CONTENTS

GENERAL INFORMATION

GENERAL GUIDE LINES AND PRECAUTIONS

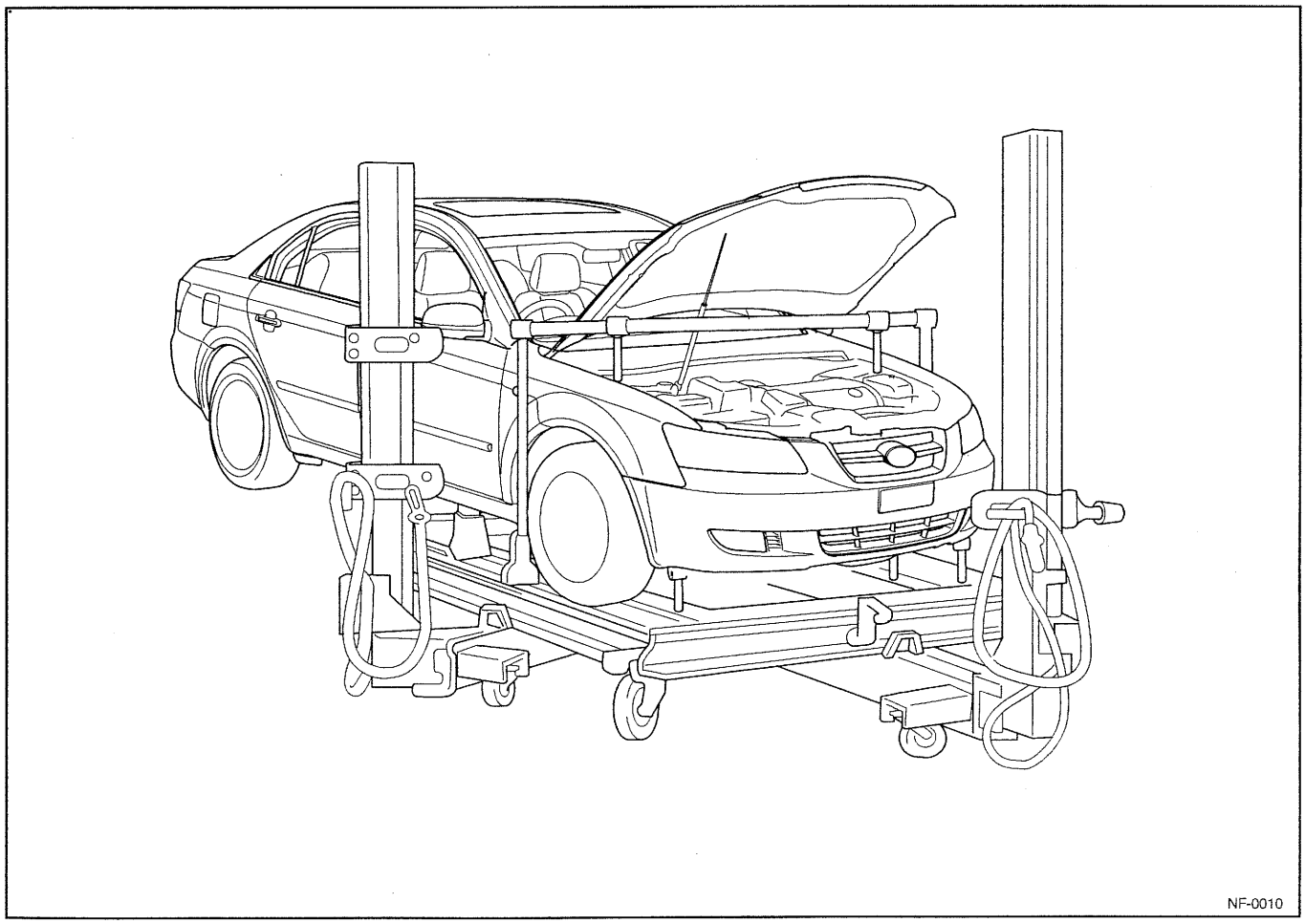
The Hyundai SONATA is a completely new vehicle design. During its development, close attention has been given to safety, stability, weight and corrosion protection. Typical of unit body design, the Hyundai SONATA is designed so that the front and rear compartments will absorb much of the collision energy so that the passengers are better protected. During collisions, these front and rear energy absorbing systems may be severely damaged. During repair, these damaged areas must be returned to their original strength and geometry. If this is not properly done, the vehicle will not provide the intended level of protection to its occupants in the event of another collision.

The repairs described in this manual were performed on SONATA body shells. In some instances special fixtures were welded in place to support the structure. During the repair of an actual vehicle, the interior would be fully disassembled and standard jack screws or portable braces may be used for temporary support.

During the repair of an accident involved vehicle, the vehicle must first be returned to pre-impact dimensions prior to beginning the sectioning repair procedures. The extent of damage that must be repaired should then be evaluated to determine the appropriate repair procedures. This manual provides locations and procedures where structural sectioning may be employed. It is the responsibility of the repair technician, based upon the extent of damage, to determine which location and procedure is suitable for the particular damaged vehicle.

During the repair of a collision damaged automobile, it is impossible to fully duplicate the methods used in the factory during the vehicle manufacture. Therefore, auto body repair techniques have been developed to provide a repair that has strength properties equivalent to those of the original design and manufacture.

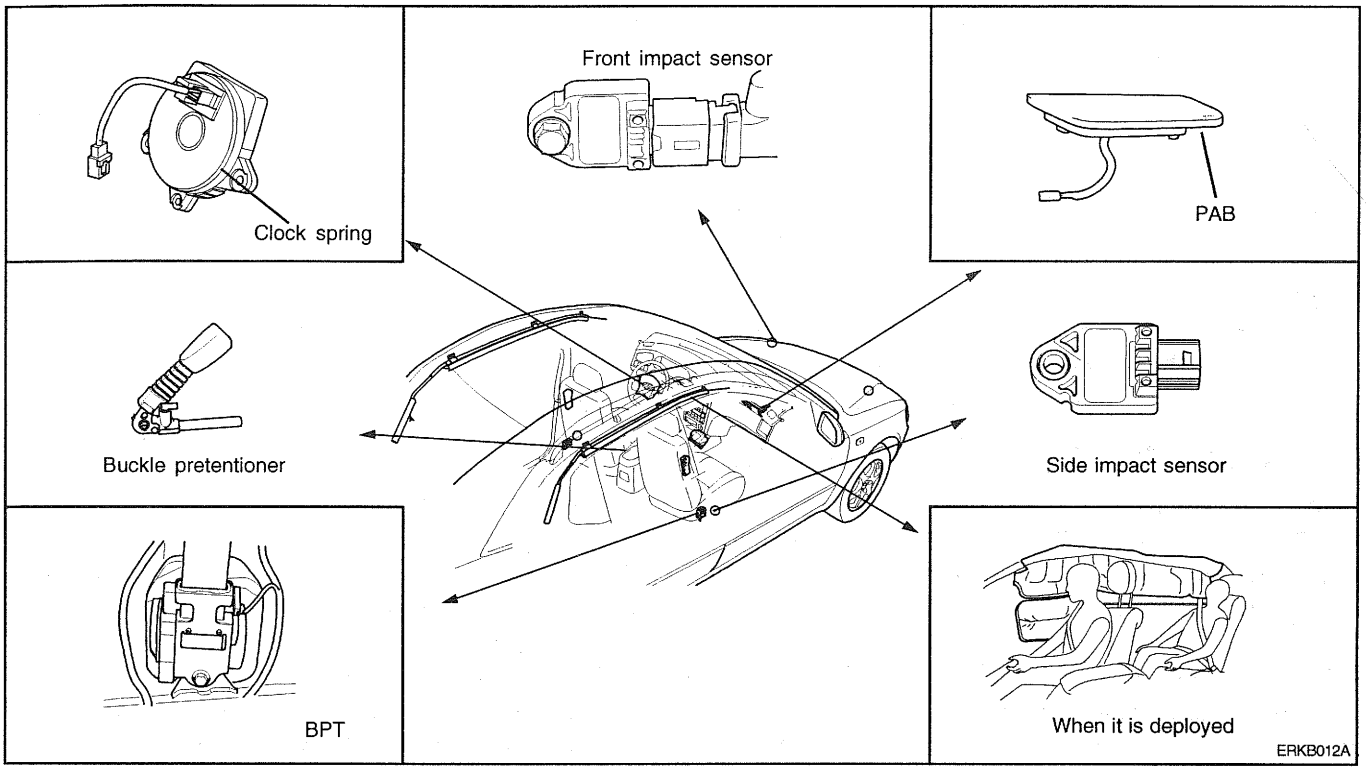
Certain guidelines and precaution are noted as follow.



NF-0010

SRS AIR-BAG

SYSTEM COMPONENT



The Hyundai SONATA is equipped with a Supplemental Restraint System AIR-BAG to provide the vehicle's driver and/or the front passenger with additional protection than that offered by the seat-belt system alone, in case of a frontal impact of sufficient severity.

When handling airbag components (removal, installation or inspection, etc.), always follow the directions given in the repair manual for the relevant model to prevent the occurrence of accidents and airbag malfunction.

Also take the following precautions when repairing the body:

1. Work must be started after approximately 30 seconds or longer from the time the ignition switch is turned to the LOCK position and the negative (-) terminal cable is disconnected from the battery. (The airbag system is equipped with a back-up power source so that if work is started within 30 seconds of disconnecting the negative (-) terminal cable of the battery, the airbag may be deployed.)
   When the negative(-) terminal cable is disconnected from the battery, memory of the clock and audio systems will be cancelled. So before starting work, make a record of the contents memorized by the audio memory system. Then when work is finished, reset the audio system as before and adjust the clock.
2. When using electric welding, first disconnect the air-bag connectors under the steering column near the MULTI-FUNCTION SWITCH and the passenger's side crash pad before starting work.
3. Store the air-bag modules where the ambient temperature remains below 93°C (200°F), without high humidity and away from electrical noise.
4. WARNING/CAUTION labels are attached to the periphery of the air-bag components.
   Refer to the SONATA SHOP MANUAL

ELECTRONIC PARTS

Vehicles today include a great many electronic parts and components, and these are in general very susceptible to adverse effects caused by overcurrent, reverse current, electromagnetic waves, high temperature, high humidity impacts, etc.
In particular such electronic components can be damaged if there is a large current flow during welding from the body side.
Therefore, take the following precautions during body repair to prevent damage to the CONTROL MODULES (ECM, TCM, ABS CM, SRS CM, etc.)

1. Before removing and inspecting the electrical parts or before starting electric welding operations, disconnect the negative (-) terminal cable from the battery.
2. Do not expose the CONTROL MODULES to ambient temperatures above 80°C (176°F).

   NOTE :
   If it is possible the ambient temperatures may reach 80°C (176°F) or more, remove the CONTROL MODULES from the vehicle before starting work.
3. Be careful not to drop the CONTROL MODULES and not to apply physical shocks to them.

CORROSION PROTECTION AND SEALING

Proper corrosion protection and sealing is an important part of any repair. When reviewing these repair procedures, it is important to recognize the need for corrosion restoration to provide for long term strength of the repaired member.

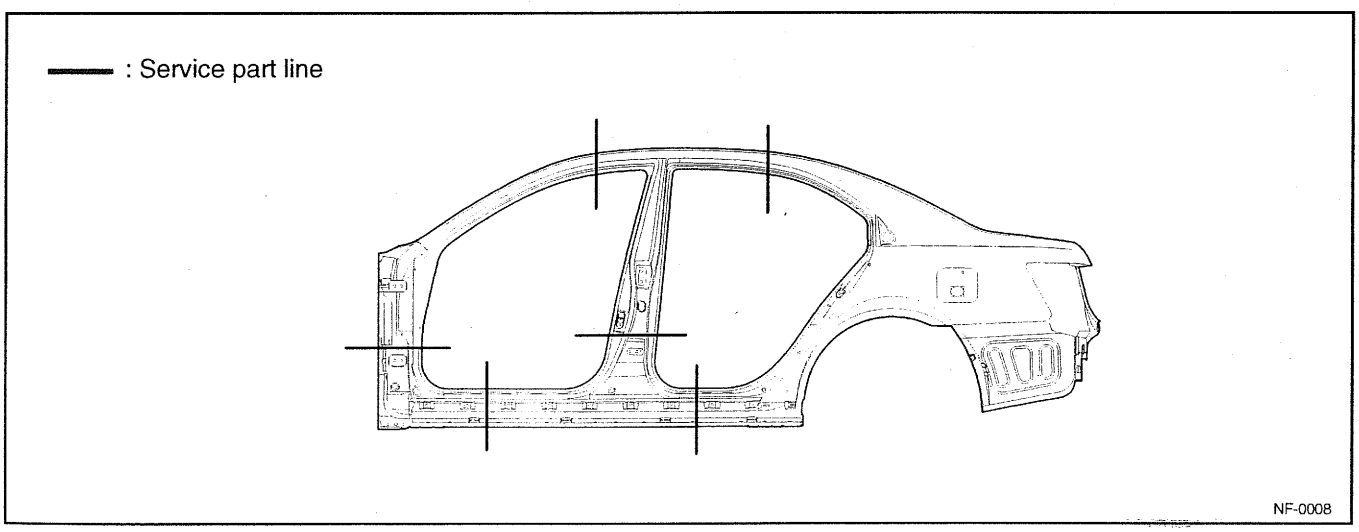
A two part epoxy primer was applied to the metal surfaces during the latter part of the repair. For closed sections, such as front and rear rails, rocker panels and pillars, the primer is applied without applying the metal conditioner and the conversion coating. These steps are omitted to insure that no rinse water is trapped in the closed sections. The primer application in followed by an application of an oil or wax based rust proofing material.

After the corrosion restoration process for the closed sections are completed, then the process can be applied to all exterior sections. For exterior surfaces, both metal conditioner and conversion coating treatments are applied to the exterior surface prior to application of the epoxy primer. The procedure in applying the corrosion restoration process is important order to insure that moisture, due to the water rinsing of the metal conditioner and conversion coating is not inadvertently trapped inside any closed section before the epoxy primer and rust proofing materials have been applied.

Appropriate seam sealers are then applied to all joints. Follow manufacturer's recommendations for the appropriate type of seam sealer to be used at each seam or joint.

SIDE BODY PANELS

The side body panel for SONATA is designed and stamped from a single piece of sheet metal in factory as shown in the figure. While the entire side panel is available for service, the partial panels sectioned by several damaged areas are also available. Therefore when repairing side body, refer to "Replacement parts section" of this manual to select and use the appropriate part.



WELDING

All repairs in this manual require the use of a Metal-Inert Gas (MIG) welder, Gas (oxyacetylene) welding must not be used.
Both high strength steel and mild steel can be welded using the MIG welder. The I-CAR recommendations for welding should be followed. The shielding gas should be 75% Argon and 25% CO2.
The recommended welding wire size is 0.23" and the wire should satisfy the American Welding Society standard code AWSER70S-6.

During the repair process, plug welds are used to duplicate original factory spot welds. All plug welds should be done with the MIG welder. An 8 mm (5/16") hole is placed in the top (welding side) sheetmetal.

You then begin welding along the edges and the spiral towards the center (see illustration). This is important so that weld penetration between the two metal pieces takes place along the circumference of the circle.

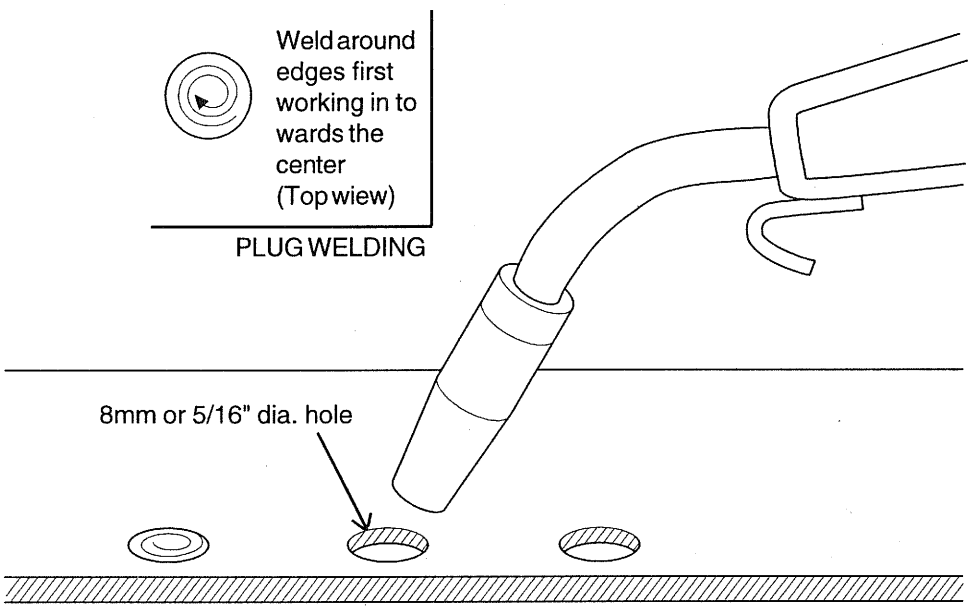


Illustration-Welding in collision repair

CON-0040

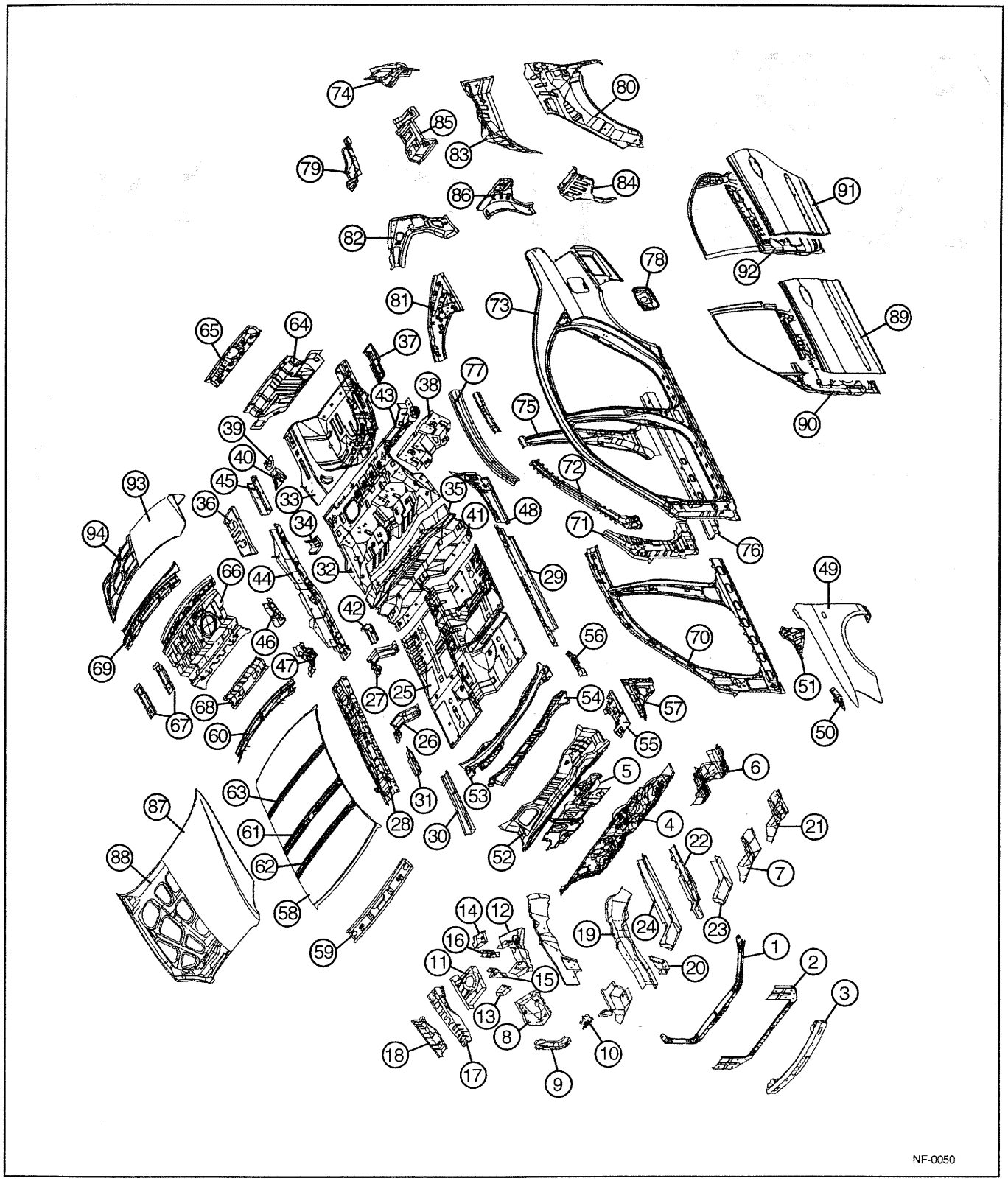
SAFETY FACTORS

Disconnect the negative(-) battery cable before performing any work on the vehicle.
Protect yourself by wearing goggles, earplugs, respirators, gloves, safety shoes, caps, etc. when working on a vehicle.
Safely support the vehicle before any work is done. Block the front or rear wheels if the vehicle is not lifted off of the ground.
Cap or remove the fuel tank when working on the rear section of the car.
Insure proper ventilation of your working area. Some paint and sealant can generate toxic gases when heated.
Use an air chisel or saw to remove damaged panels instead of a gas torch.
Observe all local and national safety regulations when performing any work.
Cover interior with heat-resistant cover to insure safety when welding.
Take care when using gas or cutting torches so as not to burn body sealer or interior. Extinguish immediately if they should catch fire.

BODY CONSTRUCTION

BODY COMPONENTS

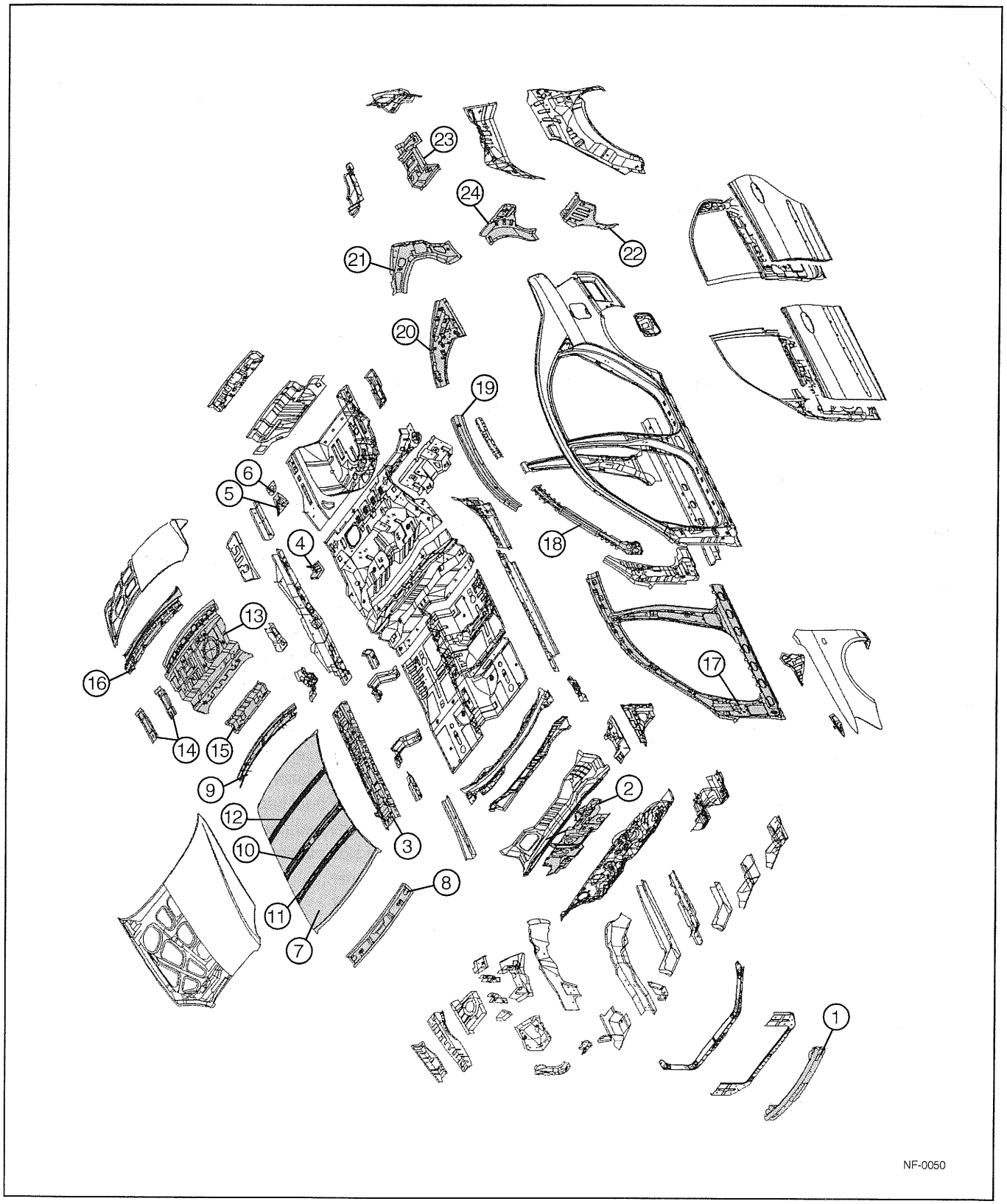
Body construction will sometimes differ depending on specifications and country of destination. Therefore, please keep in mind that the information contained herein is based on vehicles for general destination.



1. Radiator support upper member
2. Radiator support lower member
3. Front bumper beam
4. Dash panel
5. Dash reinforcement panel
6. Dash lower member assembly
7. Dash lower side member assembly
8. Fender apron inner panel
9. Fender apron front upper reinforcement assembly
10. Fender apron front upper reinforcement
11. Shock absorber housing upper panel
12. Shock absorber housing lower panel
13. Shock absorber housing lower front panel
14. Shock absorber housing lower rear panel
15. Upper arm mounting front bracket
16. Upper arm mounting rear bracket
17. Fender apron upper inner panel assembly
18. Fender apron upper outer panel
19. Front side inner member assembly
20. Front side member outer front extension
21. Front side rear lower member assembly
22. Front side rear upper reinforcement
23. Front side rear upper extension assembly
24. Front side rear upper member assembly
25. Center floor panel
26. Muffler hanger mounting bracket assembly
27. Tunnel rear bracket assembly
28. Center floor reinforcement assembly
29. Side sill inner panel assembly
30. Center floor side member
31. Center floor side inner member assembly
32. Rear floor front panel
33. Rear floor rear panel assembly
34. Rear floor to wheel house reinforcement
35. Rear floor front extension
36. Rear floor side panel assembly
37. Rear towing hook bracket assembly
38. Rear seat mounting bracket assembly
39. Spare tire mounting bracket assembly
40. Spare tire well inner reinforcement
41. Rear floor front cross member
42. Center floor side member rear extension
43. Rear floor center cross member assembly
44. Rear floor side front member assembly
45. Rear floor side rear member assembly
46. Rear suspension mounting reinforcement assembly
47. Trailing arm mounting bracket assembly
48. Side sill inner rear panel assembly
49. Fender panel
50. Fender front reinforcement
51. Fender rear upper reinforcement
52. Cowl top panel assembly
53. Cowl top upper reinforcement
54. Cowl top lower reinforcement
55. Shock absorber housing gusset assembly
56. Cowl side upper inner panel assembly
57. Cowl side upper outer panel
58. Roof panel
59. Roof front rail assembly
60. Roof rear rail assembly
61. Roof center No.2 rail
62. Roof center No.1 rail
63. Roof center No.3 rail
64. Back panel assembly
65. Rear transverse member
66. Rear package tray center panel assembly
67. Rear package tray center reinforcement assembly
68. Rear package tray front lower member assembly
69. Rear window opening outer frame
70. Side inner panel assembly
71. Front pillar outer lower reinforcement
72. Front pillar outer upper reinforcement assembly
73. Side outer panel
74. Rear combination lamp housing panel assembly
75. Center pillar outer reinforcement
76. Side sill outer reinforcement
77. Roof side outer reinforcement
78. Fuel filler housing assembly
79. Side outer rear extension assembly
80. Quarter inner lower panel assembly
81. Quarter inner upper panel assembly
82. Quarter pillar reinforcement assembly
83. Wheel house inner panel
84. Package tray side front panel assembly
85. Package tray side rear panel assembly
86. Package tray side member assembly
87. Hood outer panel
88. Hood inner panel
89. Front door outer panel
90. Front door inner panel
91. Rear door outer panel
92. Rear door inner panel
93. Trunk lid outer upper panel
94. Trunk lid inner panel

ZINC-GALVANIZED STEEL PANELS

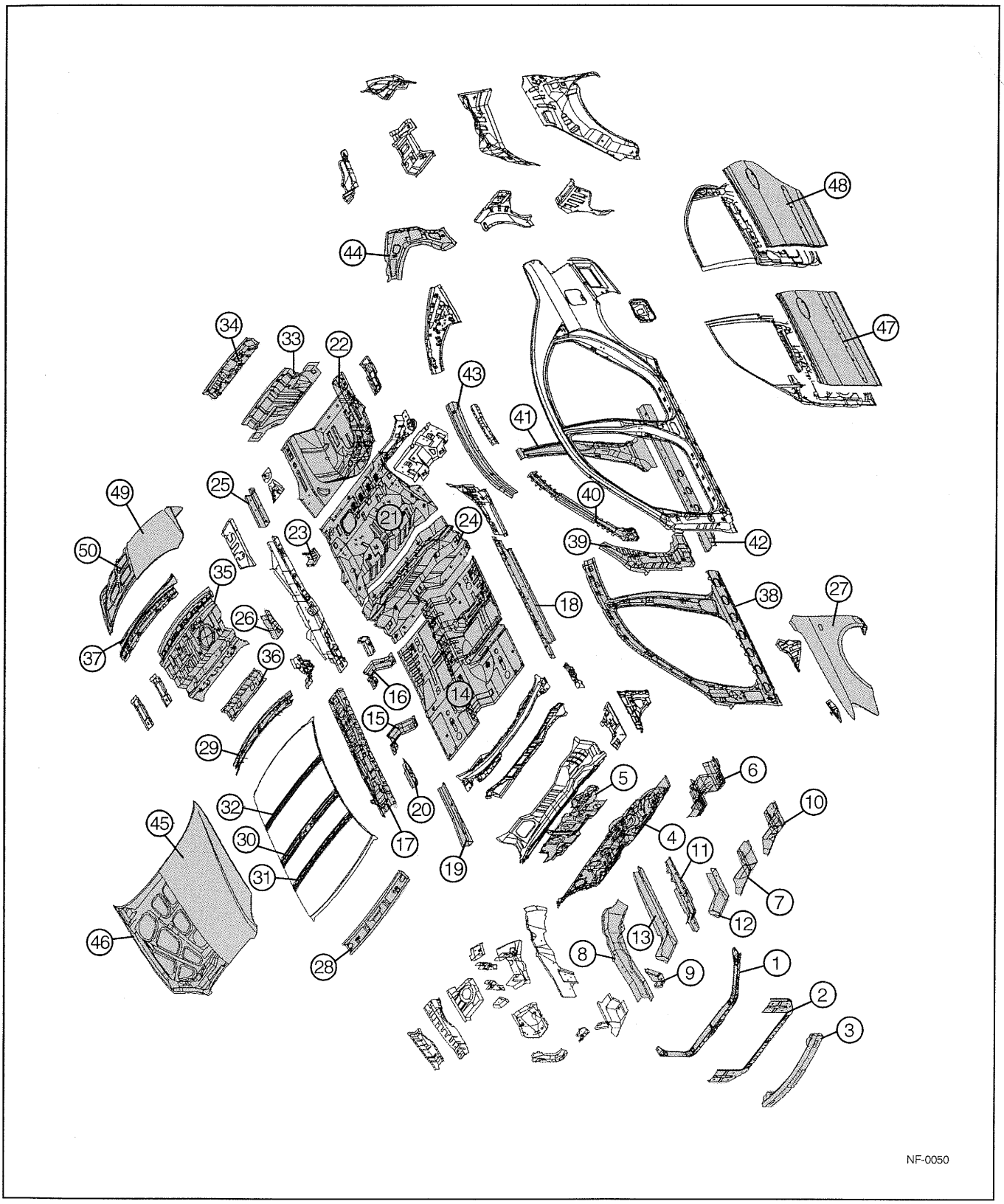
Because galvanized steel panel has excellent resistance, it is used in areas which have a high possibility of painting deficiency below.



1. Front bumper beam
2. Dash reinforcement panel
3. Center floor reinforcement assembly
4. Rear floor to wheel house reinforcement
5. Spare tire mounting bracket assembly
6. Spare tire well inner reinforcement
7. Roof panel
8. Roof front rail assembly
9. Roof rear rail assembly
10. Roof center No.2 rail
11. Roof center No.1 rail
12. Roof center No.3 rail
13. Rear package tray center panel assembly
14. Rear package tray center reinforcement assembly
15. Rear package tray front lower member assembly
16. Rear window opening outer frame
17. Side inner panel assembly
18. Front pillar outer upper reinforcement assembly
19. Roof side outer reinforcement
20. Quarter inner upper panel assembly
21. Quarter pillar reinforcement assembly
22. Package tray side front panel assembly
23. Package tray side rear panel assembly
24. Package tray side member assembly

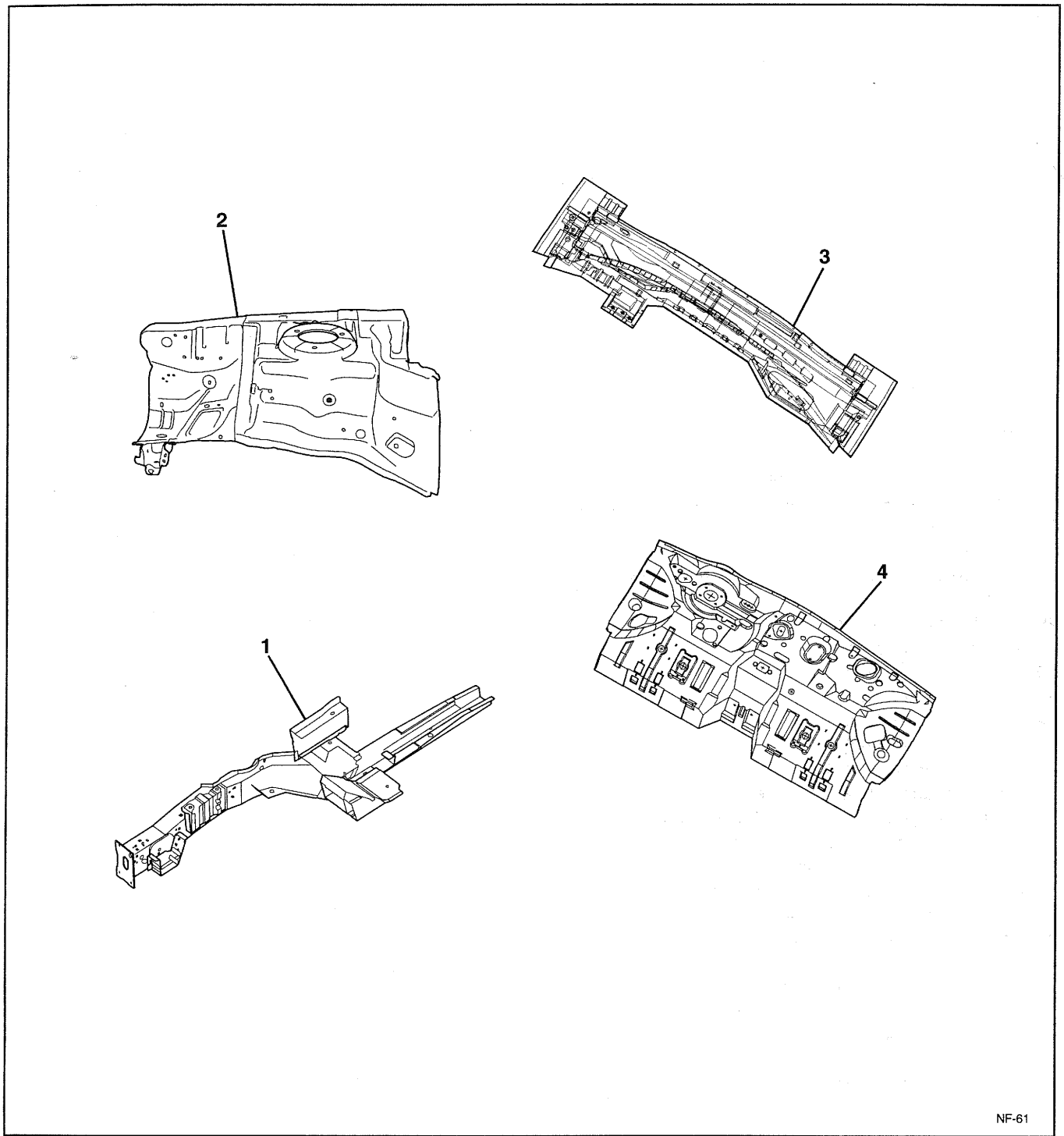
HIGH STRENGTH STEEL PANELS

Because High strength steel panel has excellent resistance, it is used in areas which have a high possibility of painting deficiency below.



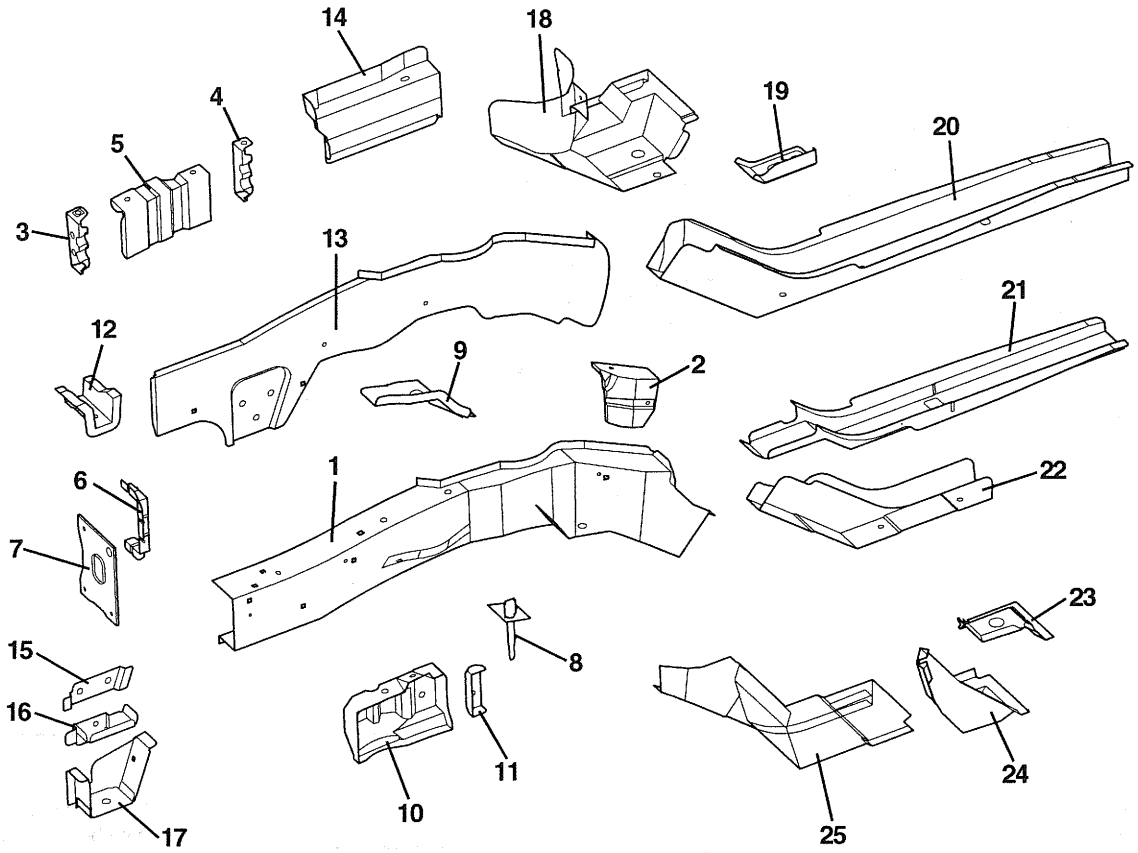
1. Radiator support upper member
2. Radiator support lower member
3. Front bumper beam
4. Dash panel
5. Dash reinforcement panel
6. Dash lower member assembly
7. Dash lower side member assembly
8. Front side inner member assembly
9. Front side member outer front extension
10. Front side rear lower member assembly
11. Front side rear upper reinforcement
12. Front side rear upper extension assembly
13. Front side rear upper member assembly
14. Center floor panel
15. Muffler hanger mounting bracket assembly
16. Tunnel rear bracket assembly
17. Center floor reinforcement assembly
18. Side sill inner panel assembly
19. Center floor side member
20. Center floor side inner member assembly
21. Rear floor front panel
22. Rear floor rear panel assembly
23. Rear floor to wheel house reinforcement
24. Rear floor front cross member
25. Rear floor side rear member assembly
26. Rear suspension mounting reinforcement assembly
27. Fender panel
28. Roof front rail assembly
29. Roof rear rail assembly
30. Roof center No.2 rail
31. Roof center No.1 rail
32. Roof center No.3 rail
33. Back panel assembly
34. Rear transverse member
35. Rear package tray center panel assembly
36. Rear package tray front lower member assembly
37. Rear window opening outer frame
38. Side inner panel assembly
39. Front pillar outer lower reinforcement
40. Front pillar outer upper reinforcement assembly
41. Center pillar outer reinforcement
42. Side sill outer reinforcement
43. Roof side outer reinforcement
44. Quarter pillar reinforcement assembly
45. Hood outer panel
46. Hood inner panel
47. Front door outer panel
48. Rear door outer panel
49. Trunk lid outer upper panel
50. Trunk lid inner panel

FRONT BODY



No.	PART NAME
1	Front side member assembly LH/RH
2	Fender apron panel assembly LH/RH
3	Cowl panel assembly
4	Dash panel assembly

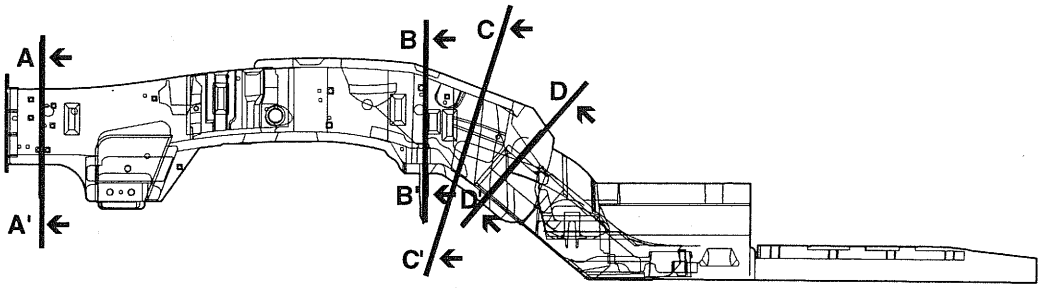
1. FRONT SIDE MEMBER



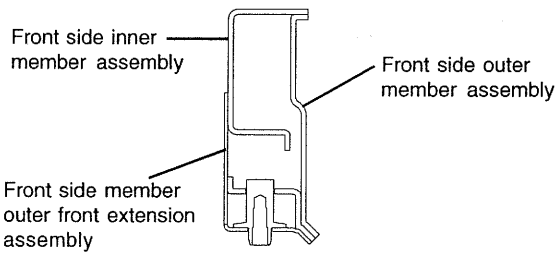
NF-130

No.	PART NAME	No.	PART NAME
1	Front side inner member	14	Side sill inner front extension
2	Front side member inner front reinforcement	15	Hook tie down reinforcement
3	Engine mounting front support	16	Front sub frame mounting front support
4	Engine mounting rear support	17	Front side member outer front extension
5	Engine mounting reinforcement	18	Front side outer extension
6	Front end module mounting reinforcement	19	Front tie down reinforcement
7	Front end module mounting bracket	20	Front side rear upper member
8	Sub frame mounting center support	21	Front side rear upper reinforcement
9	Sub frame mounting center reinforcement	22	Front side rear upper extension
10	Transmission mounting reinforcement	23	Sub frame mounting rear bracket
11	Transmission mounting rear support	24	Sub frame mounting rear reinforcement
12	Fender apron front lower reinforcement	25	Front side member rear lower member
13	Front side outer member		

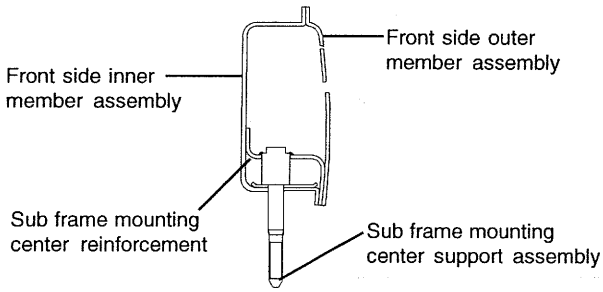
<Cross-Sectional Views>



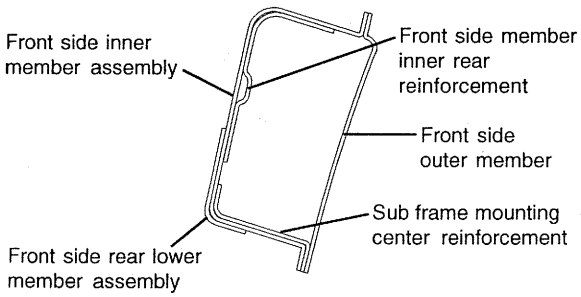
NF-140A



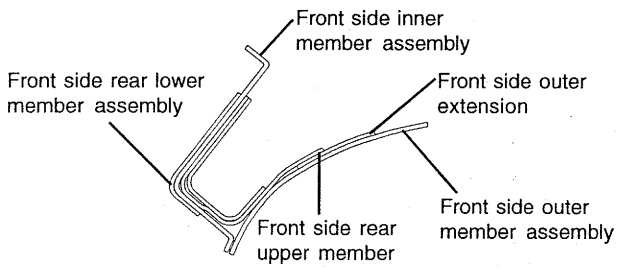
SECTION A-A' NF-140-1



SECTION B-B' NF-140-2

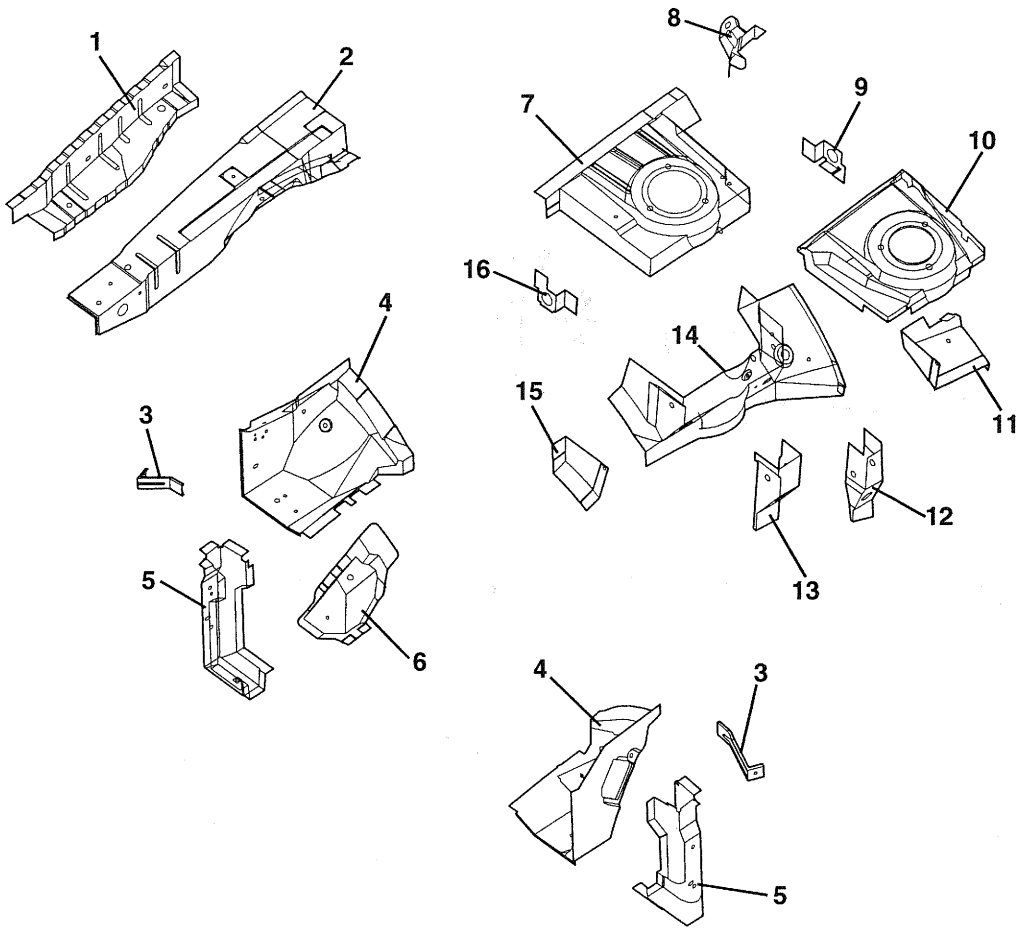


SECTION C-C' NF-140-3



SECTION D-D' NF-140-4

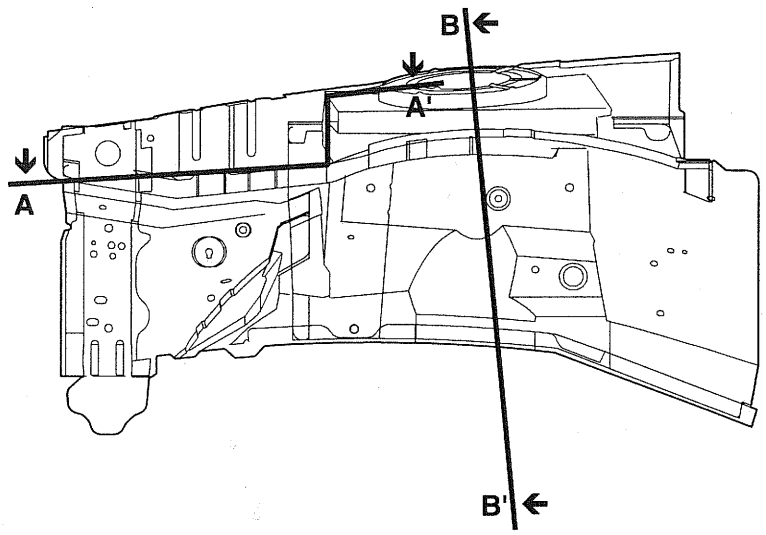
2. FENDER APRON PANEL



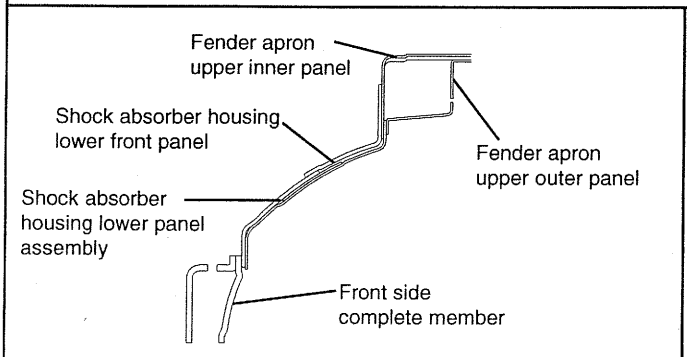
NF-180

No.	PART NAME	
1	Fender apron upper outer panel	LH/RH
2	Fender apron upper inner panel	LH/RH
3	Fender mounting bracket	LH/RH
4	Fender apron inner panel	LH/RH
5	Fender apron front upper reinforcement	LH/RH
6	Engine mounting bracket	
7	Shock absorber housing upper panel	LH/RH
8	Hood gas lifter bracket	
9	Upper arm rear stopper	LH/RH
10	Shock absorber housing cover	LH/RH
11	Shock absorber housing lower rear panel	LH/RH
12	Upper arm mounting rear bracket	LH/RH
13	Upper arm mounting front bracket	LH/RH
14	Shock absorber housing lower panel	LH/RH
15	Shock absorber housing lower front panel	LH/RH
16	Upper arm front stopper	LH/RH

