INTRODUCTION

Dodge/Plymouth Neon

This manual has been prepared for use by all body technicians involved in the repair of the Dodge/Plymouth Neon vehicles.

This manual shows:

- **Typical unibody panels contained in the Neon**
- **The weld locations for these panels**
- **The types of welds for the panel**
- **Proper sealer types and correct locations**

Chrysler Corporation reserves the right to make improvements in design or to change specifications to these vehicles without incurring any obligation upon itself.

DODGE/PLYMOUTH NEON

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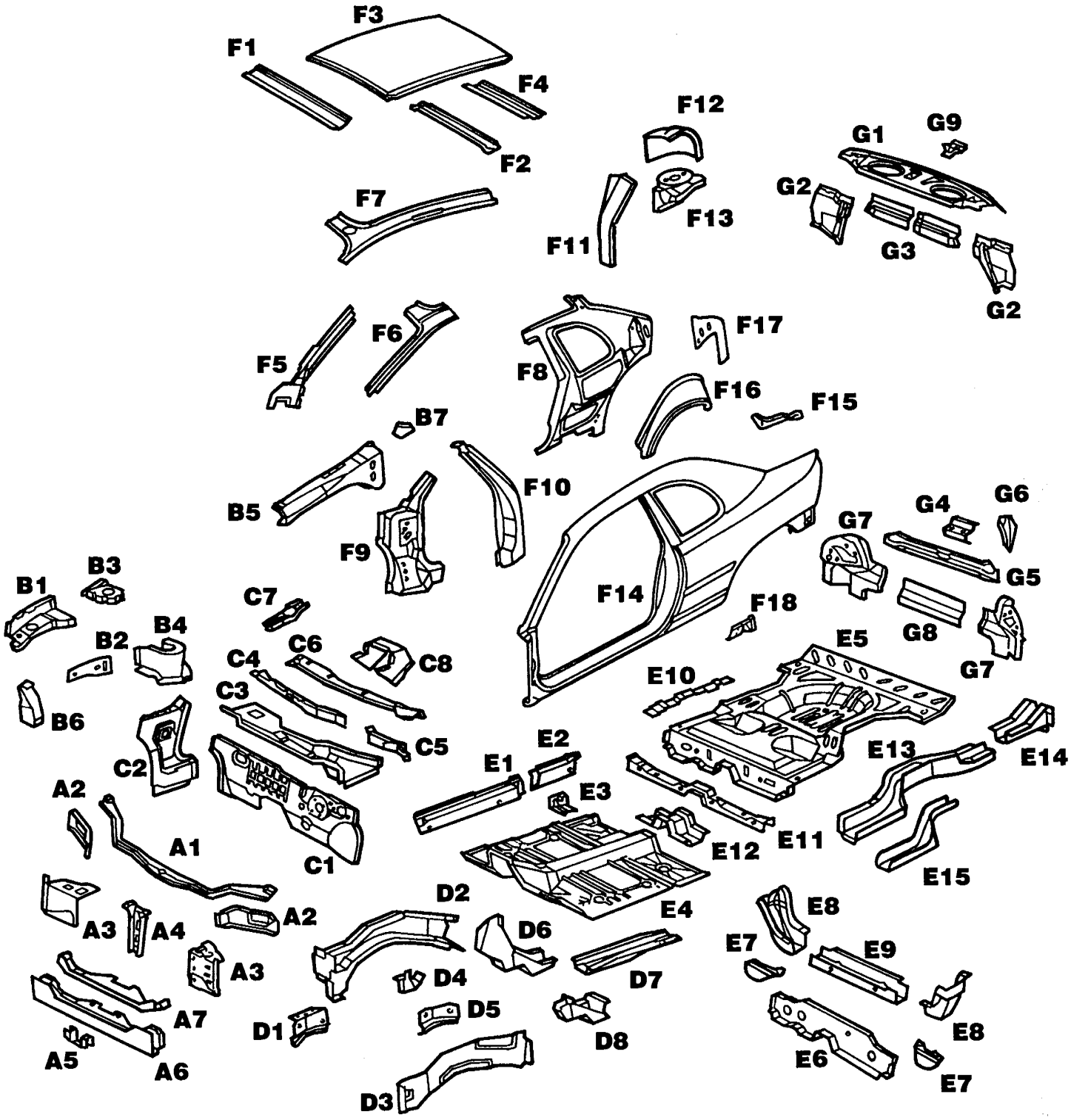
BODY COMPONENTS — DODGE/PLYMOUTH NEON



Radiator Support Components

1. Upper Closure Panel Crossmember
2. Upper Closure Panel
3. Lower Closure Panel
4. Closure Panel to Upper Crossmember Support
5. Front Crossmember Engine Mounting Bracket Gusset
6. Lower Radiator Crossmember
7. Side Rail to Lower Crossmember Closure Plate

Upper Rail Components

1. Side Shield Panel
2. Side Shield Extension
3. ISO Strut Mounting Tower Reinforcement
4. ISO Strut Mounting Tower
5. Upper Load Path Beam
6. Fender Nose Reinforcement
7. Hinge Pillar to Load Beam and Cowl Top Tie Plate

Dash Components

1. Dash Panel
2. Cowl Side Panel
3. Cowl Plenum Panel
4. Cowl Plenum to Cowl Top Reinforcement
5. Cowl Plenum to Cowl Top Extension
6. Cowl Top Panel
7. Hood Inner Panel Hinge Reinforcement
8. Plenum Steering Column Support Lower Reinforcement

Front Side Rail Components

1. Inner Impact Engine Mounting Reinforcement
2. Front Rail Assembly
3. Front Reinforcement
4. Front Suspension Crossmember Mounting Reinforcement Front Bracket
5. Inner Impact Reinforcement
6. Front Side Rail Rear Rail
7. Front Side Rail Rear Extension
8. Front Side Rail to Cowl Side Panel Rear Brace

Front and Rear Floor Pan

1. Inner Body Side Sill Panel
2. Side Sill Inner Extension
3. Floor Pan to Sill Gusset
4. Front Floor Pan
5. Rear Floor Pan
6. Rear Floor Pan Front Crossmember
7. Rear Seat and Fuel Tank Strap Reinforcement
8. Rear Floor Pan Rear Suspension Outer Crossmember
9. Rear Floor Pan Rear Suspension Crossmember
10. Front Console Mounting Bracket
11. Front Floor Pan Seat Track Mounting Crossmember
12. Tunnel to Front Seat Crossmember Center Reinforcement
13. Rear Floor Pan Side Rail
14. Rear Side Rail Shipping Tie-Down and Bumper Support Reinforcement
15. Rear Floor Pan Side Rail

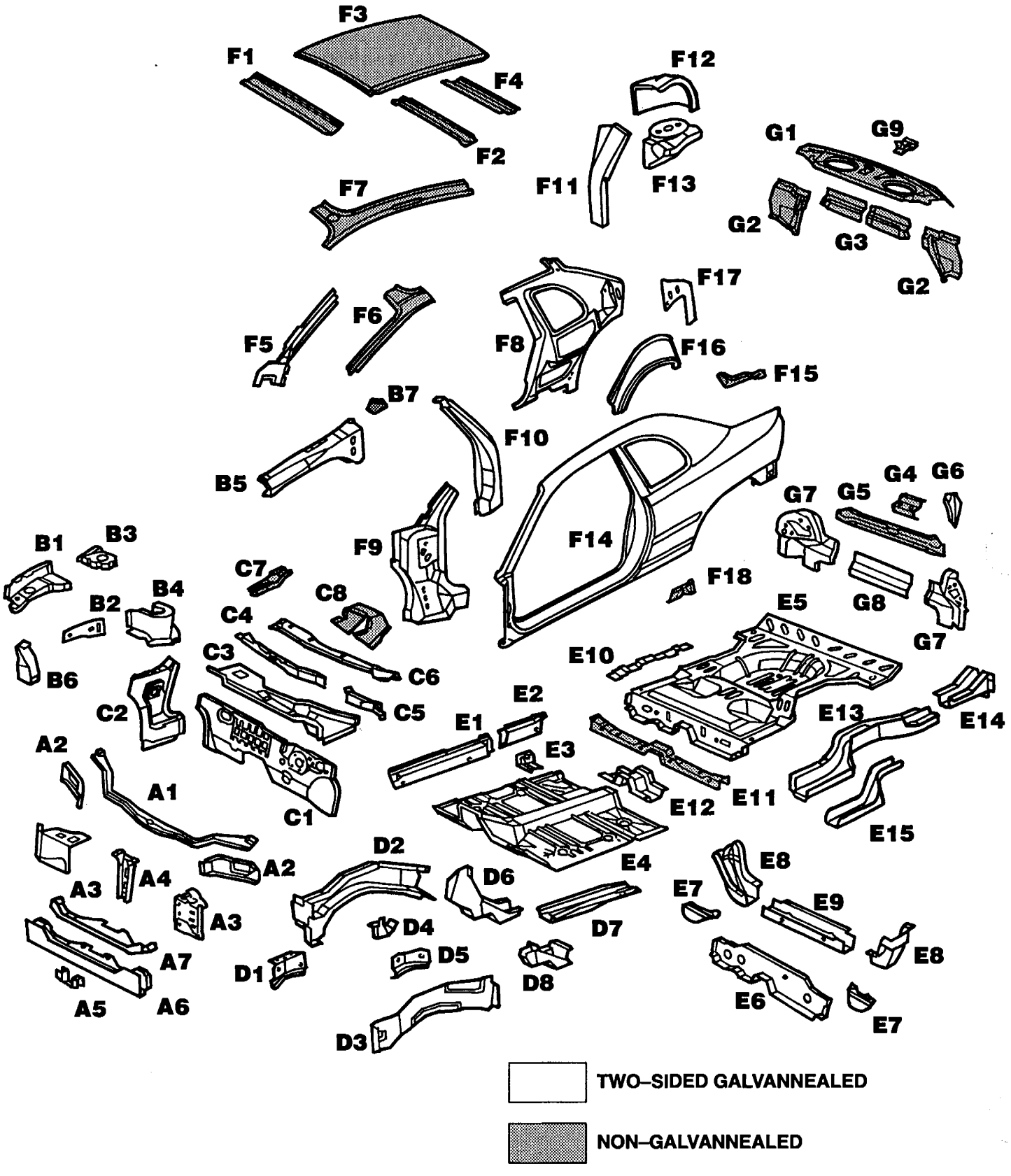
Roof and Body Side Aperture

1. Windshield Opening Upper Frame
2. Roof Bow
3. Roof Panel
4. Rear Window Opening Upper Reinforcement
5. Windshield Opening Side Inner Frame
6. Windshield Opening Side Outer Frame
7. Roof Side Inner Rail
8. Quarter Inner Panel
9. Front Hinge Pillar
10. Pillar Reinforcement (B-Pillar)
11. Rear Wheelhouse Inner Front Panel
12. Rear Wheelhouse Inner Rear Panel
13. Rear Wheelhouse Inner Panel Shock Absorber Mounting Reinforcement
14. Body Side Aperture
15. Body Side Aperture Drain Trough
16. Rear Wheelhouse Outer Panel
17. Quarter Inner Panel Extension
18. Lower Jacking Reinforcement

Tail Panel Components

1. Shelf Panel
2. Shelf Panel to Wheelhouse Support
3. Shelf Panel Front Reinforcement
4. Lower Deck Opening Reinforcement Latch Striker Plate
5. Deck Opening Lower Panel Reinforcement
6. Body Side Aperture to Lower Deck Opening Outer Panel Extension
7. Deck Opening Lower Panel
8. Deck Opening Lower Center Panel
9. Shelf Panel Rear Center Reinforcement

CORROSION PROTECTION — DODGE/PLYMOUTH NEON



The following measures have been implemented in order to provide maximum corrosion prevention and protection.

1. The use of galvannealed coatings throughout the body structure.
2. Cationic electrode position undercoating is used on the complete body in all instances.
3. Body sealing.
4. Stone-chipping resistant primer application.
5. Underbody corrosion prevention.

Definitions of Steels used in Dodge/ Plymouth Neon:

MS 66 — Represents an uncoated cold-rolled structural steel used mainly for interior braces and reinforcements.

MS 67 — Represents an uncoated structural steel used in areas where structural integrity is critical. Eg., the type of steel used for the A-pillar.

MS 264-050-XK — Represents an uncoated high strength steel used in applications where structural integrity is critical.

Two-Sided Galvannealed MS 6000-44A — Represents a two-sided zinc coated steel in which the coating is fully alloyed with the sheet or strip surface.

Two-Sided Galvannealed MS 6000-44VA — Represents a two-sided zinc-iron coated high strength steel in which the coating is fully alloyed with the sheet or strip surface.

PARTIAL LIST OF STEEL APPLICATIONS

Galvannealed Steel

Body Side Aperture

Cowl Plenum Panel

Cowl Side Panel

Dash Panel

Deck Lid — Inner and Outer*

Deck Opening Lower Center Panel

Deck Opening Lower Panel

Front Door — Inner Panel*

Front Door — Outer Panel*

Front Fender*

Front Floor Pan

Front Hinge Pillar

Front Rail

Front Strut Mounting Tower

Front Wheelhouse (Front and Rear)

Hood — Inner and Outer Panels*

Lower Radiator Crossmember

Radiator Closure Panel Upper Crossmember

Radiator Closure Panel — Upper and Lower

Rear Door — Inner Panel*

Rear Door — Outer Panel*

Rear Floor Pan

Rear Floor Pan Front Crossmember

Rear Floor Pan and Rear Suspension Outer Crossmember

Rear Floor Pan Side Rail

Rear Quarter Panel — Inner

Rear Quarter Panel — Outer (Body Side Aperture)

Rear Wheelhouse — Inner

Roof Panel

Upper Load Path Beam

* Not shown in illustration

HIGH STRENGTH STEELS (HSS)

High tensile steel strengthened by solid solution has been used for the parts listed below.

The tensile strength of these high strength steel panels is much greater than the tensile strength of mild steel, nevertheless body work (sheet metal work, painting, etc.) can be performed by using the same procedures as those for mild steels.

DO NOT HEAT ANY OF THESE STEELS OVER 700°F.

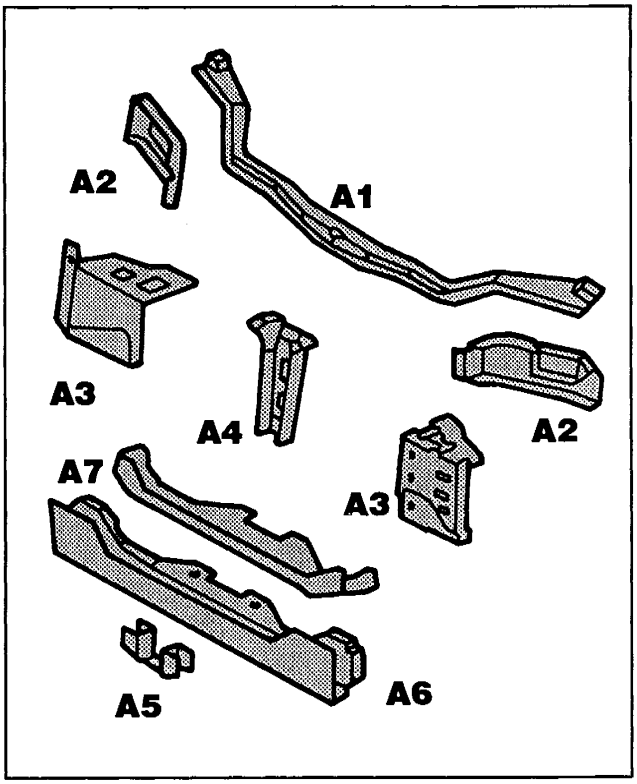
DODGE/PLYMOUTH NEON HIGH STRENGTH STEEL APPLICATIONS

Part Description	Materials Specification
Hood Hinge Assembly	MS-6000-44-VA
Front Suspension ISO Strut Mounting Tower Reinforcement	MS-6000-44-VA
Front Crossmember Engine Mounting Bracket Gusset	MS-6000-44 VA
Lower Radiator Crossmember	MS-6000-44-VA
Front Side Rail to Lower Radiator Crossmember Closure Plate	MS-6000-44-VA
Front Side Rail Front Reinforcement	MS-6000-44-VA
Front Side Rail Rear Extension	MS-6000-44-VA
Inner Body Side Sill Panel	MS-6000-44-VA
Side Sill Inner Extension	MS-6000-44-VA
Rear Floor Pan Side Rail	MS-6000-44-VA
Rear Floor Pan Side Rail Reinforcement	MS-6000-44-VA
Fuel Tank Strap Mounting Reinforcement	MS-6000-44-VA
Rear Floor Pan Rear Suspension Center Crossmember	MS-6000-44-VA
Front Side Rail Rear Reinforcement	MS-6000-44-VA
Rear Side Rail Shipping Tie-Down & Bumper Support Reinforcement	MS-6000-44-VA
Rear Floor Pan Spare Wheel Anchor Bolt Bracket	MS-264-050-XK
Rear Suspension Crossmember Control Arm	MS-264-050-XK
Rear Floor Pan Rear Suspension Outer Crossmember	MS-6000-44-VA
Front Side Rail Inner Impact Engine Mount Reinforcement	MS-6000-44-VA
Front Side Inner Impact Reinforcement	MS-6000-44-VA
Shelf Panel Front Reinforcement	MS-264-050-XK
Front Fender Shield Upper Load Path Front Beam	MS-6000-44-VA
Front Side Rail Battery Tray Bracket	MS-6000-44-VA
Front Side Rail Battery Tray Attachment Bracket Extension	MS-6000-44-VA
Front Suspension Rear Attachment Retainer	MS-6000-44-VA
Front Side Rail Front to Dash Panel Reinforcement	MS-6000-44-VA
Front Side Rail Rear to Floor Pan Plate	MS-6000-44-VA
Windshield Opening Side Outer Frame	MS-264-050-XK

RADIATOR SUPPORT COMPONENTS

The Upper and Lower Radiator Closure Panels are serviced as a sub-assembly. The Side Rail to Front Crossmember Closure Panel is also serviced as a sub-assembly of the Front Crossmember.

