

SECTION **BRM**
BODY REPAIR

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BODY EXTERIOR PAINT COLOR

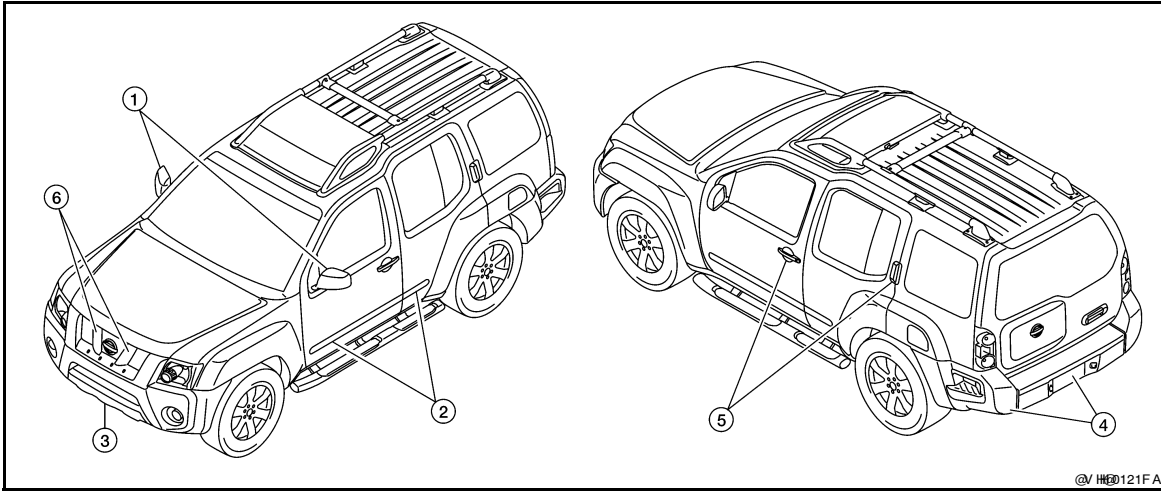
< FEATURES OF NEW MODEL >

FEATURES OF NEW MODEL

BODY EXTERIOR PAINT COLOR

Body Exterior Paint Color

INFOID:000000004065484



Component		Color code	A20	C43	EW3	K12	K26	KH3	NAC	QM1	RAB	
		Description	Red Alert	Desert Stone	Solar Yellow	Silver Lightning	Night Armor	Super Black	Red Brick	Avalanche	Navy Blue	
		Paint type	2P	2M	2P	2M	2P	2S	2P	2S	2PM	
		Hard clear coat	—	—	—	—	—	—	—	—	—	
1	Outside mirror	X,S,OR	Black	—	—	—	—	—	—	—	—	
		SE	Body color	A20	C43	EW3	K12	K26	KH3	NAC	QM1	RAB
2	Side Guard Molding	OR	Black	—	—	—	—	—	—	—	—	
		SE	Body color	A20	C43	EW3	K12	K26	KH3	NAC	QM1	RAB
3	Front bumper finisher	X,S,OR	Sand-blast Aluminum	LX04	LX04	LX04	LX04	LX04	LX04	LX04	LX04	
		SE	Satin Chrome	LX01	LX01	LX01	LX01	LX01	LX01	LX01	LX01	
4	Rear Bumper	Side	Black	—	—	—	—	—	—	—	—	
	Rear Bumper	Center	Paint code	LX04	LX04	LX04	LX04	LX04	LX04	LX04	LX04	
5	Outside handles	X,S,OR	Black	—	—	—	—	—	—	—	—	
		SE	Body color	A20	C43	EW3	K12	K26	KH3	NAC	QM1	RAB
6	Radiator grille	Emblem	Chromium plate	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	Cr2P	
		Center	Black	KH3	KH3	KH3	KH3	KH3	KH3	KH3	KH3	
		Body	X,S,OR	Sand-blast Aluminum	LX04	LX04	LX04	LX04	LX04	LX04	LX04	LX04
			SE	Satin Chrome	LX01	LX01	LX01	LX01	LX01	LX01	LX01	LX01

BODY EXTERIOR PAINT COLOR

< FEATURES OF NEW MODEL >

2M: Metallic with clear; 2S: 2-Coat Solid with clear, 2P: Pearl or Mica with clear; 2PM: Pearl - mica and metallic with clear

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HANDLING PRECAUTIONS

< PRECAUTION >

PRECAUTION

HANDLING PRECAUTIONS

Handling Precaution for Plastics

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HANDLING PRECAUTIONS FOR PLASTICS

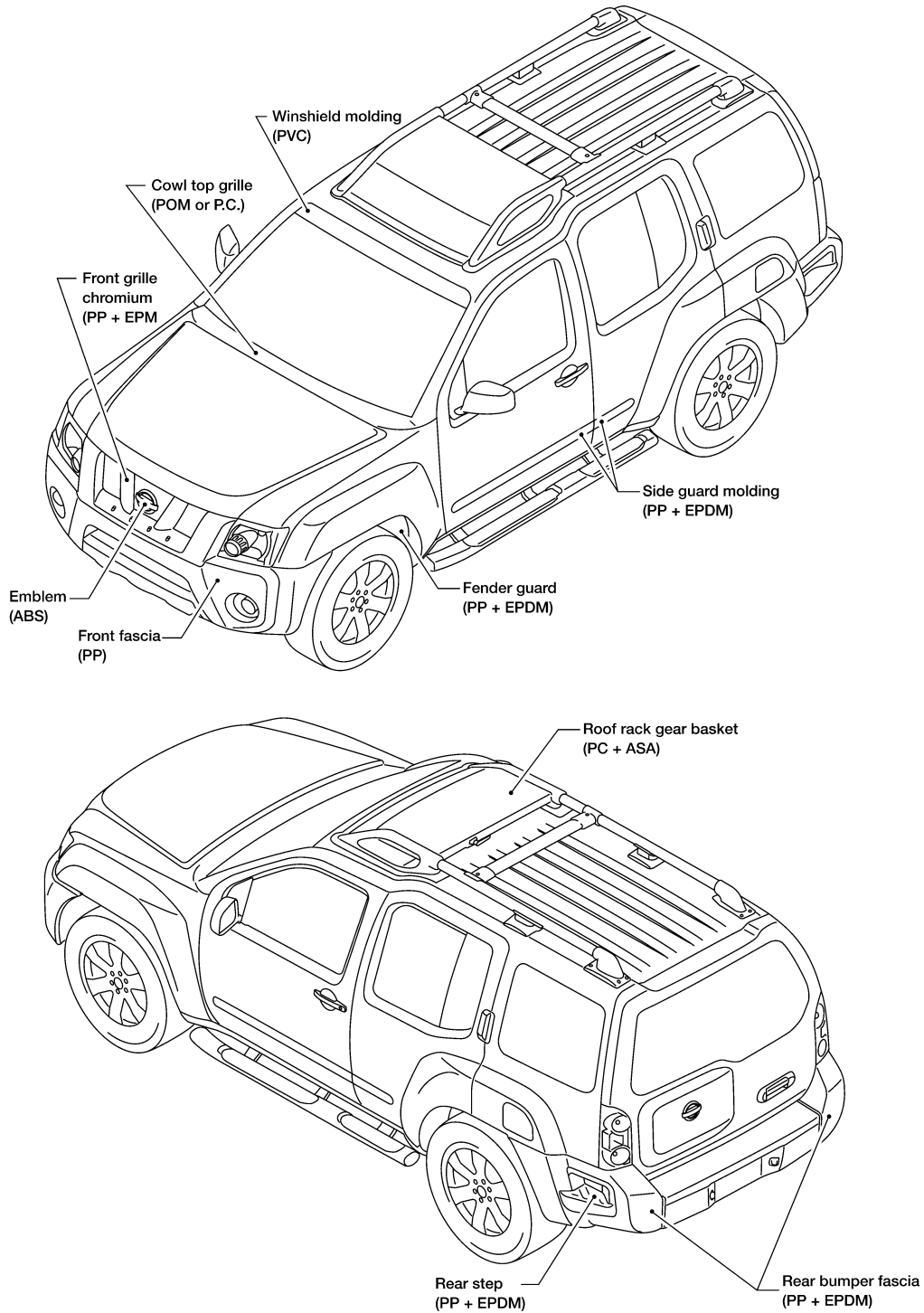
Abbreviation	Material name	Heatresisting temperature °C (°F)	Resistance to gasoline and solvents	Other cautions
PE	Polyethylene	60 (140)	Gasoline and most solvents are harmless if applied for a very short time (wipe up quickly).	Flammable
PVC	Polyvinyl Chloride	80 (176)	Same as above.	Poison gas is emitted when burned.
EPM/EPDM	Ethylene Propylene (Diene) rubber	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	Polyester thermoset	90 (194)	Same as above.	Flammable
PS	Polystyrene	80 (176)	Avoid solvents.	Flammable
ABS	Acrylonitrile Butadiene Styrene resin	80 (176)	Avoid gasoline and solvents.	
AES	Acrylonitrile Ethylene Styrene	80 (176)	Same as above.	
PMMA	Polymethyl Methacrylate	85 (185)	Same as above.	
AAS	Acrylonitrile Acrylic Styrene	85 (185)	Same as above.	
AS	Acrylonitrile Styrene	85 (185)	Same as above.	
EVA	Polyvinyl Ethyl Acetate	90 (194)	Same as above.	
ASA	Acrylonitrile Styrene Acrylate	100 (222)	Same as above.	Flammable
PPO/PPE	Polyphenylene Oxide/ Polyphenylene Ether	110 (230)	Same as above.	
PC	Polycarbonate	120 (248)	Same as above.	
PAR	Polyacrylate	180 (356)	Same as above.	
L-LDPE	Linear Low Density PE	45 (100)	Gasoline and most solvents are harmless.	Flammable
PUR	Polyurethane	90 (194)	Same as above.	
TPU	Thermoplastic Urethane	110 (230)	Same as above.	
PPC	Polypropylene Composite	115 (239)	Same as above.	Flammable
POM	Polyacetal	120 (248)	Same as above.	Avoid battery acid.
PBT+PC	Polybutylene Terephthalate+Polycarbonate	120 (248)	Same as above.	Flammable
PA	Polyamide (Nylon)	140 (284)	Same as above.	Avoid immersing in water.
PBT	Polybutylene Terephthalate	140 (284)	Same as above.	
FRP	Fiber Reinforced Plastics	170 (338)	Same as above.	Avoid battery acid.
PET	Polyethylene Terephthalate	180 (356)	Same as above.	
PEI	Polyetherimide	200 (392)	Same as above.	

HANDLING PRECAUTIONS

< PRECAUTION >

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

LOCATION OF PLASTIC PARTS



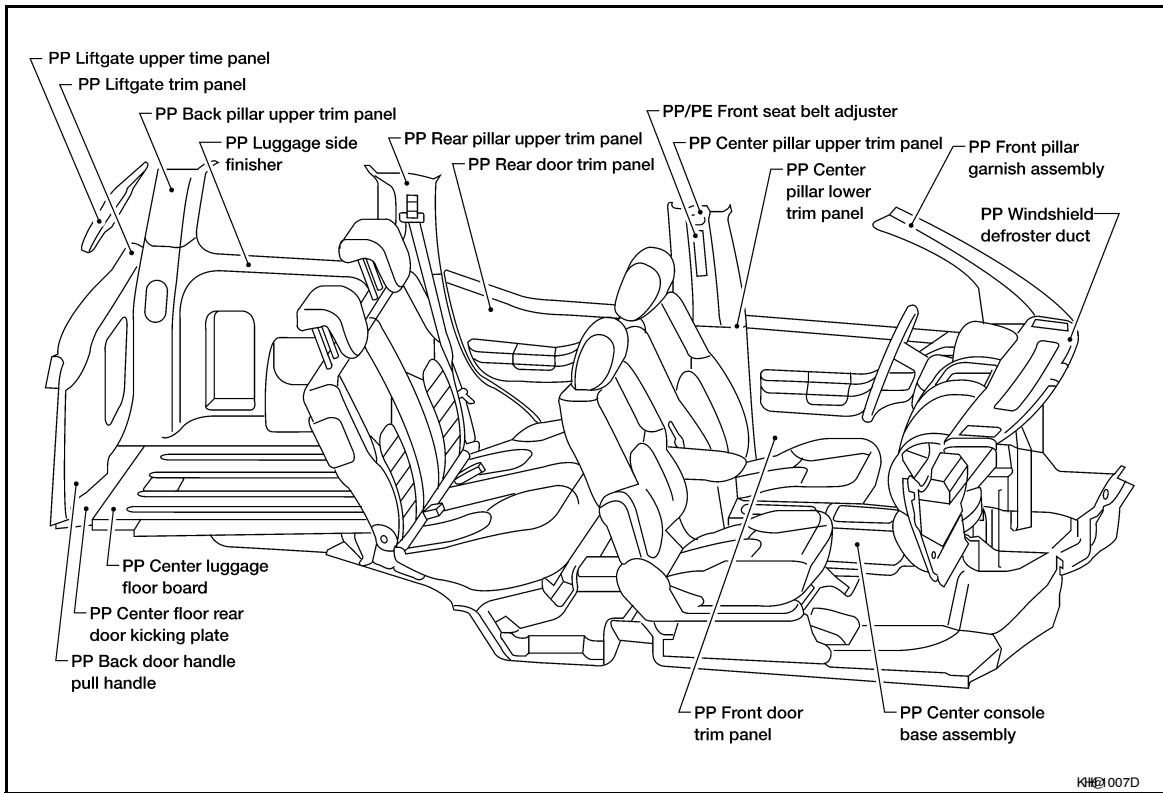
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HANDLING PRECAUTIONS

< PRECAUTION >



BODY COMPONENT PARTS

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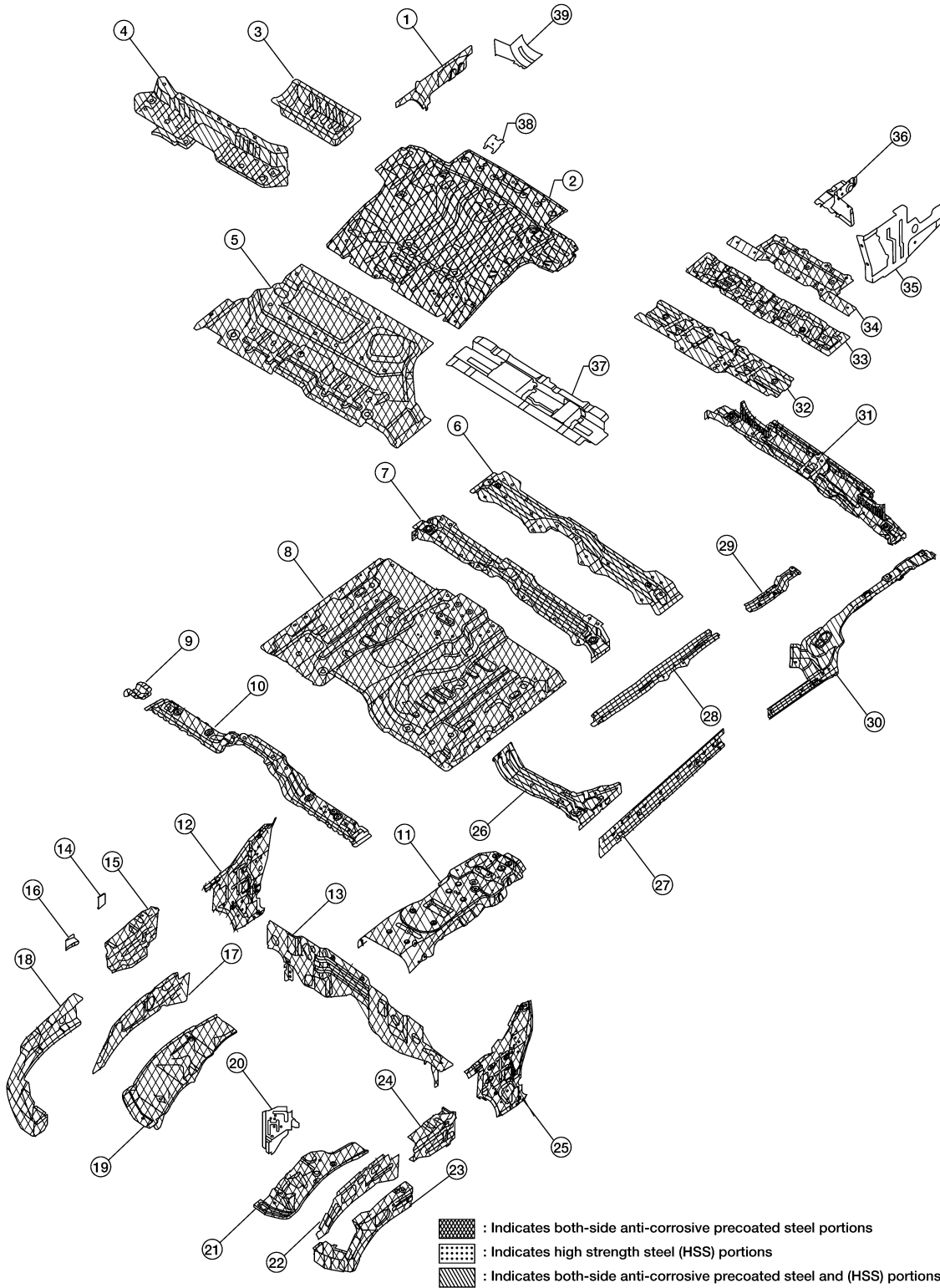
ON-VEHICLE REPAIR

BODY COMPONENT PARTS

Body Component Parts

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UNDERBODY COMPONENT PARTS



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BODY COMPONENT PARTS

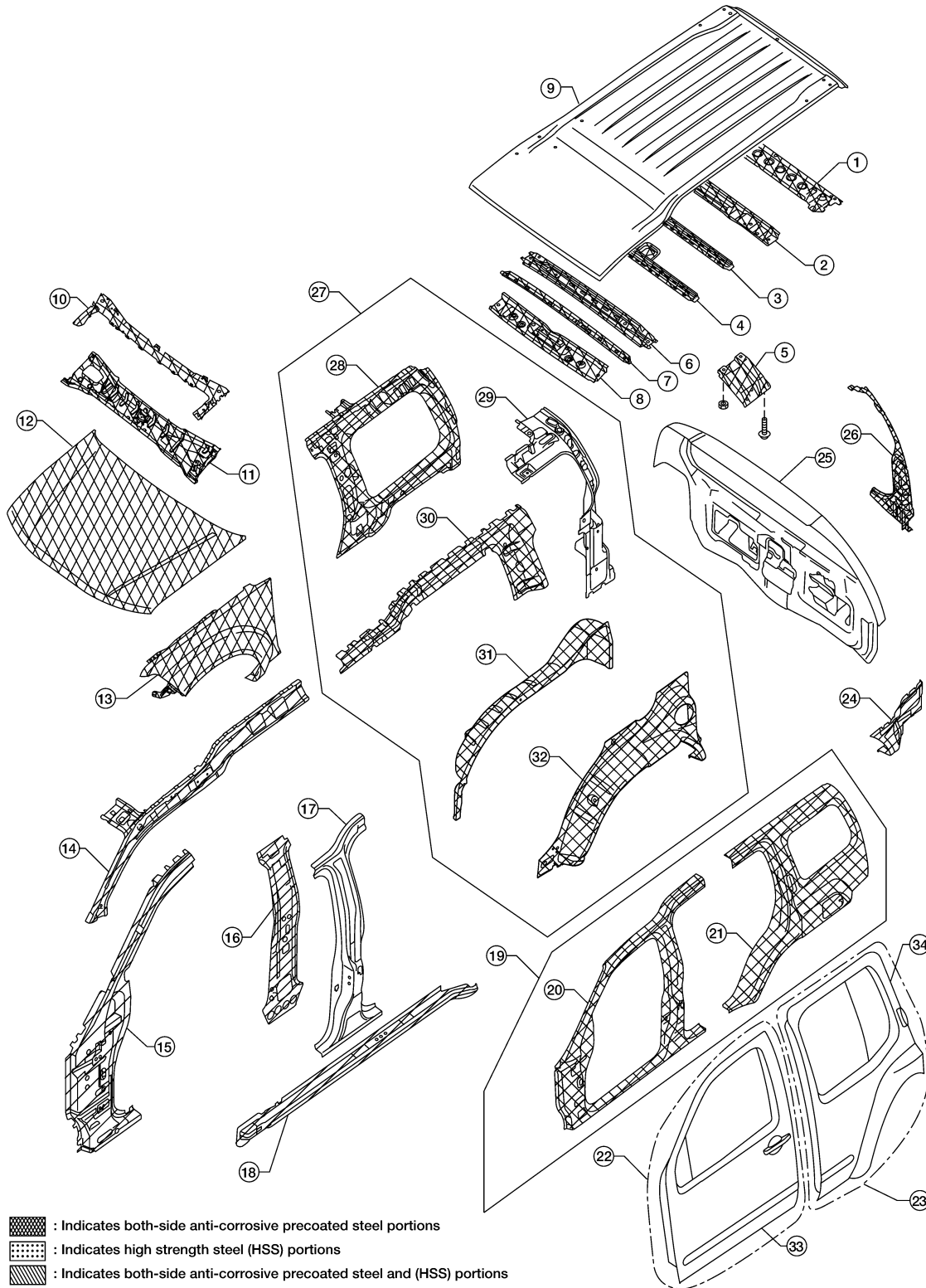
< ON-VEHICLE REPAIR >

1. Rear floor side RH
2. Rear floor rear
3. Storage bin
4. Second seat mounting crossmember
5. Rear floor front
6. Center pillar crossmember assembly
7. Front seat mounting rear crossmember
8. Front floor
9. Front seat mounting crossmember
10. Second crossmember extension
11. Front floor reinforcement
12. Side dash RH
13. Lower dash
14. Washer tank bracket
15. Hoodledge reinforcement rear RH
16. Hoodledge plate
17. Hoodledge RH
18. Hoodledge reinforcement assembly RH
19. Rear lower hoodledge RH
20. Battery tray
21. Rear lower hoodledge LH
22. Hoodledge LH
23. Hoodledge reinforcement assembly LH
24. Hoodledge reinforcement rear LH
25. Side dash LH
26. Second crossmember assembly (RH & LH)
27. Inner sill (RH & LH)
28. Front side member assembly (RH & LH)
29. Center floor member assembly
30. Rear side member rear (RH & LH)
31. Rear crossmember
32. Second seat mounting crossmember
33. Third seat mounting bracket assembly
34. Rope hook bracket
35. Rear floor side LH
36. Rear floor side upper extension assembly LH
37. Third seat mounting rear crossmember assembly
38. Trim mounting bracket
39. Rear floor side upper extension assembly RH