<Cross-Sectional Views>

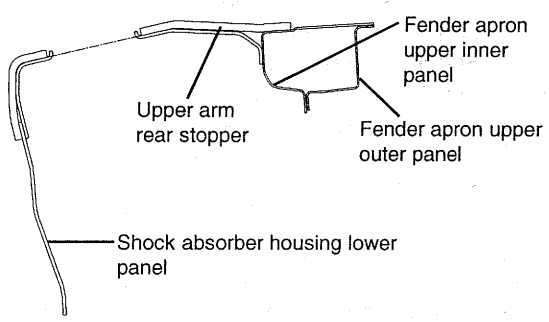


NF-190



SECTION A-A'

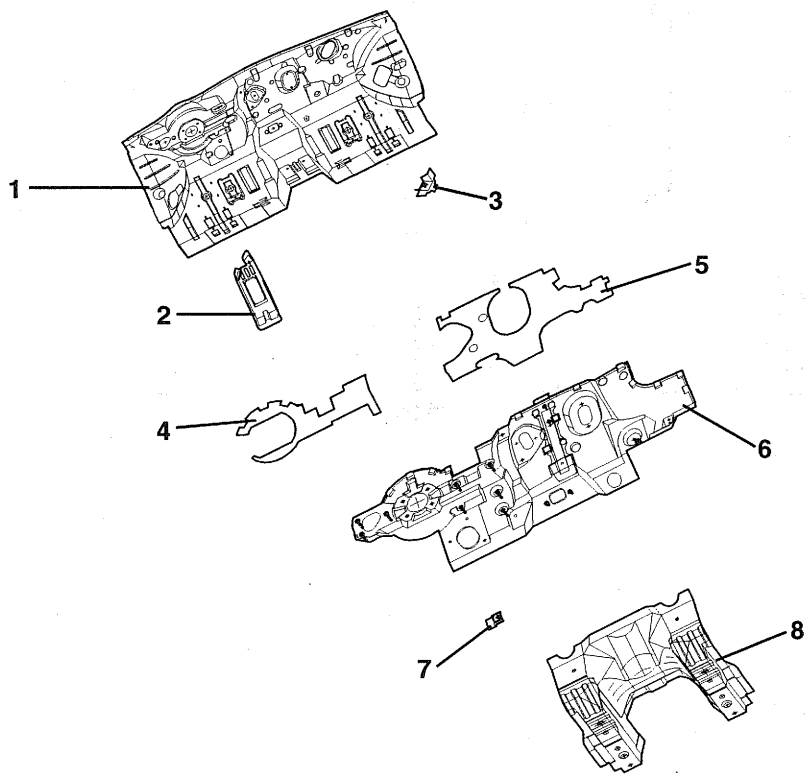
NF-190-1



SECTION B-B'

NF-190-2

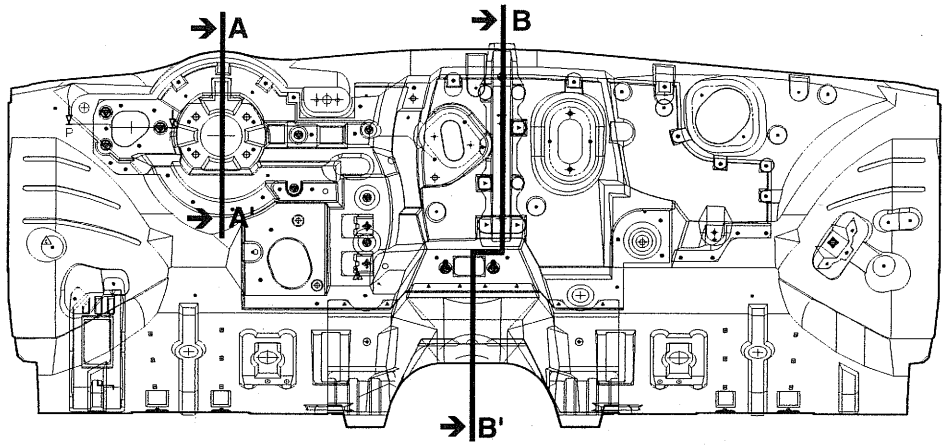
3. DASH PANEL



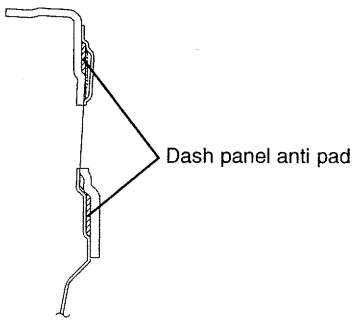
NF-220

No.	PART NAME
1	Dash panel
2	Foot rest mounting bracket
3	Blower lower mounting bracket
4	Dash lower member
5	Dash panel anti-pad
6	Dash panel reinforcement
7	Fuel tube front mounting bracket
8	Dash lower member

<Cross-Sectional Views>

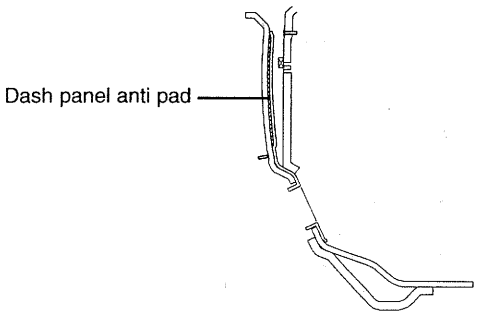


NF-230



SECTION A-A'

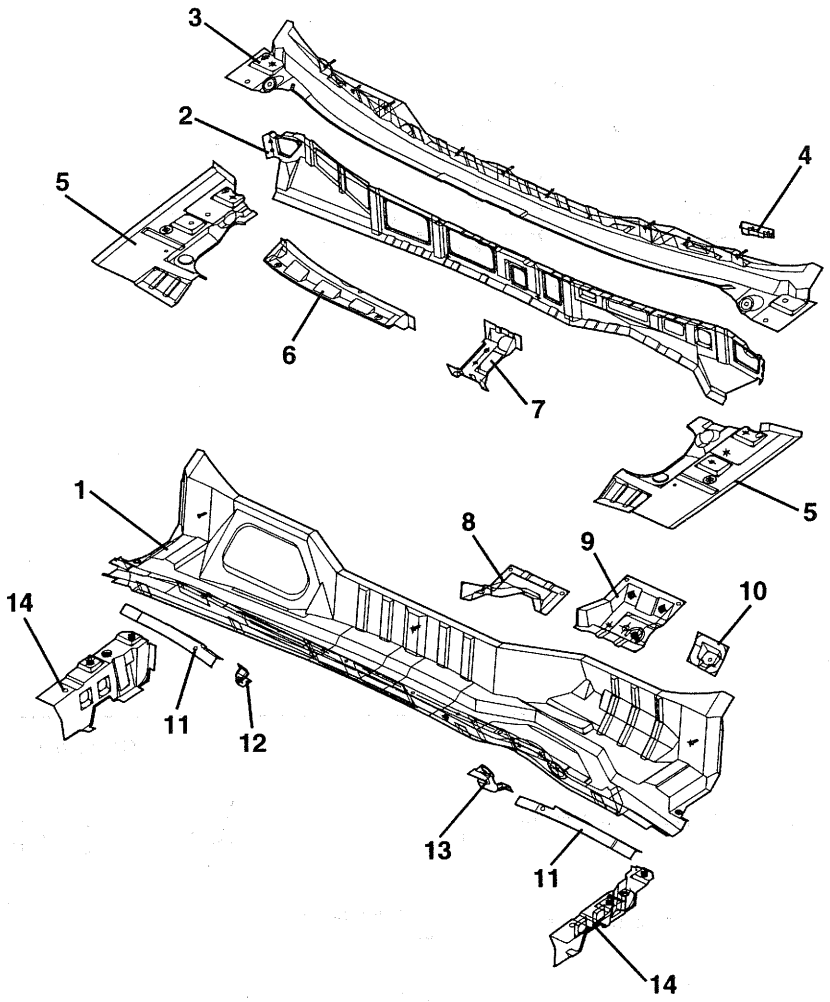
NF-230-1



SECTION B-B'

NF-230-2

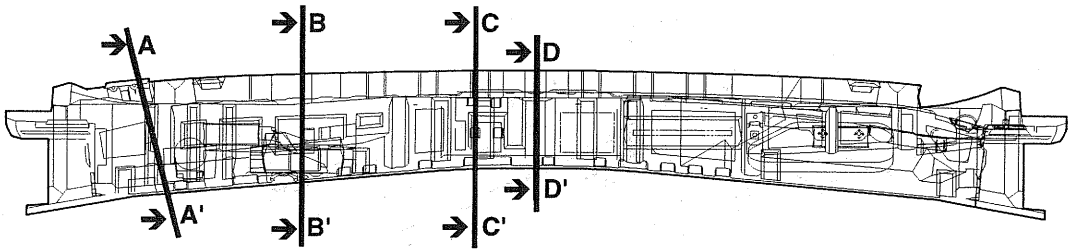
4. COWL PANEL



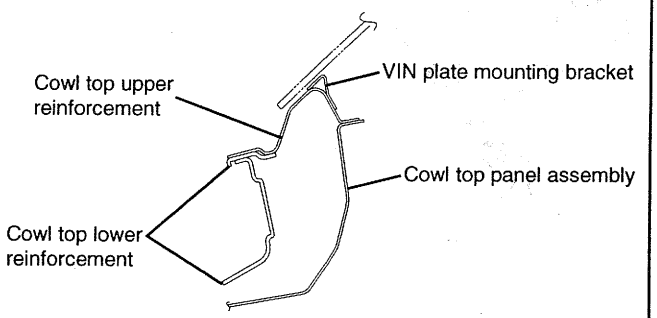
NF-280

No.	PART NAME	No.	PART NAME
1	Cowl top panel	8	Steering column upper support extension
2	Cowl top lower reinforcement	9	Steering column lower support extension
3	Cowl top upper reinforcement	10	Clutch pedal mounting bracket
4	VIN plate mounting bracket	11	Cowl top side reinforcement
5	Shock absorber housing gusset	12	Solenoid valve mounting bracket
6	Cowl top upper extension	13	Wiper motor mounting bracket
7	Cowl top center reinforcement	14	Cowl side upper inner panel

<Cross-Sectional Views>

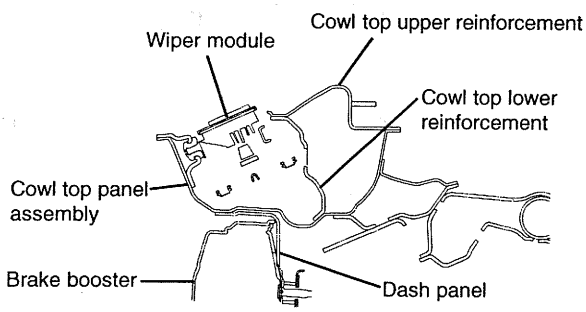


NF-290



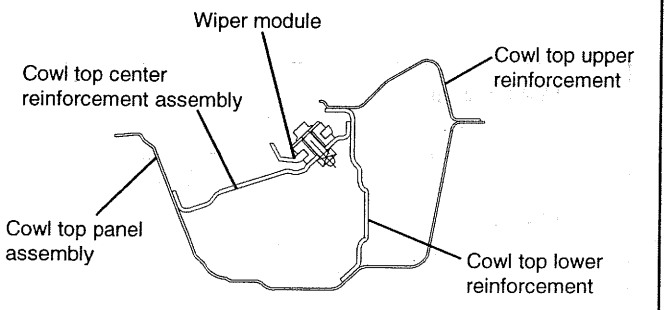
SECTION A-A'

NF-290-1



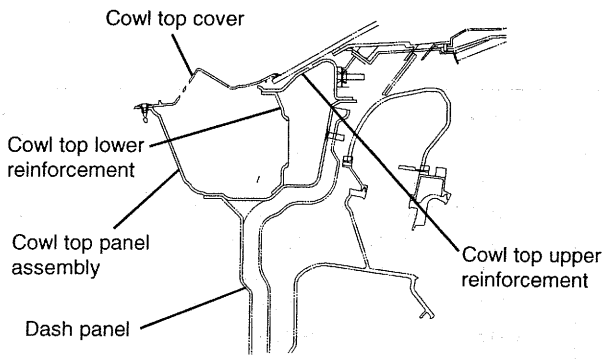
SECTION B-B'

NF-290-2



SECTION C-C'

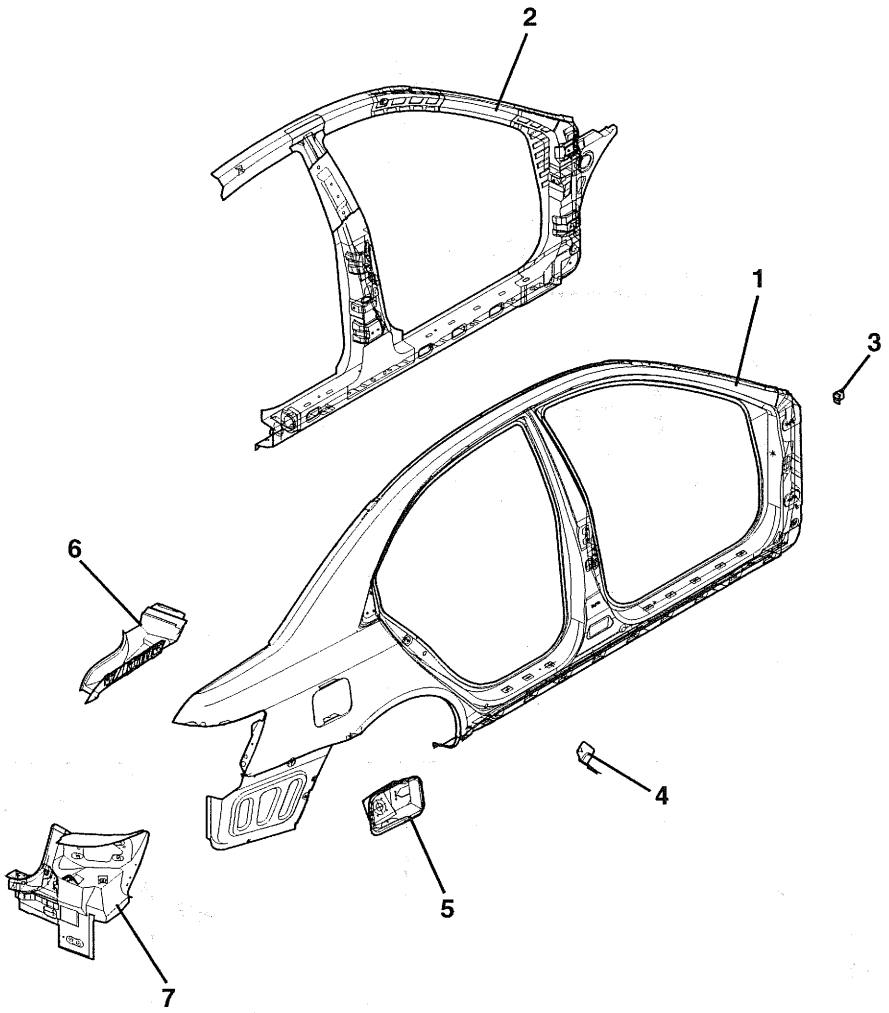
NF-290-3



SECTION D-D'

NF-290-4

SIDE BODY

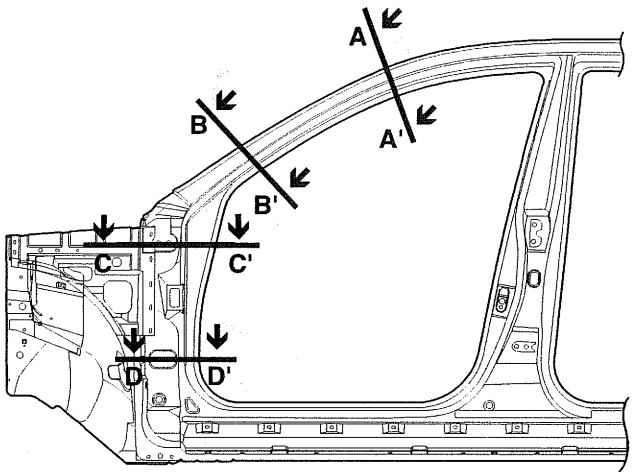


NF-340

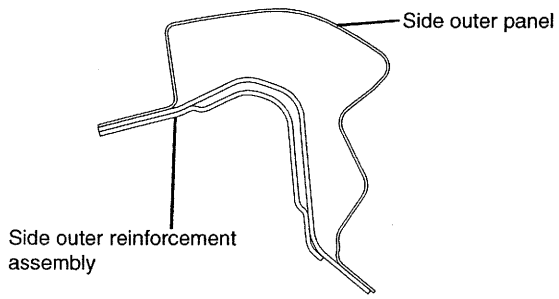
No.	PART NAME	
1	Side outer panel	LH/RH
2	Side outer reinforcement	LH/RH
3	Fender mounting bracket	LH/RH
4	Rear door striker	LH/RH
5	Fuel filler housing	
6	Side outer rear extension	LH/RH
7	Rear combination lamp housing panel	LH/RH

1. FRONT PILLAR

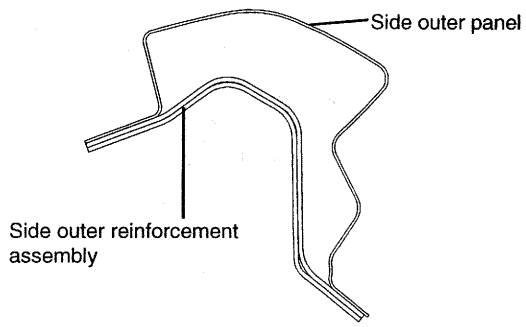
<Cross-Sectional Views>



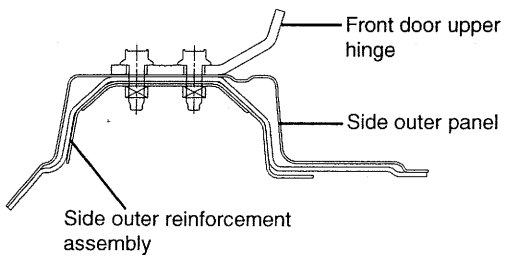
NF-350



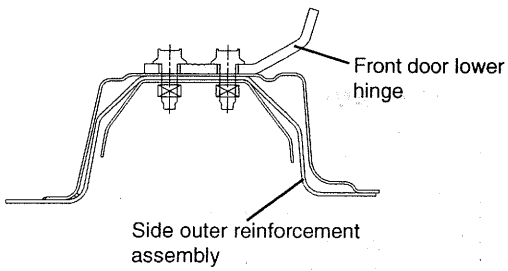
SECTION A-A' NF-350-1



SECTION B-B' NF-350-2



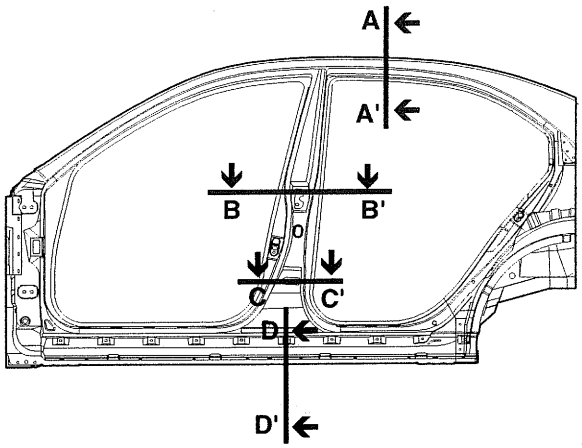
SECTION C-C' NF-350-3



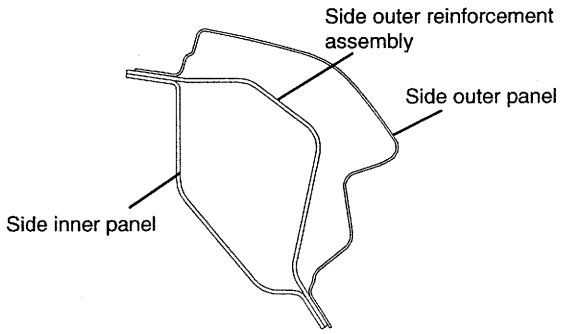
SECTION D-D' NF-350-4

2. CENTER PILLAR

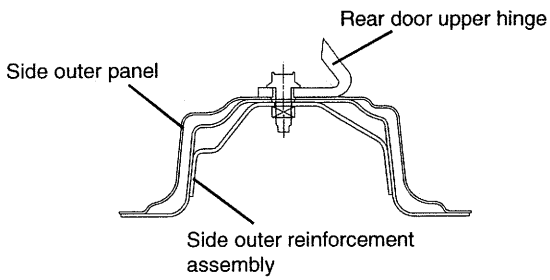
<Cross-Sectional Views>



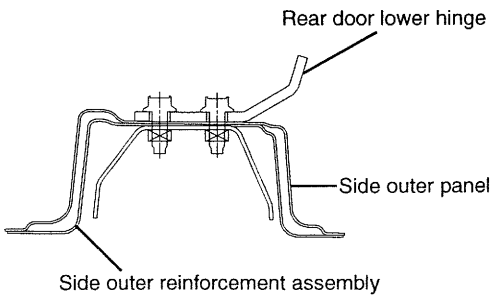
NF-400



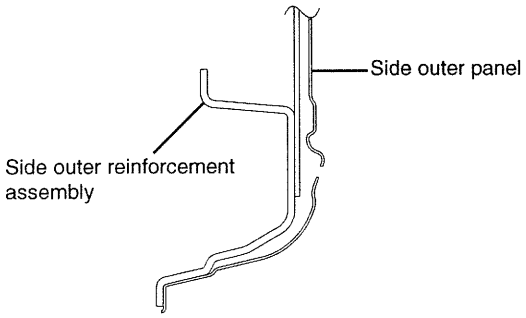
SECTION A-A' NF-400-1



SECTION B-B' NF-400-2



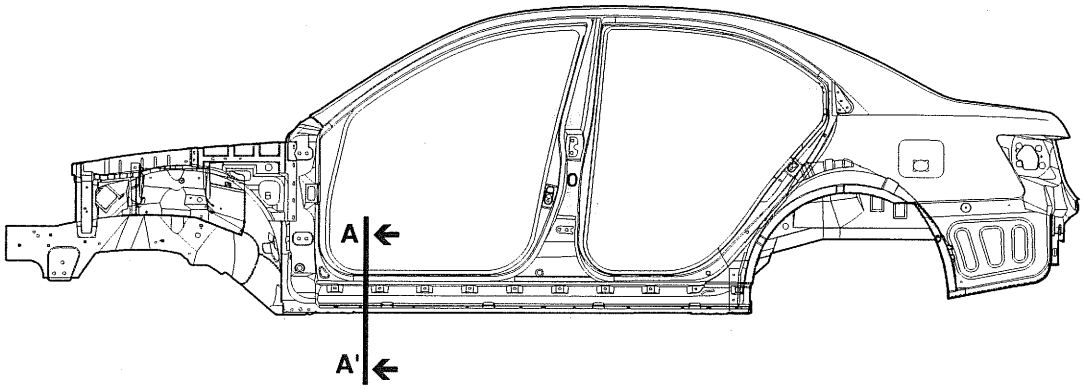
SECTION C-C' NF-400-3



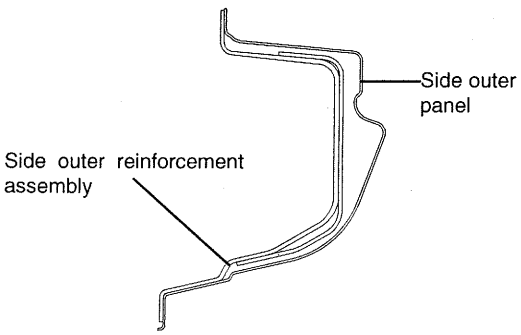
SECTION D-D' NF-400-4

3. SIDE SILL

<Cross-Sectional View>



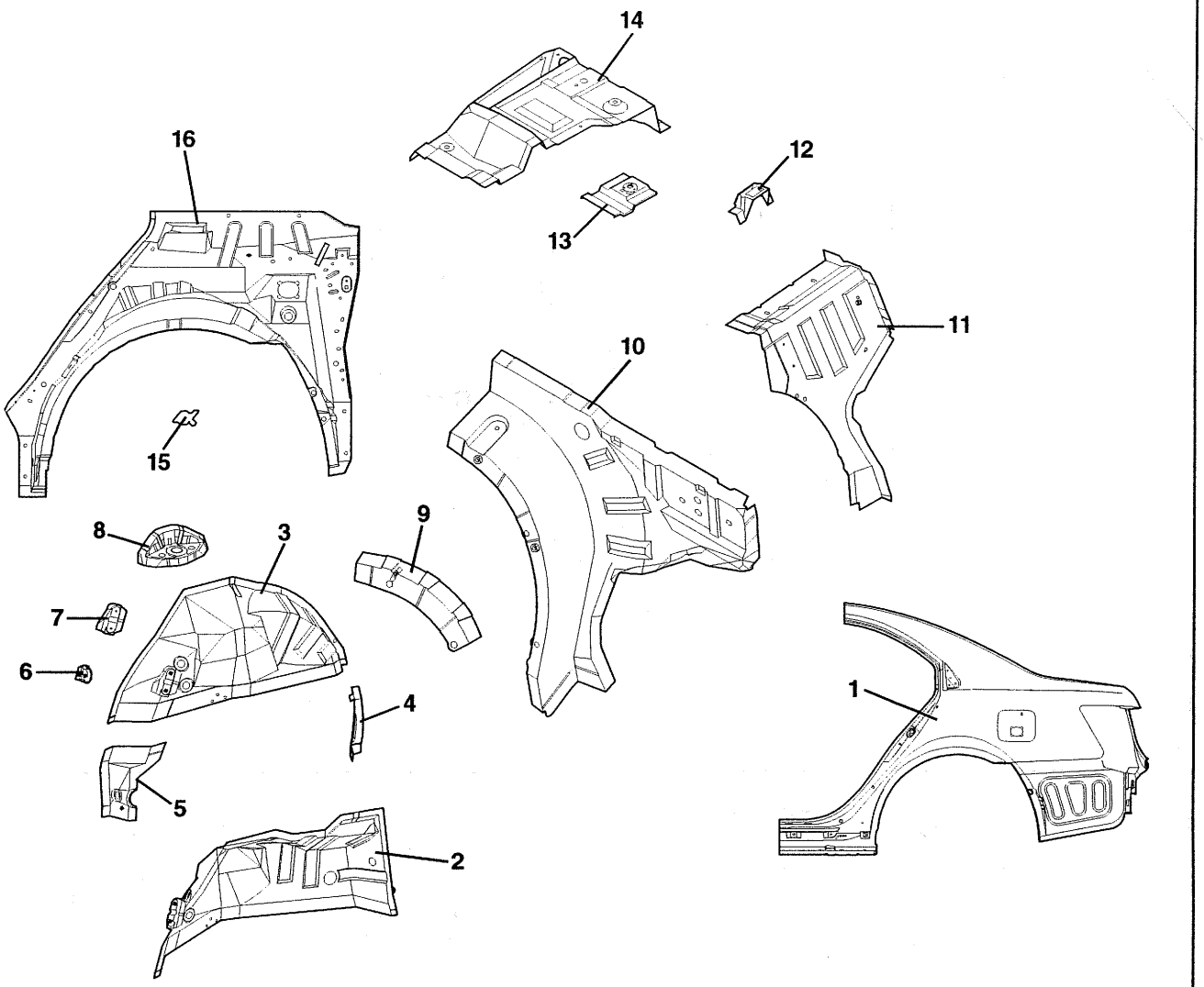
NF-450



SECTION A-A'

NF-450-1

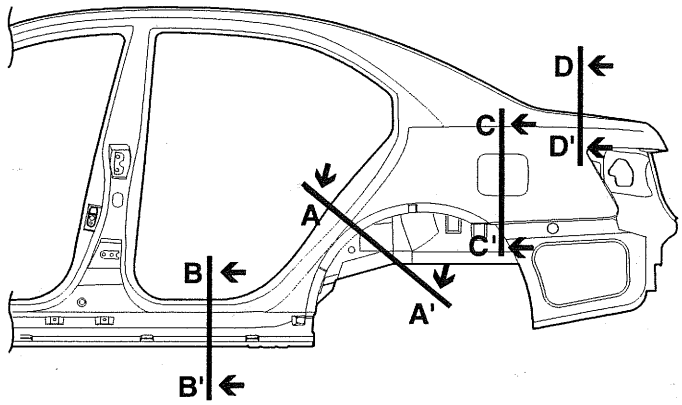
4. QUARTER PANEL



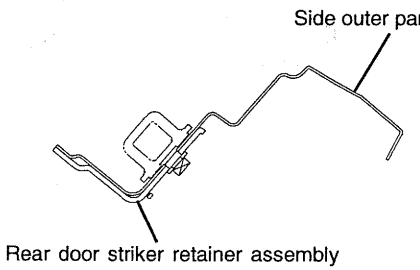
NF-480

No	PART NAME		No	PART NAME	
1	Quarter outer panel	LH/RH	9	Package tray side member support	LH/RH
2	Wheel house inner panel	LH/RH	10	Package tray side member	LH/RH
3	Wheel house panel	LH/RH	11	Package tray side front panel	LH/RH
4	Wheel house inner rear extension	LH/RH	12	Rear seat back side bracket	LH/RH
5	Wheel house inner front extension	LH/RH	13	Rear seat belt mounting reinforcement	
6	Rear seat back mounting bracket	LH/RH	14	Package tray side rear panel	LH/RH
7	Rear seat mounting lower bracket	LH/RH	15	Rear wheel guard mounting bracket	LH/RH
8	Rear suspension mounting bracket	LH/RH	16	Quarter inner lower panel	LH/RH

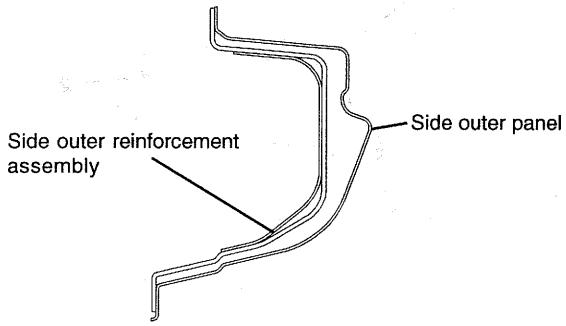
<Cross-Sectional Views>



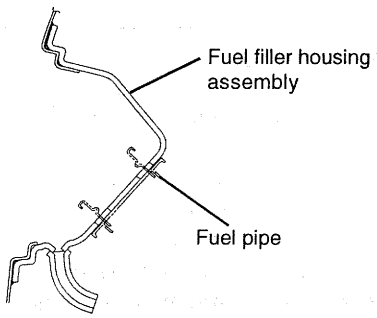
NF-500



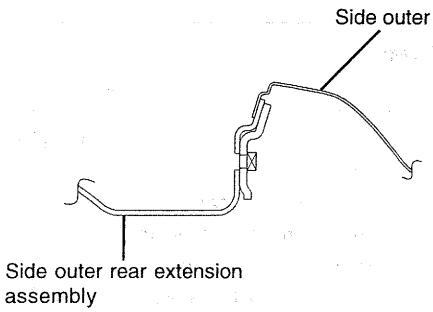
SECTION A-A' NF-490-1



SECTION B-B' NF-490-2

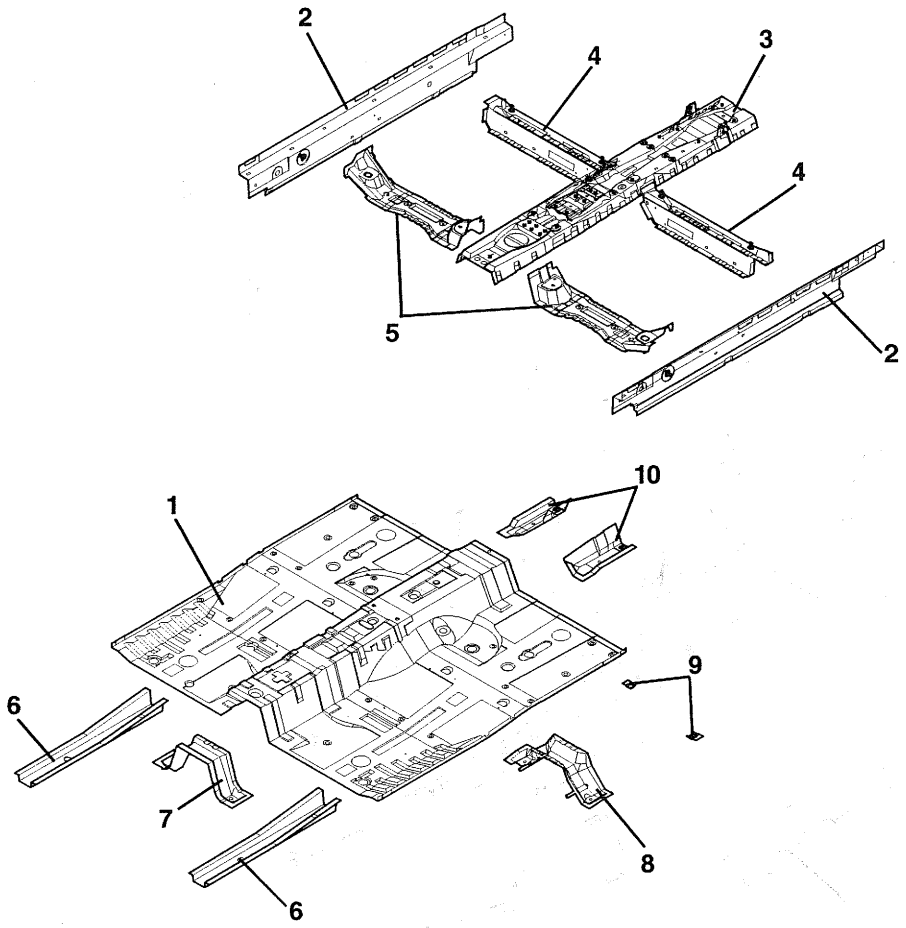


SECTION C-C' NF-490-3



SECTION D-D' NF-490-4

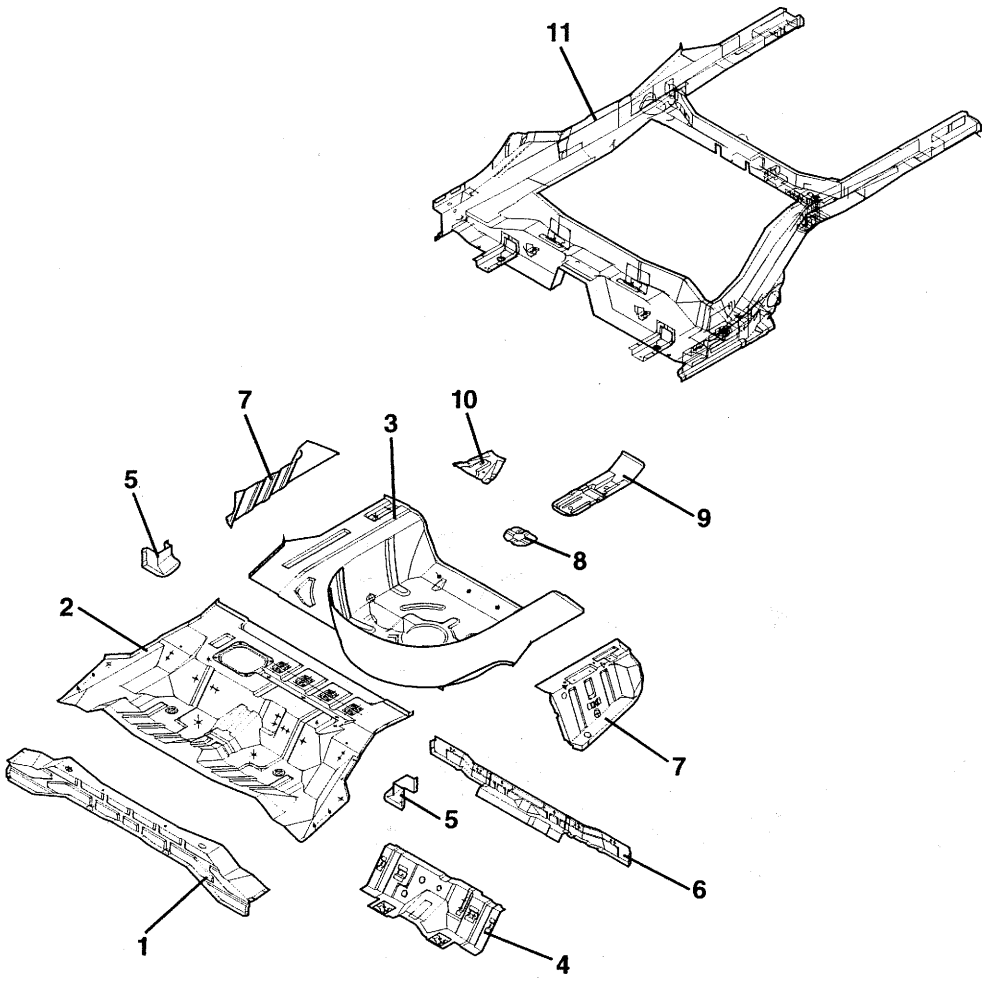
CENTER FLOOR PANEL



NF-539

No	PART NAME		No	PART NAME	
1	Center floor panel		6	Center floor side member	LH/RH
2	Side sill inner panel	LH/RH	7	Tunnel rear bracket	
3	Center floor reinforcement		8	Muffler hanger mounting bracket	
4	Front seat mounting member	LH/RH	9	Fuel tube front mounting bracket	
5	Front seat rear mounting member	LH/RH	10	Center floor side inner member	

REAR FLOOR & SIDE MEMBER

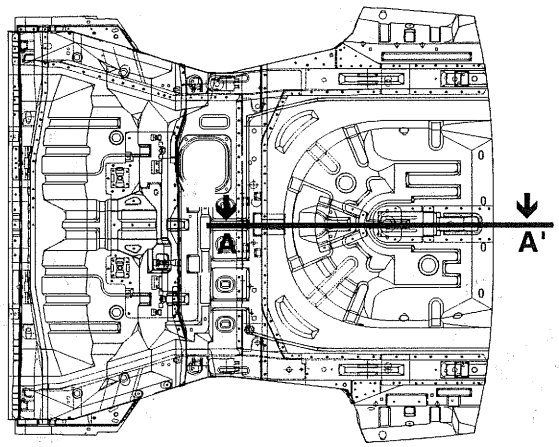


NF-540

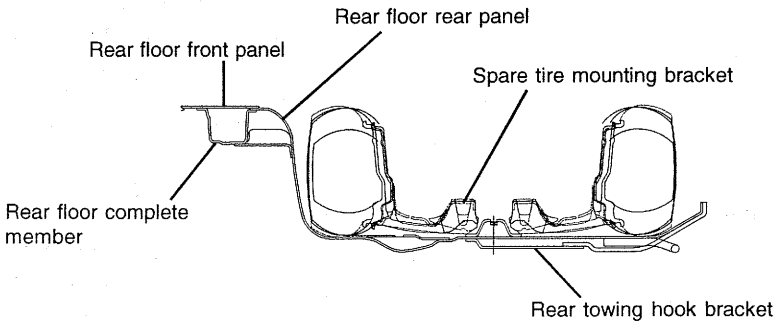
No	PART NAME	No	PART NAME
1	Rear floor front extension	7	Rear floor side panel
2	Rear floor front panel	8	Spare tire mounting bracket
3	Rear floor rear panel	9	Rear towing hook mounting bracket
4	Rear seat mounting bracket	10	Spare tire well inner reinforcement
5	Rear floor to wheel house reinforcement	11	Rear floor member
6	Luggage center partition panel		

1. REAR FLOOR

<Cross-Sectional Views>



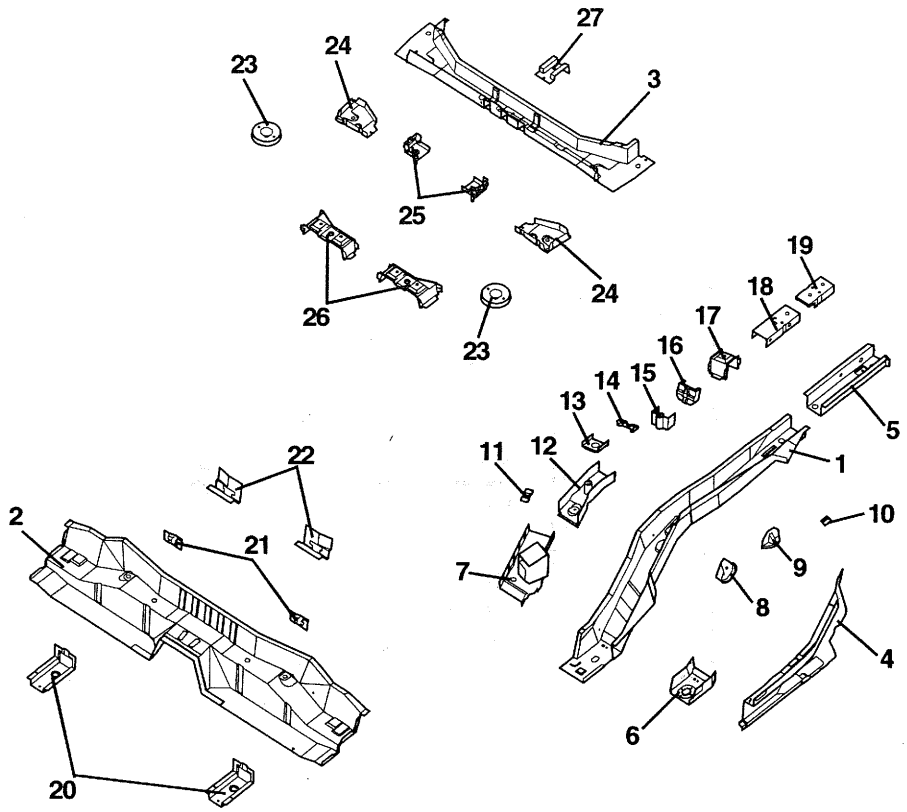
NF-550



SECTION A-A'

NF-550-1

2. REAR FLOOR SIDE MEMBER

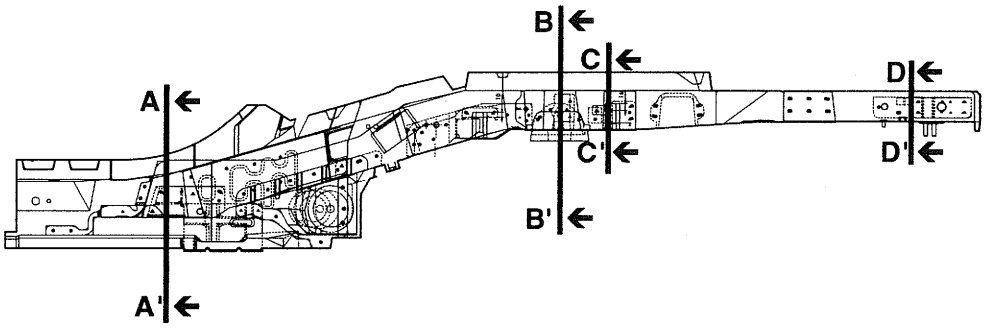


NF-545

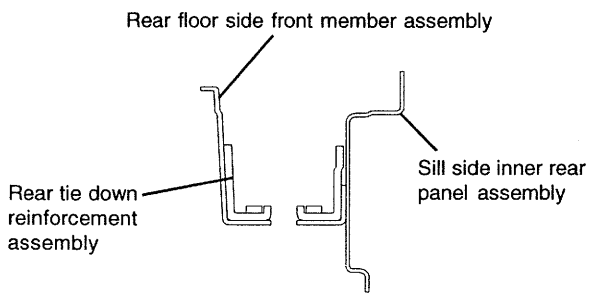
No	PART NAME	No	PART NAME
1	Rear floor side front member	15	Rear suspension rear support
2	Rear floor front cross member	16	Rear floor side member center reinforcement
3	Rear floor center cross member	17	LPI bombe mounting rear bracket
4	Side sill inner rear panel	18	Rear bumper mounting bracket
5	Rear floor side rear member	19	Rear bumper mounting reinforcement
6	Rear tie down reinforcement	20	Center floor side member rear extension
7	Trailing arm mounting bracket	21	Parking cable mounting bracket
8	Child seat side mounting reinforcement	22	Fuel tank mounting front bracket
9	Rear suspension spring sheet reinforcement	23	Rear suspension spring mounting sheet
10	Brake hose rear bracket	24	Rear floor center cross side reinforcement
11	ABS wheel sensor mounting bracket	25	Fuel tank mounting rear bracket
12	Rear suspension mounting bracket	26	LPI bombe mounting front bracket
13	Rear suspension front upper reinforcement	27	Rear floor center cross center reinforcement
14	Rear suspension rear upper reinforcement		

3. REAR FLOOR SIDE MEMBER

<Cross-Sectional Views>

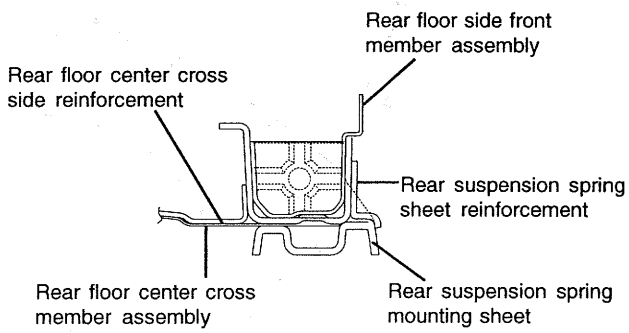


NF-600



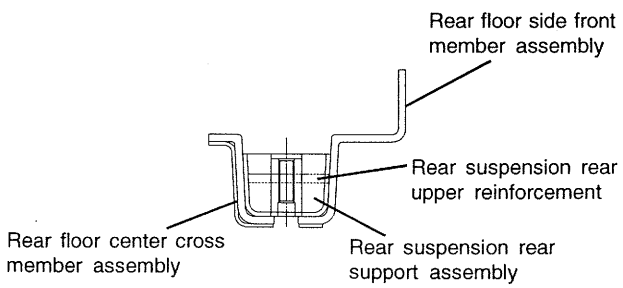
SECTION A-A'