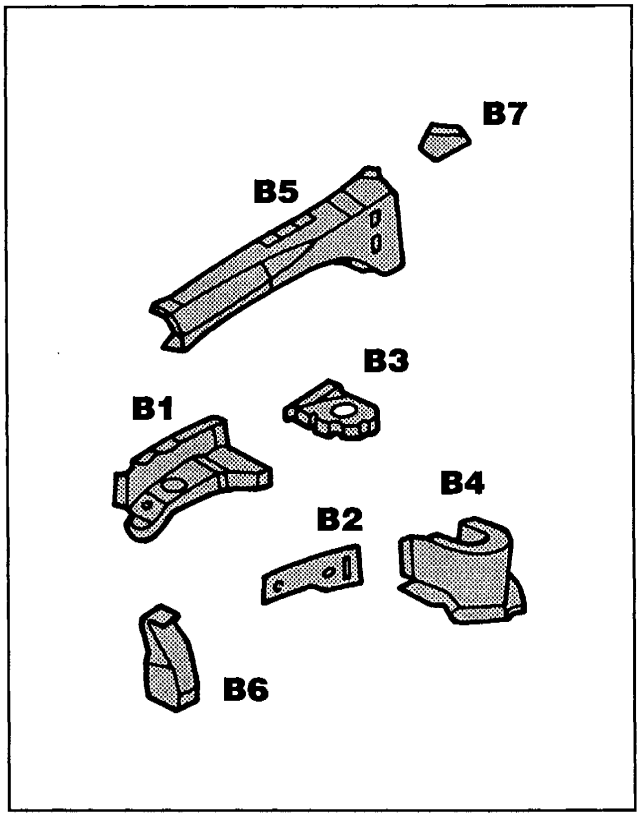
Item	Description
A1.	Upper Closure Panel Crossmember
A2.	Upper Radiator Closure Panel*
A3.	Lower Radiator Closure Panel*
A4.	Closure Panel to Upper Crossmember Support
A5.	Front Crossmember Engine Mounting Bracket Gusset
A6.	Lower Radiator Crossmember*
A7.	Side Rail to Lower Radiator Crossmember Closure Panel*



UPPER RAIL COMPONENTS

The Side Shield Panel is serviced as an assembly which includes the Side Shield Extension and the Front Side Rail Accessory Pulley Splash Shield, the latter being a plastic component. The ISO Strut Mounting Tower and ISO Strut Mounting Tower Reinforcement are also only available as a service assembly.

Item	Description
B1.	Side Shield Panel*
B2.	Side Shield Extension*
B3.	ISO Strut Mounting Tower Reinforcement*
B4.	ISO Strut Mounting Tower*
B5.	Upper Load Path Beam
B6.	Fender Nose Reinforcement
B7.	Hinge Pillar to Load Beam and Cowl Top Tie Plate

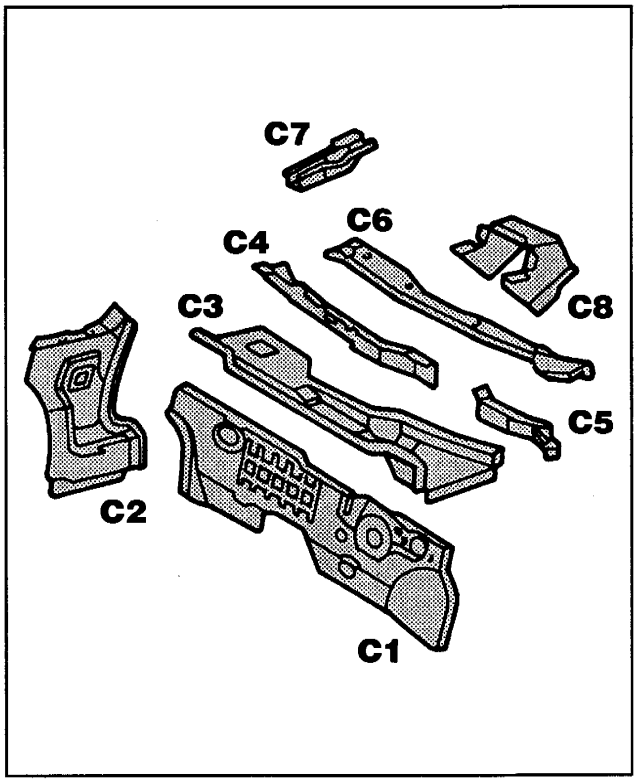


* Serviced as an assembly

DASH COMPONENTS

The Cowl Plenum Panel to Cowl Top Reinforcement and Cowl Top Extension are included in a large service assembly. The Cowl Plenum Panel is the base for this service assembly.

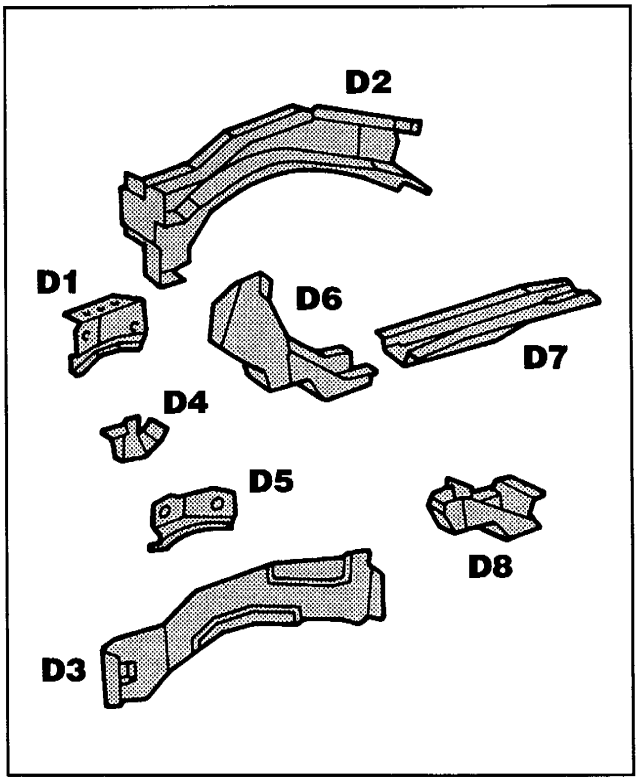
Item	Description
C1.	Dash Panel
C2.	Cowl Side Panel
C3.	Cowl Plenum Panel*
C4.	Cowl Plenum to Cowl Top Reinforcement*
C5.	Cowl Plenum to Cowl Top Extension*
C6.	Cowl Top Panel*
C7.	Hood Inner Panel Hinge Reinforcement
C8.	Plenum Steering Column Support Lower Reinforcement



FRONT SIDE RAIL COMPONENTS

All Front Side Rail Components are serviced as individual components.

Item	Description
D1.	Inner Impact Engine Mounting Reinforcement
D2.	Front Outer Rail
D3.	Front Reinforcement
D4.	Front Suspension Crossmember Mounting Reinforcement Front Bracket
D5.	Inner Impact Reinforcement
D6.	Front Side Rail Rear Rail
D7.	Front Side Rail Rear Extension
D8.	Front Side Rail to Cowl Side Panel Rear Brace



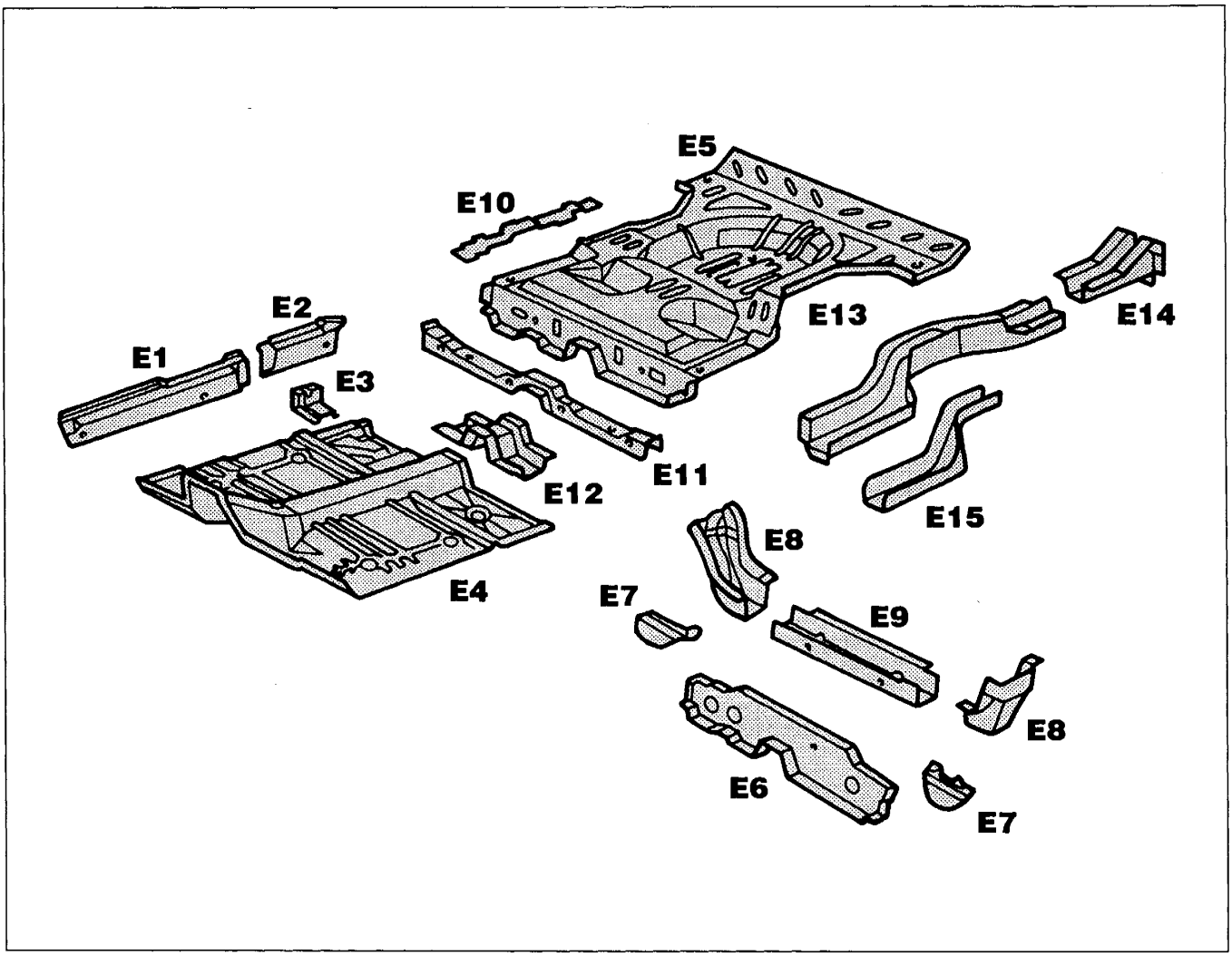
*Serviced as an assembly

FRONT AND REAR FLOOR PAN

The Rear Floor Pan Rear Suspension Outer and Center Crossmembers are serviced as a sub-assembly and are welded to the Rear Floor Pan as a single unit. The Rear Floor Pan Side Rail and Reinforcement are also serviced as an assembly.

Item	Description
E1.	Inner Body Side Sill Panel
E2.	Side Sill Inner Extension
E3.	Floor Pan to Sill Gusset
E4.	Front Floor Pan
E5.	Rear Floor Pan
E6.	Rear Floor Pan Front Crossmember
E7.	Rear Seat and Fuel Tank Strap Reinforcement
E8.	Rear Floor Pan Rear Suspension Outer Crossmember*
E9.	Rear Floor Pan Rear Suspension Crossmember*
E10.	Front Console Mounting Bracket
E11.	Front Floor Pan Seat Track Mounting Crossmember
E12.	Tunnel to Front Seat Crossmember Center Reinforcement
E13.	Rear Frame Rail
E14.	Rear Side Rail Shipping Tie-Down and Bumper Support Reinforcement
E15.	Rear Frame Rail Reinforcement*

* Serviced as an assembly

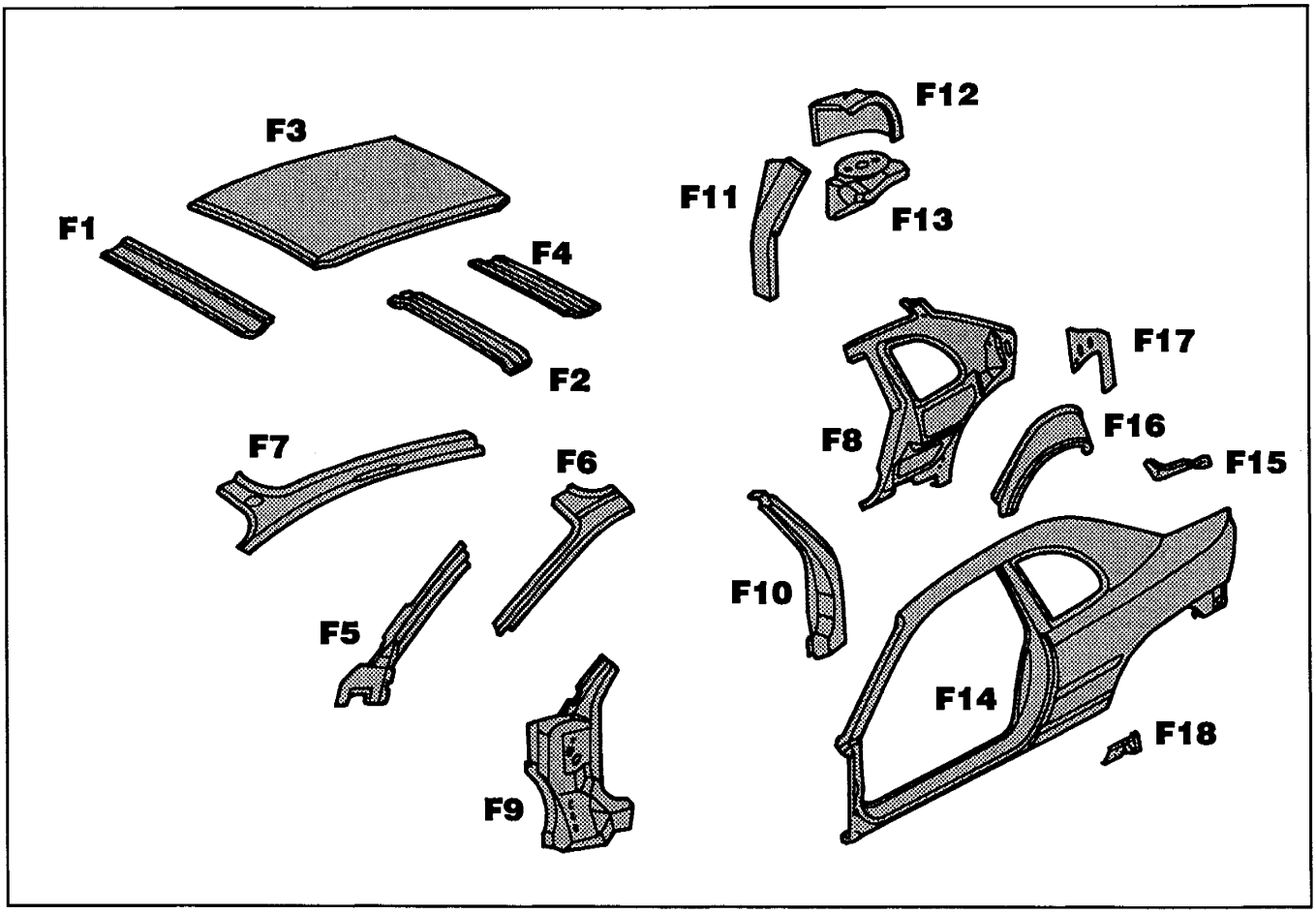


ROOF AND BODY SIDE APERTURE

For service, the Body Side Aperture is divided into two separate service assemblies: The Front Side Aperture and the Rear Quarter Panel. The Front Side Aperture contains the Front Hinge Pillar, A-Pillar and Roof Inner Side Rail components. The Rear Quarter Panel contains the Pillar Reinforcement, and the Outer Quarter Panel does not include the Inner Quarter Panel or Outer Wheelhouse Panel.