BODY COMPONENT PARTS

< ON-VEHICLE REPAIR >

BODY COMPONENT PARTS



1. Rear roof rail
2. Roof 5th bow
3. Roof 4th bow
4. Roof 3rd bow

BODY COMPONENT PARTS

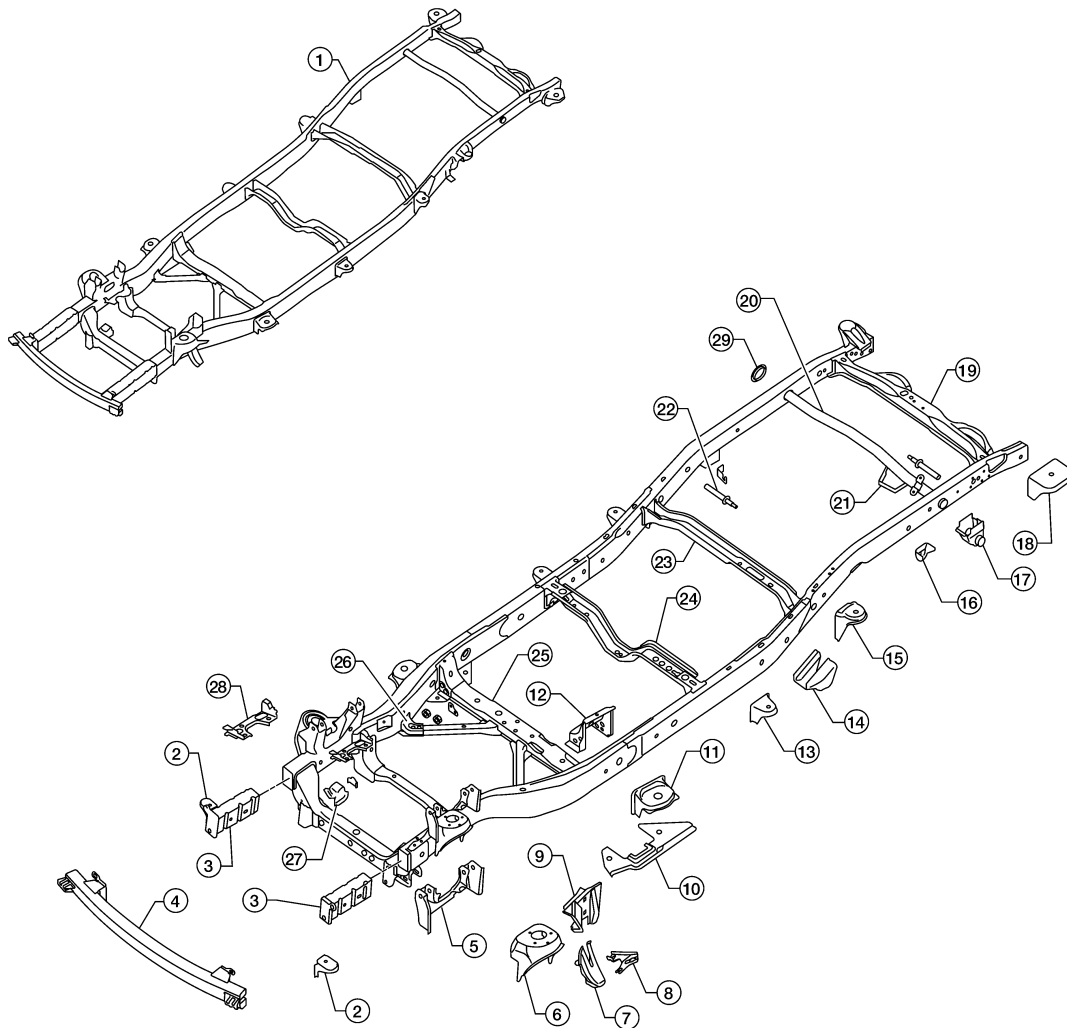
< ON-VEHICLE REPAIR >

5. Roof bow second bracket
6. Roof 2nd bow
7. Roof 1st bow
8. Front roof rail
9. Roof
10. Upper dash crossmember assembly
11. Upper dash assembly
12. Hood assembly
13. Front fender (RH & LH)
14. Front inner pillar upper (RH & LH)
15. Front pillar hinge brace (RH & LH)
16. Center inner pillar (RH & LH)
17. Center pillar hinge brace
18. Outer sill reinforcement (RH & LH)
19. Body side outer assembly
20. Front body side outer (RH & LH)
21. Rear body side outer (RH & LH)
22. Front door assembly (RH & LH)
23. Rear door assembly (RH & LH)
24. Rear fender extension (RH & LH)
25. Lift gate assembly
26. Main back pillar (RH & LH)
27. Body side inner reinforcement assembly (RH & LH)
28. Rear inner side panel (RH & LH)
29. Back pillar reinforcement (RH & LH)
30. Outer roof side rail reinforcement (RH & LH)
31. Rear wheel housing inner (RH & LH)
32. Rear wheel housing outer (RH & LH)
33. Outer front door panel (RH & LH)
34. Outer rear door panel (RH & LH)

BODY COMPONENT PARTS

< ON-VEHICLE REPAIR >

FRAME COMPONENT PARTS



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1. Frame assembly
2. 1st cab mounting bracket (RH & LH)
3. Front side member extension assembly (RH & LH)
4. 1st crossmember assembly
5. Front upper link mounting bracket (RH & LH)

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BODY COMPONENT PARTS

< ON-VEHICLE REPAIR >

6. Front shock absorber mounting bracket (RH & LH)
7. Bound bumper bracket (RH & LH)
8. Front brake hose bracket (RH & LH)
9. Panhard rod bracket reinforcement
10. 4th crossmember gusset (RH & LH)
11. 2nd cab mounting bracket (RH & LH)
12. 4th crossmember gusset (RH & LH)
13. 3rd cab mounting bracket (RH & LH)
14. Rear suspension mounting bracket (RH & LH)
15. 4th cab mounting bracket (RH & LH)
16. Rear bound bumper bracket (RH & LH)
17. Rear suspension rear mounting bracket (RH & LH)
18. Cab mounting bracket assembly (RH & LH)
19. 9th crossmember assembly
20. Rear torsion crossmember
21. Rear brake hose bracket
22. Rear shock pin (RH & LH)
23. 6th crossmember assembly
24. 5th crossmember assembly
25. 4th crossmember assembly
26. Crossmember support (RH & LH)
27. Front differential mounting bracket (RH & LH)
28. Engine mount (RH & LH)
29. Rear torsion crossmember collar (RH & LH)

CORROSION PROTECTION

< ON-VEHICLE REPAIR >

CORROSION PROTECTION

Corrosion Protection

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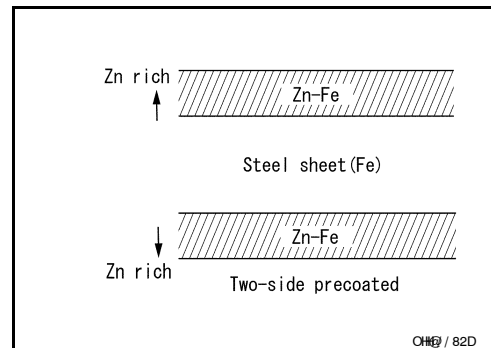
DESCRIPTION

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 reparability 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 electrode position primer.



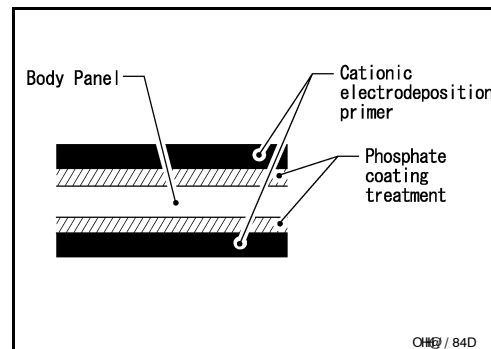
Nissan Genuine Service Parts are fabricated from galvannealed steel. Therefore, it is recommended that GENUINE NISSAN PARTS or equivalent be used for panel replacement to maintain the anti-corrosive performance built into the vehicle at the factory.

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.

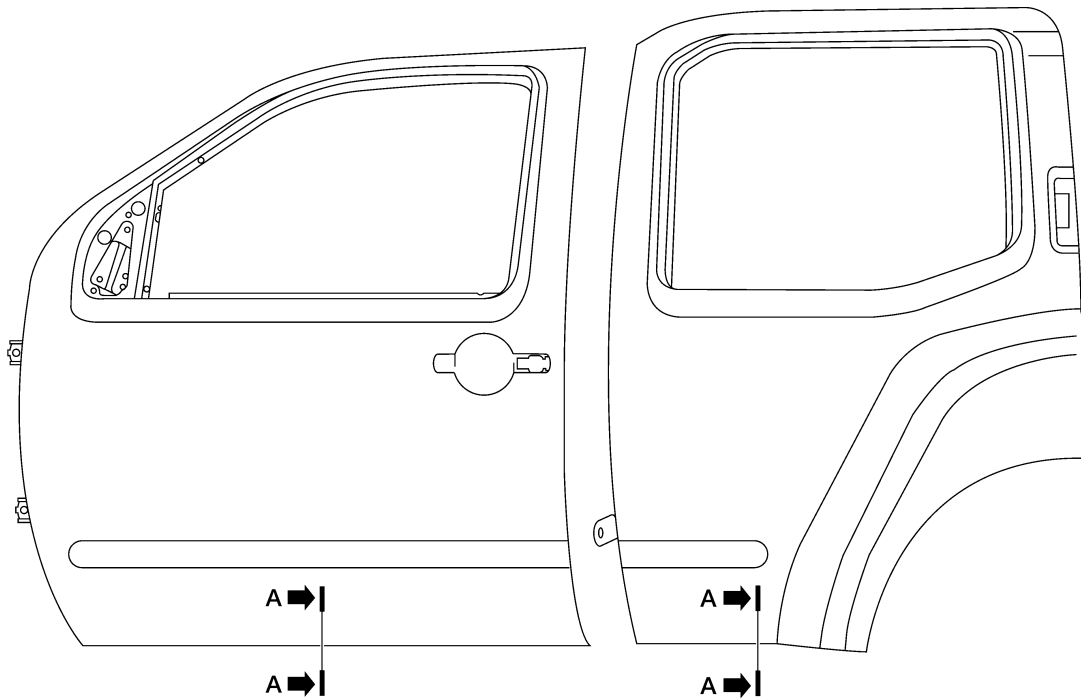
ANTI-CORROSIVE WAX



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

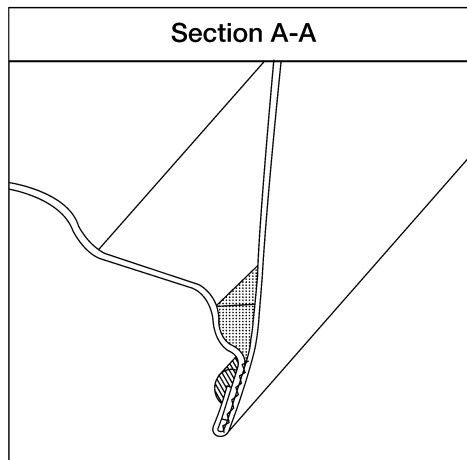
CORROSION PROTECTION

< ON-VEHICLE REPAIR >

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



 : Indicates outside body sealant
 : 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

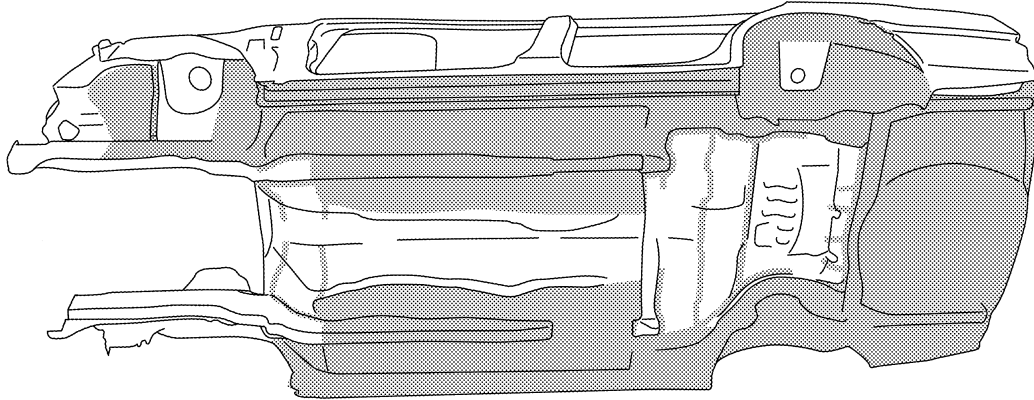
1. Do not apply undercoating to any place unless specified (such as the areas above the muffler and three way catalyst which are subjected to heat).
2. Do not undercoat the exhaust pipe or other parts which become hot.
3. Do not undercoat rotating parts.

CORROSION PROTECTION

< ON-VEHICLE REPAIR >

4. Apply bitumen wax after applying undercoating.

 : Indicates undercoated portions.



Body Sealing

DESCRIPTION

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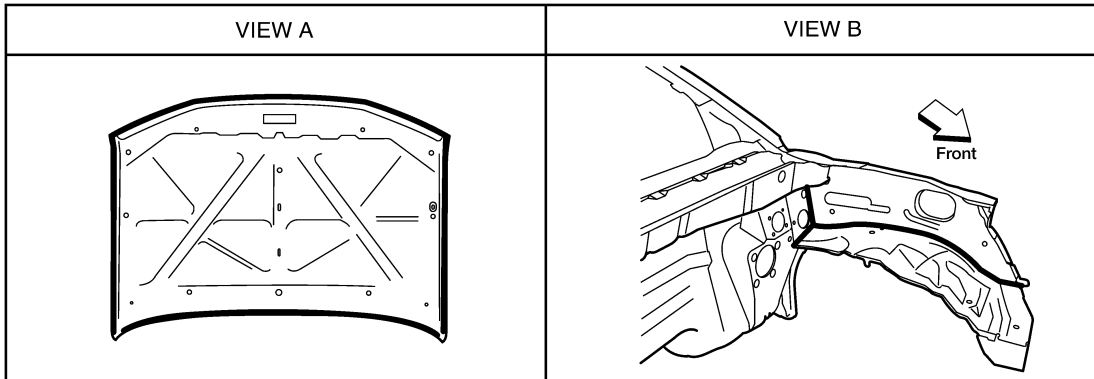
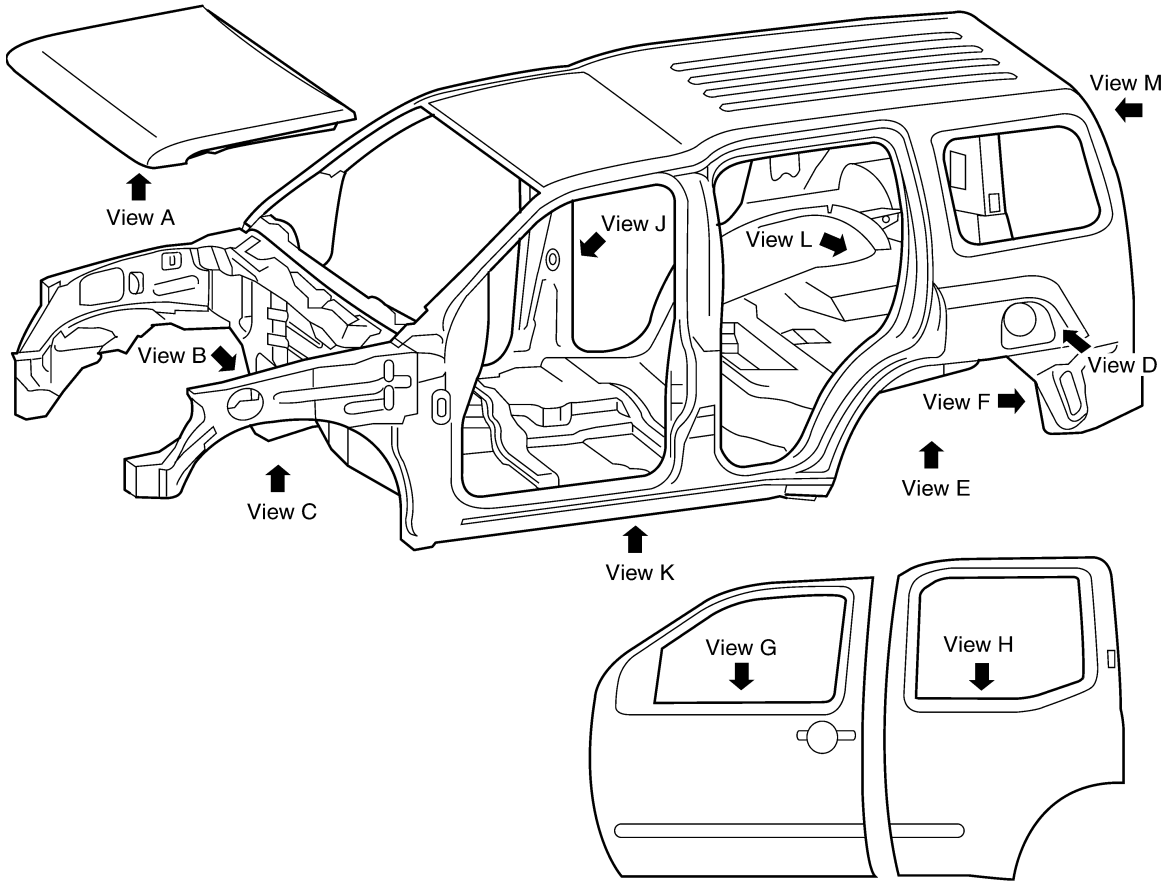
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CORROSION PROTECTION

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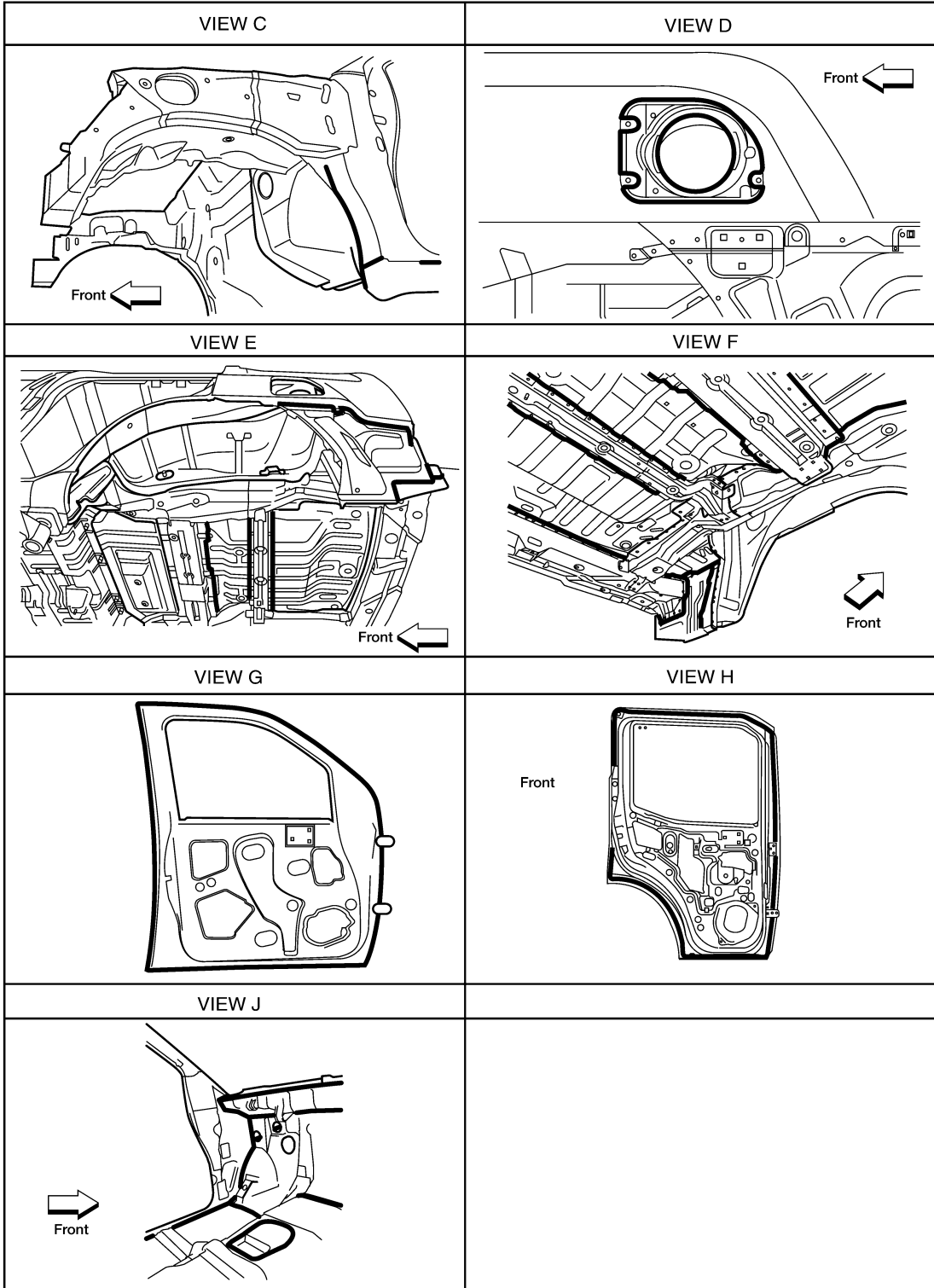
The following figure shows the areas which are sealed at the factory. Sealant which has been applied to these areas should be smooth and free from cuts or gaps. Care should be taken not to apply an excess amount of sealant and not to allow other unaffected parts to come into contact with the sealant.



