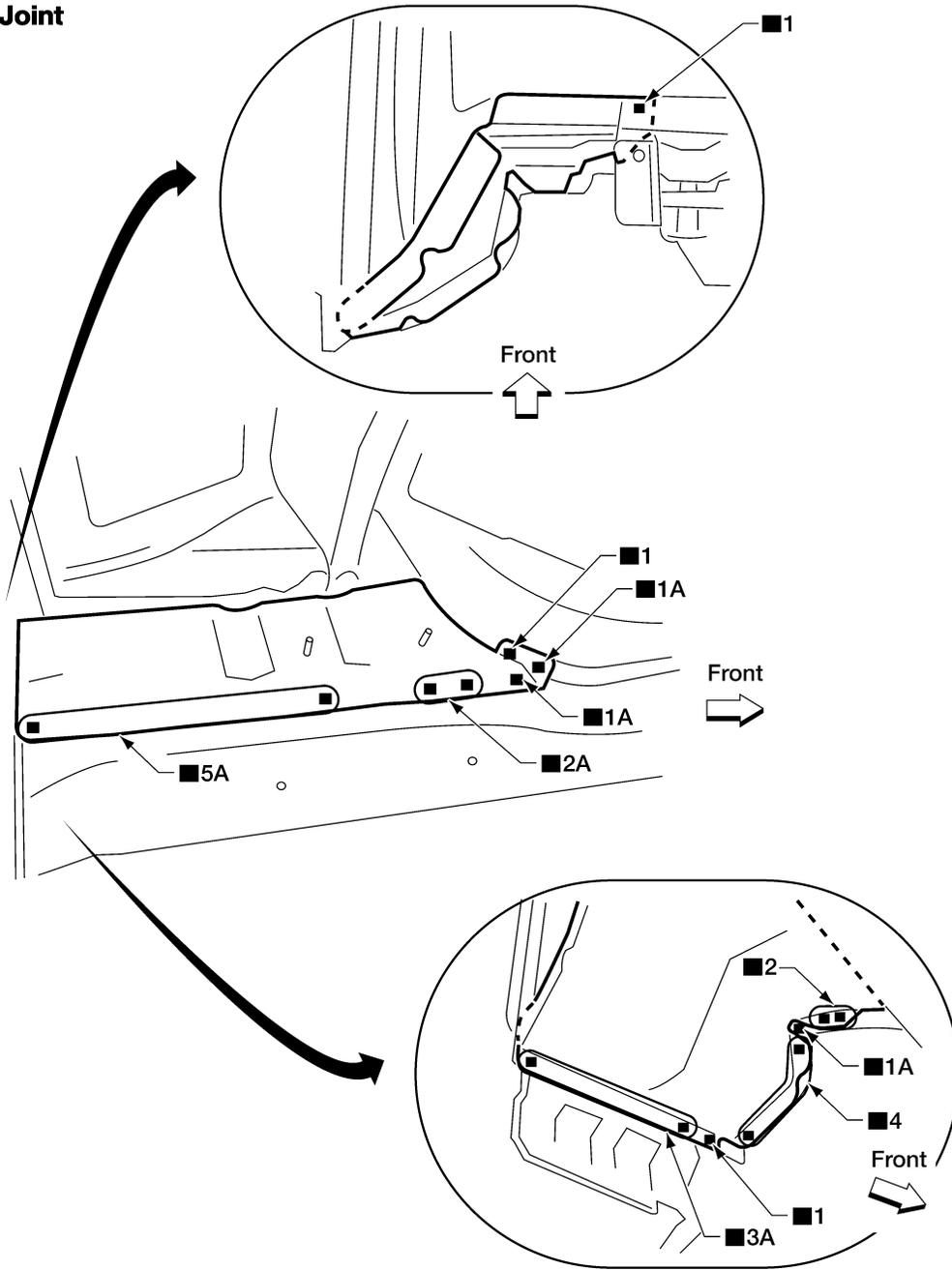
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INFOID:00000004205873

Rear Floor Rear LH

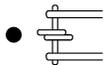
- Work after rear panel assembly has been removed.

Service Joint

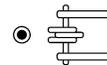


Unit : mm

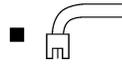
2-spot welds



3-spot welds



MIG Plug weld



(For 3 panels plug weld method)



MIG seam weld/
Point weld



ALKIA0730GB

Change parts

- Rear floor rear LH

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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

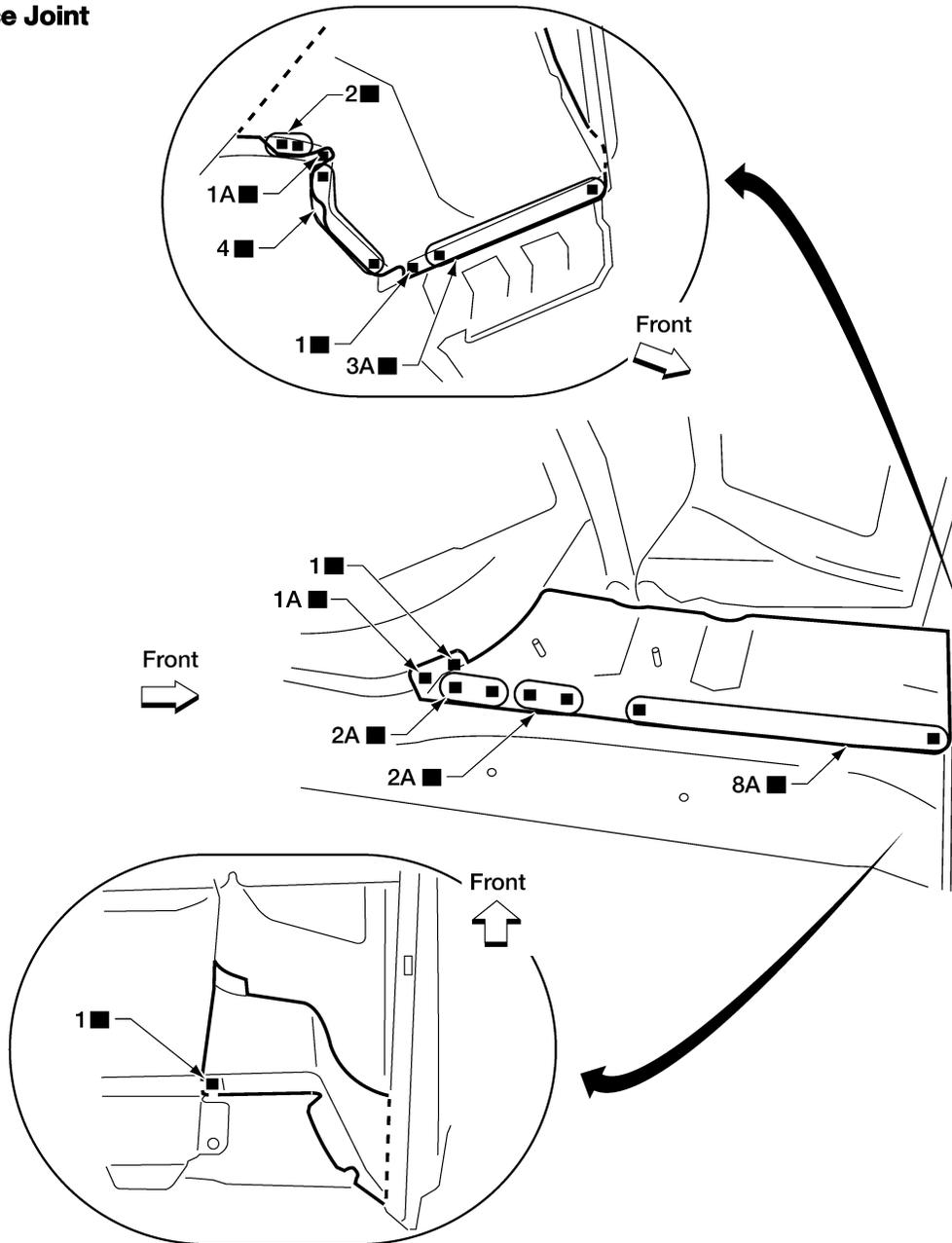
[COUPE]

INFOID:000000004205874

Rear Floor Rear RH

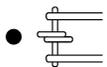
- Work after rear panel assembly has been removed.

Service Joint

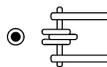


Unit : mm

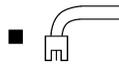
2-spot welds



3-spot welds



MIG Plug weld



(For 3 panels plug weld method)



MIG seam weld/
Point weld



ALKIA0731GB

Change parts

- Rear floor rear RH

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

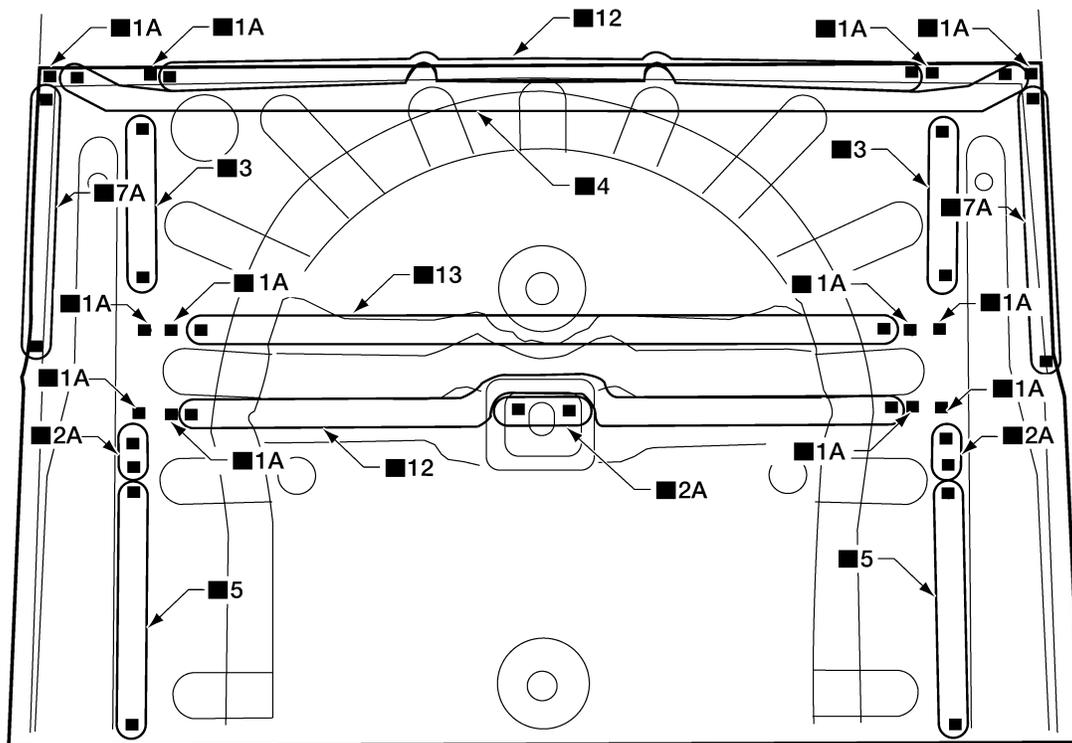
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INFOID:00000004205875

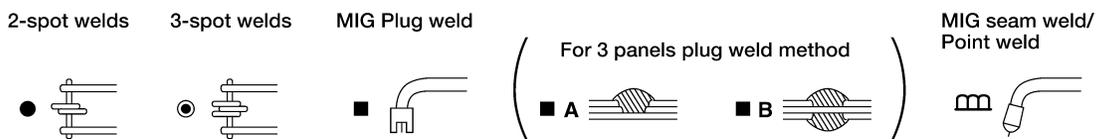
Rear Floor Rear

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

Service Joint



Front
↑



ALKIA0734GB

Change parts

- Rear floor rear

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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

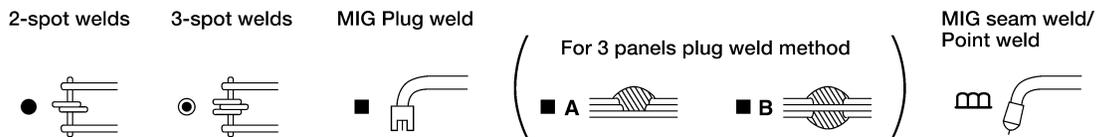
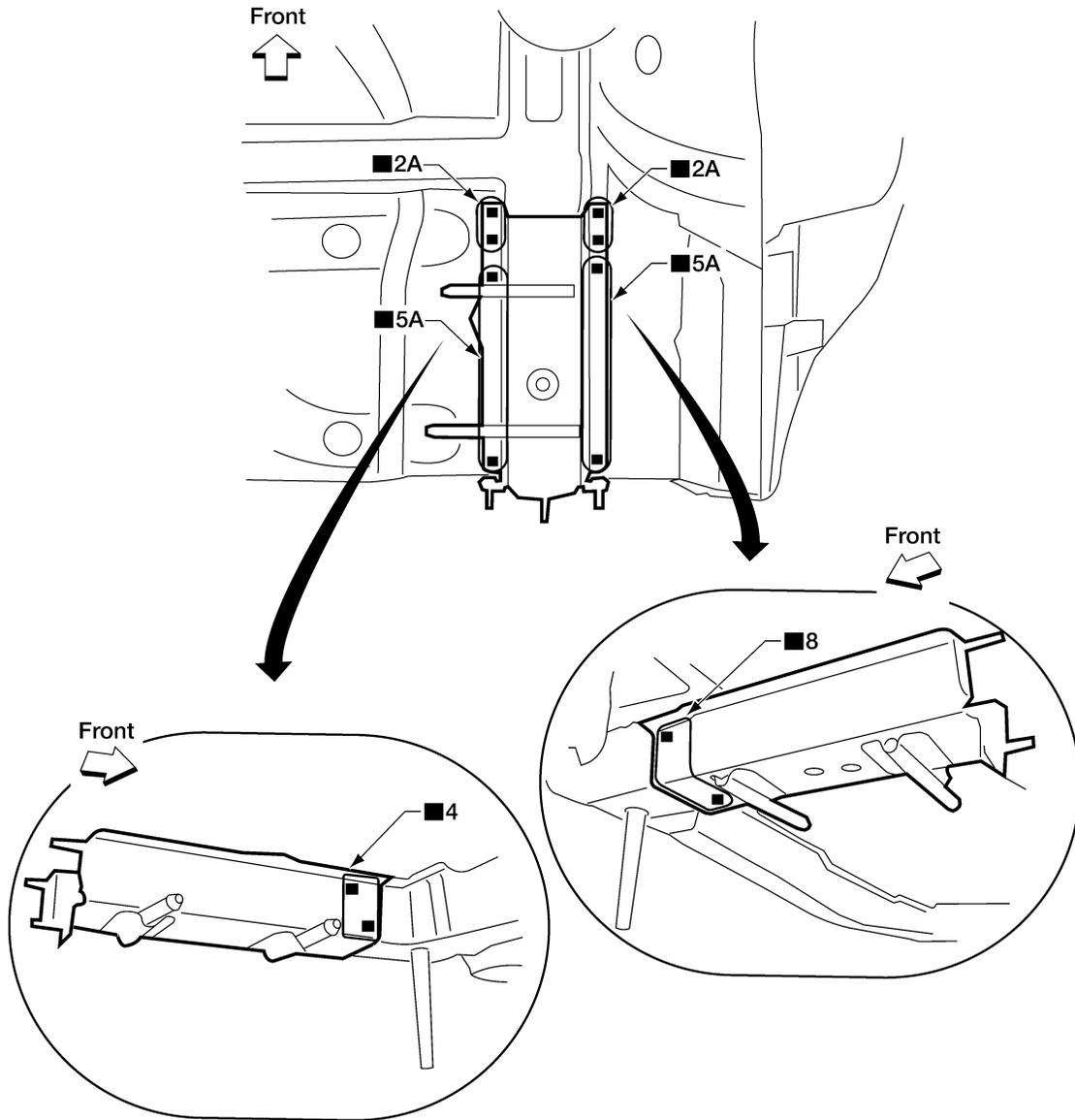
[COUPE]

Rear Side Member Extension

INFOID:000000004205876

- Work after rear panel assembly has been removed.

Service Joint



ALKIA0733GB

Change parts

- Rear side member extension

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[COUPE]

Foam Repair

INFOID:00000004205877

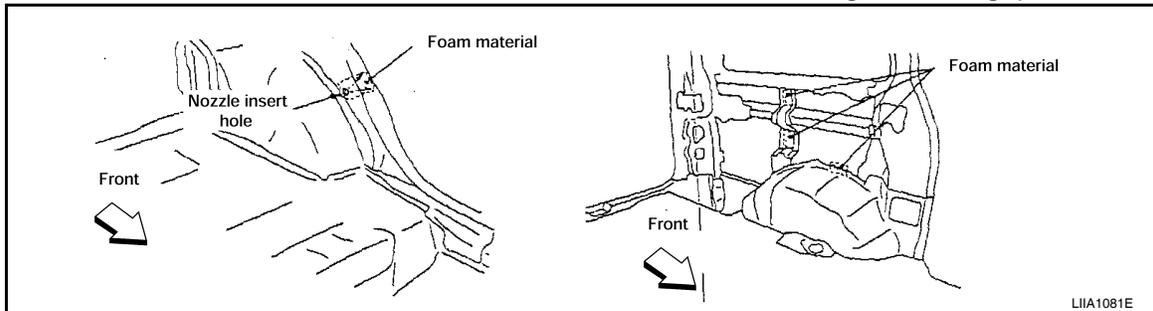
During factory assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

URETHANE FOAM APPLICATIONS

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

FILL PROCEDURES

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



2. Fill procedures before installation service part
 - Remove foam material remaining on vehicle side.
 - Clean area in which foam material on wheelhouse outer side.

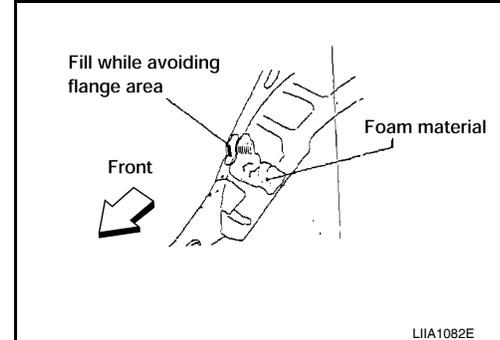
NOTE:

Fill in enough to close gap with service part while avoiding flange area.

- Install service part.

NOTE:

Refer to label for information on working times.



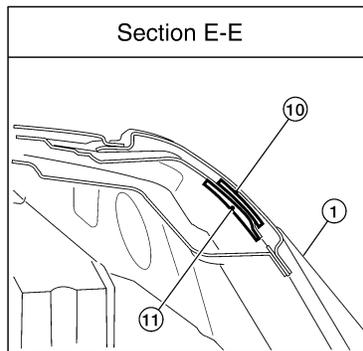
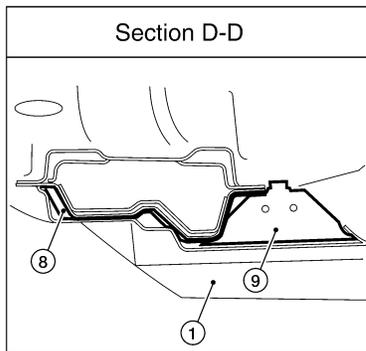
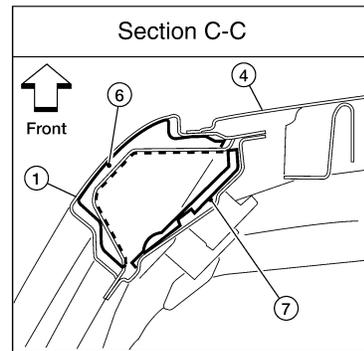
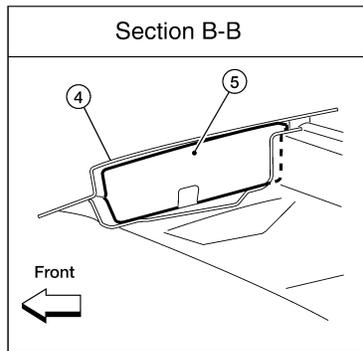
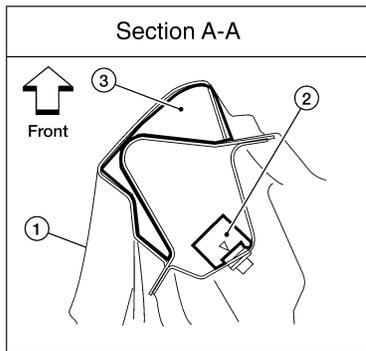
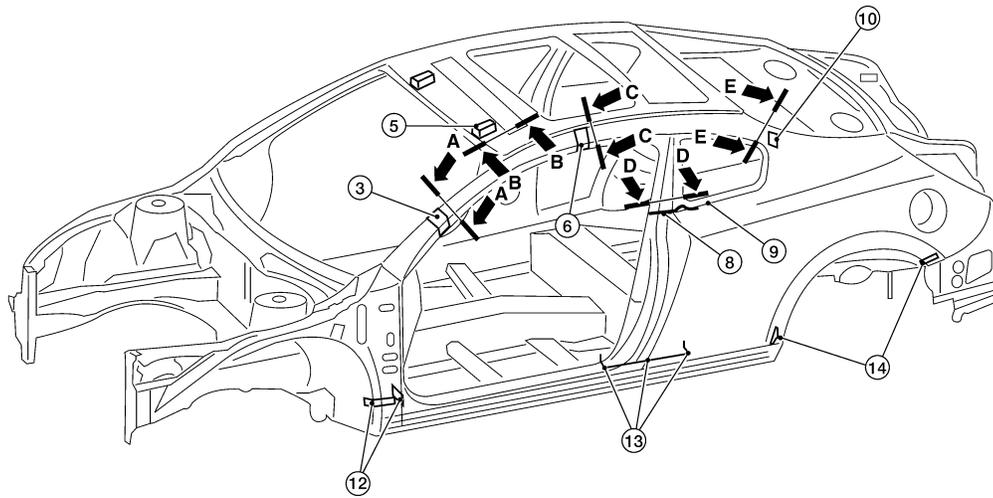
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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[COUPE]



ALKIA0809GB

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

BODY EXTERIOR PAINT COLOR

< FEATURES OF NEW MODEL >

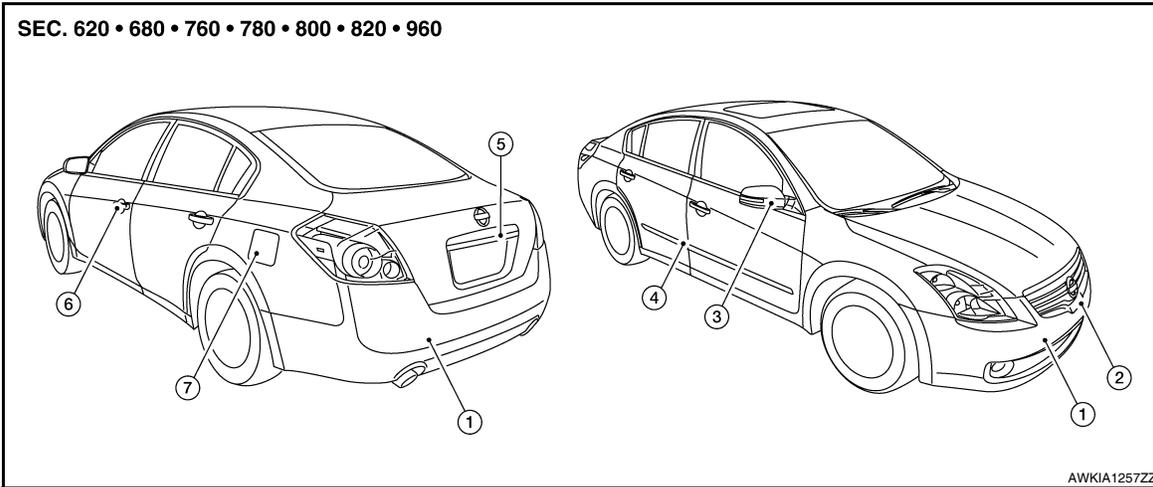
[SEDAN]

FEATURES OF NEW MODEL

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:000000004205878



Component		Color code	NAC	RAB	HAB	K12	K50	KH3	QX3	W40	
		Description	Red	Blue	Beige	Silver	Dark Grey	Black	White	Medium Grey	
		Paint type	M	M	M	M	M	S	3P	M	
		Hard clear coat	x	x	x	x	-	-	-	-	
1	Bumper fascia	Body color	NAC	RAB	HAB	K12	K50	KH3	QX3	W40	
2	Front grille	Chromium-plate + Smoke clear	Cr + HFM-09								
3	Door outside mirror	Case	Body color	NAC	RAB	HAB	K12	K50	KH3	QX3	W40
4	Body side molding	Body color	NAC	RAB	HAB	K12	K50	KH3	QX3	W40	
5	License plate finisher	Chromium plate + Body color	Cr + NAC	Cr + RAB	Cr + HAB	Cr + K12	Cr + K50	Cr + KH3	Cr + QX3	Cr + W40	
6	Door outside handle	Chromium-plate	Cr								
7	Fuel filler lid	Body color	NAC	RAB	HAB	K12	K50	KH3	QX3	W40	

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

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HANDLING PRECAUTIONS FOR PLASTICS

< PRECAUTION >

[SEDAN]

PRECAUTION

HANDLING PRECAUTIONS FOR PLASTICS

Precautions For Plastics

INFOID:000000004205879

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.	