Item	Description
F1.	Windshield Opening Upper Frame
F2.	Roof Bow
F3.	Roof Panel
F4.	Rear Window Opening Upper Reinforcement
F5.	Windshield Opening Side Inner Frame*
F6.	Windshield Opening Side Outer Frame*
F7.	Roof Side Inner Rail*
F8.	Quarter Inner Panel
F9.	Front Hinge Pillar*
F10.	Pillar Reinforcement*
F11.	Rear Wheelhouse Inner Front Panel
F12.	Rear Wheelhouse Inner Rear Panel
F13.	Rear Wheelhouse Inner Panel Shock Absorber Mounting
F14.	Body Side Aperture*
F15.	Body Side Aperture Drain Trough
F16.	Rear Wheelhouse Outer Panel
F17.	Quarter Inner Panel Extension
F18.	Lower Jacking Reinforcement

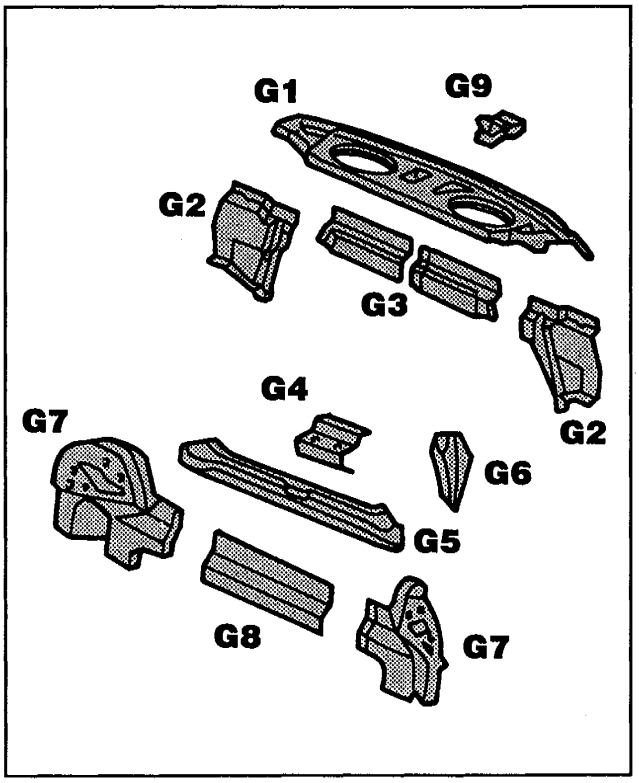
*Serviced as an assembly



TAIL AND SHELF PANEL COMPONENTS

The Deck Opening Lower Panel Reinforcement, Deck Opening Lower Center Panel and the Deck Opening Latch Striker Plate Reinforcement are combined into one service assembly. All other Tail and Shelf Panel components are serviced individually.

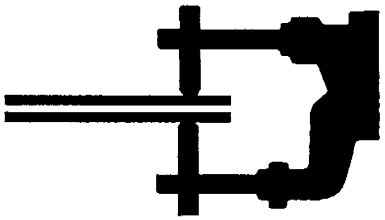
Item	Description
G1.	Shelf Panel
G2.	Shelf Panel to Wheelhouse Support
G3.	Shelf Panel Front Reinforcement
G4.	Lower Deck Opening Reinforcement Latch Striker Plate Reinforcement*
G5.	Deck Opening Lower Panel Reinforcement*
G6.	Body Side Aperture to Lower Deck Opening Outer Panel Extension
G7.	Deck Opening Lower Panel Reinforcement
G8.	Deck Opening Lower Center Panel*
G9.	Shelf Panel Rear Center Reinforcement



*Serviced as an assembly

WELDED PANEL REPLACEMENT

Dodge/Plymouth Neon



The basic parts of the body structure are the welded panels. This section contains a brief description of the placement of some of these panels and their weld locations.

NOTE: To ensure the cleanest, strongest and most durable welds possible, perform testing before and during all weld procedures. Always follow American Weld Society specifications and procedures.

EXPLANATION OF MANUAL CONTENTS

The major construction of a unibody vehicle consists of welded panels that create the supporting structure for all components and assemblies of the vehicle. Here are some examples for replacement of these parts.

Symbols

Some of the operations for panel replacement are designated by the following symbols.

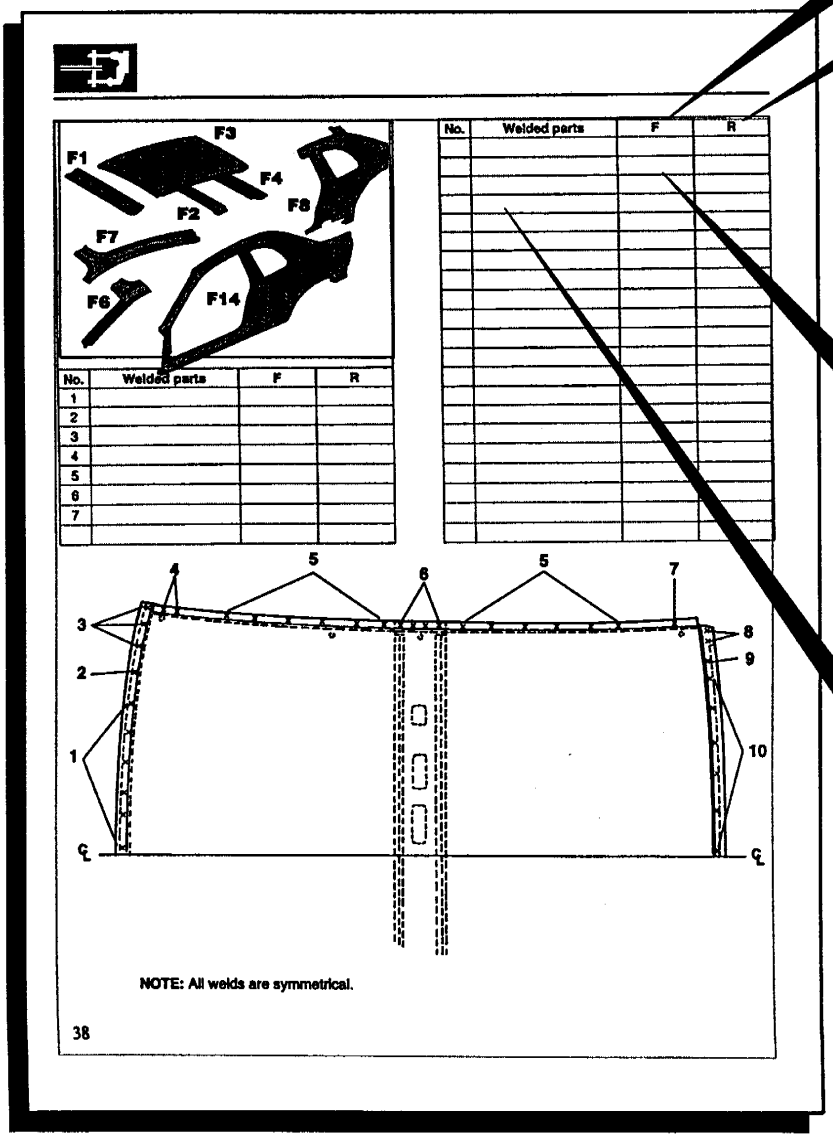
Rough cutting of panel to be replaced	MIG Plug Weld	MIG Arc Welding

1 3 2 4

Continuous Stitch MIG Weld

Alternate stitch welds until you have a continuous MIG weld.

NOTE: Although resistant spot welds are the nuts and bolts of the unibody vehicle, they will not be used as a repair symbol because of the lack of proper resistant spot weld equipment in most shops.



"F" indicates the number of factory welds to be separated.
"R" indicates the number of welds to be made and the method to be used when making repairs.

If only a number is listed under "F" it indicates that the method used at the factory was a spot weld; for all other methods, both the welding method and the number of welds are indicated.
For example, "F2, RP2" indicates that the 2 spot welds made at the factory should be replaced by 2 plug welds if repairs are made.

The welded components are indicated by using the designations given in the illustration below:
For example, " a + b " indicates that component "a" and component "b" shown in the top illustration are welded together.

NOTE: Before beginning repair procedures, perform test welds to verify your equipment and to ensure your welds are the best quality. All welds should conform to the American Welding Society standards.

For weld specifications contact:

American Welding Society

550 Northwest Le Jeune Road

P.O. Box 351040

Miami, Florida 33135

Phone: (305) 443-9353

Certain body components must use sealers to ensure proper assembly. Be sure to check the **Body Sealing Locations** and **Structural Adhesives Sections** for location and sealer type.

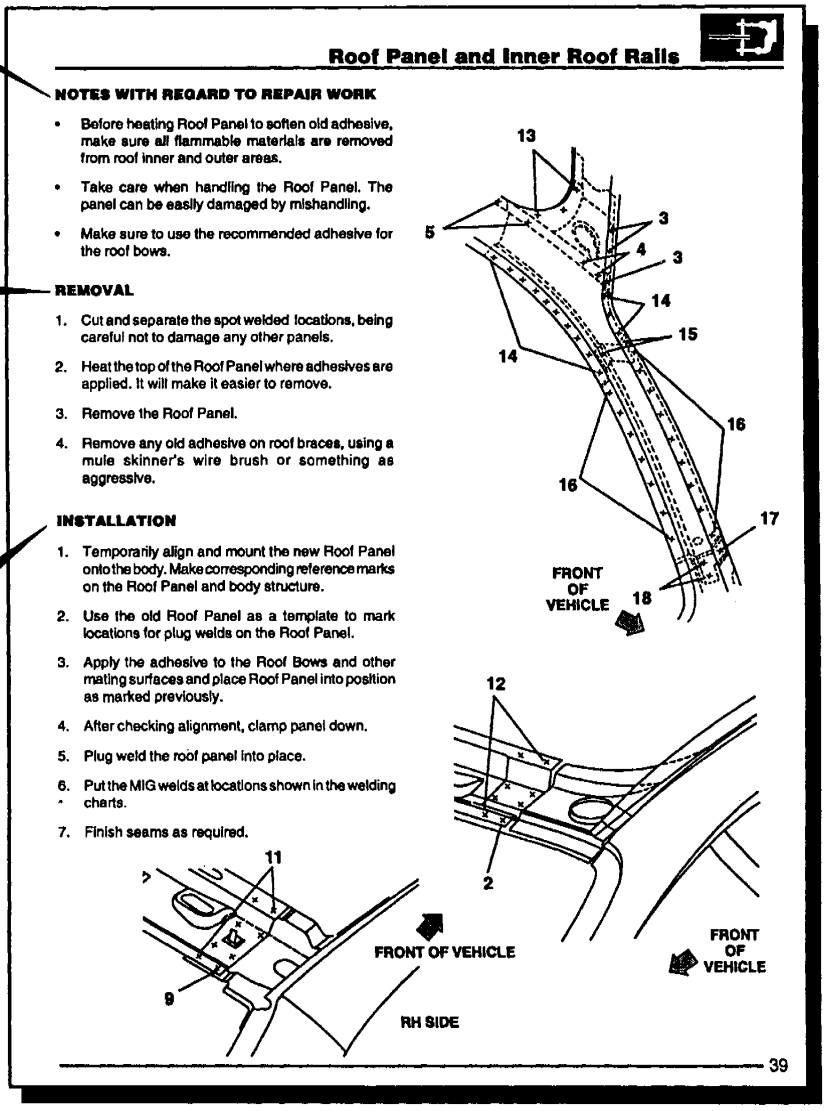
When dealing with panels that contact both the right and left sides of the vehicle (eg., roof panel) the artwork may depict only one-half of the panel being welded. In these cases, the referenced panel will be split on the vehicle centerline, and the number of welds shown will be half of the true amount. The corresponding chart will show the true number of welds. Remember, even though the artwork may show 12 welds, the chart may call for 24 welds total.

Points which require particular attention during welded panel replacement work.

The panel removal instructions and accompanying illustrations are given in the order in which the work is to be performed.

The panel installation instructions and accompanying illustrations are given in the order in which the work is to be performed.

In order to keep the instructions brief and simple, obvious work procedures (such as removal of a panel after it has been cut) have been omitted where possible.



Roof Panel and Inner Roof Rails

NOTES WITH REGARD TO REPAIR WORK

- Before heating Roof Panel to soften old adhesive, make sure all flammable materials are removed from roof inner and outer areas.
- Take care when handling the Roof Panel. The panel can be easily damaged by mishandling.
- Make sure to use the recommended adhesive for the roof bows.

REMOVAL

1. Cut and separate the spot welded locations, being careful not to damage any other panels.
2. Heat the top of the Roof Panel where adhesives are applied. It will make it easier to remove.
3. Remove the Roof Panel.
4. Remove any old adhesive on roof braces, using a mule skinner's wire brush or something as aggressive.

INSTALLATION

1. Temporarily align and mount the new Roof Panel onto the body. Make corresponding reference marks on the Roof Panel and body structure.
2. Use the old Roof Panel as a template to mark locations for plug welds on the Roof Panel.
3. Apply the adhesive to the Roof Bows and other mating surfaces and place Roof Panel into position as marked previously.
4. After checking alignment, clamp panel down.
5. Plug weld the roof panel into place.
6. Put the MIG welds at locations shown in the welding charts.
7. Finish seams as required.

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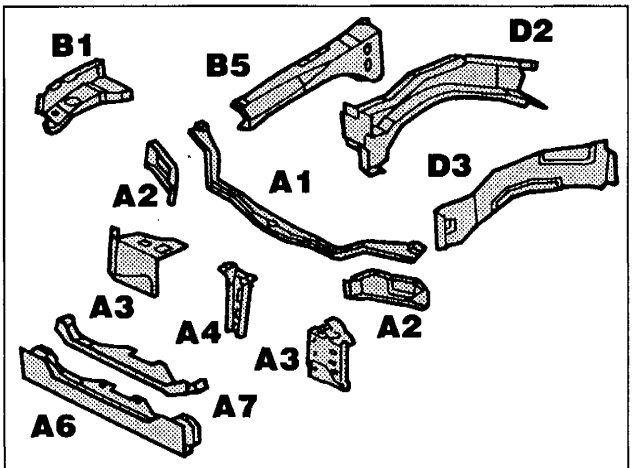
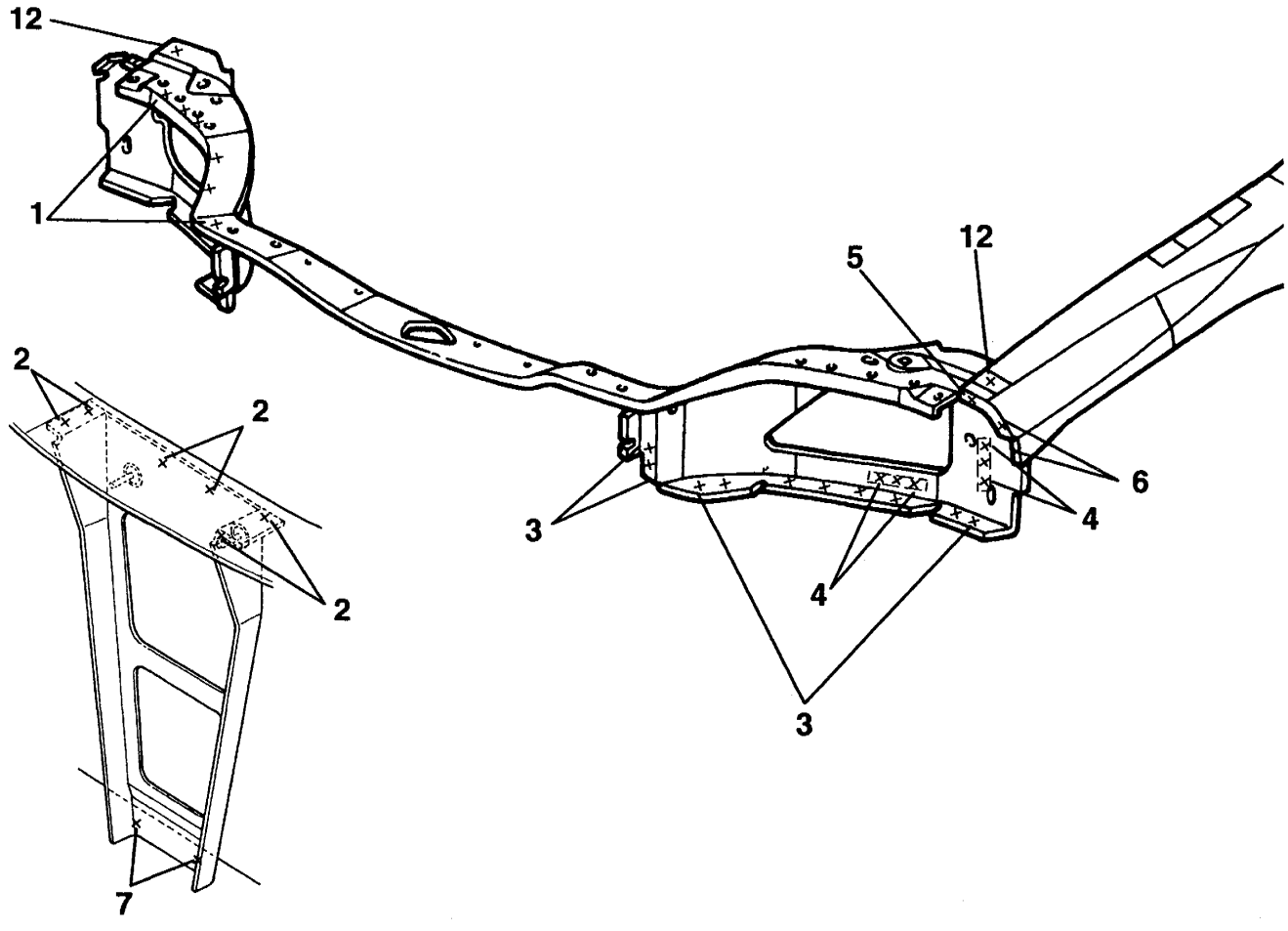
Upper Radiator Closure Panel