NF-600-1



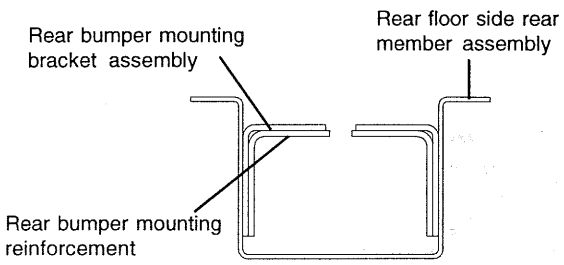
SECTION B-B'

NF-600-2



SECTION C-C'

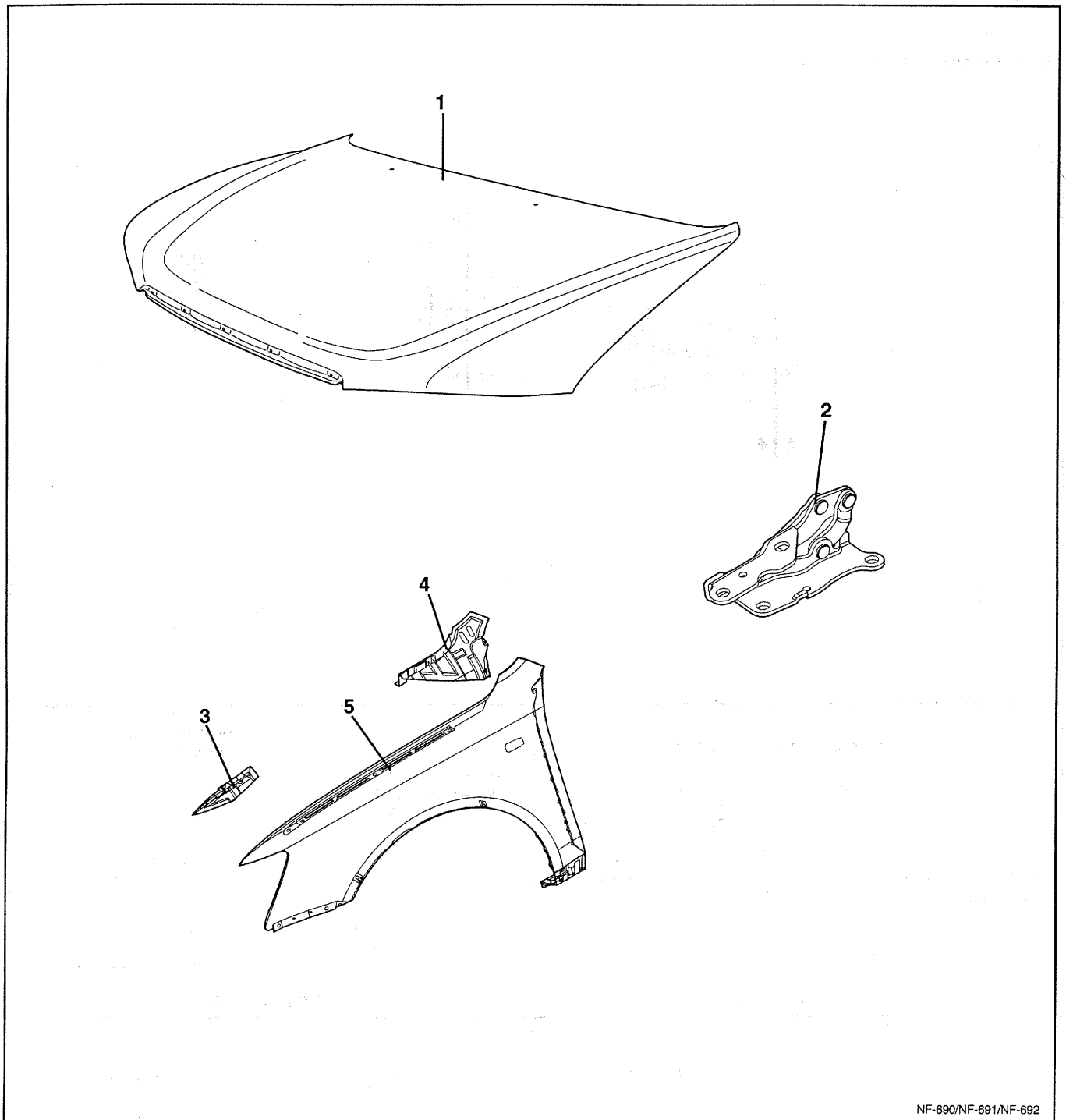
NF-600-3



SECTION D-D'

NF-600-4

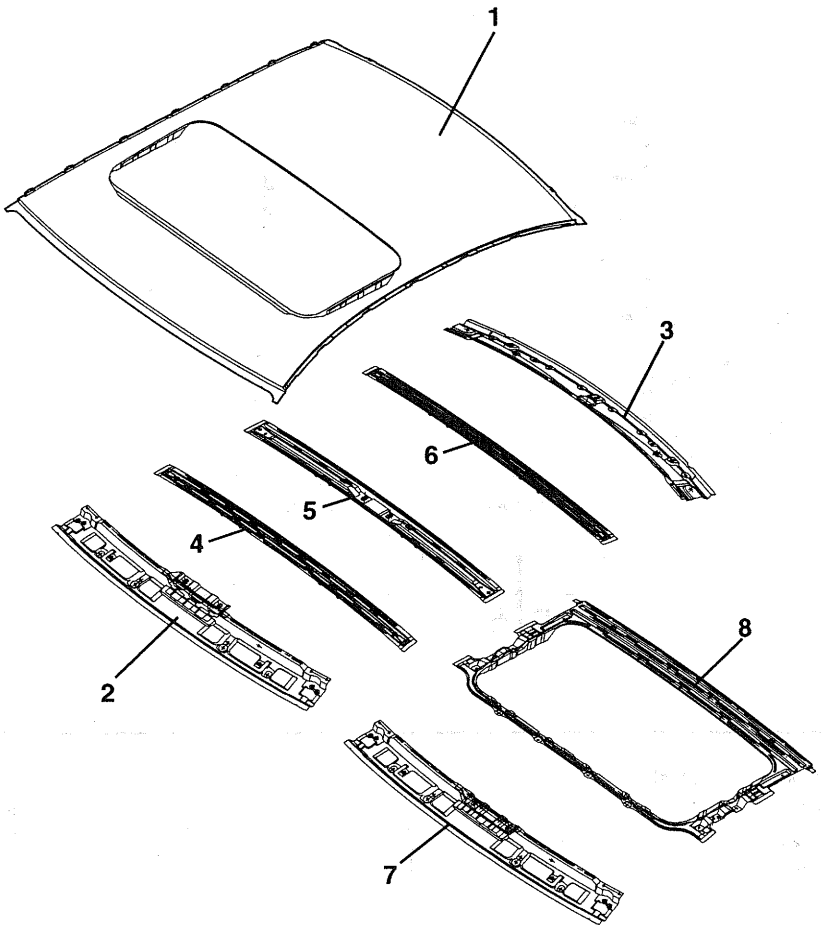
FENDER & HOOD



NF-690/NF-691/NF-692

NO	PART NAME	
1	Hood panel	
2	Hood hinge assembly	LH/RH
3	Fender front reinforcement	LH/RH
4	Fender rear upper reinforcement	LH/RH
5	Fender panel	LH/RH

ROOF



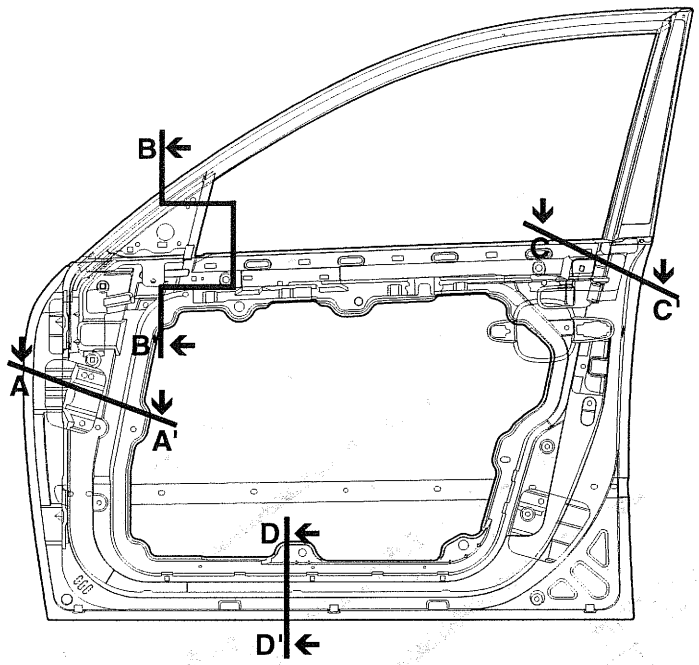
NF-700

NO	PART NAME
1	Roof panel
2	Roof front rail
3	Roof rear rail
4	Roof center No.1 rail
5	Roof center No.2 rail
6	Roof center No.3 rail
7	Roof front rail (Sun roof)
8	Sun roof reinforcement ring

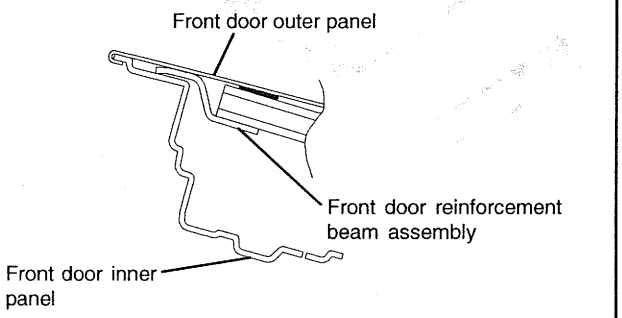
DOOR

1. FRONT DOOR

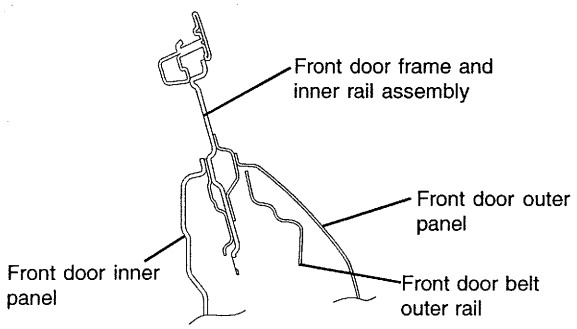
<Cross-sectional Views>



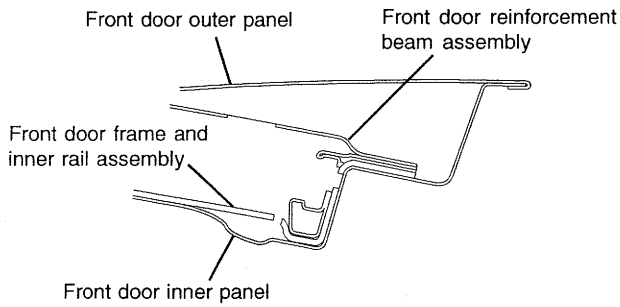
NF-710



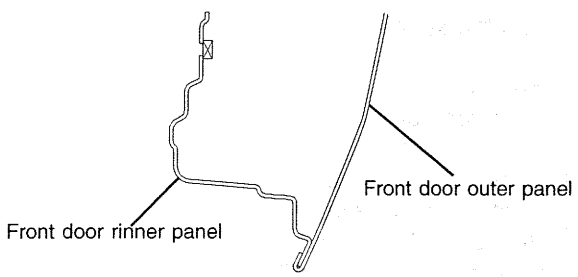
SECTION A-A' NF-710-1



SECTION B-B' NF-710-2



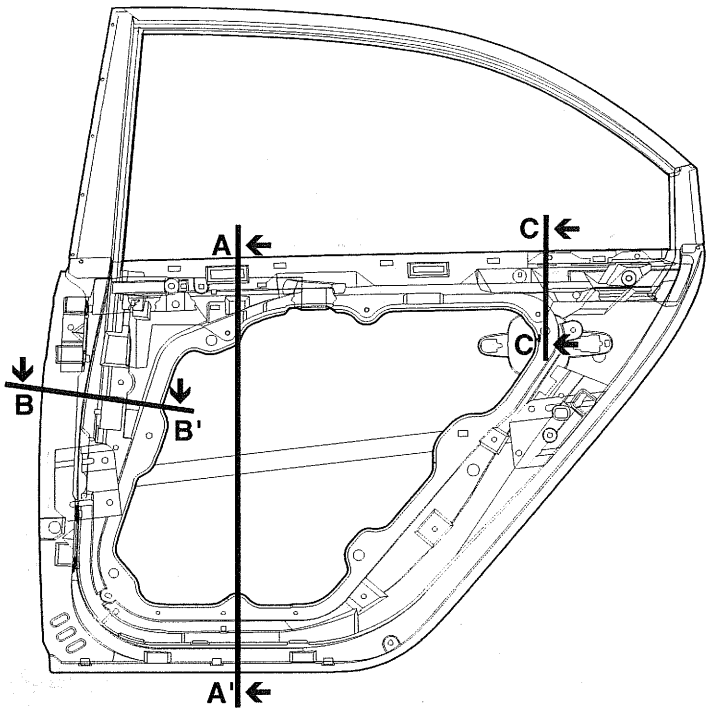
SECTION C-C' NF-710-3



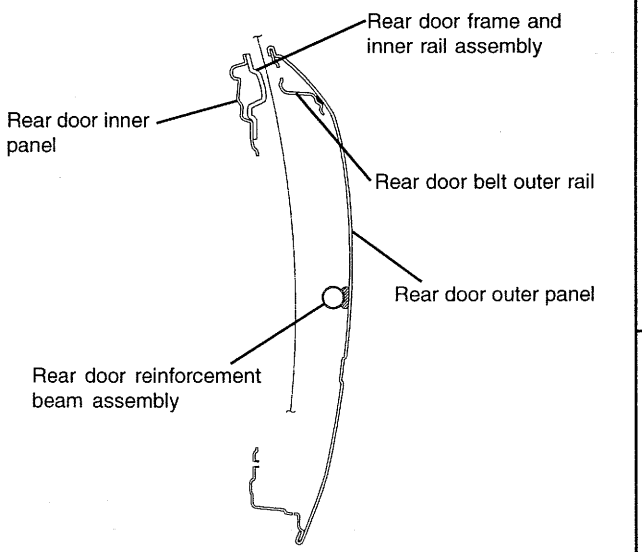
SECTION D-D' NF-710-4

2. REAR DOOR

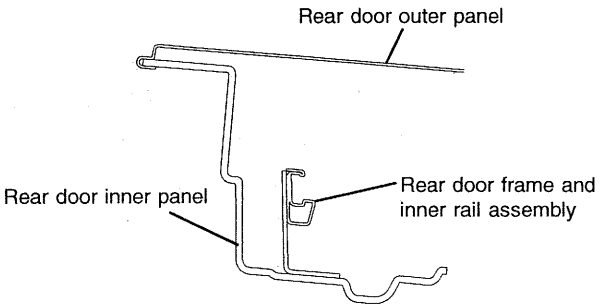
<Cross-sectional Views>



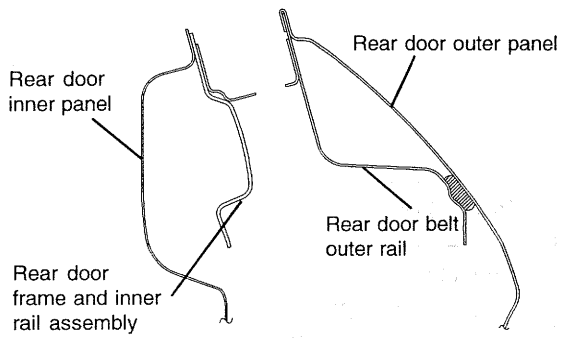
NF-720



SECTION A-A' NF-720-1

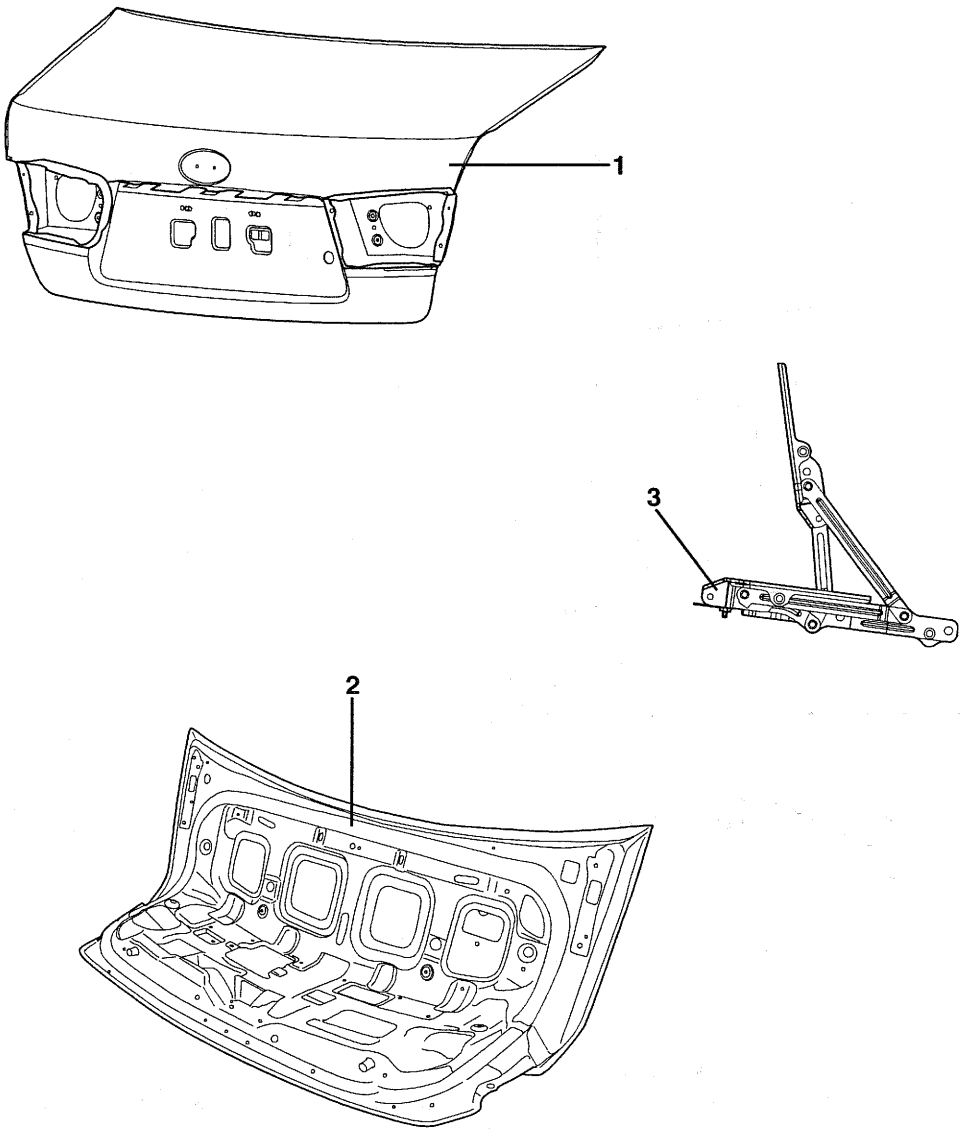


SECTION B-B' NF-720-2



SECTION C-C' NF-720-3

TRUNK LID



NF-800/NF-80/NF-802

NO	PART TIME
1	Trunk lid outer panel
2	Trunk lid inner panel
3	Trunk lid hinge assembly LH/RH

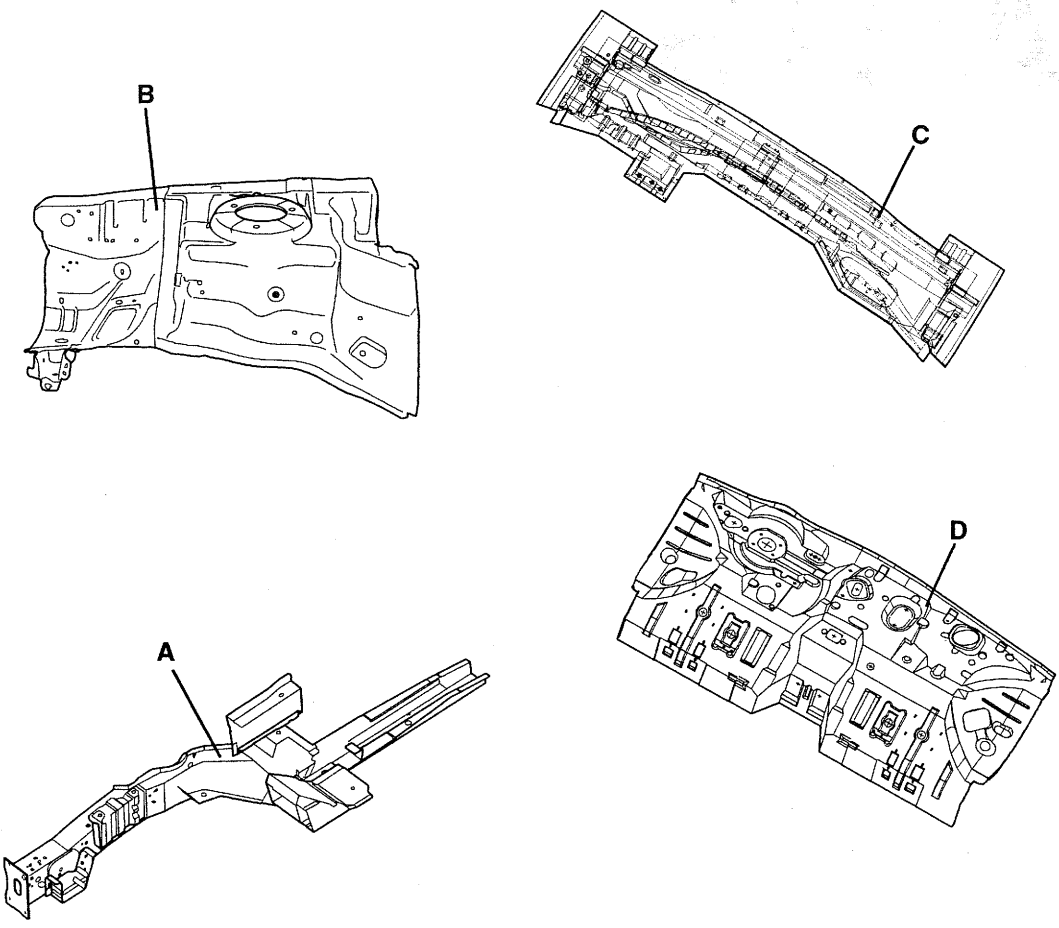
REPLACEMENT PARTS

REPLACEMENT PARTS

The following section illustrates replacement parts used in the repairs described in this manual. It is important that only Hyundai replacement parts be used in making these repairs to ensure the repairs are made with the highest possible standards for fit, safety and corrosion protection.

For a more complete listing of service parts, refer to an authorized Hyundai dealership.

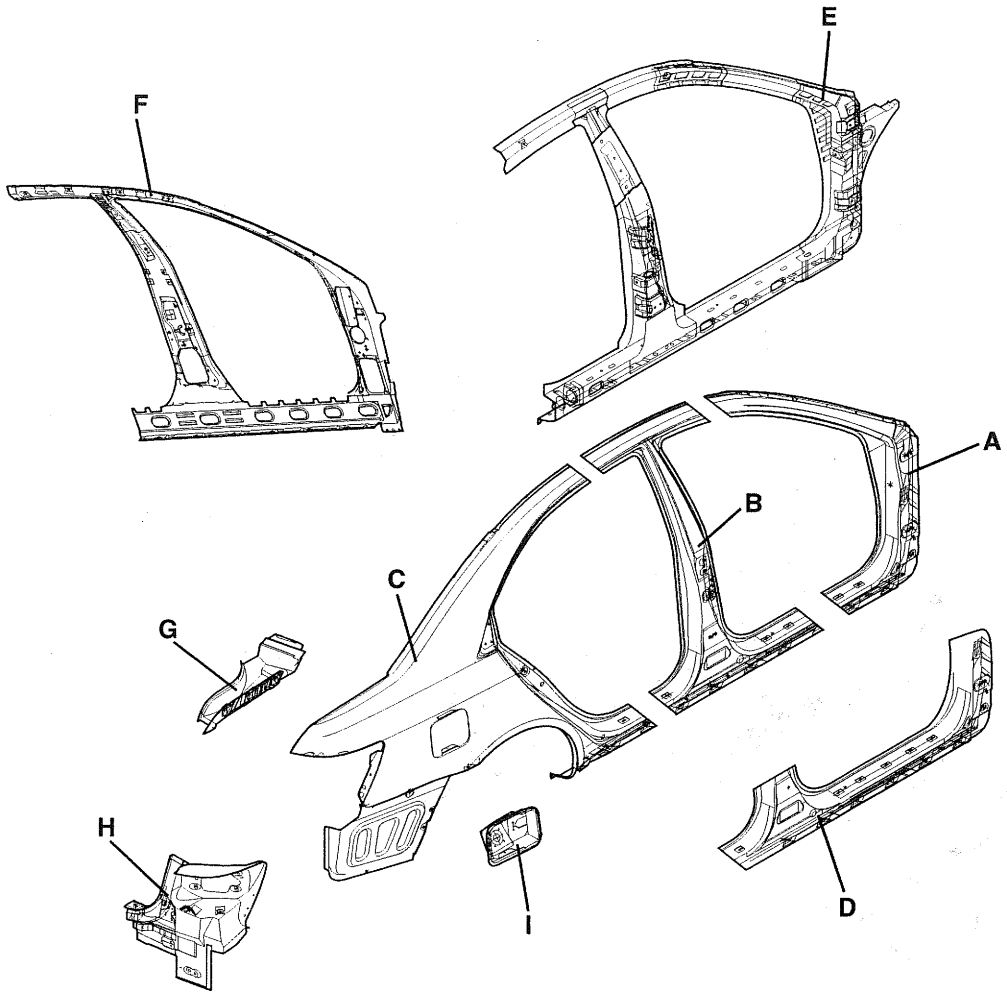
FRONT BODY



NF-61

	PART NAME	
A	FRONT SIDE MEMBER ASSEMBLY	LH/RH
B	FENDER APRON PANEL ASSEMBLY	LH/RH
C	COWL PANEL ASSEMBLY	
D	DASH PANEL COMPLETE	

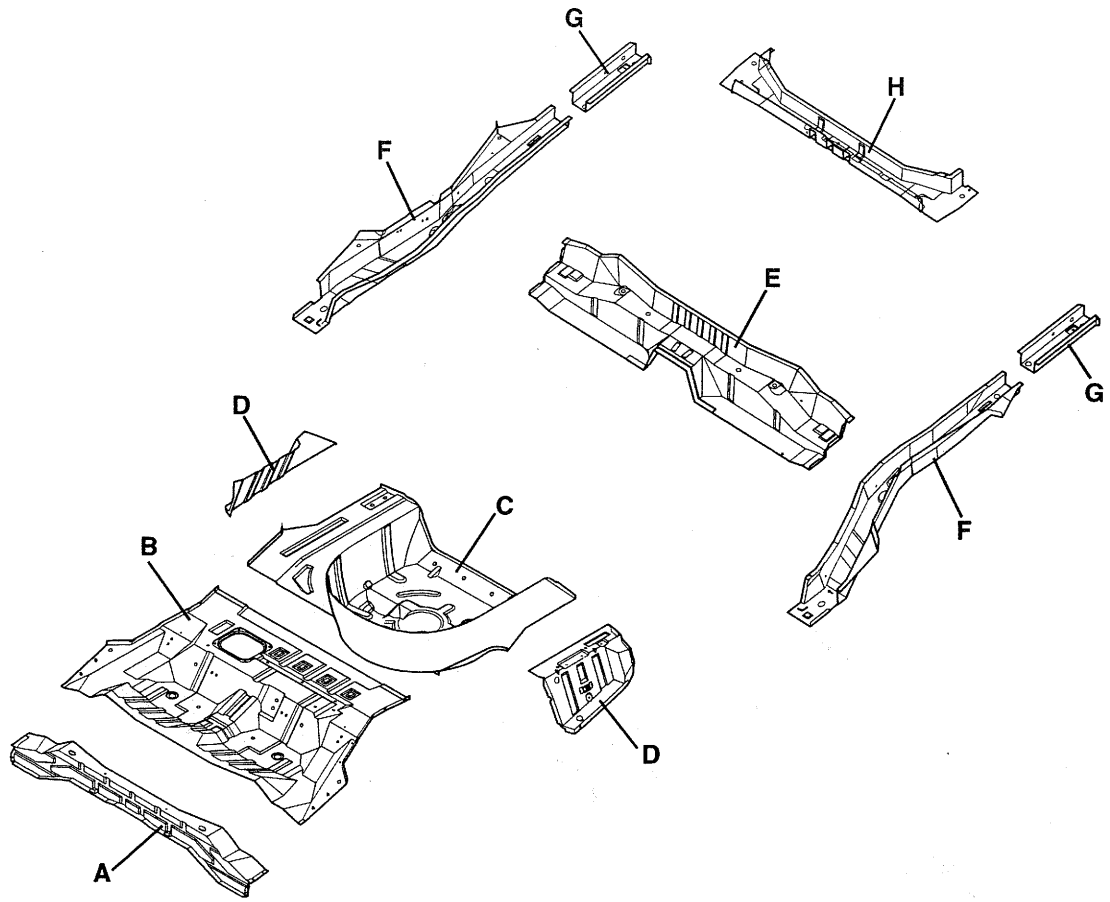
SIDE BODY



NF-800C

	PART NAME	
A	FRONT PILLAR OUTER PANEL	LH/RH
B	CENTER PILLAR OUTER PANEL	LH/RH
C	QUARTER OUTER PANEL	LH/RH
D	SIDE SILL OUTER PANEL	LH/RH
E	SIDE OUTER REINFORCEMENT	LH/RH
F	SIDE INNER PANEL	LH/RH
G	SIDE OUTER REAR EXTENSION	LH/RH
H	REAR COMBINATION LAMP HOUSING PANEL	LH/RH
I	FUEL FILLER HOUSING	

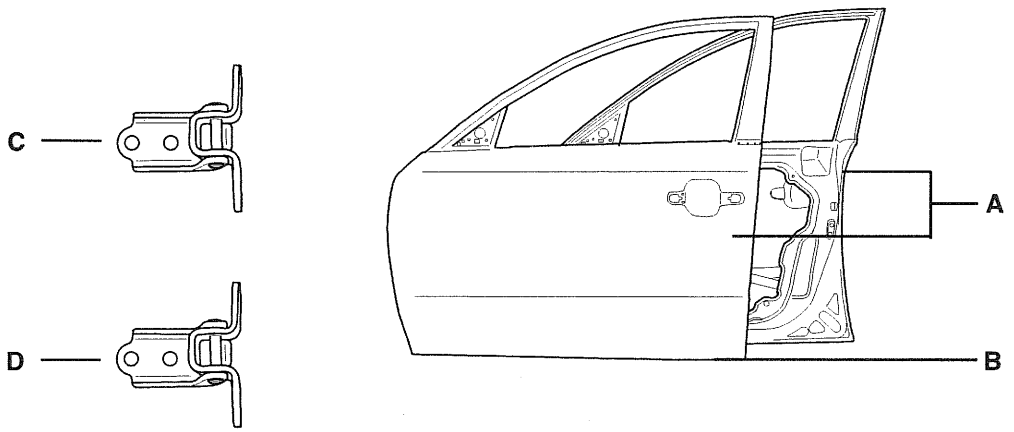
REAR BODY



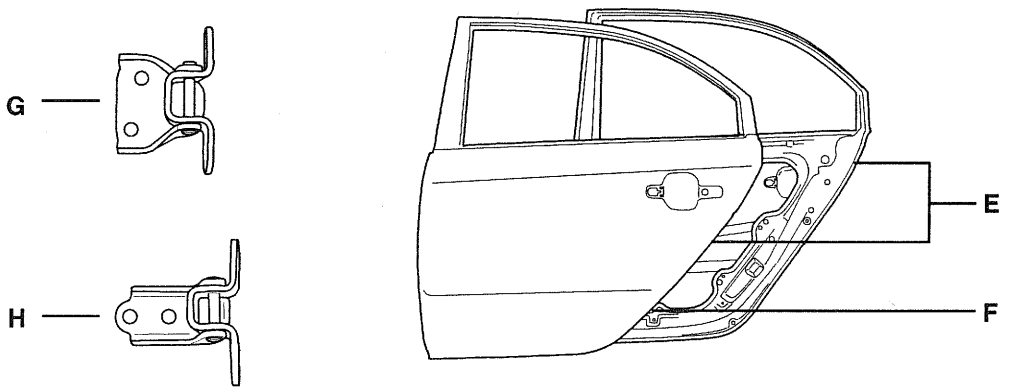
NF-830

	PART NAME	
A	REAR FLOOR FRONT EXTENSION	
B	REAR FLOOR FRONT PANEL	
C	REAR FLOOR REAR PANEL	
D	REAR FLOOR SIDE PANEL	LH/RH
E	REAR FLOOR FRONT CROSS MEMBER	
F	REAR FLOOR SIDE FRONT MEMBER	LH/RH
G	REAR FLOOR SIDE REAR MEMBER	LH/RH
H	REAR FLOOR CENTER CROSS MEMBER	

DOOR



NF-7112/NF-FRT



NF-7113/NF-RR

	PART NAME	
A	FRONT DOOR PANEL ASSEMBLY	LH/RH
B	FRONT DOOR OUTER PANEL	LH/RH
C	FRONT DOOR UPPER HINGE ASSEMBLY	LH/RH
D	FRONT DOOR LOWER HINGE ASSEMBLY	LH/RH
E	REAR DOOR PANEL ASSEMBLY	LH/RH
F	REAR DOOR OUTER PANEL	LH/RH
G	REAR DOOR UPPER HINGE ASSEMBLY	LH/RH
H	REAR DOOR LOWER HINGE ASSEMBLY	LH/RH

BODY DIMENSIONS

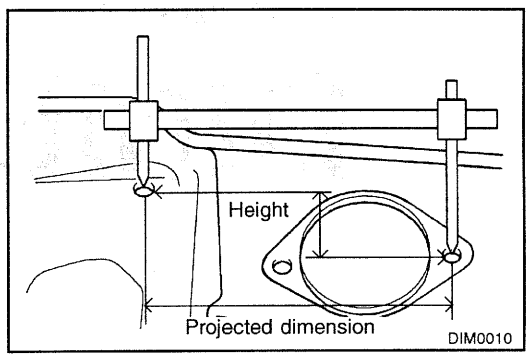
GENERAL

1. Basically, all measurements in this manual are taken with a tracking gauge.
2. When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
3. For measuring dimensions, both projected dimension and actual-measurement dimension are used in this manual.

MEASUREMENT METHOD

PROJECTED DIMENSIONS

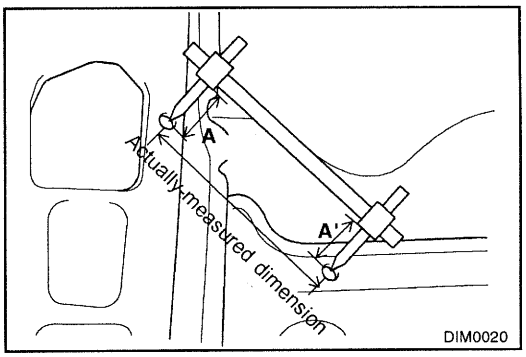
1. These are the dimensions measured when the measurement points are projected into the reference plane, and are the reference dimensions used for body alterations.
2. If the length of the tracking gauge probes are adjustable, make the measurement by lengthening one probe by the amount equivalent to the difference in height of the two surfaces.



ACTUAL-MEASUREMENT DIMENSIONS

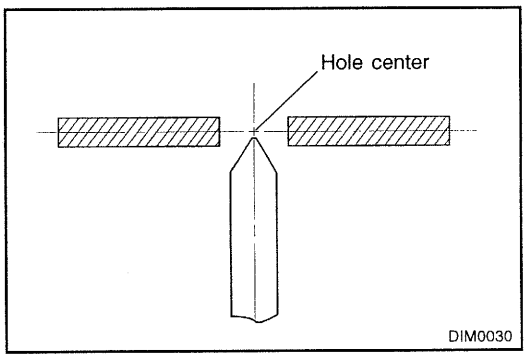
1. These dimensions indicate the actual linear distance between measurement points, and are the reference dimensions for use if a tracking gauge is used for measurement.
2. Measure by first adjusting both probes to the same length (A=A')

NOTE
Check the probes and gauge itself to make sure there is no free play.

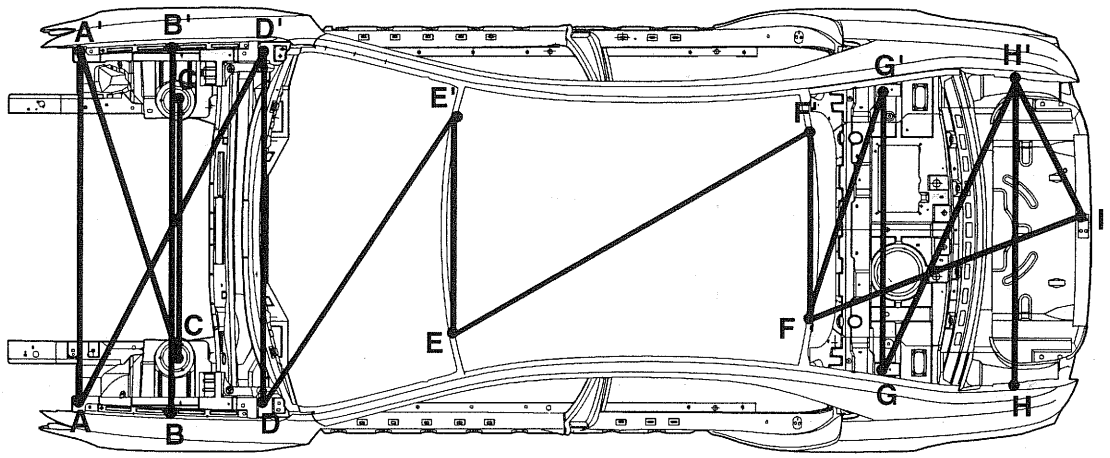


MEASUREMENT POINT

1. Measurements should be taken at the hole center.



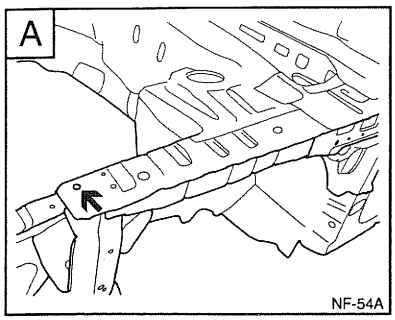
UPPER BODY



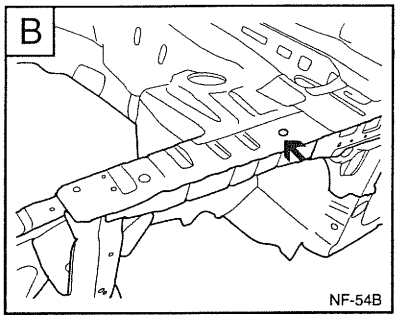
NF-53

* These dimensions indicated in this figure are **actual-measurement dimensions.**

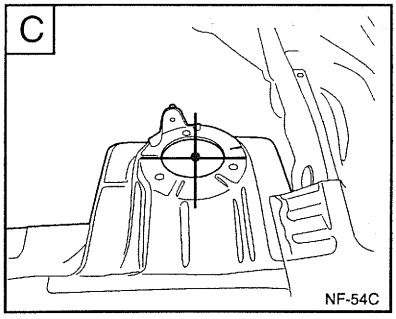
Point symbol	A-A'	A-D'	B-B'	C-C'	C-A'	D-D'	D-E'	E-E'
Length (mm)	1400	1605.3	1540	1047	1286	1420	1500.7	1056
Point symbol	**E-F'**	**F-F'**	**F-G'**	**F-I**	**G-G'**	**G-H'**	**H-H'**	**I-H'**
Length (mm)	1719.3	800.6	1070.5	1400	1139.4	1302.7	1249.2	764.6



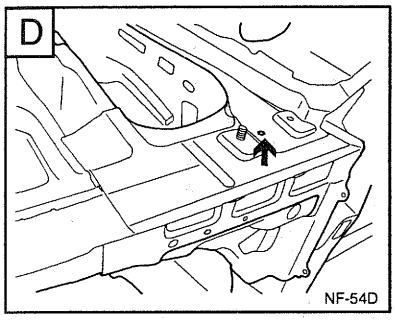
Front end module mounting hole (Ø 13)



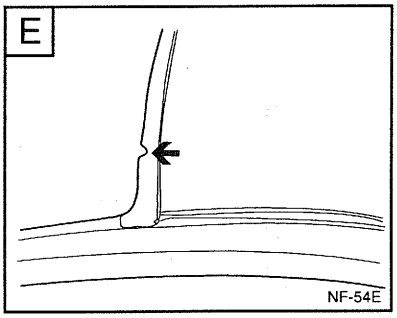
Fender mounting hole (Ø 9.8)



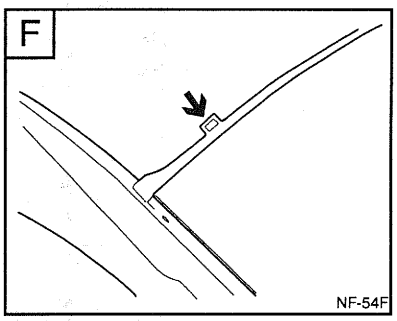
Front strut hole (Ø 85)



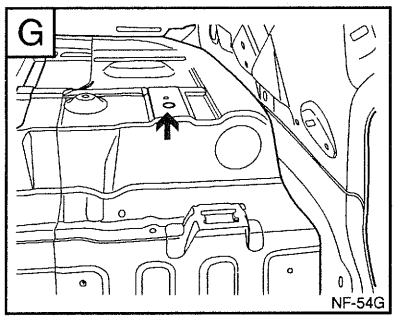
Tooling hole (Ø 10)



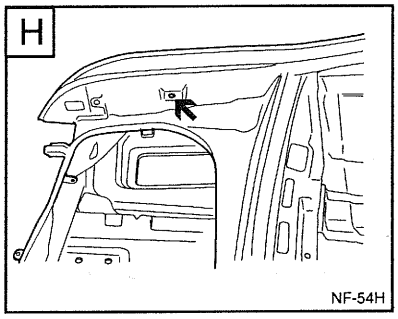
Left front roof notch



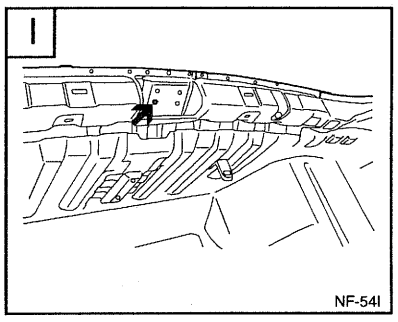
Rear glass right stopper hole (□ 7x15)



Left rear seat belt retractor mounting hole (Ø 15)

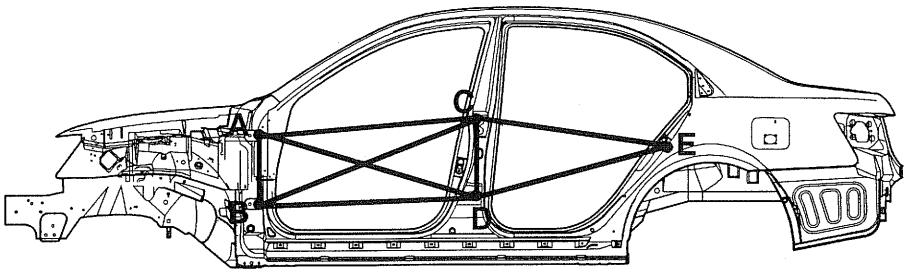


Trunk lid hinge mounting hole (Ø 11)



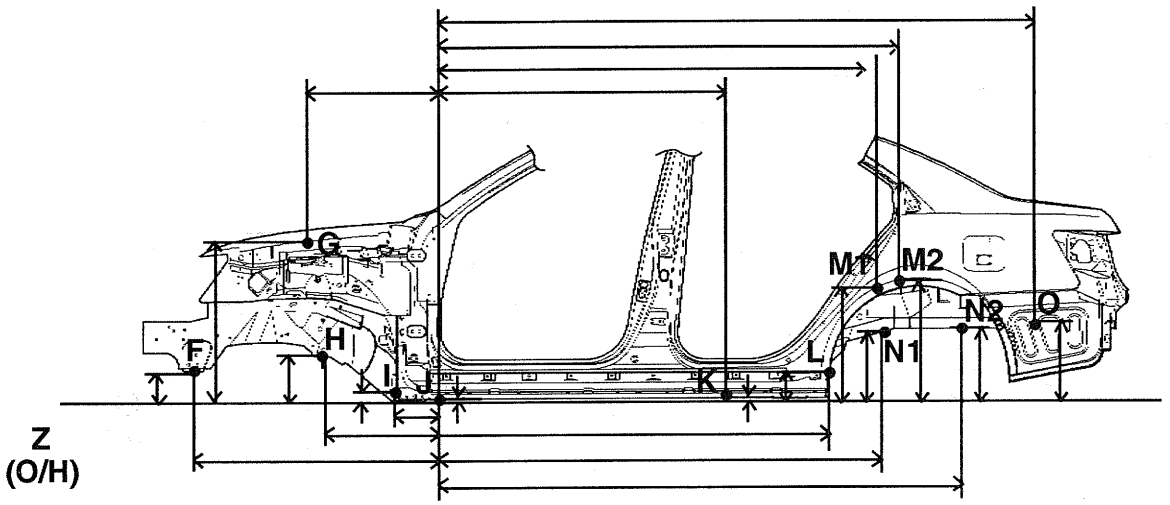
Trunk lid striker mounting hole (Ø 9)

SIDE BODY



NF-55

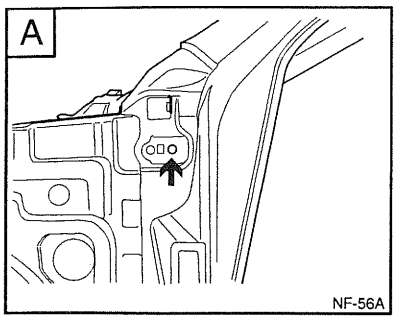
*These dimensions indicated in this figure are **actual-measurement dimensions.**



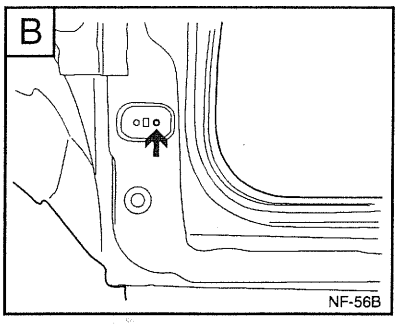
*These dimensions indicated in this figure are **projected dimensions.**

NF-55A

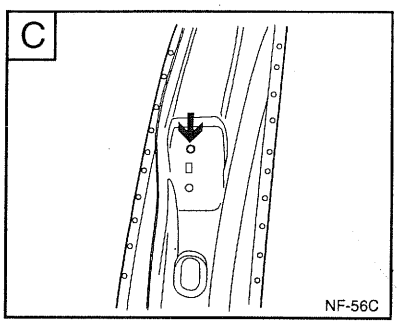
Point symbol	A-B	A-C	A -D	B-C	B-D	C-D	C-E	D-E
Length (mm)	350.0	1092.9	1114.8	1164.1	1071	367.0	917.1	952.0
Point symbol	**F-Z**	**G-Z**	**H-Z**	**I-Z**	**J-Z**	**K-Z**	**L-Z**	**M1-Z**
Length (mm)	21.4	496.9	51.3	92.4	169.2	173.7	80	365.6
Point symbol	**M2-Z**	**N1-Z**	**N2-Z**	**O-Z**	**F-J**	**G-J**	**H-J**	**I-J**
Length (mm)	378	55	71.4	88.2	1121.7	548.7	660.1	265.7
Point symbol	**J-K**	**J-L**	**J-M1**	**J-M2**	**J-N1**	**J-N2**	**J-O**	
Length (mm)	957.3	1747.5	1959.1	2.68.4	2032.3	2285.3	2635.3	



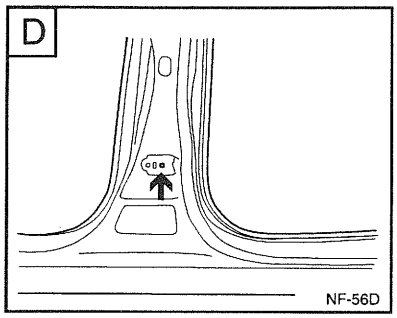
Front door hinge upper mounting hole (Ø 13)