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CORROSION PROTECTION

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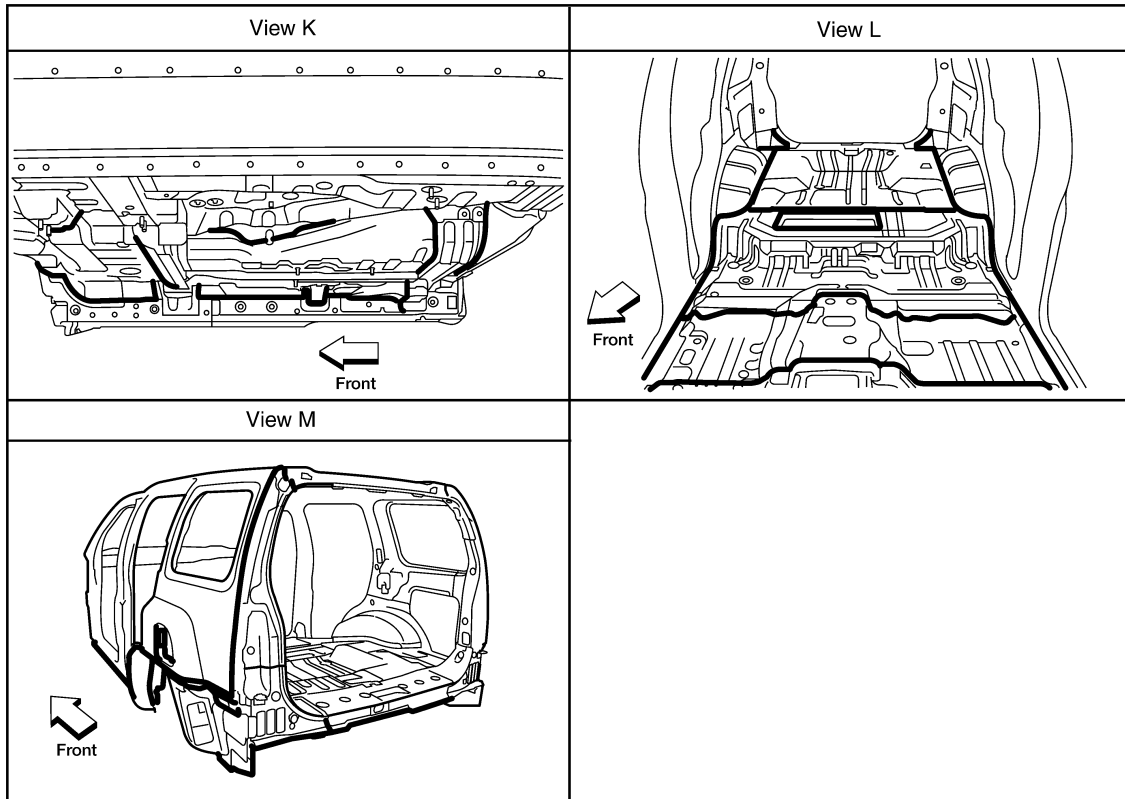


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CORROSION PROTECTION

< ON-VEHICLE REPAIR >



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BODY CONSTRUCTION

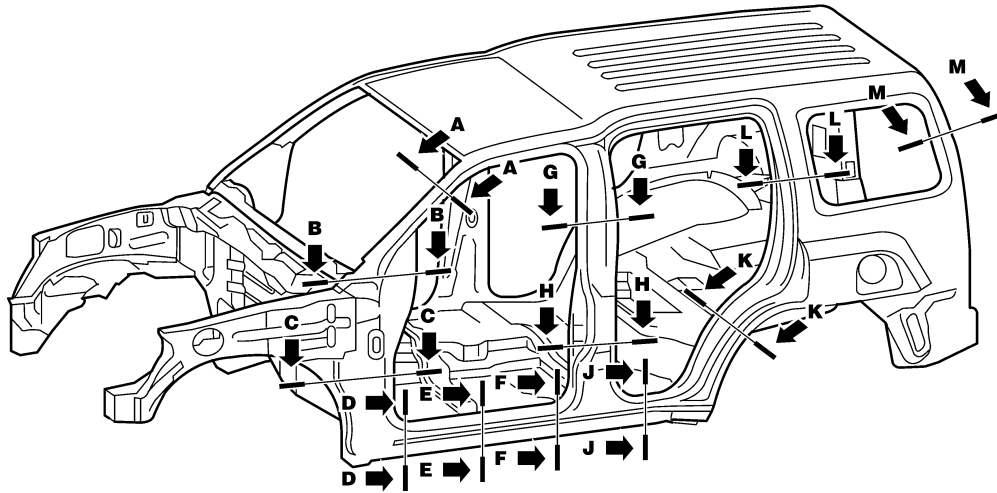
< ON-VEHICLE REPAIR >

BODY CONSTRUCTION

Body Construction

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BODY CONSTRUCTION



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

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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

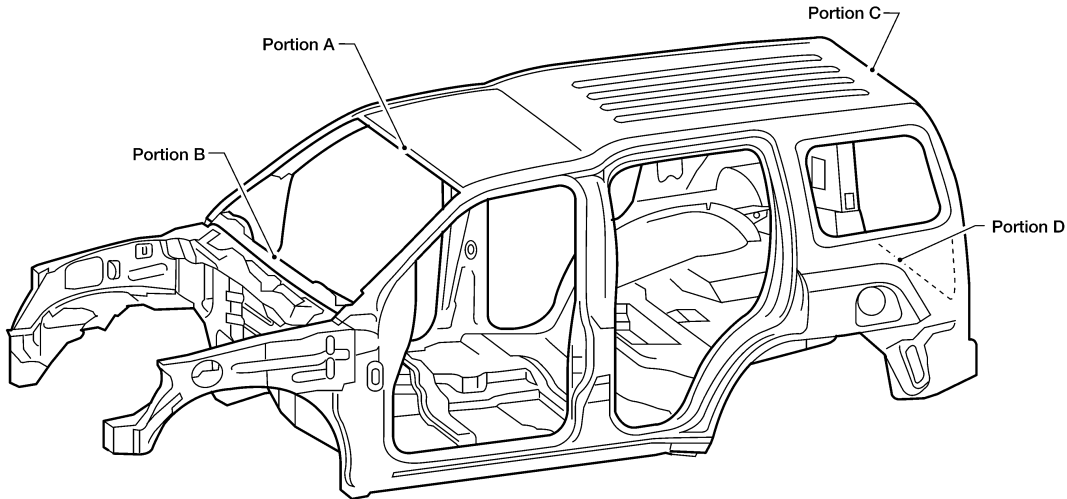
BODY ALIGNMENT

Body Alignment

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BODY CENTER MARKS

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



Portion A	Portion B	Portion C
<p>Embossment</p>	<p>Flange end</p>	<p>Notch</p>
<p>Flange end</p>		

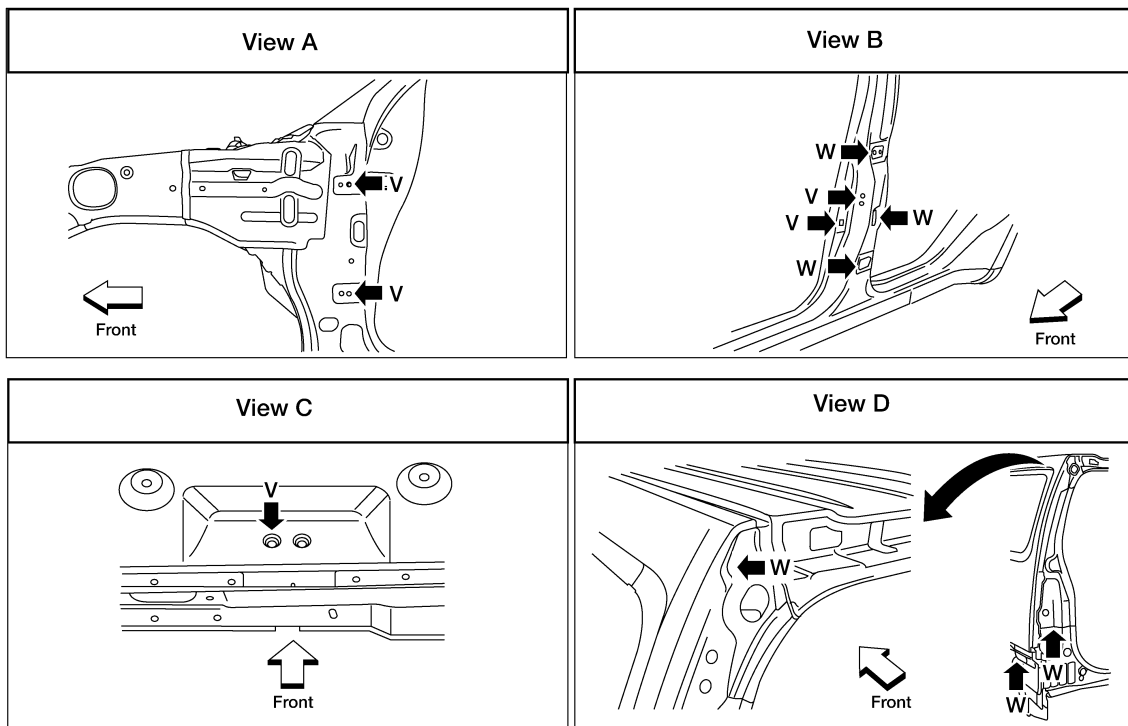
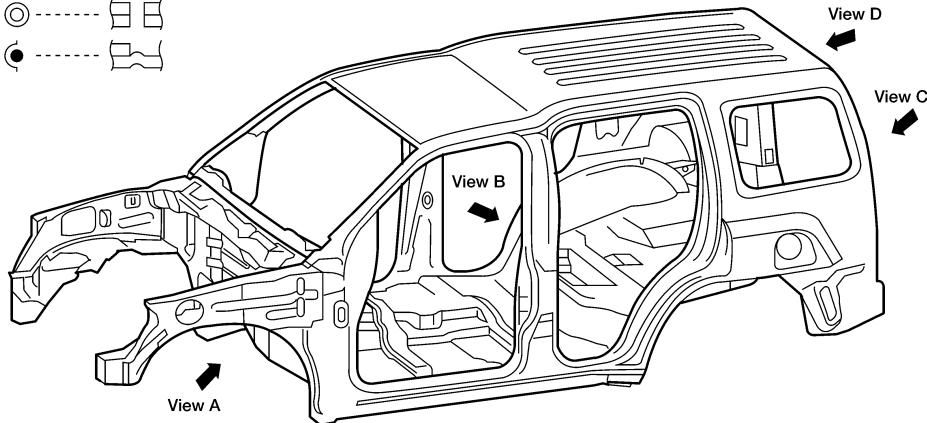
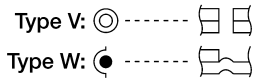
KHBE/55D

PANEL PARTS MATCHING MARKS

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

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.



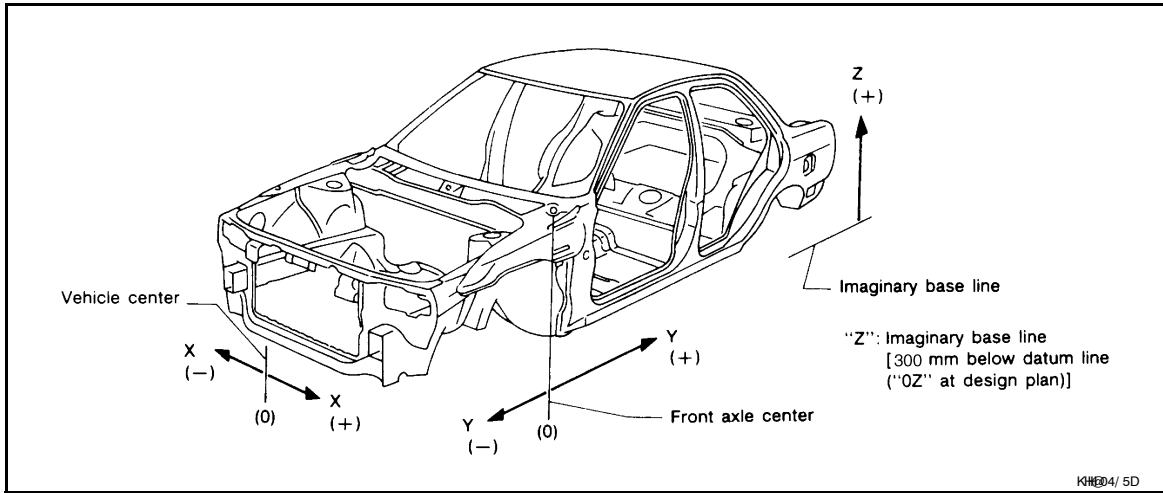
KHBE / 56D

DESCRIPTION

- 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 >



Engine Compartment

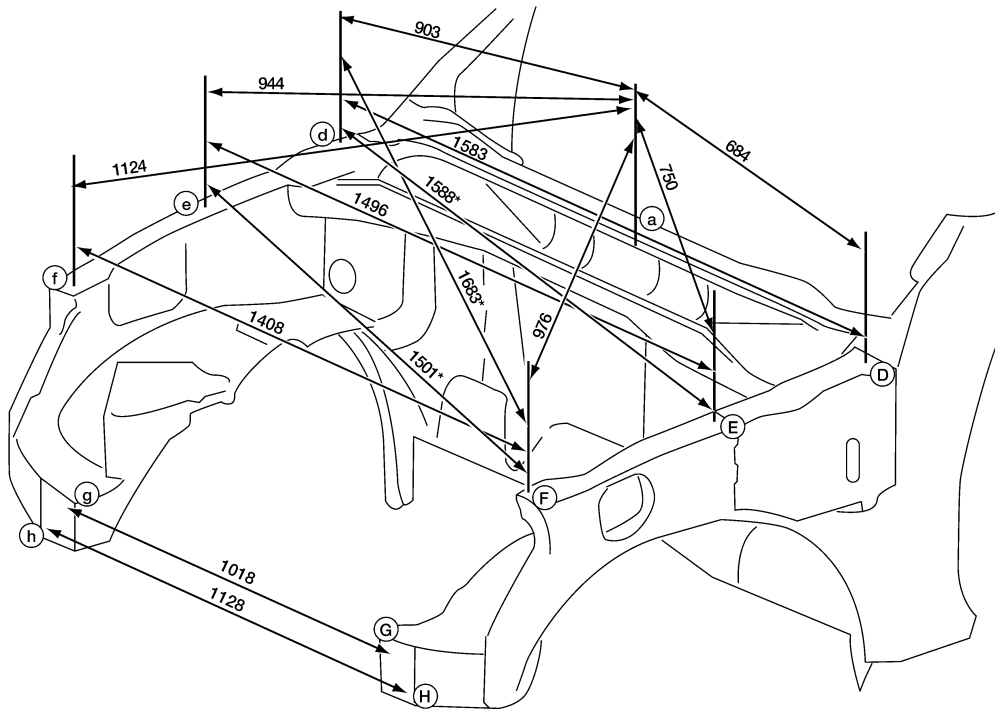
BODY ALIGNMENT

< ON-VEHICLE REPAIR >

MEASUREMENT

All dimensions indicated in this figure are actual.

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



Unit: mm

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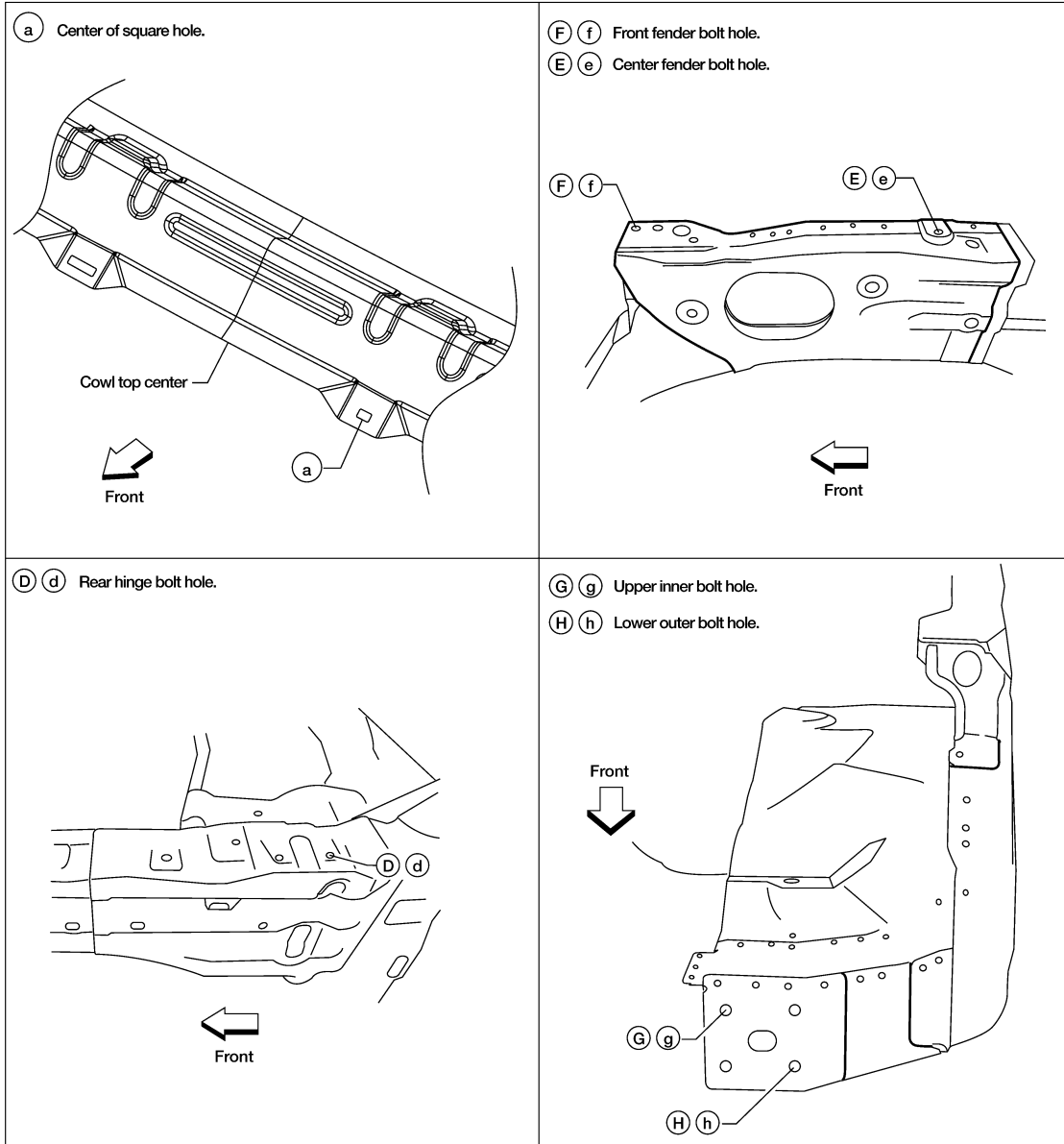
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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