No.	Welded parts	F	R
1	A1 + A2	8	P8
2	A1 + A4	6	P6
3	A2 + A3	12	P12
4	A2 + B1	6	P6
5	B5 + A1 + A2	1	P1
6	B5 + A2	2	P2
7	A4 + A7	2	P2
8	A3 + D2 + D3	3	P3

No.	Welded parts	F	R
9	A3 + D2	2	P2
10	A7 + A3 + A6	3	P3
11	A6 + A3 + D2	2	P2
12	B5 + A1 + B1	2	P2
13	D6 + D2	2	P2
14	D2 + A3	3	P3
15	D2 + A3 + D3	2	P2
16	D2 + D3	1	P1
17	D2 + D3 + A6	2	P2



NOTES WITH REGARD TO REPAIR WORK

- The Headlamp Supports are serviced as an assembly that includes the Upper Closure Panel and the Lower Closure Panel.
- Left and right sides are serviced in the same manner.
- Refer to the Lower Radiator Crossmember section for Headlamp Support to Crossmember weld locations.

REMOVAL

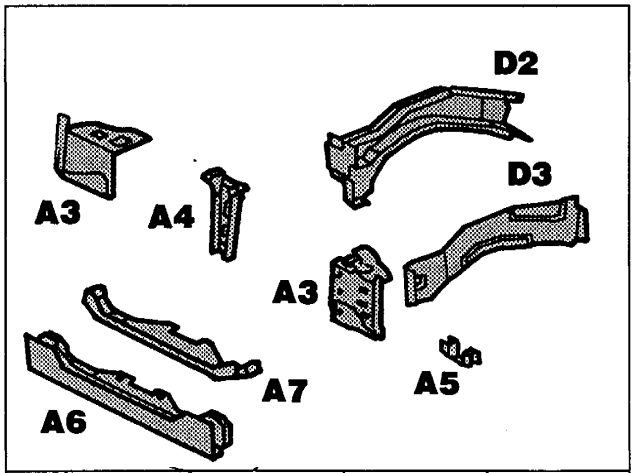
1. You must remove B5 in order to remove headlamp support.
2. Carefully cut all spot and MIG welds and use care not to damage any other panels.
3. Separate all welds.
4. Remove old panel and prepare mating surfaces of existing panels.

CAUTION: Do not cut at a location where there is a weld bead or a welded nut.

INSTALLATION

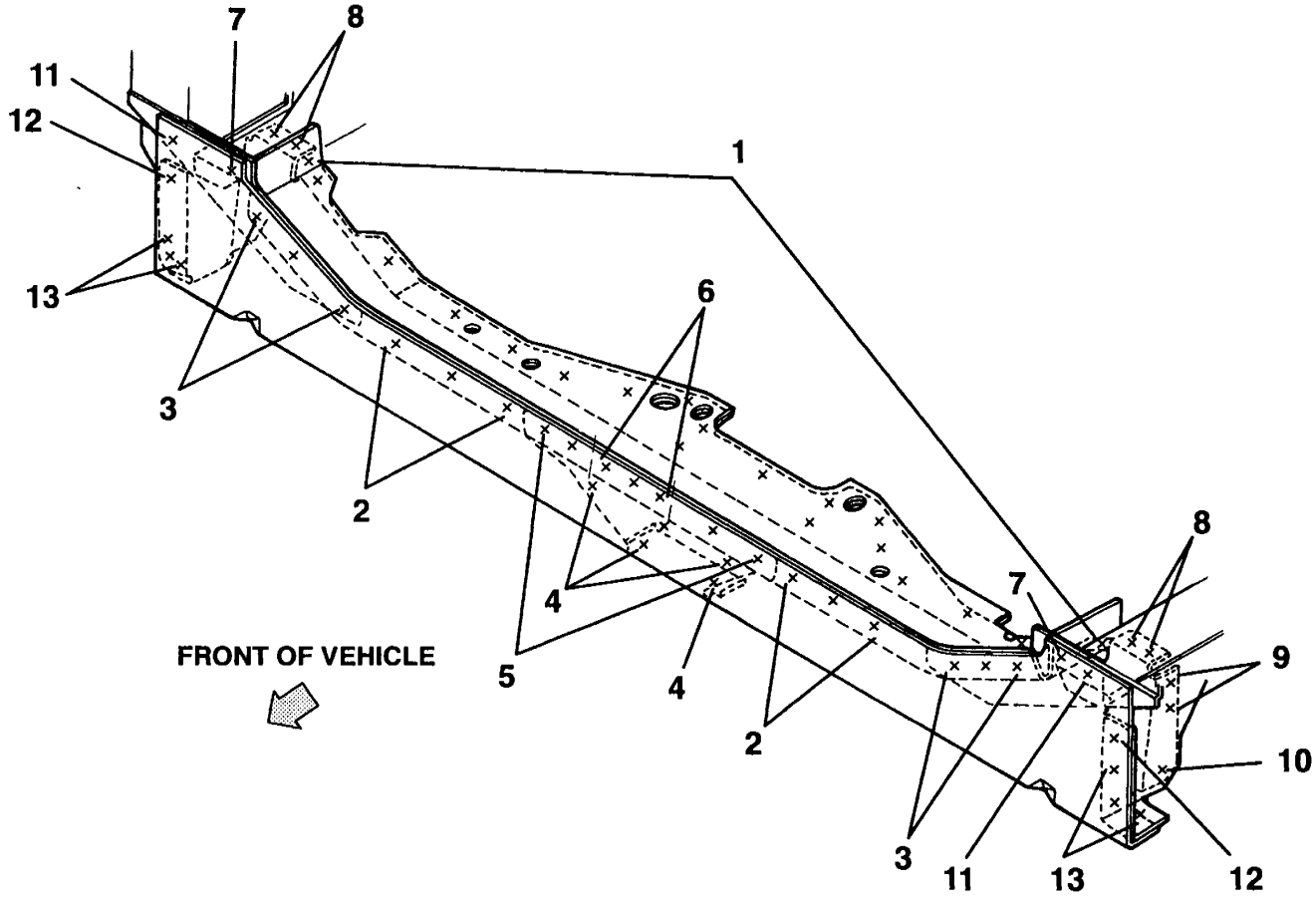
1. Measure the upper and lower parts of the Headlamp Support and mark them according to your measurements.
2. Temporarily mount new panel.
3. Check all measurements and alignments.
4. Spray anti-corrosion agent over repair area (inside and out).
5. Do the plug and MIG welding work.

Lower Radiator Crossmember



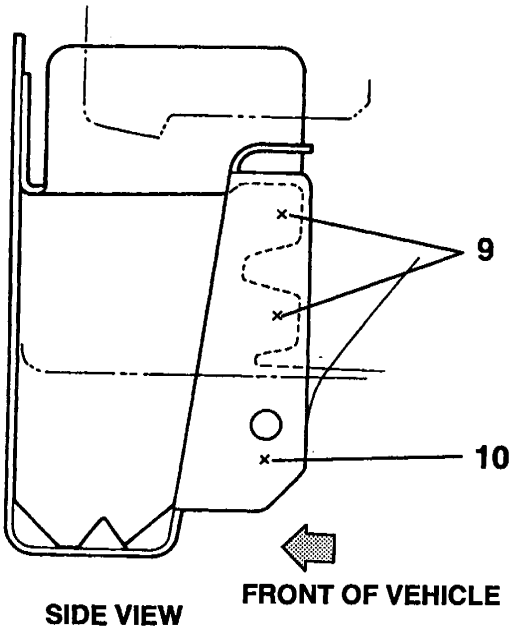
No.	Welded parts	F	R
1	A3 + A7	19	P19
2	A6 + A7	6	P6
3	A6 + A7 + A3	6	P6
4	A6 + A5	5	P5
5	A6 + A5	5	P5
6	A4 + A7	2	P2
7	A6 + A3 + D2	2	P2
8	A6 + D2	4	P4

No.	Welded parts	F	R
9	A6 + D2 + D3	4	P4
10	A6 + D2	2	P2
11	A6 + D2	2	P2
12	A6 + A7 + D2	2	P2
13	A6 + A7	6	P6



NOTES WITH REGARD TO REPAIR WORK

- Because the Headlamp Supports and Lower Radiator Crossmember create the mounting points for many critical front body components, be sure to make careful measurements and maintain the correct dimensions when doing the repairs.
- For points which have no specific measurement instructions in the Body Dimensions section, determine two points on the radiator support which are positioned symmetrically, and then confirm that the distances from the body center point to the left point and to the right point are the same.
- The Lower Radiator Crossmember and the Side Rail to Lower Radiator Crossmember Closure Plate are serviced as an assembly.



SIDE VIEW

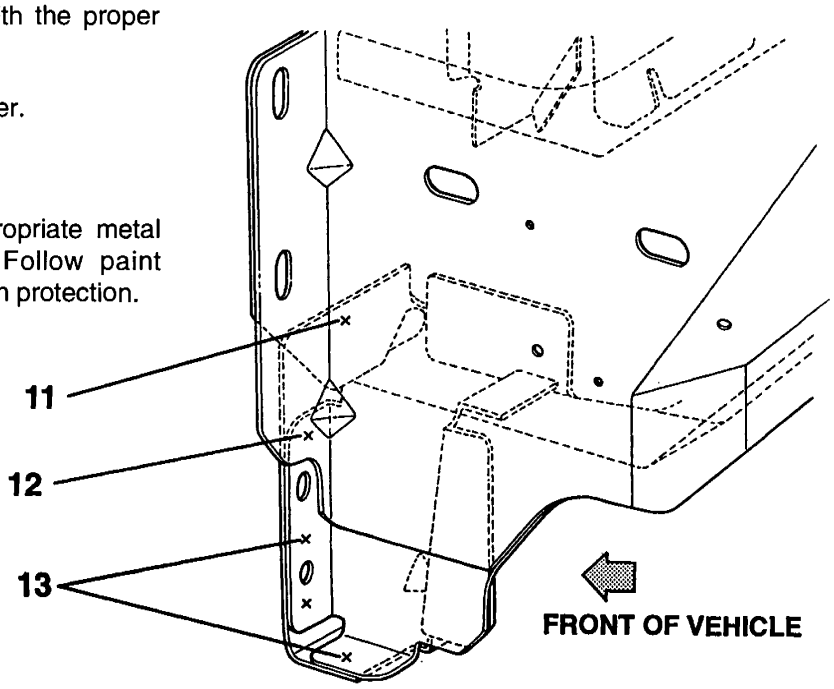
REMOVAL

1. Cut spot welds on section being removed. Use care not to damage other panels.
2. Separate panels and remove.

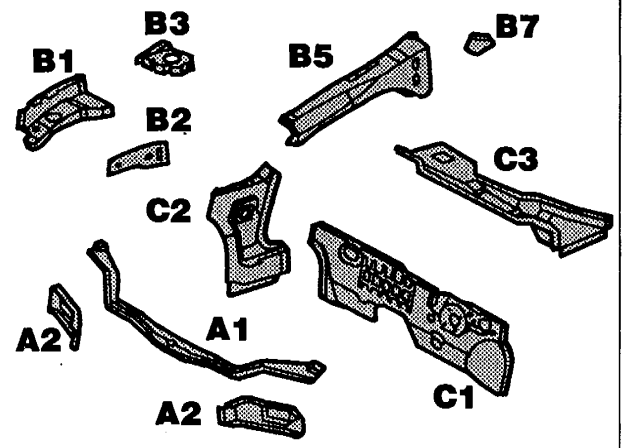
INSTALLATION

1. Temporarily mount the new Lower Radiator Crossmember onto the Front Rails.
2. Measure each part and make any corrections necessary to obtain agreement with the proper body dimensions.
3. Apply anti-corrosion weld-thru primer.
4. Do the plug welding.

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

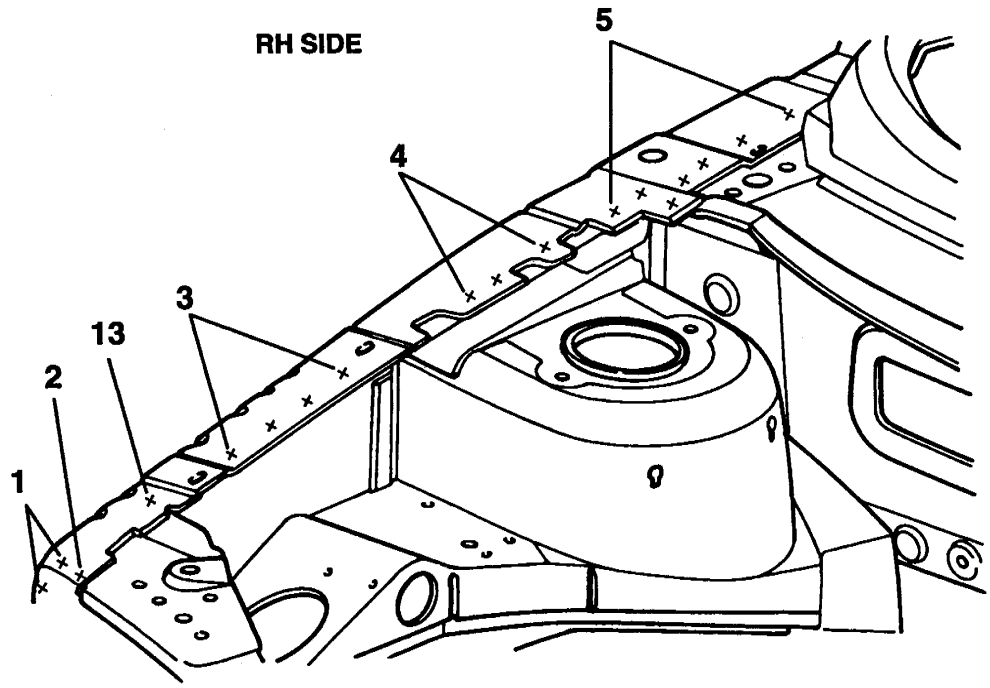


Upper Load Path Beam



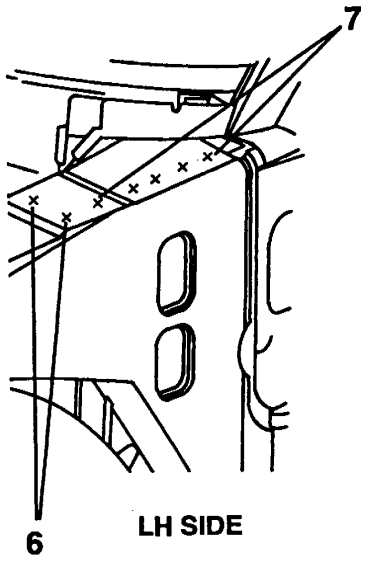
No.	Welded parts	F	R
1	B5 + A2	2	P2
2	B5 + A1 + A2	1	P1
3	B5 + B1	4	P4
4	B5 + B3	3	P3
5	B5 + B7 + C3 (RH only)	7	P7
6	B5 + B7 + C3 (LH only)	2	P2
7	B5 + B7 (LH only)	5	P5
8	B5 + B1	7	P7

No.	Welded parts	F	R
9	B5 + B2	6	P6
10	B5 + C2 + B2	1	P1
11	B5 + C2 + C1	1	P1
12	B5 + F9	2	P2
13	B5 + A1 + B1	1	P1
14	B5 + F9 + Impact Reinforcement	7	P7
15	B5 + F9	2	P2



NOTES WITH REGARD TO REPAIR WORK

- The Upper Load Path Beam is the final "tie-in" for the Headlamp Support to the rest of the unibody.
- These reinforcements also provide mounting points for the fender which makes beam alignment crucial.