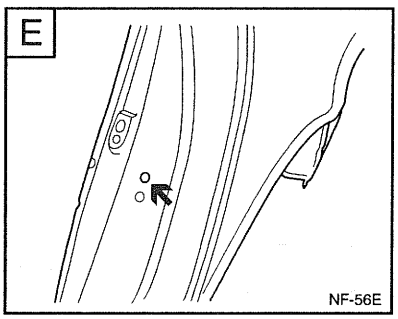
Front door hinge lower mounting hole (Ø 13)



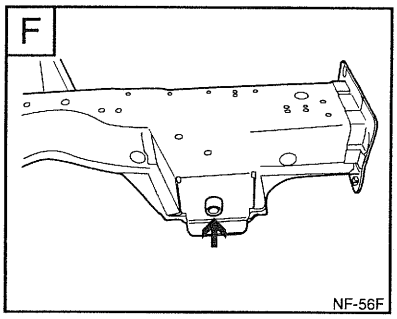
Rear door hinge upper mounting hole (Ø 13)



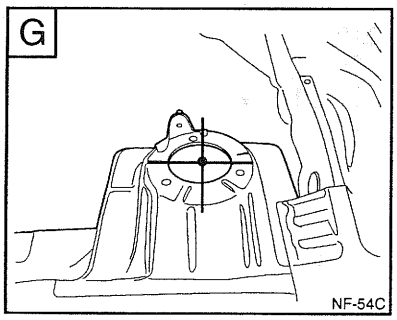
Rear door hinge lower mounting hole (Ø 13)



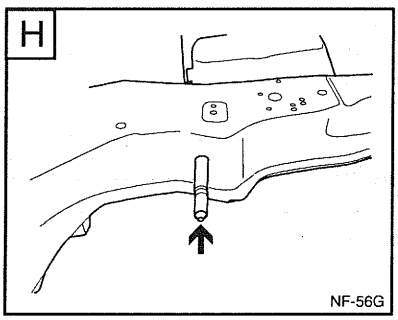
Rear door striker mounting hole (Ø 13)



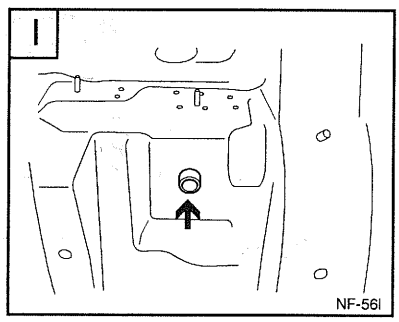
Sub frame front mounting pipe nut (Ø 14)



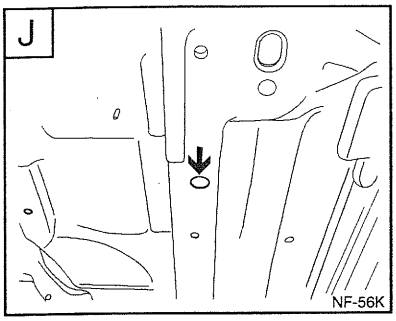
Front strut hole (Ø 85)



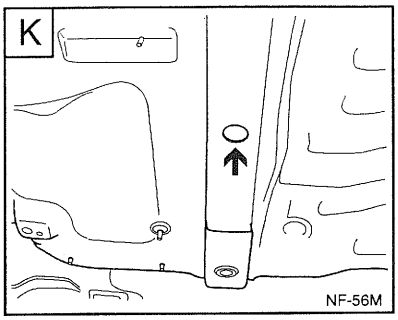
Sub frame center mounting bolt (Ø 14)



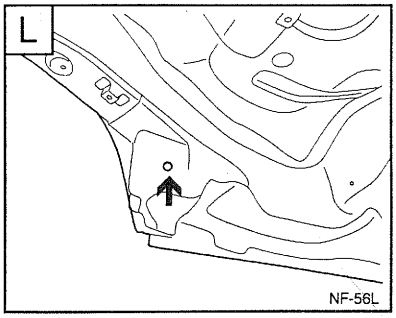
Sub frame rear mounting pipe nut (Ø 14)



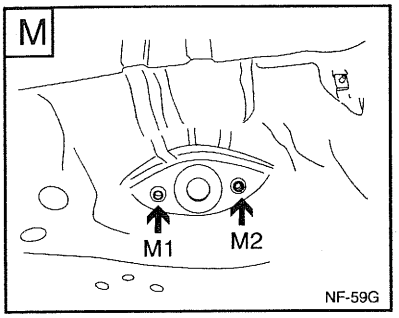
Tooling hole (Ø 25)



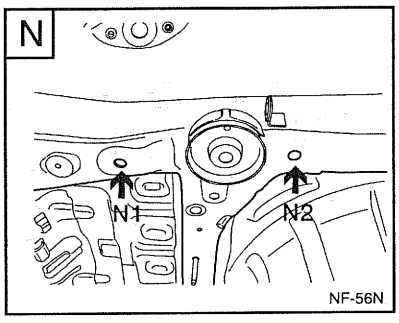
Tooling hole (Ø 30)



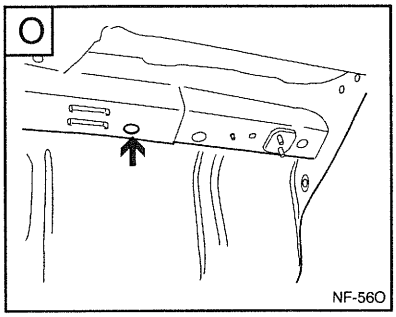
Rear trailing arm mounting hole (Ø 14)



Rear strut mounting hole (Ø 11)

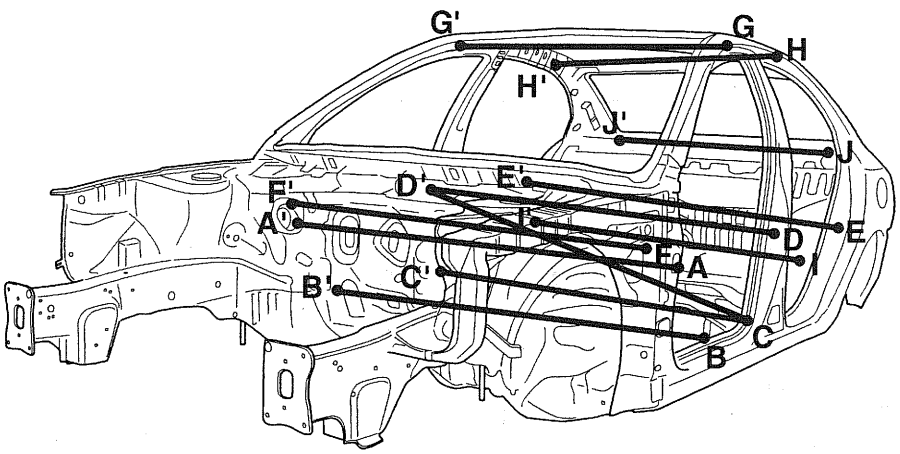


Rear cross member mounting hole (Ø 17)



Tooling hole (Ø 23)

INTERIOR



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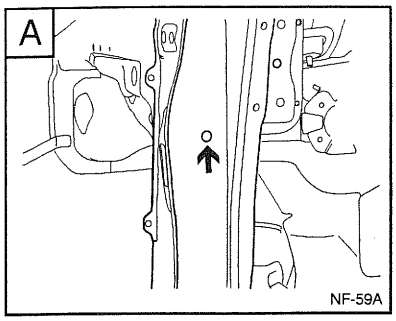
* These dimensions indicated in this figure are **actual-measurement dimensions.**

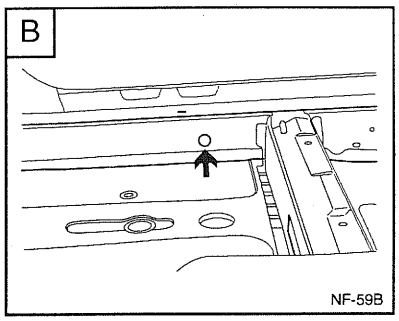
Point symbol	A-A'	B-B'	C-C'	C-D'	D-D'	E-E'	F-F'	G-G'
Length (mm)	1548.8	1378.8	1378.8	1565.2	1593	1574.3	1352.1	1105.5
Point symbol	**H-H'**	**I-I'**	**J-J'**					
Length (mm)	1084.9	1783.8	1139.4					

A



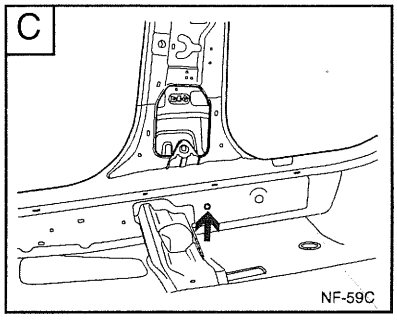
Front door checker mounting hole (Ø 13)

B



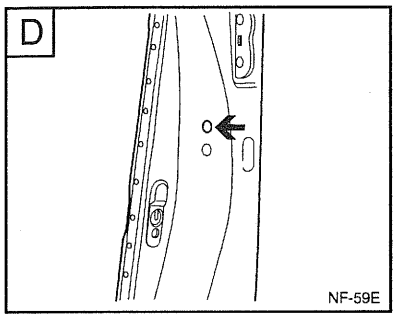
Tooling hole (Ø 20)

C



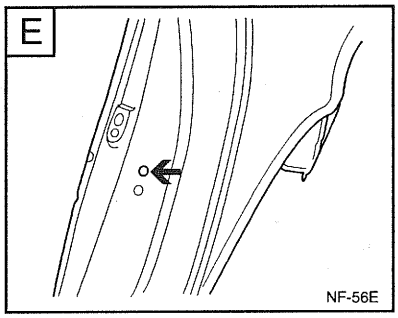
Seat belt lower anchor mounting hole (Ø 15)

D



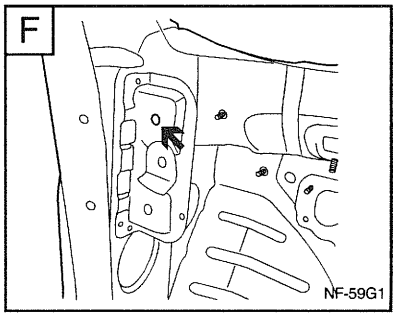
Front door striker mounting hole (Ø 13)

E



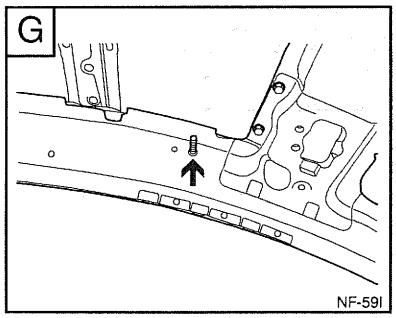
Rear door striker mounting hole (Ø 13)

F



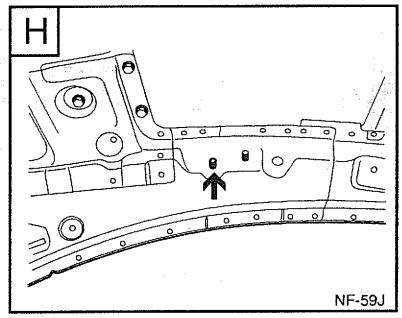
Cowl cross member mounting hole (Ø 11)

G



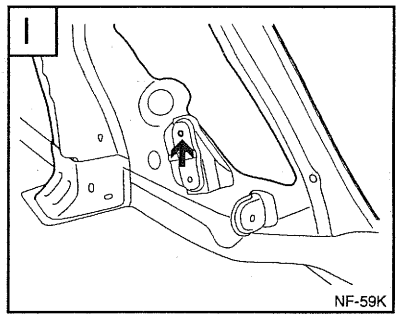
Front assist handle bracket mounting bolt (Ø 15)

H



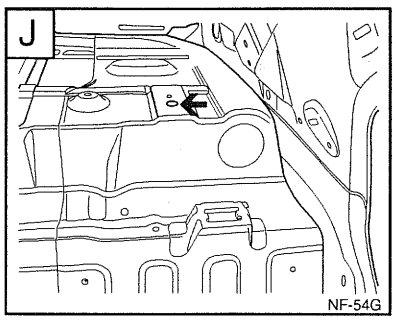
Rear assist handle bracket mounting bolt (Ø 15)

I



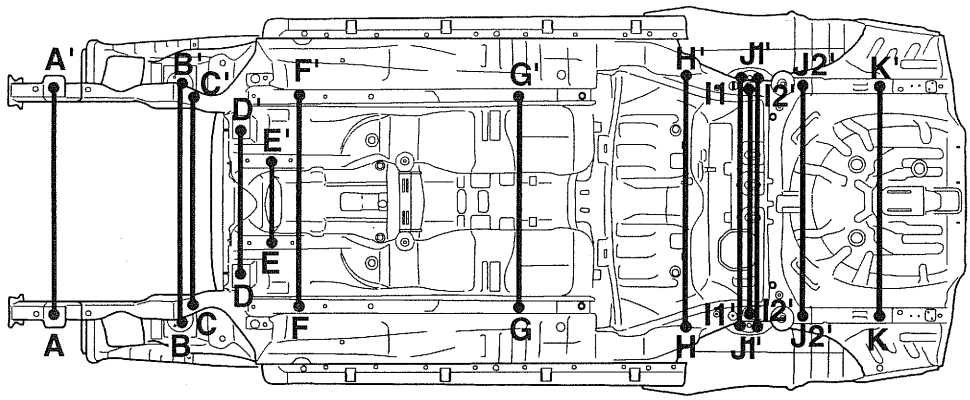
Rear seat tilting hinge mounting hole (Ø 6.6)

J



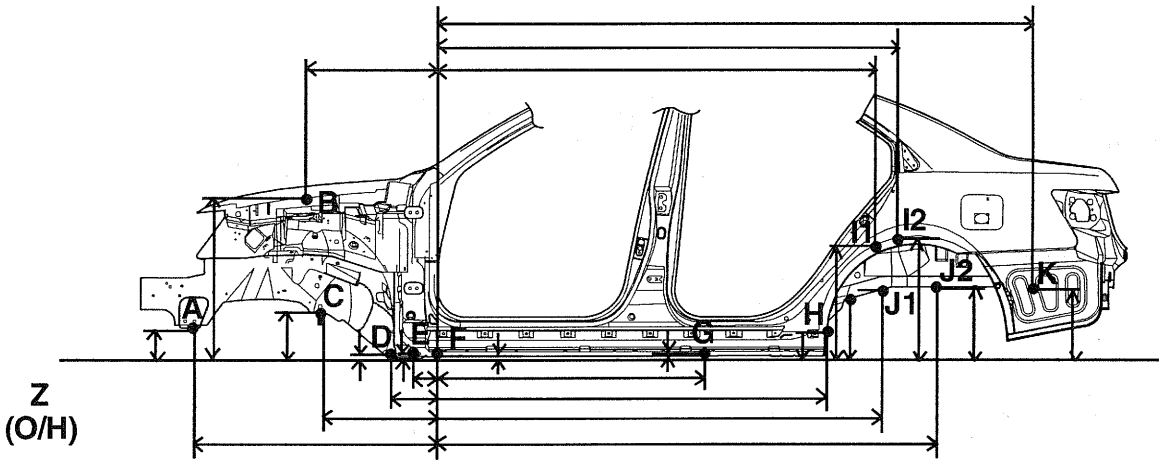
Seat belt retractor mounting hole (Ø 15)

UNDER BODY



*These dimensions indicated in this figure are **actual-measurement dimensions.**

NF-N60

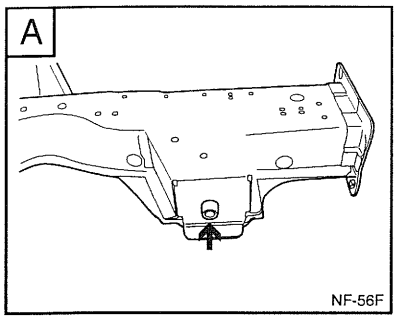


*These dimensions indicated in this figure are **projected dimensions.**

NF-55A

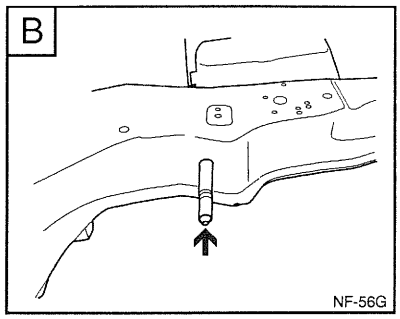
Point symbol	A-A'	B-B'	C-C'	D-D'	E-E'	F-F'	G-G'	H-H'
Length (mm)	1010	950	1048.7	630	340	908	895	1068.9
Point symbol	**I1-I1'**	**J1-J1'**	**I2-I2'**	**I2-J2'**	**K-K'**	**A-Z**	**B-Z**	**C-Z**
Length (mm)	1121.7	1000	1118	1030	1004	21.4	496.9	51.3
Point symbol	**D-Z**	**E-Z**	**F-Z**	**G-Z**	**H-Z**	**I1-Z**	**I2-Z**	**J1-Z**
Length (mm)	92.4	125	169.2	173.7	80	365.6	378	55
Point symbol	**J2-Z**	**K-Z**	**A-F**	**B-F**	**C-F**	**D-F**	**E-F**	**F-G**
Length (mm)	71.4	88.2	1121.7	548.7	660.1	265.7	177.7	957.3
Point symbol	**F-H**	**F-I1**	**F-J1**	**F-I2**	**F-J2**	**F-K**		
Length (mm)	1747.5	1959.1	2032.3	2068.4	2285.3	2635.3		

A



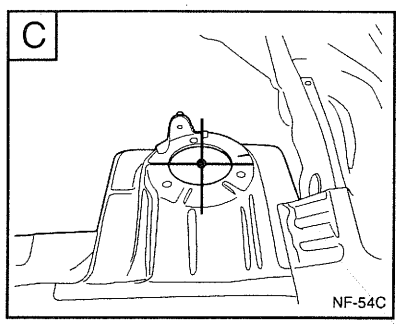
Sub frame front mounting pipe nut (Ø 14)

B



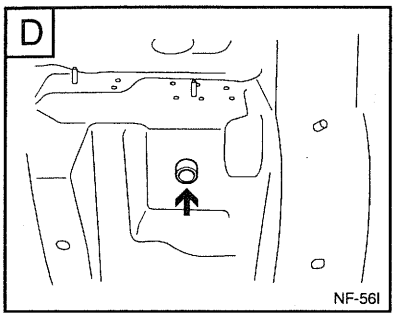
Sub frame front mounting pipe nut (Ø 14)

C



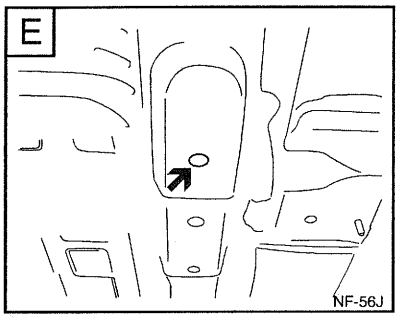
Front strut hole (Ø 85)

D



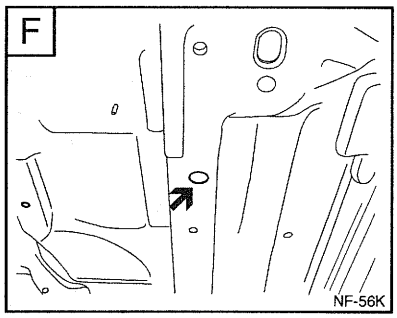
Sub frame rear mounting pipe nut (Ø 14)

E



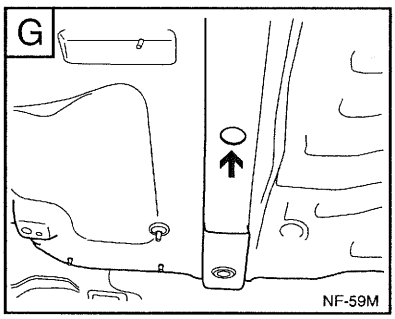
Tooling hole (Ø 16)

F



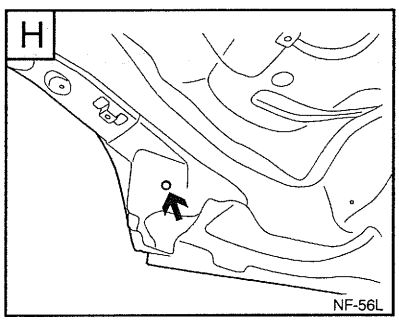
Tooling hole (Ø 25)

G



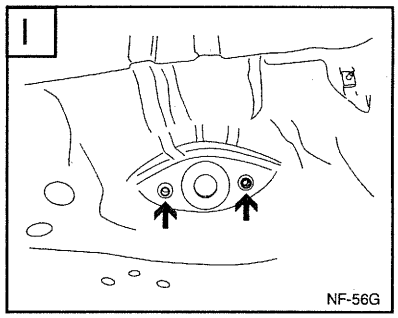
Tooling hole (Ø 30)

H



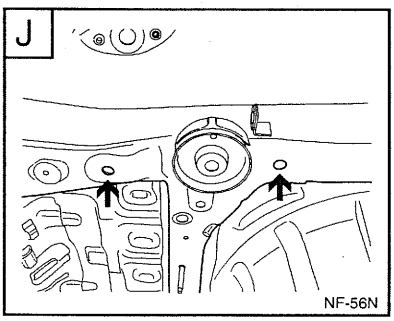
Rear trailing arm mounting hole (Ø 14)

I



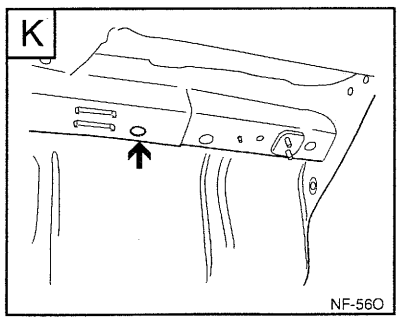
Rear strut mounting hole (Ø 11)

J



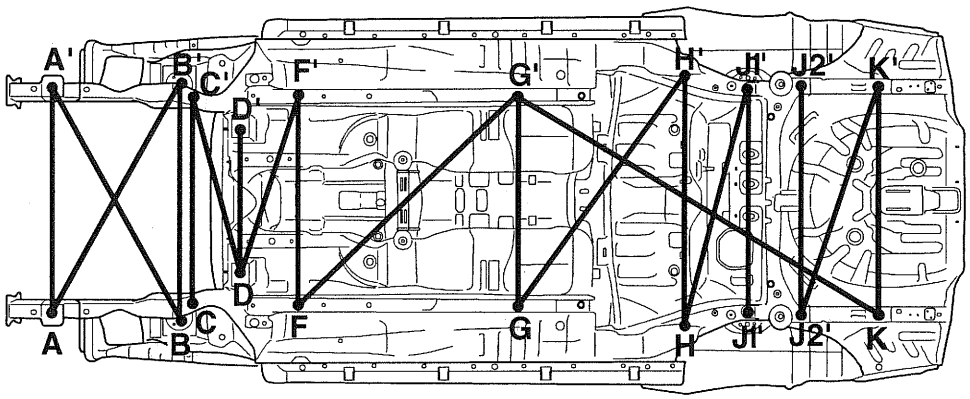
Rear cross member holes (Ø 17)

K



Tooling hole (Ø 23)

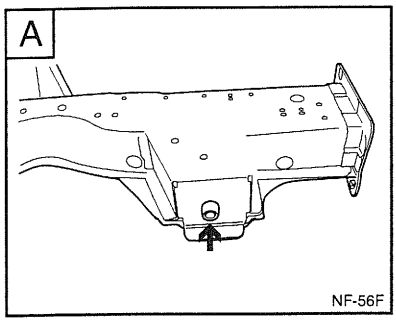
UNDER BODY



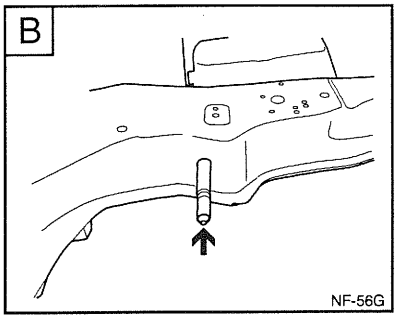
*These dimensions indicated in this figure are **actual-measurement dimensions.**

NF-N60

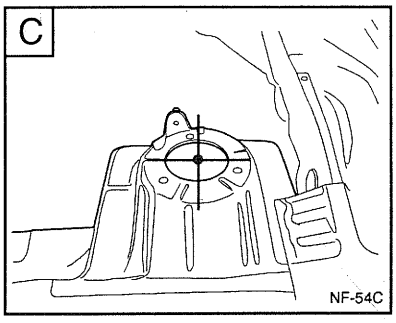
Point symbol	A-A'	A-B'	B-B'	C-A'	C-C'	D-C'	D-D'	D-F'
Length (mm)	1010	1137.5	950	1241.5	1048.7	1097.7	630	817.2
Point symbol	**F-F'**	**F-G'**	**G-G'**	**G-H'**	**H-H'**	**H-J1'**	**J1-J1'**	**J2-J2'**
Length (mm)	908	1314.9	895	1263.9	1068.9	1081.4	1000	1030
Point symbol	**J2-K'**	**K-K'**	**K-G'**					
Length (mm)	1075.7	1004	1945.7					



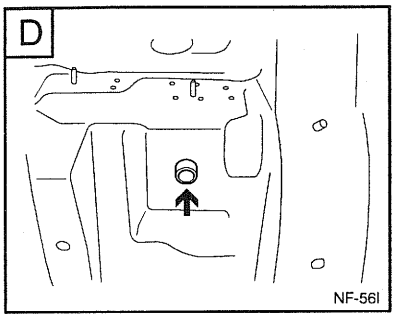
Sub frame front mounting pipe nut (Ø 14)



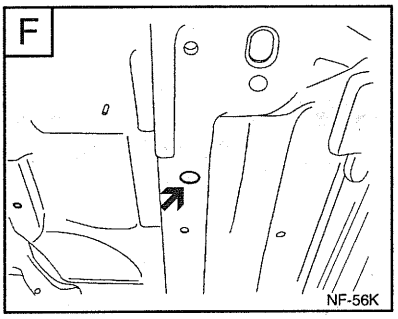
Sub frame front mounting pipe nut (Ø 14)



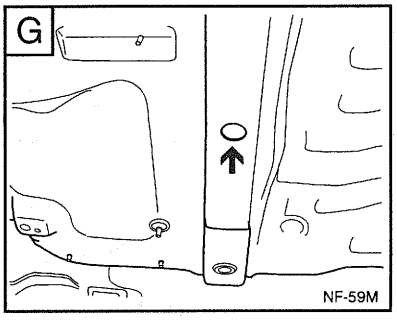
Front strut hole (Ø 85)



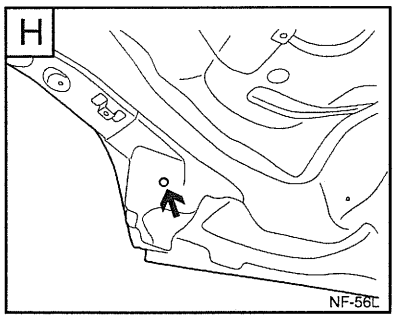
Sub frame rear mounting pipe nut (Ø 14)



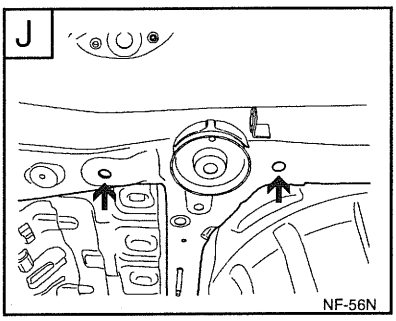
Tooling hole (Ø 25)



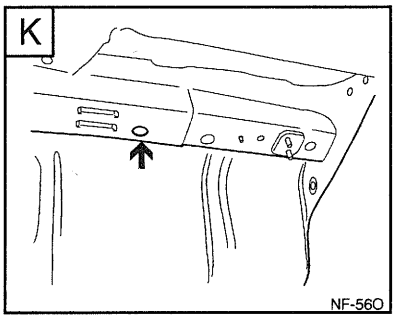
Tooling hole (Ø 30)



Rear trailing arm mounting hole (Ø 14)

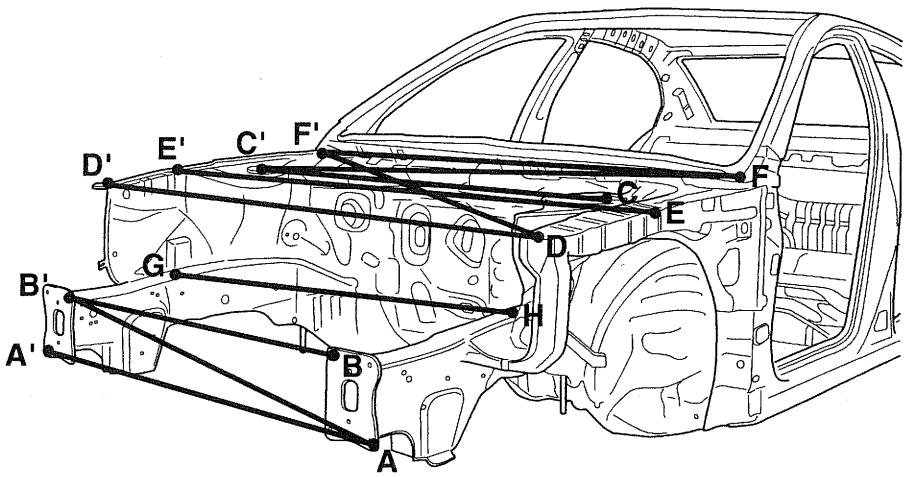


Rear cross member holes (Ø 17)



Tooling hole (Ø 23)

ENGINE COMPARTMENT

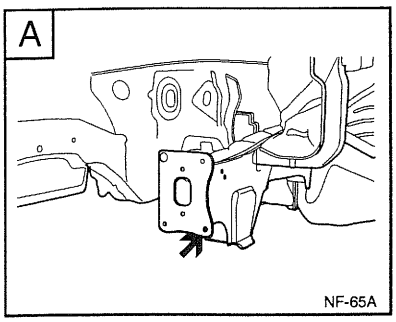


NF-64

*These dimensions indicated in this figure are **actual-measurement dimensions.**

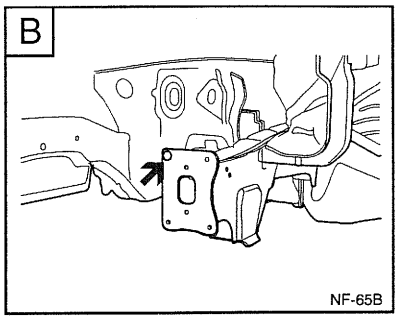
Point symbol	A-A'	A-B'	B-B'	C-C'	D-D'	D-F'	E-E'	F-F'
Length (mm)	1110	1012.5	904	1047	1400	1605.3	1540	1435
Point symbol	**F-C'**	**G-H**						
Length (mm)	1291.6	996.4						

A



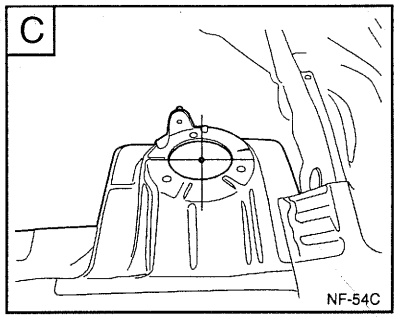
Front bumper mounting hole (Ø 9)

B



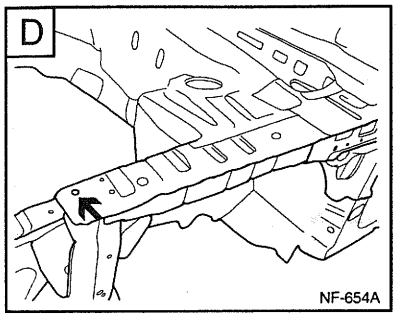
Tooling hole (Ø 9)

C



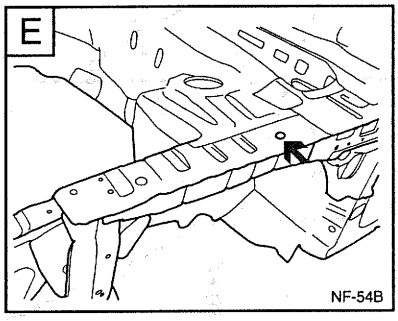
Front strut hole (Ø 85)

D



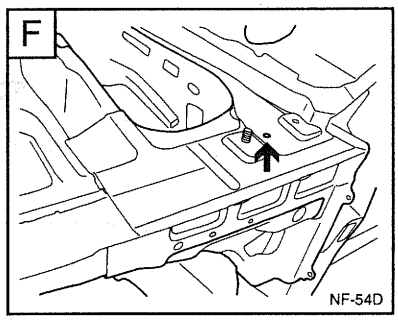
Front end module mounting hole (Ø 13)

E



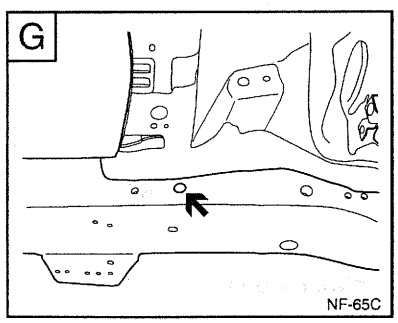
Fender mounting hole (Ø 9.8)

F



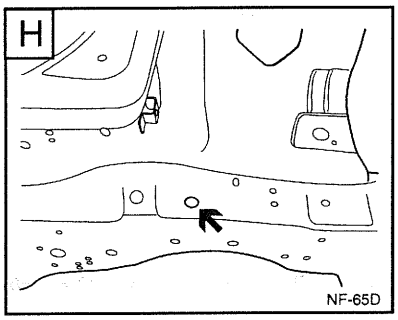
Tooling hole (Ø 10)

G



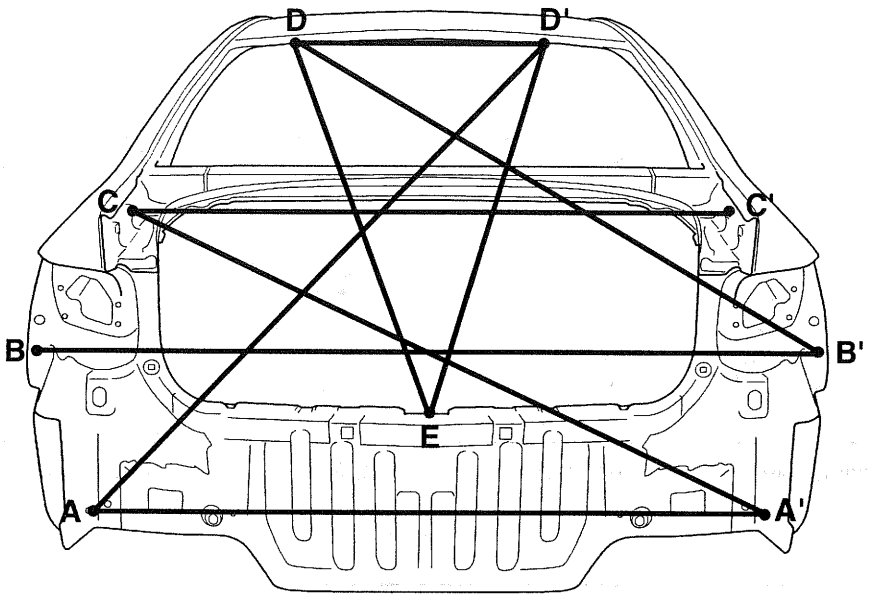
Engine mountin gbracket mounting hole (Ø 13)

H



Transaxles mounting bracket front mounting hole(Ø 15)

LUGGAGE COMPARTMENT

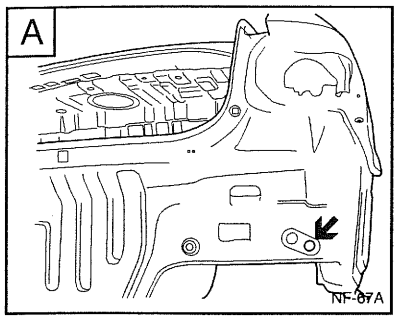


NF-66

* These dimensions indicated in this figure are **actual-measurement dimensions.**

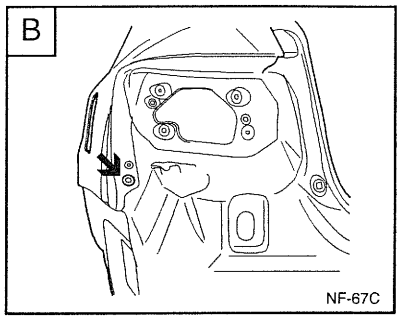
Point symbol	A-A'	A-C'	B-B'	B-D'	C-C'	D-D'	D-A'	D-E
Length (mm)	1346	1430.9	1602	1611.5	1249.2	800.6	1755.2	1399.6
Point symbol	**E-D'**							
Length (mm)	1387.5							

A



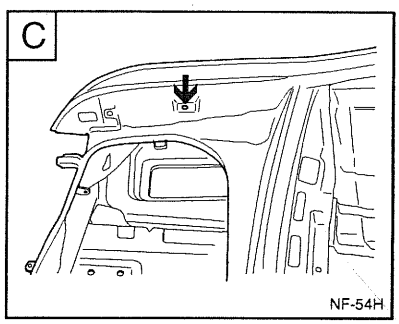
Tooling hole (Ø 12)

B



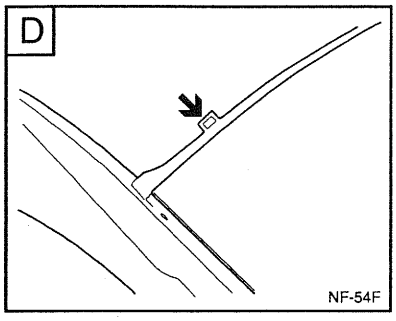
Rear combination lamp mounting hole (Ø 14)

C



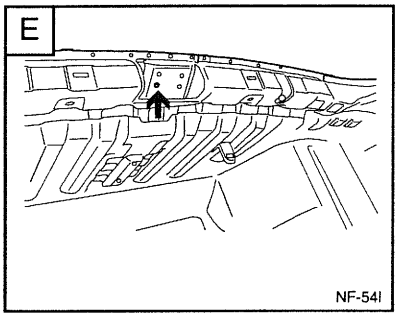
Trunk lid hinge mounting (Ø 11)

D



Rear glass right stopper hole (□ 7x15)

E



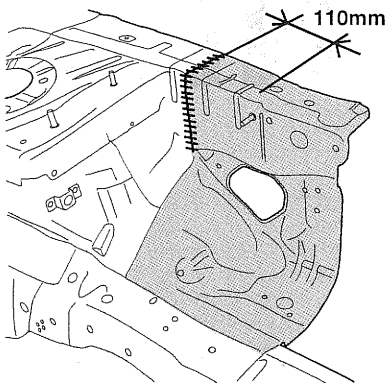
Trunk lid striker mounting hole (Ø 9)

BODY PANEL REPAIR PROCEDURE

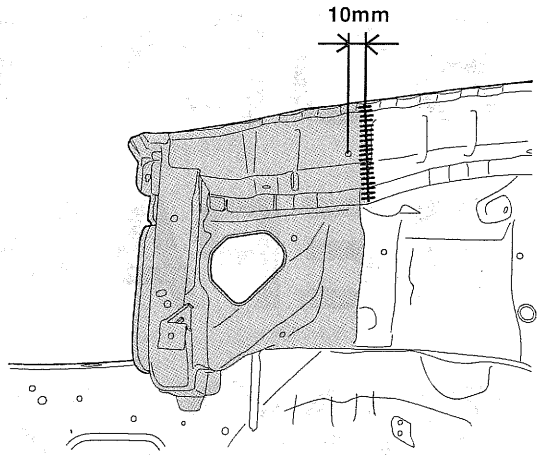
FENDER APRON PANEL (PARTIAL)

WELDLING POINTS

L/H



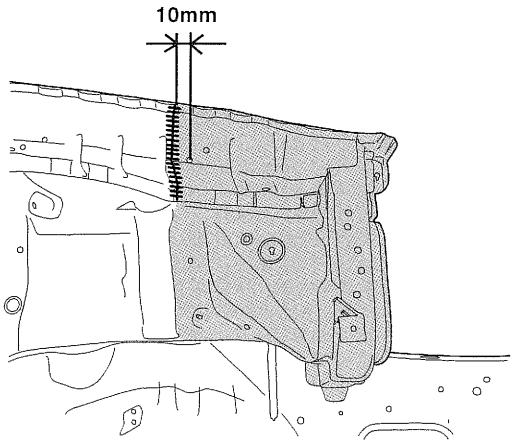
PRO-0030



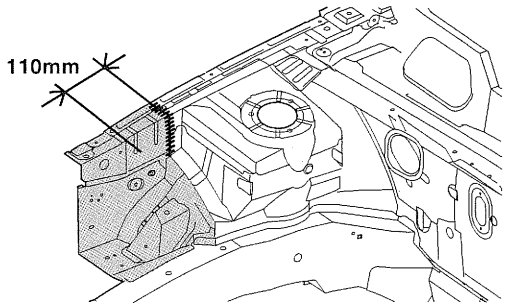
PRO-0031

● MIG plug welding
⫼ MIG butt welding
⤫ MIG lap welding

R/H



PRO-0040

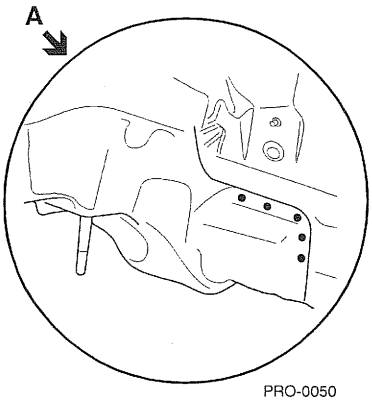


PRO-0041

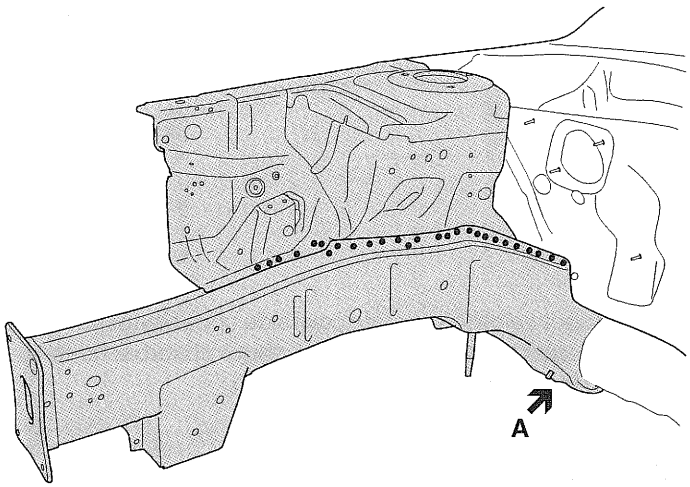
● MIG plug welding
⫼ MIG butt welding
⤫ MIG lap welding

FENDER APRON AND FRONT SIDE MEMBER (ASSEMBLY)

WELDLING POINTS

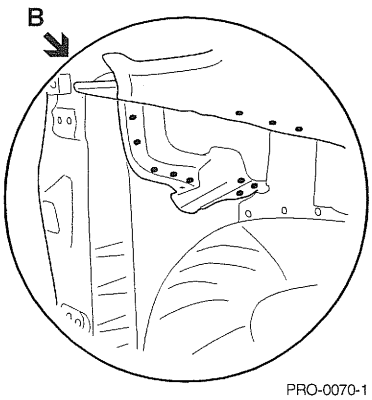


PRO-0050

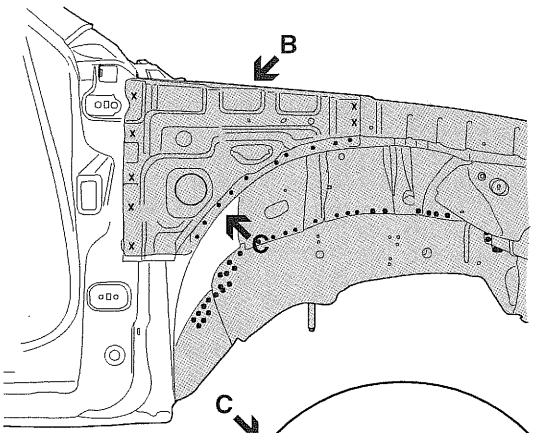


● MIG plug welding

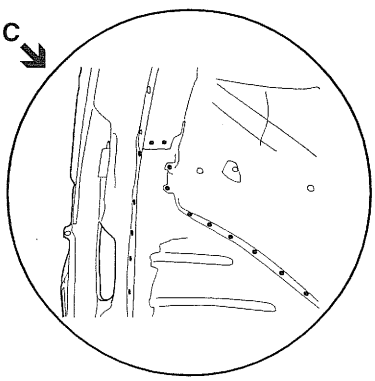
PRO-0060-1



PRO-0070-1



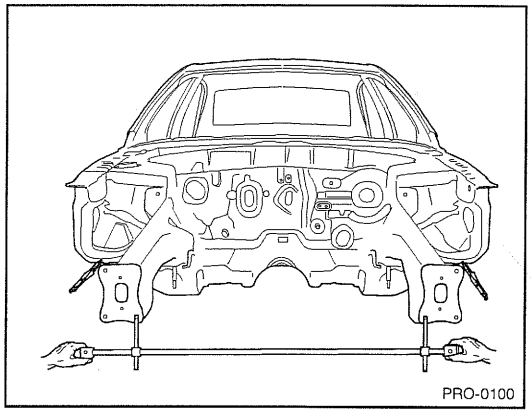
PRO-0071



PRO-0065

● MIG plug welding
⫴ MIG butt welding
⤫ MIG lap welding

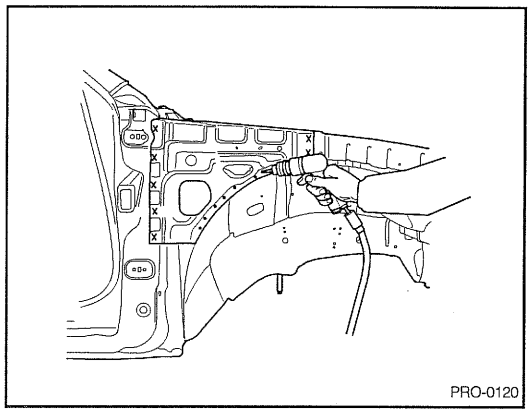
NOTE
Before repairing, remove Engine and Suspension Components. Refer to the body dimension charts and measure the vehicle to determine straightening and alignment requirements. The body must be returned to its original dimension before you begin the repair procedure.


PRO-0100

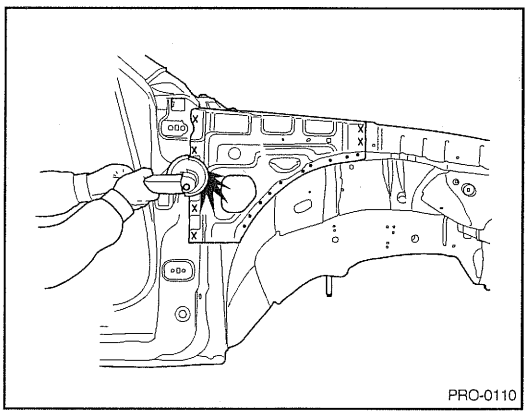
REMOVAL

1. Drill out all the spotwelds to separate cowl side upper outer panel from front pillar outer lower reinforcement, shock absorber housing gusset and fender apron upper outer panel.

   NOTE
   When spotwelded portions are not apparent, remove paint with a rotary wire brush.

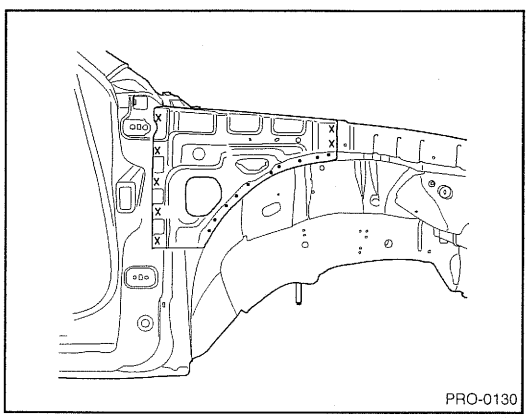

PRO-0120

2. Remove Co_2 weld points using a grinder.

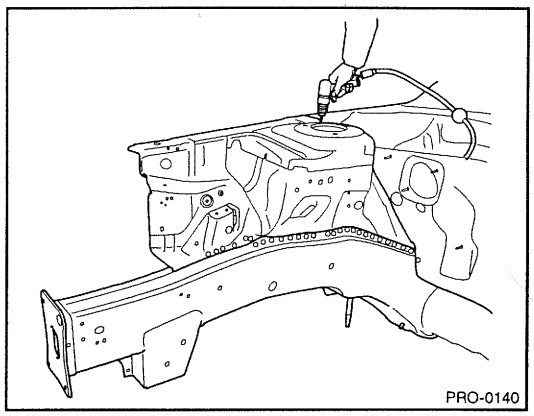

PRO-0110

3. Drill out all the spotwelds attaching the cowl side upper outer panel.

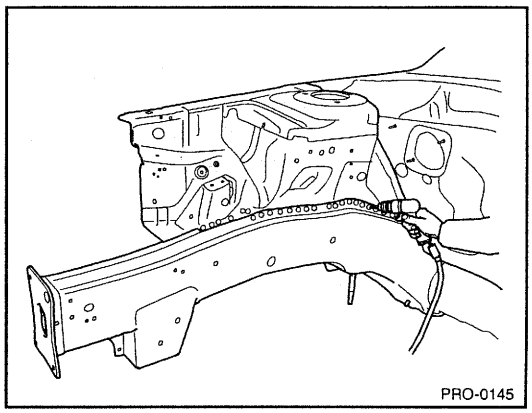
   NOTE
   If it is possible that the fender apron upper outer panel is reusable, be careful not to damage it while removing.