MEASUREMENT POINTS



Underbody

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BODY ALIGNMENT

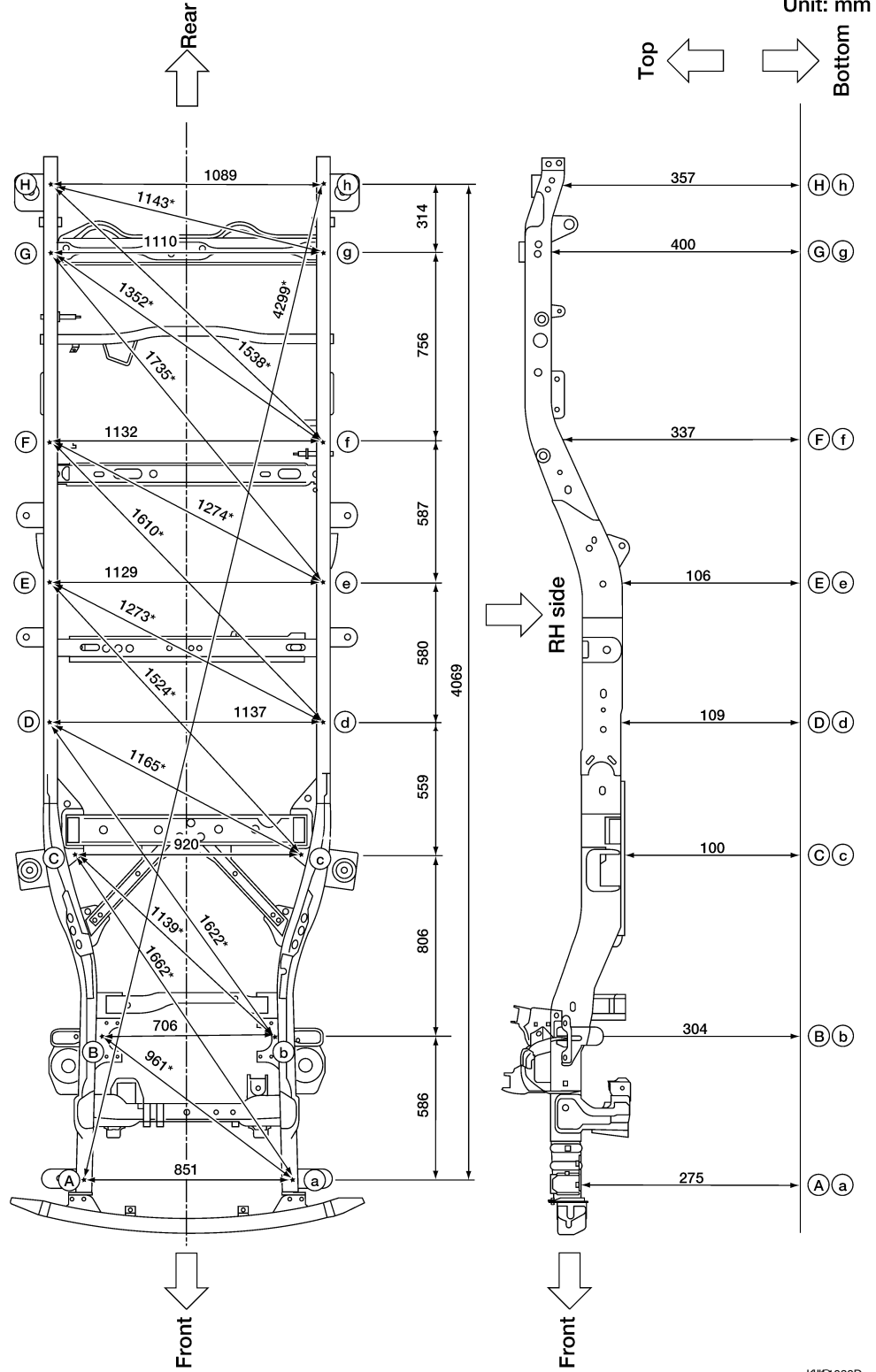
< ON-VEHICLE REPAIR >

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.



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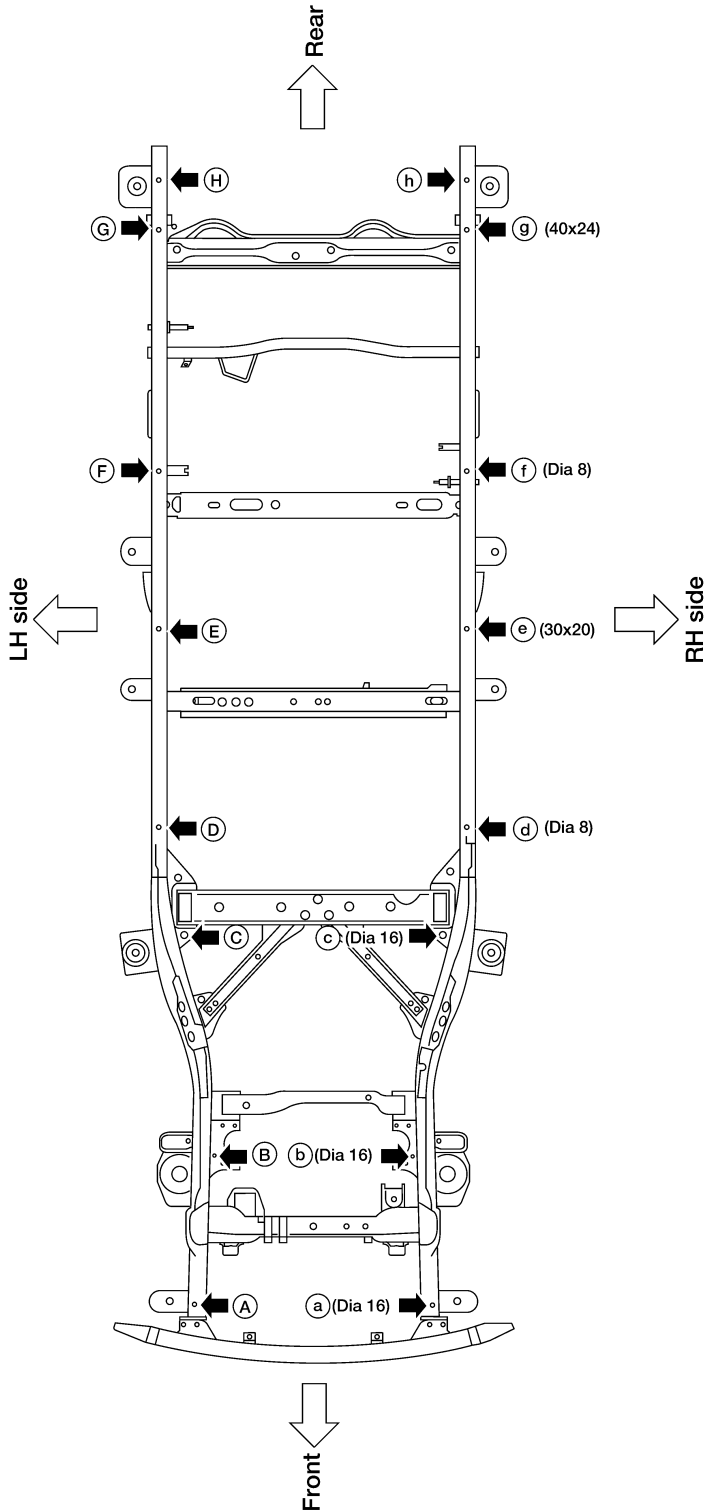
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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

MEASUREMENT POINTS



Coordinates:

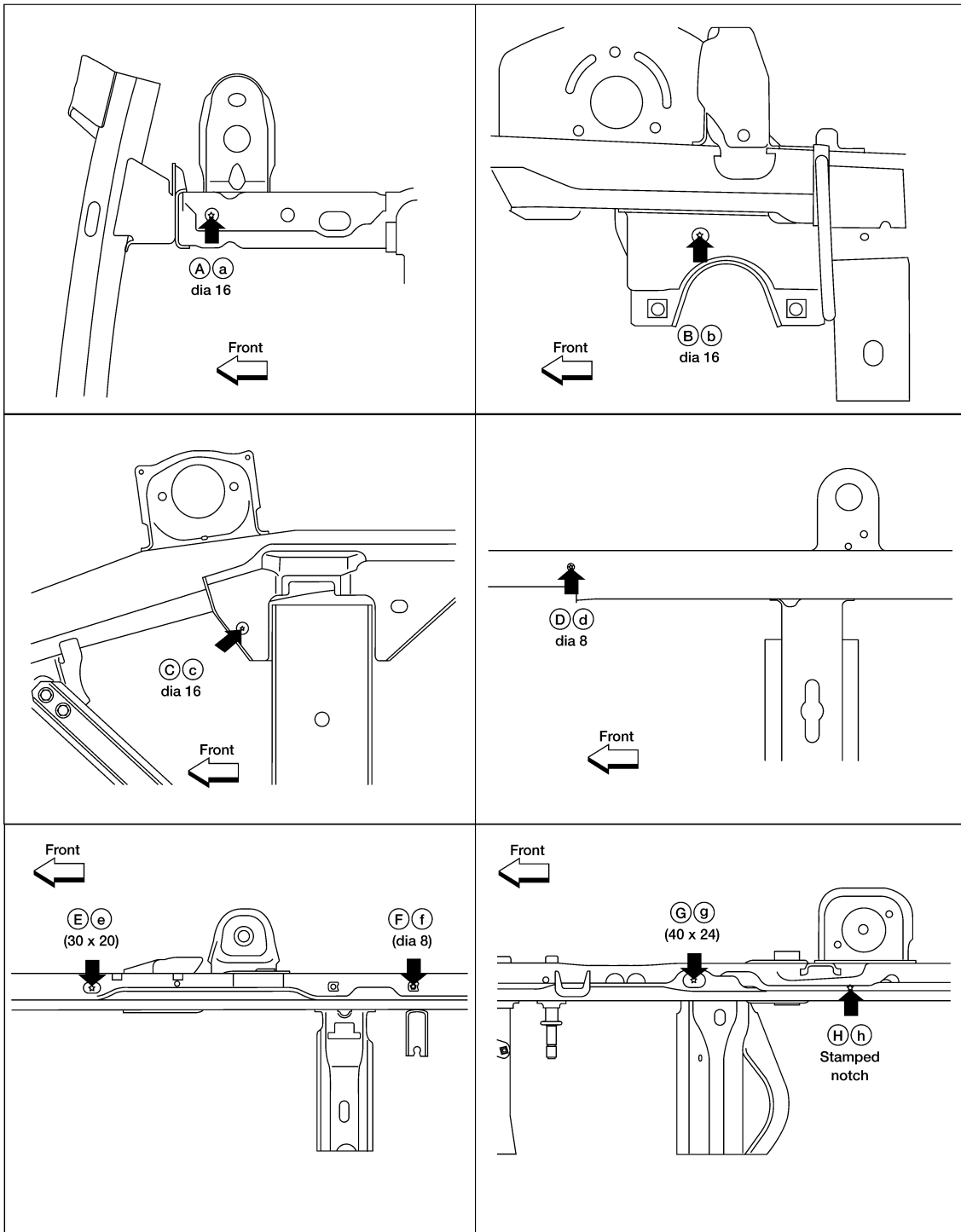
- (A), (a)
- X : ± 425
- Y : -528
- Z : 275
- (B), (b)
- X : ± 353
- Y : 35
- Z : 304
- (C), (c)
- X : ± 460
- Y : 807
- Z : 100
- (D), (d)
- X : ± 568
- Y : 1356
- Z : 109
- (E), (e)
- X : ± 564
- Y : 1936
- Z : 106
- (F), (f)
- X : ± 566
- Y : 2475
- Z : 337
- (G), (g)
- X : ± 544
- Y : 3228
- Z : 400
- (H), (h)
- X : ± 544
- Y : 3539
- Z : 357

Unit: mm

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BODY ALIGNMENT

< ON-VEHICLE REPAIR >



Coordinates:		(A/a)	(B/b)	(C/c)	(D/d)	(E/e)	(F/f)	(G/g)	(H/h)
X :	±	425	353	460	568	564	566	544	544
Y :		-528	35	807	1356	1936	2475	3228	3539
Z :		275	304	100	109	106	337	400	357

Unit: mm

KH#040D

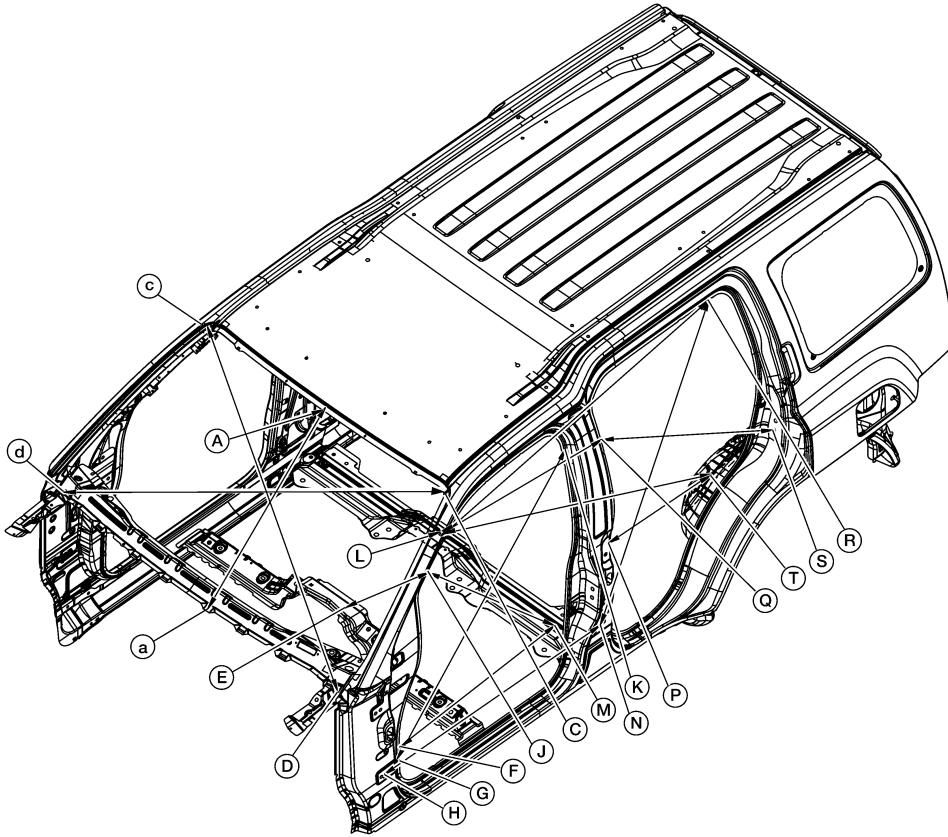
Passenger Compartment

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BODY ALIGNMENT

< ON-VEHICLE REPAIR >

MEASUREMENT



MEASURING POINT	DIM (mm)
A-a	840.0
C-d	1488.2
D-c	1528.2
E-J	1009.0
E-j	1101.0
E-K	1160.7
E-k	1238.5
F-M, f-m	844.2
G-K, g-k	1258.9
H-N, h-n	1095.2
J-M, j-m	954.7
L-Q, l-q	1115.0
L-R, l-r	1450.9
L-T, l-t	955.2
N-R, n-r	1265.3
P-S, p-s	847.8
Q-S, q-s	878.5

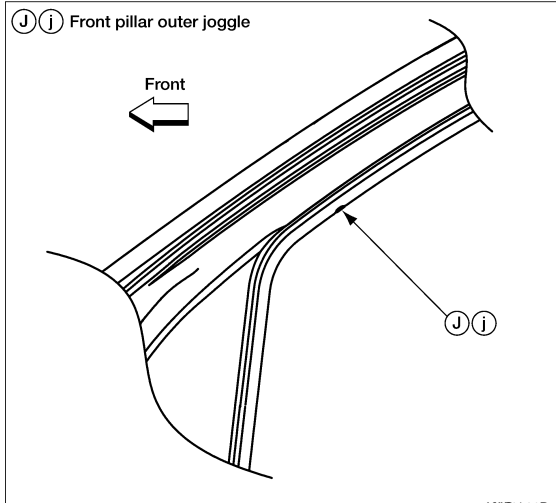
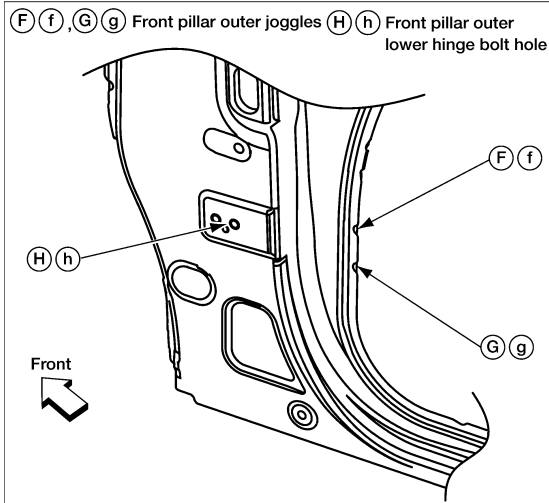
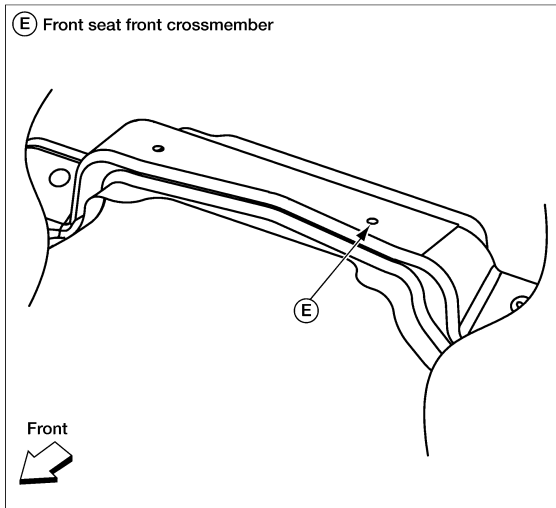
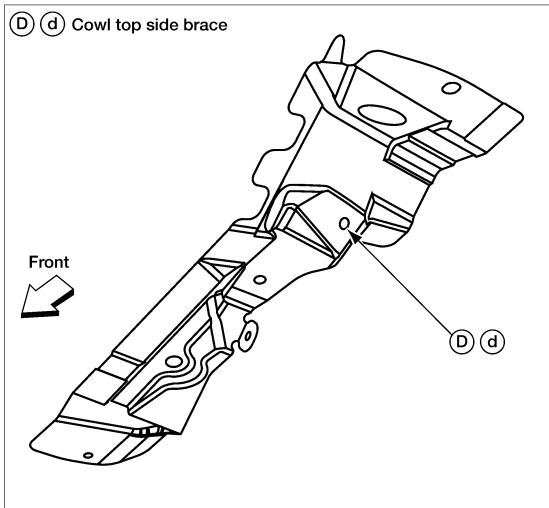
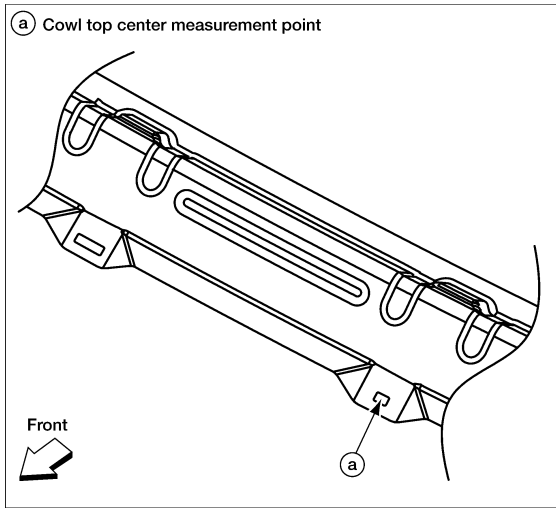
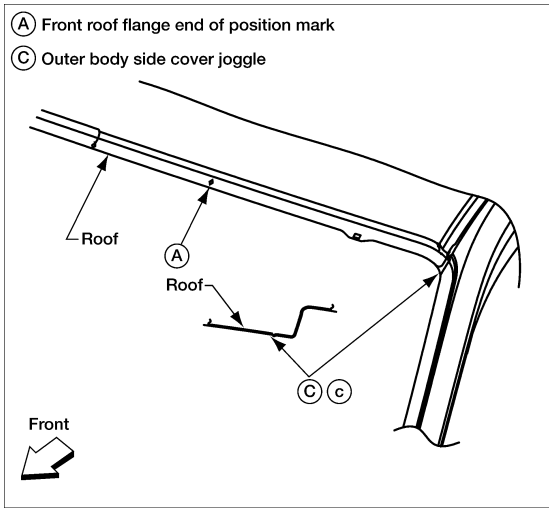
Unit: mm