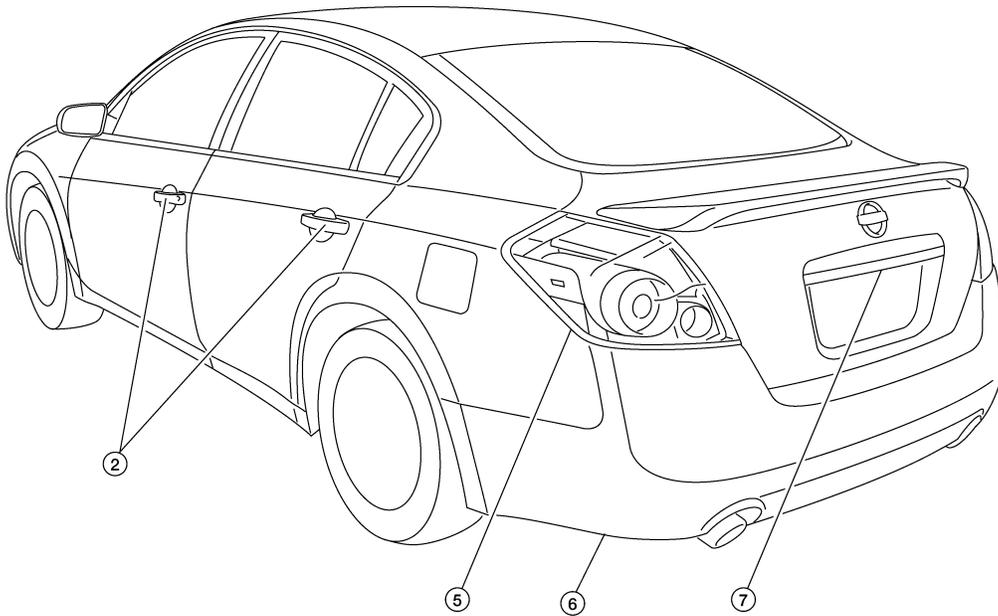
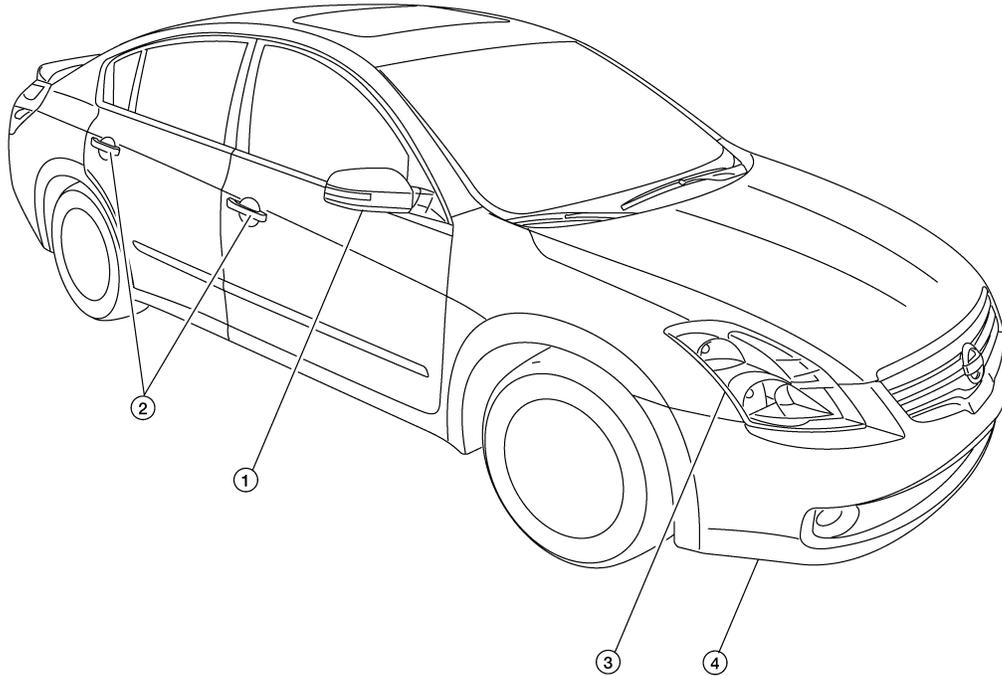
1. When repairing and painting a portion of the body adjacent to plastic parts, consider their characteristics (influence of heat and solvent) and remove them if necessary or take suitable measures to protect them.
2. Plastic parts should be repaired and painted using methods suiting the materials' characteristics.

LOCATION OF PLASTIC PARTS

HANDLING PRECAUTIONS FOR PLASTICS

< PRECAUTION >

[SEDAN]



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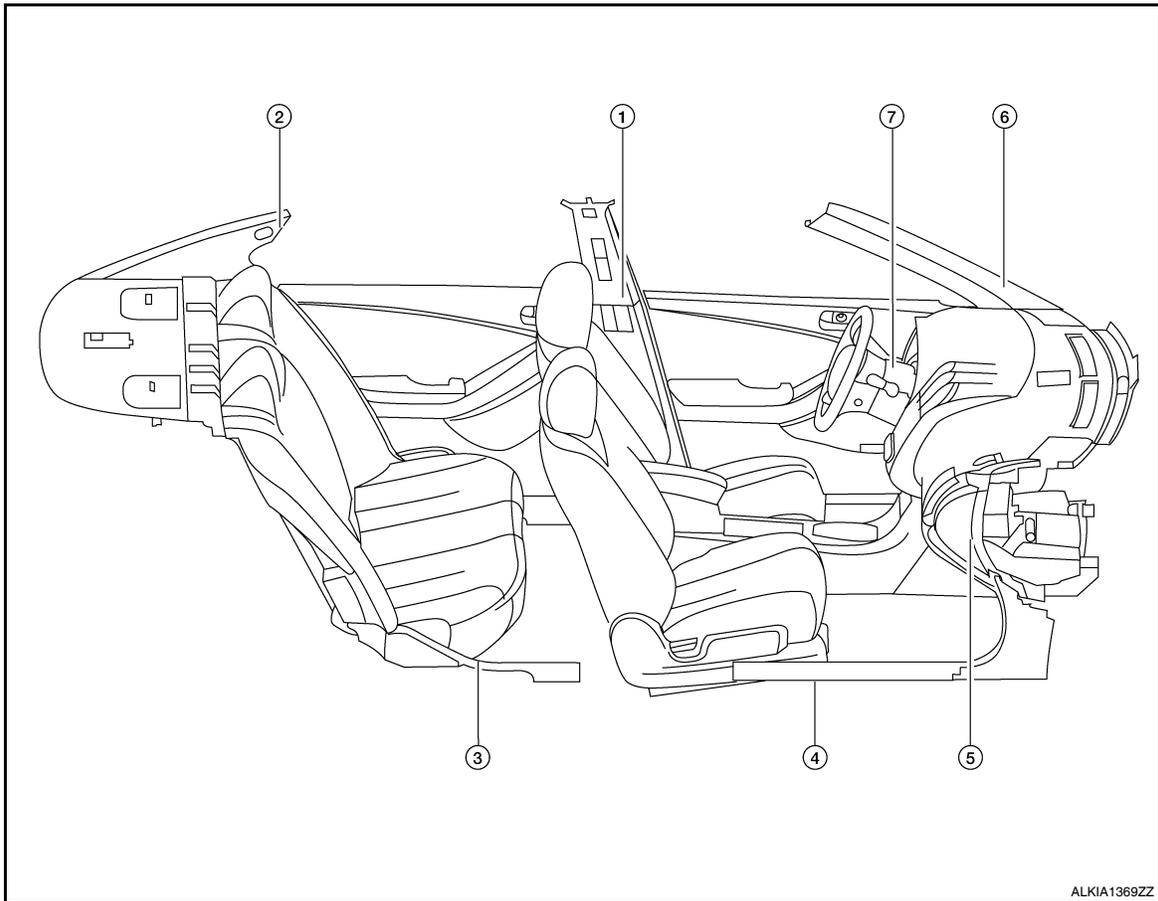
Item	Component	Abbreviation	Material
1.	Door Mirror	Case	ASA Acronitrile Styrene Acrylate
		Skull cap	ABS Acronitrile Butadiene Acrylate
2.	Outside door handle	Grip	PC Polycarbonate
		Escutcheon	PA Polyamide (Nylon)

HANDLING PRECAUTIONS FOR PLASTICS

[SEDAN]

< PRECAUTION >

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



ALKIA1369ZZ

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

BODY COMPONENT PARTS

< ON-VEHICLE REPAIR >

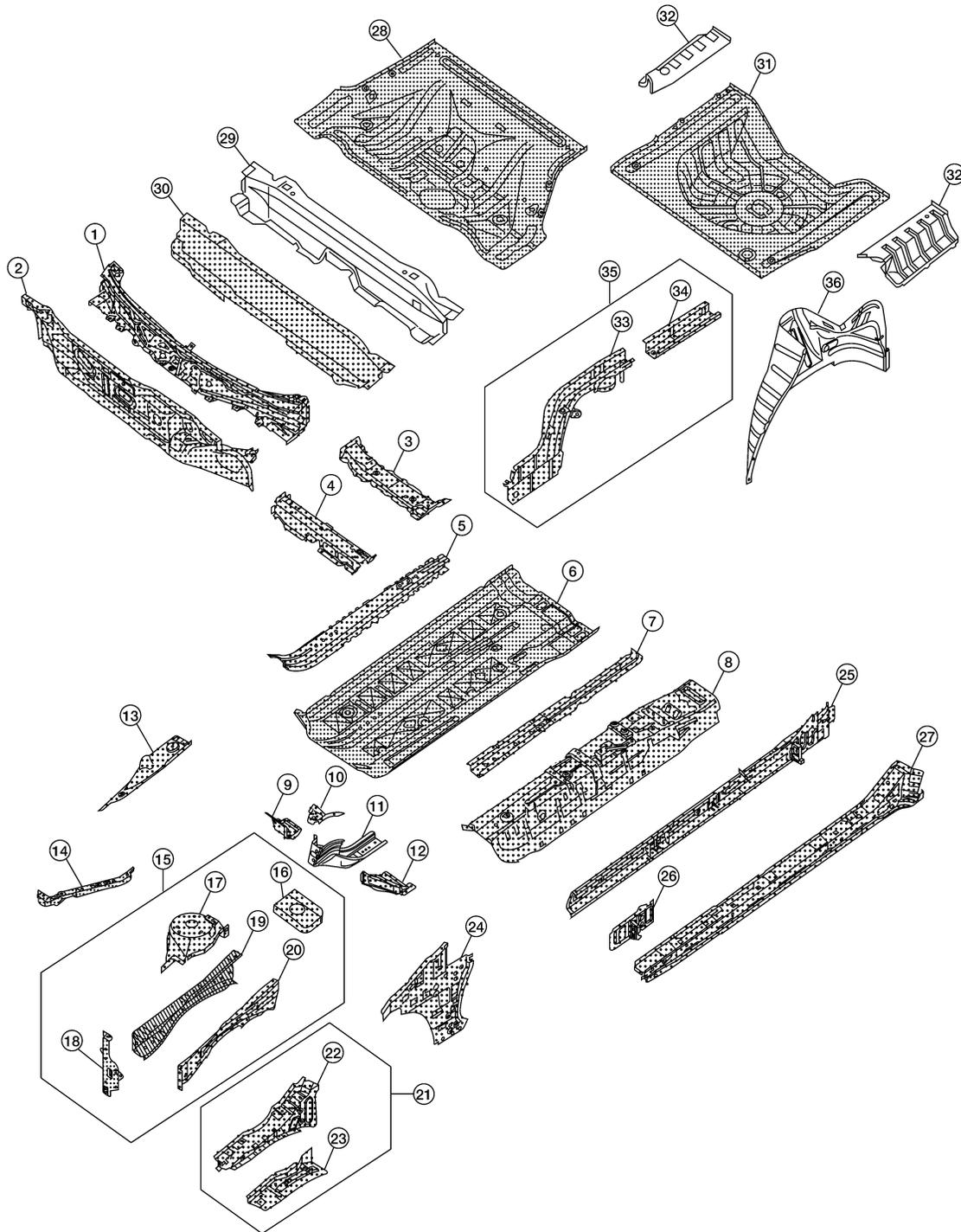
[SEDAN]

ON-VEHICLE REPAIR

BODY COMPONENT PARTS

Underbody Component Parts

INFOID:000000004205880



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

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

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BODY COMPONENT PARTS

< ON-VEHICLE REPAIR >

[SEDAN]

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

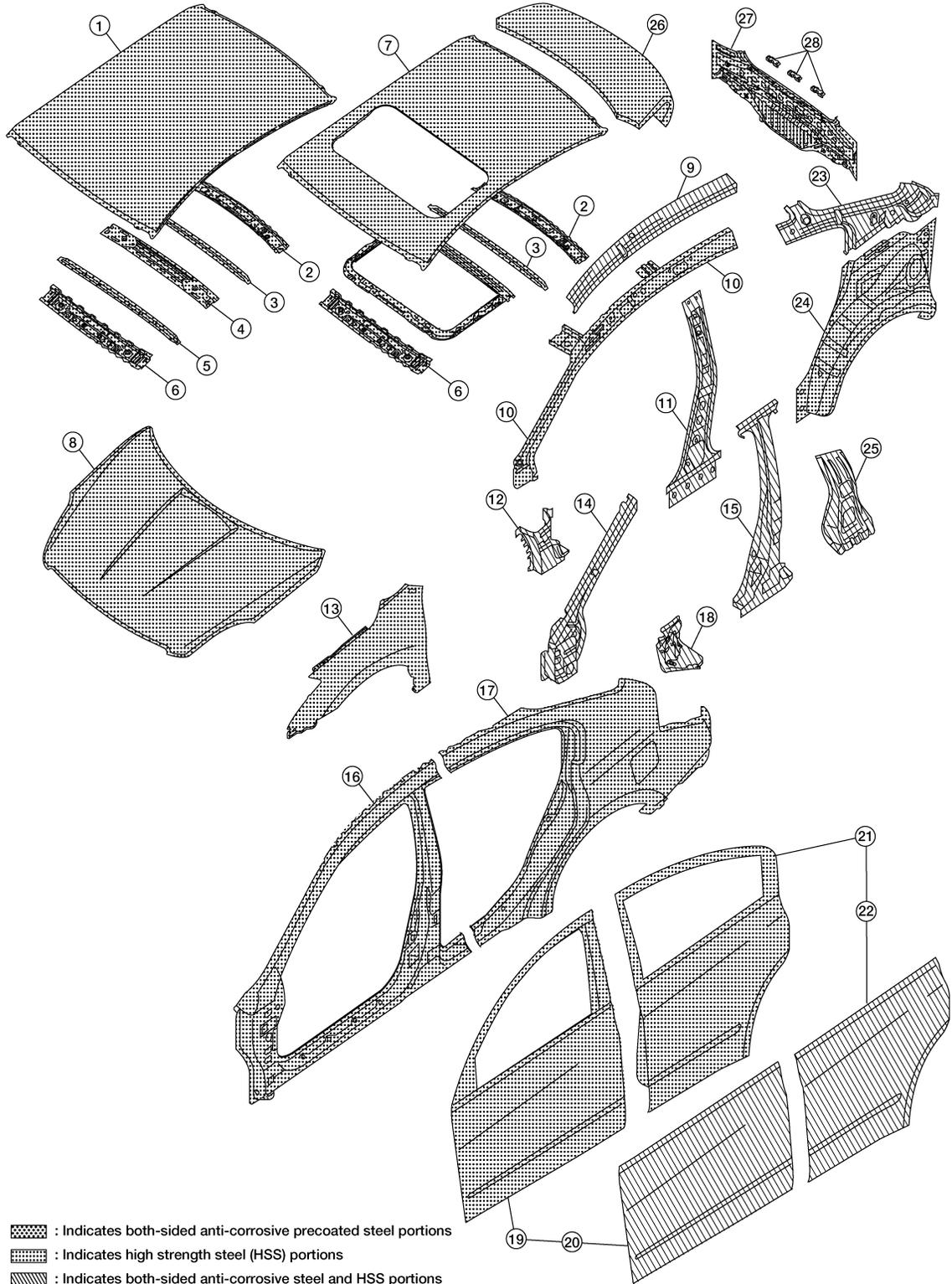
BODY COMPONENT PARTS

< ON-VEHICLE REPAIR >

[SEDAN]

INFOID:00000004205881

Body Component Parts



 : 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. Roof panel assembly
- 2. Rear roof rail
- 3. 3rd roof rail
- 4. 2nd roof rail
- 5. 1st roof rail
- 6. Front roof rail

- 7. Rear roof rail reinforcement (RH, LH)
- 8. Rear wheel well housing outer (RH, LH)
- 9. Rear pillar inner reinforcement (RH, LH)
- 10. Trunk lid assembly (RH, LH)
- 11. Trunk lid reinforcement (RH, LH)
- 12. Trunk lid reinforcement (RH, LH)
- 13. Trunk lid reinforcement (RH, LH)
- 14. Trunk lid reinforcement (RH, LH)
- 15. Trunk lid reinforcement (RH, LH)
- 16. Trunk lid reinforcement (RH, LH)
- 17. Trunk lid reinforcement (RH, LH)
- 18. Trunk lid reinforcement (RH, LH)
- 19. Rear door assembly (RH, LH)
- 20. Outer rear door panel (RH, LH)
- 21. Rear door assembly (RH, LH)
- 22. Outer rear door panel (RH, LH)
- 23. Rear roof rail reinforcement (RH, LH)
- 24. Rear wheel well housing outer (RH, LH)
- 25. Rear pillar inner reinforcement (RH, LH)
- 26. Trunk lid assembly (RH, LH)

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BODY COMPONENT PARTS

< ON-VEHICLE REPAIR >

[SEDAN]

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

CORROSION PROTECTION

Description

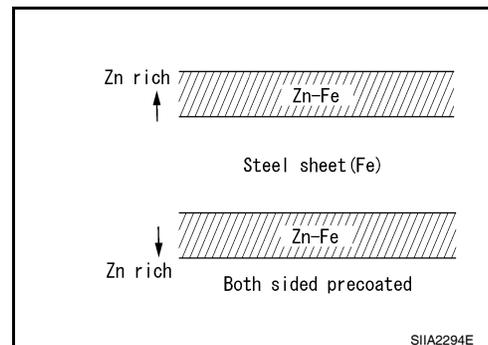
INFOID:000000004205882

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.