PRO-0130

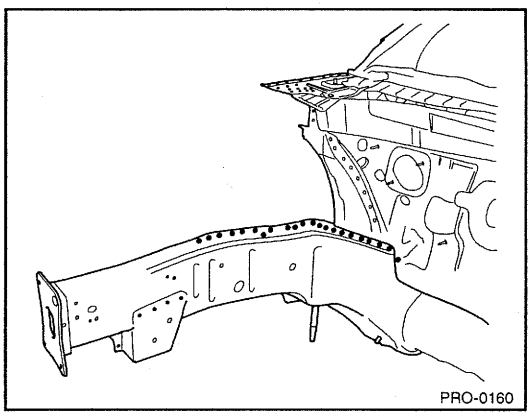
4. Using a spotweld cutter, drill out all the spotwelds attaching the fender apron to the dash panel, shock absorber housing gusset and front side member.
5. Remove the fender apron panel.



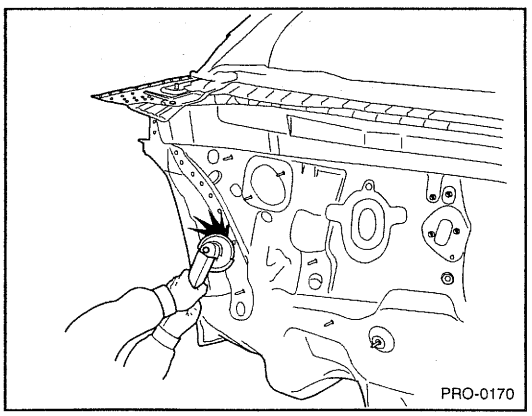
NOTE
If collision damage requires replacement of fender apron and front side member together, remove both of them at the same time.



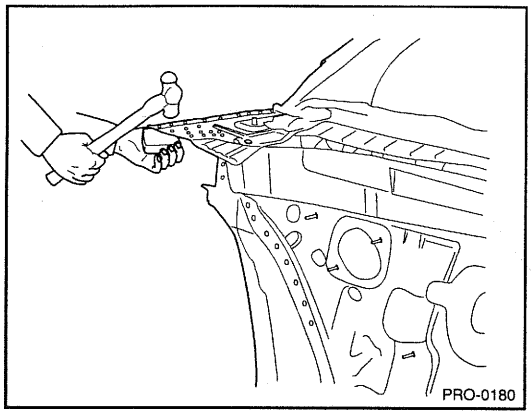
6. Using a spotweld cutter, remove the front side member by drilling out the spotwelds.



7. Grind and smooth any weld traces which might be left on the body surface by using an air grinder or similar tool, being careful not to damage any of the panels which is not to be replaced.

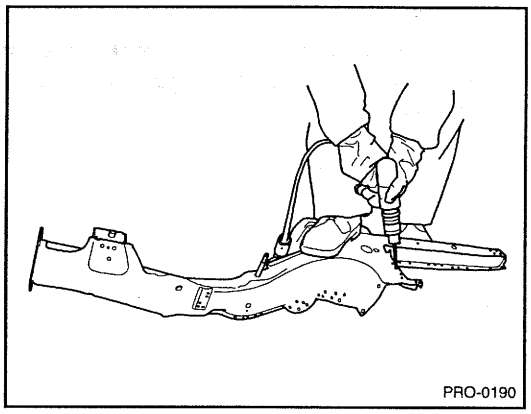


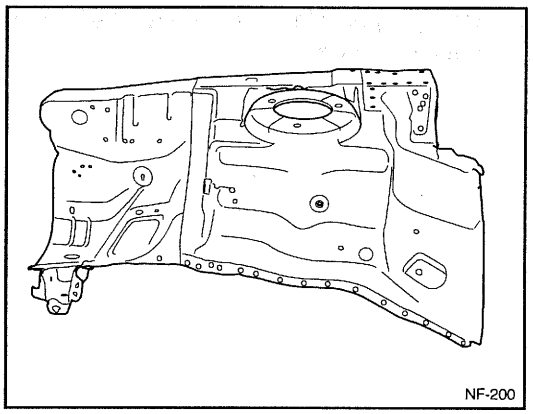
8. Using a hammer and dolly, correct any flanges that become bent or deformed when spotwelds are broken.



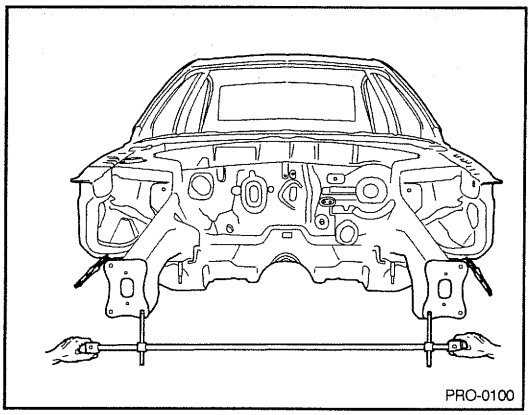
INSTALLATION

1. Drill 8 mm holes in the new fender apron and front side member for MIG plug welding.
2. Remove paint from both sides of all portions that are to be welded such as peripheries of MIG plug weld holes.

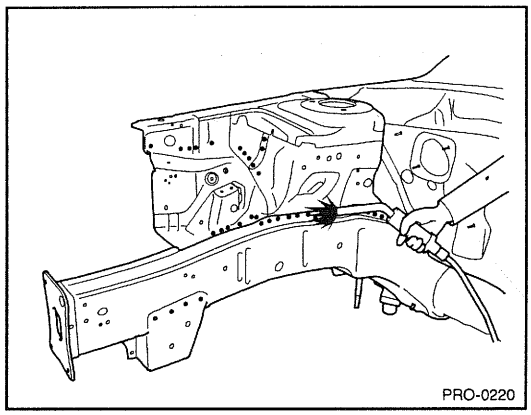




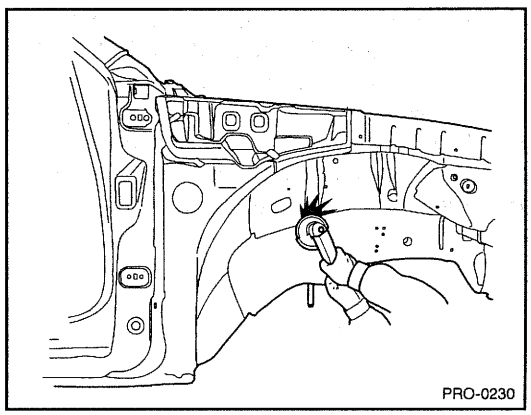
3. Temporarily install new parts in place.
4. Measure each measurement point (Refer to the BODY DIMENSIONS) and corrcet the installation position.



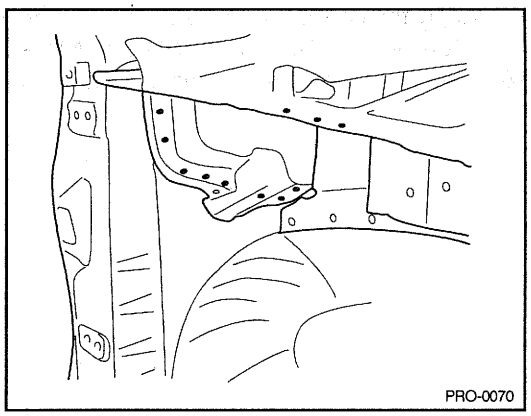
5. MIG plug weld all holes


PRO-0220

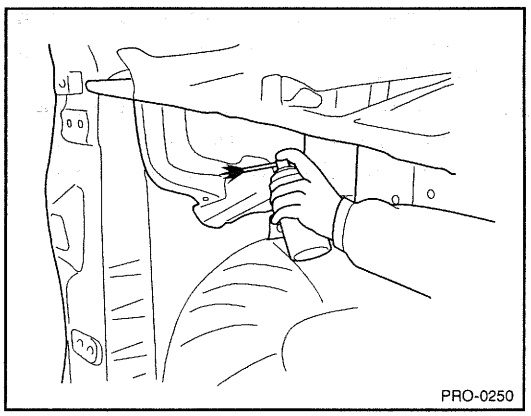
6. Clean MIG welds with a disc grinder.


PRO-0230

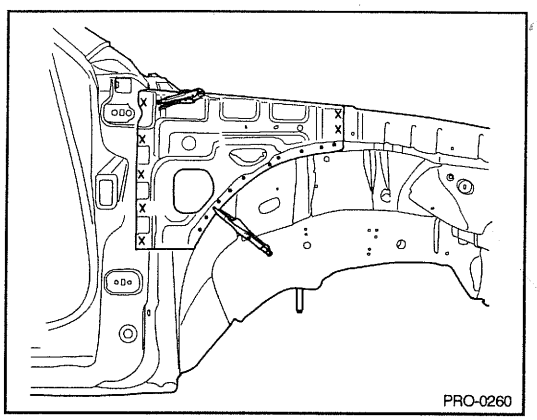
NOTE
1. **Be careful not to grind welded portions too much.**
2. **The internal parts will be stronger if the weld traces are not ground.**


PRO-0070

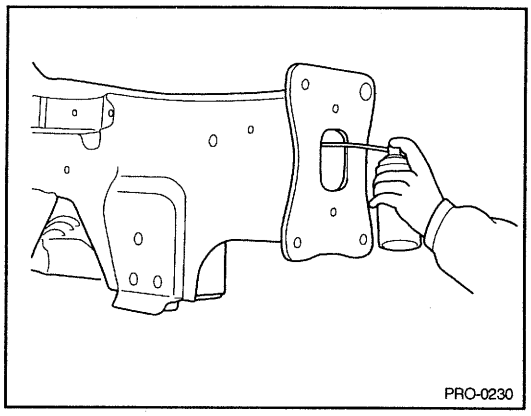
7. Before welding the cowl side upper outer panel, apply the two part epoxy primer and anti-corrosion agent to the interior of the cowl side upper outer panel.


PRO-0250

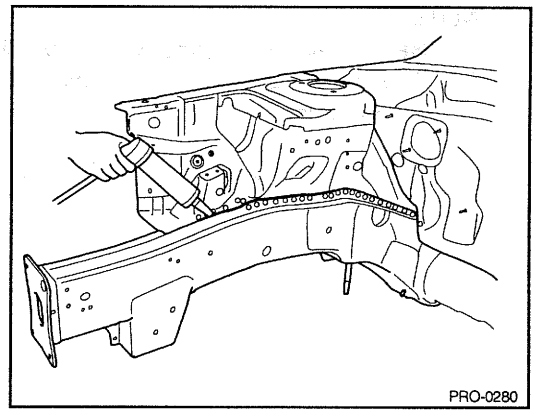
8. Install the cowl side upper outer panel in place.
9. MIG plug weld all holes.
10. Clean and prepare all welds, remove all residue.
11. Apply the two part epoxy primer to the interior of the each panel.


PRO-0260

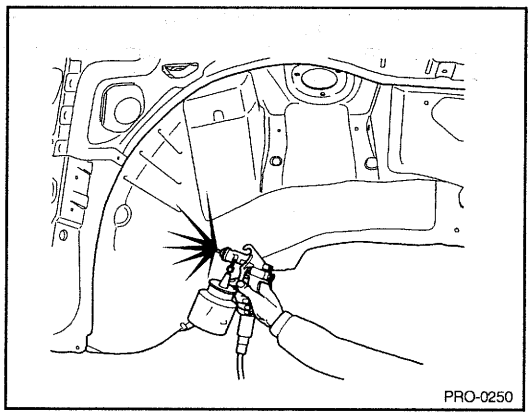
12. Apply an anti-corrosion agent as required (Refer to the CORROSION PROTECTION).
13. Prepare the exterior surfaces for priming using wax and grease remover.
14. Apply metal conditioner and water rinse.
15. Apply conversion coating and water rinse.
16. Apply the two-part epoxy primer.


PRO-0230

17. Apply the correct seam sealer to all joints carefully (Refer to the BODY SEALING LOCATION).
18. Reprime over the seam sealer to complete the repair.


PRO-0280

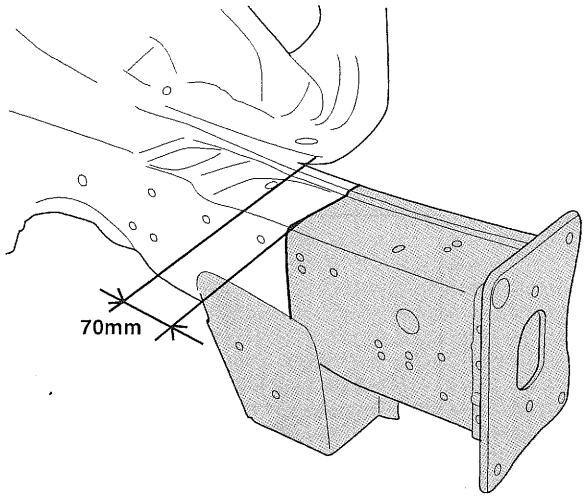
19. After completing body repairs, carefully apply under coating to the front sidemember and fender apron (Refer to the CORROSION PROTECTION).
20. In order to improve corrosion resistance, if necessary, apply an under body anti-corrosion agent to the panel which is repaired or replaced (Refer to the CORROSION PROTECTION).


PRO-0250

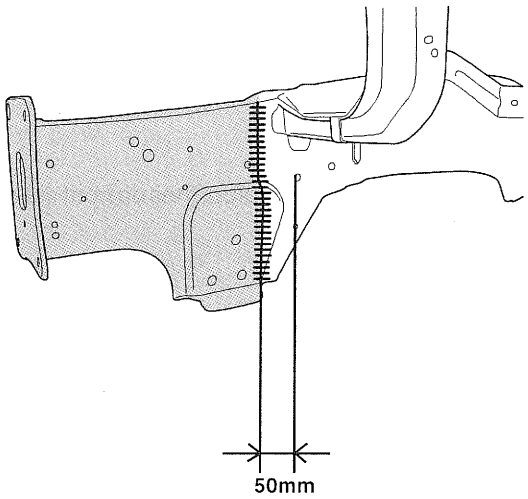
FRONT SIDE MEMBER (PARTIAL)

WELDLING POINTS

L/H



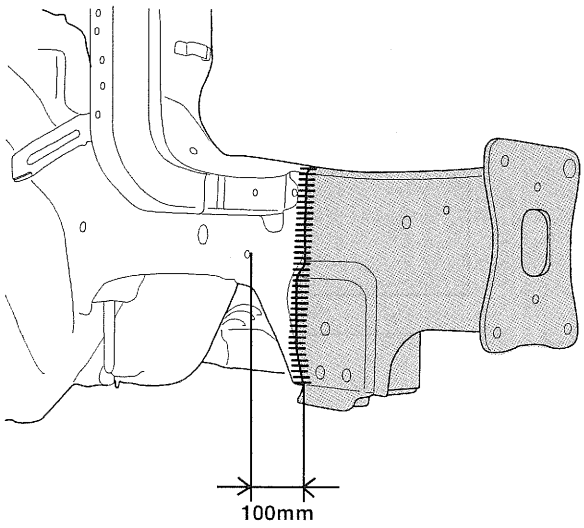
PRO-0300



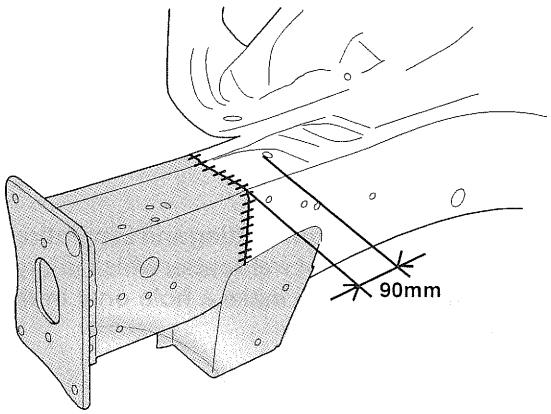
PRO-0310

● MIG plug welding
⫼ MIG butt welding

R/H



PRO-0320



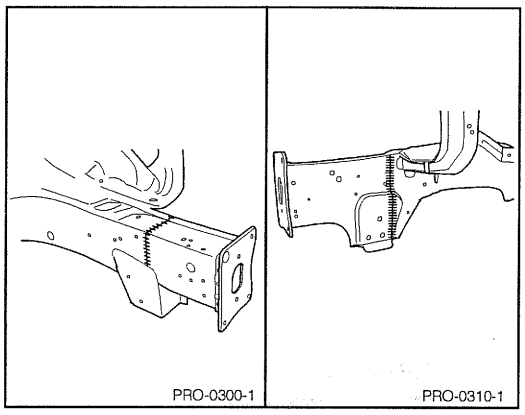
PRO-0330

● MIG plug welding
⫼ MIG butt welding

REMOVAL

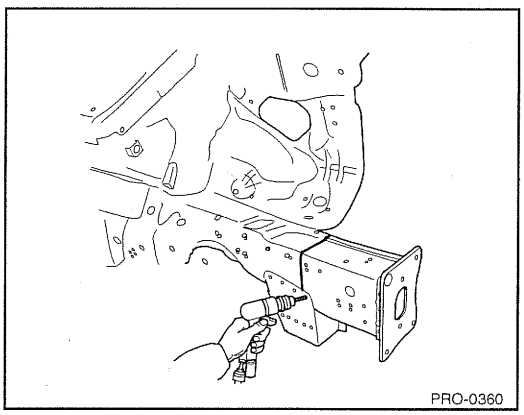
NOTE
This procedure is to be used only for repair of minor damage to the front side member and when it is impossible to straighten the damaged side member. The following procedure illustrates a repair for the front left side member.
The procedure may also be applied to the front right side-member.

1. Measure and mark the vertical cutlines on front side member inner tooling hole center.

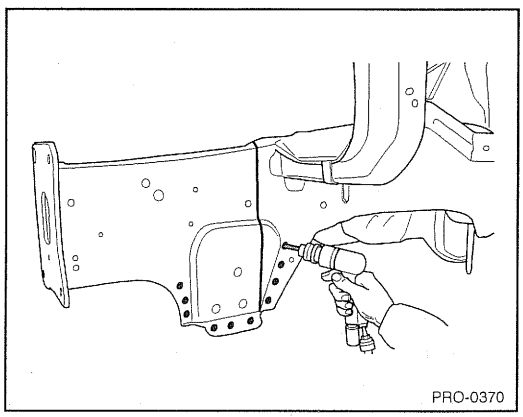


2. Drill out all the spotwelds to separate front side member outer front extension from front side member.

NOTE
1. When spotwelded portions are not apparent, remove paint with a rotary wire brush.



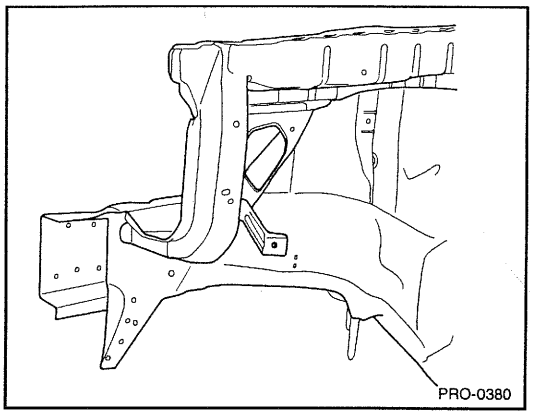
2. In order to perform cutting and separation of spotwelded points use a spot weld cutter which is larger than the size of the nugget to make a hole only in the panels to be replaced.



3. Cut through the front side member inner and outer at cutlines.

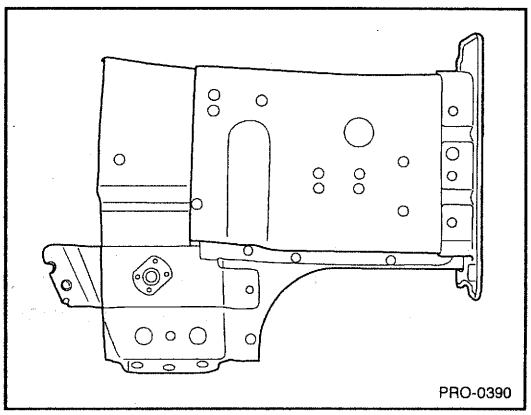
   NOTE
   Take care not to cut through front side member inner reinforcement.

4. Prepare all surfaces to be welded.

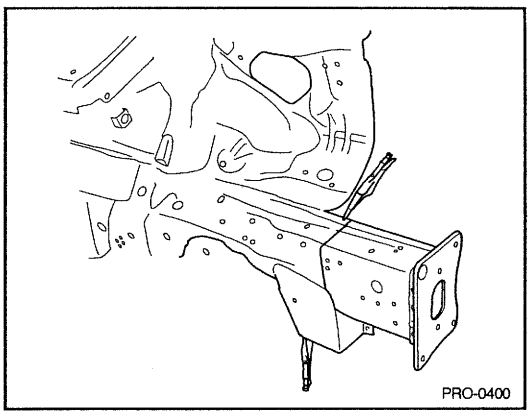


INSTALLATION

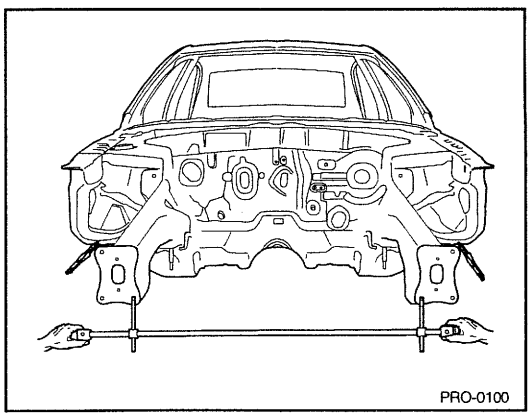
1. Transcribe the front side member inner and outer cutline to the new front side member, cut to length and chamfer butt end to improve weld surface.
2. Drill 8mm holes in new front side member for MIG plug welding.



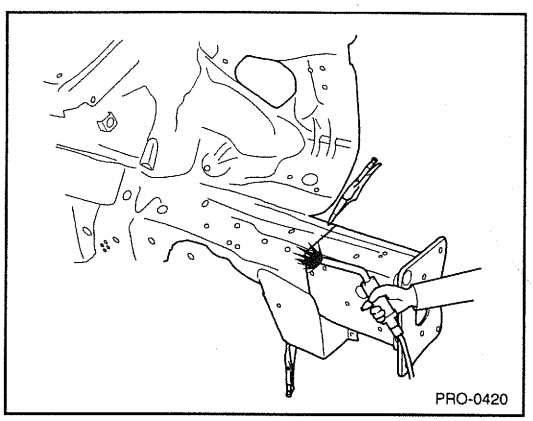
3. Fit and clamp the front side member inner and outer in place.
4. MIG plug weld all holes and MIG butt weld all seams.



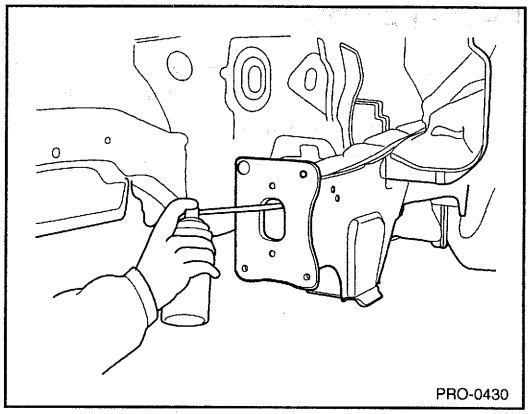
5. Measure each measurement point (Refer to the BODY DIMENSIONS) and correct the installation position.



6. Clean and prepare all welds, remove all residue.
7. Apply the two-part epoxy primer to the interior of the front side member.

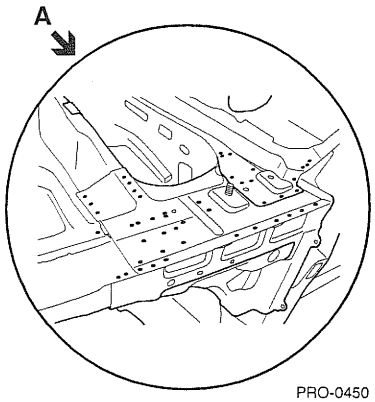

PRO-0420

8. Apply an anti-corrosion agent as required (Refer to the CORROSION PROTECTION).
9. Prepare the exterior surfaces for priming using wax and grease remover.
10. Apply metal conditioner and water rinse.
11. Apply conversion coating and water rinse.
12. Apply the two-part epoxy primer.
13. Apply the correct seam sealer to all joints carefully (Refer to the BODY SEALING LOCATIONS).
14. Reprime over the seam sealer to complete the repair.

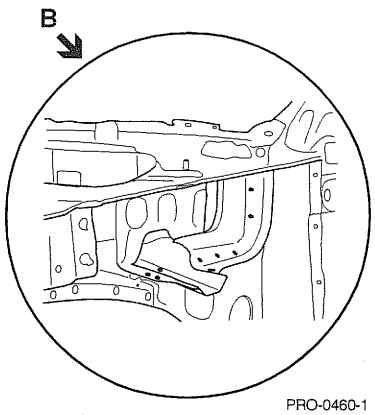

PRO-0430

FRONT PILLAR

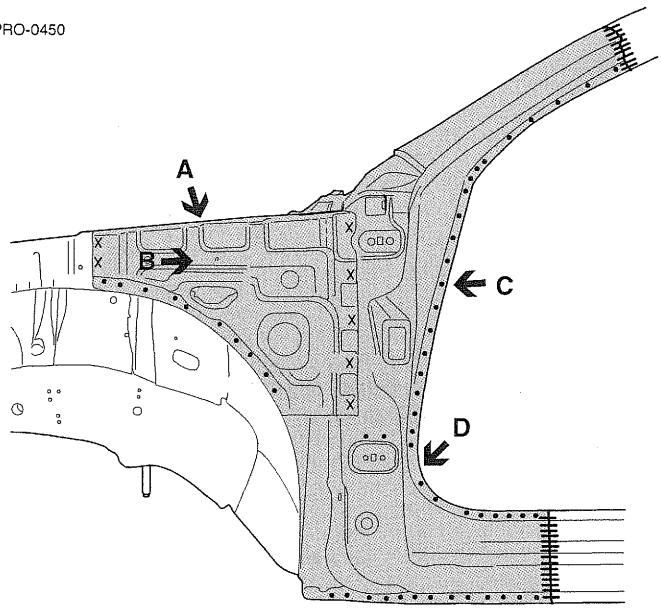
WELDLING POINTS



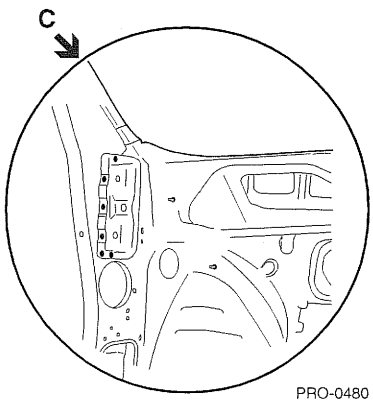
PRO-0450



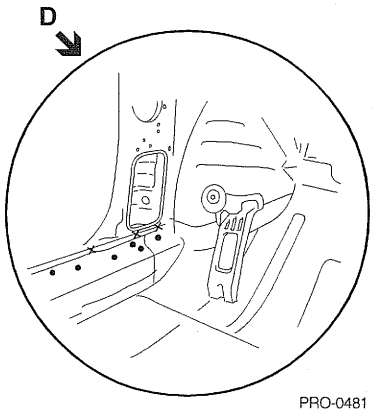
PRO-0460-1



PRO-0470



PRO-0480

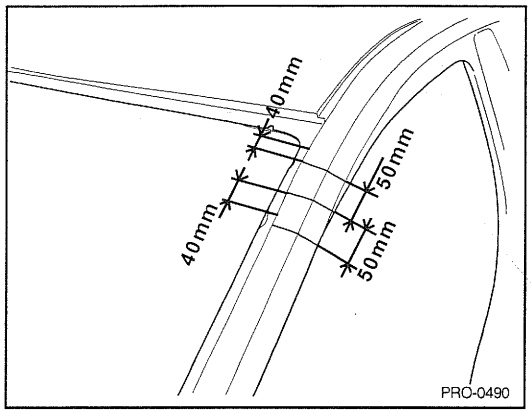


PRO-0481

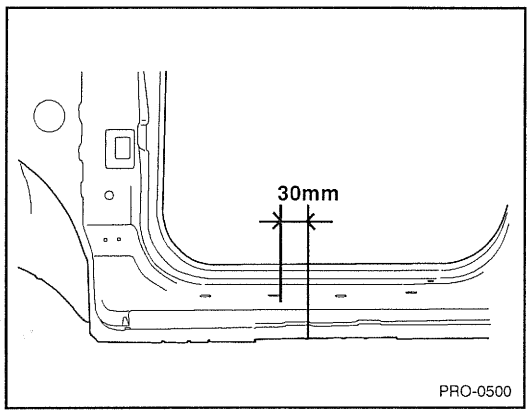
● MIG plug welding
MIG butt welding
MIG lap welding

REMOVAL

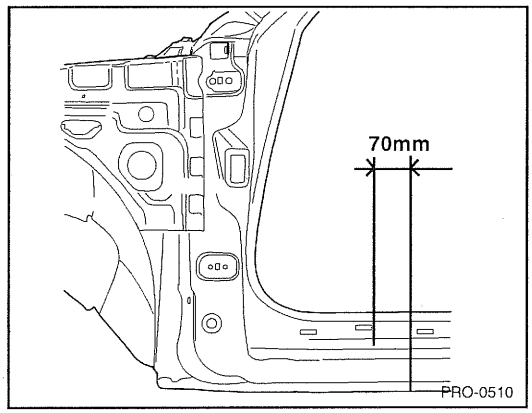
1. Measure and mark the each cutline on the front outer pillar at 40mm from the roof panel end line as indicated in the illustration.



2. Measure and mark the cutline on front side sill outer panel as shown in the illustration.

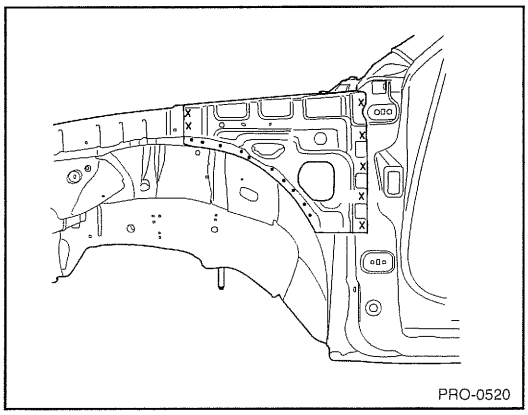


3. Depending on the extend of damaged area, it may be possible to determine the cutting range within indicated in the illustration.

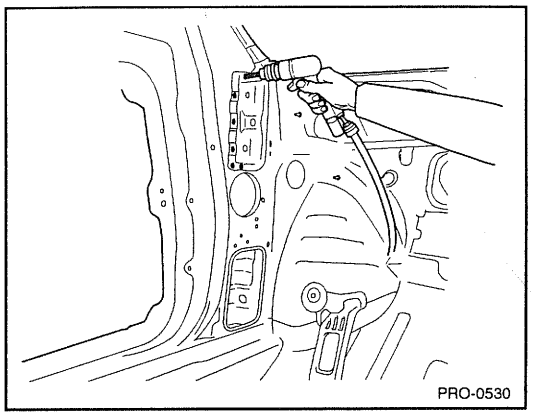


4. To remove the front pillar, grind away and drill out all welds attaching the cowl side upper outer panel as shown in the illustration.

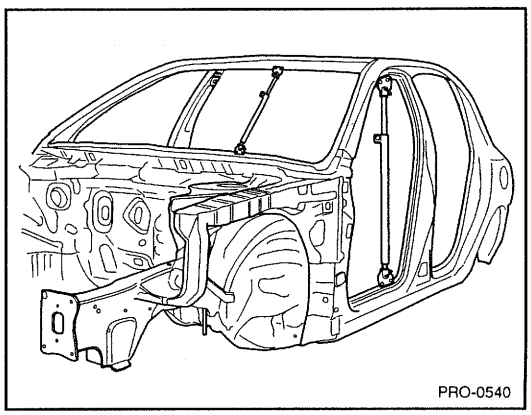
   NOTE
   If it is possible that the cowl side upper outer panel is reusable, be careful not to damage it while removing.



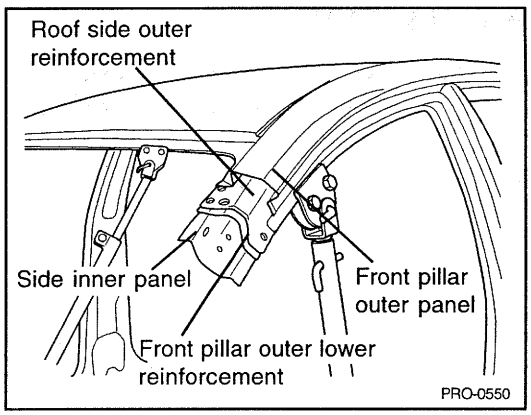
5. Drill out all welds attaching the front pillar to cowl cross member bracket.
6. Remove spotwelds and lap welds attaching cowl cross member bracket to remove side inner pillar.


PRO-0530

7. Before cutting front pillar, be sure to support roof panel.


PRO-0540

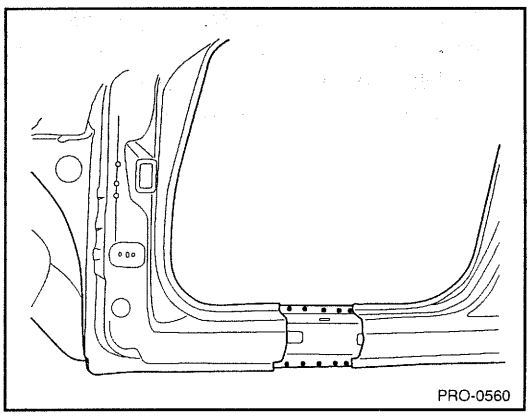
8. Cut the front pillar through each cutline, taking care not to damage the other panel as illustration.



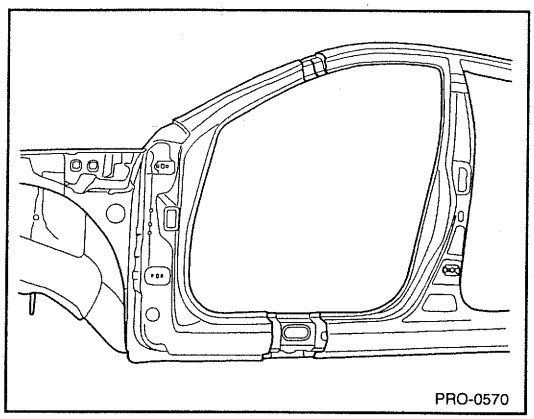
PRO-0550

9. Before cutting the front side sill outer panel, make a rough cut the side sill outer panel only.

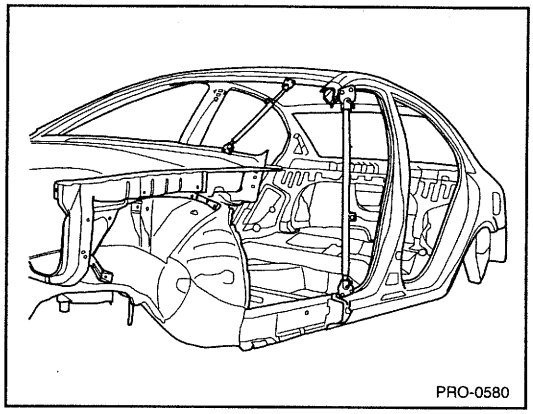
NOTE
When cutting the front side sill outer panel, be careful not to cut side outer reinforcement.


PRO-0560

10. Cut the side outer reinforcement as shown in the illustration.
11. Cut the side sill inner panel vertical cutting line and remove the front pillar.

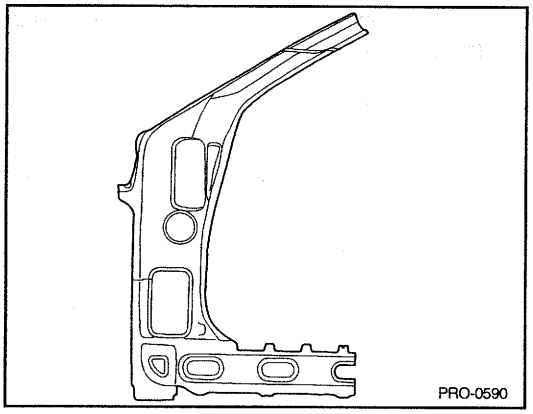

PRO-0570

12. Straighten all flanges as necessary, prepare all surfaces to be welded.

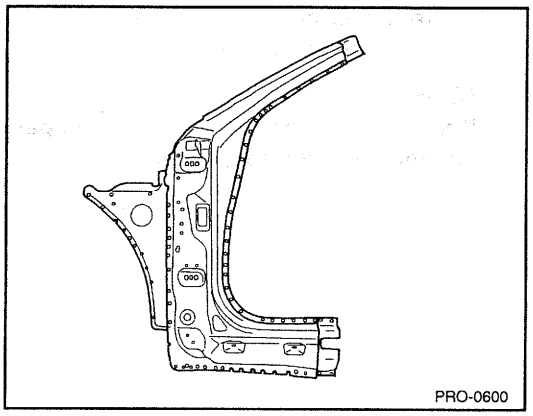

PRO-0580

INSTALLATION

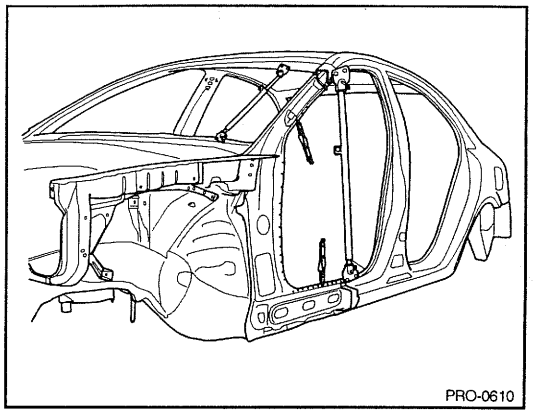
1. Transcribe the cutline to the new side inner panel, cut to length and chamfer butt end to improve weld surface.


PRO-0590

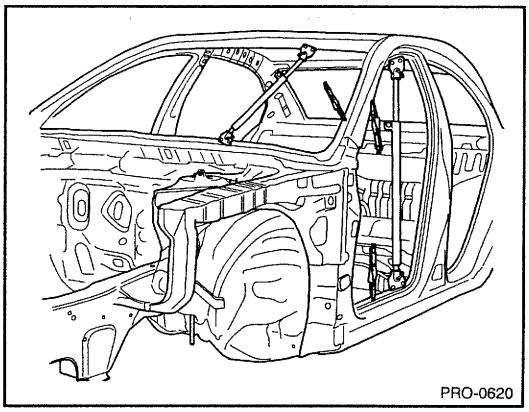
2. Transcribe the cutline to the new side outer reinforcement and new front pillar, adding 30mm overlap to end and cut to length.
3. Drill 8mm holes along outer panel flanges in production location for attachment to other panels.


PRO-0600

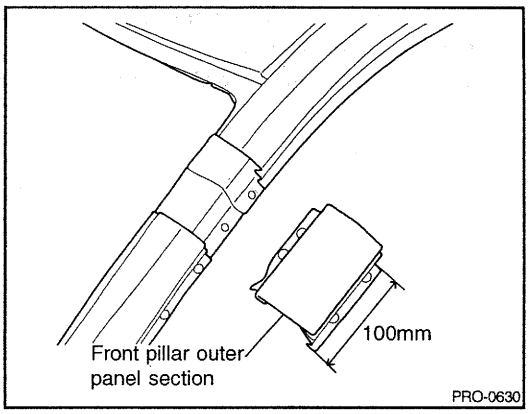
4. Transcribe the cutline to the new side inner panel, adding 30mm overlap to end and cut to length.
5. Drill 8mm holes in the side inner panel for MIG plug welding.
6. Fit and clamp the new side inner panel in place for welding.
7. MIG plug weld all holes and MIG butt weld the seams.


PRO-0610

8. Temporarily install front pillar outer panel in place.
9. Measure and each measurement point (Refer to the BODY DIMENSIONS) and correct the installation position.
10. If necessary, make temporary welds, and then check to confirm that the closing and fit for windshield glass, door and fender are correct.

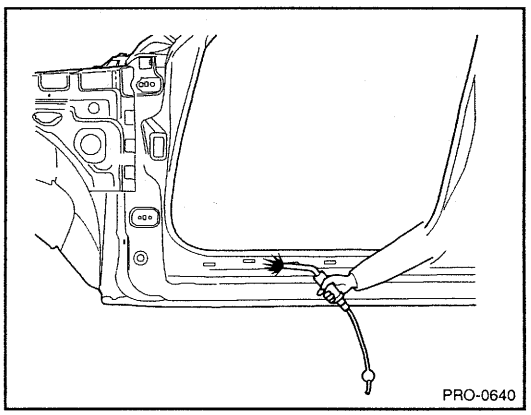

PRO-0620

11. MIG butt weld front pillar outer panel and side sill outer reinforcement seams.
12. Reattach the cut away front pillar outer panel section, then MIG butt weld.



PRO-0630

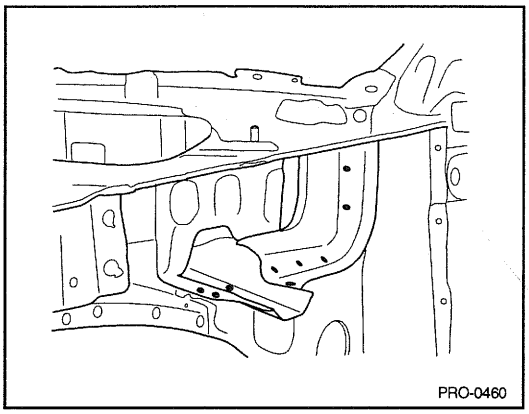
13. MIG plug weld all holes and MIG butt weld all seams in the side outer panel.
14. Clean and prepare all welds, remove all residue.
15. Apply body filler to joints and sand as needed.
16. Apply the two-part epoxy primer to the interior of the front pillar.


PRO-0640

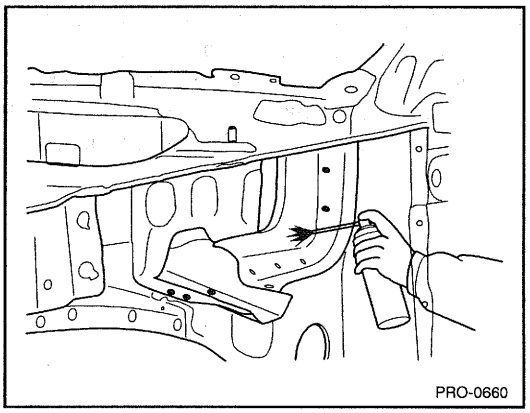
17. Clean all welds with a disc grinder.

NOTE

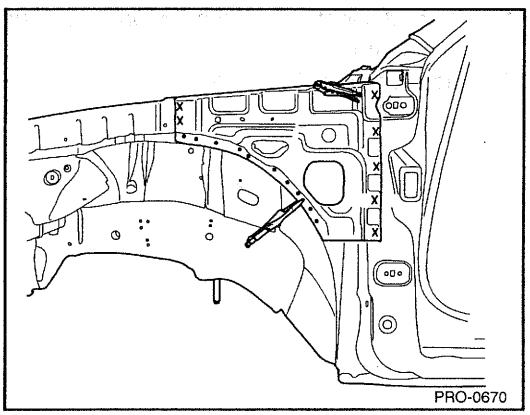
1. **Be careful not to grind welded portions too much.**
2. **The internal parts will be stronger if the weld traces are not ground.**


PRO-0460

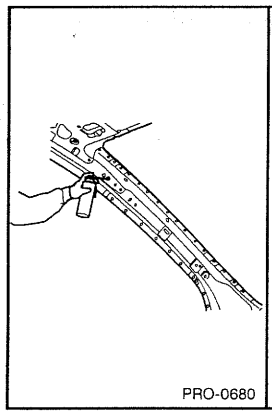
18. Before welding the cowl side upper outer panel, apply the two-part epoxy primer and anti-corrosion agent to the interior of the cowl side upper outer panel.

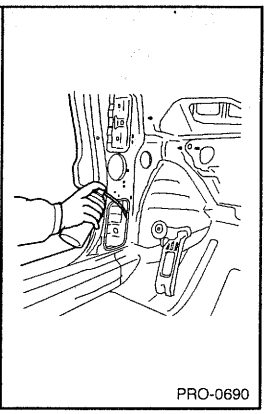

PRO-0660

19. Install the cowl side upper outer panel in place.
20. MIG plug weld all holes.
21. Clean and prepare all welds, remove all residue.

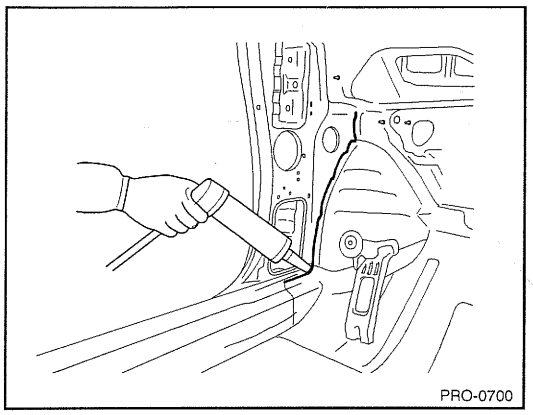

PRO-0670

22. Apply an anti-corrosion agent to the welded parts and inside of front pillar (Refer to the CORROSION PROTECTION).
23. Prepare exterior surfaces for priming, using wax and grease remover.
24. Apply metal conditioner and water rinse.
25. Apply conversion coating and water rinse.
26. Apply the two-part epoxy primer.


PRO-0680

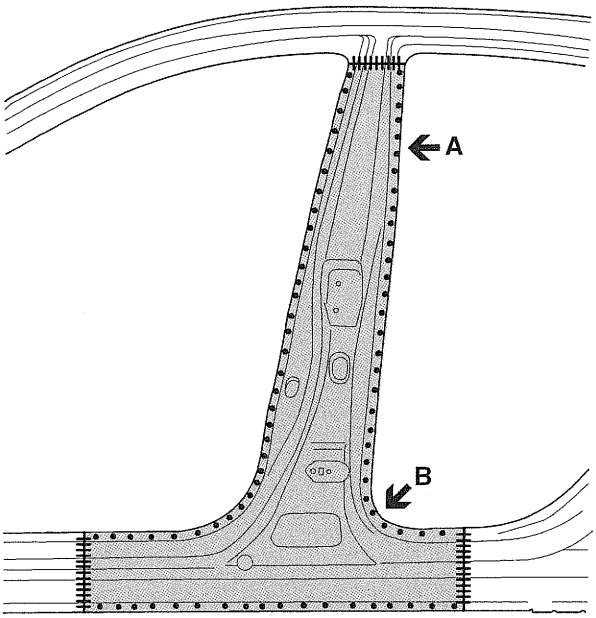

PRO-0690

27. Apply the correct seam sealer to all joints carefully (Refer to the BODY SEALING LOCATIONS).
28. Reprime over the seam sealer to complete the repair.