KHBEI/6/D

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

MEASUREMENT POINTS



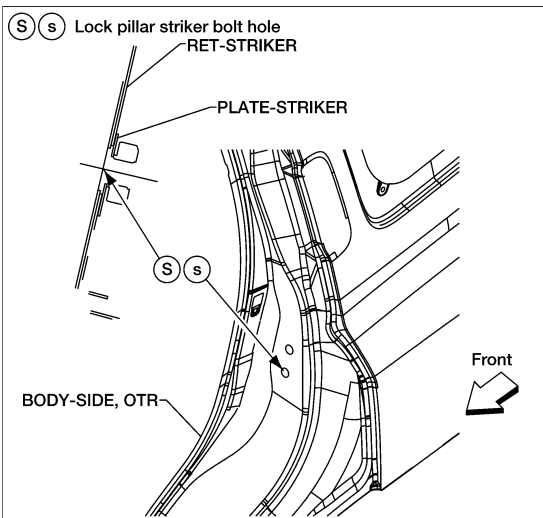
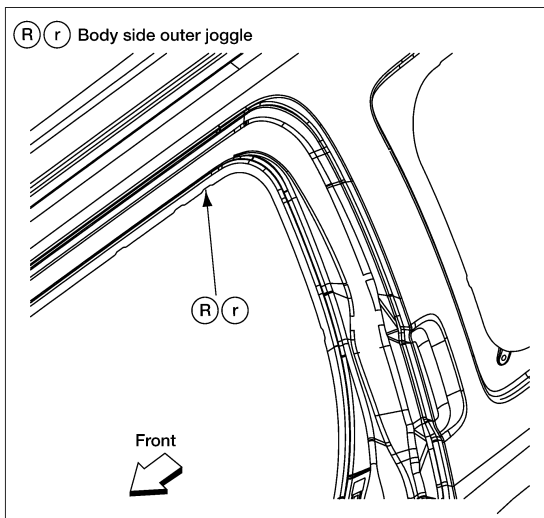
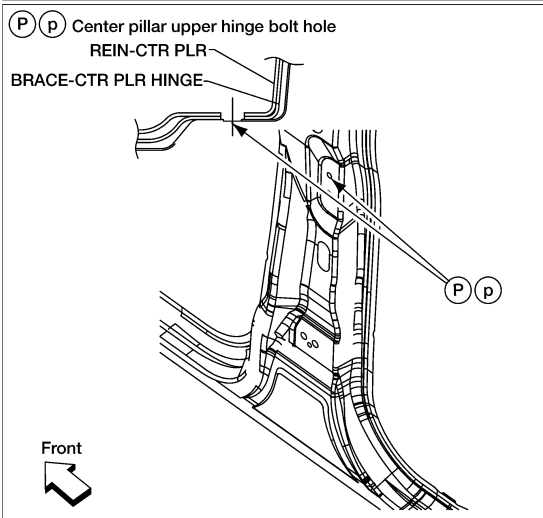
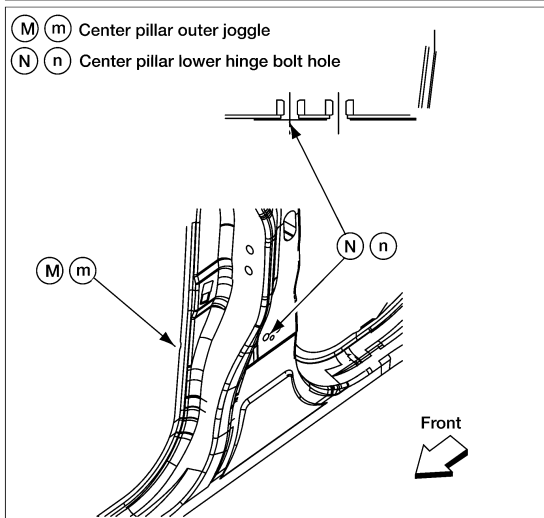
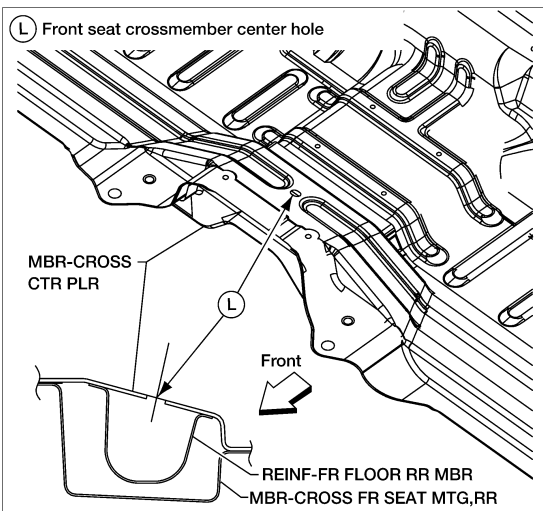
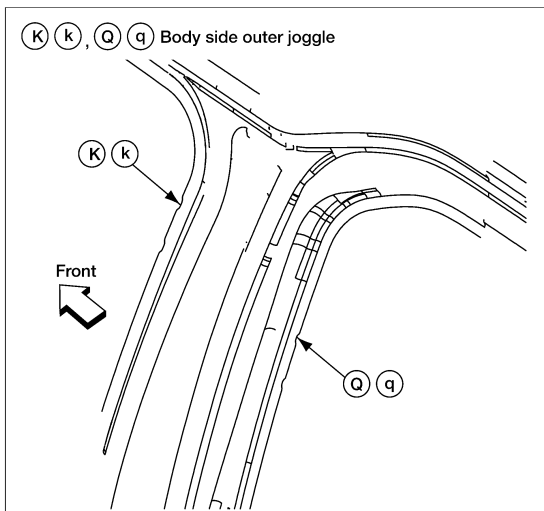
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K1#07/61D

BODY ALIGNMENT

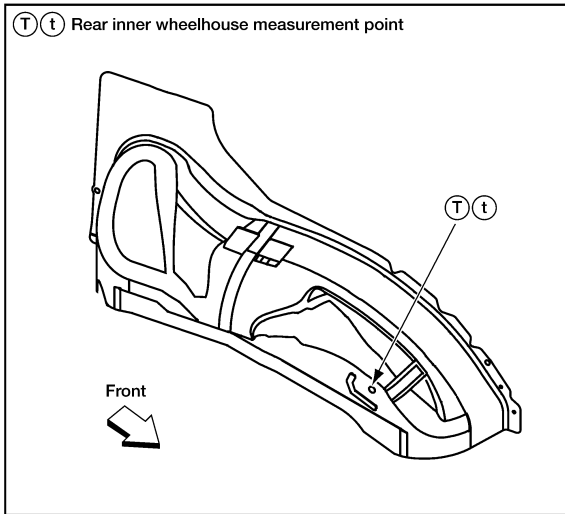
< ON-VEHICLE REPAIR >



KH01/62D

BODY ALIGNMENT

< ON-VEHICLE REPAIR >



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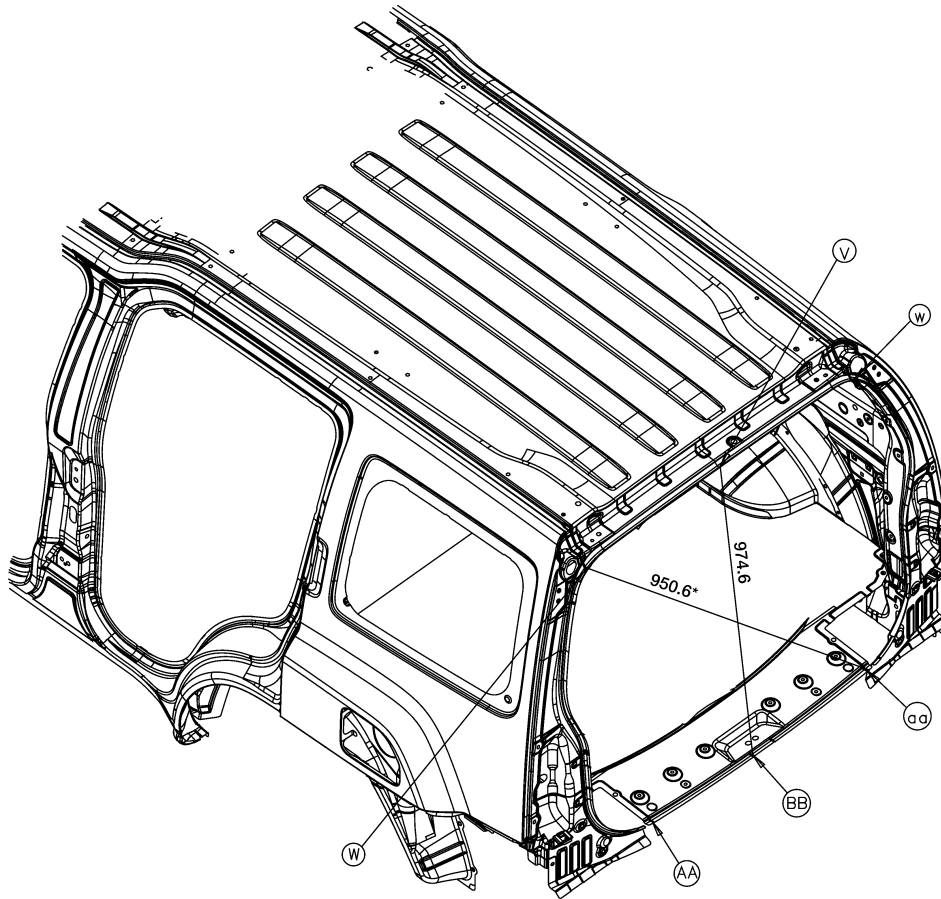
Rear Body

KH#01/63D

BODY ALIGNMENT

< ON-VEHICLE REPAIR >
MEASUREMENT

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



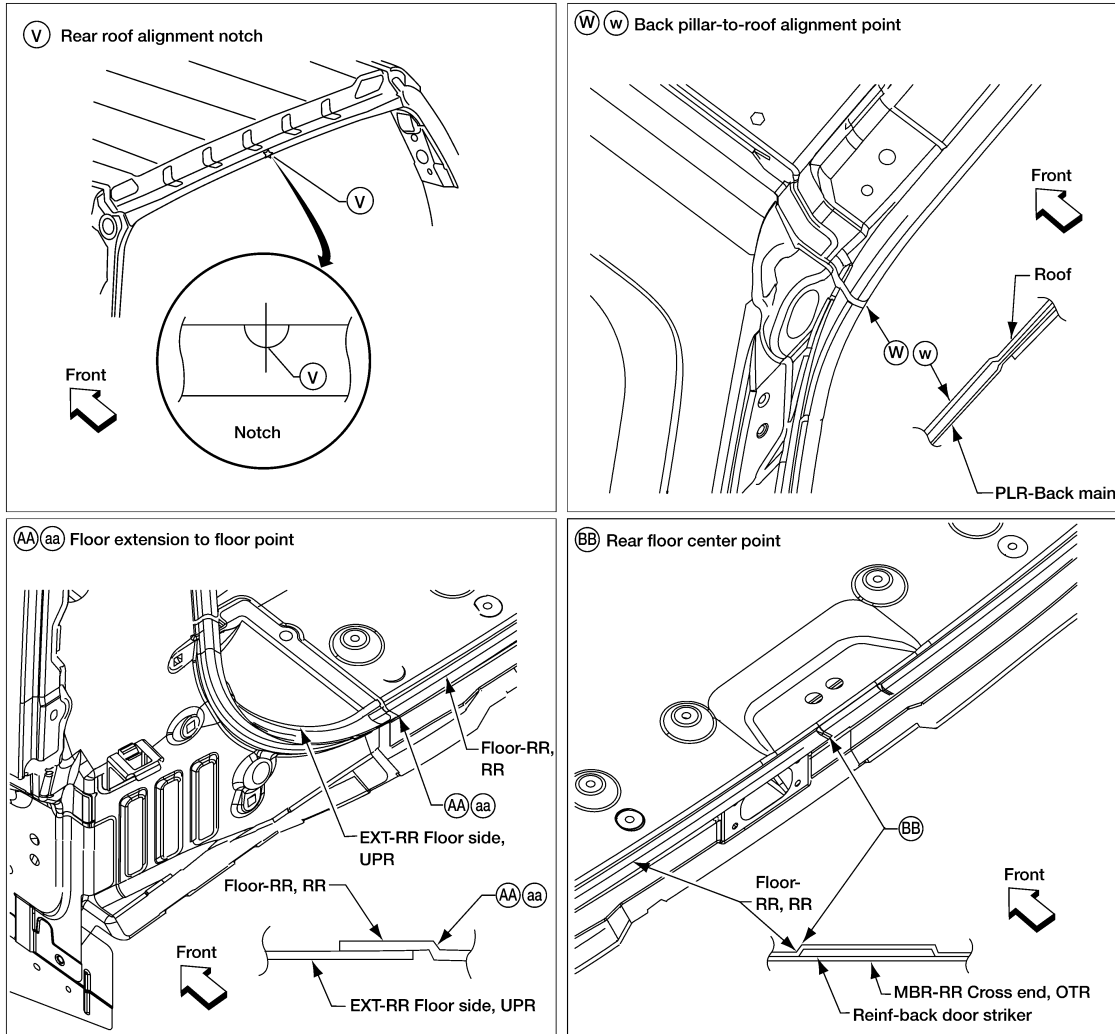
Unit: mm

K1#E1/64D

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

MEASUREMENT POINTS



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K#EJ / 65D

INFOID:000000004065491

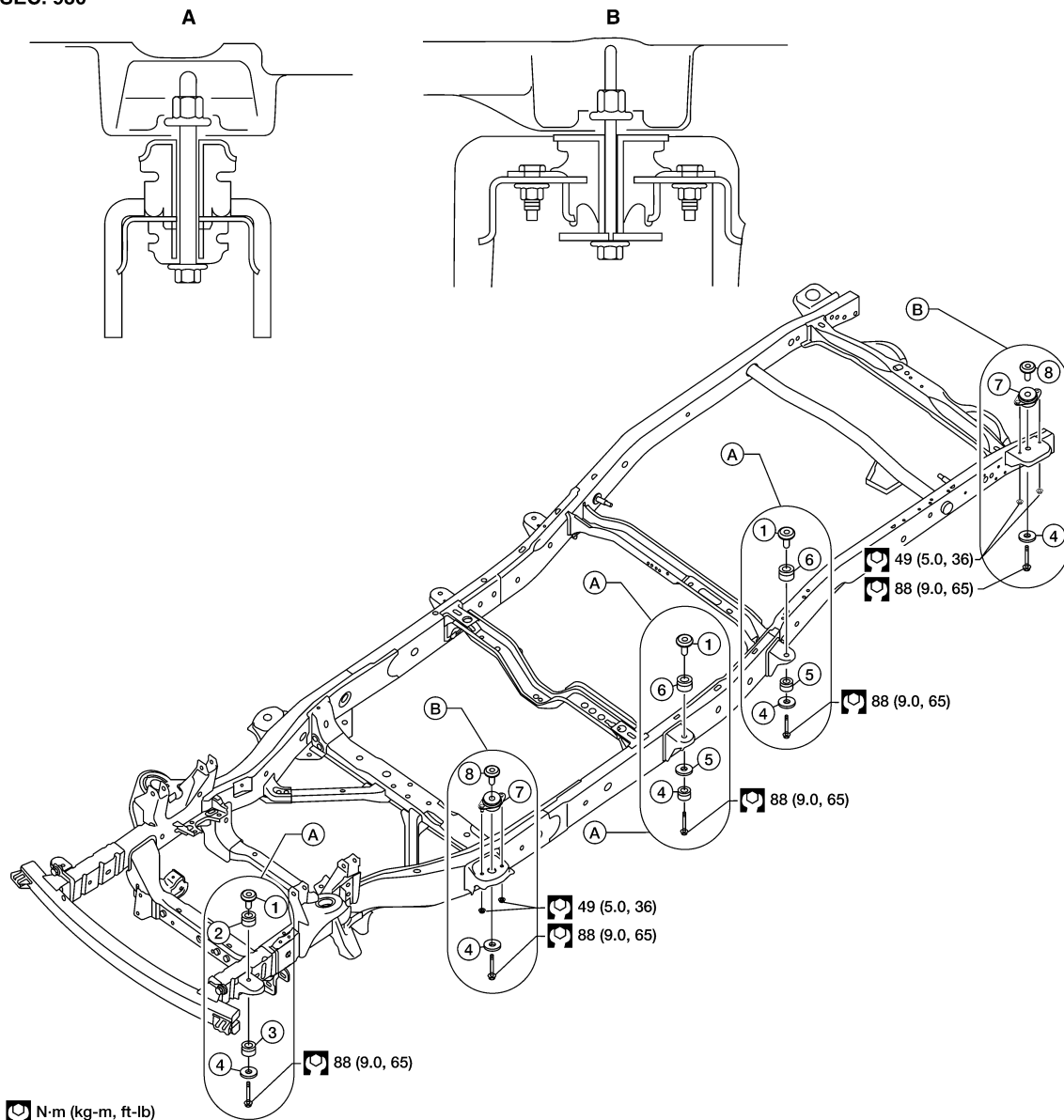
Body Mounting

- When removing, be sure to replace bolts and nuts (sealant applied bolts or self-lock nuts are used for all mounting).
- Unless otherwise noted, the bushings and insulators have paint marks that are to be installed facing outward.

BODY ALIGNMENT

< ON-VEHICLE REPAIR >

SEC. 930



- | | | |
|-------------------------|-------------------------------------|-------------------------------------|
| 1. Gold washer | 2. Upper bushing | 3. Lower bushing |
| 4. Black washer | 5. Lower bushing without paint mark | 6. Upper bushing without paint mark |
| 7. Body mount insulator | 8. Body washer | |

REPAIRING HIGH STRENGTH STEEL

< ON-VEHICLE REPAIR >

REPAIRING HIGH STRENGTH STEEL

Precaution in Repairing High Strength Steel

INFOID:000000004065492

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:

High strength steel (hss) used in nissan vehicles

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"> • Upper inner front pillar • Front pillar hinge brace • Outer front pillar reinforcement • Other reinforcements
785-981 N/mm ² (80-100kg/mm ² 114-142klb/sq in)	SP150	<ul style="list-style-type: none"> • Outer sill reinforcement • Main back pillar

SP130 is the most commonly used HSS.

SP150 HSS is used only on parts that require much more strength.

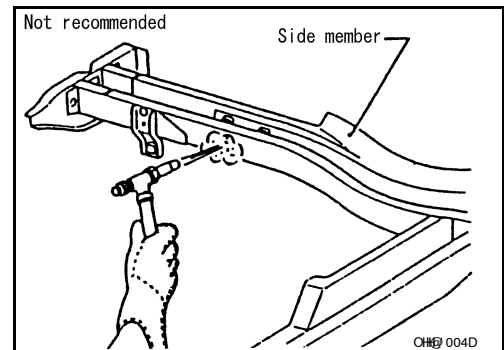
Read the following precautions when repairing HSS:

1. Additional points to consider

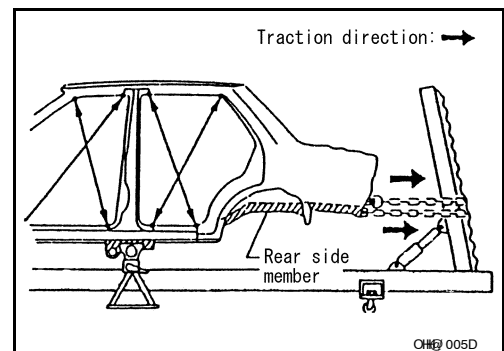
- The repair of reinforcements (such as side members) by heating is not recommended since it may weaken the component. When heating is unavoidable, do not heat HSS parts above 550°C (1,022°F).

Verify heating temperature with a thermometer.

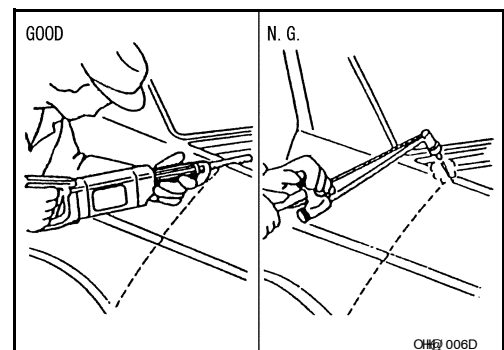
(Crayon-type and other similar type thermometer are appropriate.)



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



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

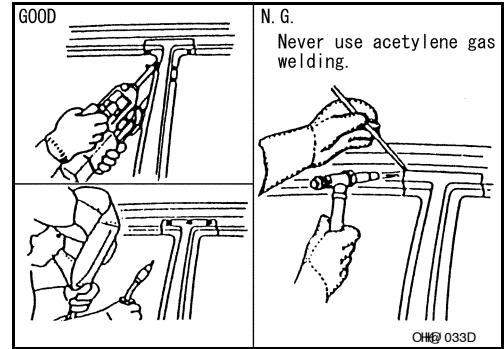


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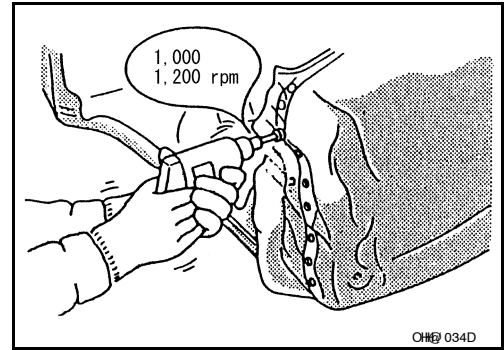
REPAIRING HIGH STRENGTH STEEL

< 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.



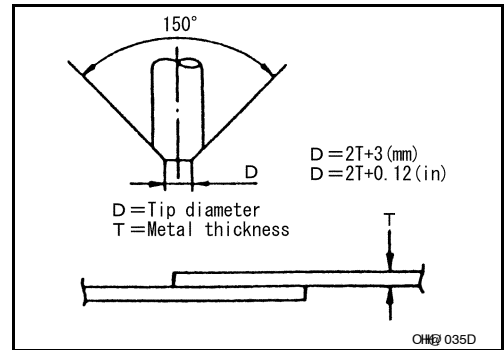
- The spot weld on HSS panels is harder than that of an ordinary steel panel. Therefore, when cutting spot welds on a HSS panel, use a low speed high torque drill (1,000 to 1,200 rpm) to increase drill bit durability and facilitate the operation.
- SP150 HSS panels with a tensile strength of 785 to 981 N/mm² (80 to 100 kg/mm², 114 to 142 klb/sq in), used as reinforcement in the door guard beams, is too strong to repair. When these HSS parts are damaged, the outer panels also sustain substantial damage; therefore, the assembly parts must be replaced.