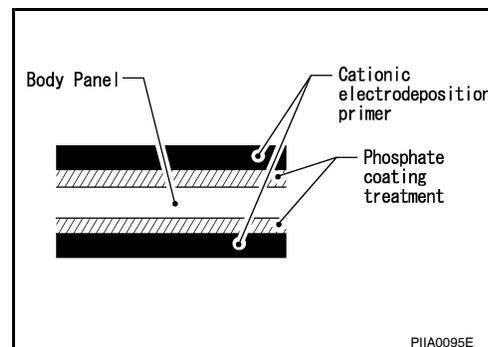
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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:000000004205883

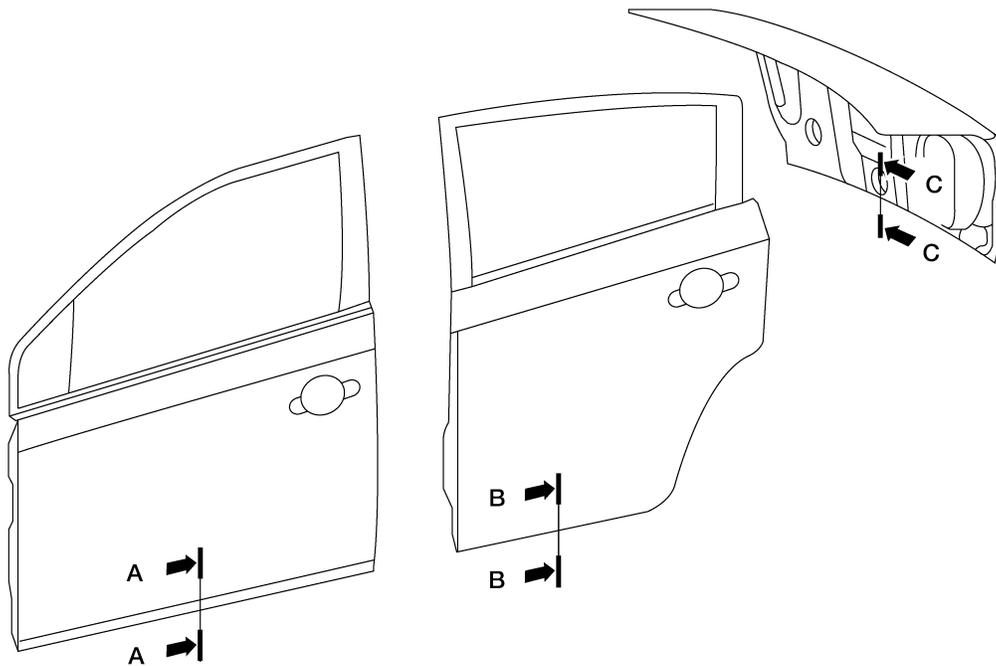
To improve corrosion resistance, anti-corrosive wax is applied inside the body sill and inside other closed sections. Accordingly, when replacing these parts, be sure to apply anti-corrosive wax to the appropriate areas of

CORROSION PROTECTION

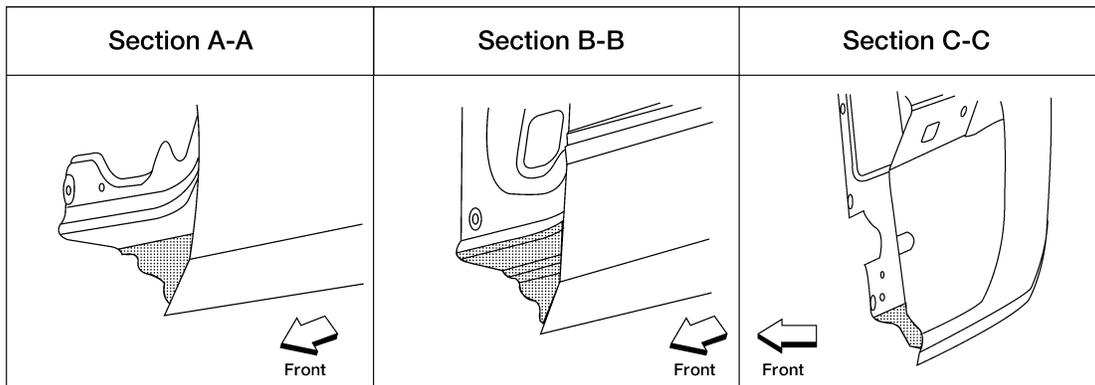
< ON-VEHICLE REPAIR >

[SEDAN]

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



 : Indicates anti-corrosive wax coated portions



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INFOID:000000004205884

Undercoating

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

Precautions in Undercoating

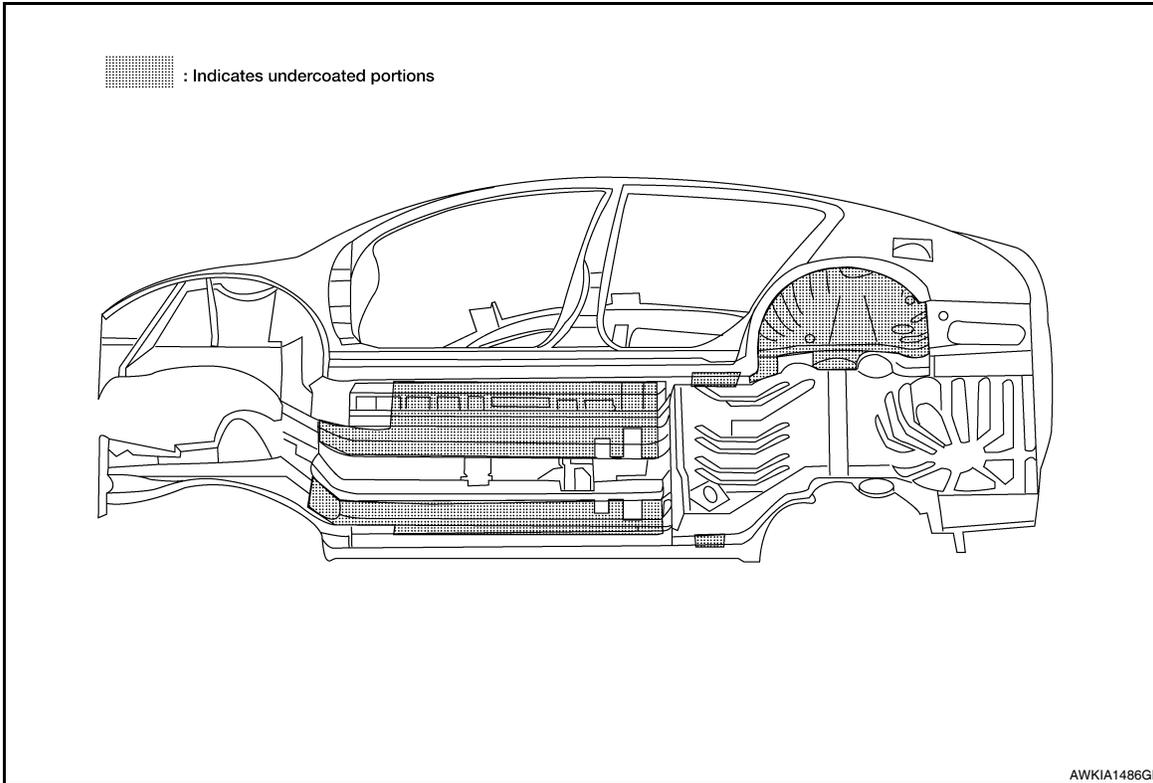
1. Do not apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst which are subjected to heat).
2. Do not undercoat the exhaust pipe or other parts which become hot.
3. Do not undercoat rotating parts.
4. Apply bitumen wax after applying undercoating.

CORROSION PROTECTION

< ON-VEHICLE REPAIR >

[SEDAN]

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

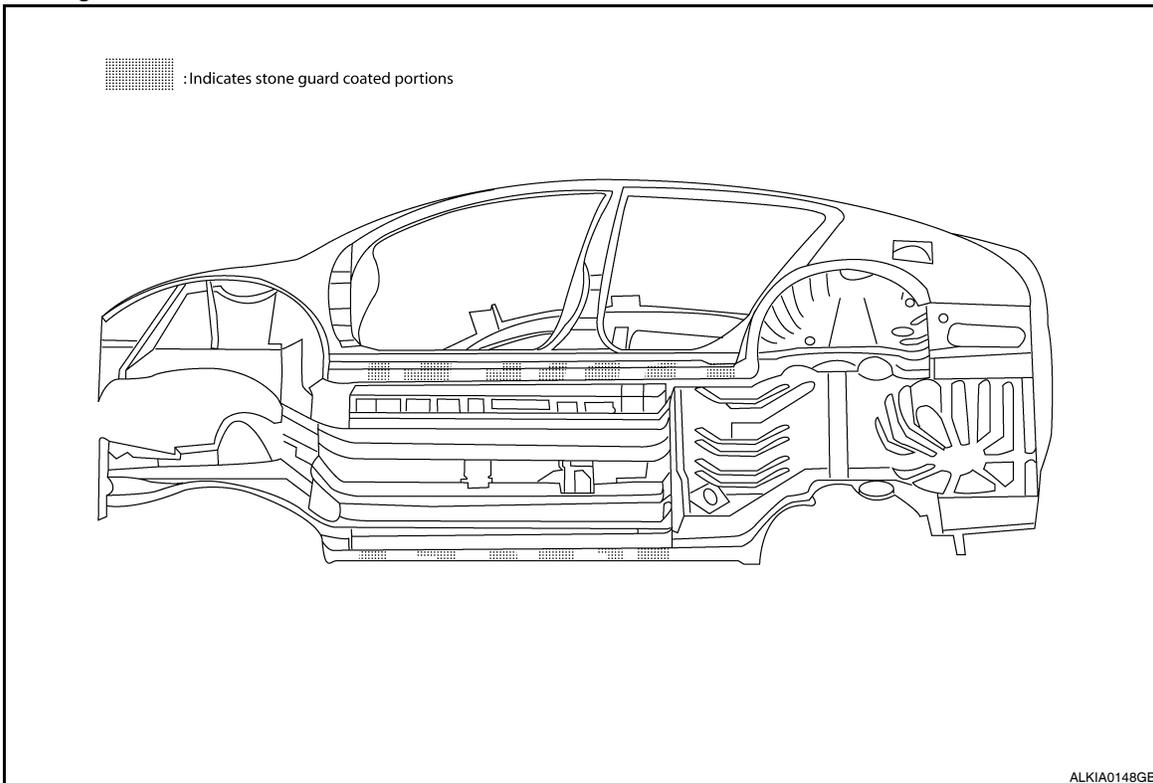


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Stone Guard Coat

INFOID:000000004205885

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



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BODY SEALING

< ON-VEHICLE REPAIR >

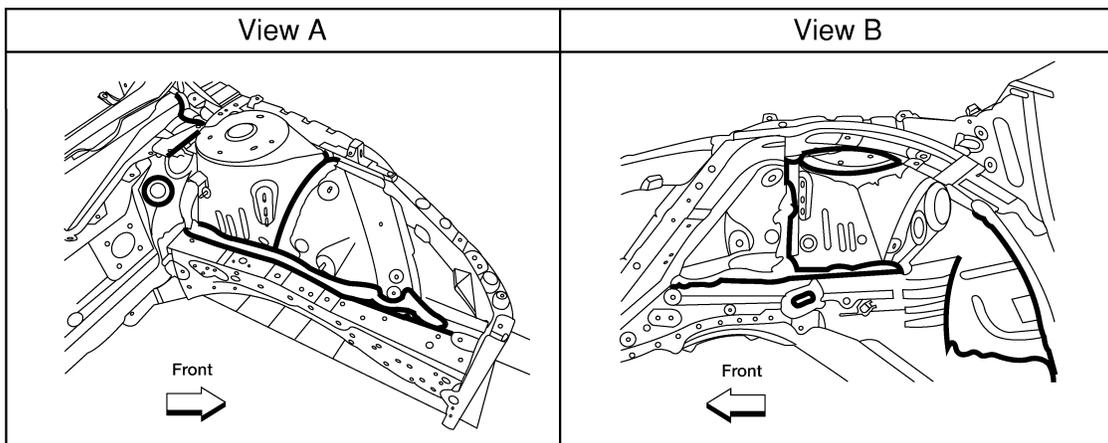
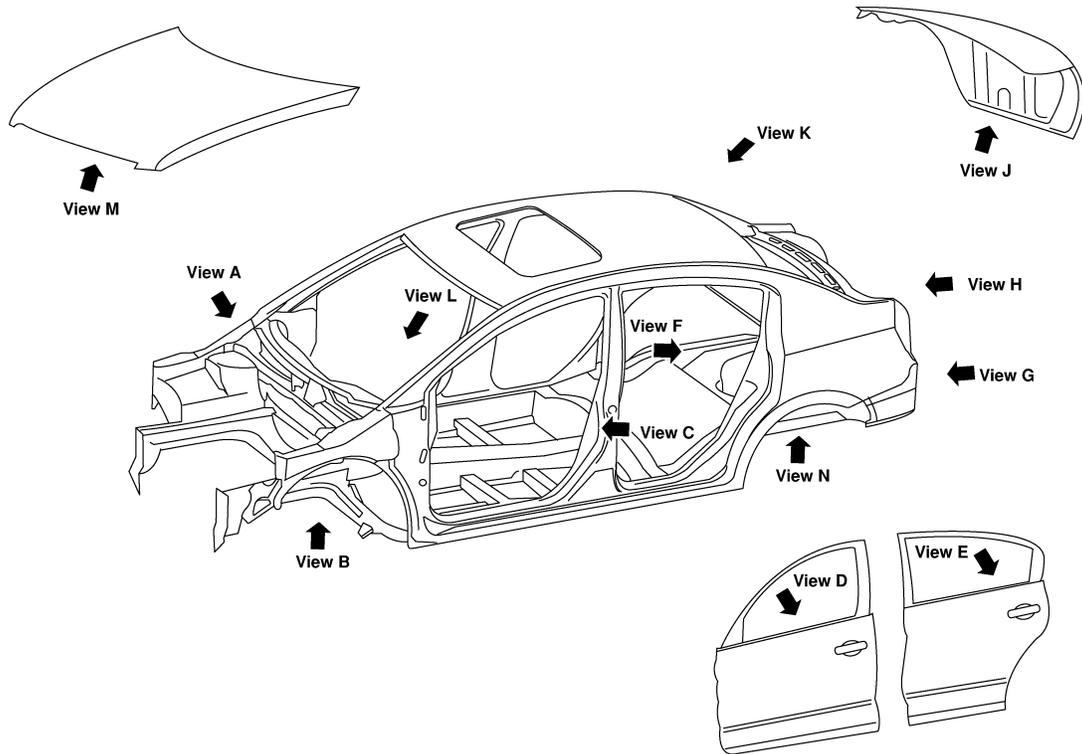
[SEDAN]

BODY SEALING

Description

INFOID:000000004205886

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.

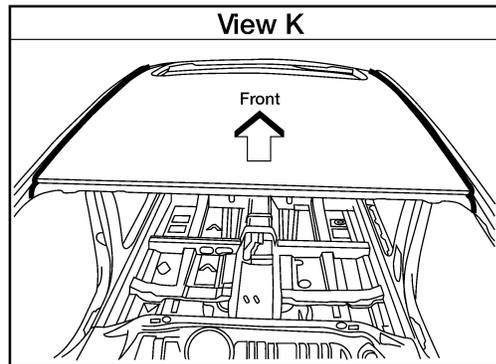
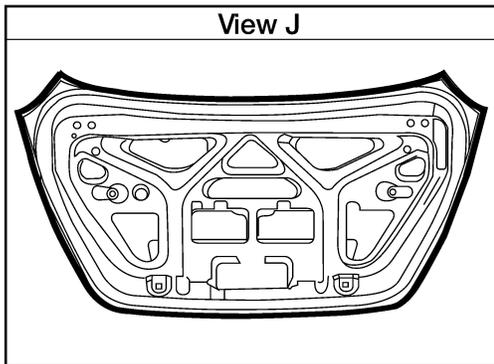
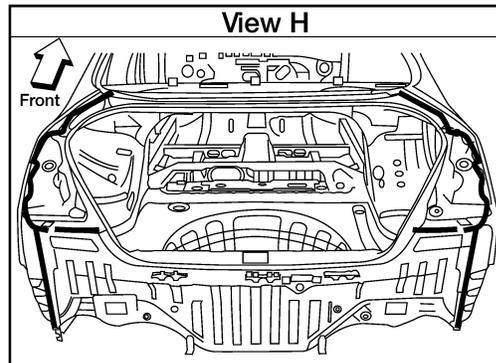
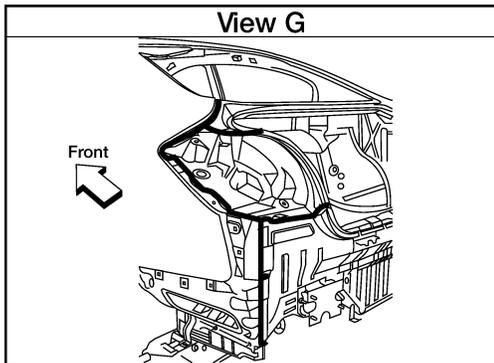
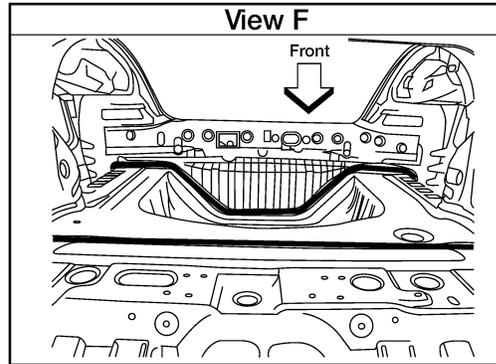
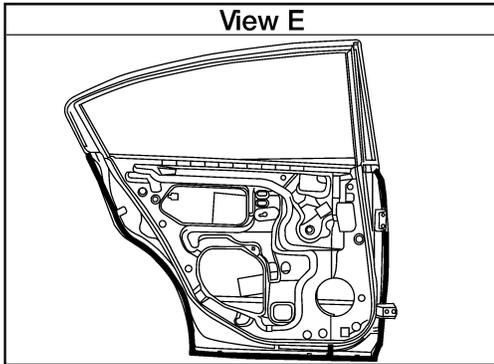
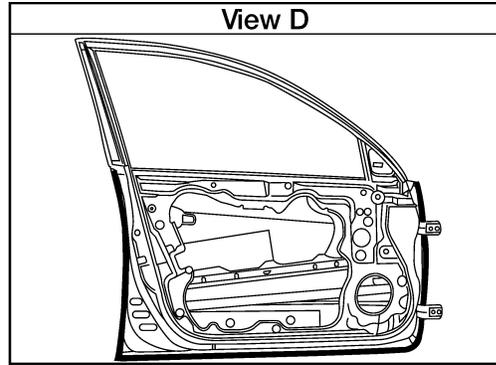
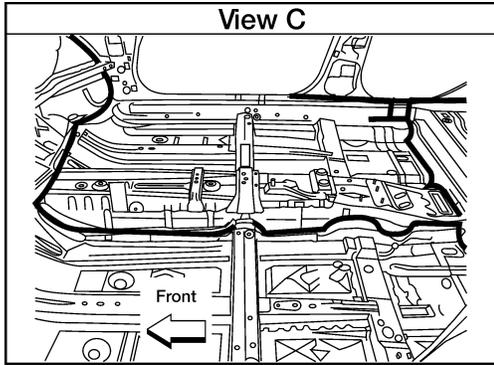


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BODY SEALING

< ON-VEHICLE REPAIR >

[SEDAN]



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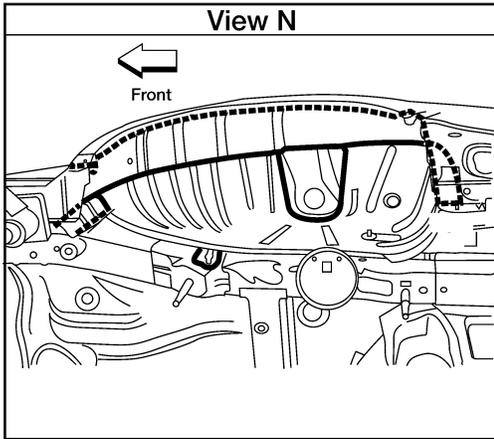
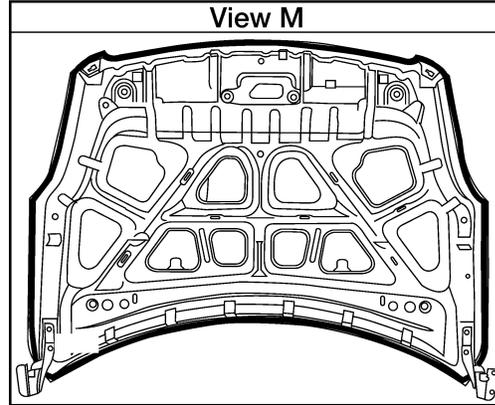
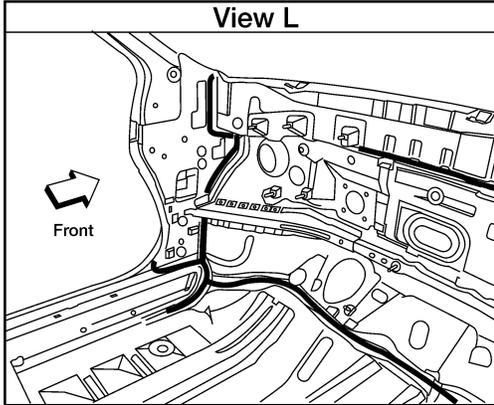
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BODY SEALING

< ON-VEHICLE REPAIR >

[SEDAN]



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BODY CONSTRUCTION

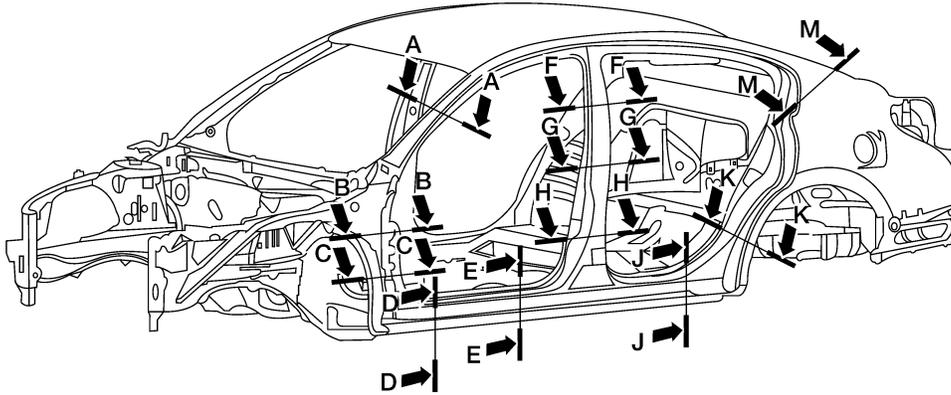
< ON-VEHICLE REPAIR >

[SEDAN]

BODY CONSTRUCTION

Body Construction

INFOID:000000004205887



Section A-A	Section B-B	Section C-C
Section D-D	Section E-E	Section F-F
Section G-G	Section H-H	Section J-J
Section K-K	Section M-M	