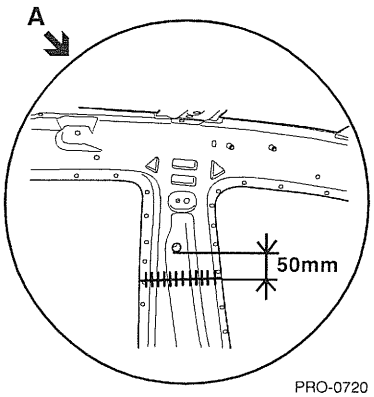


CENTER PILLAR

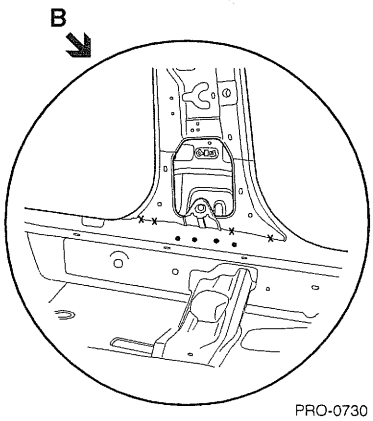
WELDLING POINTS



PRO-0710



PRO-0720

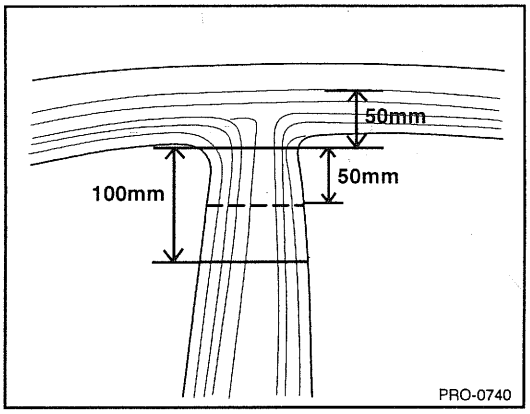


PRO-0730

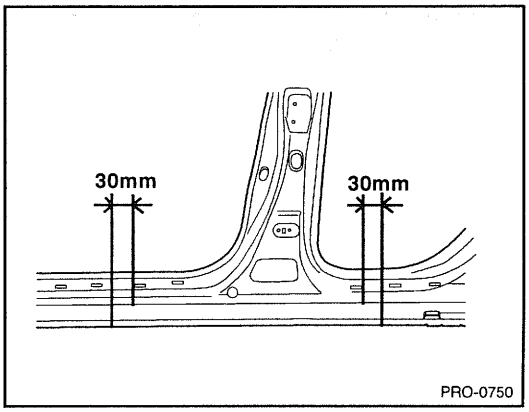
● MIG plug welding
MIG butt welding

REMOVAL

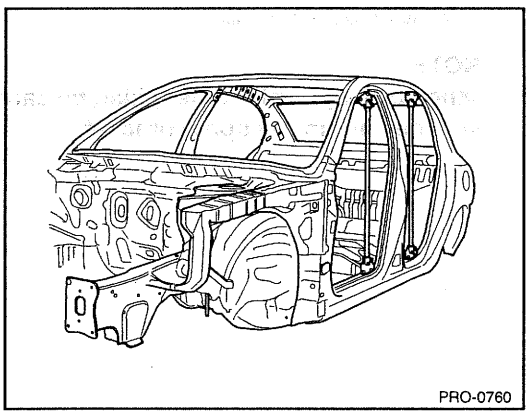
1. Measure and mark the horizontal cutting line on center pillar outer panel as indicated in the illustration.



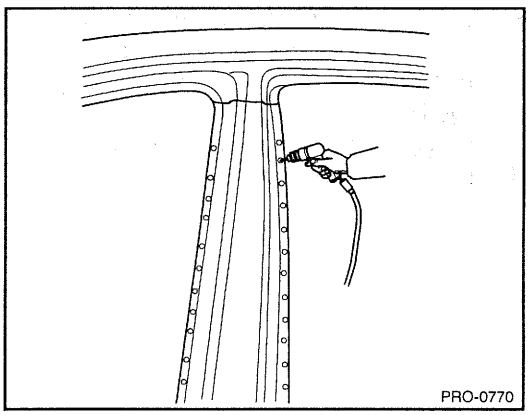
2. Measure and mark the vertical cutline on side sill outer panel 30mm from the front door step trim mounting hole.



3. Before cutting center pillar, be sure to support roof panel.

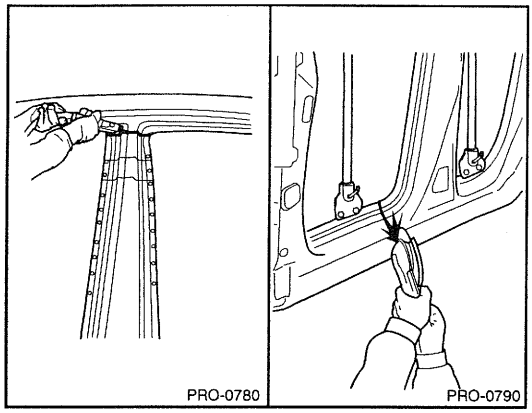


4. Drill out all spotwelds attaching the center outer pillar to the body to remove center outer pillar.

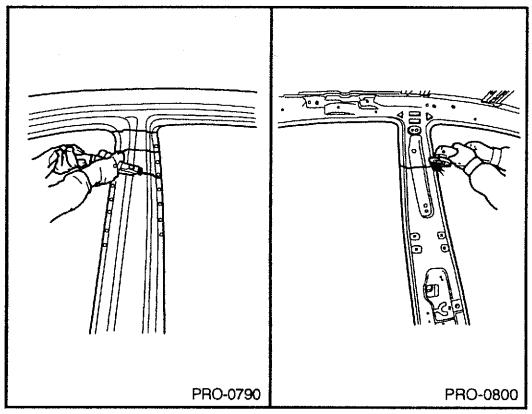


5. Cut through center outer pillar and side sill outer panel at cutlines.

NOTE
When cutting side sill outer panel take care not to cut through mating flanges or side outer reinforcement.

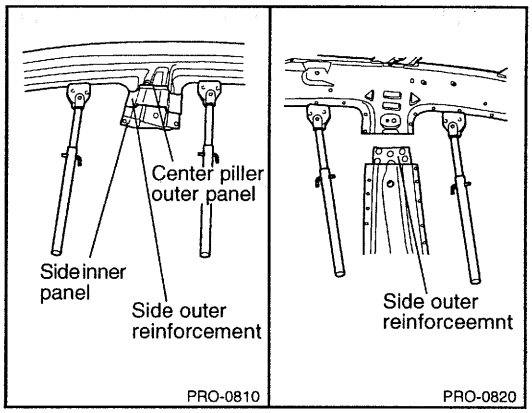


6. After cutting side outer panel (center pillar outer & side sill), cut the center pillar outer reinforcement and center pillar inner panel.

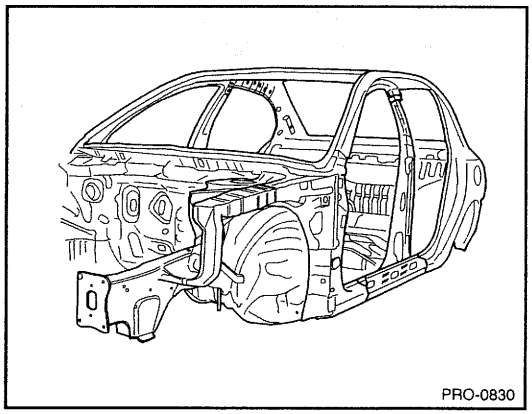


7. Remove the center pillar.

NOTE
When cutting center inner pillar, be careful not to cut front seat belt mounting upper bracket.

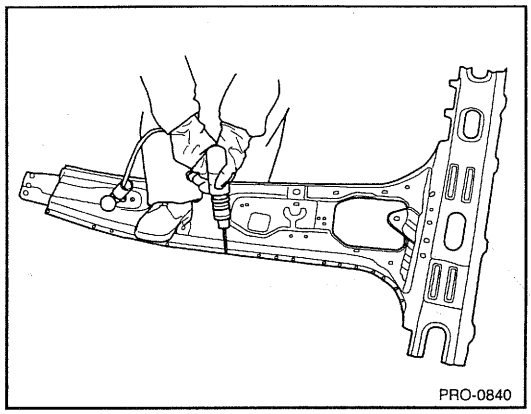


8. Determine if the side outer reinforcement is damaged and needs to be replaced. If replacing is necessary, mark out the damaged portion of the reinforcement. Cut at cutlines and remove damaged portion.
9. Straighten all flanges as necessary.
10. Prepare all surfaces to be welded.

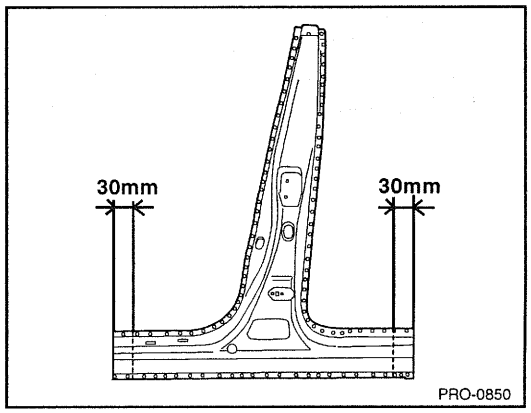


INSTALLATION

1. In order to install center inner pillar drill out all spotwelds attaching the roof side outer rail to center inner pillar to separate them.

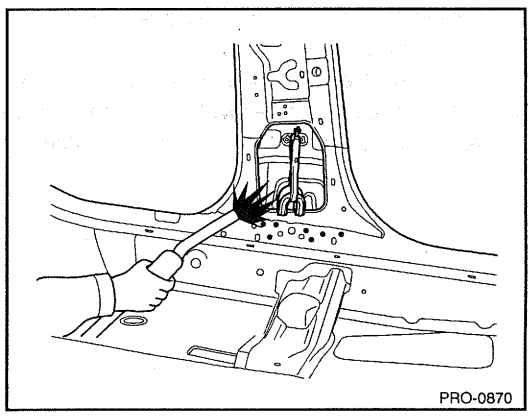

PRO-0840

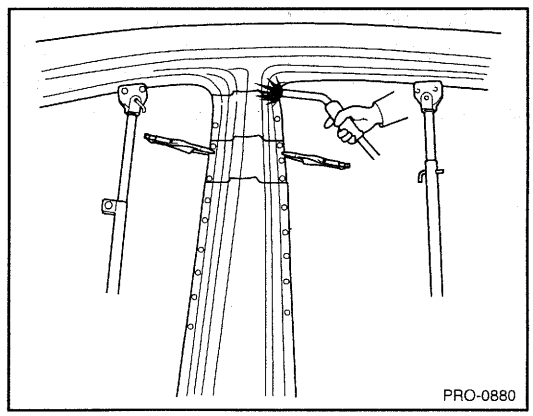
2. Transcribe the center outer pillar cutlines to the new center outer pillar, adding 30mm overlap at center lower pillar ends.
3. Cut and chamfer butt end to improve weld surface.
4. Drill 8mm holes in overlap area and along outer panel flanges.



PRO-0850

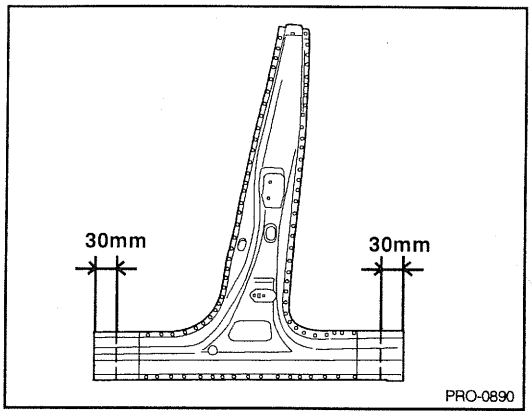
5. MIG butt weld all seams in center inner pillar and sill side outer reinforcement as shown in the illustration.


PRO-0870

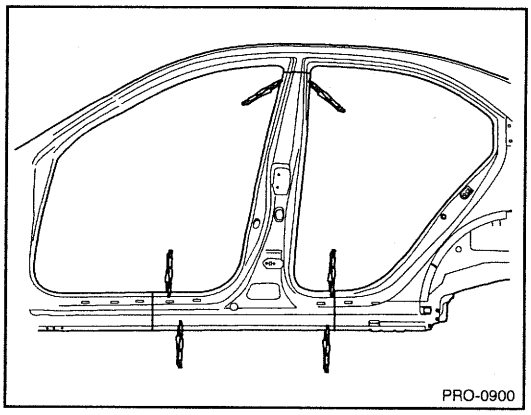

PRO-0880

6. Transcribe the cutting line dimensions to the new side sill outer reinforcement, adding 30mm overlap to each end and cut to length.
7. Drill 8mm holes in overlap areas on each end of new side sill outer reinforcement and clamp the new side sill outer reinforcement in place.
8. MIG plug weld all holes and MIG butt weld seams.

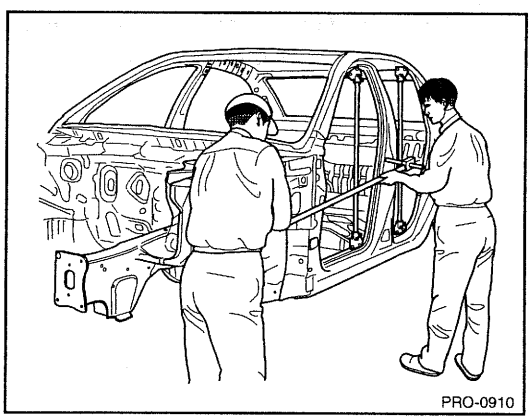
NOTE
The reinforcement will be stronger if the weld traces are not ground.



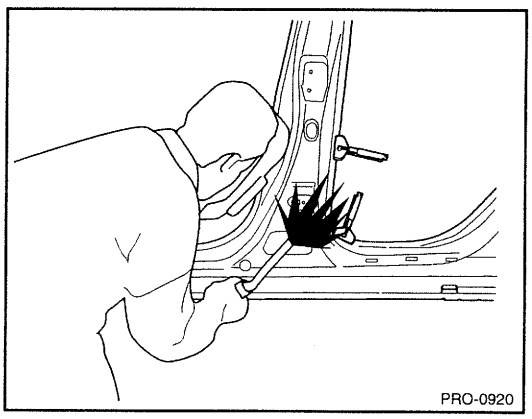
9. Temporarily install new center outer panel in place.
10. Screw center pillar in place.
11. Measure and each measurement point (Refer to the BODY DIMENSIONS) and correct the installation position.



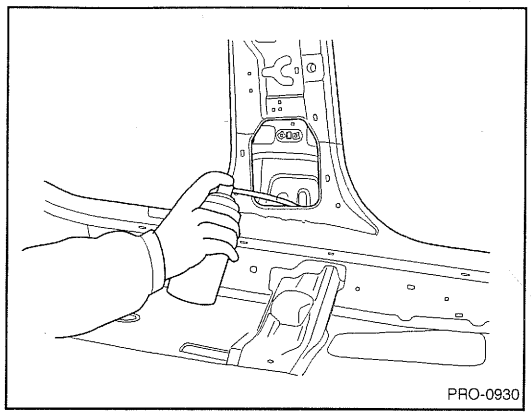
12. Check the fit of the front and rear doors.
13. Reinstall center outer pillar and screw in place.
14. MIG plug weld all holes and MIG butt weld all seams.
15. Clean and prepare all welds, and remove all residue.
16. Apply body filler to the outer center pillar seam. Sand and finish.

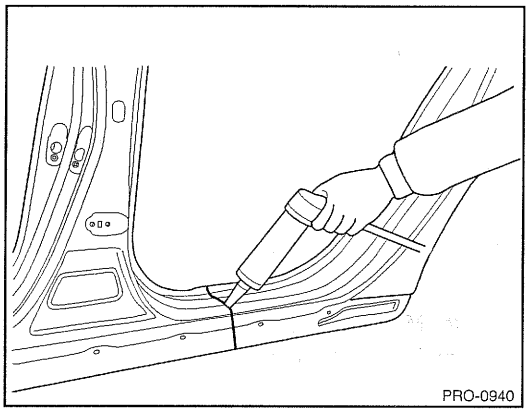


17. Apply the two-part epoxy primer to the interior of the center pillar.
18. Apply an anti-corrosion agent to the welded parts and interior of the center pillar (Refer to the CORROSION PROTECTION).
19. Prepare exterior surfaces for priming, using wax and grease remover.



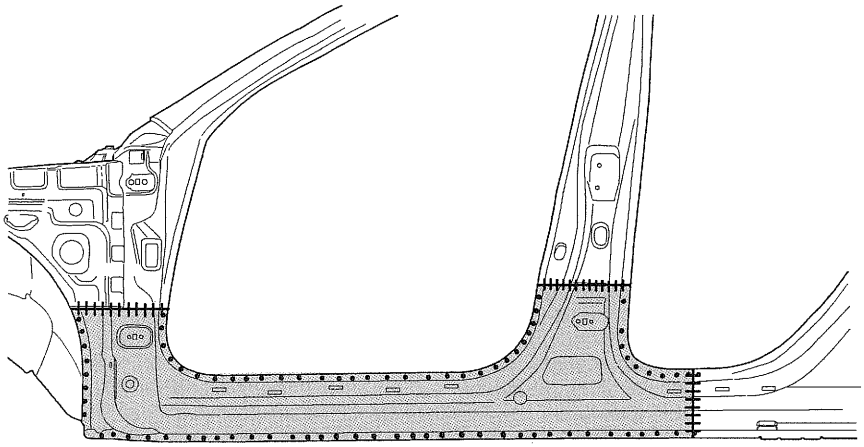
20. Apply metal conditioner and water rinse.
21. Apply conversion coating and water rinse.
22. Apply the two-part epoxy primer.
23. Apply the correct seam sealer to all joints carefully (Refer to the BODY SEALING LOCATIONS).
24. Reprime over the seam sealer to complete the repair.


PRO-0930


PRO-0940

SIDE SILL (ASSEMBLY)

WELDLING POINTS

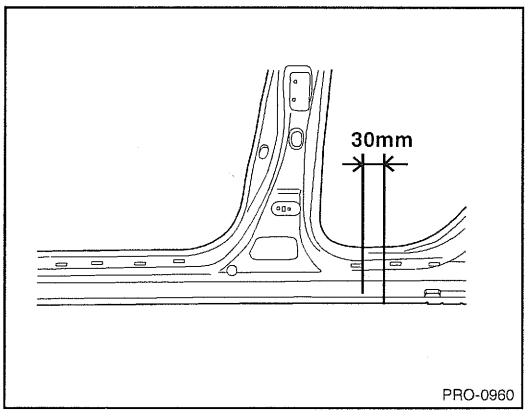


● MIG plug welding
⫲ MIG butt welding

PRO-0950

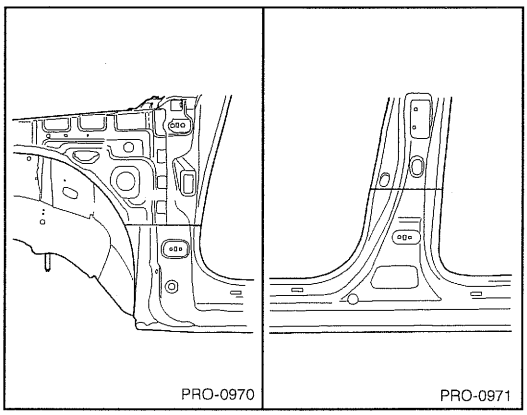
REMOVAL

1. Measure and mark vertical cutting line from the rear door step trim mounting hole on the rear side sill outer panel.



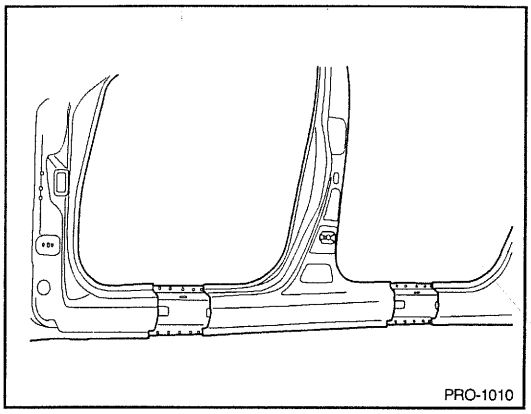
PRO-0960

2. At the front and center pillar, measure and mark horizontal cutting lines from the door hinge mounting hole on the side sill outer panel as shown in the illustration.

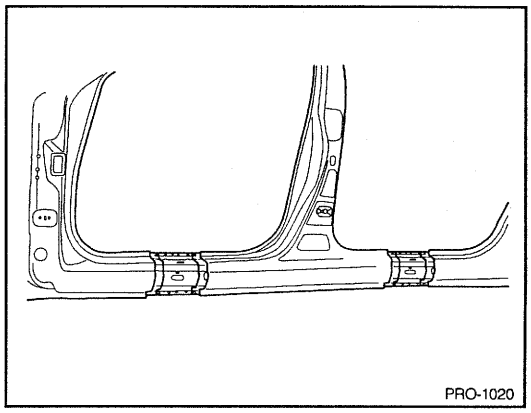


PRO-0970 PRO-0971

3. Cut the side sill outer panel along cutlines. Be careful not to cut mating flanges.
4. Drill out all spotwelds, attaching the side sill outer panel to side sill outer reinforcement.
5. Remove the side sill outer panel.

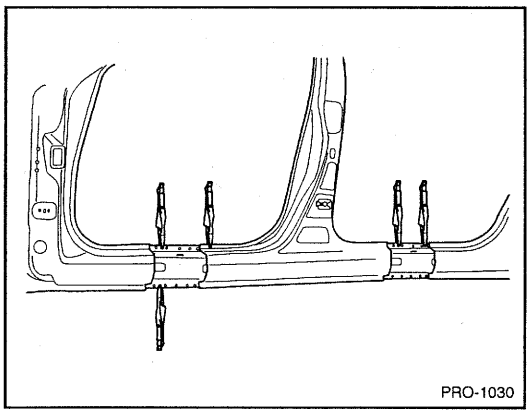

PRO-1010

6. Determine if the side sill outer reinforcement is damaged and needs to be replaced, measure cutting line on reinforcement as shown in the illustration.
7. Cut side sill outer reinforcement along the cutting line.
8. Drill out spotwelds attaching the side sill outer reinforcement to the body and remove side sill outer reinforcement.
9. Prepare all surfaces to be welded.


PRO-1020

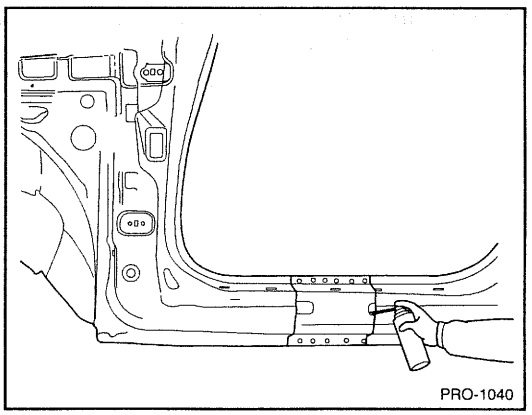
INSTALLATION

1. Transcribe cutline dimension to side sill outer panel, adding 30mm overlap to rear end and cut to length.
2. Drill 8mm holes in overlap area on rear end and along front flange.
3. Fit and clamp the side sill outer reinforcement in place.
4. MIG plug weld all holes and MIG butt weld seams.

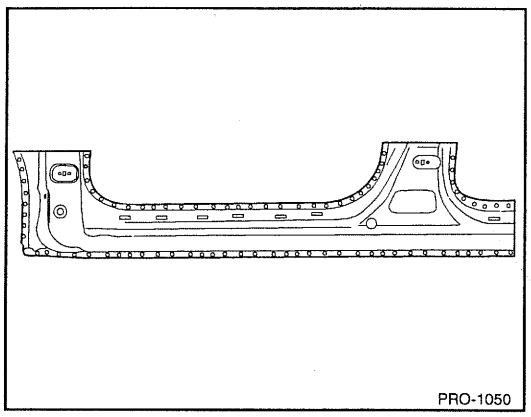

PRO-1030

5. Before welding the side sill outer panel, apply the two-part epoxy primer and anti-corrosion agent to the welded parts.

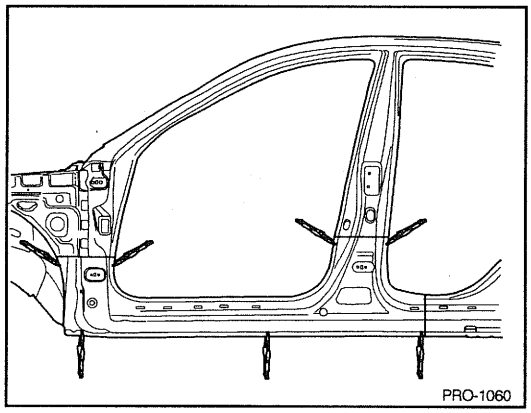
NOTE
The reinforcement will be stronger if the weld traces are not ground.


PRO-1040

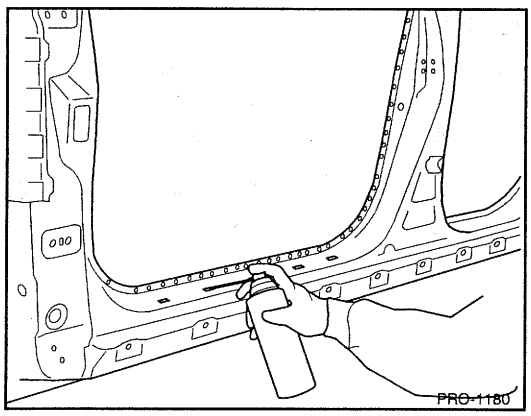
6. Using service panel for replacement of side sill outer panel, drill 8mm holes in overlap areas and along upper and lower flanges.


PRO-1050

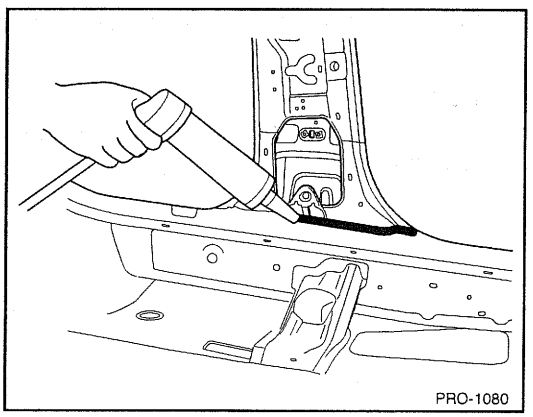
7. Crimp flanges on the remaining portion of the side sill outer panel at all joint for overlap.
8. Fit and clamp the side sill outer panel in place.
9. MIG plug weld all holes and MIG butt weld seams.
10. Clean and prepare all welds and remove all residue.
11. Apply body filler to the side sill outer seams.
12. Apply the two-part epoxy primer to the interior of the side sill.


PRO-1060

13. Apply an anti-corrosion agent to welded parts and interior of the side sill (Refer to the CORROSION PROTECTION).
14. Prepare the exterior surfaces for priming, using wax and grease remover.
15. Apply metal conditioner and water rinse.
16. Apply conversion coating and water rinse.
17. Apply the two-part epoxy primer.

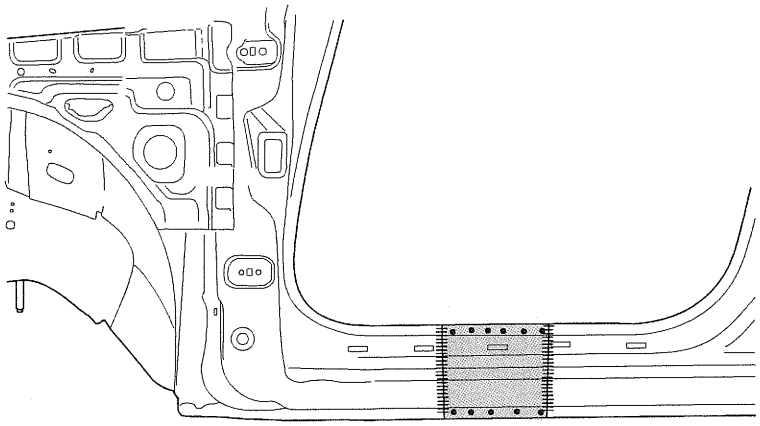

PRO-1180

18. Apply the correct seam sealer to all joints (Refer to the BODY SEALING LOCATIONS).
19. Reprime over the seam sealer.


PRO-1080

SIDE SILL (PARTIAL)

WELDLING POINTS

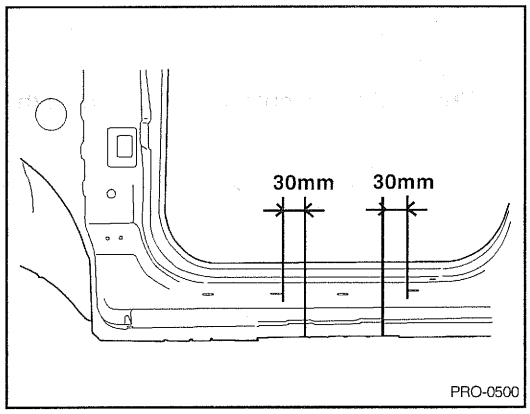


● **MIG plug welding**
⫴ **MIG butt welding**

PRO-1100

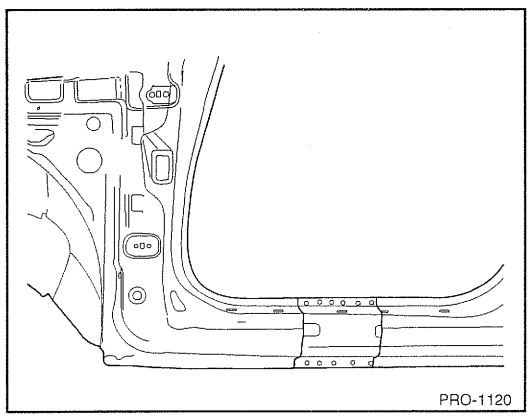
REMOVAL

1. Depending on the extent of damage, mark out the damaged portion of the side sill.



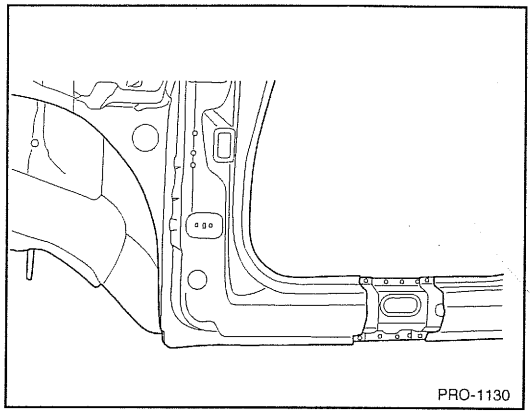
PRO-0500

2. Drill out the spotwelds in upper and lower flanges of side sill between cutlines to remove side sill outer panel and cut the damaged portion of the side sill at the cutlines.



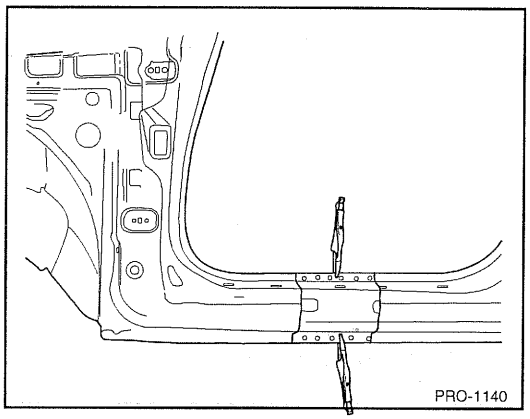
PRO-1120

3. Determine if the side sill outer reinforcement is damaged and needs to be replaced. If replacing is necessary, mark out the damaged portion of the side sill outer reinforcement. Cut at cutting lines and remove the damaged portion.
4. Prepare all surfaces to be welded.


PRO-1130

INSTALLATION

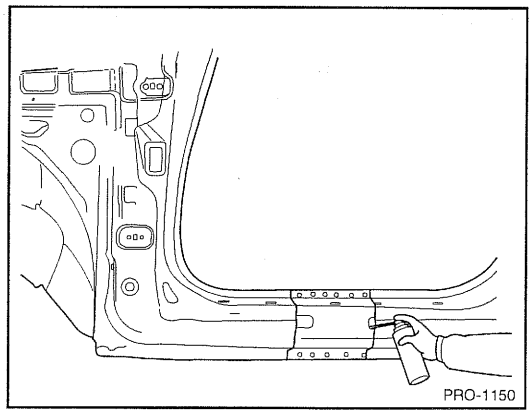
1. Transcribe the cutting line to the new side sill outer reinforcement, adding 30 mm overlap to each end and cut to length
2. Drill 8 mm holes in overlap areas on each end and upper flange of new side sill outer reinforcement and clamp the new side sill outer reinforcement in place.


PRO-1140

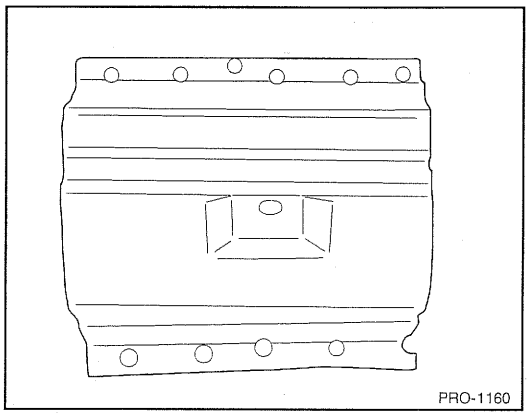
3. MIG plug weld all holes and MIG butt weld all seams.

   NOTE
   The reinforcement will be stronger if the weld traces are not ground.

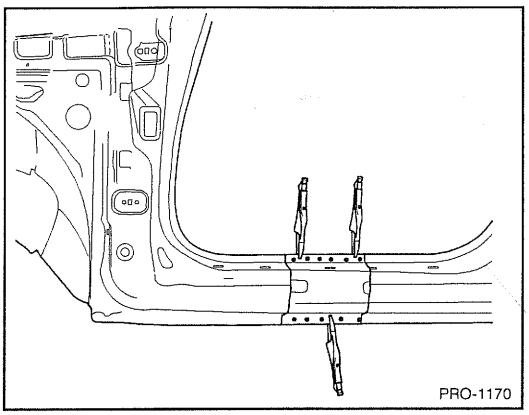
4. Before welding the side sill outer panel, apply the two part epoxy primer and anti-corrosion agent to the welded parts.


PRO-1150

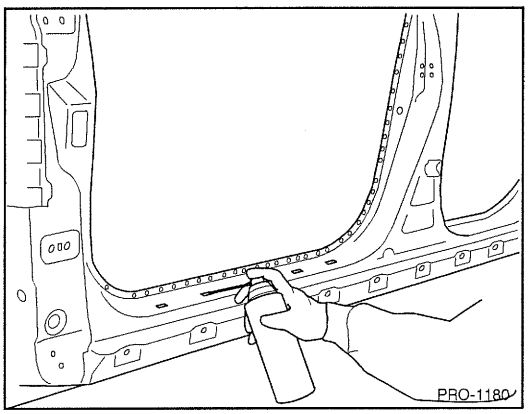
5. Transcribe the side sill outer panel cutline to the new side sill, adding 30 mm overlap to each end, cut and chamfer butt end to improve weld surface.
6. Drill 8 mm holes in overlap areas on each end and along upper and lower flanges of the new side sill outer panel for MIG plug welding.


PRO-1160

7. Fit and clamp the side sill in place.
8. MIG plug weld all holes and MIG butt weld seams.
9. Clean and prepare all welds, remove all residue.
10. Apply body filler to the side sill outer seams.
11. Apply the two-part epoxy primer to the interior of the side sill.

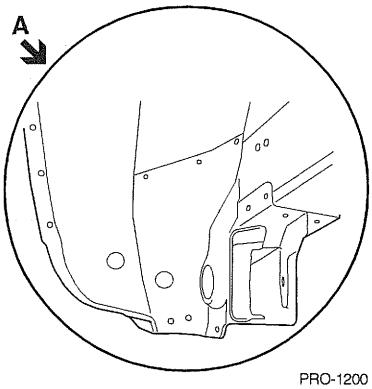


12. Apply an anti-corrosion agent to the welded parts and interior of the side sill (Refer to the CORROSION PROTECTION).
13. Prepare the exterior surfaces for priming, using wax and grease remover.
14. Apply metal conditioner and water rinse.
15. Apply conversion coating and water rinse.
16. Apply the two-part epoxy primer.

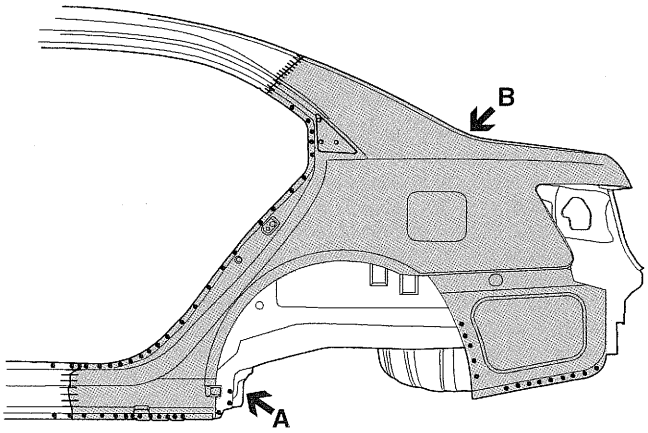


QUARTER PANEL

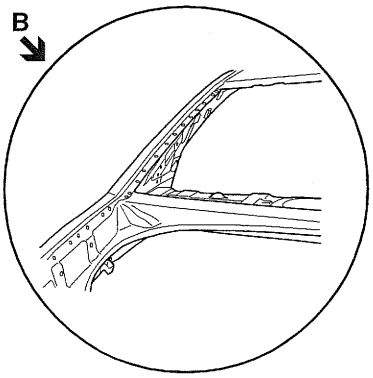
WELDLING POINTS



PRO-1200



PRO-1201

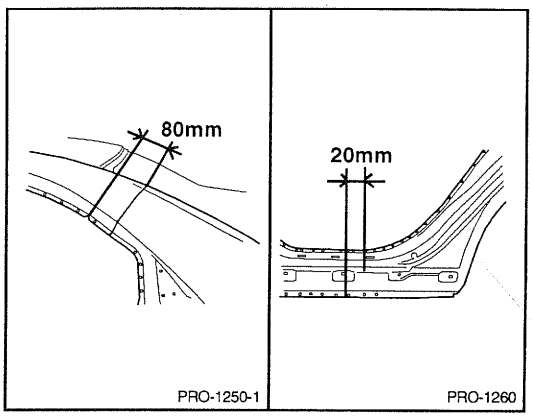


PRO-1220

● MIG plug welding
MIG butt welding

REMOVAL

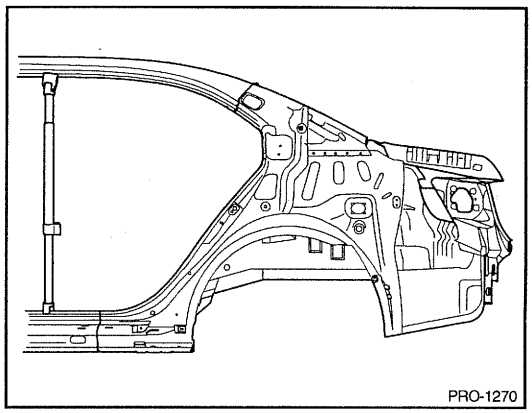
1. Depending on the extent of damage, measure and mark cutlines on the quarter outer panel as indicated in the illustration.



2. Drill out all attaching spotwelds on the quarter outer panel, including the seam around the door lip opening.
3. Cut the quarter outer panel at cutlines and remove the quarter outer panel as illustration.

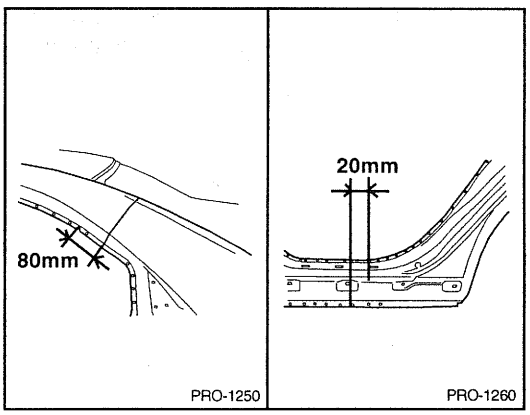
   NOTE
   When cutting the quarter outer panel, be careful not to cut side inner panel.

4. Prepare all surfaces to be welded.

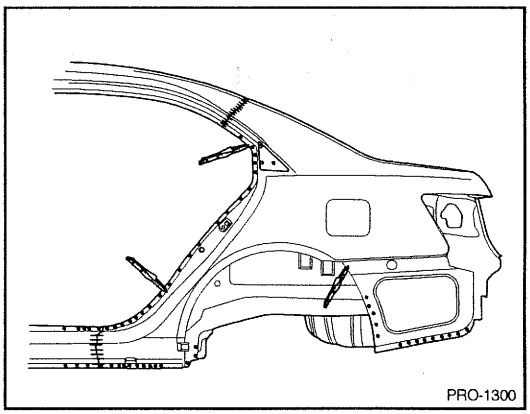


INSTALLATION

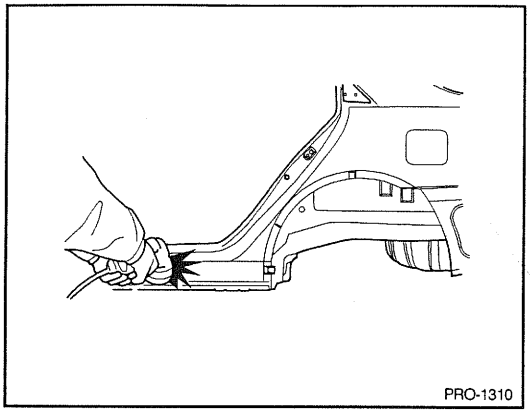
1. Transcribe the cutline to the new quarter outer panel, adding 30 mm for overlap at the old joint.
2. Drill 8 mm holes in overlap areas and along upper and lower flanges of the new quarter outer panel for MIG plug welding.



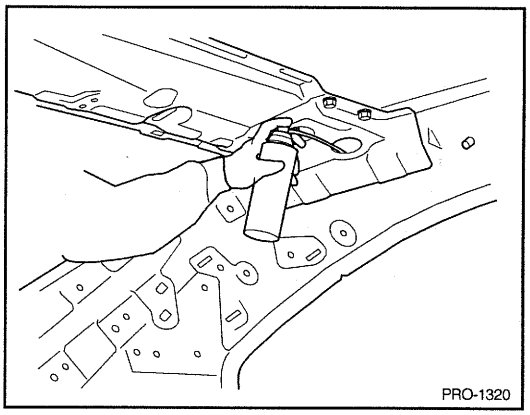
3. Fit and clamp the quarter outer panel in place.
4. MIG plug weld all holes and MIG butt weld seams. At the wheel well the edge must be crimped over the wheel housing.
   This joint may be welded after crimping or applying a bead of adhesive which may be applied to the joint before or after crimping.
5. Clean and prepare all welds, remove all residue.



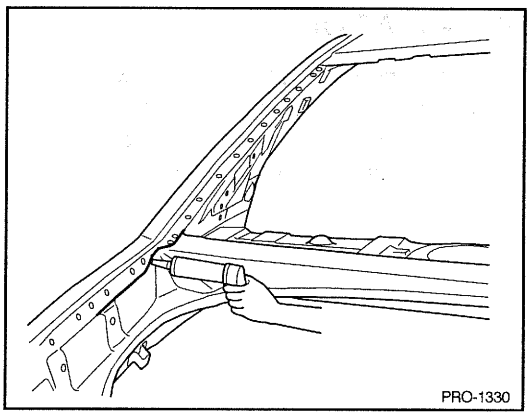
6. Apply body filler to the welded seam. Sand and finish. Apply the two-part epoxy primer to the interior of the quarter outer panel.



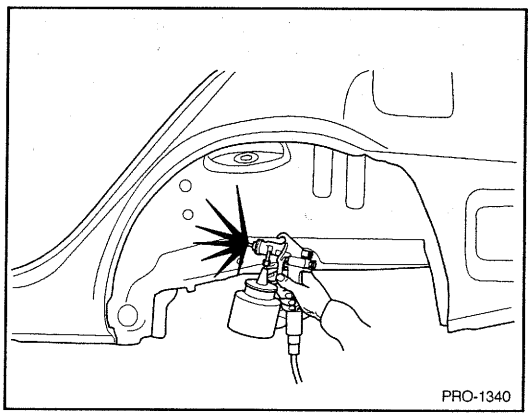
7. Apply an anti-corrosion agent to the welded parts and interior of the quarter outer panel (Refer to the CORROSION PROTECTION).
8. Prepare exterior surfaces for priming, using wax and grease remover.
9. Apply metal conditioner and water rinse.
10. Apply conversion coating and water rinse.
11. Apply the two-part epoxy primer.



12. Apply the correct seam sealers to all joints.
13. Reprime over the seam sealer to complete the repair.

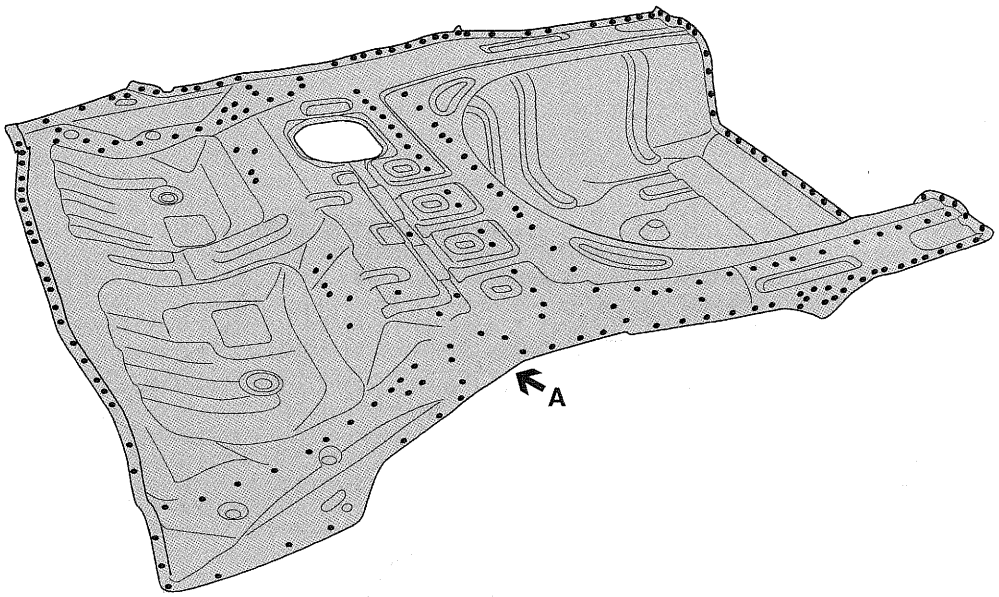


14. In order to improve corrosion resistance, if necessary, apply an under body anti-corrosion agent to the wheel well (Refer to the CORROSION PROTECTION).

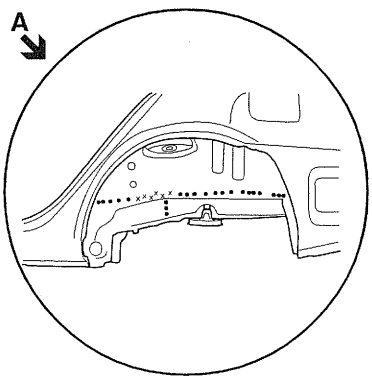


REAR FLOOR PANEL

WELDLING POINTS



PRO-1520

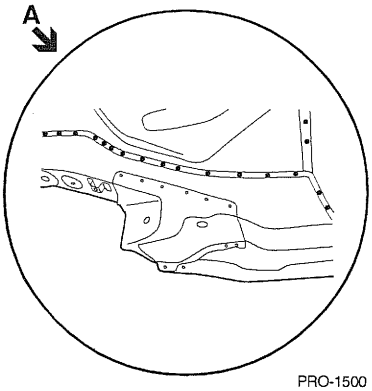


PRO-1521

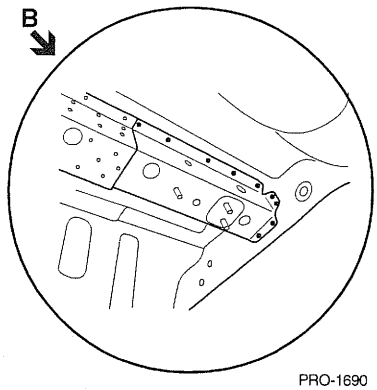
● MIG plug welding
⫼ MIG butt welding

REAR FLOOR SIDE MEMBER (ASSEMBLY)

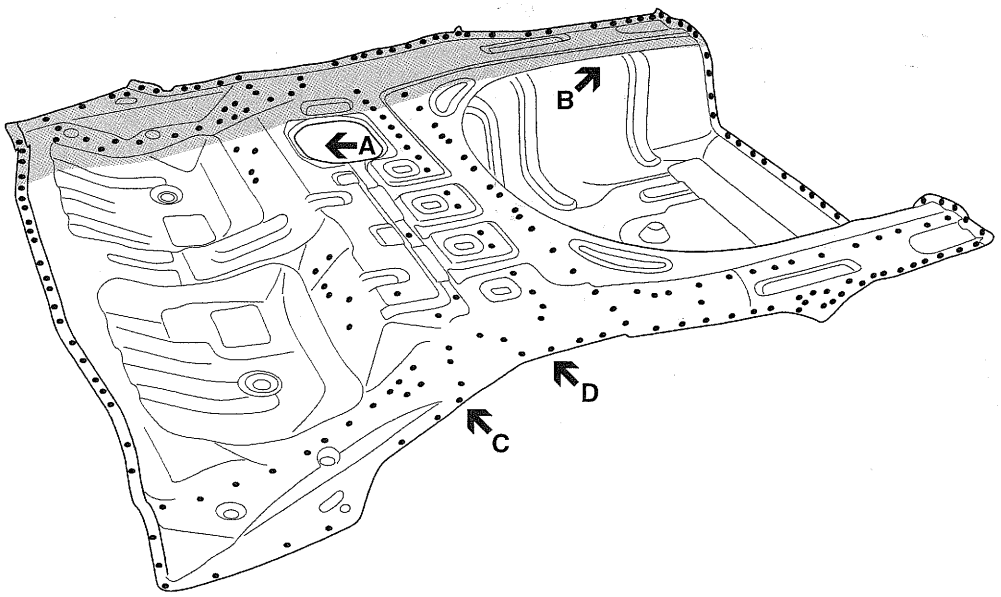
WELDLING POINTS



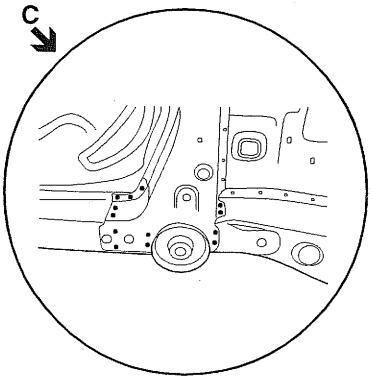
PRO-1500



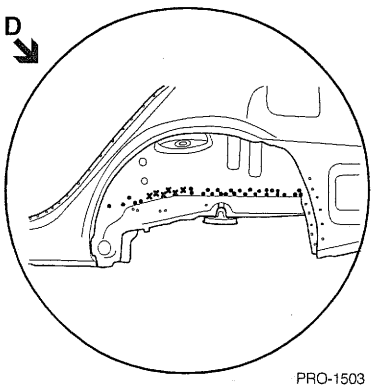
PRO-1690



PRO-1520



PRO-1502



PRO-1503

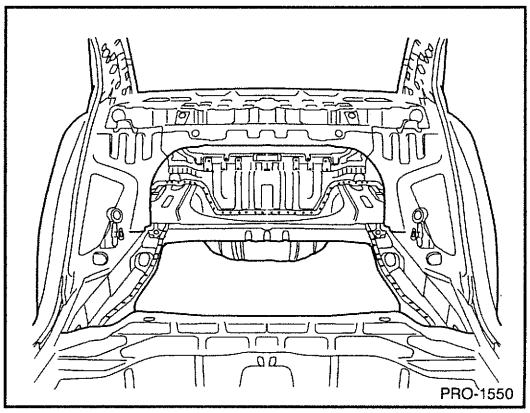
● MIG plug welding
MIG butt welding

NOTE
Because the rear floor side members are desigened to absorb energy during a rear collision, care must be taken when deciding to use this repair method. This repair is recommended only for moderate damage to vehicle, where distortions do not extend forward of the trunk region. If the damage is more severe, then the entire side member assembly should be replaced at factory seams without employing this sectioning procedure.