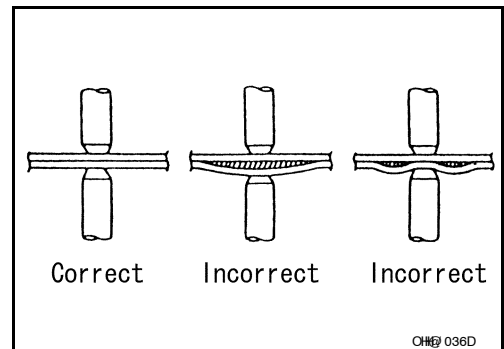
2. Precautions in spot welding HSS

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.



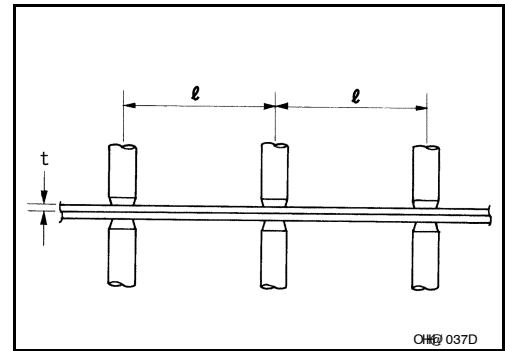
REPAIRING HIGH STRENGTH STEEL

< ON-VEHICLE REPAIR >

- 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

< ON-VEHICLE REPAIR >

REPLACEMENT OPERATIONS

Replacement Operation

INFOID:000000004065493

DESCRIPTION

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.


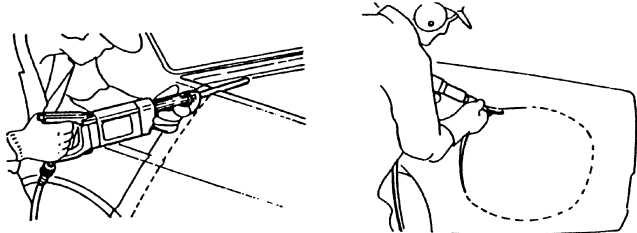



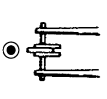





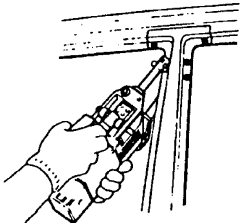
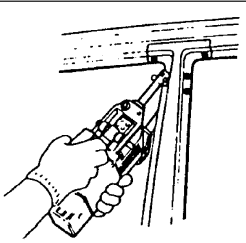



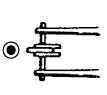









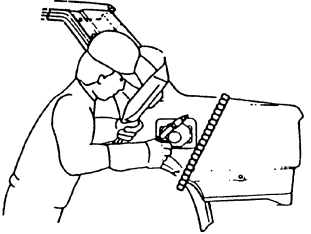





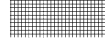
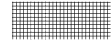
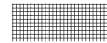



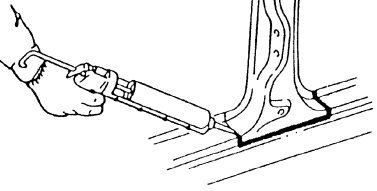
Technicians are also encouraged to read Body Repair Manual (Fundamentals) in order to ensure that the original functions and quality of the vehicle can be maintained. The Body Repair Manual (Fundamentals) contains additional information, including cautions and warnings, that are not including in this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

Please note that this information is prepared for worldwide usage, and as such, certain procedures may not apply in some regions or countries.

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

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

 Saw cut or air chisel cut							
<table border="1"> <tr> <td data-bbox="271 464 378 590">Spot weld</td> <td data-bbox="378 464 638 590">  2-spot welds </td> <td data-bbox="638 464 678 590">  </td> </tr> <tr> <td data-bbox="271 590 378 709"></td> <td data-bbox="378 590 638 709">  3-spot welds </td> <td data-bbox="638 590 678 709">  </td> </tr> </table>	Spot weld	 2-spot welds			 3-spot welds		<p>2-spot welds (2-panel overlapping portions)</p>  <p>3-spot welds (3-panel overlapping portions)</p>  
Spot weld	 2-spot welds						
	 3-spot welds						
<table border="1"> <tr> <td data-bbox="271 709 378 835">  MIG plug weld </td> <td data-bbox="378 709 638 835">  </td> </tr> <tr> <td data-bbox="271 835 378 955">  MIG seam weld/ Point weld </td> <td data-bbox="378 835 638 955">  </td> </tr> </table>	 MIG plug weld		 MIG seam weld/ Point weld		 		
 MIG plug weld							
 MIG seam weld/ Point weld							
<p>Brazing</p>  							
<p>Soldering</p>  							
<p>Sealing</p> 							

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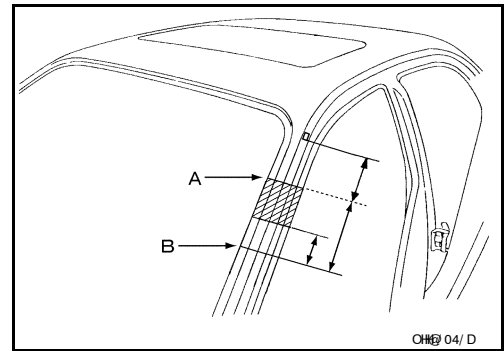
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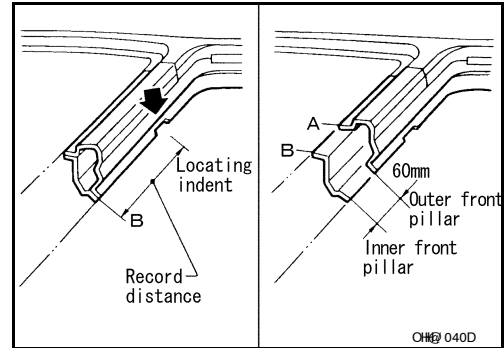
REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

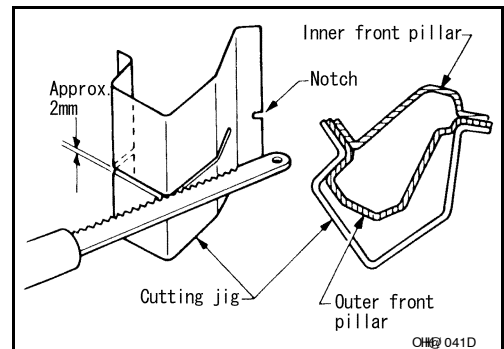
- Front pillar butt joint can be determined anywhere within shaded area as shown in the figure. The best location for the butt joint is at position A due to the construction of the vehicle. Refer to the front pillar section.



- 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.

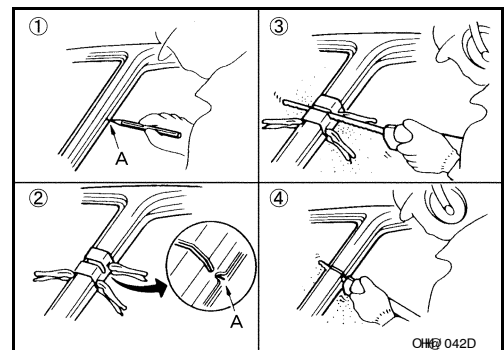


- Prepare a cutting jig to make outer pillar easier to cut. Also, this will permit service part to be accurately cut at joint position.



- 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.



HOODLEDGE

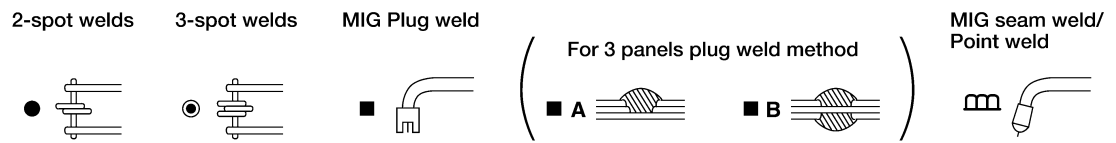
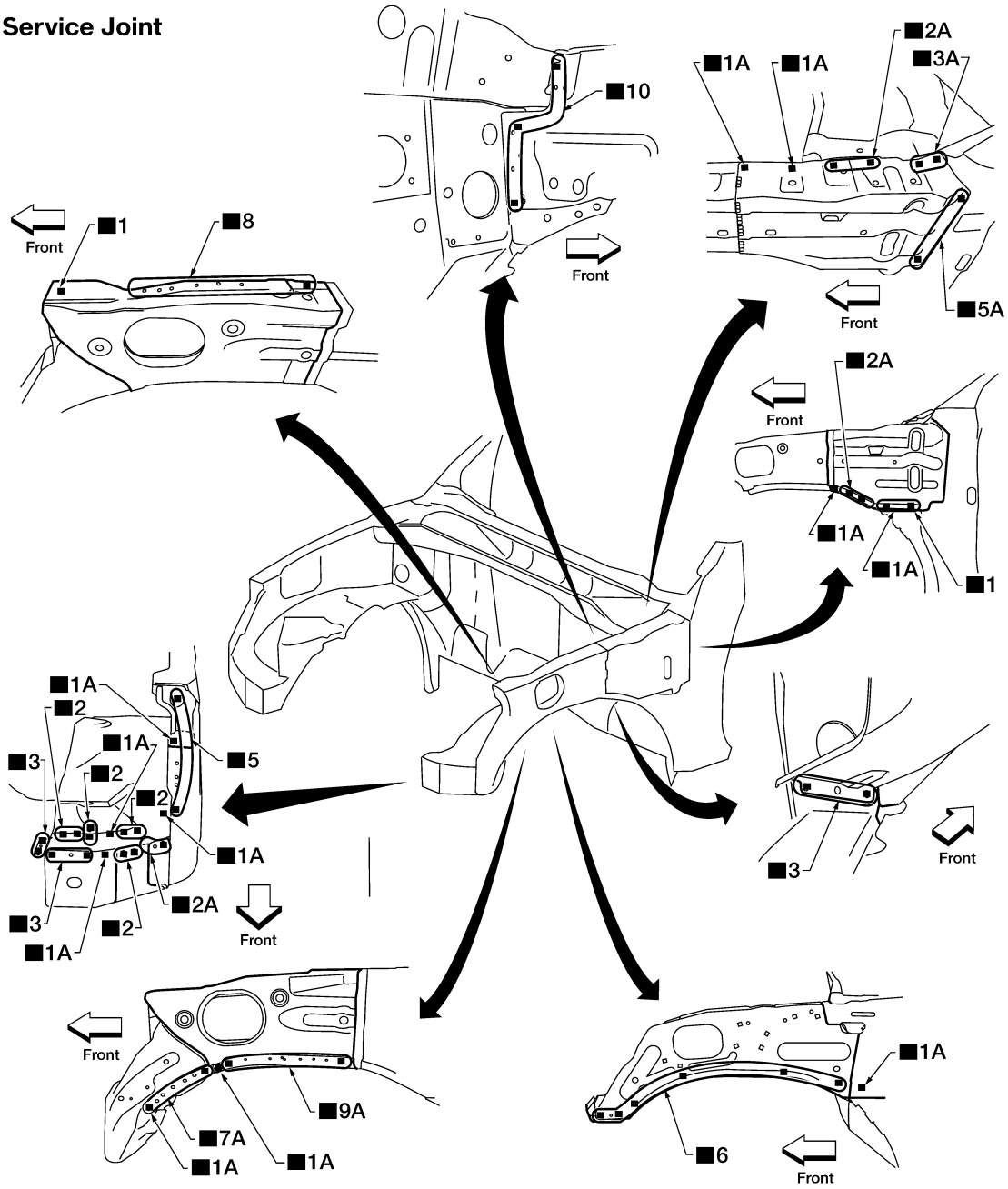
LH

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

- Work after radiator core support has been removed.

Service Joint



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RH

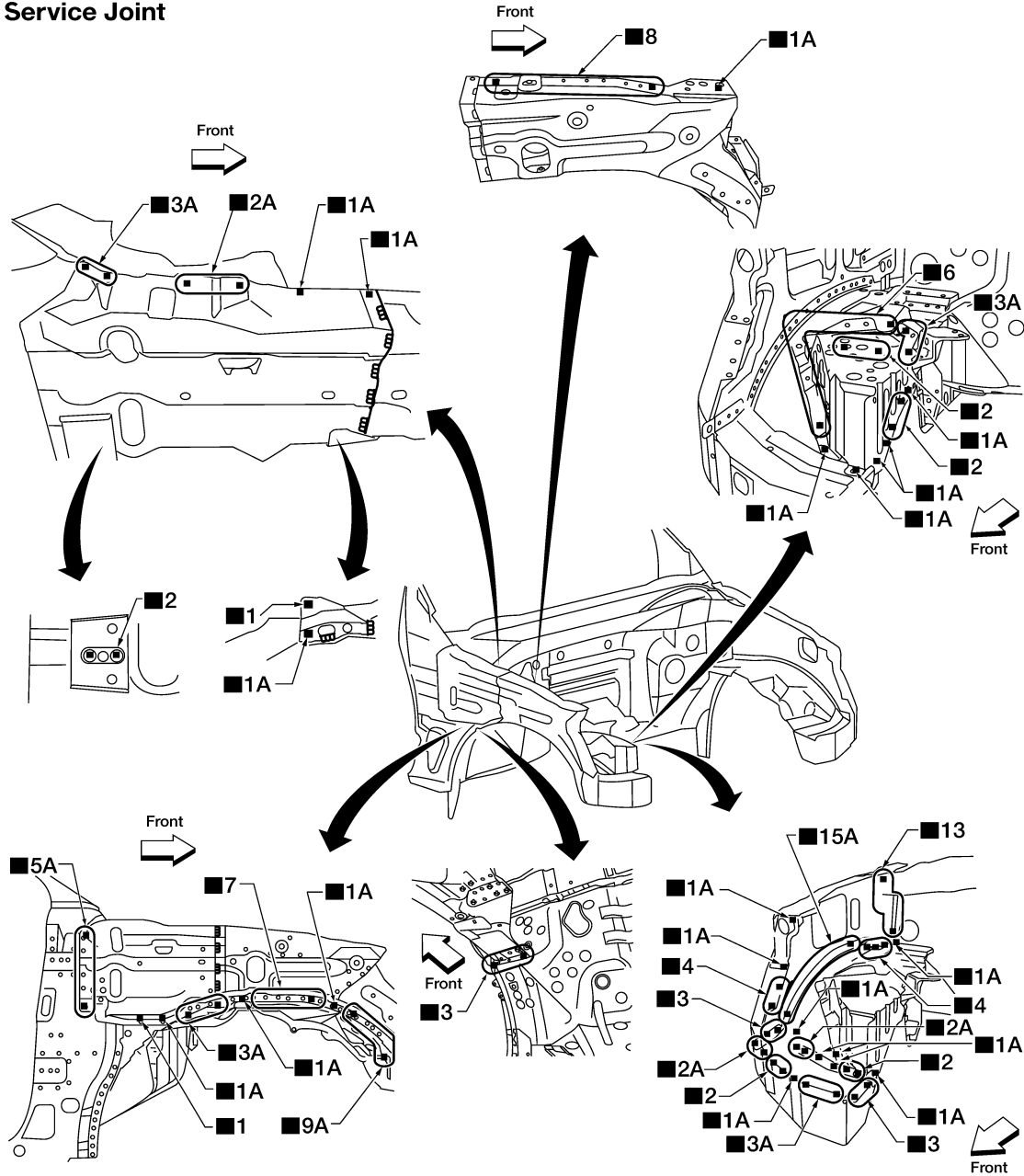
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REPLACEMENT OPERATIONS

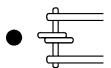
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- Work after radiator core support has been removed.

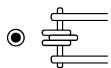
Service Joint



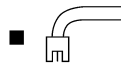
2-spot welds



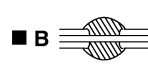
3-spot welds



MIG Plug weld



(For 3 panels plug weld method)



MIG seam weld/
Point weld



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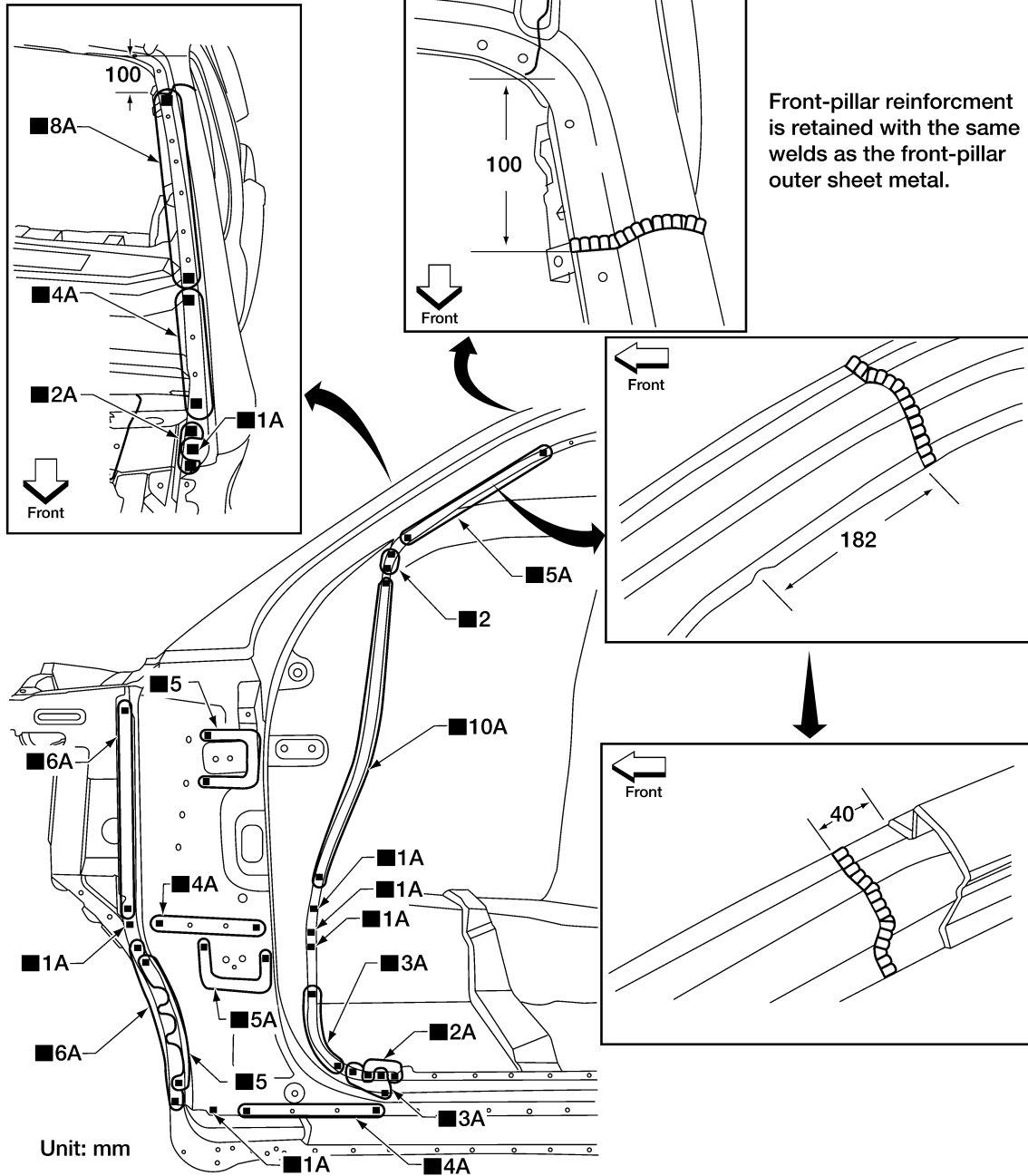
FRONT PILLAR

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

- Work after rear hoodledge reinforcement has been removed.

Service Joint



Front-pillar reinforcement is retained with the same welds as the front-pillar outer sheet metal.