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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

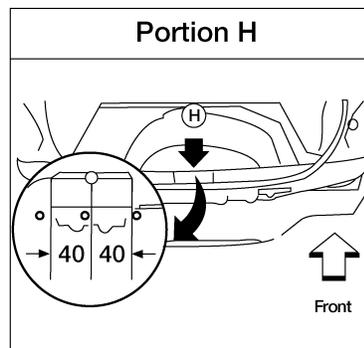
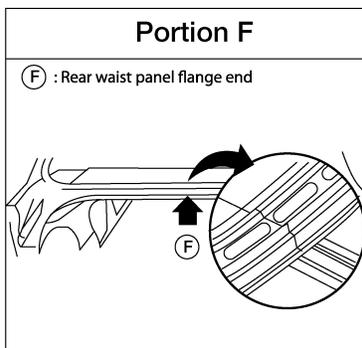
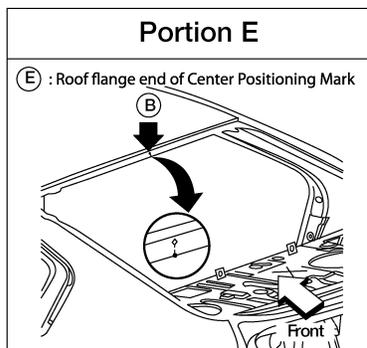
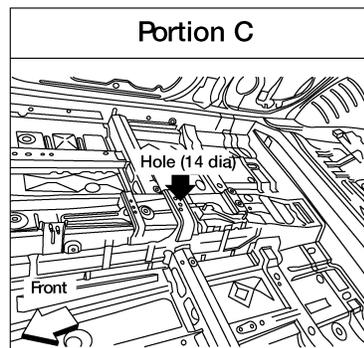
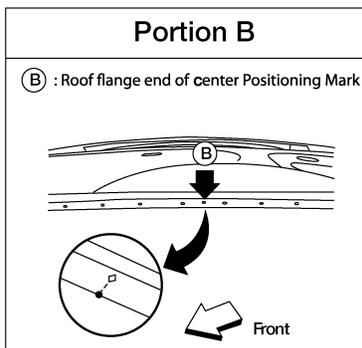
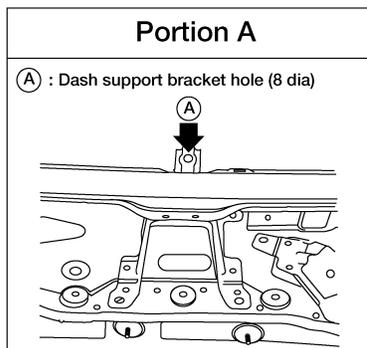
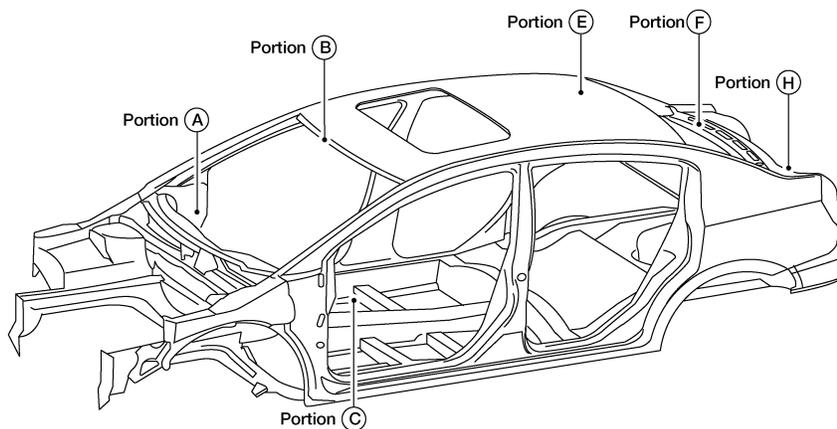
[SEDAN]

BODY ALIGNMENT

Body Center Marks

INFOID:000000004205888

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



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BODY ALIGNMENT

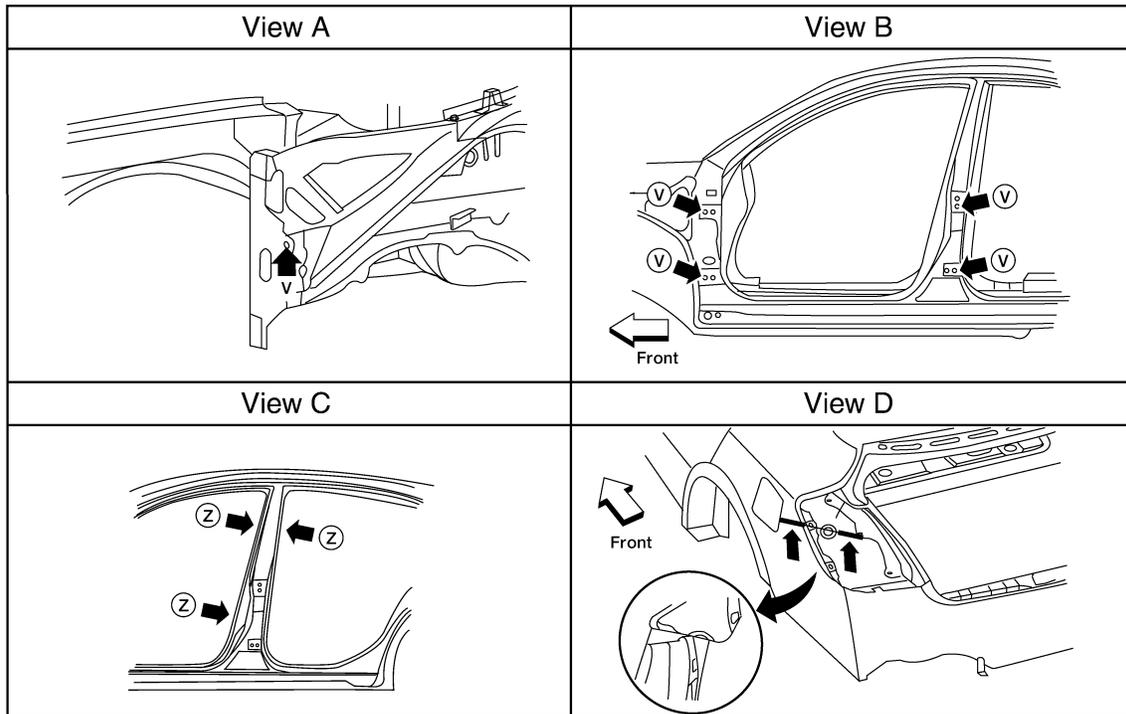
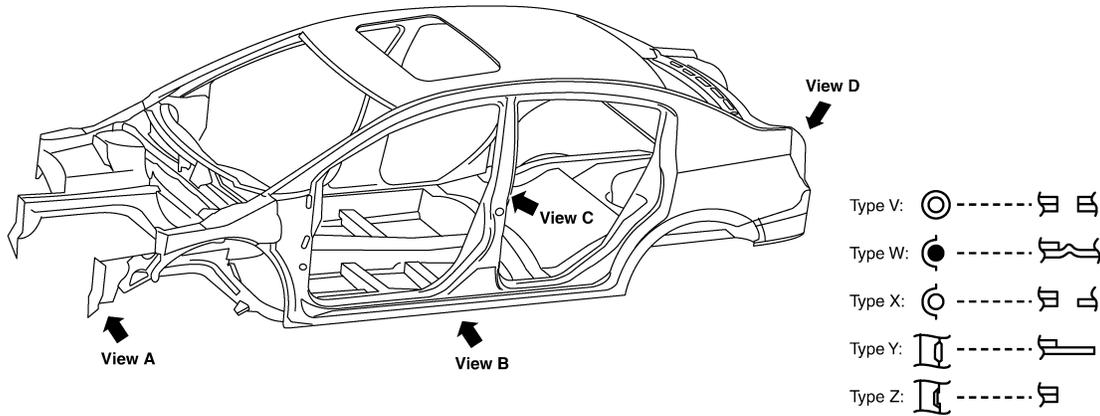
< ON-VEHICLE REPAIR >

[SEDAN]

Panel Parts Matching Marks

INFOID:000000004205889

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



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Description

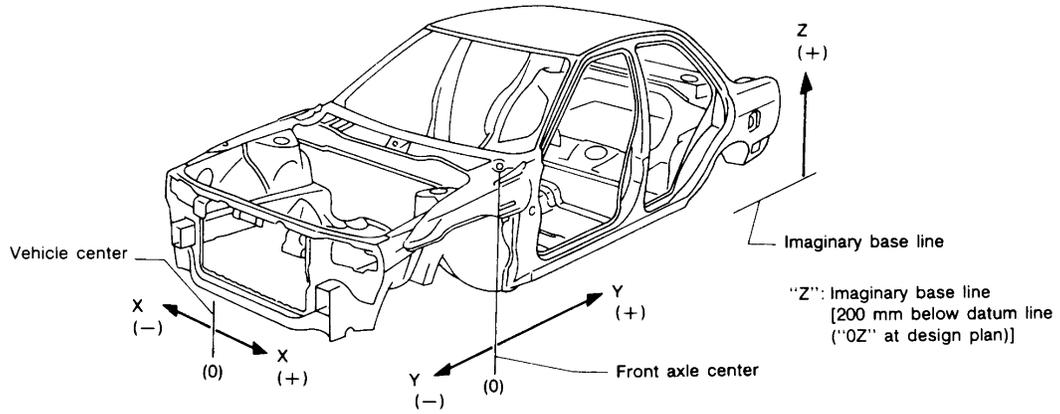
INFOID:000000004205890

- 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".

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[SEDAN]



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BODY ALIGNMENT

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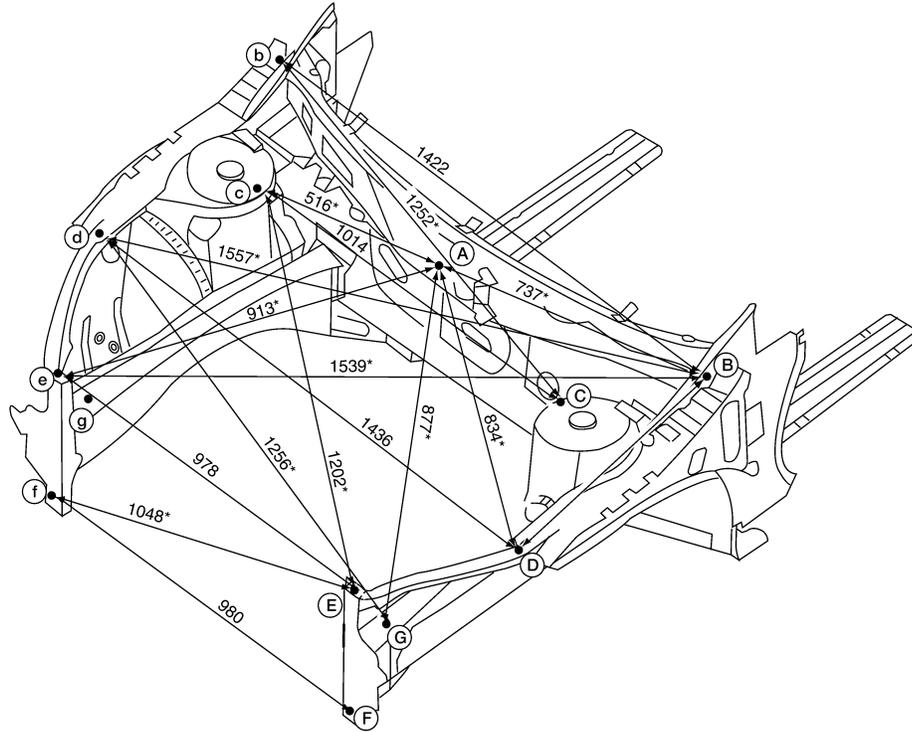
[SEDAN]

INFOID:00000004205891

Engine Compartment

Measurement

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



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

Unit : mm

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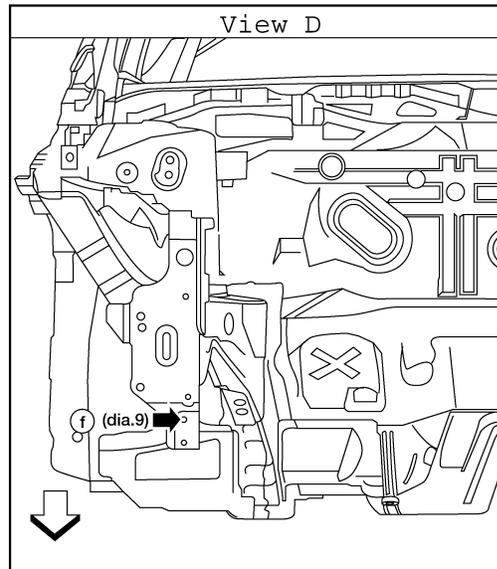
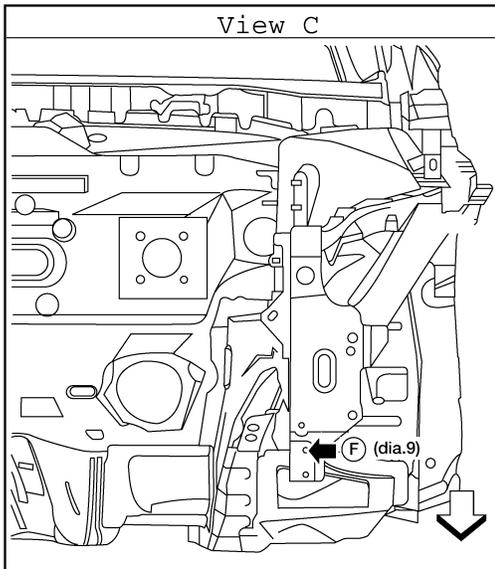
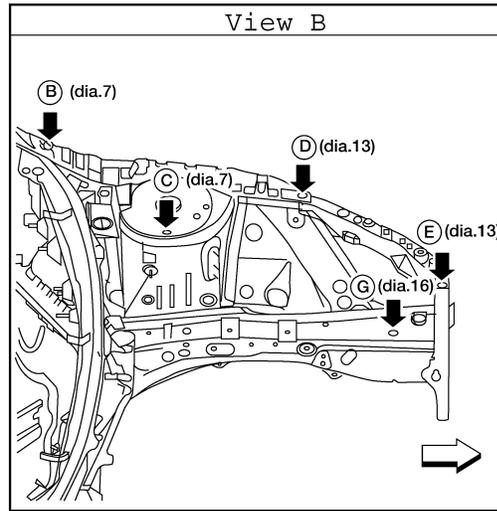
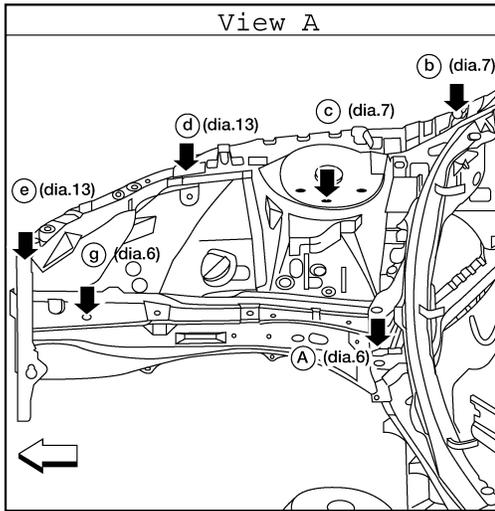
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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[SEDAN]

Measurement Points



Unit : mm

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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[SEDAN]

Underbody

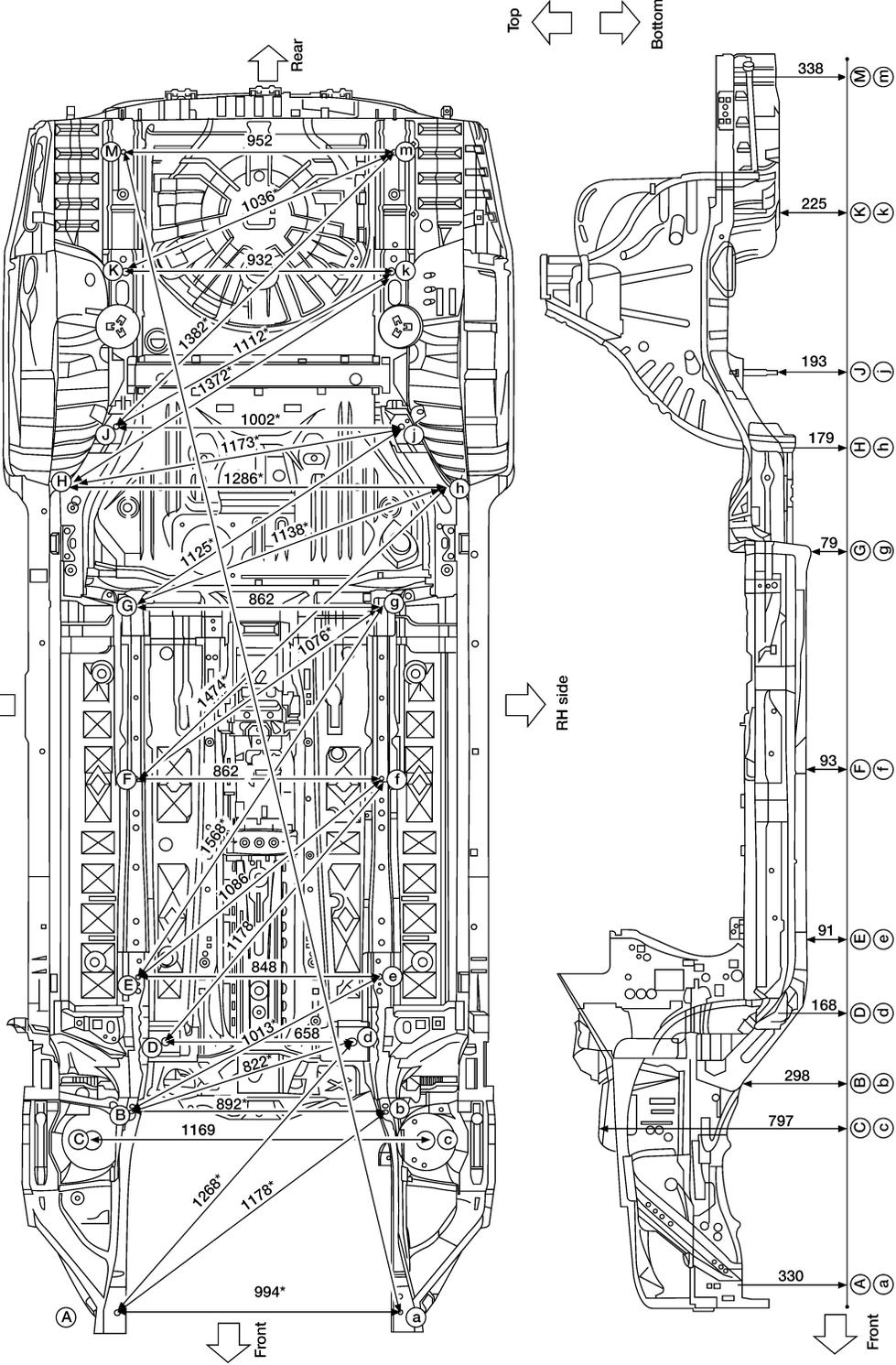
INFOID:00000004205892

Measurement

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

As viewed from underside.

All dimensions indicated in this figure are actual.