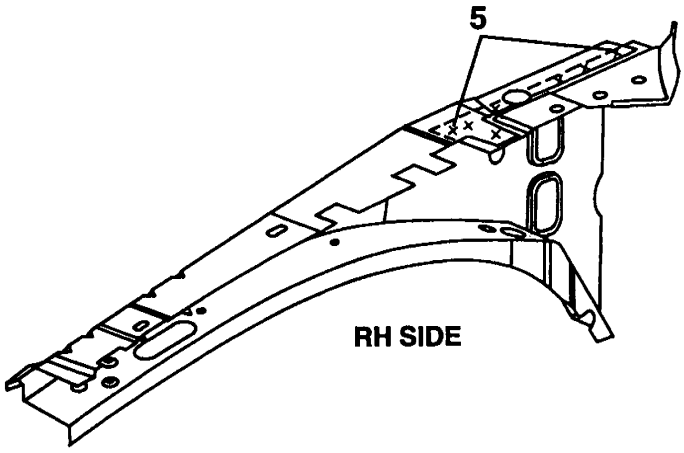
REMOVAL

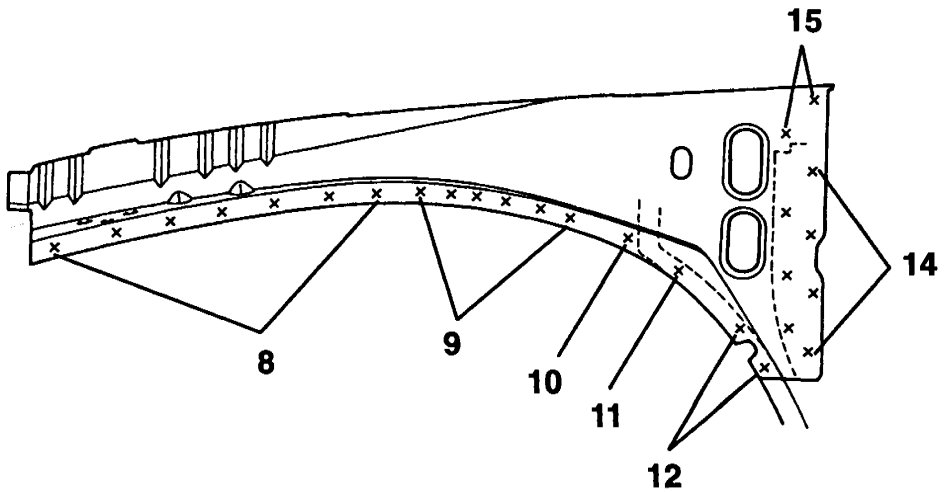
1. Use a spot weld cutter to remove all welds pertaining to the beams.
2. Note the weld locations of panels not damaged.
3. Carefully cut all MIG welds to be removed.

INSTALLATION

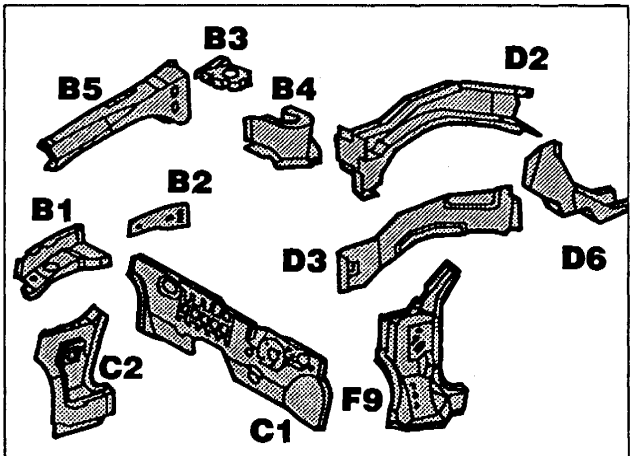
1. Prepare all mating surfaces by cleaning thoroughly to ensure good weld penetration and alignment.
2. Install the upper reinforcement first and be sure spot weld locations are aligned correctly.
3. Tack weld the panel in place and check alignment.
4. Use weld-thru primer for best corrosion protection.
5. Complete all plug and MIG welding responsibilities.
6. Install the lower reinforcement following the same procedures.

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



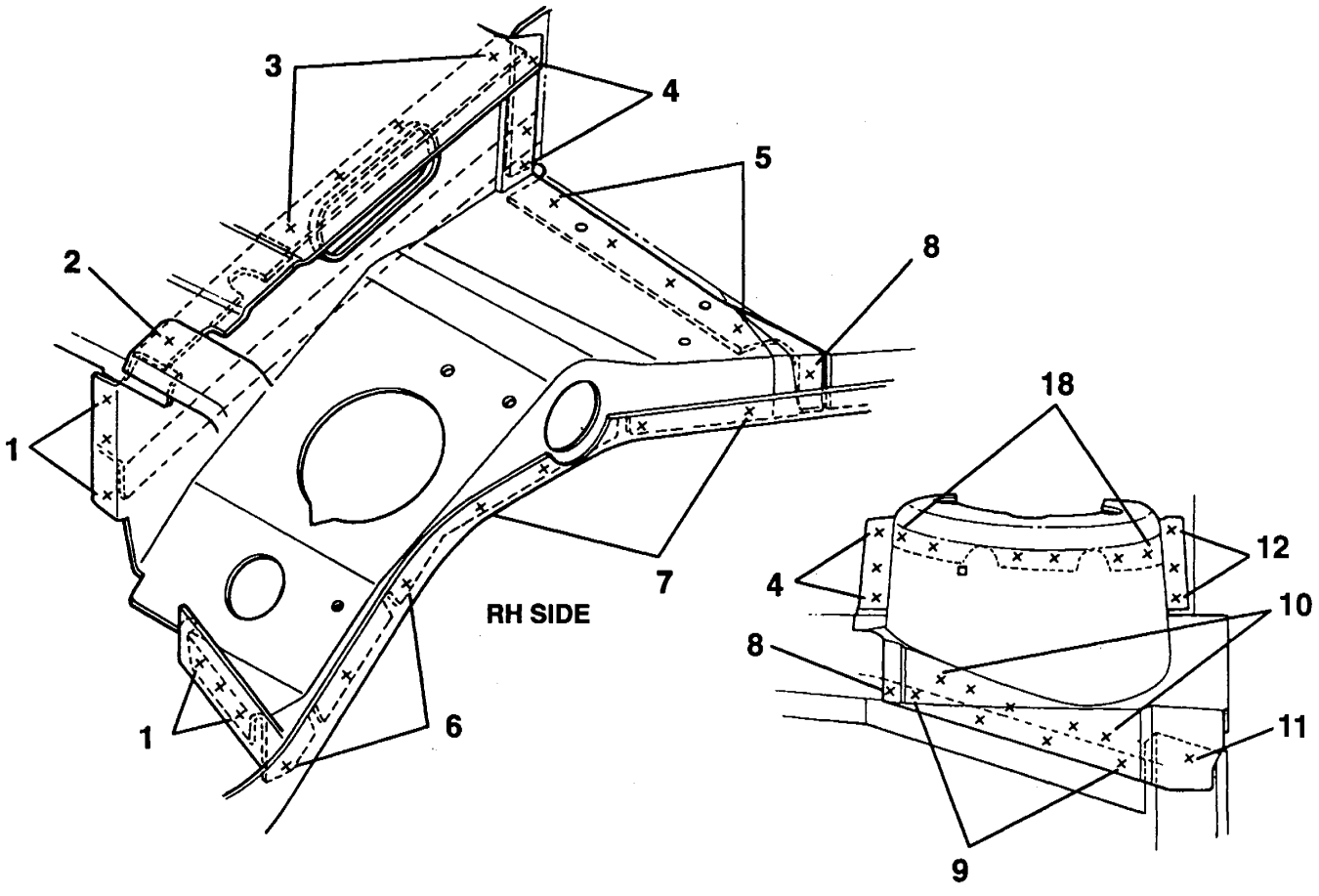


Fender Side Shield and Strut Tower



No.	Welded parts	F	R
1	B1 + A2	6	P6
2	B5 + A1 + B1	1	P1
3	B5 + B1	4	P4
4	B1 + B4 + B2	3	P3
5	B4 + B1	4	P4
6	B1 + D3 + D2	3	P3
7	B1 + D3 + D2	4	P4
8	B1 + B4 + D3	1	P1

No.	Welded parts	F	R
9	B4 + D2 + D3	4	P4
10	B4 + D3	5	P5
11	B4 + D3 + D6	1	P1
12	B4 + B2	3	P3
13	B3 + B5	3	P3
14	B4 + C1	6	P6
15	B3 + B2	4	P4
16	B2 + C2	3	P3
17	B3 + B4	8	P8
18	B3 + B4	10	P10

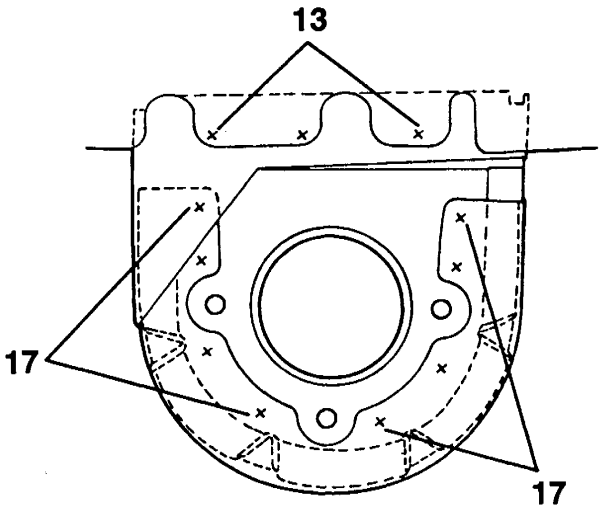


NOTES WITH REGARD TO REPAIR WORK

- The suspension mounting support is serviced as a sub-assembly.
- Because the Fender Side Shield and Strut Tower touch so many of the front structure parts and determine accuracy of the alignment, they have to be perfectly aligned when mounted.

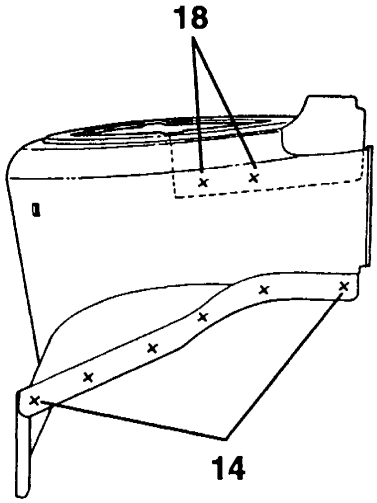
REMOVAL

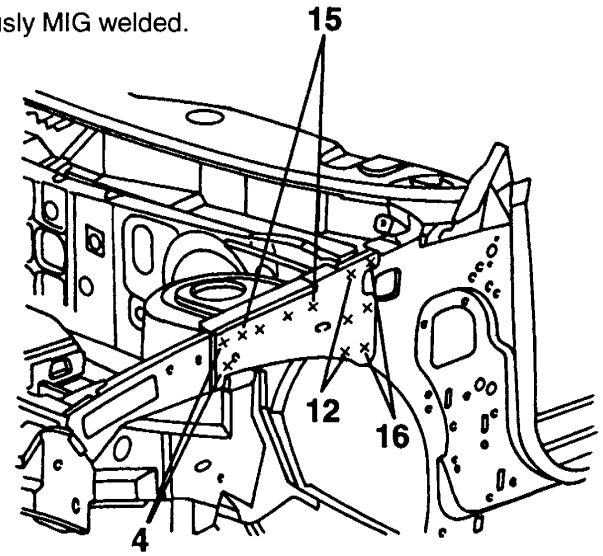
1. Refer to the Cowl Side Panel section for removal of the Cowl Side Panel and the Upper Load Path Beam.
2. Use a spot weld cutter or similar tool to remove all spot welds holding the suspension mounting support assemblies to the Upper Load Path Beam.



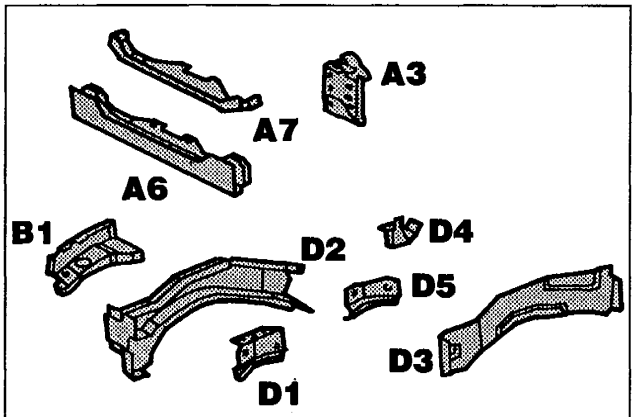
INSTALLATION

1. Clean all connecting parts to make installation easier.
2. Temporarily mount all new panels in their proper locations.
3. If all new components are used, pre-punch holes for plug welds.
4. Make sure alignment is correct to the point of perfection.
5. Use weld-thru primer where necessary.
6. Plug weld the tower reinforcement into place.
7. MIG stitch weld where previously MIG welded.





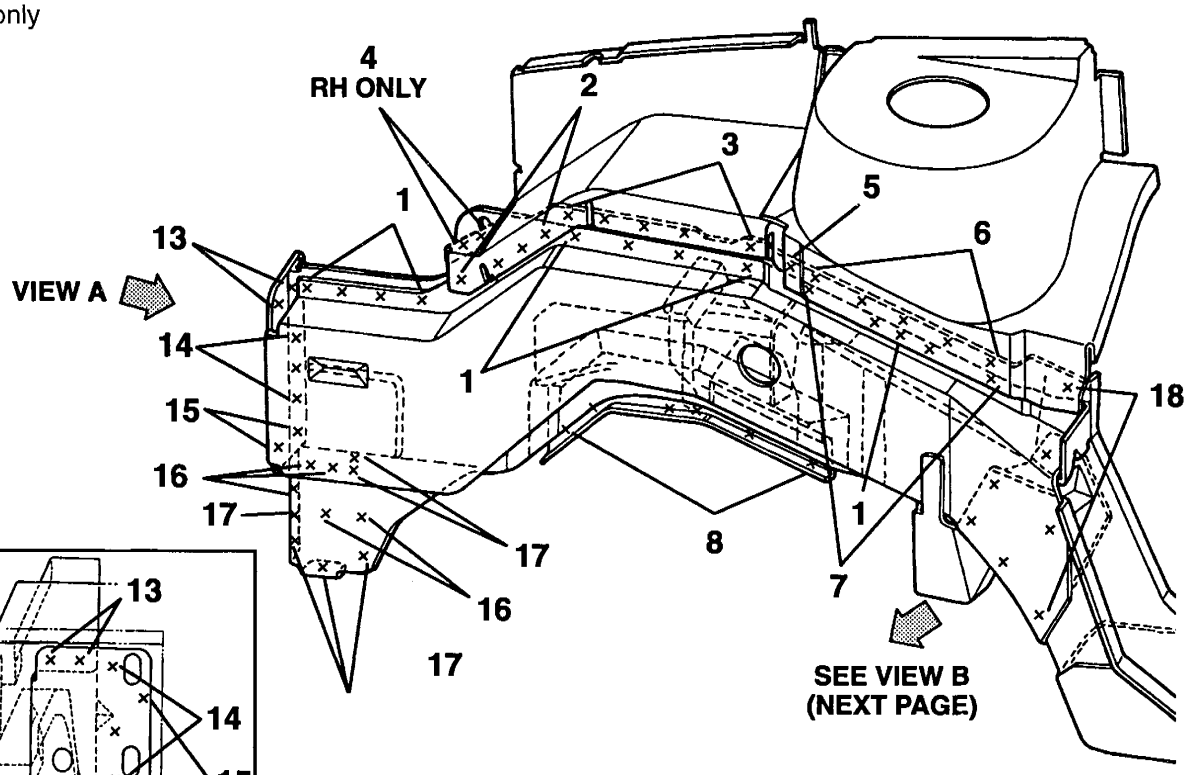
Front Lower Side Rail and Extension

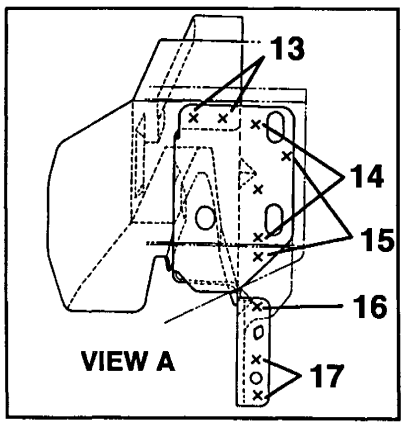


No.	Welded parts	F	R
1	D2 + D3	9	P9
2LH	D2 + D3 + B1	3	P3
2RH	D2 + D3 + B1	4	P4
3LH	D3 + B1	4	P4
3RH	D3 + B1	5	P5
4*	D2 + D3	2	P2
5	D3 + B1 + B4	1	P1
6	D3 + B4	5	P5