Unit: mm

2-spot welds

3-spot welds

MIG Plug weld

For 3 panels plug weld method

MIG seam weld/
Point weld



V H 752D

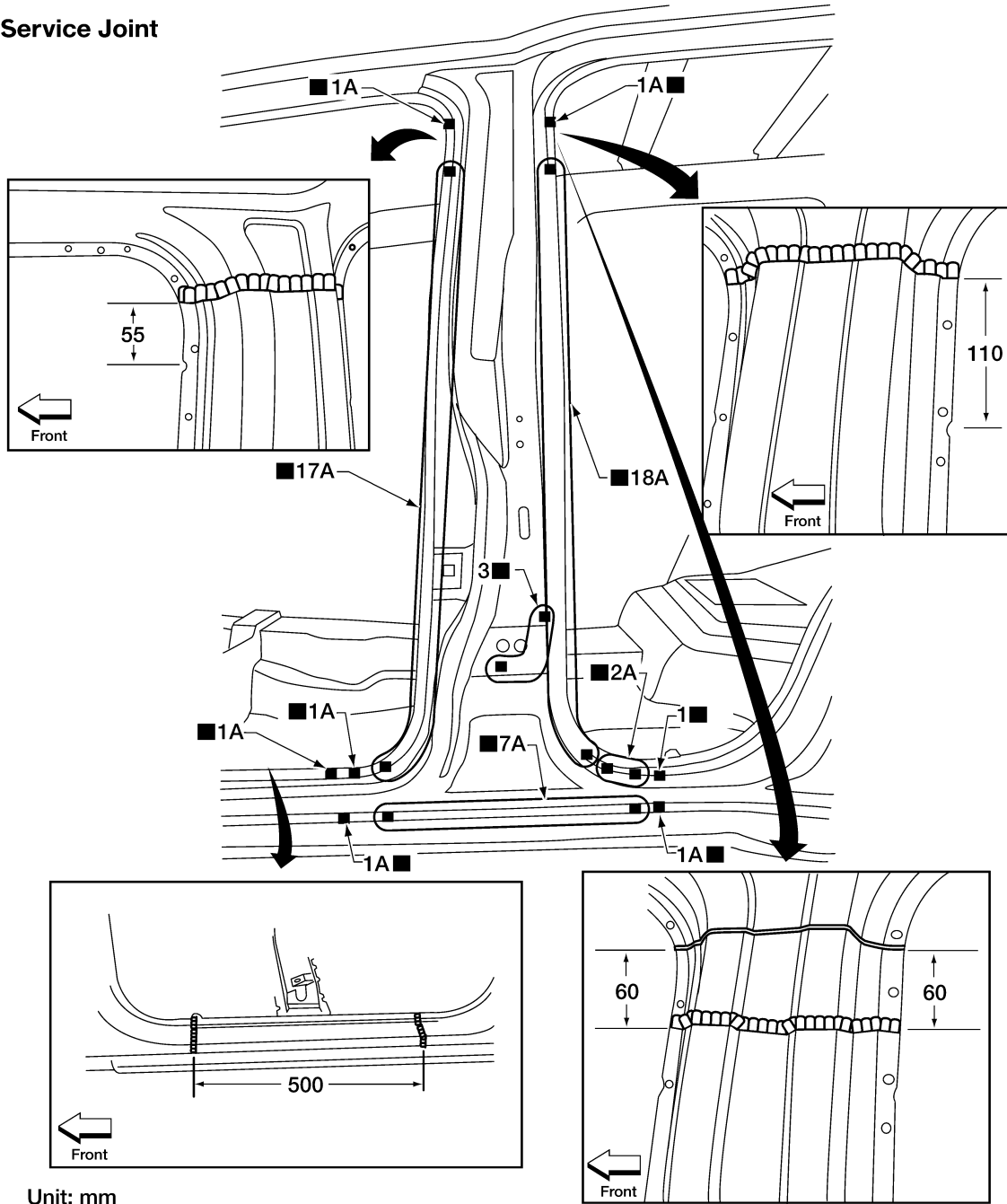
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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

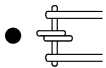
CENTER PILLAR

Service Joint

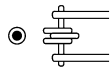


Unit: mm

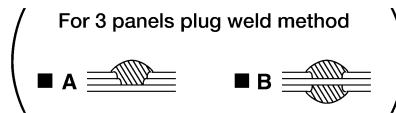
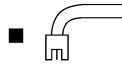
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld

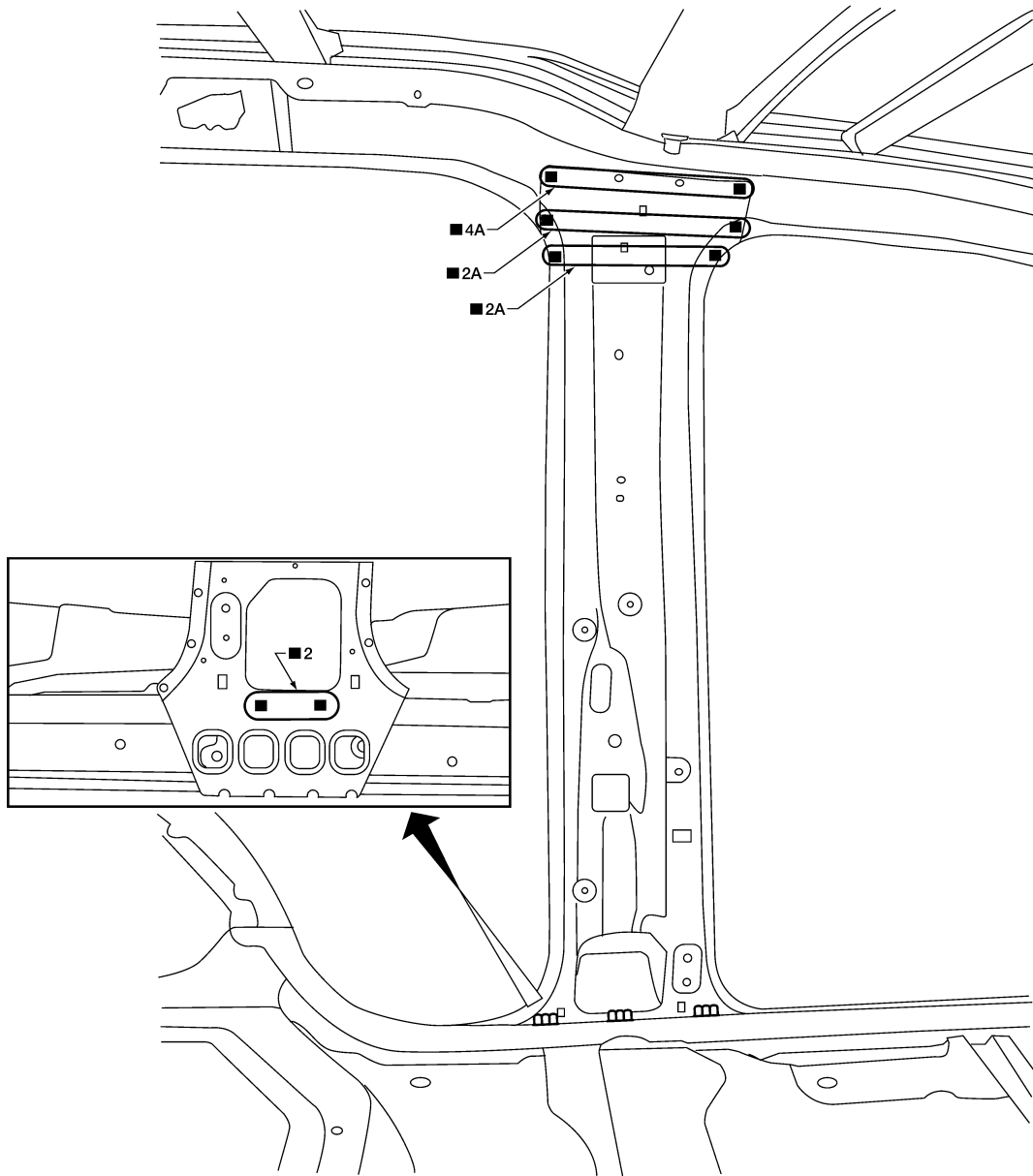


V HB 753D

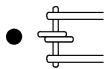
REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

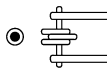
Service Joint



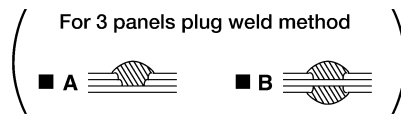
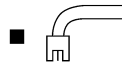
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld



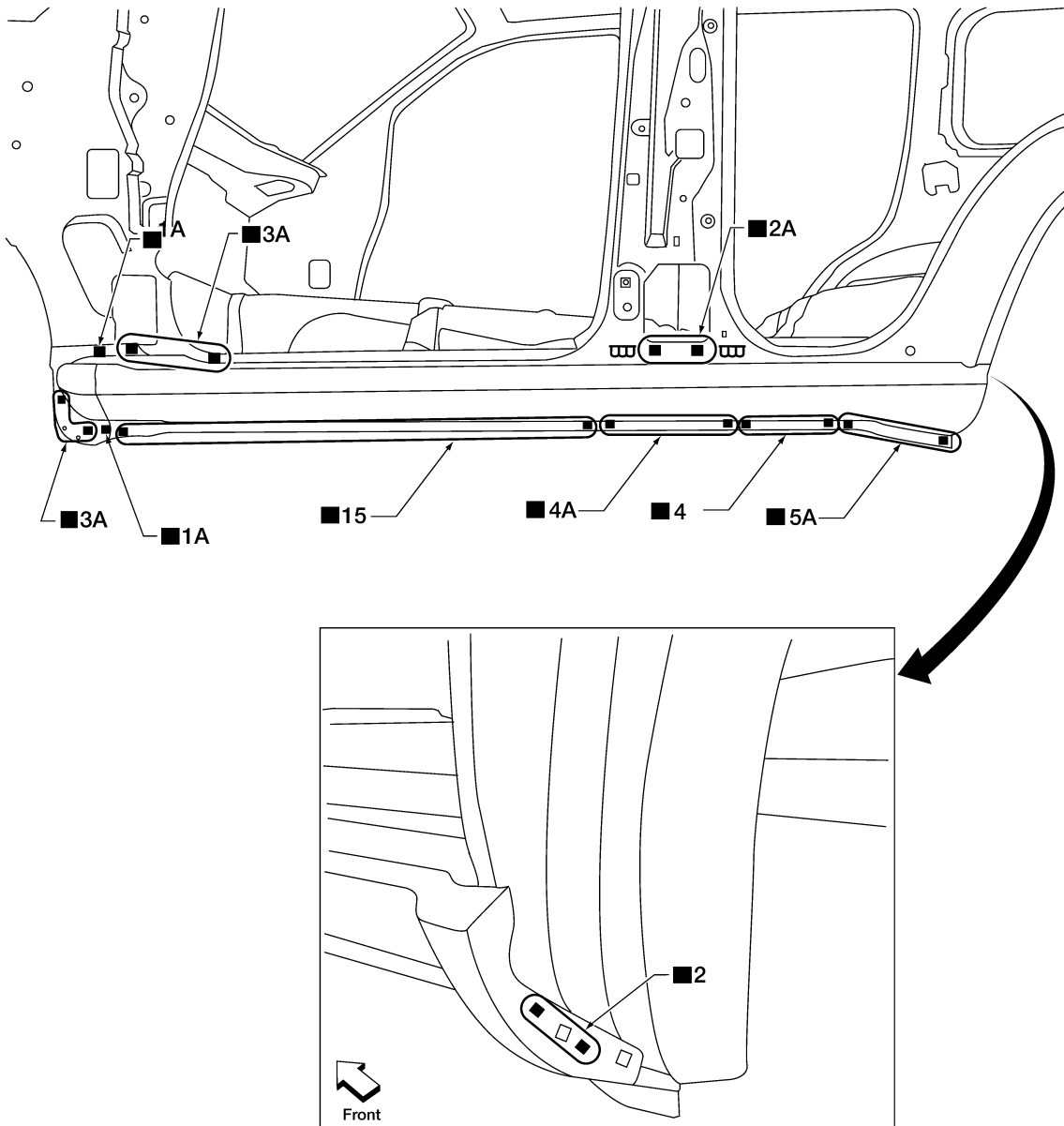
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REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

OUTER SILL

Service Joint



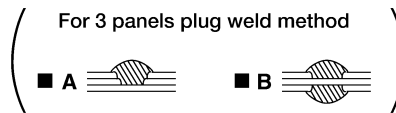
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld



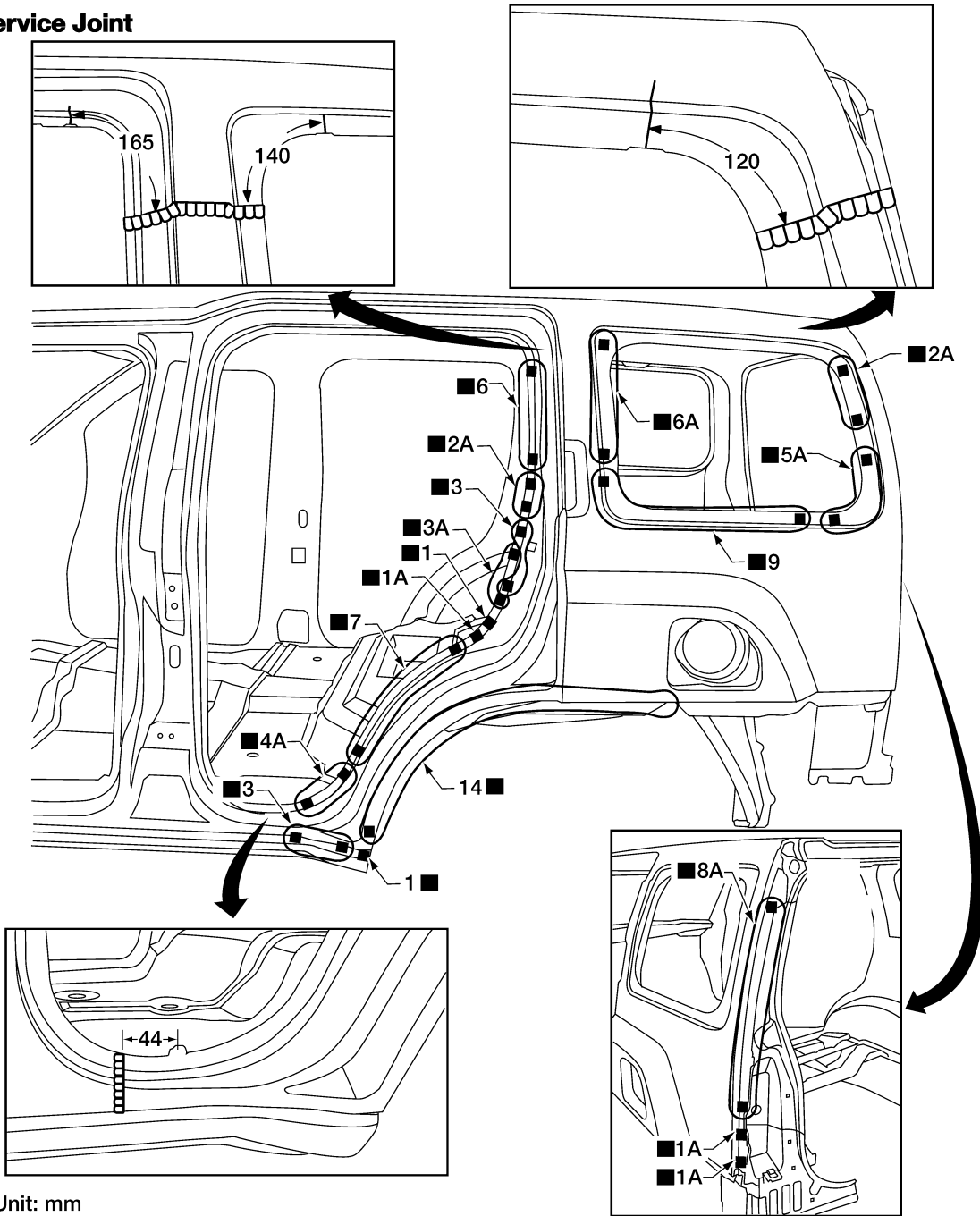
V HB 754D

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

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



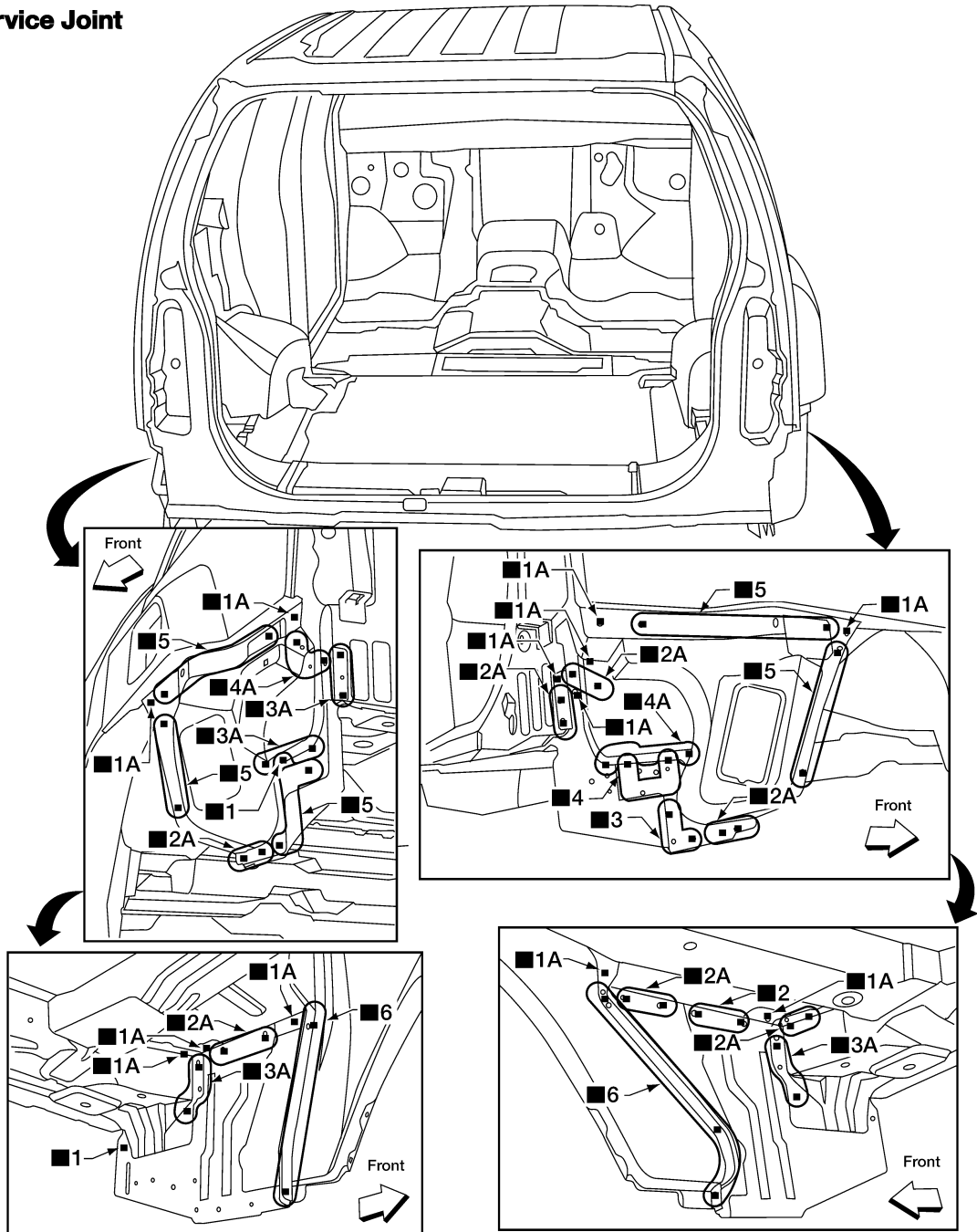
V HB 755D

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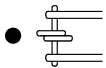
REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >
 REAR FENDER EXTENSION

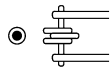
Service Joint



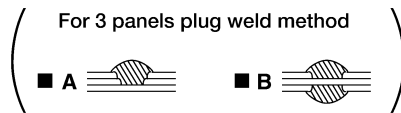
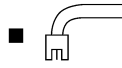
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
 Point weld