Unit : mm

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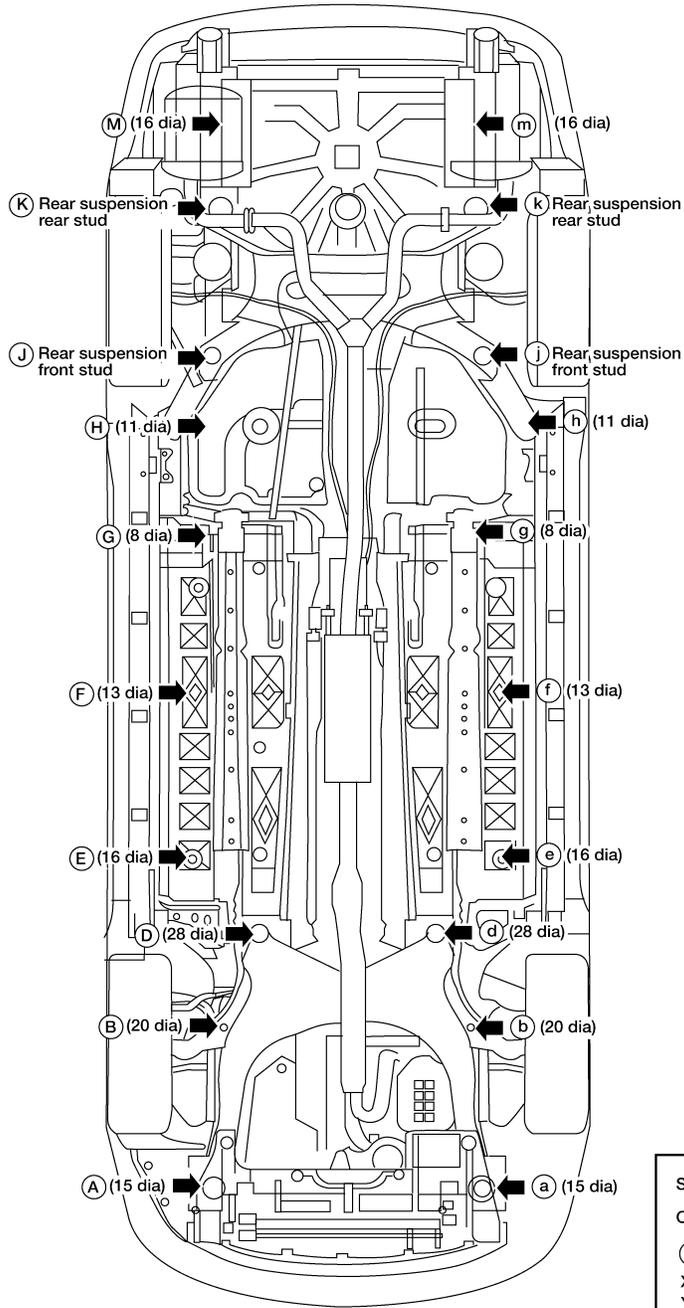
BRM

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[SEDAN]

Measurement Points



(A) a
X : ± 497
Y : -566
Z : 330

(B) b
X : ± 446
Y : 149
Z : 298

(D) d
X : ± 327
Y : 395
Z : 168

(E) e
X : ± 424
Y : 624
Z : 91

(F) f
X : ± 431
Y : 1294
Z : 93

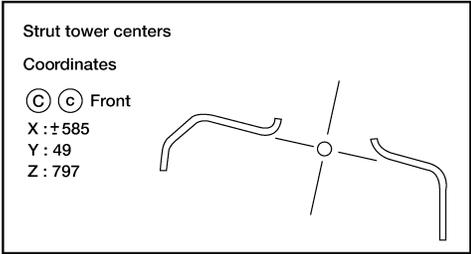
(G) g
X : ± 431
Y : 1938
Z : 79

(H) h
X : ± 643
Y : 2301
Z : 179

(J) j
X : ± 501
Y : 2558
Z : 193

(K) k
X : ± 466
Y : 3107
Z : 225

(M) m
X : ± 476
Y : 3525
Z : 338



Unit : mm

AWKIA1489GB

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[SEDAN]

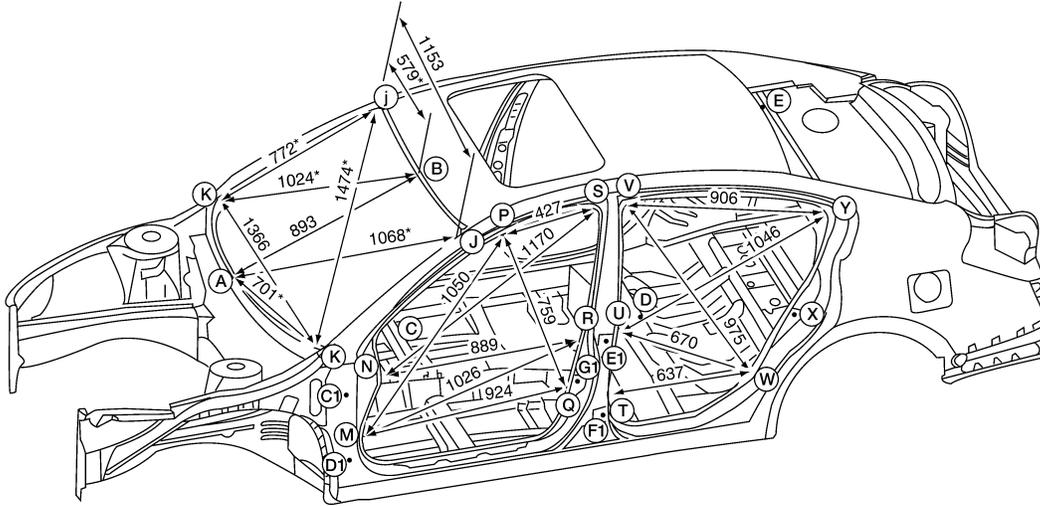
Passenger Compartment

INFOID:00000004205893

Measurement

Unit : mm

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



Point	Dimension	Point	Dimension	Point	Dimension	Point	Dimension
(A) - (C)	1044	(D) ~ (T)	742	(Gt) - (X)	987	(S) ~ (Q)	779
(A) - (D)	1890	(D) ~ (t)	904	(M) ~ (m)	1464	(S) ~ (s)	1143
(A) - (F)	3134	(D) ~ (u)	973	(M) ~ (P)	1050	(T) ~ (t)	1471
(B) - (C)	972	(D) ~ (U)	823	(M) ~ (q)	1735*	(T) ~ (V)	840
(C) - (E)	1796*	(D) ~ (v)	1148	(M) ~ (r)	1794*	(T) ~ (y)	1823*
(C) ~ (m)	912*	(D) ~ (V)	1054	(M) ~ (s)	1896*	(T) ~ (Y)	1212
(C) ~ (n)	928*	(D) ~ (w)	883	(M) ~ (S)	1386	(U) ~ (u)	1479
(C) ~ (p)	1100*	(D) ~ (W)	715	(N) ~ (n)	1442	(V) ~ (t)	1544*
(C) ~ (q)	860*	(D) ~ (y)	1234	(N) ~ (P)	803	(V) ~ (v)	1139
(C) ~ (r)	970*	(D) ~ (Y)	1137	(N) ~ (r)	1710*	(V) ~ (w)	1624*
(C) ~ (s)	1249*	(D1) ~ (Et)	1223	(P) ~ (p)	1181	(W) ~ (t)	1607*
(C1) ~ (Et)	1167	(D1) ~ (Fi)	1147	(Q) ~ (n)	1686*	(W) ~ (u)	1624*
(C1) ~ (Fi)	1181	(D1) ~ (Gt)	1068	(Q) ~ (p)	1521*	(W) ~ (w)	1480
(C1) ~ (Gt)	1064	(D1) ~ (X)	2054	(Q) ~ (q)	1471	(W) ~ (y)	1564*
(C1) ~ (X)	2029	(Et) ~ (X)	867	(Q) ~ (s)	1513*	(W) ~ (Y)	762
(D) ~ (E)	1102	(Fi) ~ (X)	931	(R) ~ (r)	1480	(Y) ~ (y)	1261

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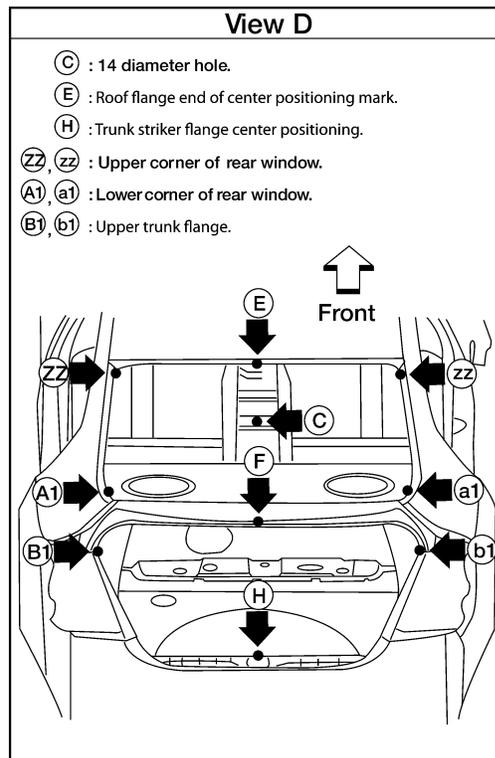
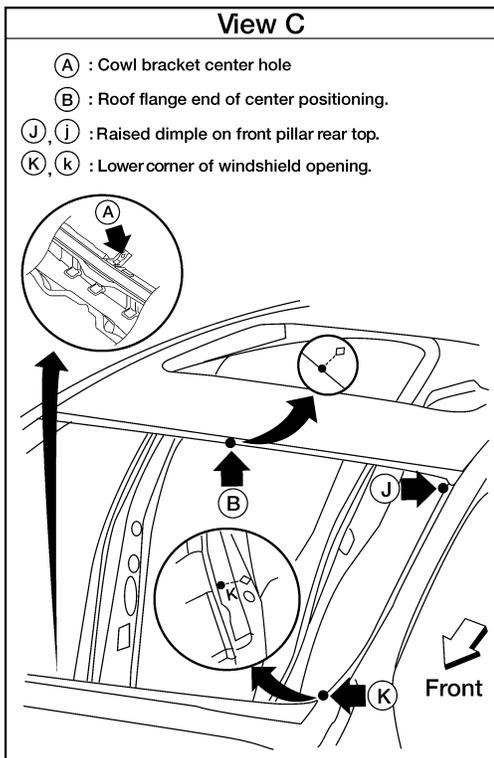
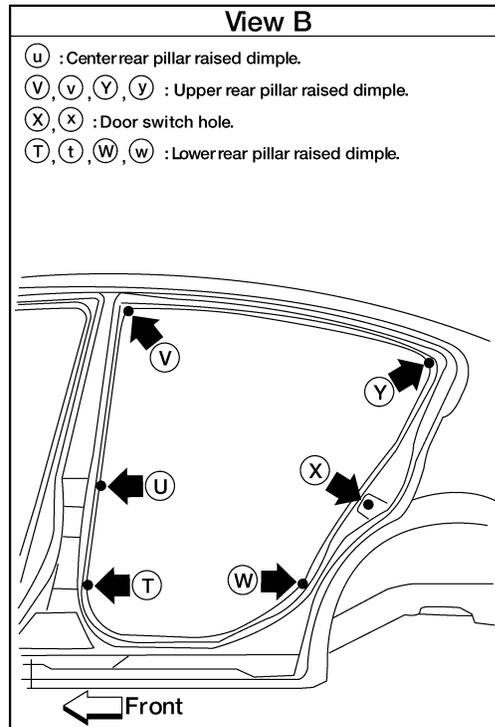
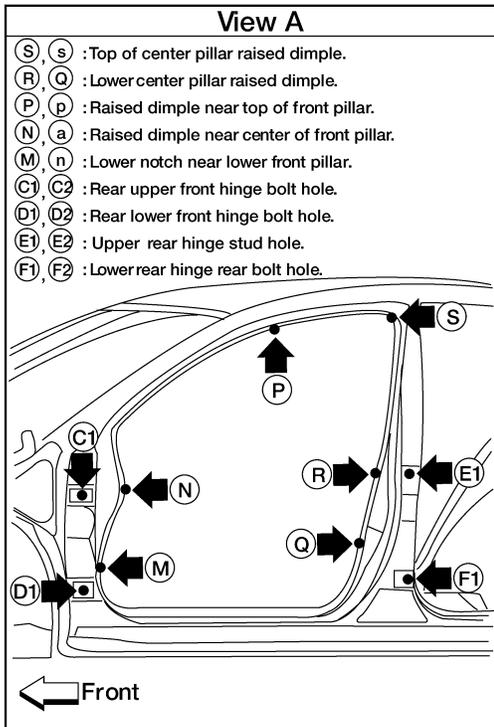
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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[SEDAN]

Measurement Points



AWKIA1487GB

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

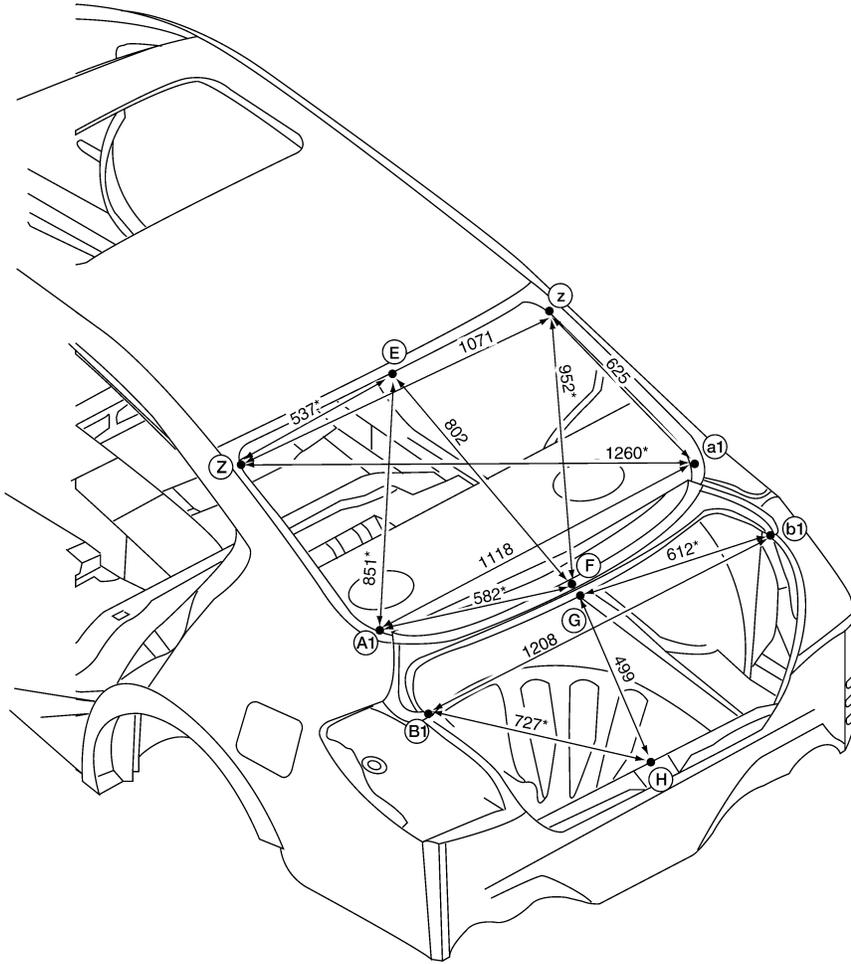
[SEDAN]

Rear Body

INFOID:00000004205894

Measurement

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



Unit : mm

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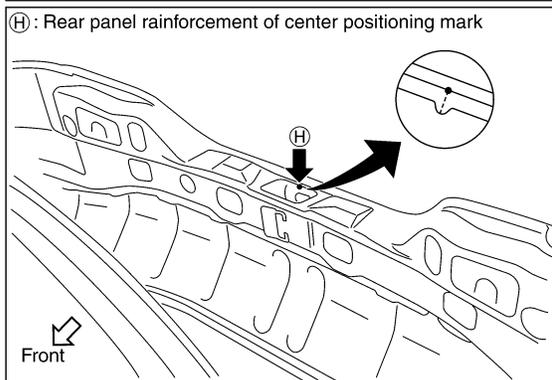
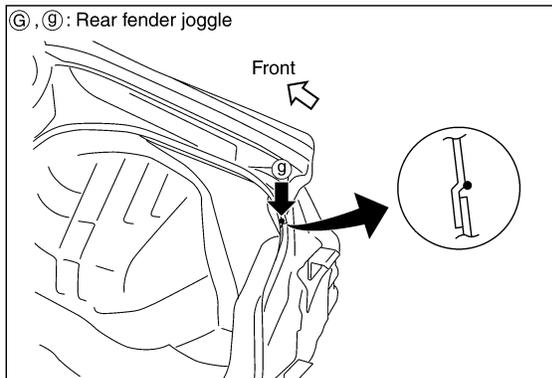
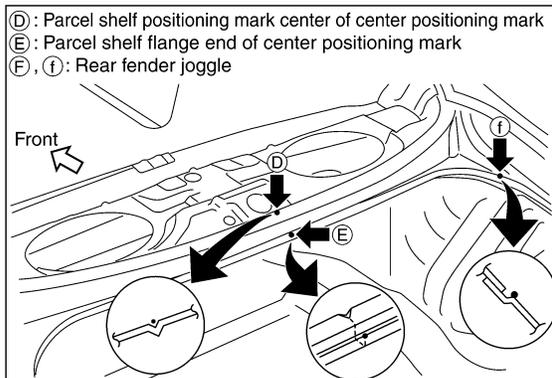
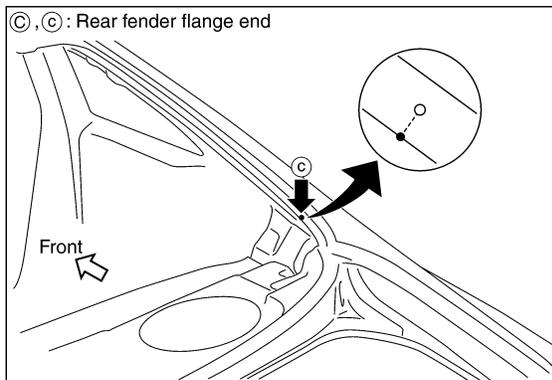
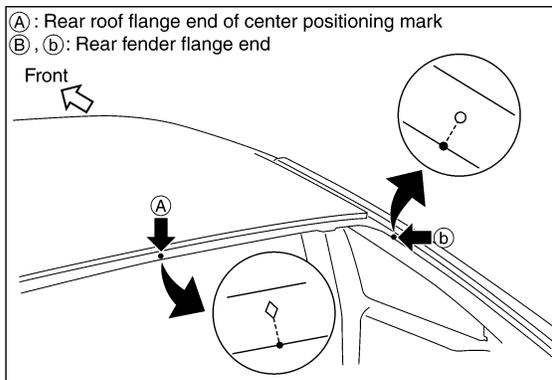
BRM

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

[SEDAN]

Measurement Points



SIIA2147E

PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

< ON-VEHICLE REPAIR >

[SEDAN]

PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

High Strength Steel (HSS)

INFOID:00000004205895

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:

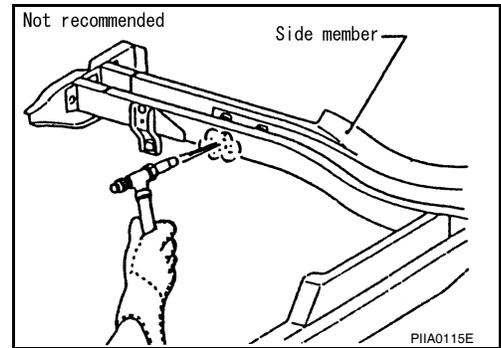
Tensile strength	Nissan/Infiniti designation	Major applicable parts
373 N/mm ² (38kg/mm ² ,54klb/sq in)	SP130	<ul style="list-style-type: none"> • Front side member assembly • Hoodledge assembly • Upper dash • Front pillar reinforcement assembly • Rear side member assembly • Other reinforcements

SP130 is the most commonly used HSS.

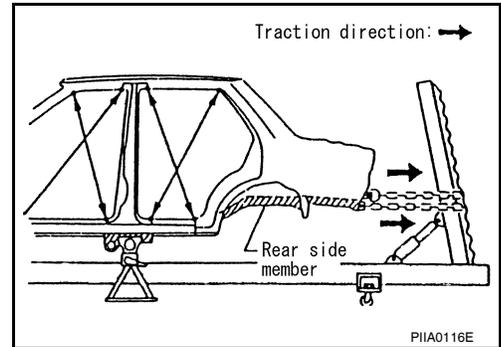
Read the following precautions when repairing HSS:

1. Additional points to consider

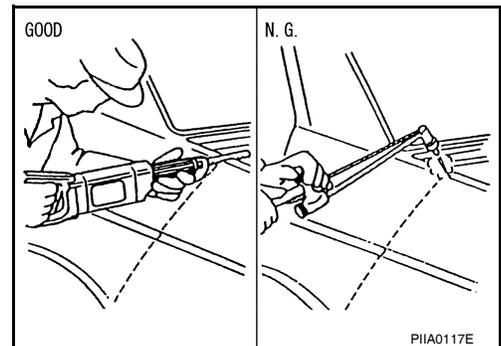
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F). Verify heating temperature with a thermometer. (Crayon-type and other similar type thermometer are appropriate.)



- 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).

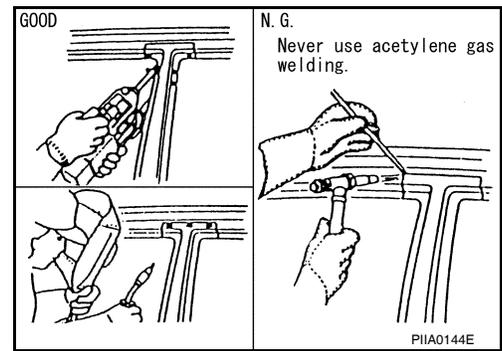


PRECAUTIONS IN REPAIRING HIGH STRENGTH STEEL

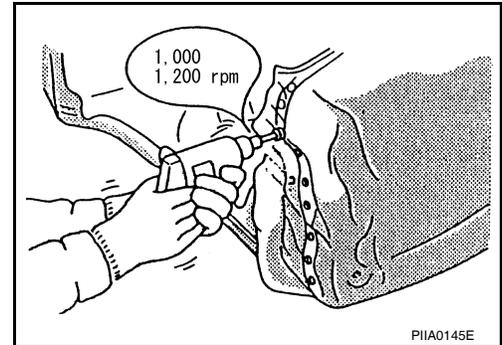
[SEDAN]

< ON-VEHICLE REPAIR >

- 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.



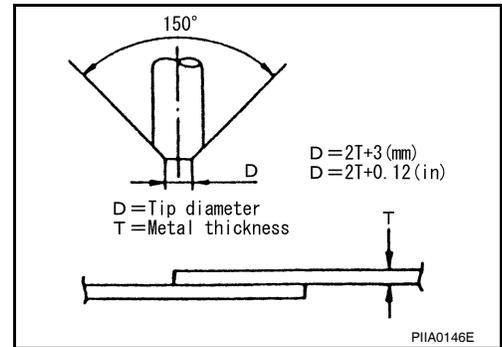
- The spot weld on HSS panels is harder than that of an ordinary steel panel. Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.



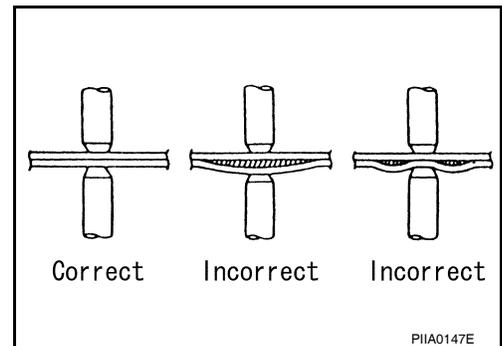
2. Precautions in spot welding HSS

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

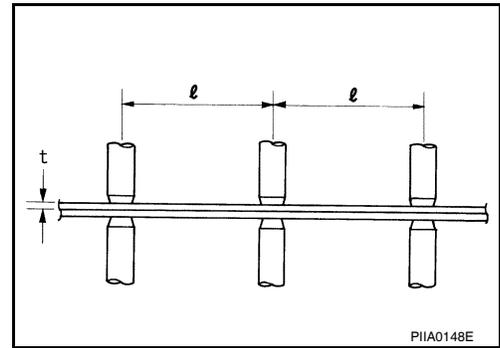
< ON-VEHICLE REPAIR >

[SEDAN]

- Follow the specifications for the proper welding pitch.

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

Unit:mm



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REPLACEMENT OPERATIONS

Description

INFOID:000000004205896

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.