No.	Welded parts	F	R
7	D3 + D2 + B4	4	P4
8	D3 + D2 + Reinforcement	5	P5
9	D1 + D2	9	P9
10	D4 + D2	5	P5
11	D4 + D6 + D2	3	P3
12	D6 + D2	5	P5
13	D2 + A3	2	P2
14	D2 + A3 + D3	3	P3
15	D2 + D3	2	P2
16	D2 + D3 + A6	5	P5
17	D2 + A6	6	P6
18	D6 + D3	18	P18
19	D2 + D8	15	P15
20	D6 + C1	16	P16
21	D6 + C1 + E4	2	P2
22LH	D6 + E4	4	P4
22RH	D6 + E4	10	P10

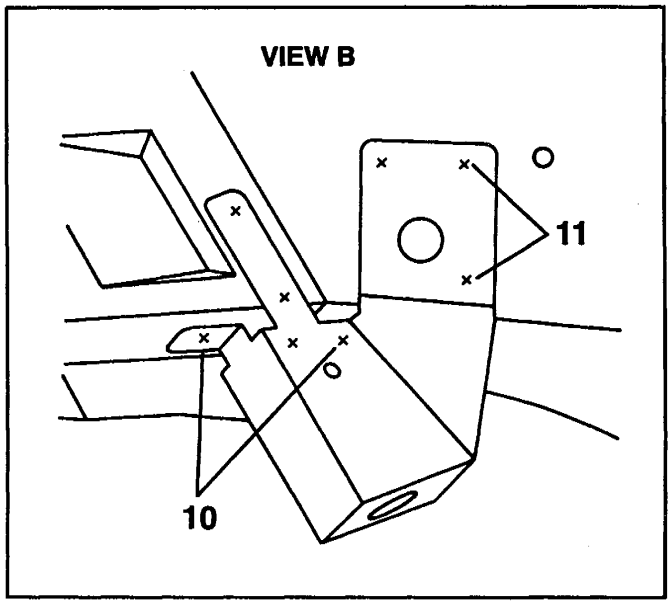
*Right side only





NOTES WITH REGARD TO REPAIR WORK

- Because the engine and some front suspension components mount to the Front Rail, it is extremely important that the alignment and workmanship are perfect when doing repair work in this area.
- There are many reinforcements and brackets that are encased by the Inner and Outer Rails.
- Avoid cutting any welded nuts, reinforcements or brackets during your repair.
- List areas where the frame rails are welded to other panels.

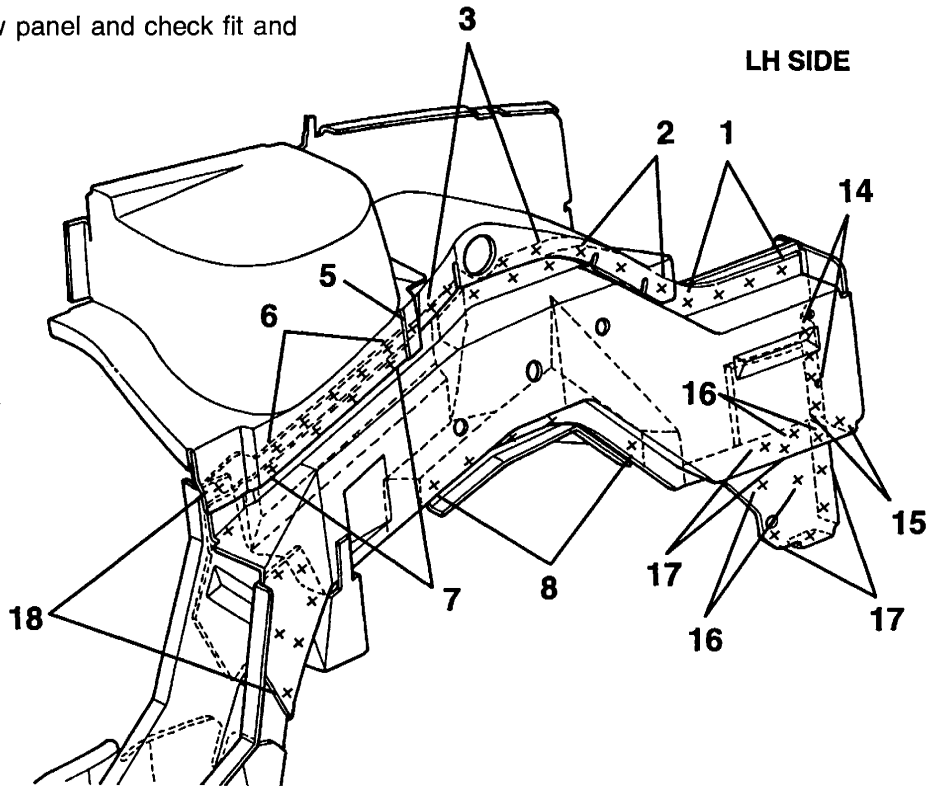


REMOVAL

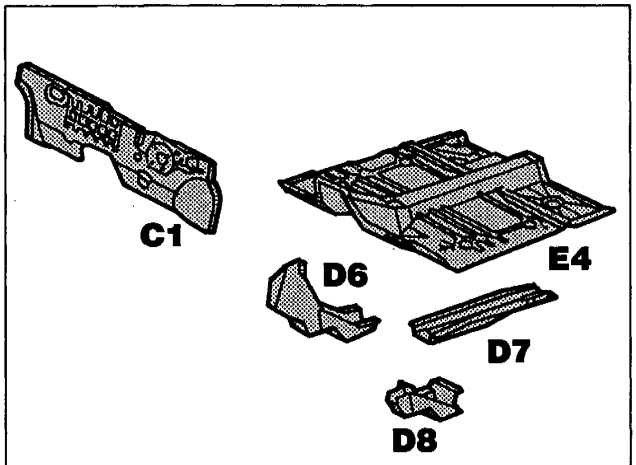
1. Use a drill bit or hole saw designed to cut spot welds to remove welds on the damaged rail.
2. Use old components as a template for weld locations on new pieces wherever necessary.
3. Note location of brackets and reinforcements when removing rail.

INSTALLATION

1. Clean all attaching surfaces and prep for new component installation.
2. Temporarily mount new panel and check fit and alignment.
3. Check all reference measurements.
4. Use weld-thru primer to promote corrosion protection.
5. Plug weld new panel in place.

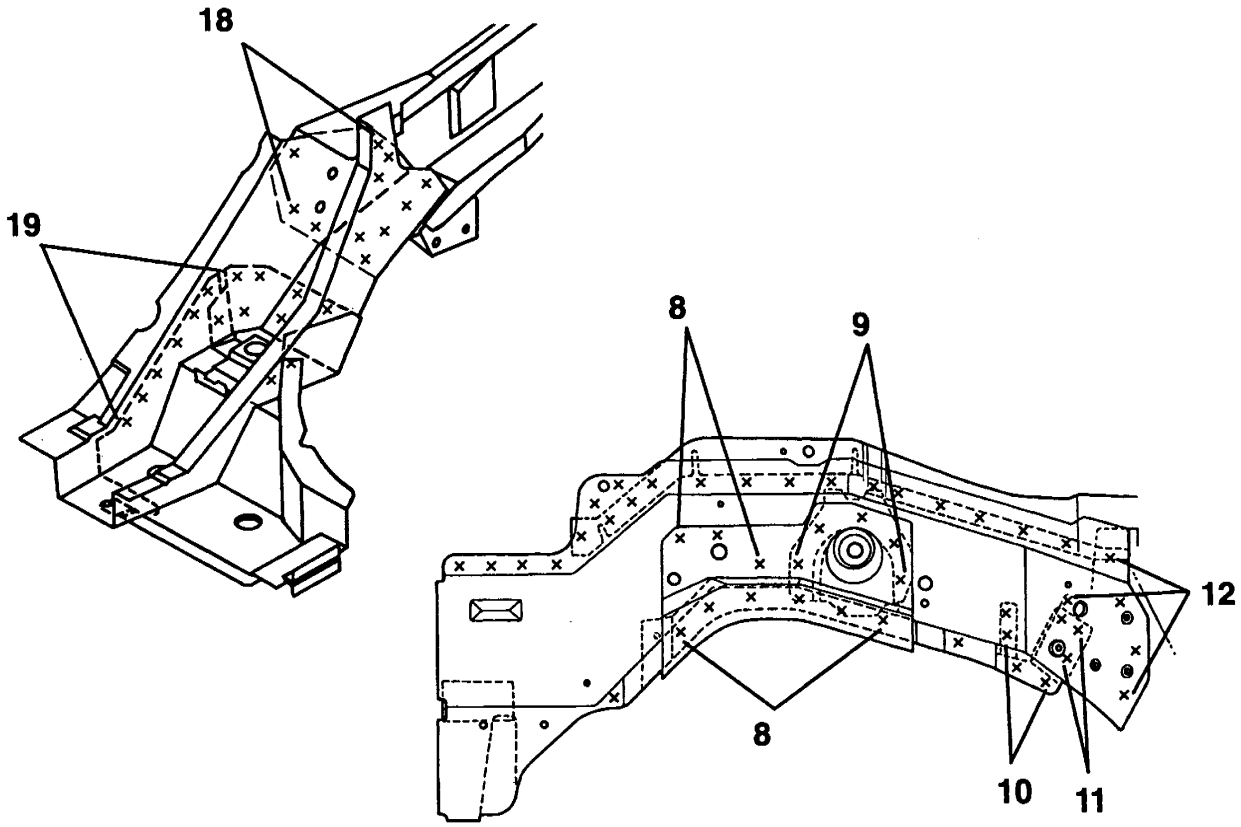


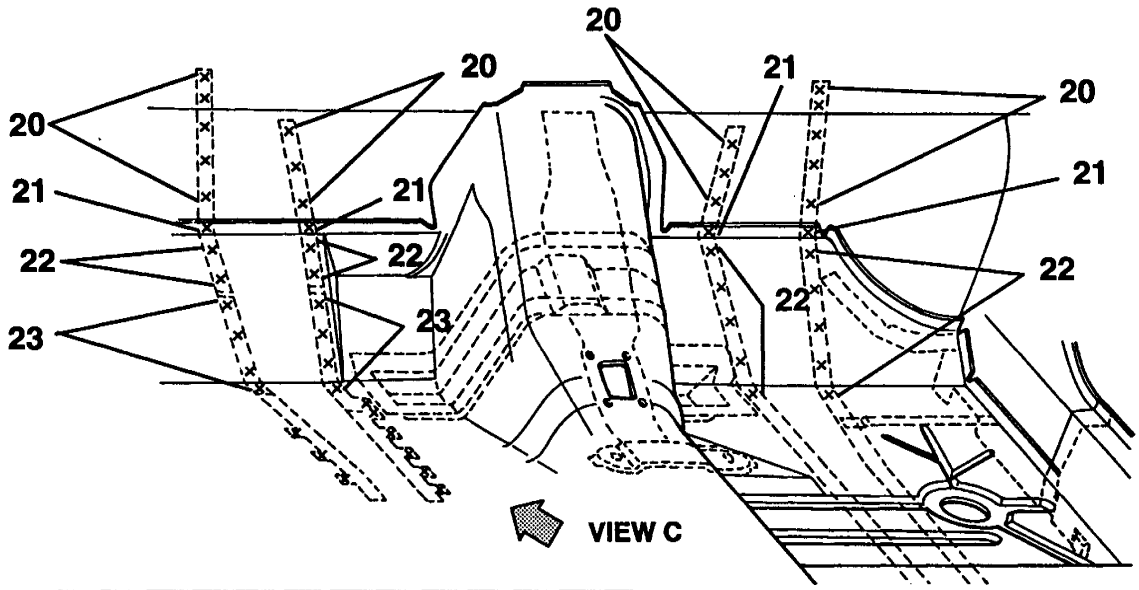
Front Lower Side Rail and Extension

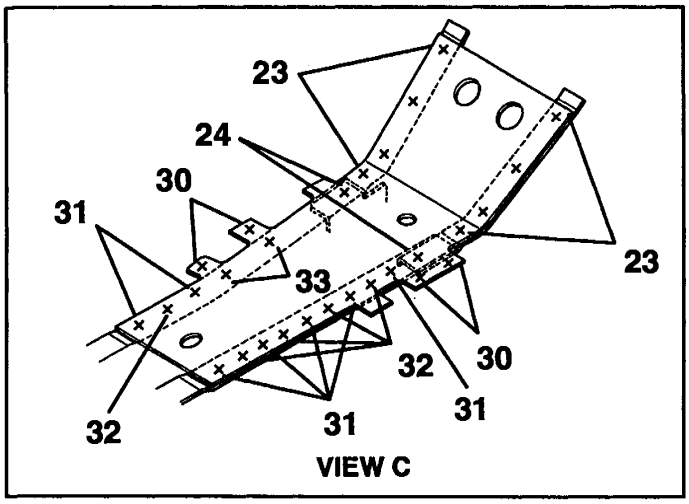


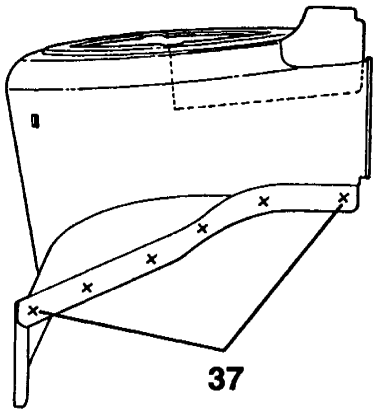
No.	Welded parts	F	R
23**	D6 + Plate + E4	8	P8
24**	Compression Plate + E4	2	P2
25	D7 + D6 + D8	2	P2
26	D7 + D6	11	P11
27	D7 + D8	1	P1
28	D7 + Shipping Tie-down + E4	2	P2
29	D7 + Shipping Tie-down	5	P5
30**	Compression Plate + E4	4	P4
31**	Compression Plate + D7	7	P7
32**	D7 + Compression Plate + E4	5	P5
33**	D7 + Compression Plate + Shipping Tie-down	2	P2
34	D7 + E4	25	P25
35	D7 + E4 + E11	4	P4
36	D7 + Seat Reinforcement + E4	2	P2
37	B4 + C1	6	P6