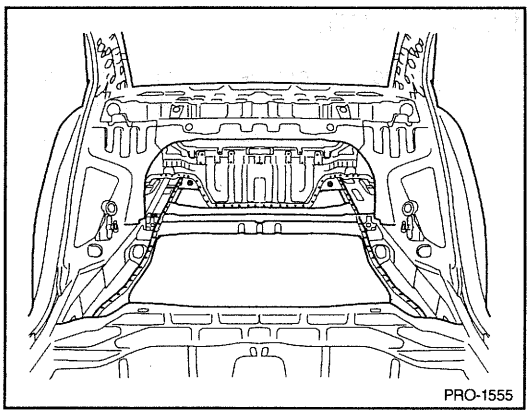
Refer to the body dimension chart and measure the vehicle to determine straigthening and alignment requirements. **The body must be returned to its original dimension before beginning the repair procedure.**

REMOVAL

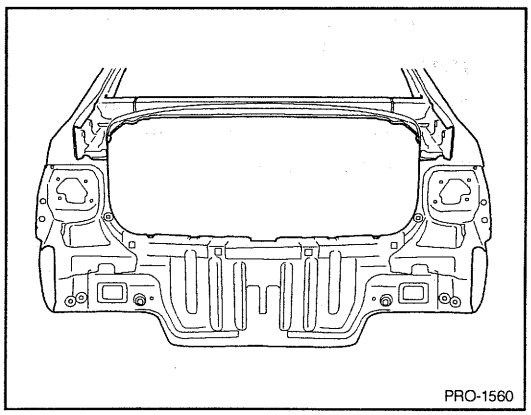
1. Drill out all the spotwelds attaching the rear floor panel to the wheel housings and rear side members.



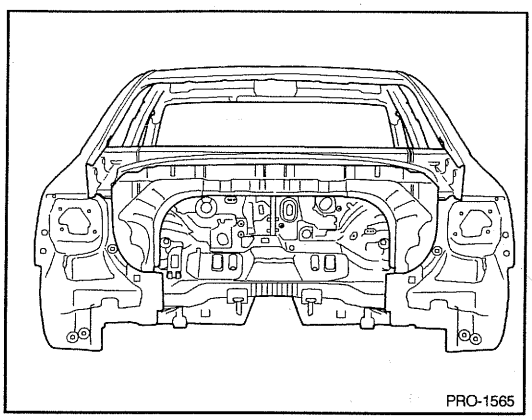
2. Remove the rear floor panel.

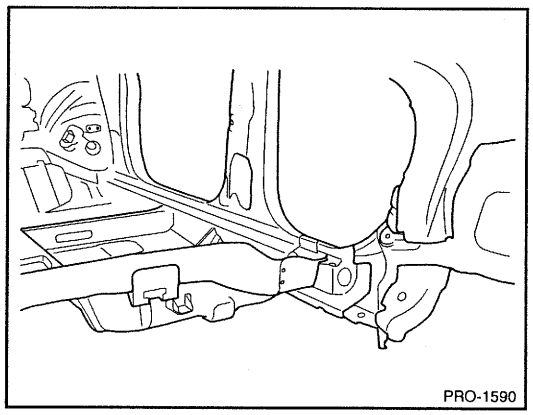


3. Remove the back panel by drilling out all attaching spotwelds.



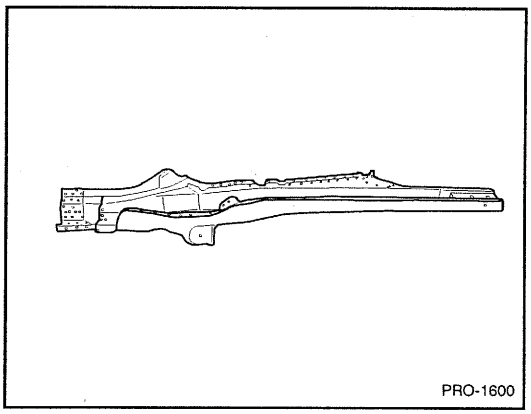
4. Remove the rear floor cross member, rear floor front extension and rear floor side member from the rear body.


PRO-1565


PRO-1590

INSTALLATION

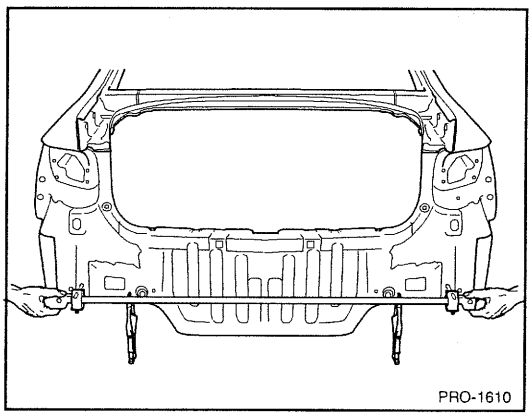
1. Transcribe the cutline to the new rear floor side members. Drill out the spotwelds attaching the reinforcements. Remove remaining portions of side members.


PRO-1600

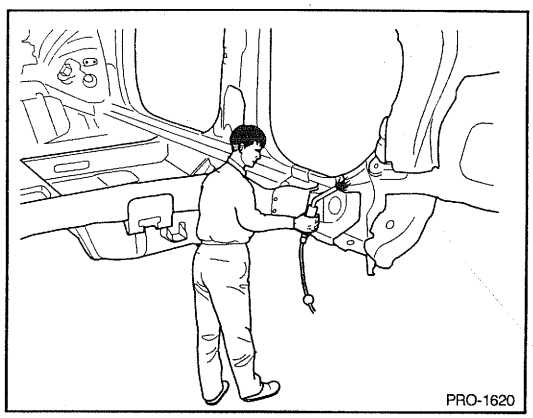
2. Temporarily fit and clamp the rear floor side members in place.

   NOTE
   When installing the rear floor side member, temporarily install the rear floor cross member to measure each measurement point.

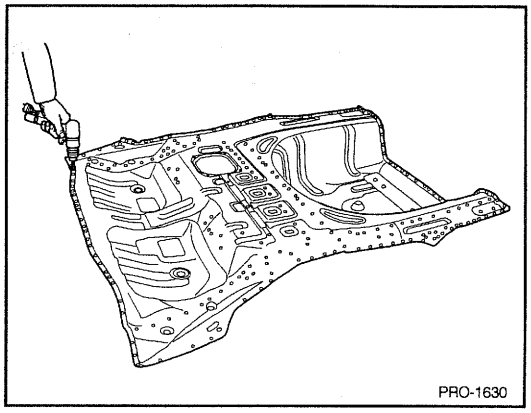
3. Measure each measurement point (Refer to BODY DIMENSIONS) and correct the installation position.
4. If necessary, make temporarily welds, and then check to confirm that the fit of rear floor panel is correct.


PRO-1610

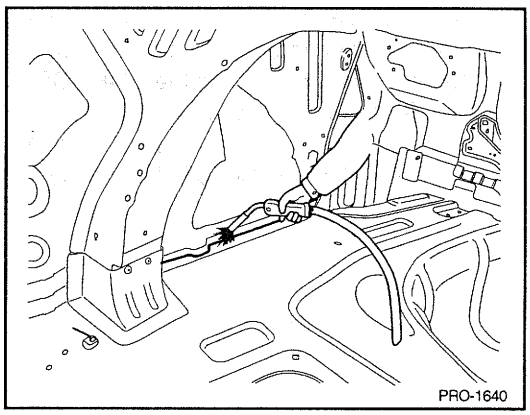
5. MIG plug weld the rear floor side members and MIG butt weld seams.
6. Prepare the welds and surfaces to which the rear floor will attach.
7. Transcribe the cutline to the new rear floor panel, adding 30mm for overlap at the old joint.


PRO-1620

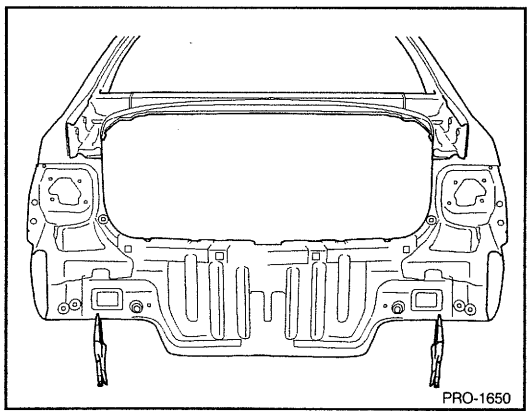
8. Drill 8mm holes in overlap area and production locations of the new rear floor panel for MIG plug welding.
9. Fit and clamp the rear floor panel and attach the rear floor panel to the rear floor side members and other panels.


PRO-1630

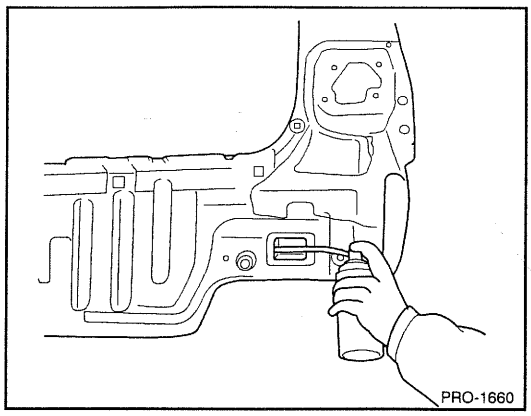
10. MIG plug weld all holes and MIG butt weld the seams.
11. Clean all welded surfaces.
12. Drill 8 mm holes on the flange attaching the rear end cross member to the rear floor and side member ends.


PRO-1640

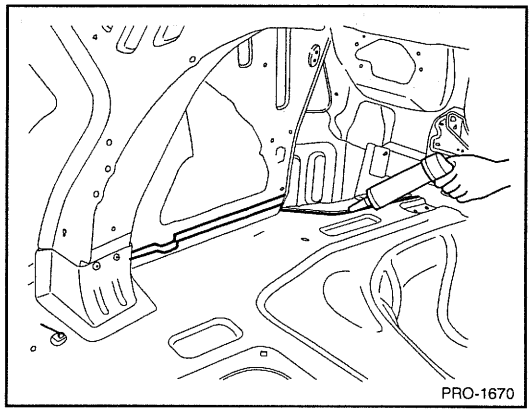
13. Fit and clamp the rear end cross member in place.
14. MIG plug weld the rear end cross member.
15. Clean and prepare all welds, remove all residue.
16. Apply the two-part epoxy primer to the interior of the rear floor side members.


PRO-1650

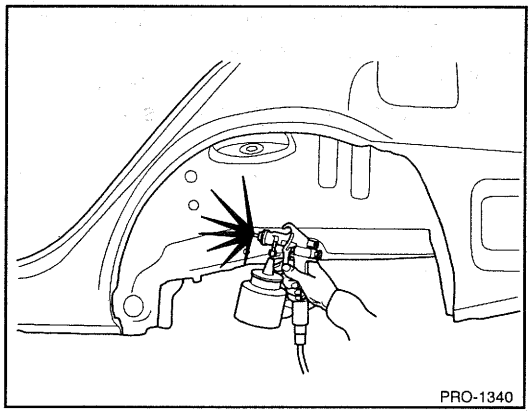
17. Apply an anti-corrosion to the interior of the rear floor side members
(Refer to the CORROSION PROTECTION).
18. Prepare exterior surfaces for priming, using wax and grease remover.
19. Apply metal conditioner and water rinse.



20. Apply the two-part epoxy primer.
21. Apply the correct seam sealer to all joints (Refer to the BODY SEALING LOCATIONS).

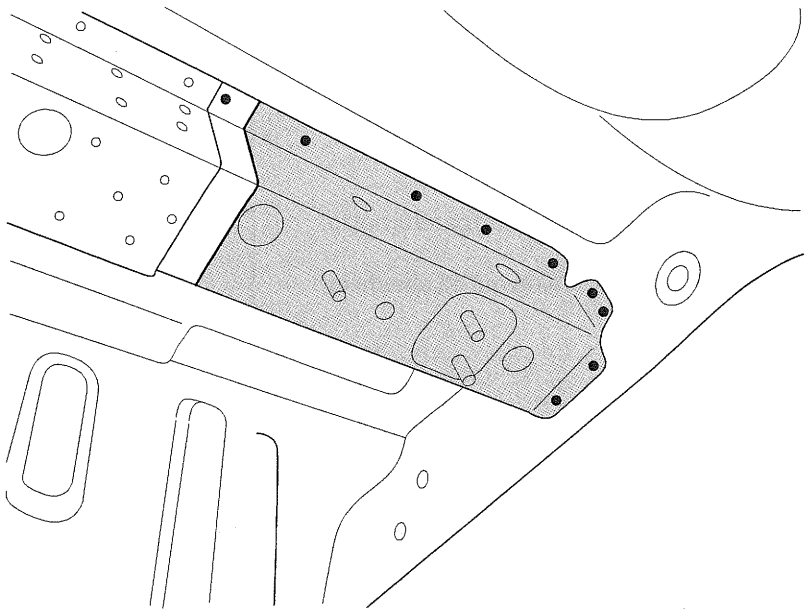


22. Reprime over the seam sealer to complete the repair.
23. After completing body repairs, carefully apply under coating to the under body (Refer to the CORROSION PROTECTION).
24. In order to improve corrosion resistance, if necessary, apply an under body anti-corrosion agent to the panel which is repaired or replaced (Refer to the CORROSION PROTECTION).



REAR FLOOR SIDE MEMBER (PARTIAL)

WELDLING POINTS



● MIG plug welding
⫲ MIG butt welding

PRO-1690-1

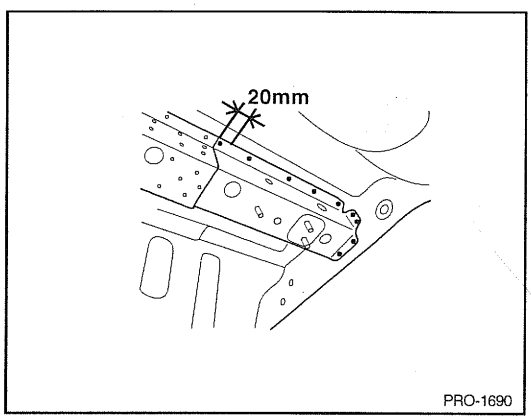
REMOVAL

NOTE
Because the rear floor side members are designed to absorb energy during a rear collision, care must be used when deciding to use this repair method. This repair is recommended only for moderate damage to the vehicle, where distortions do not extend forward of the trunk region. If the damage is more severe, then the entire side member assembly should be replaced at the factory seams without employing this sectioning procedure.

The following procedure applys when only one rear floor side member needs to be replaced. If both side members are damaged and need to be replaced, then the procedure of rear floor side members and rear floor section should be followed.

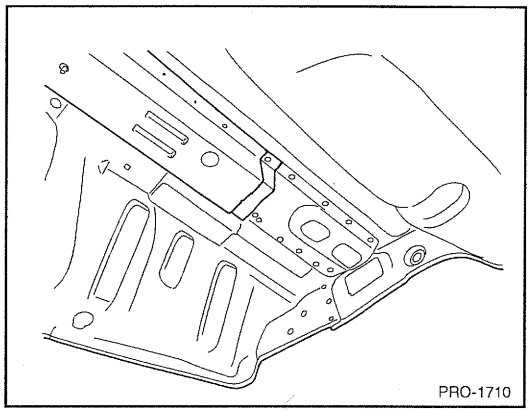
Refer to the body dimension charts and measure the vehicle to determine straightening and alignment requirements.
The body must be returned to its original dimensions before beginning the repair procedure.

1. Depending on the extent of damage, if the right side member is to be replaced it should be measured and marked 20mm from the rear floor side member tooling hole center.



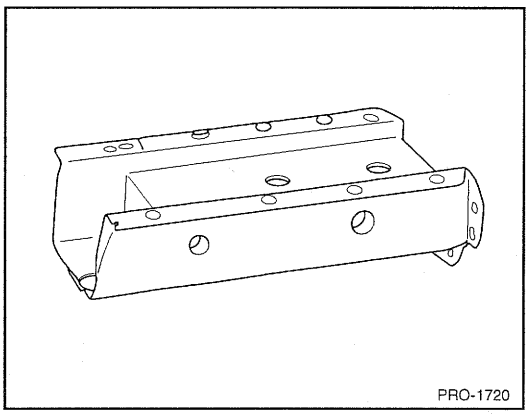
NOTE
The flowing procedure illustrates a repair for the right rear floor side member. The procedure may also be applied the left rear floor side member.

2. Cut through rear floor side member at cutline being careful not to cut rear floor side member reinforcement.
3. Remove the rear floor side member by drilling out all attaching spotwelds.
4. Prepare all surfaces to be welded.

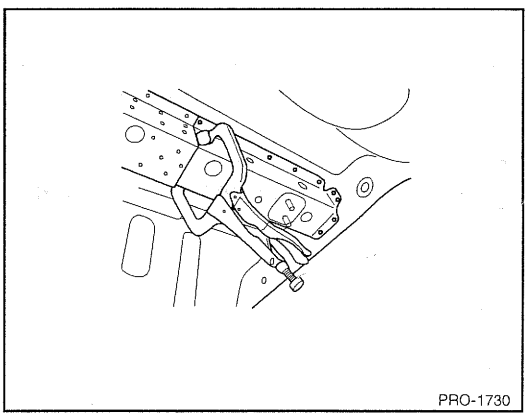


INSTALLATION

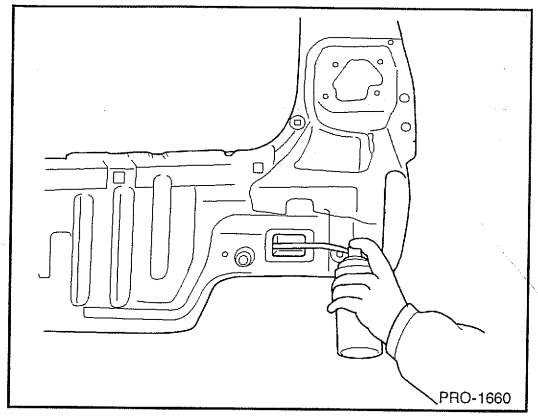
1. Transcribe the cutline to the new rear floor side member. Cut at line and drill out the spotwelds attaching the reinforcement and separate it.



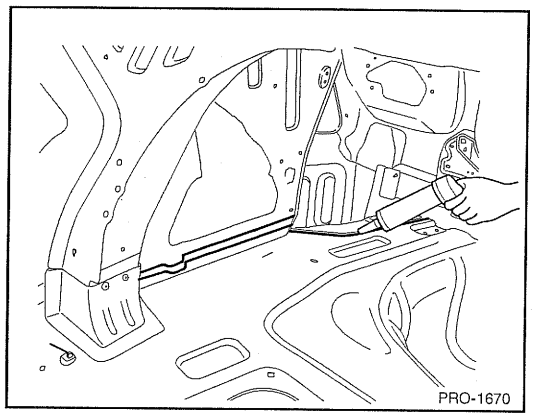
2. Fit and clamp the new rear floor side member in place for welding. Measure to ensure dimensions are accurate as given in the body dimension charts.
3. MIG plug weld at the holes and MIG butt weld the seam in the side member.
4. Clean and prepare all surfaces to be welded and remove all residue.
5. Apply the two-part epoxy primer to the interior of the rear floor side member.



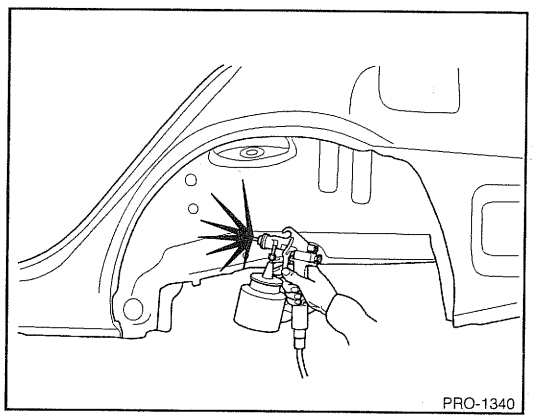
6. Apply an anti-corrosion to the interior of the rear floor side member (Refer to the CORROSION PROTECTION).
7. Prepare exterior surfaces for priming, using wax and grease remover.
8. Apply metal conditioner and water rinse.
9. Apply conversion coating and water rinse.
10. Apply the two-part epoxy primer.



11. Apply the correct seam sealer to all joints (Refer to the BODY SEALING LOCATIONS).
12. Reprime over the seam sealer to complete the repair.



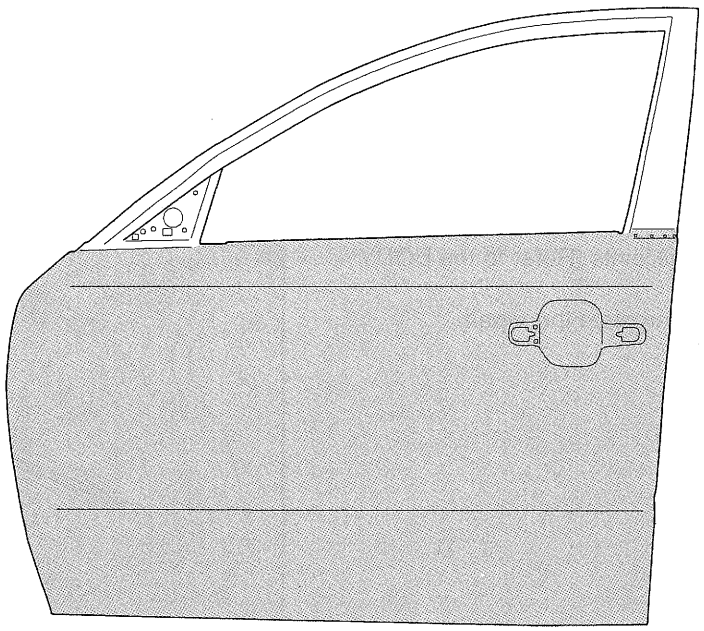
13. After completing body repairs, carefully apply under coating to the under body (Refer to the CORROSION PROTECTION).
14. In order to improve corrosion resistance, if necessary, apply an under body anti-corrosion agent to the panel which is repaired or replaced (Refer to the CORROSION PROTECTION).



FRONT AND REAR DOOR OUTER PANELS

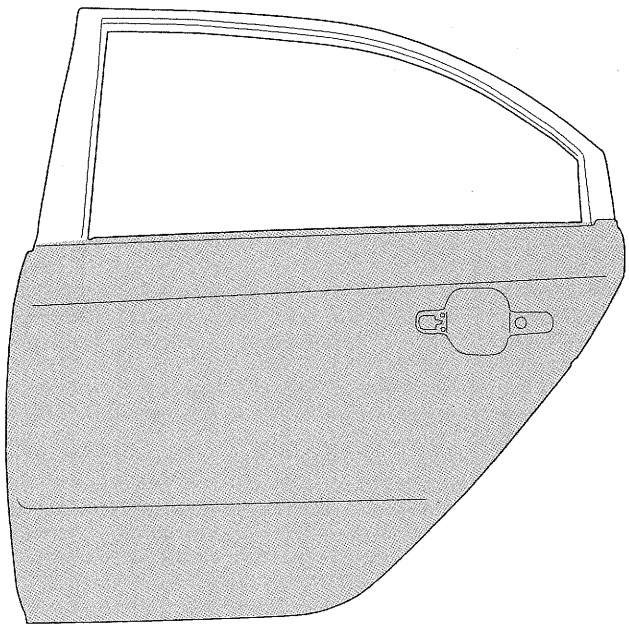
WELDLING POINTS

FRONT DOOR



CON-0750

REAR DOOR

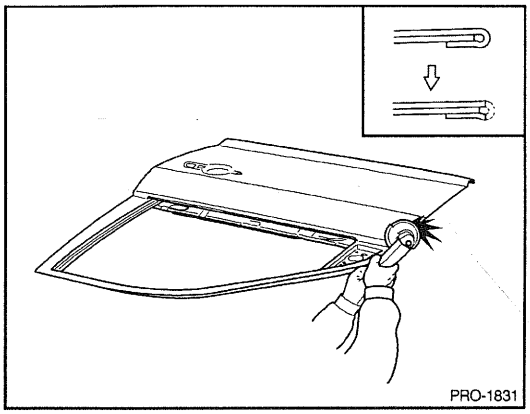


● MIG plug welding
⤫ MIG lap welding

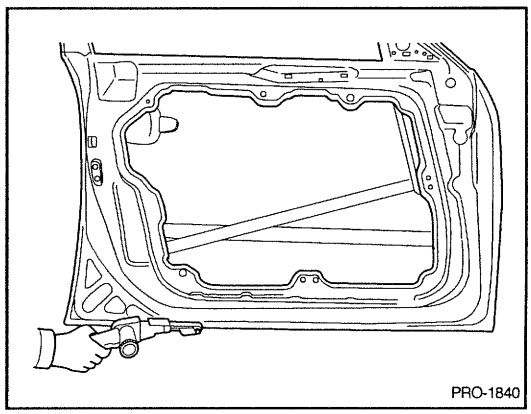
CON-0800

REMOVAL

1. Cut door outer panel hem with a sander.
2. After grinding off the hemming location, remove the outer panel.

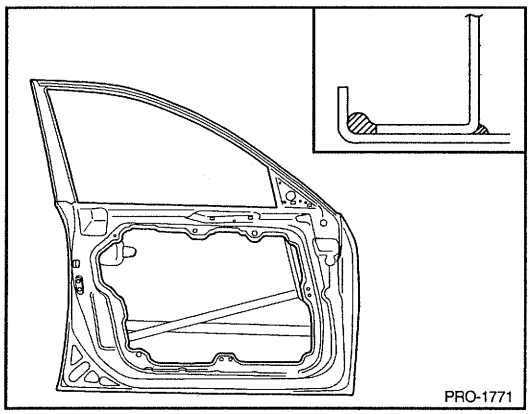


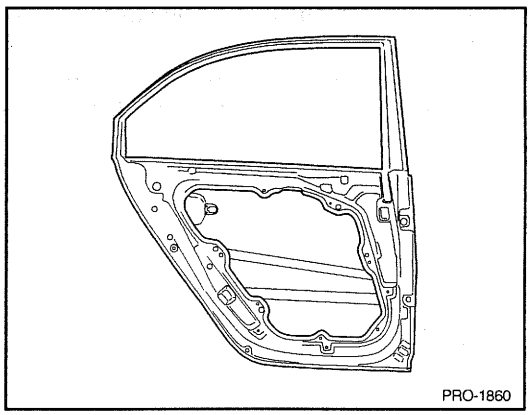
3. Dress rusty part with a sander and prepare surface to be hemmed.



INSTALLATION

1. Apply adhesive or equivalent to outer panel hem.
2. Apply mastic sealer or equivalent to the door upper member and door reinforcement beam as shown in the figure.

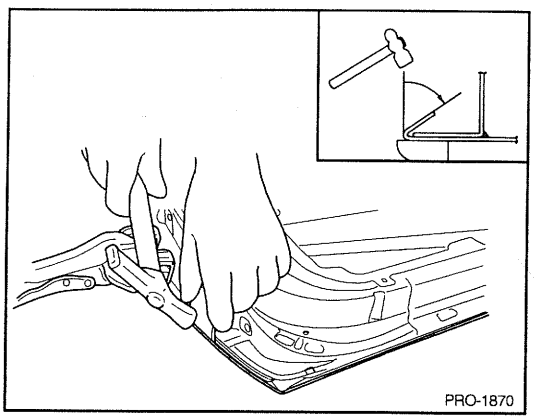


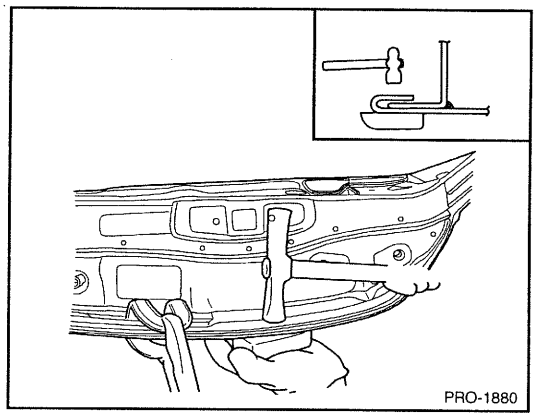


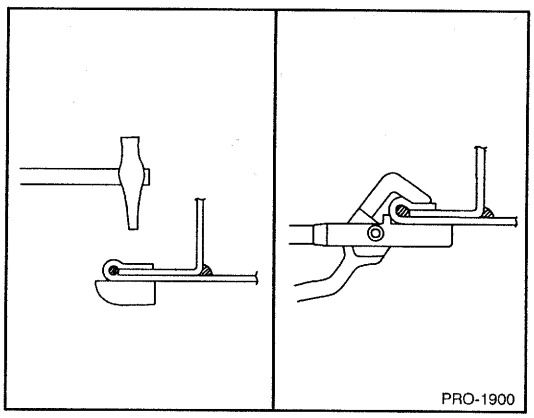
3. Bend the flange hem with a hammer and dolly, then fasten tightly with a hemming tool.

NOTE

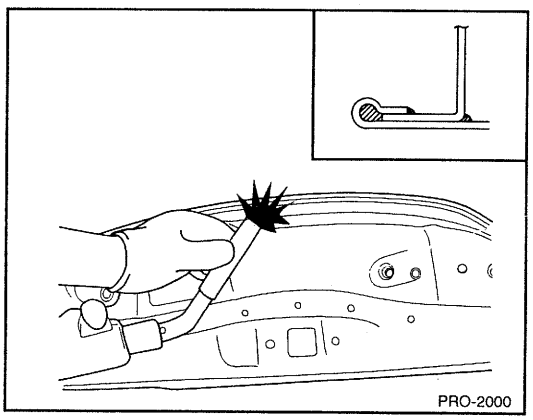
1. **Hemming work should be done in three steps as illustration.**
2. **If a hemming tool cannot be used, hem with a hammer and dolly.**



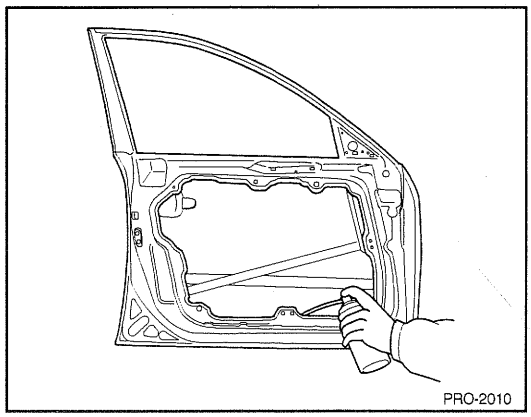




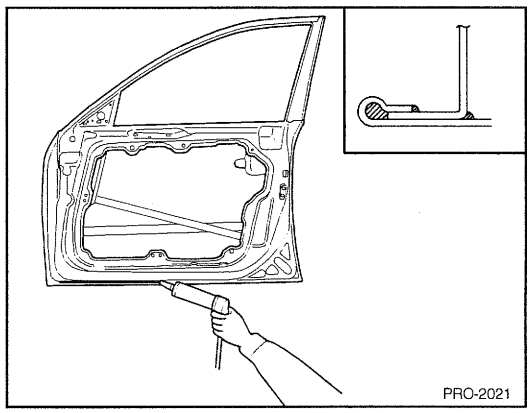
4. After completing the hemming work, make MIG spot welds at 50 mm intervals on the inside.
5. Clean and prepare all welds, remove all residue.
6. Apply the two-part epoxy primer to the interior of the door panel.



7. Apply an anti-corrosion agent to the welded parts and lower inside of the door panel (Refer to the CORROSION PROTECTION).
8. Prepare exterior surfaces for priming, using wax and grease remover.
9. Apply metal conditioner and water rinse.
10. Apply conversion coating and water rinse.
11. Apply the two-part epoxy primer.
12. Apply the correct seam sealer to whole panel edge.

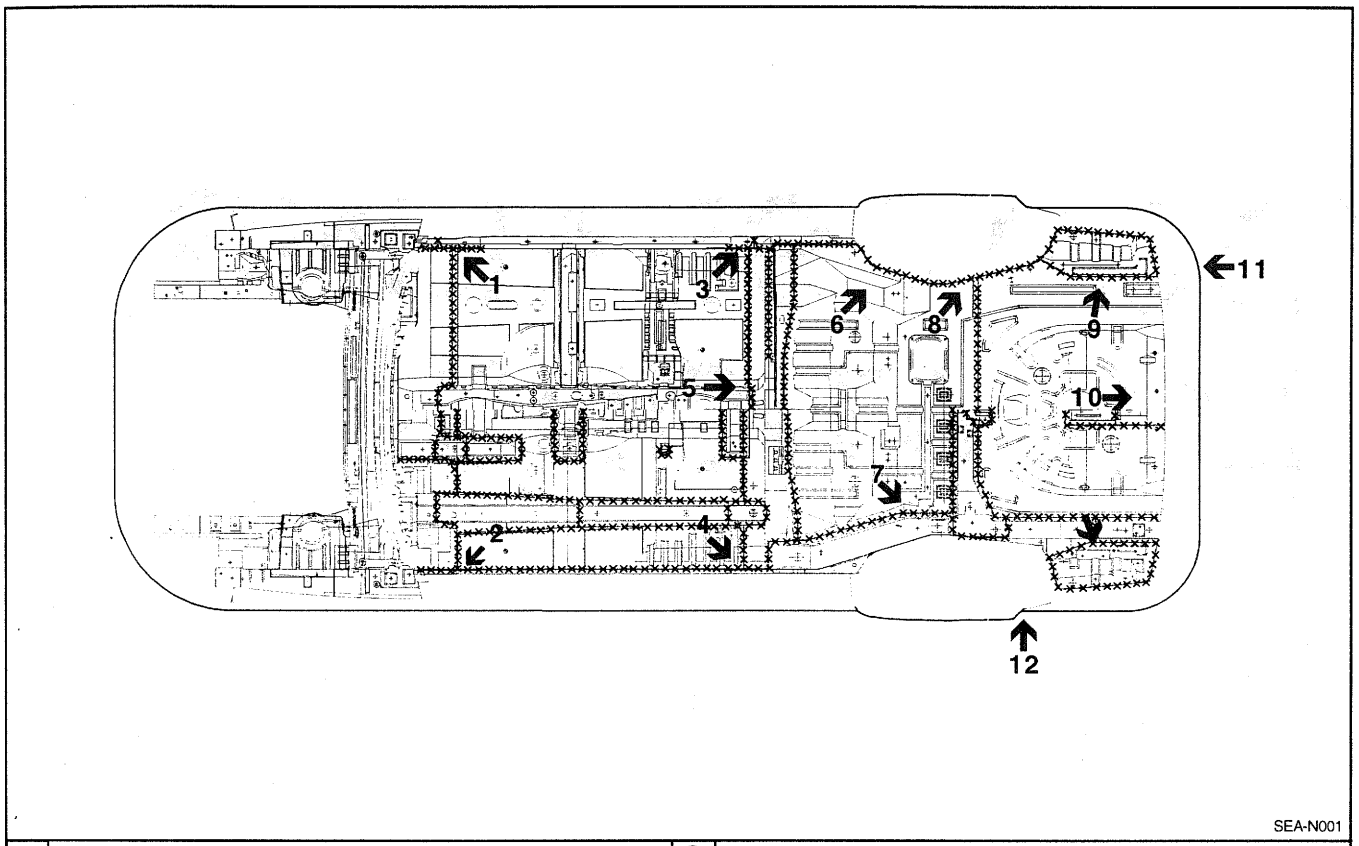

PRO-2010

13. Reprime over the seam sealer to complete the repair.


PRO-2021

BODY SEALING LOCATIONS

FLOOR



SEA-N001

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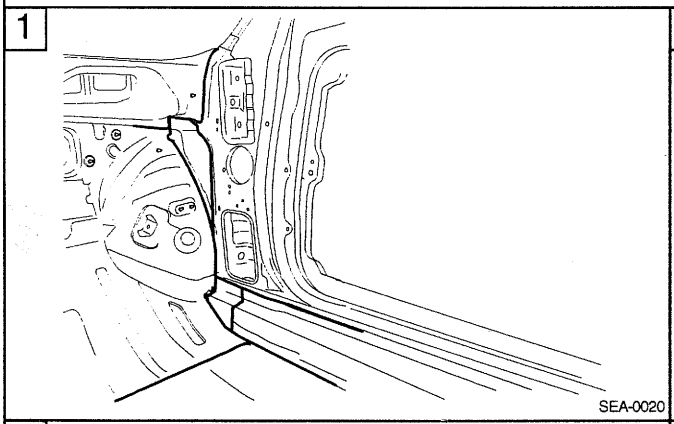

SEA-0020

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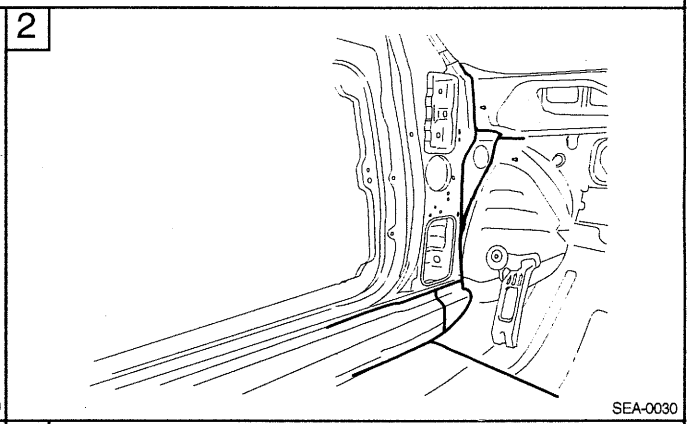

SEA-0030

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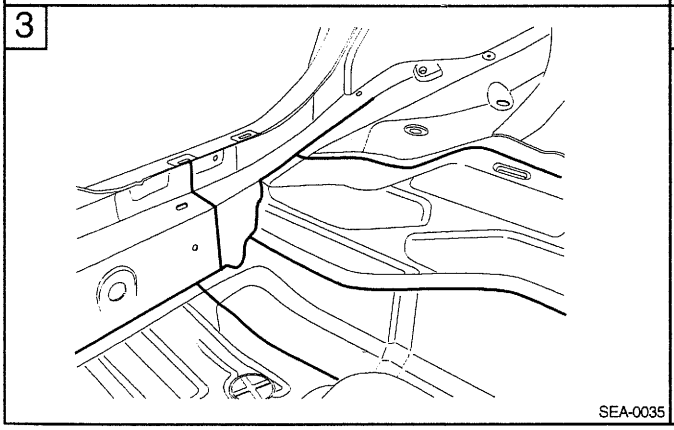

SEA-0035

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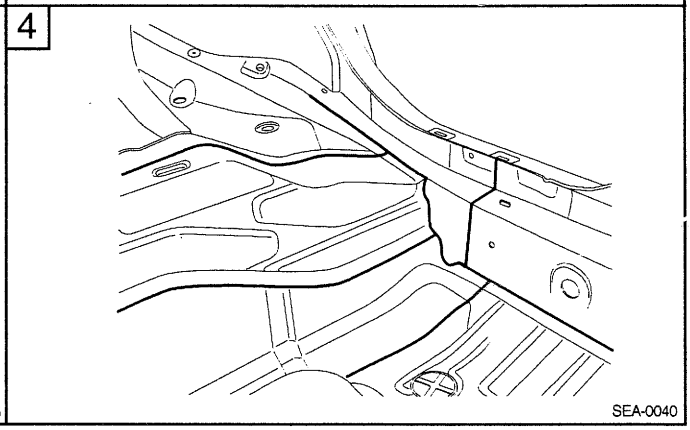

SEA-0040

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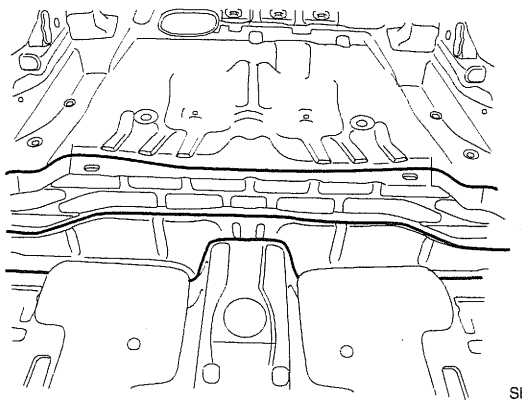

SEA-0050

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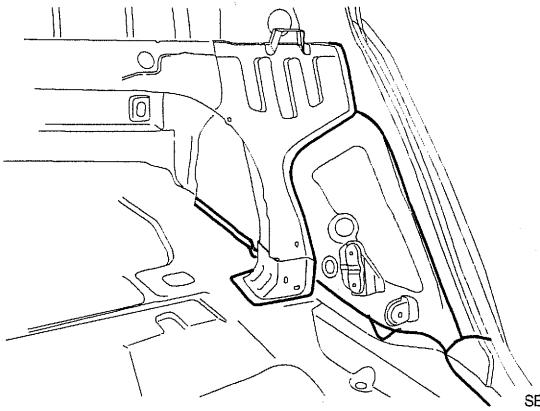

SEA-0060

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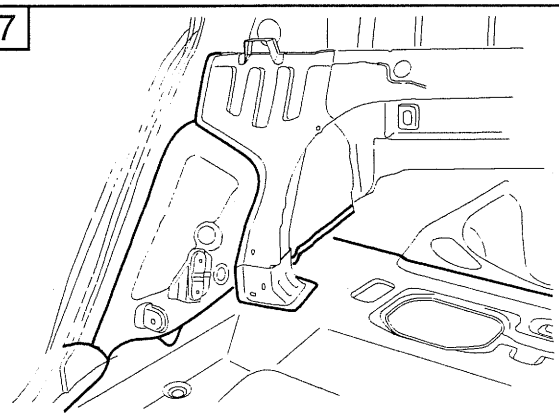

SEA-0070

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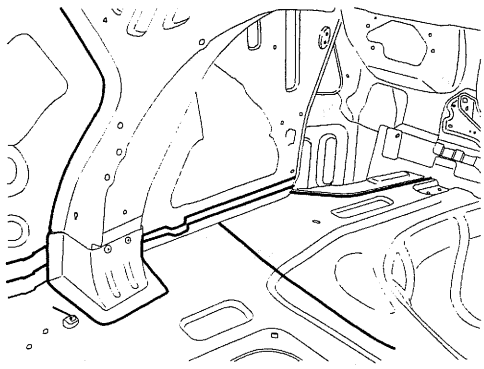

SEA-0080

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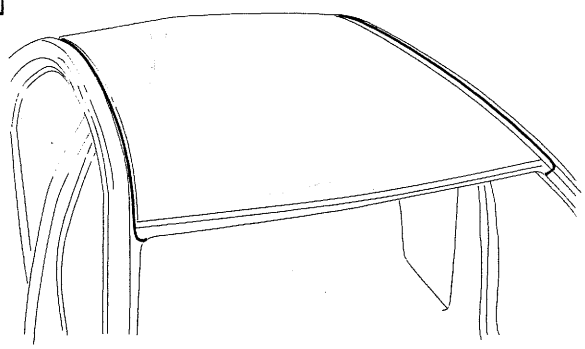

SEA-0090

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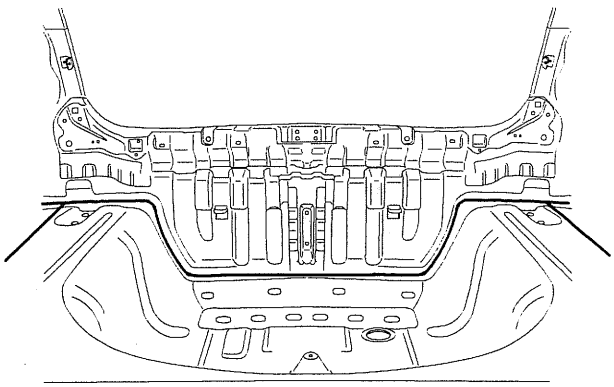

SEA-0100

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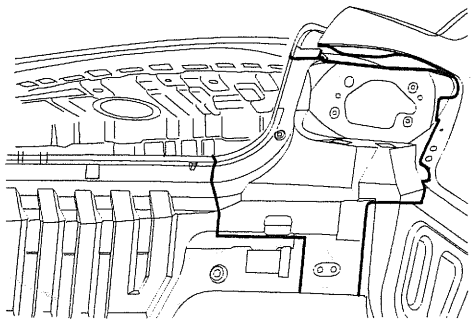

SEA-0110

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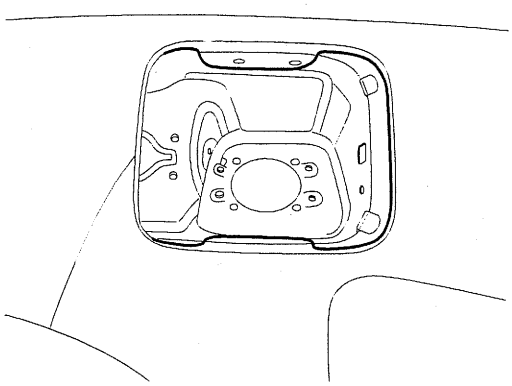
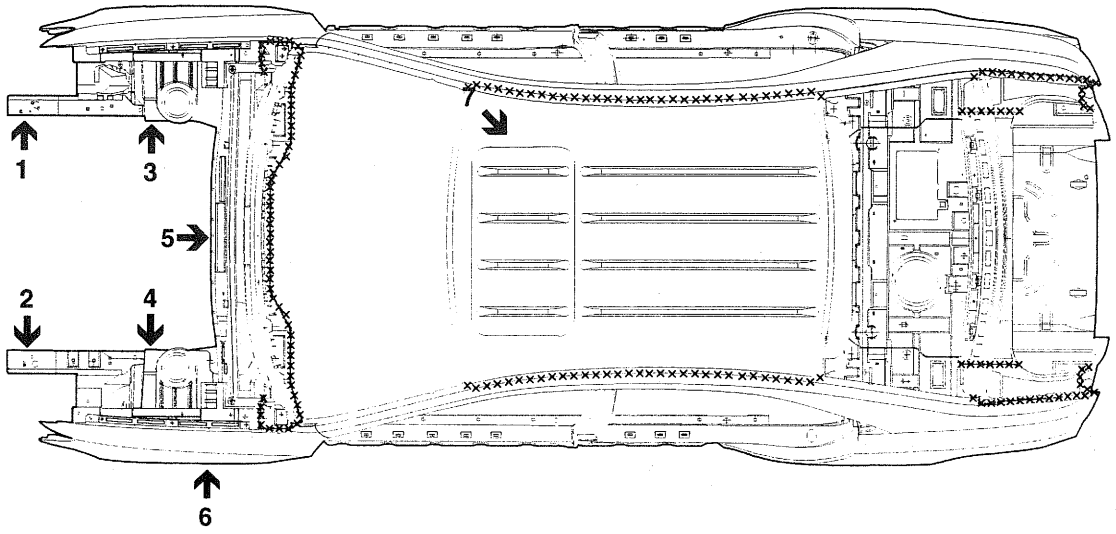
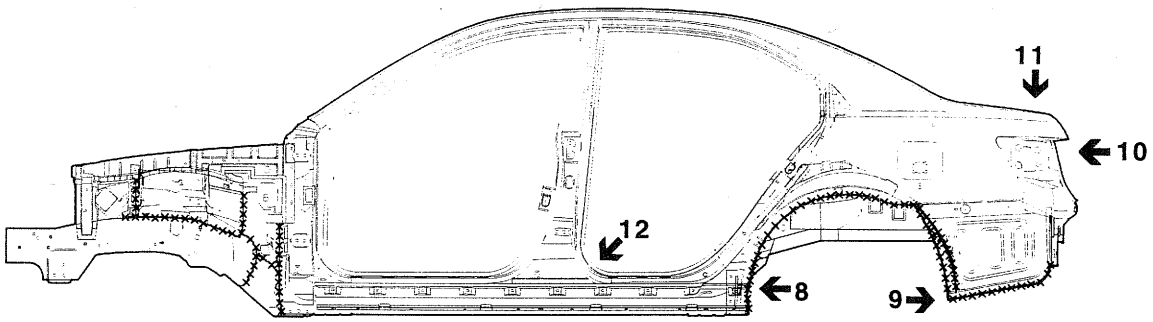