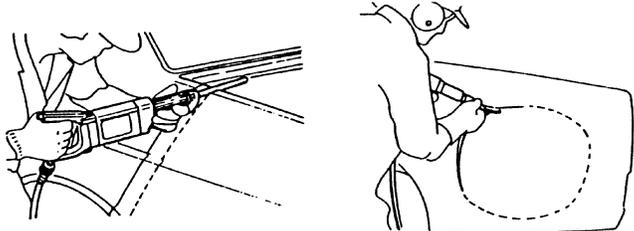
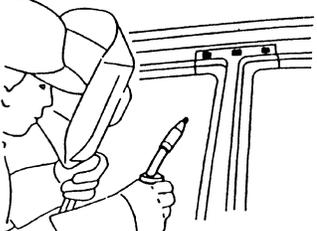
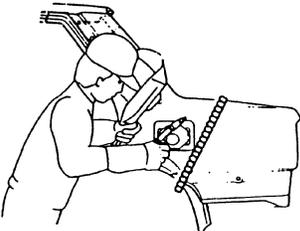
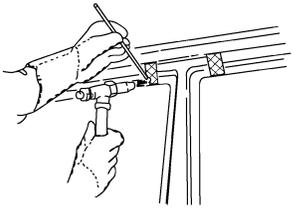
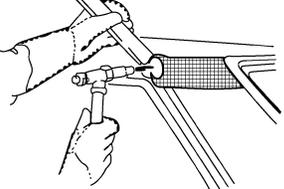
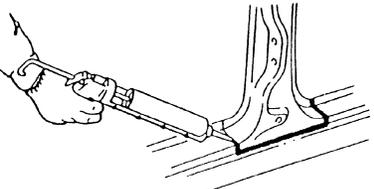
Please note that these information are prepared for worldwide usage, and as such, certain procedures might not apply in some regions or countries.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[SEDAN]

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

 Saw cut or air chisel cut			
Spot weld	 2-spot welds		2-spot welds (2-panel overlapping portions)
	 3-spot welds		3-spot welds (3-panel overlapping portions)
 MIG plug weld			
 MIG seam weld/ Point weld			
 Brazing			
 Soldering			
 Sealing			

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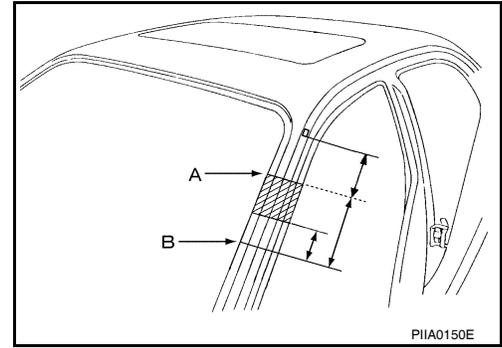
PIIA0149E

REPLACEMENT OPERATIONS

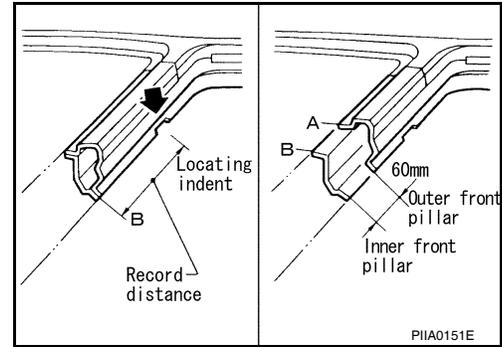
[SEDAN]

< ON-VEHICLE REPAIR >

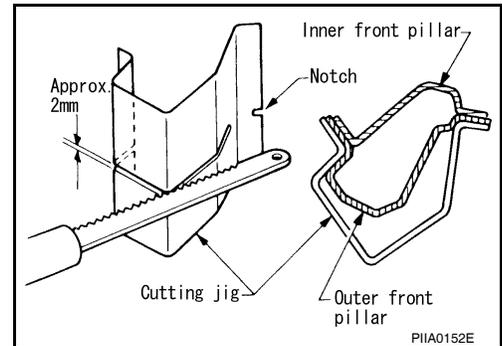
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- 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.

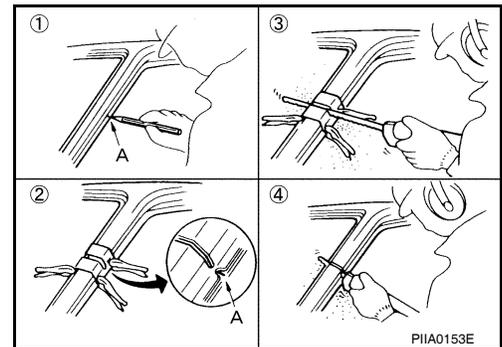


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- 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.



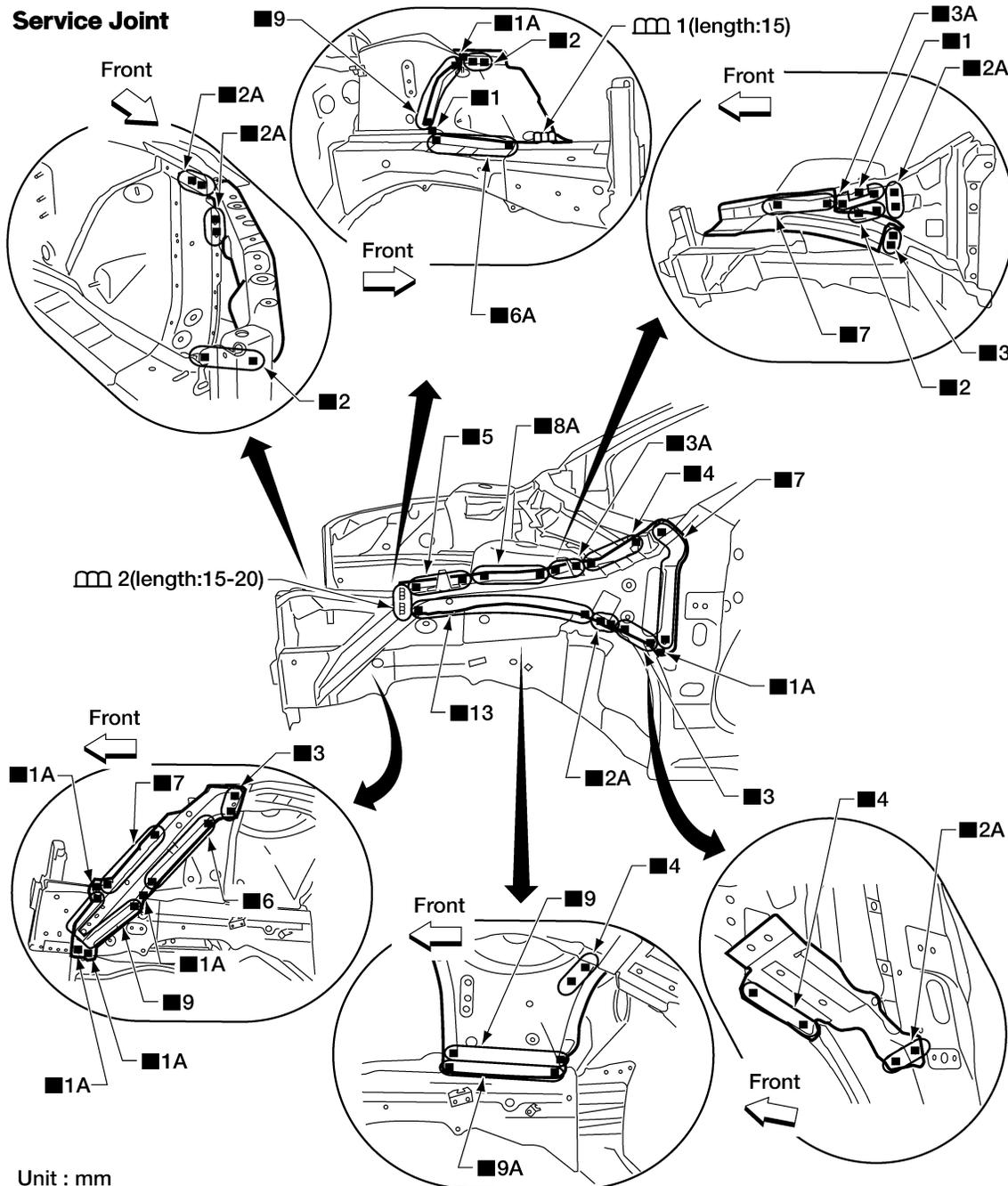
REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

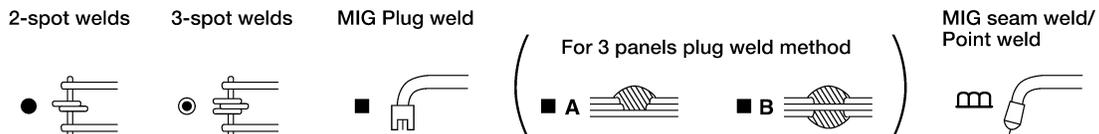
[SEDAN]

Hoodledge

INFOID:00000004205897



Unit : mm



ALKIA0084GB

Change parts

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

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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

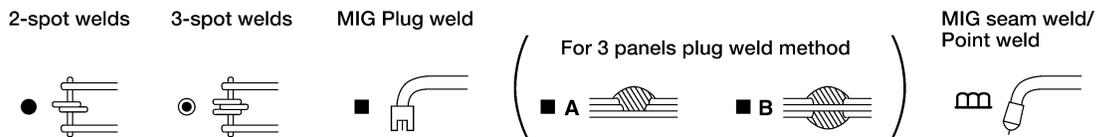
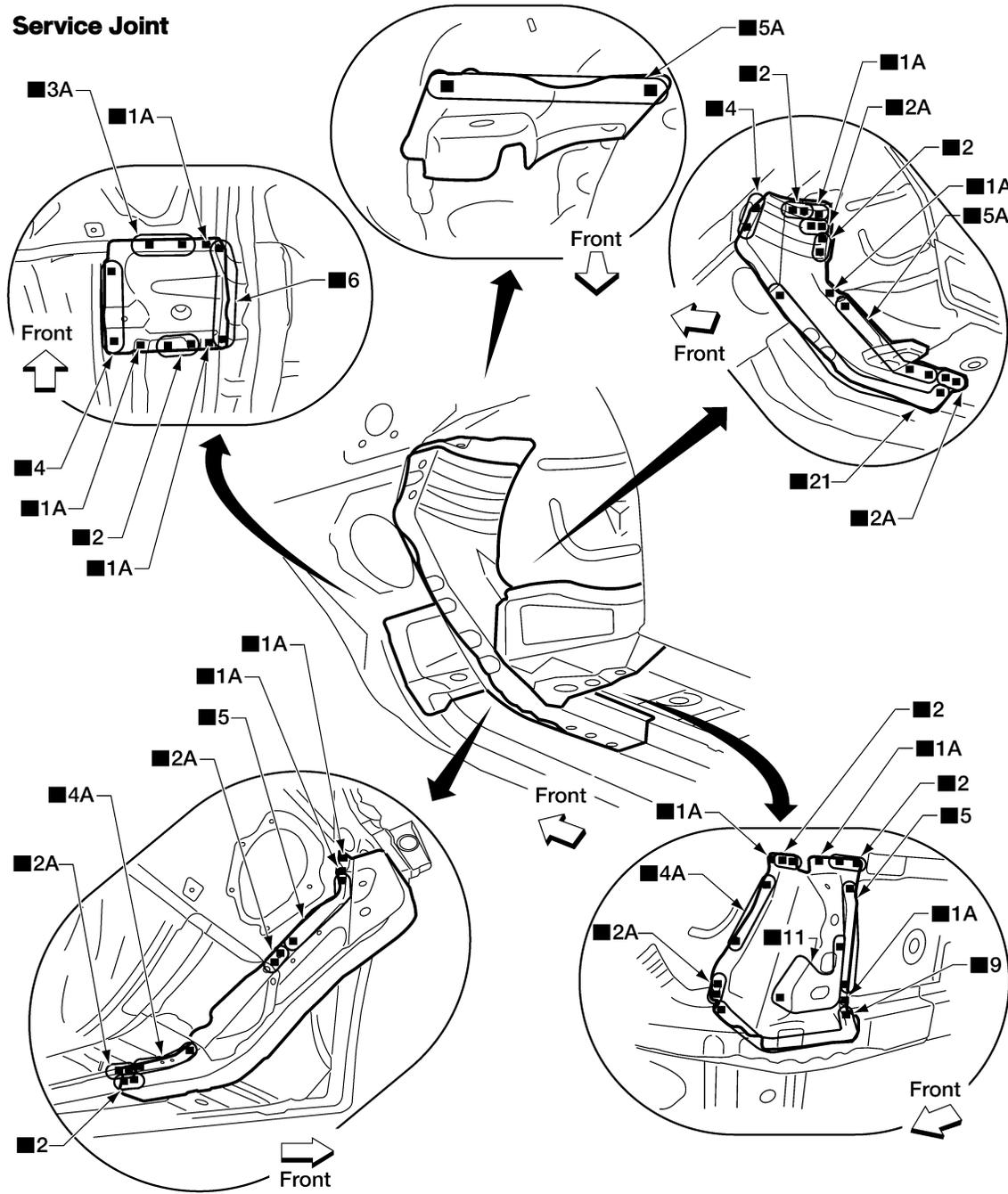
[SEDAN]

INFOID:000000004205898

Front Side Member

- Work after hoodledge partial has been removed.

Service Joint



ALKIA0085GB

Change parts

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

REPLACEMENT OPERATIONS

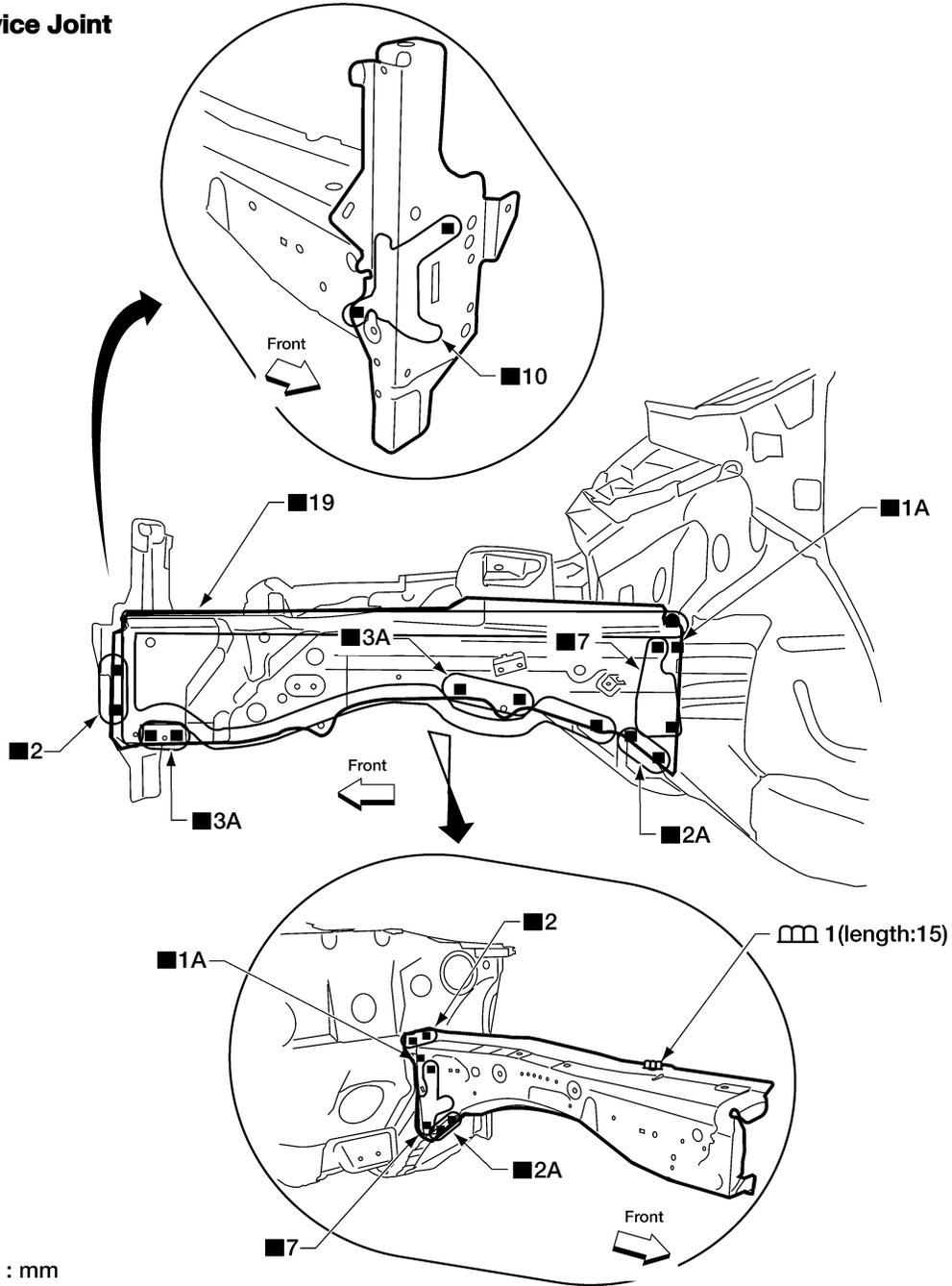
< ON-VEHICLE REPAIR >

[SEDAN]

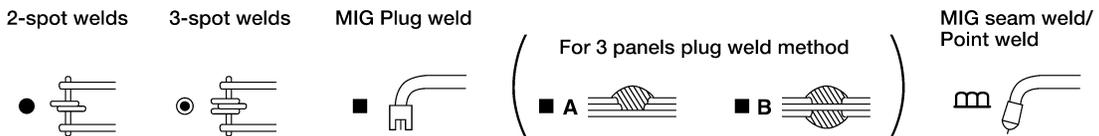
Front Side Member (Partial Replacement)

INFOID:00000004205899

Service Joint



Unit : mm



ALKIA0086GB

Change parts

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

Front Pillar

INFOID:00000004205900

OUTER

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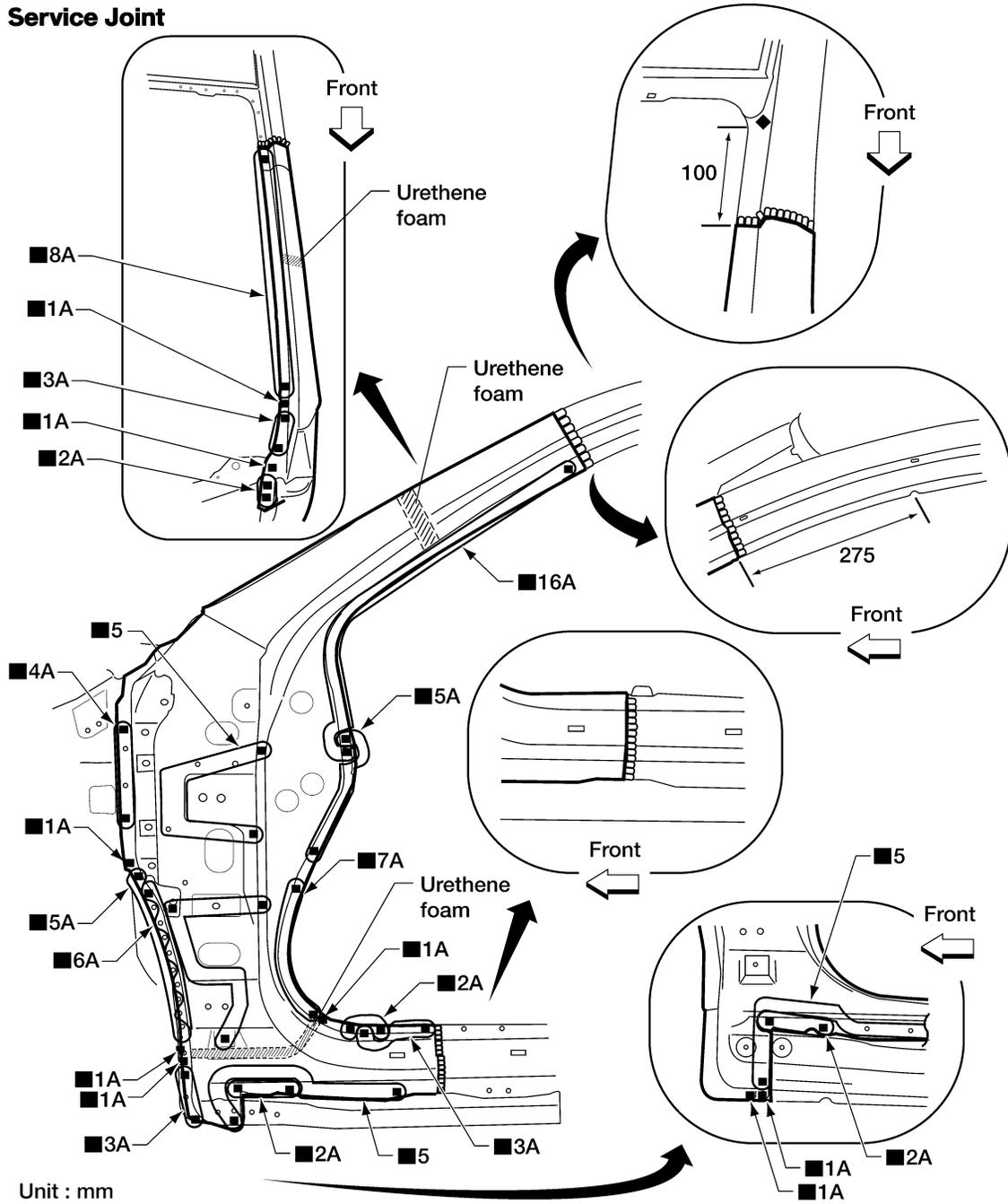
REPLACEMENT OPERATIONS

[SEDAN]

< ON-VEHICLE REPAIR >

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

Service Joint



2-spot welds

3-spot welds

MIG Plug weld

(For 3 panels plug weld method)