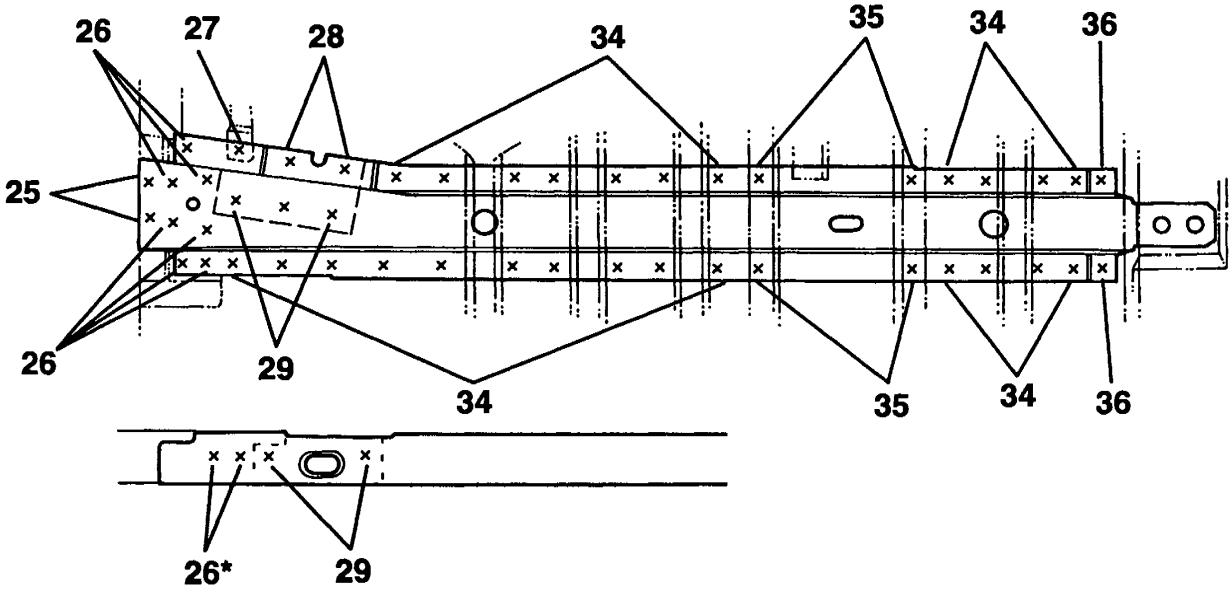
**Left side only





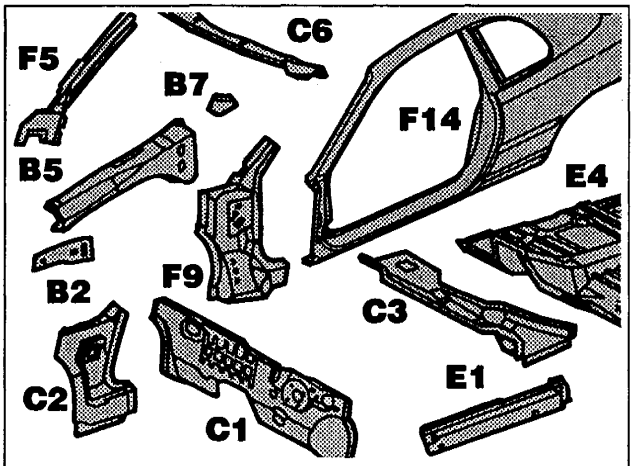






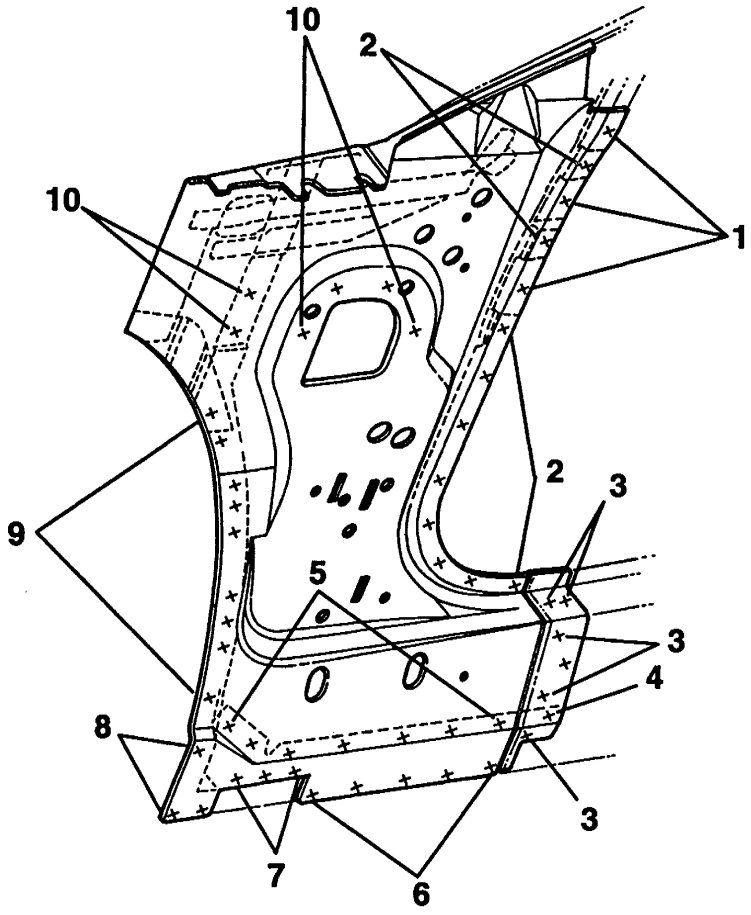
* 2 Welds Inboard, 2 Welds Outboard

Cowl Side Panel



No.	Welded parts	F	R
1	C2 + F5 + F14	3	P3
2	C2 + F9 + F14	10	P10
3	C2 + E1	6	P6
4	C2 + E1	1	P1
5	C2 + E4	7	P7
6	C2 + F9 + F14	5	P5
7	C2 + Torque Box	3	P3
8	C2 + F9	4	P4

No.	Welded parts	F	R
9	F9 + C2 + C1	9	P9
10	C2 + F5	6	P6
11	C2 + C1	2	P2
12	C2 + B2	4	P4
13	C2 + B2 + C1	4	P4
14LH	C2 + C3	8	P8
15RH	C2 + C3	8	P8
16	C2 + F9 + F5	1	P1
17LH	C2 + C5	2	P2
17RH	C2 + C4	2	P2
18	C2 + F5 + F9	1	P1
19	C2 + C6	1	P1
20	C2 + F5	2	P2
21	C2 + F5 + F9	2	P2



NOTES WITH REGARD TO REPAIR WORK

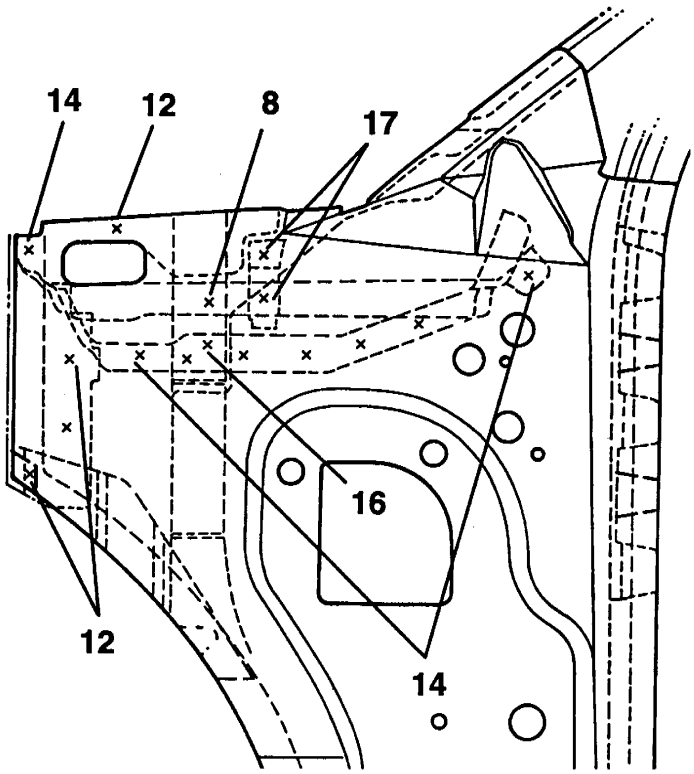
- Remove side aperture/hinge plate and outer A-Pillar to complete repair.
- The Cowl Side Panel is the connecting point for the Upper Load Path Beam and the rest of the unibody.
- Correct mounting location and weld integrity is critical to replacement of this panel.
- You must remove parts B2 upper load path beam, side aperture and hinge pillar prior to removal.

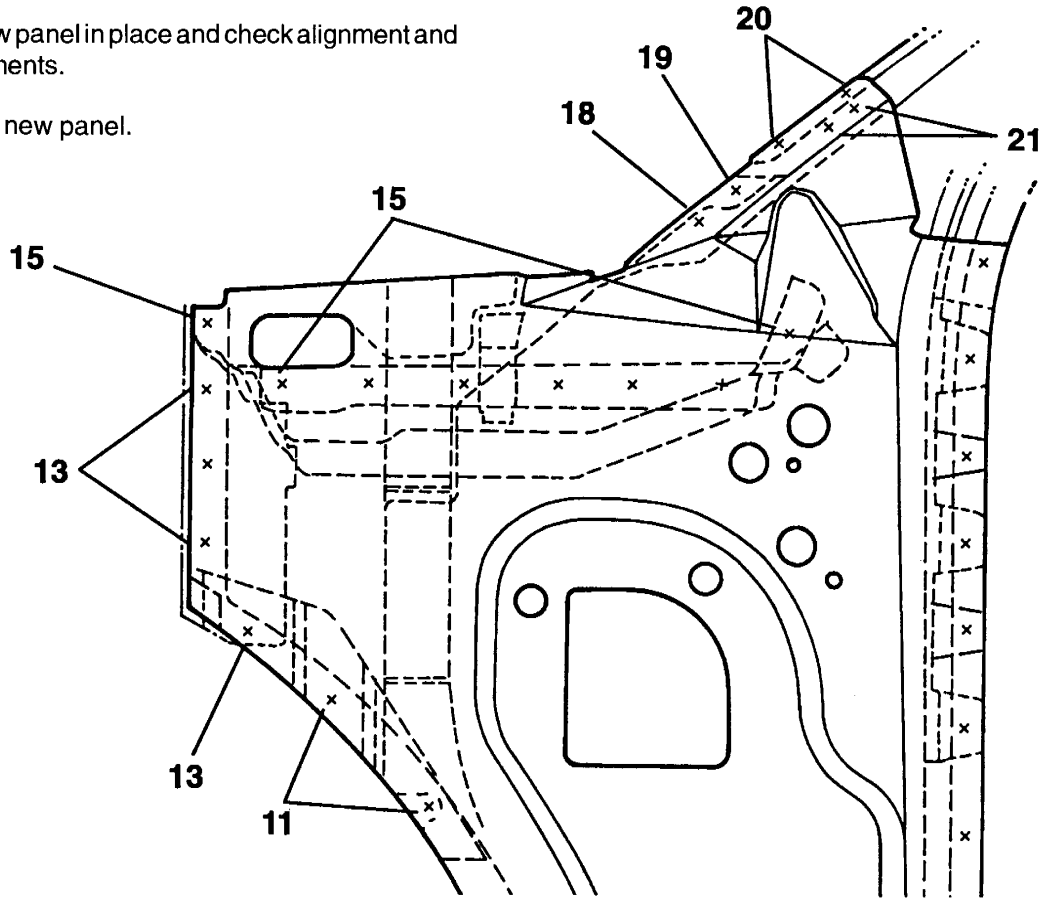
REMOVAL

1. Use a spot weld cutter to remove old welds.
2. Clean attaching area on remaining panels.
3. Use removed panel as template for weld placement on new panel.

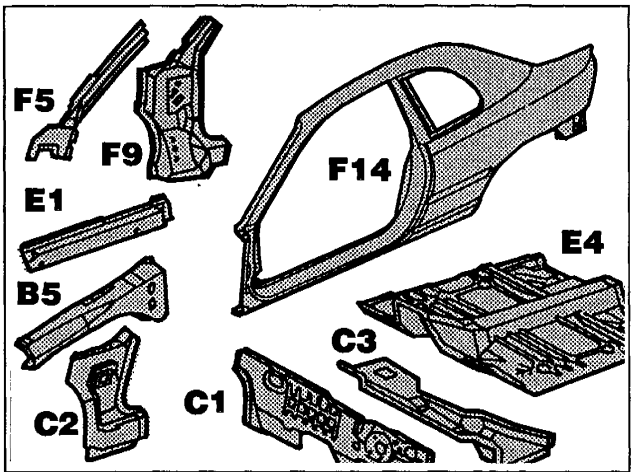
INSTALLATION

1. Transfer markings to new panel from old for weld locations.
2. Clamp new panel in place and check alignment and measurements.
3. Plug weld new panel.



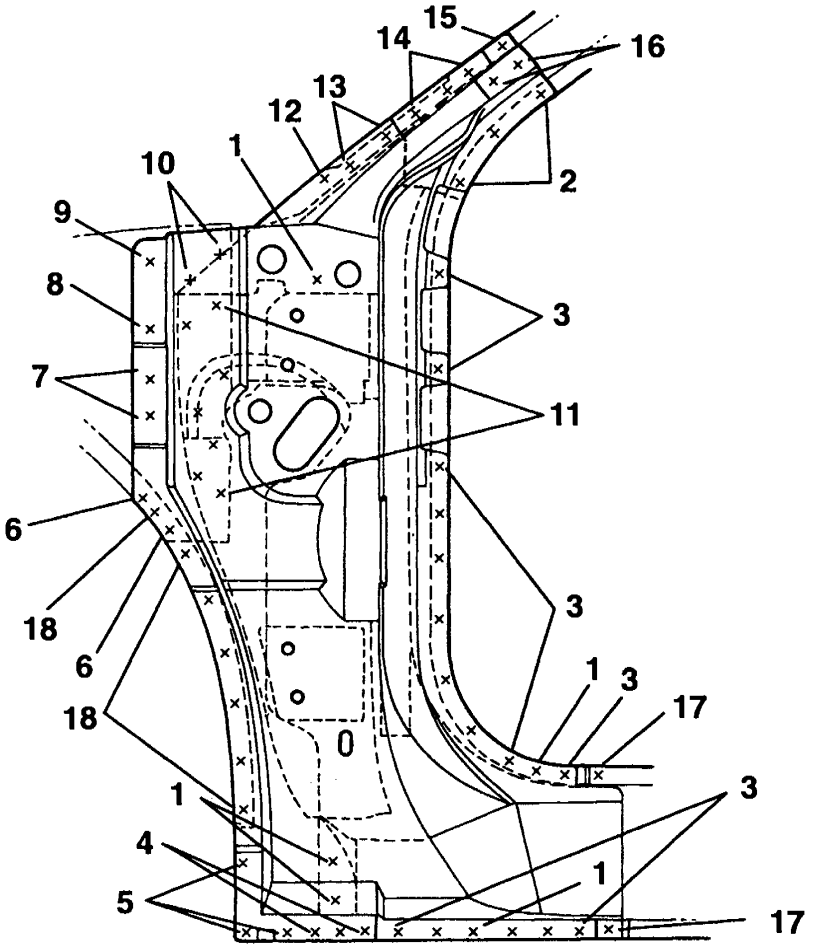


Front Hinge Pillar



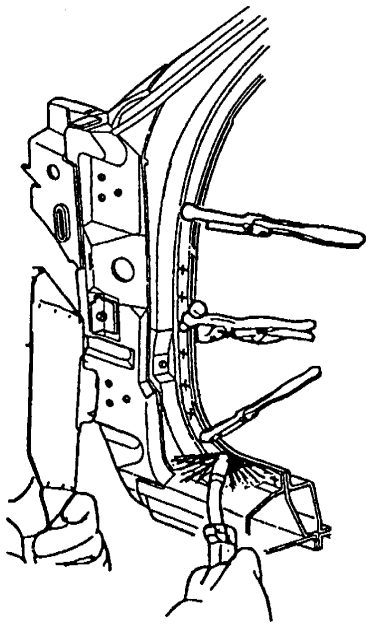
No.	Welded parts	F	R
1	F9 + F14	5	P5
2	F9 + F5 + F14	3	P3
3	C2 + F9 + F14	15	P15
4	F9 + Torque Box	3	P3
5	F9 + C2	3	P3
6	Impact Reinforcement + F9 + B5	2	P2
7	C2 + F9 + F5	2	P2
8	F9 + C2 + C1	1	P1

No.	Welded parts	F	R
9	F9 + C2	1	P1
10	B5 + F9	2	P2
11	Impact Reinforcement + F9 + B5	7	P7
12	F9 + C2 + C6	1	P1
13	F9 + C2 + F14	2	P2
14	F9 + F5 + F14	3	P3
15	F9 + F5 + F6	1	P1
16	F9 + F6	2	P2
17	F9 + E1 + F14	2	P2
18	F9 + C2 + C1	7	P7



NOTES WITH REGARD TO REPAIR WORK

- The Hinge Pillar is comprised of multiple components layered to create the pillar.
- The Front Hinge Pillar is a sub-assembly of the Front Side Aperture. If damaged, the Hinge Pillar may be sectioned-in or, depending on the extent of the damage, the entire aperture assembly may have to be replaced.
- The Side Aperture must be removed to gain access to the Hinge Pillar.