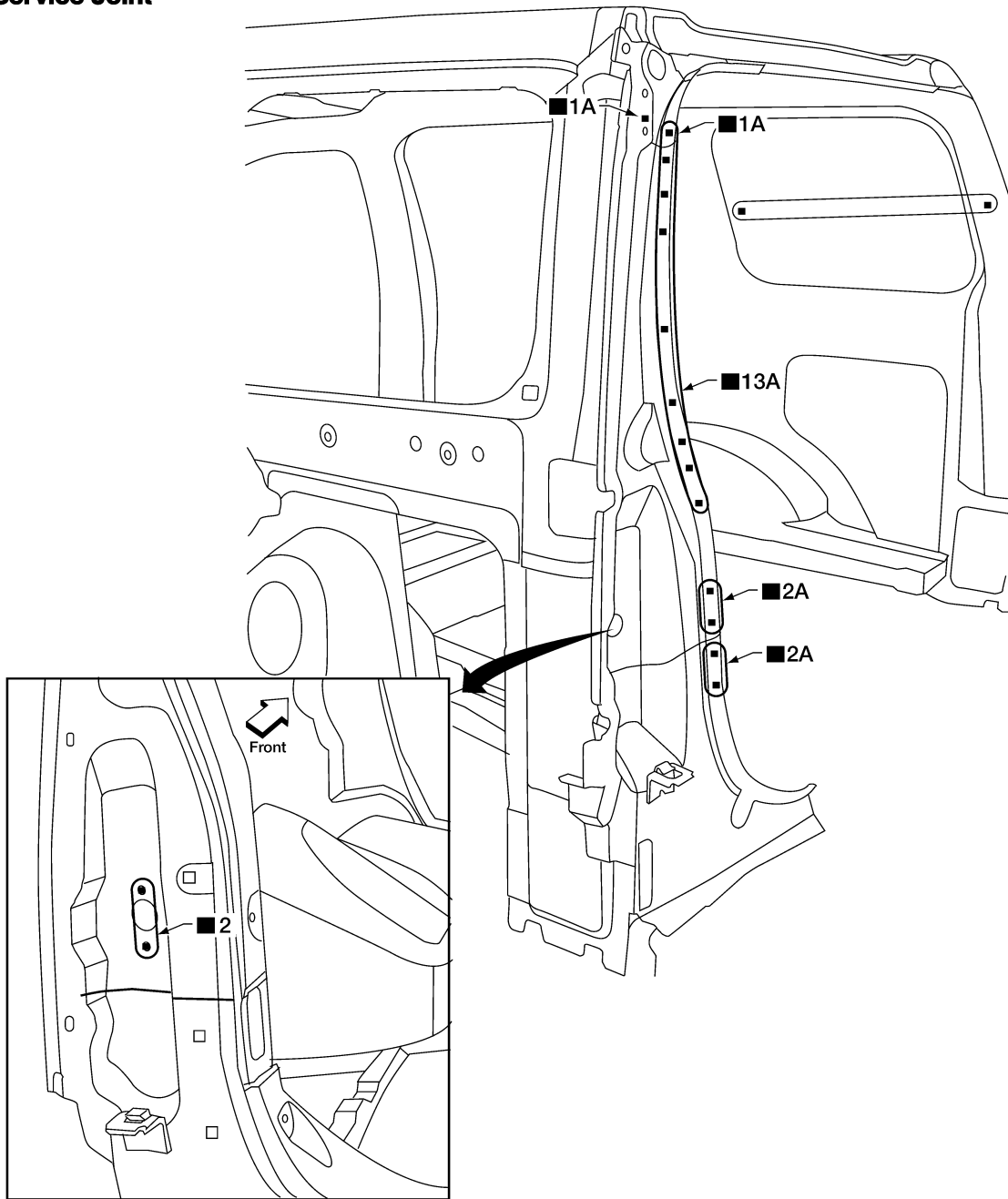
KH#E1016D

REPLACEMENT OPERATIONS

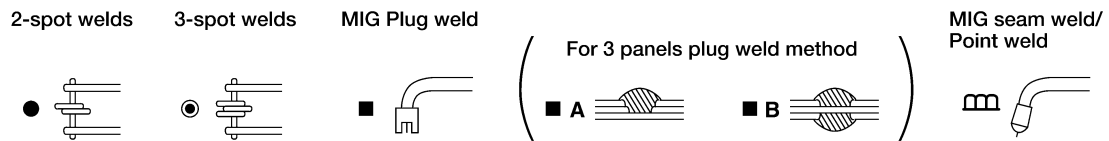
< ON-VEHICLE REPAIR >

MAIN BACK PILLAR

Service Joint



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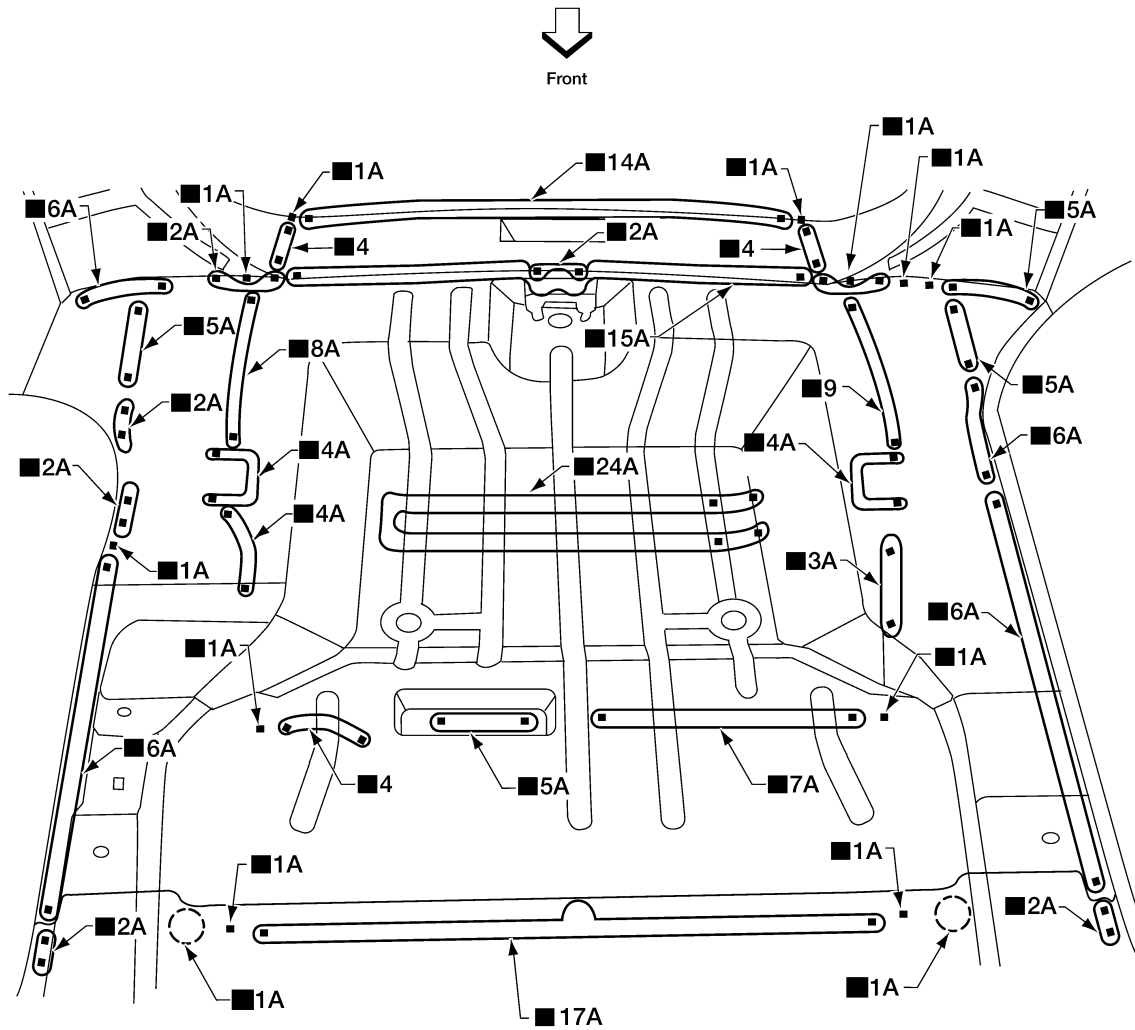
V HD 756D

REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

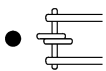
REAR FLOOR REAR

Service Joint

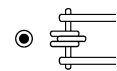


○ 3 panel plug weld below front floor

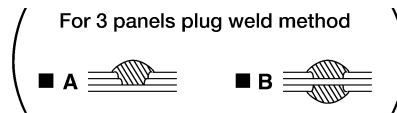
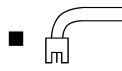
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld



KH01017D

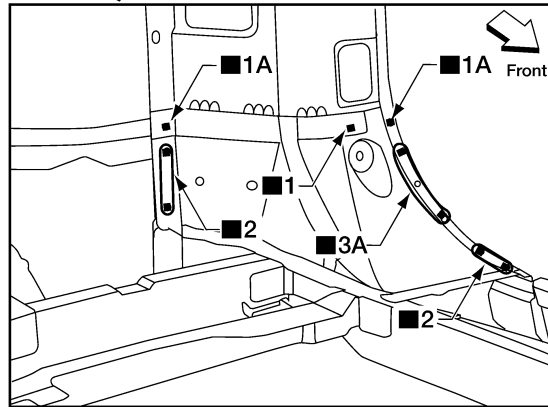
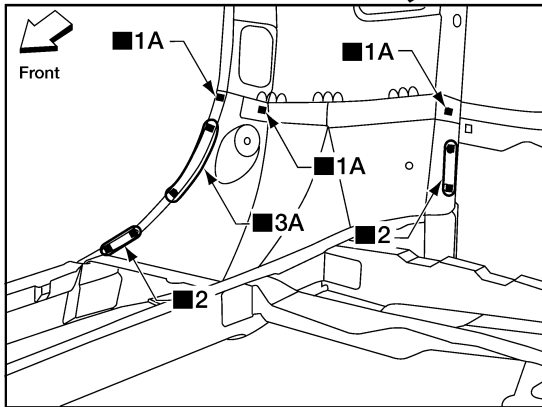
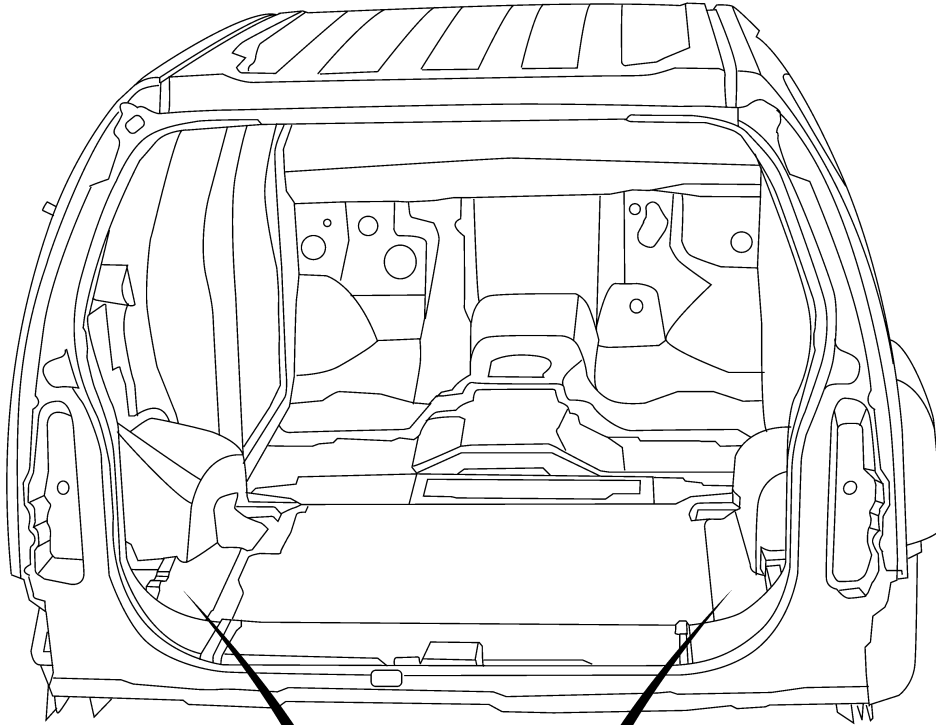
REAR CROSSMEMBER

REPLACEMENT OPERATIONS

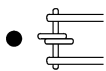
< ON-VEHICLE REPAIR >

Rear Floor Upper Extensions

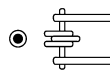
Service Joint



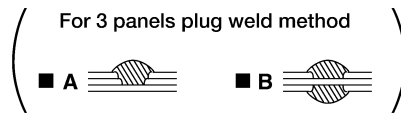
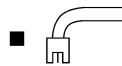
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld



V HB 757D

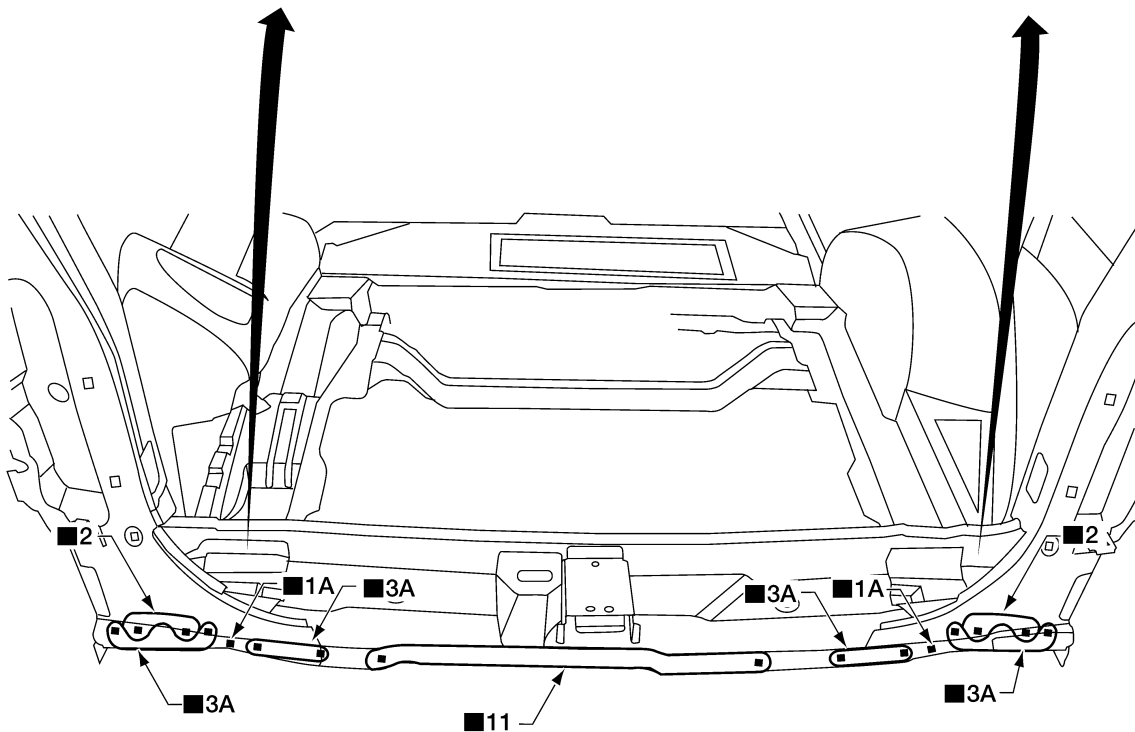
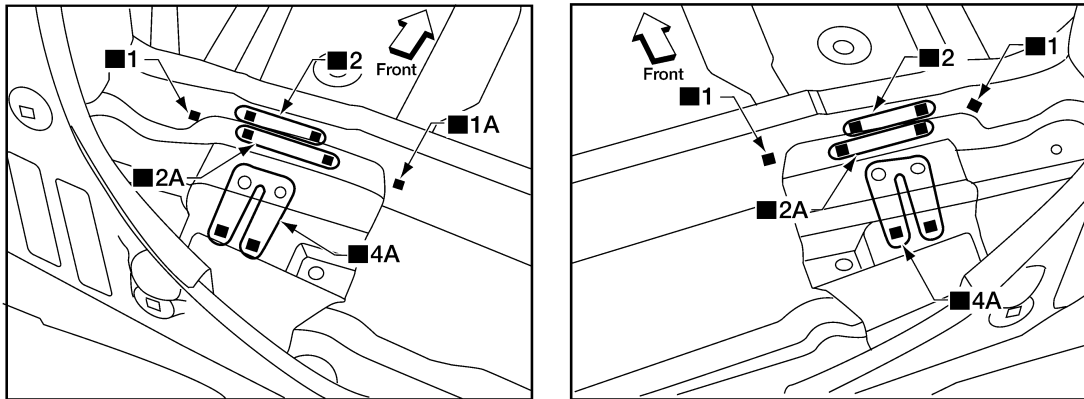
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REPLACEMENT OPERATIONS

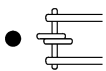
< ON-VEHICLE REPAIR >

Crossmember

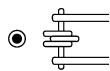
Service Joint



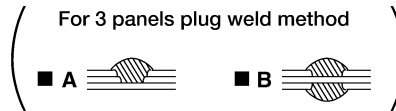
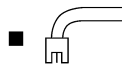
2-spot welds



3-spot welds



MIG Plug weld



MIG seam weld/
Point weld



V H 758D

CRUSH HORN

CAUTION:

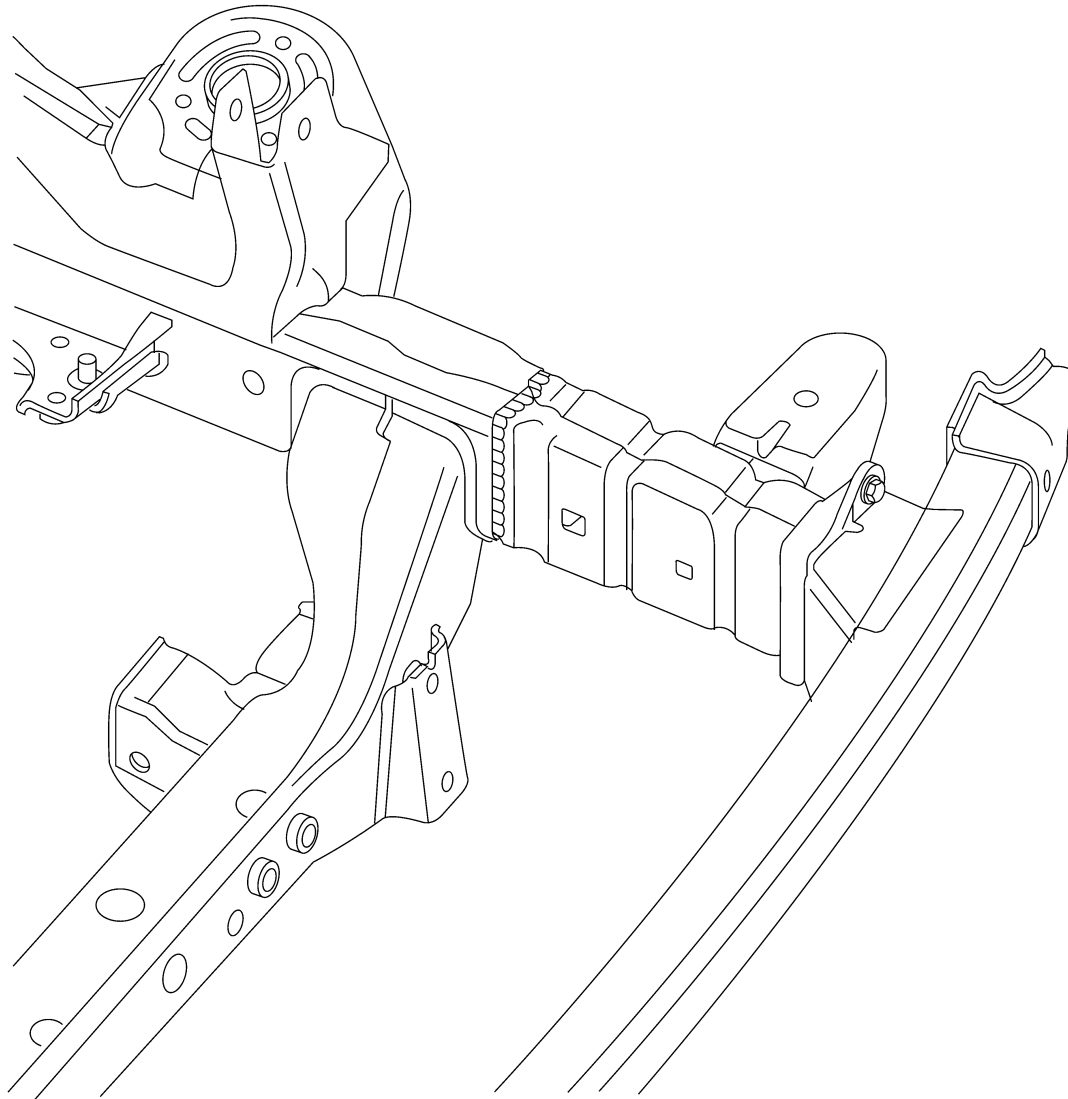
When replacing a damaged crush horn on N50 model, do not choose partial replacement method, such as cutting and butt-joint welding the crush horn.

REPLACEMENT OPERATIONS

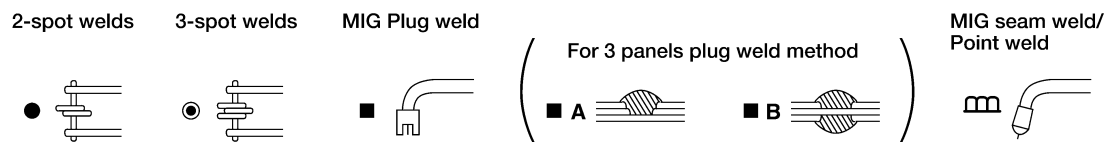
< ON-VEHICLE REPAIR >

Be sure to replace the entire crush horn when the crush horn has damage at the back of the body mounting bracket.

Service Joint



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Foam Repair

During factory body 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

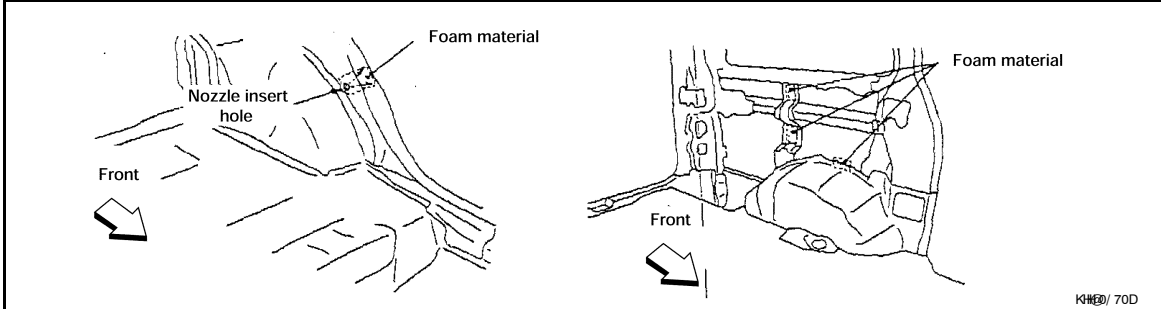
REPLACEMENT OPERATIONS

< ON-VEHICLE REPAIR >

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

FILL PROCEDURES

1. Fill procedures after installation of 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 the service part.



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