MIG seam weld/
Point weld



ALKIA0087GB

Change parts

- Front pillar section of body side outer

REINFORCEMENT

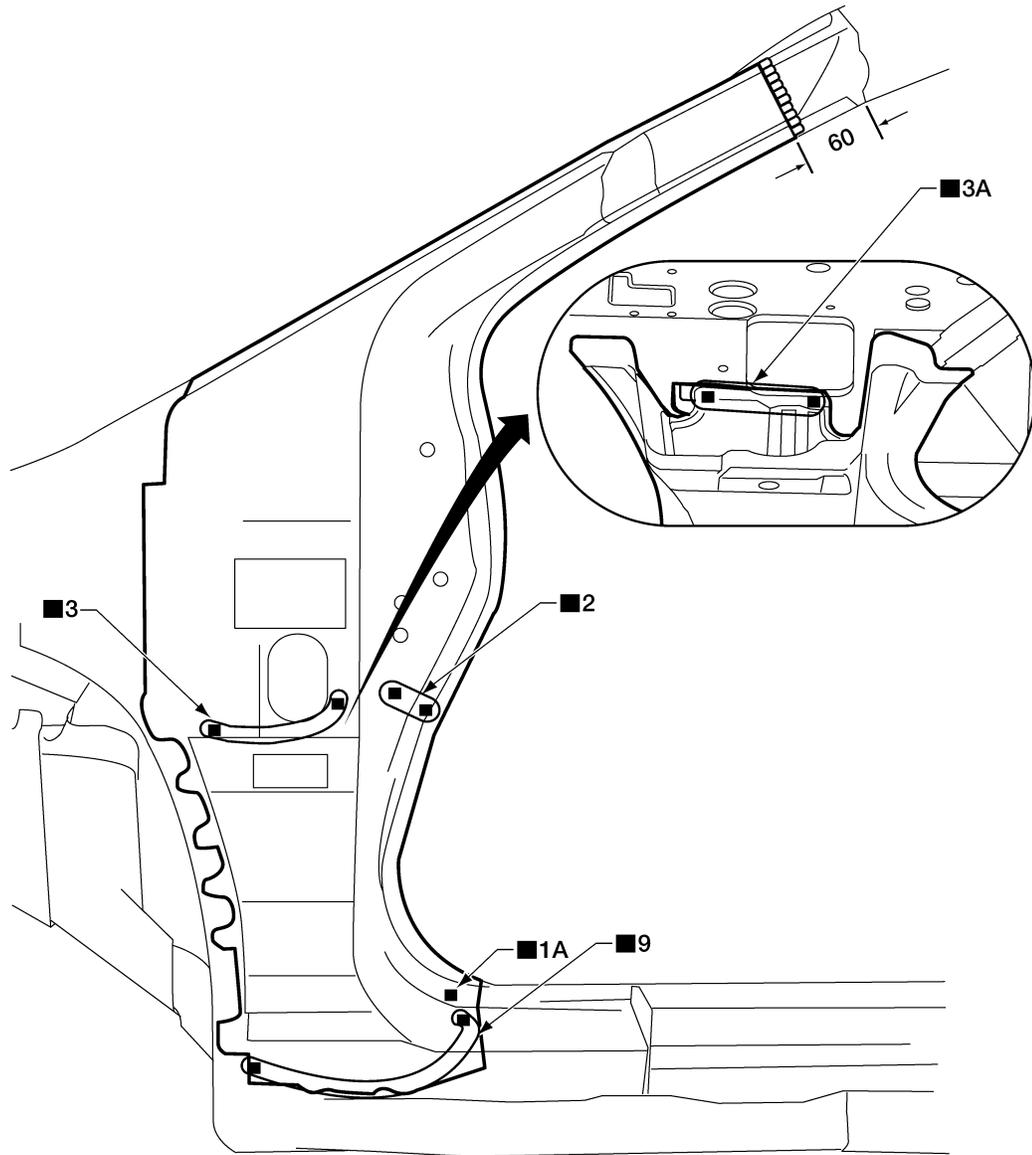
REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[SEDAN]

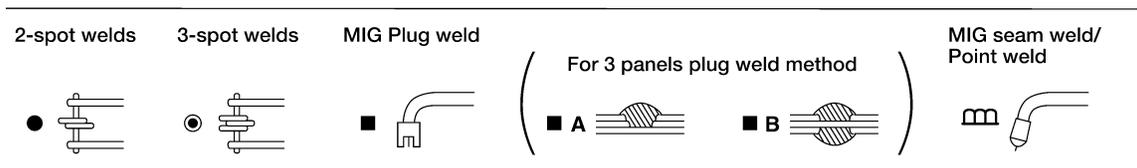
- Work after front pillar outer has been removed.

Service Joint



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ALKIA0088GB

- Change parts
- Front pillar upper reinforcement
 - Front pillar lower reinforcement

INNER

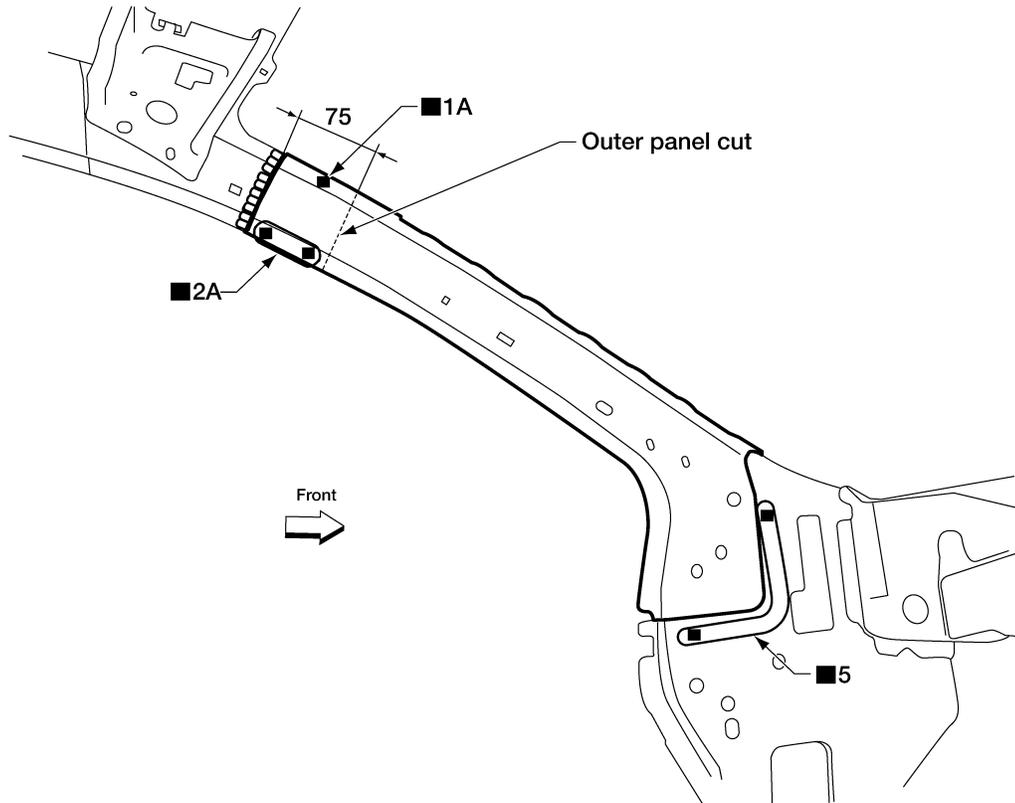
REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

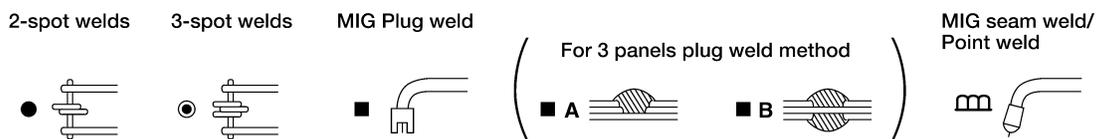
[SEDAN]

- Work after front pillar reinforcement has been removed.

Service Joint



Unit : mm



ALKIA0089GB

Change parts

- Front pillar inner reinforcement

Dash Side

INFOID:000000004205901

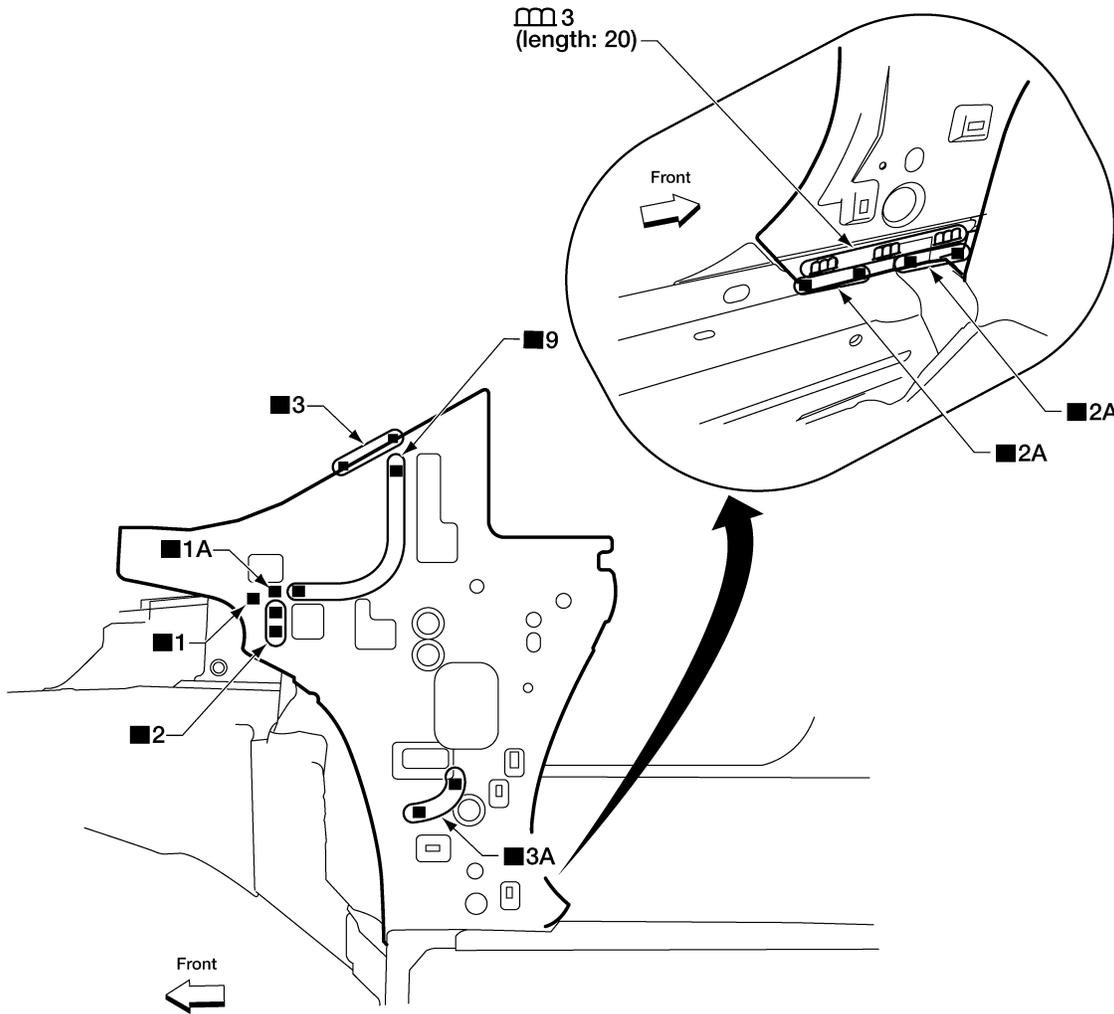
Work with front pillar reinforcement removed.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

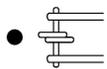
[SEDAN]

Service Joint

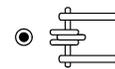


Unit : mm

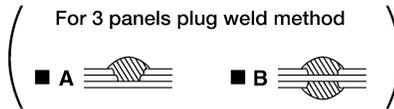
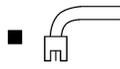
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld



ALKIA0091GB

Change parts

● Dash side

Center Pillar

OUTER

INFOID:000000004205902

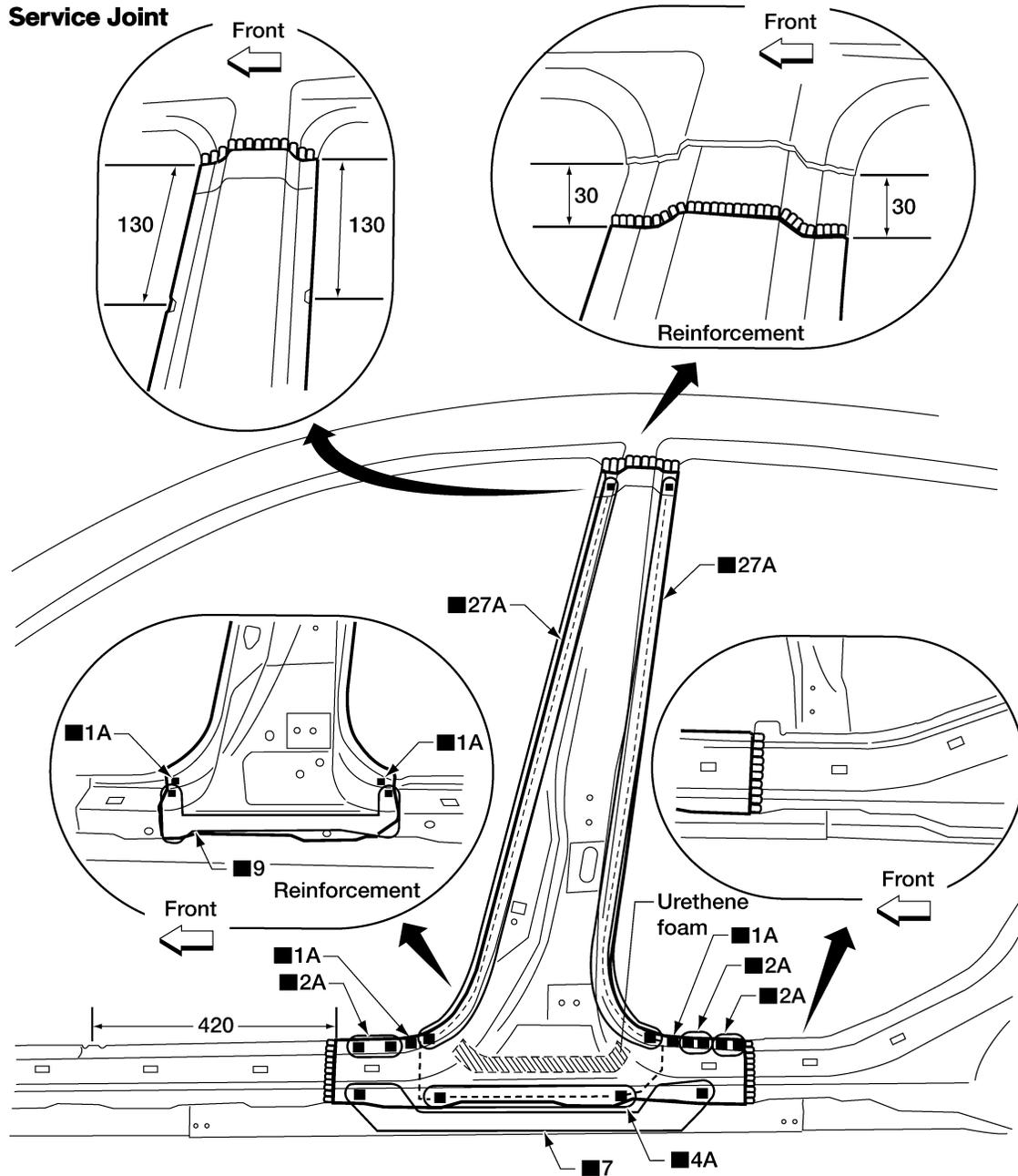
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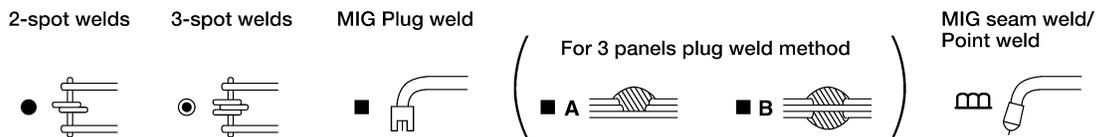
REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[SEDAN]



Unit : mm



AWKIA1228GB

Change parts

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

INNER

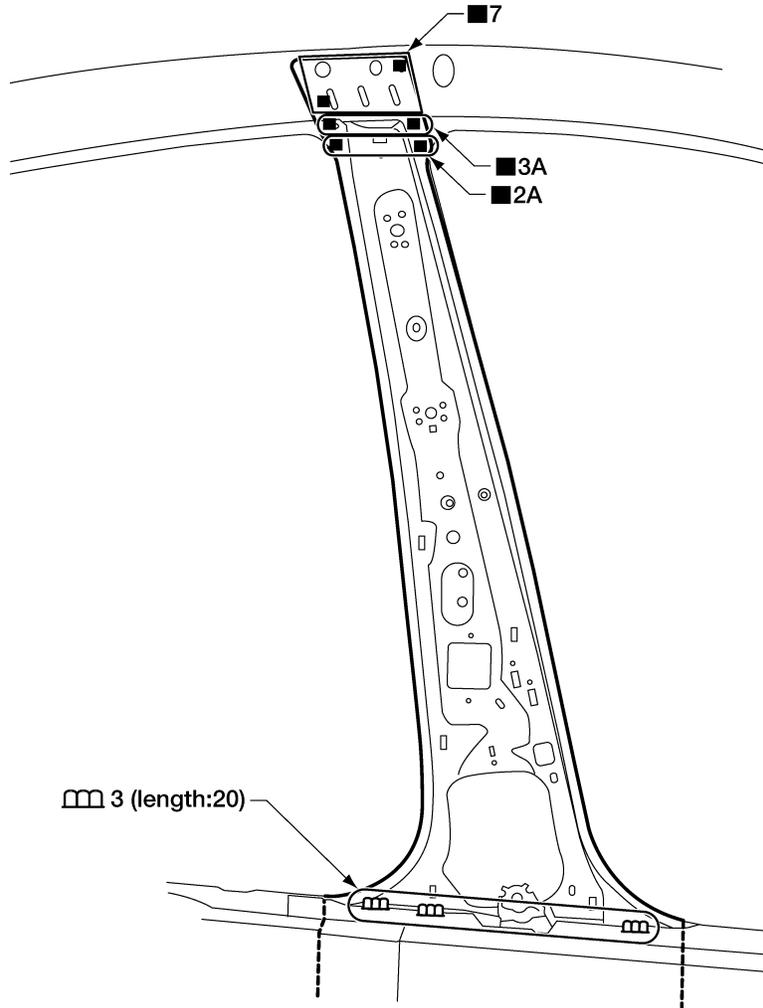
Work after center pillar outer and outer sill have been removed.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[SEDAN]

Service Joint

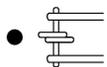


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Unit : mm

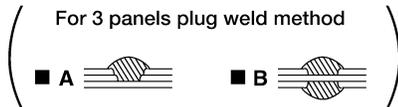
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld



ALKIA0093GB

Change parts

- Center pillar inner

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

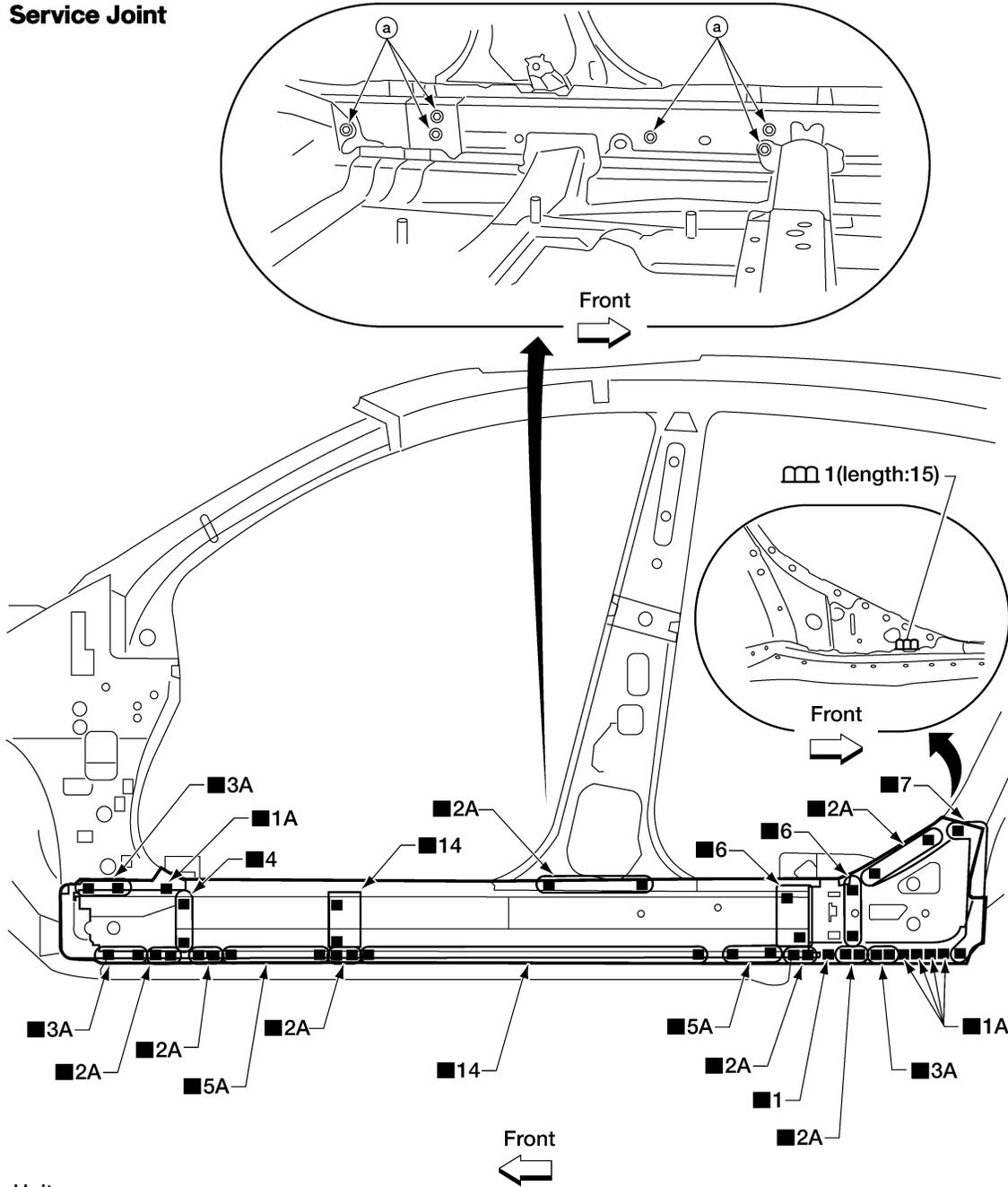
[SEDAN]