SEA-0120

UPPER AND SIDE BODY





SEA-N002/SEA-N003

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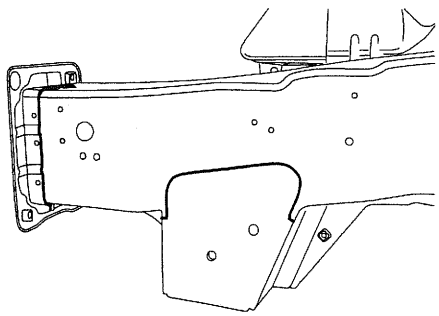

SEA-0200

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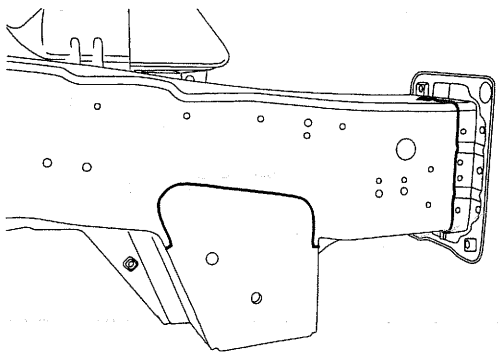

SEA-0210

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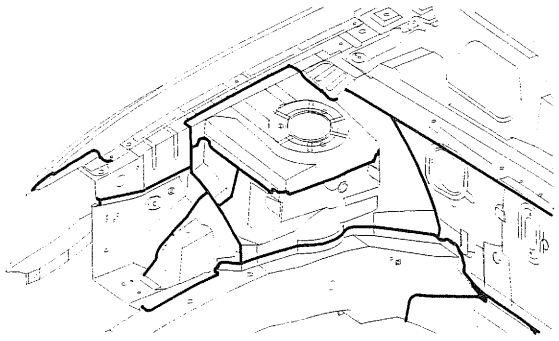

SEA-0220

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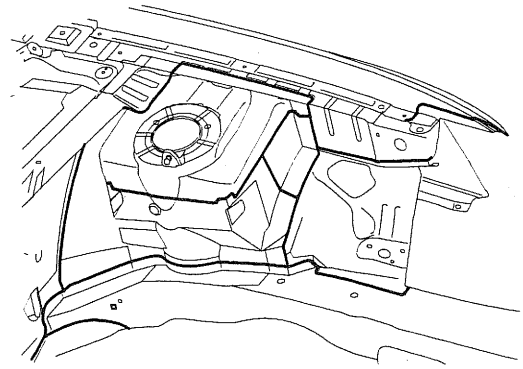

SEA-0230

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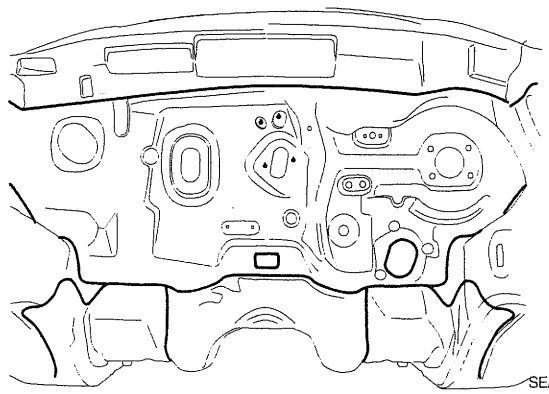

SEA-0240

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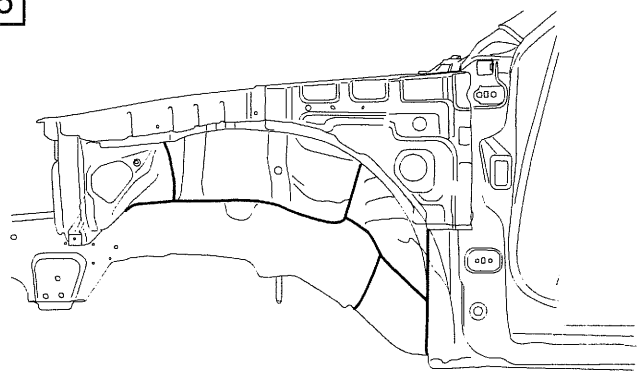

SEA-0250

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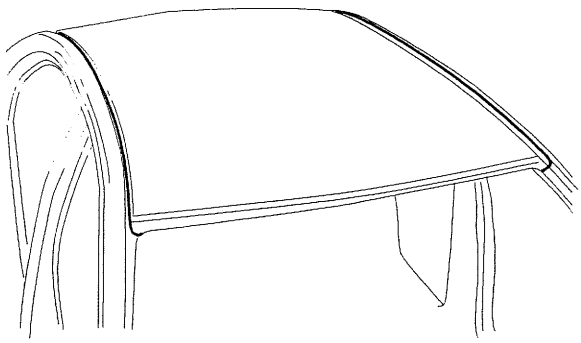

SEA-0090

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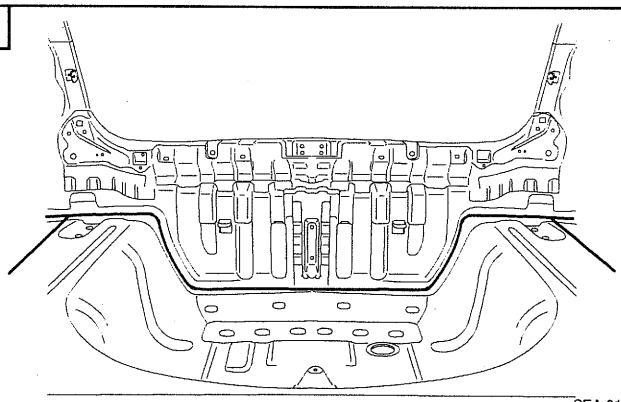

SEA-0100

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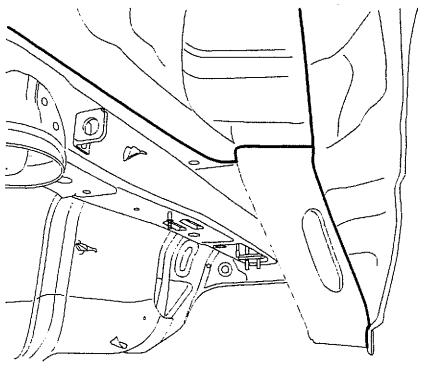

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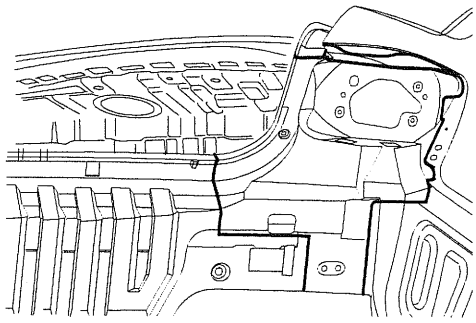

SEA-0110

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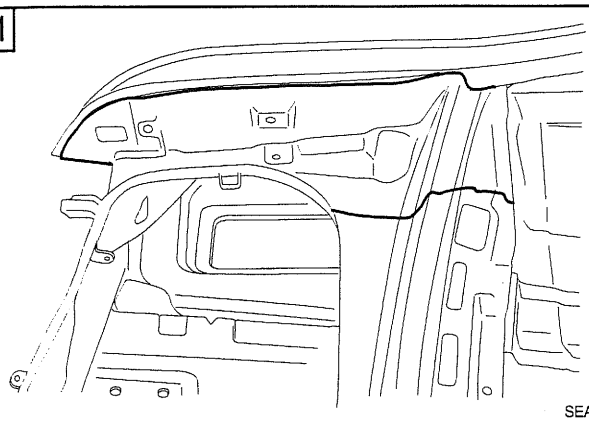

SEA-0130

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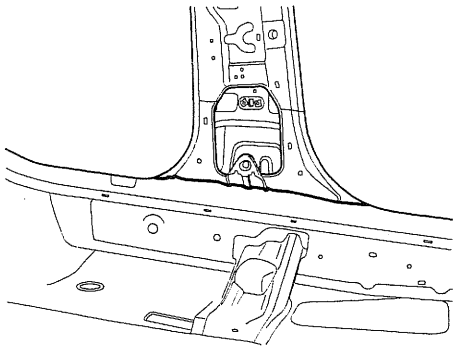
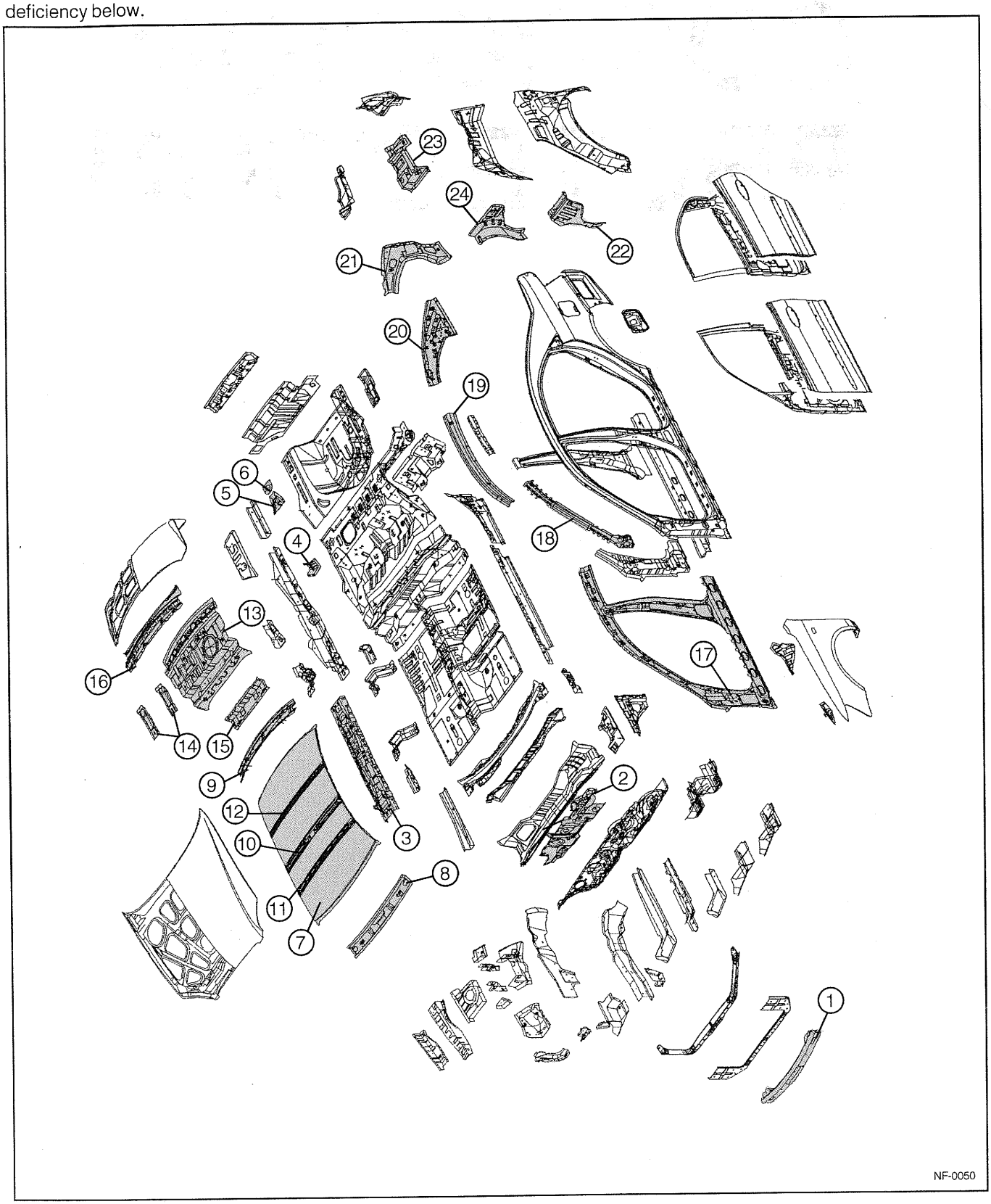


SEA-0290

CORROSION PROTECTION

ZINC-GALVANIZED STEEL PANELS

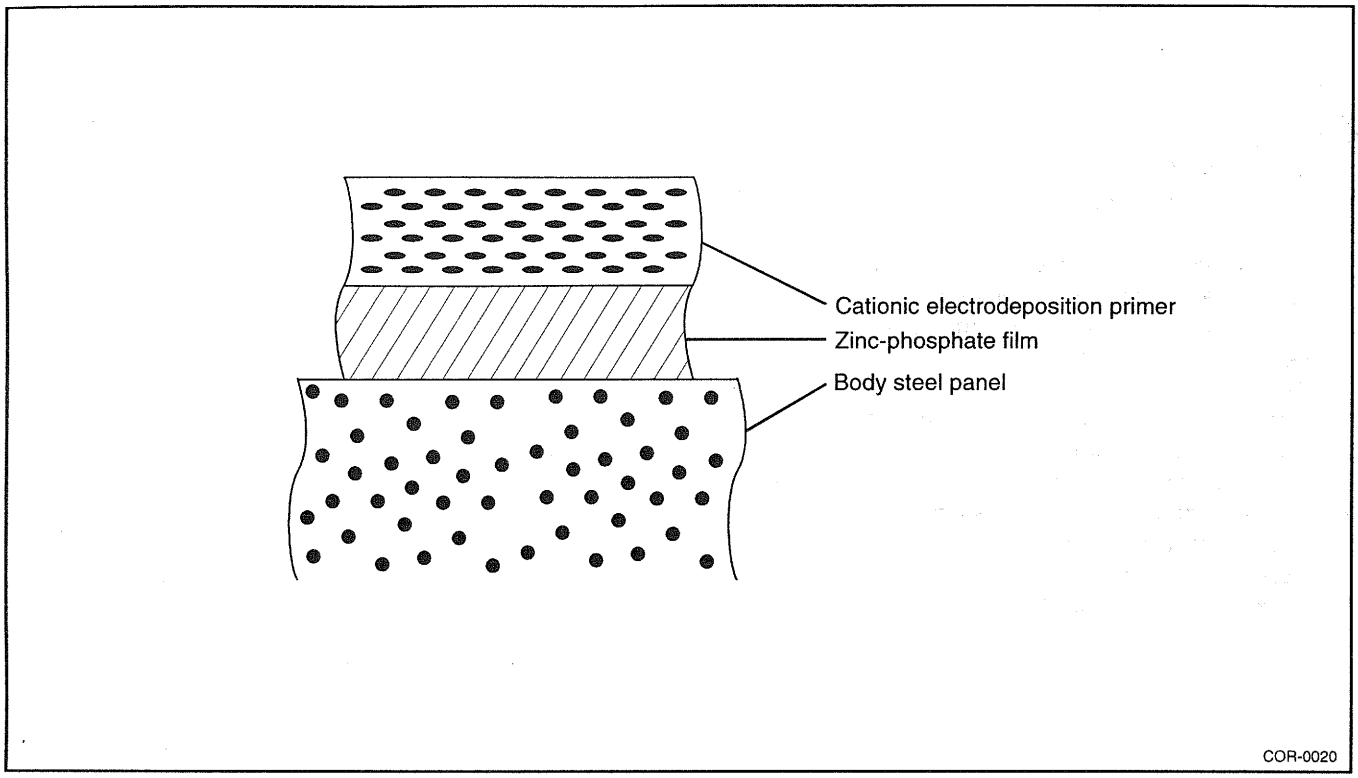
Because galvanized steel panel has excellent resistance, it is used in areas which have a high possibility of painting deficiency below.



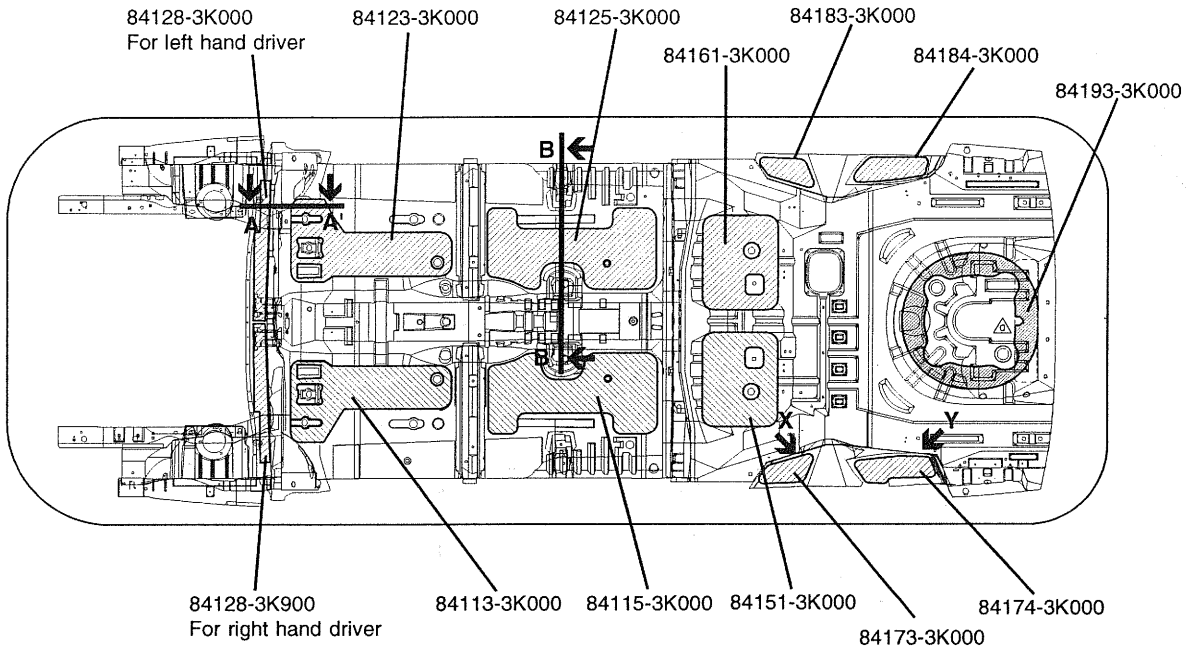
1. Front bumper beam
2. Dash reinforcement panel
3. Center floor reinforcement assembly
4. Rear floor to wheel house reinforcement
5. Spare tire mounting bracket assembly
6. Spare tire well inner reinforcement
7. Roof panel
8. Roof front rail assembly
9. Roof rear rail assembly
10. Roof center No.2 rail
11. Roof center No.1 rail
12. Roof center No.3 rail
13. Rear package tray center panel assembly
14. Rear package tray center reinforcement assembly
15. Rear package tray front lower member assembly
16. Rear window opening outer frame
17. Side inner panel assembly
18. Front pillar outer upper reinforcement assembly
19. Roof side outer reinforcement
20. Quarter inner upper panel assembly
21. Quarter pillar reinforcement assembly
22. Package tray side front panel assembly
23. Package tray side rear panel assembly
24. Package tray side member assembly

ZINC-PHOSPHATE COAT & CATIONIC ELECTRODEPOSITION PRIMER

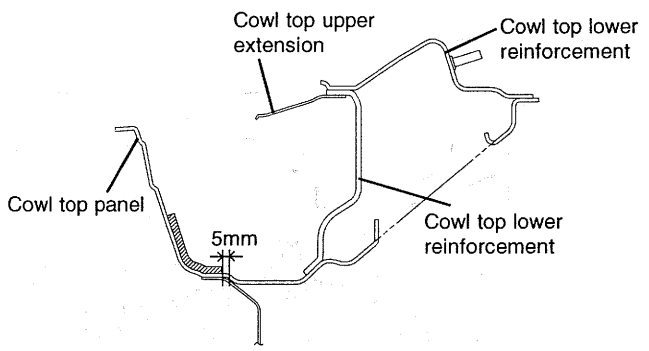
In order to improve the adhesion of the paint coat on the steel panel, and also to improve the corrosion resistance, the entire body is coated with a film of Zinc-phosphate and a cationic electrodeposition primer.



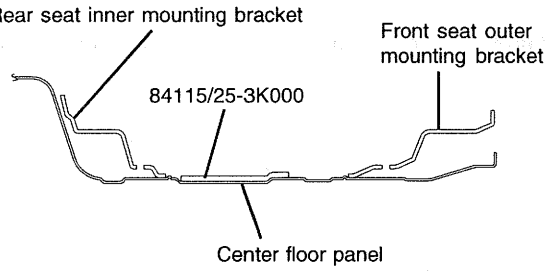
ANTIVIBRATION PADS-LOCATION & SECTION



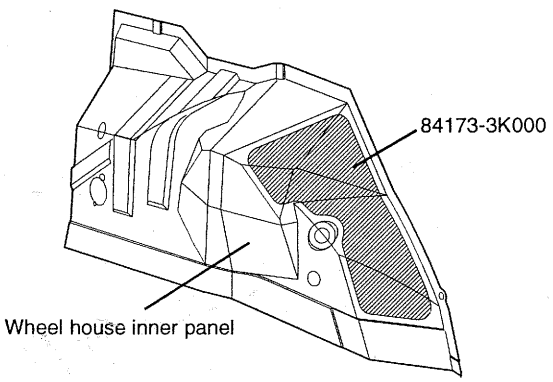
ANT-0001



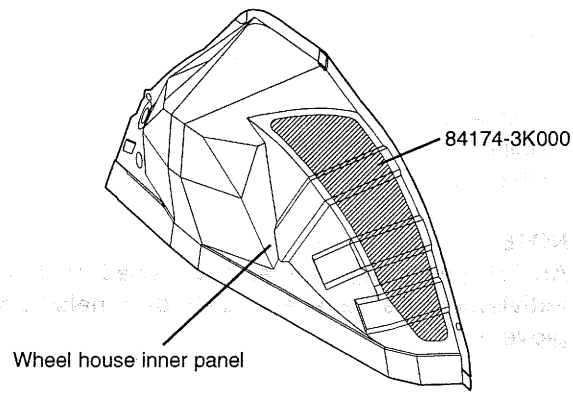
SECTION A-A' ANT-0004



SECTION B-B' ANT-0005



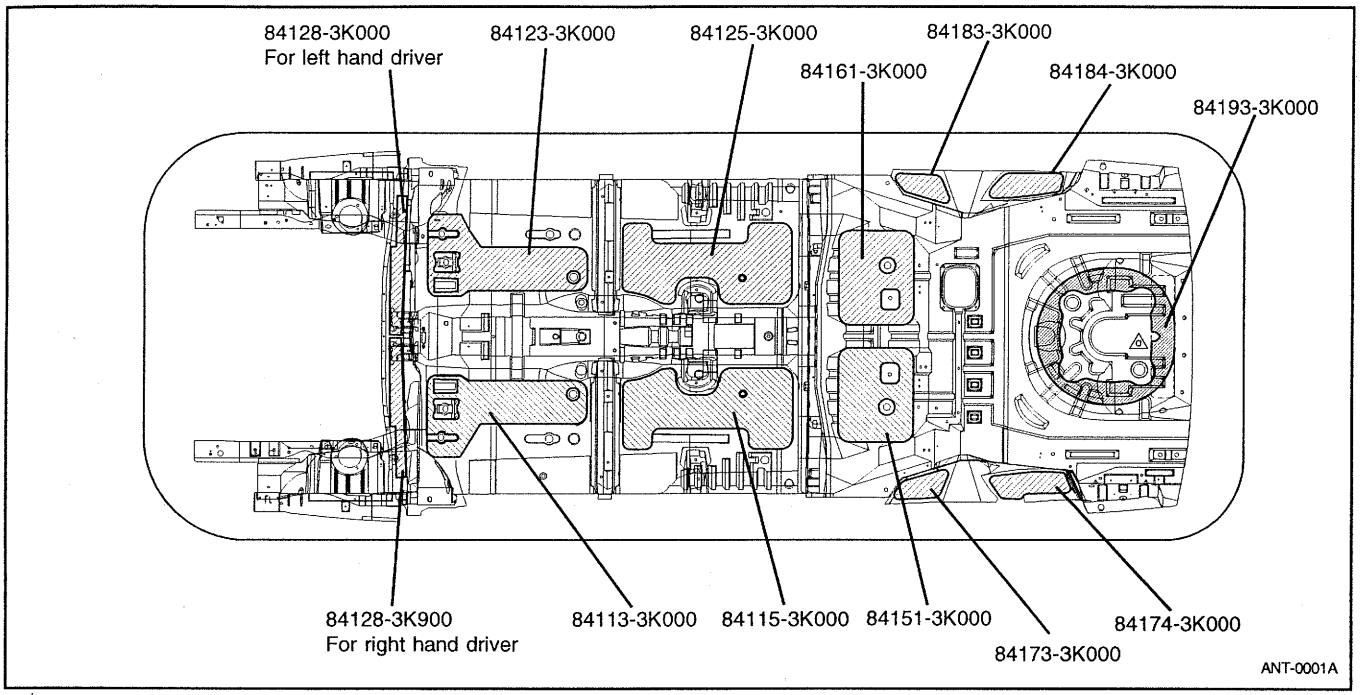
VIEW "X" VIEW-X



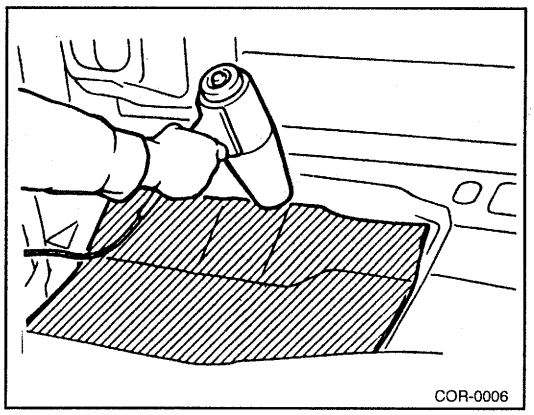
VIEW "Y" VIEW-Y

ATTACHMENT OF ANTIVIBRATION PADS

Antivibration pads are attached to the upper surface of the floor and at the interior side of the dash panel in order to absorb vibrations and shut out exhaust gas heat. If these antivibration pads are peeled off in the course of replacement or repair of a welded panel, cut and attach replacement material (in the shape shown in the figure).

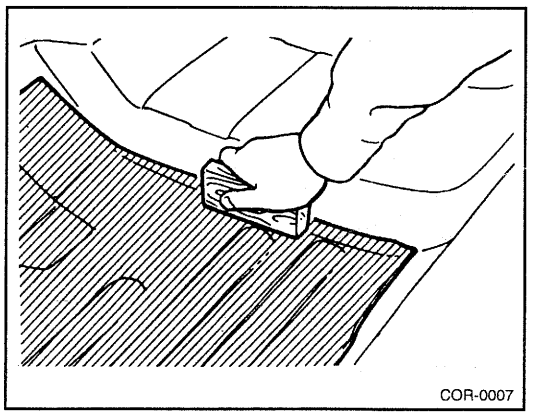


1. Heat the "antivibration pad" with a blow drier to soften it.



2. Align the antivibration pad layer in the position where it is to be installed, and then press it down with a roller or a block of wood so that it adheres well.

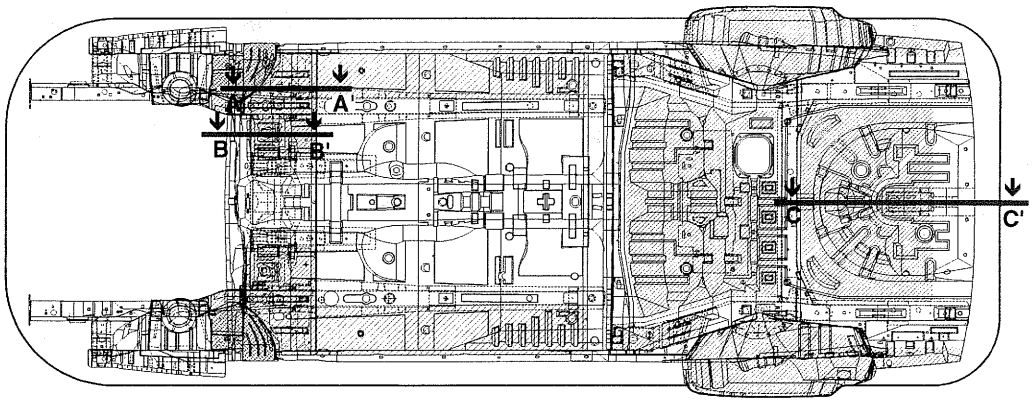
   NOTE
   An infrared lamp can also be used to heat both the antivibration pad layer and the body panels(be sure to wear gloves).



UNDER BODY COAT

In order to provide corrosion, stone chipping and vibration resistance, under body coat is applied to the under sides of the floor and wheel house.
Therefore, when such panel is replaced or repaired, apply under body coat to that part.

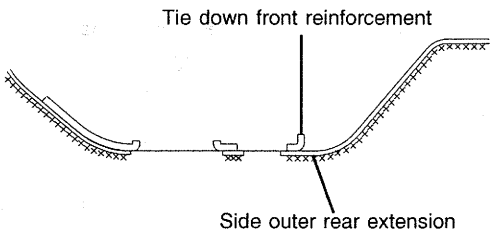
FLOOR



★ Because parts are to be mounted in these locations, mask the location, before applying the under body coat.

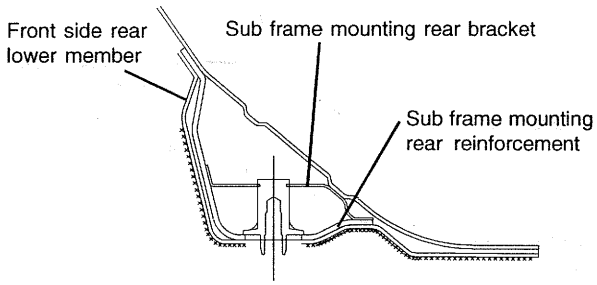
Under body coating (Thickness : 1.0mm, : 1.5mm)

DED-N001



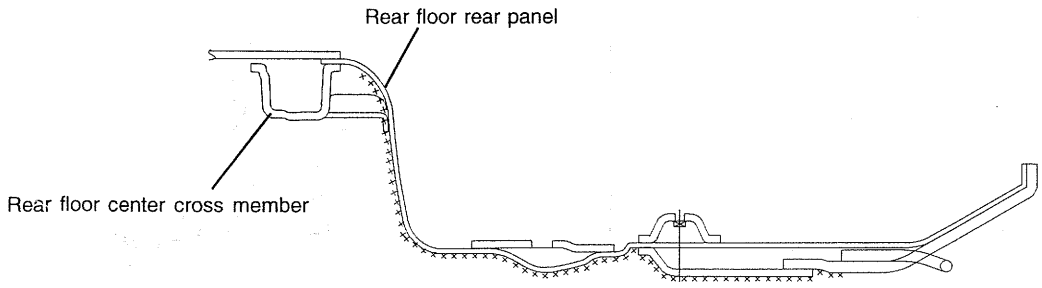
SECTION A-A'

DED-0002



SECTION B-B'

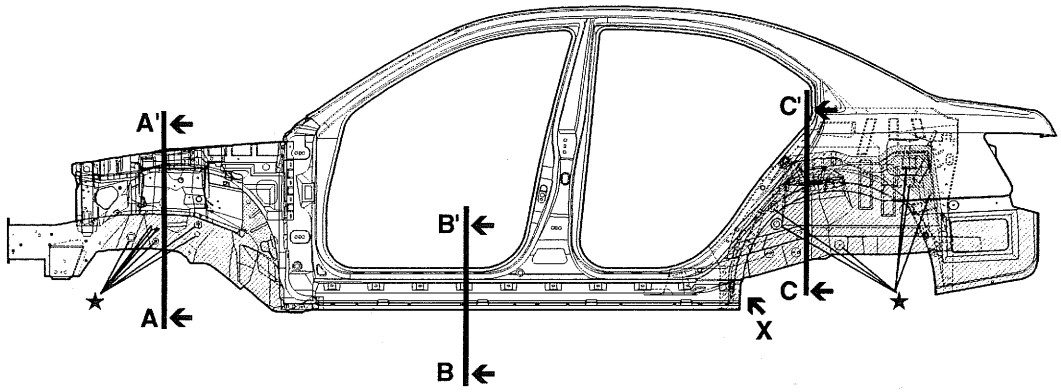
DED-0003



SECTION C-C'

DED-0004

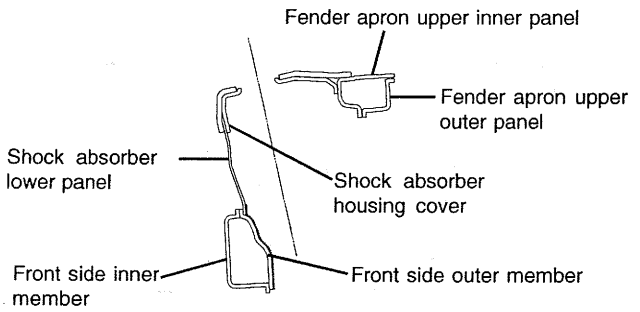
SIDE BODY



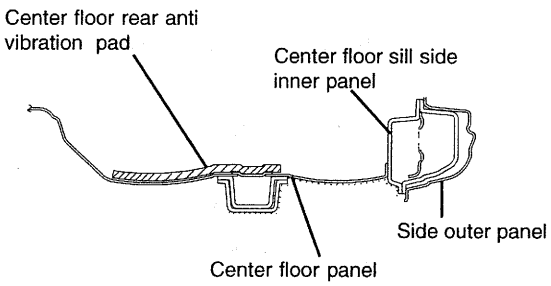
★ Because parts are to be mounted in these locations, mask the location before applying the under body coat.

Under body coating (Thickness 1.0 mm - 2.0 mm)

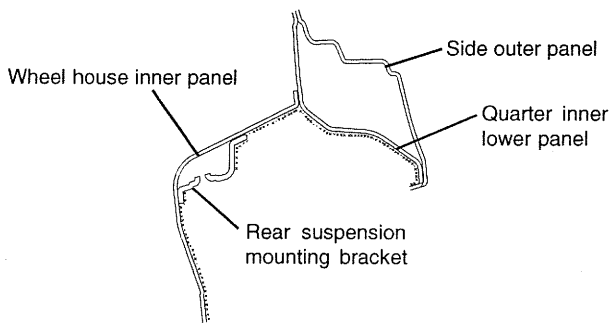
DED-N002



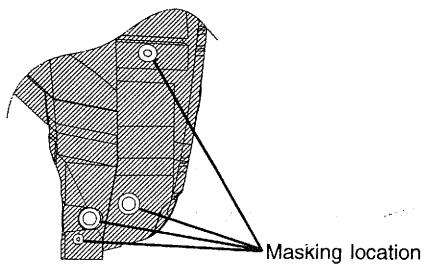
SECTION A-A' DED-0007



SECTION B-B' DED-0008



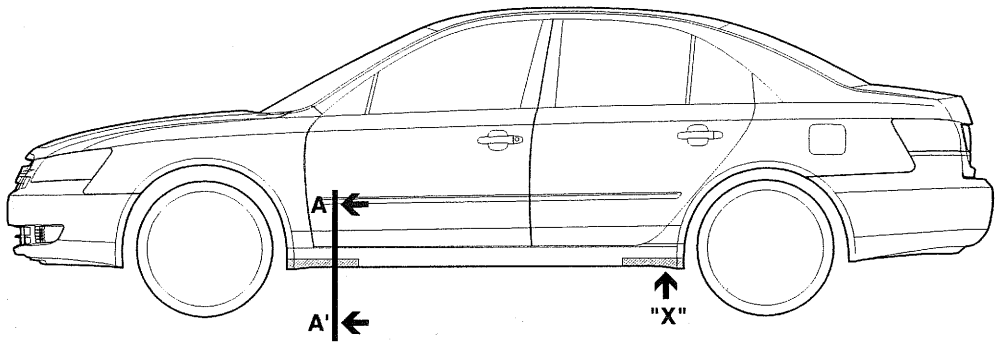
SECTION C-C' DED-0009



VIEW "X" DED-0010

CAVITY WAX INJECTION

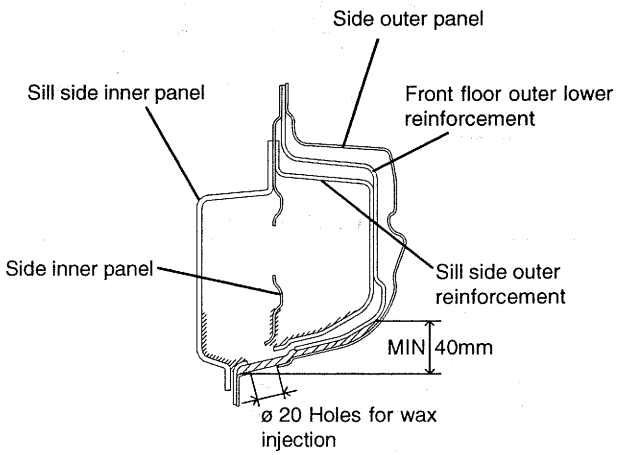
In order to provide greater corrosion resistance, cavity wax injection has been performed for the lower areas of the vehicle, such as the sidemember, the side sill and the inside of other panels which are a hollow construction. When replacing these parts, be such to apply cavity wax to the appropriate areas of the new parts.



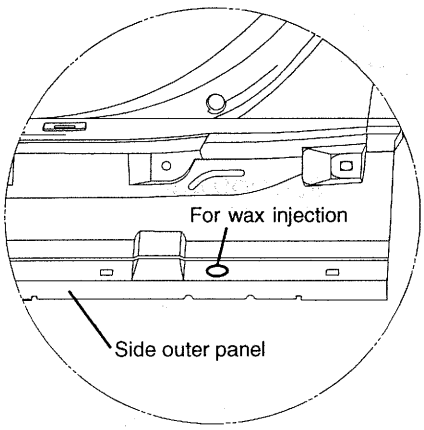
★ Wax injection must be done through access holess marked.

Cavity wax injection (Thickness 40μ - 50μ)

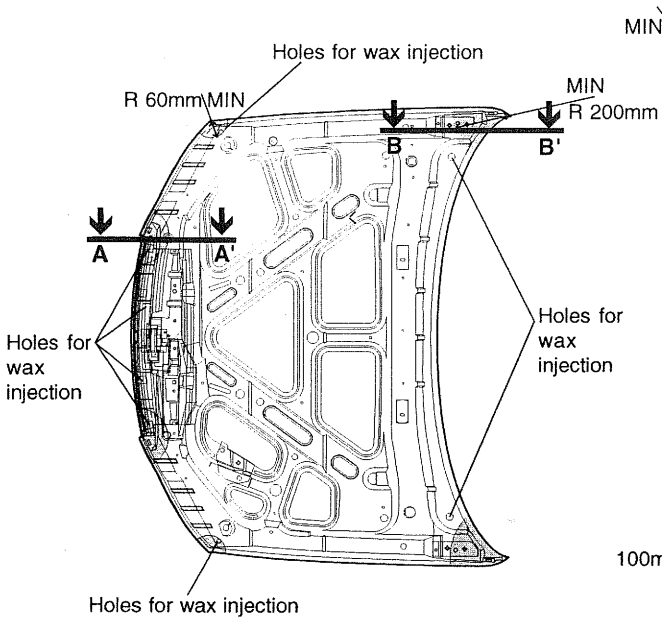
COR-N030



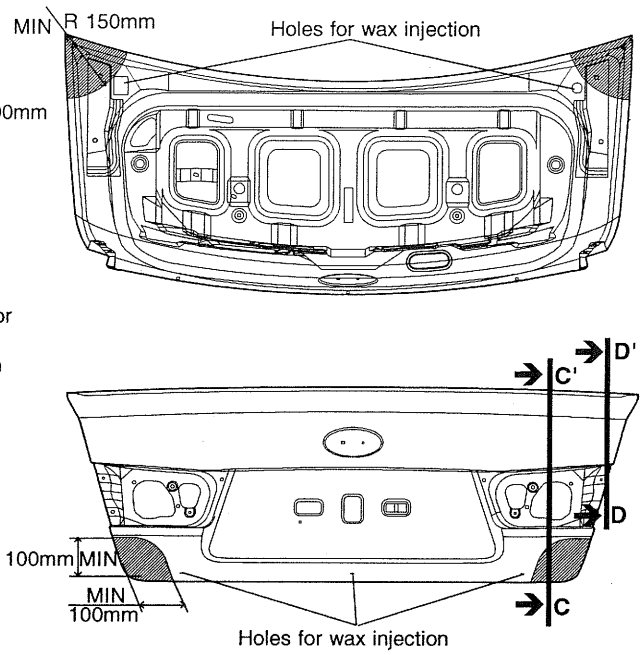
SECTION A-A' COR-0031



VIEW "X" COR-0032



HOOD

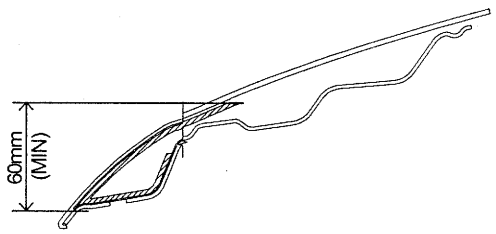


TAIL GATE

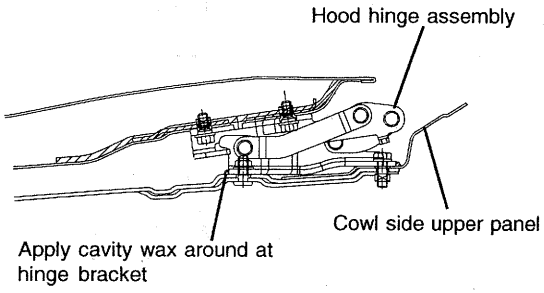
★ Wax injection must be done through access holes marked.

Cavity wax injection (Thickness 40μ - 50μ)

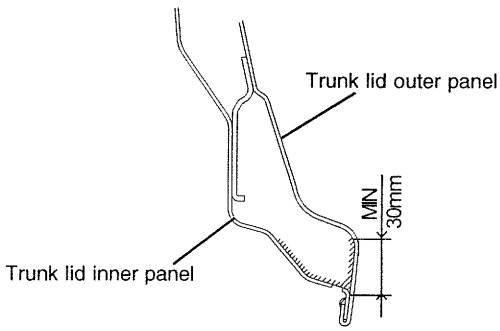
COR-N040/N050



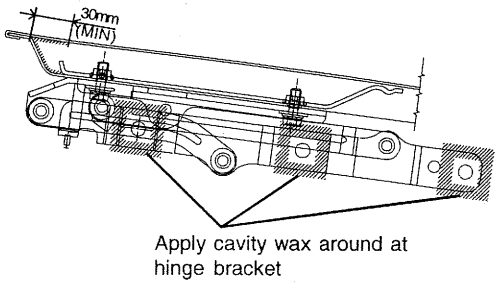
SECTION A-A' COR-0041



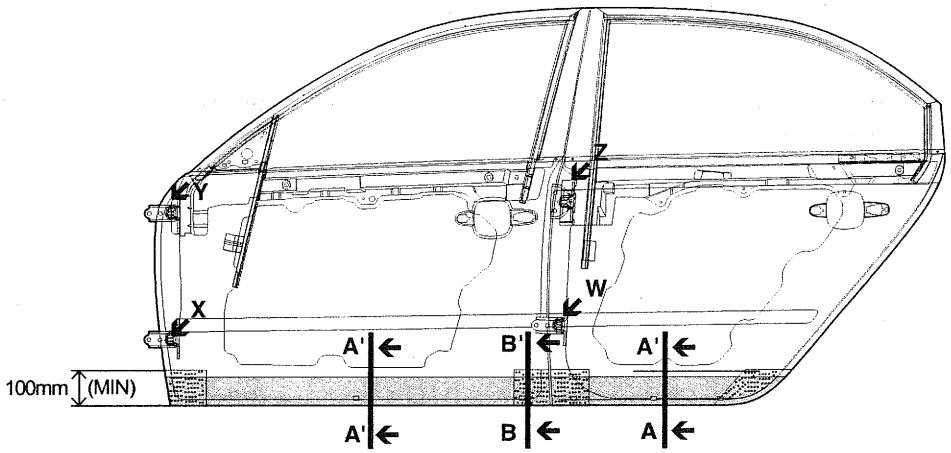
SECTION B-B' COR-0042



SECTION C-C' COR-0051



SECTION D-D' COR-0052



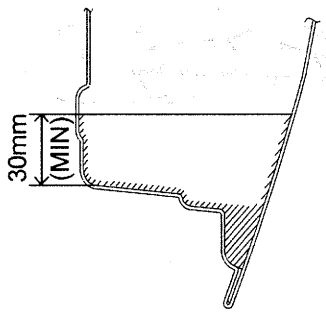
FRONT DOOR **REAR DOOR**

★ Wax injection must be done through access holes marked.

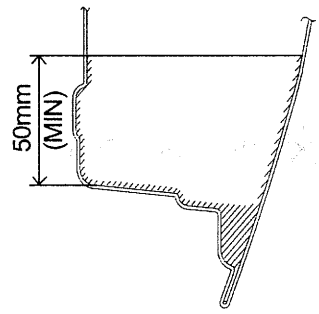
Cavity wax injection (Thickness 40μ - 50μ)

HMMA only

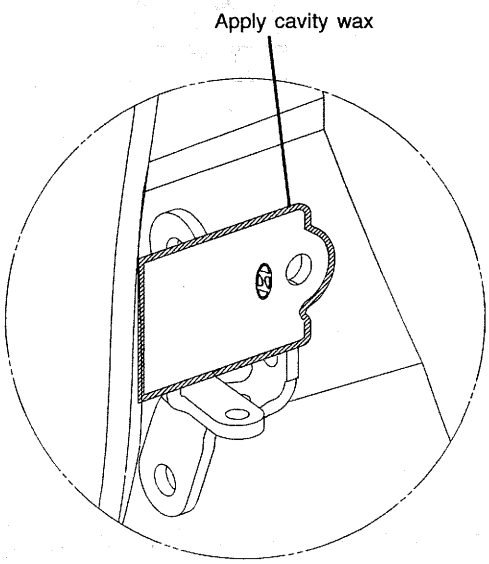
COR-N060



SECTION A-A' SECA-A



SECTION B-B' (FOR HMMA) SECB-B

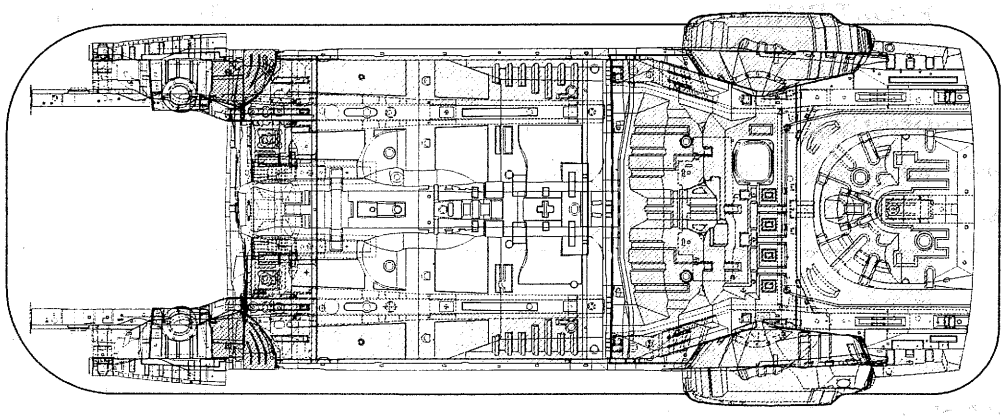


VIEW "W" "X" "Y" "Z" COR-0062

UNDER BODY ANTI-CORROSION AGENT

The undersides of the floor and wheel house are undercoated to provide greater corrosion resistance. Therefore, when such panel is replaced or repaired, apply under body anti-corrosion agent to that part.

NOTE
Do not apply the under body anti-corrosion agent to come in contact with tires, muffler and exhaust pipe.



* Under body anti-corrosion agent (: Thickness 1.0mm, : Thickness 1.5mm)

DED-N001A