Outer Sill

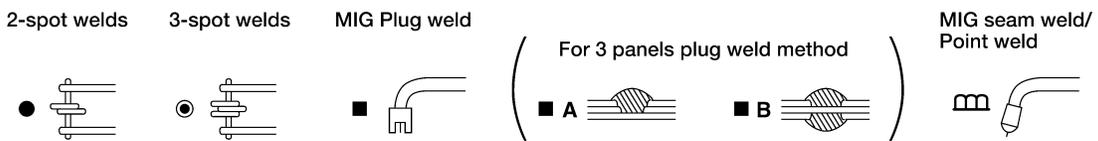
INFOID:000000004205903

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

Service Joint



Unit : mm



ALKIA0094GB

Change parts

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

REPLACEMENT OPERATIONS

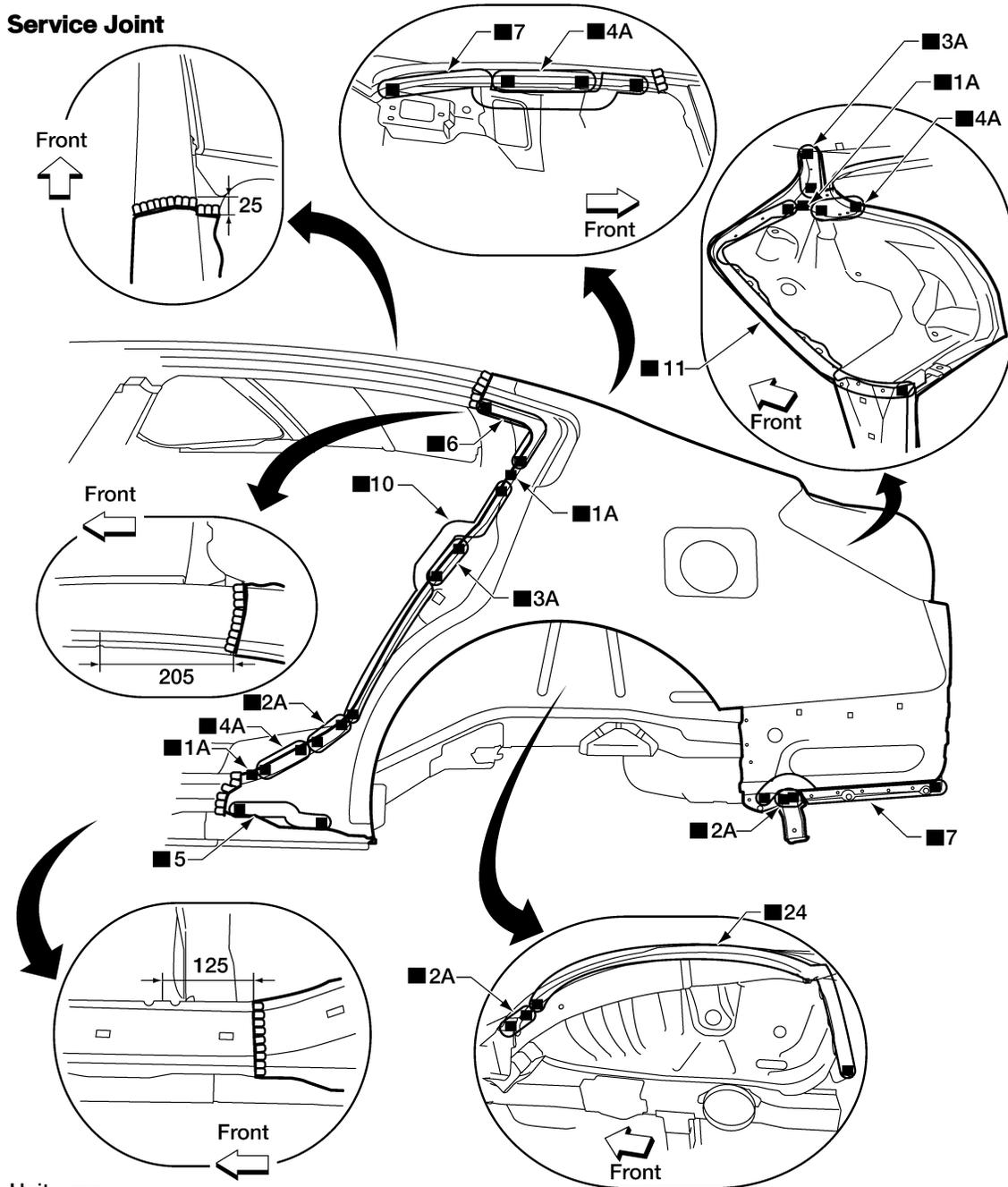
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[SEDAN]

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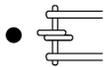
Rear Fender

Service Joint

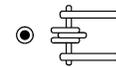


Unit : mm

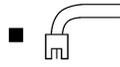
2-spot welds



3-spot welds



MIG Plug weld



(For 3 panels plug weld method)



MIG seam weld/
Point weld



ALKIA0095GB

Change parts

- Rear fender

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REPLACEMENT OPERATIONS

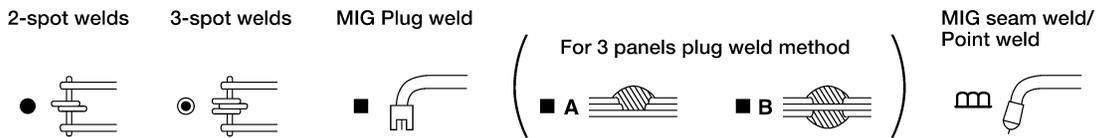
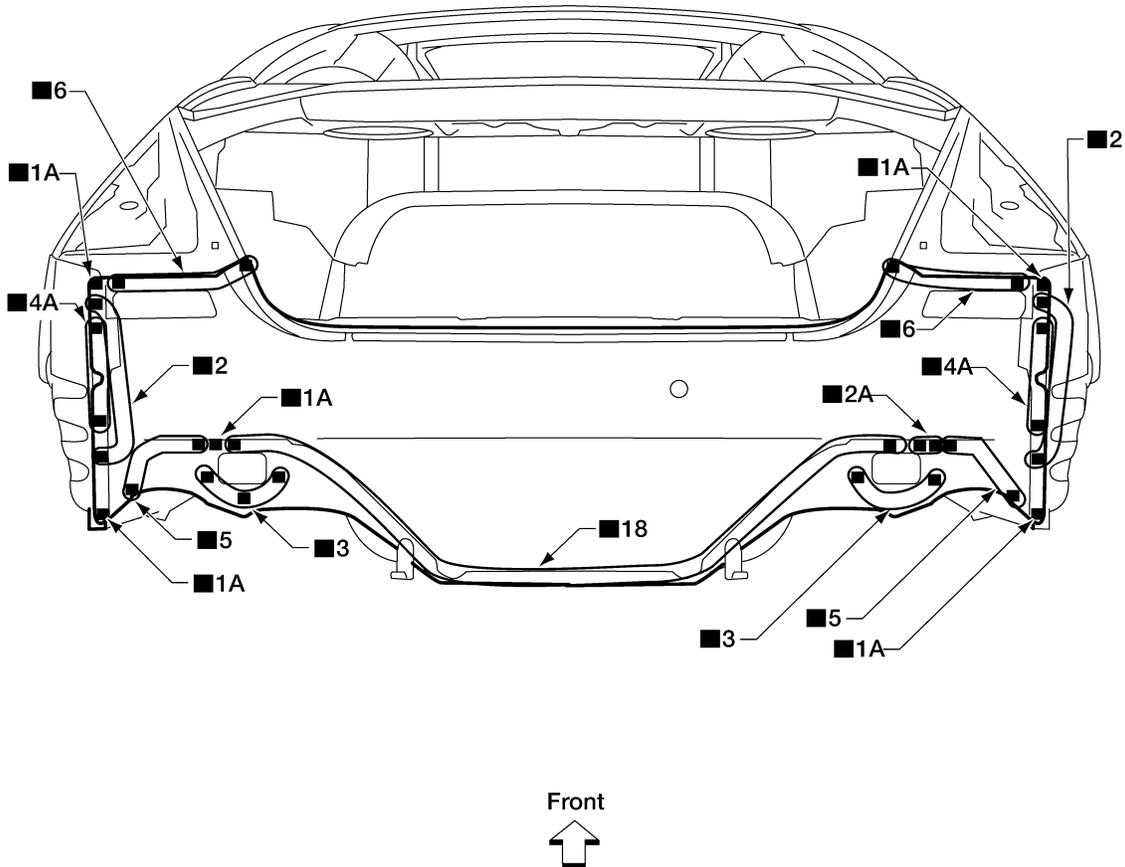
< ON-VEHICLE REPAIR >

[SEDAN]

Rear Panel

INFOID:000000004205905

Service Joint



ALKIA0096GB

Change parts

- Rear panel assembly

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

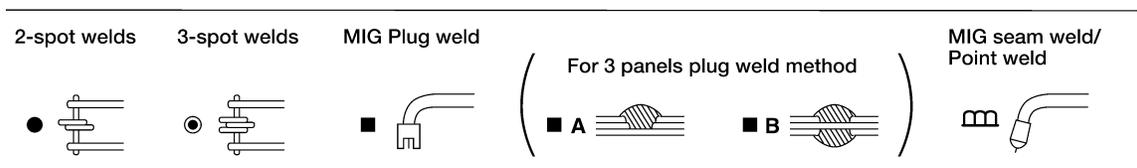
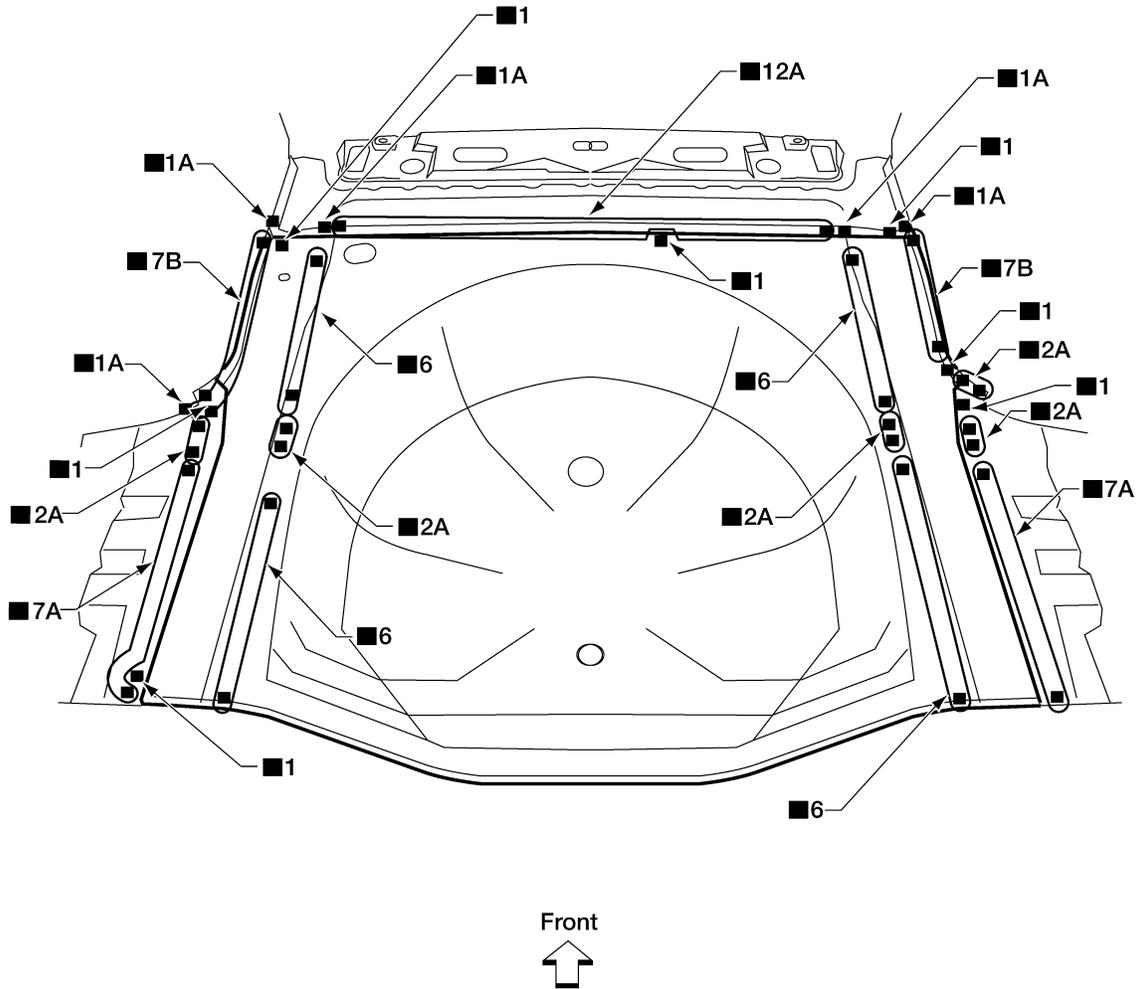
[SEDAN]

INFOID:00000004205906

Rear Floor Rear

- Work after rear panel assembly has been removed.

Service Joint



ALKIA0097GB

Change parts

- Rear floor rear

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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

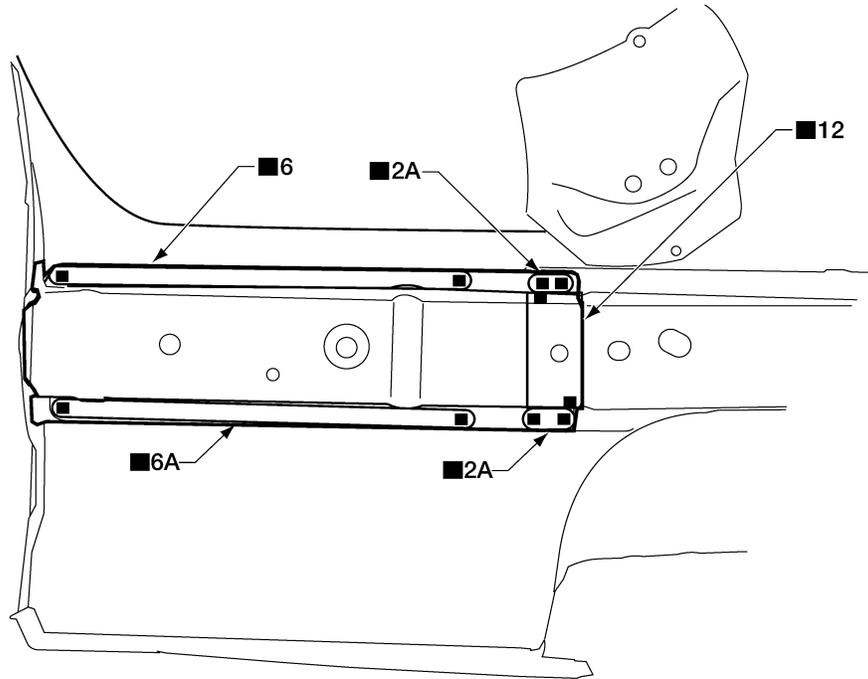
[SEDAN]

INFOID:000000004205907

Rear Side Member Extension

- Work after rear panel assembly has been removed.

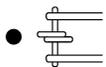
Service Joint



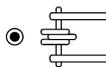
Front



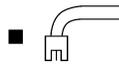
2-spot welds



3-spot welds



MIG Plug weld



For 3 panels plug weld method



MIG seam weld/
Point weld



ALKIA0098GB

Change parts

- Rear side member extension

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[SEDAN]

Foam Repair

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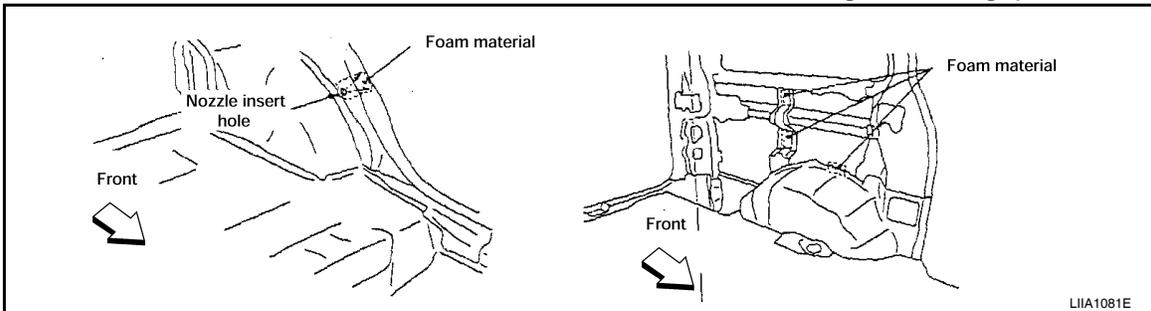
During factory assembly, foam insulators are installed in certain body panels and locations around the vehicle. Use the following procedure(s) to replace any factory-installed foam insulators.

URETHANE FOAM APPLICATIONS

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

FILL PROCEDURES

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



2. Fill procedures before installation service part
 - Remove foam material remaining on vehicle side.
 - Clean area in which foam material on wheelhouse outer side.

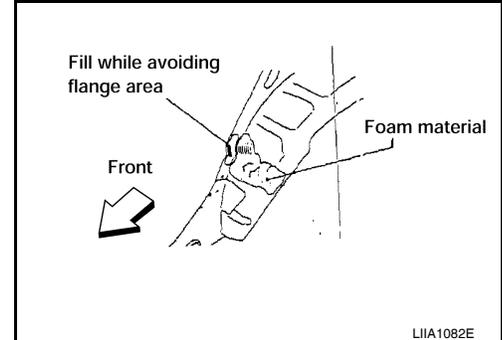
NOTE:

Fill in enough to close gap with service part while avoiding flange area.

- Install service part.

NOTE:

Refer to label for information on working times.



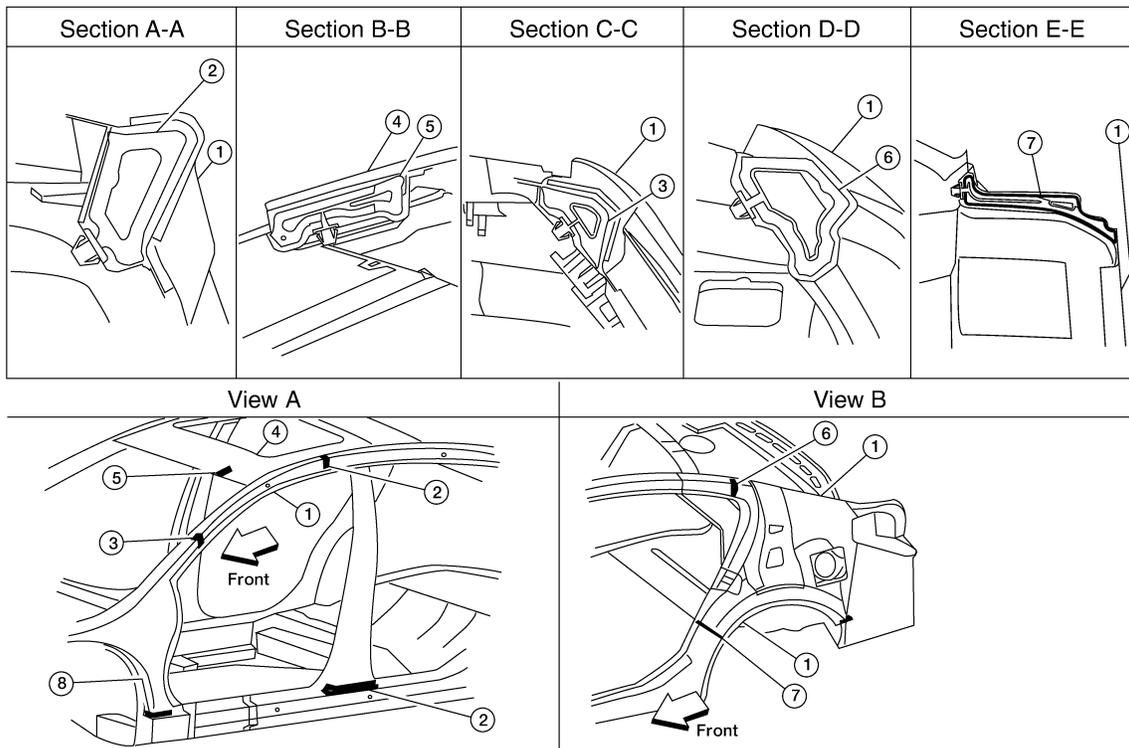
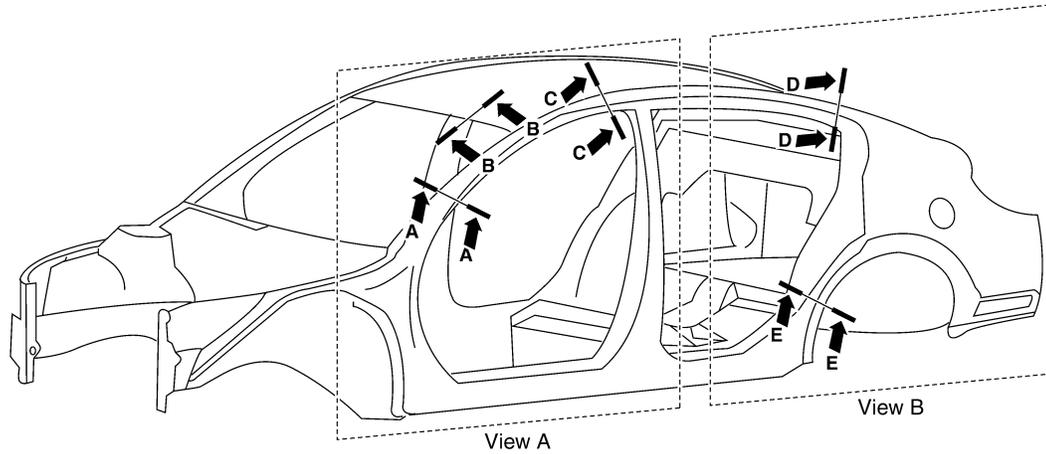
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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

[SEDAN]



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- | | | |
|--|---|---|
| 1. Body side outer | 2. Body side insulation (foam) upper front pillar | 3. Body side insulation (foam) front pillar |
| 4. Roof panel assembly | 5. Roof panel insulation (foam) front roof rail | 6. Body side insulation (foam) rear pillar |
| 7. Body side insulation (foam) rear pillar lower | 8. Body side insulation strip, front pillar lower reinforcement | |