REMOVAL

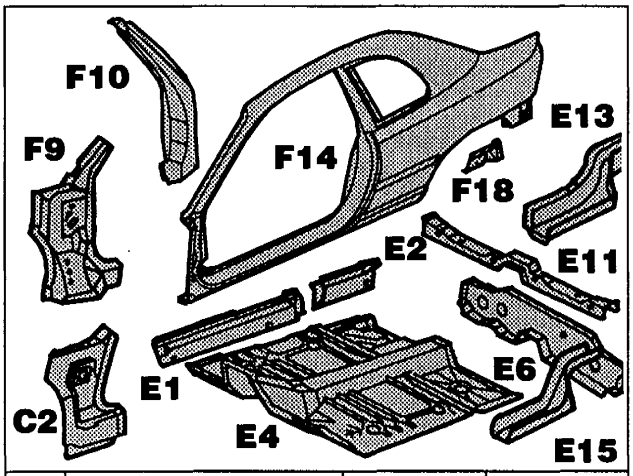
1. The way you intend to replace this panel will determine whether you remove it as a single component or as a sub-assembly.
2. When cutting these welds be sure to cut them as cleanly as possible. This will make your cleanup work much easier.

INSTALLATION

1. If replacing as a sub-assembly, always overlap in areas where you cannot weld at OEM welds. Use stitch welds to make a continuous MIG weld where specified.
2. After fitting your new panel and cutting the new holes for the plug welds, double check to be sure of alignment.
3. Plug and stitch weld your new panels into place.

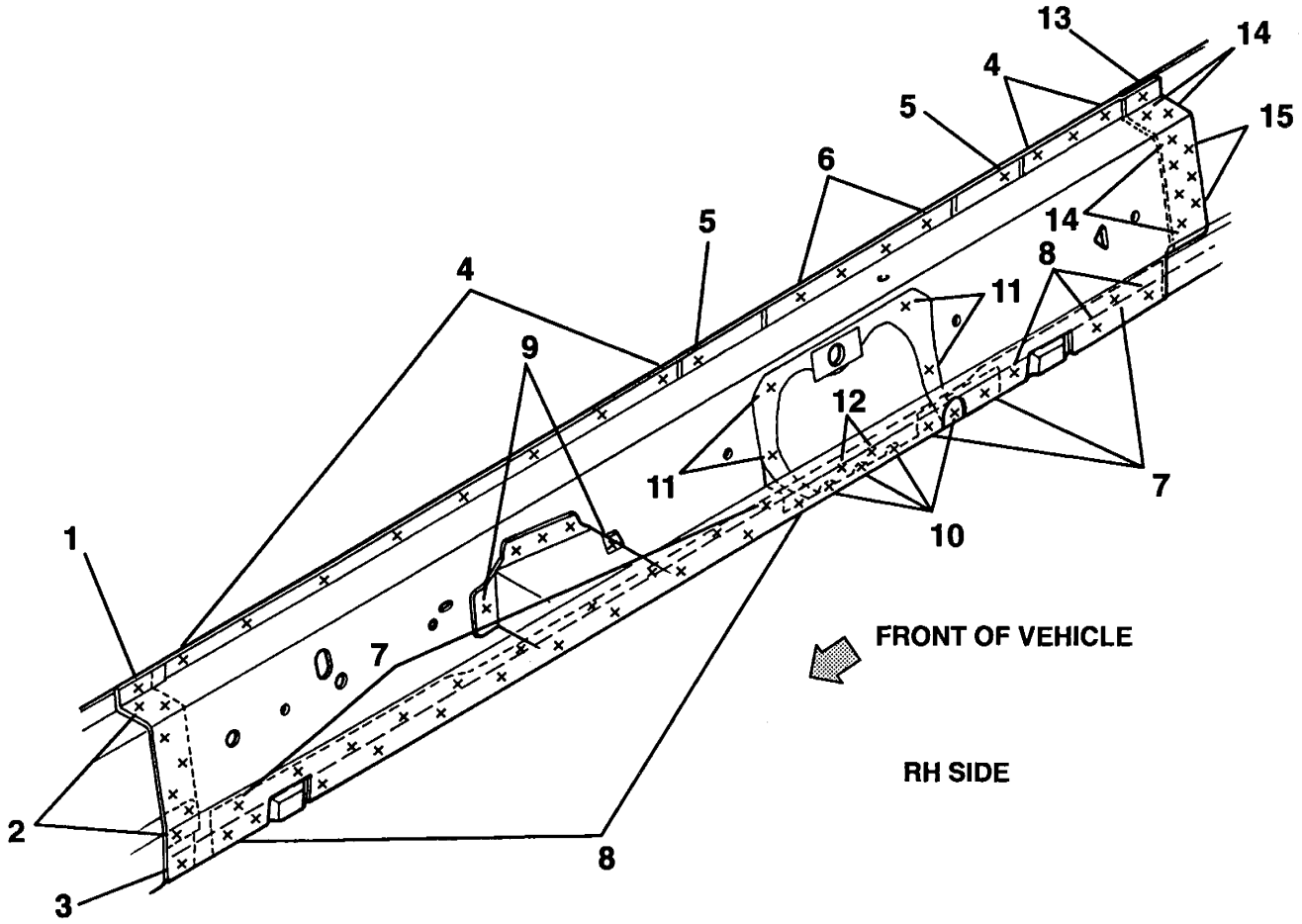
Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

Side Sill — Inner



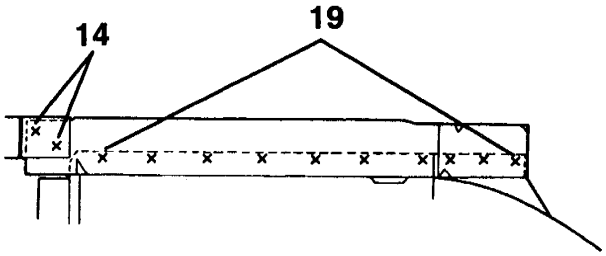
No.	Welded parts	F	R
1	E1 + C2 + F14	1	P1
2	E1 + C2 + E4	7	P7
3	E1 + F9 + F14	1	P1
4	E1 + F14	11	P11
5	E1 + F10 + F14	2	P2
6	E1 + F10	4	P4
7	E1 + E4	13	P13
8	E1 + E4 + F14	14	P14

No.	Welded parts	F	R
9	E1 + E11	5	P5
10	E1 + F10 + F14	4	P4
11	E1 + E3	4	P4
12	E1 + Front Seat Rear Crossmember	2	P2
13	E2 + E1 + F14	1	P1
14	E2 + E1	6	P6
15	E2 + E6	3	P3
16	E2 + F14	5	P5
17	E2 + F18 + F14	2	P2
18	E2 + E4 + F14	1	P1
19	E2 + E5	13	P13
20	E2 + F11	1	P1
21	E2 + E5 + F11	2	P2
22	E2 + F14	7	P7
23	E2 + F18 + F14	2	P2
24	E2 + E13	9	P9
25	F11 + E2	2	P2
26	E2 + F11 + E13	1	P1
27	E2 + E13 + E5	2	P2



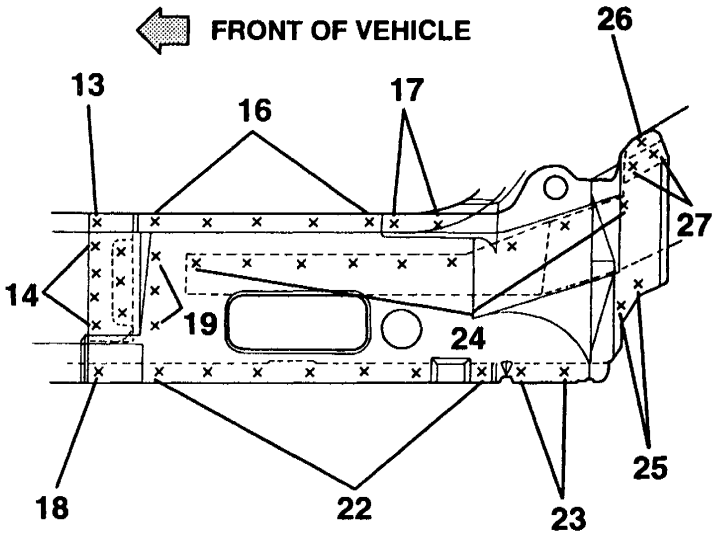
NOTES WITH REGARD TO REPAIR WORK

- The Side Sill overlaps multiple components as well as being overlapped by numerous bodyside components.
- If you choose to section the Side Sill, be sure to butt weld over solid components such as reinforcements. If none are available, overlap and use continuous stitch and plug welds.



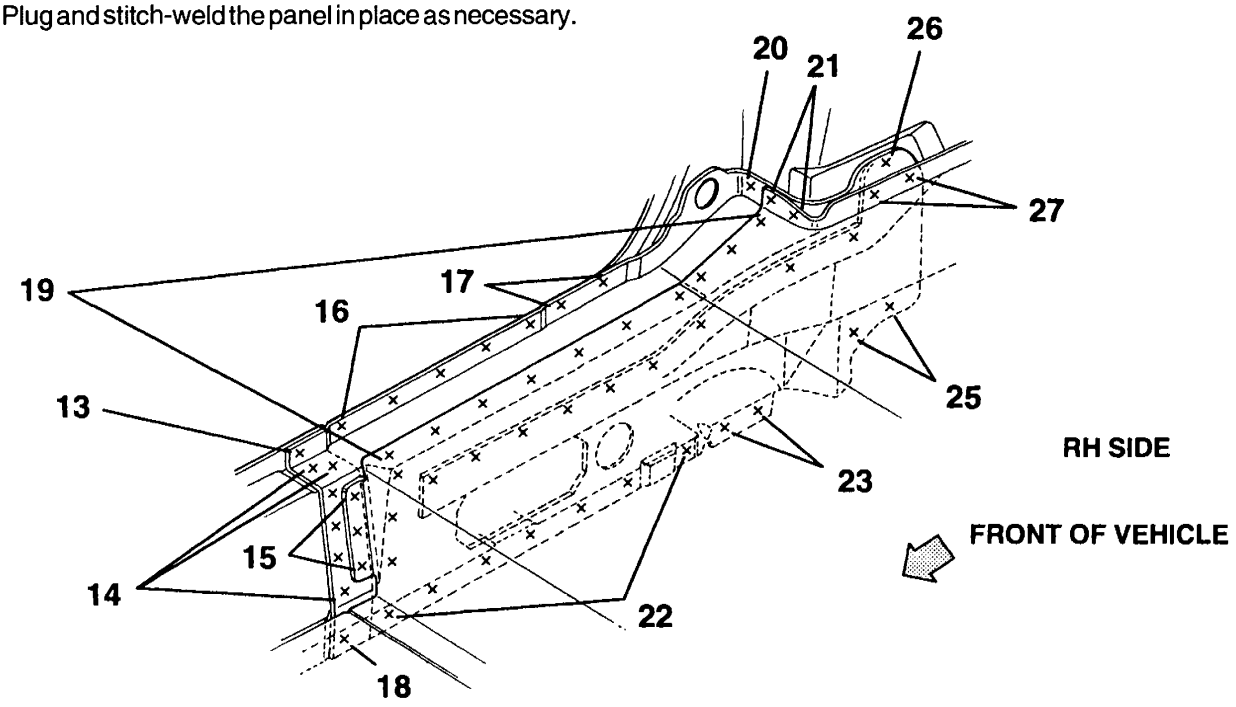
REMOVAL

1. Locate all spot and MIG welds and remove as required.
2. If sectioning, do not cut or remove any reinforcements.
3. Clean and prepare panels for new panel installation.

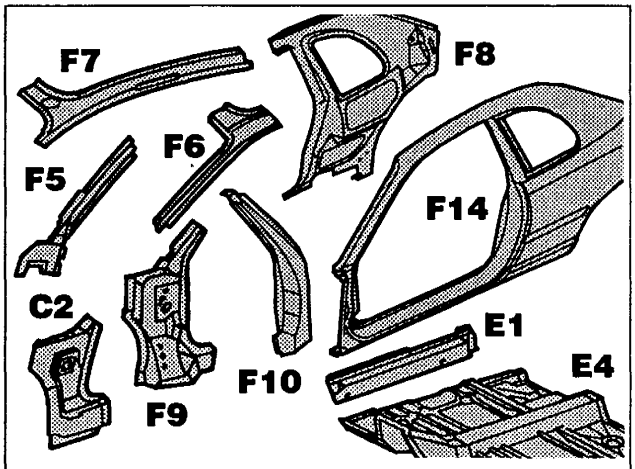


INSTALLATION

1. Using the old Inner Side Rail as a template, mark plug weld locations on new inner side rail panel.
2. Tack weld new rail in place. Recheck all measurements and alignments.
3. Use weld-thru primer at weld loctions.
4. Plug and stitch-weld the panel in place as necessary.



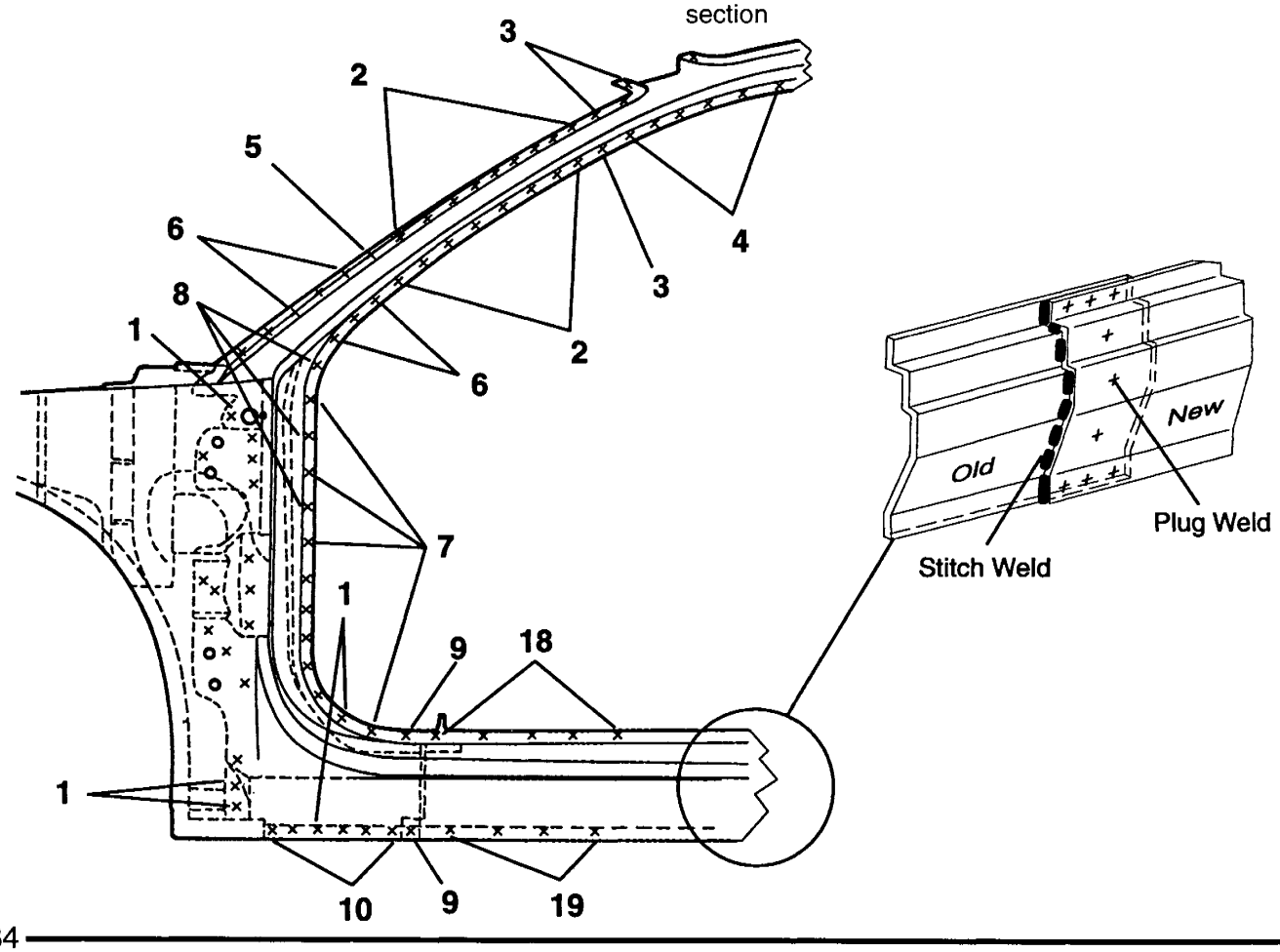
Front Side Aperture



No.	Welded parts	F	R
1	F14 + F9	18	P18
2	F6 + F14	17	P17
3	F7 + F6 + F14	4	P4
4	F7 + F6 + F14	6	P6
5	F9 + F5 + F6	1	P1
6	F14 + F9 + F5	6	P6
7	F14 + F9 + C2	7	P7
8	F14 + F5 + C2	3	P3

No.	Welded parts	F	R
9	F14 + F9 + C2	2	P2
10	F14 + C2 + F9	5	P2
11	F14 + F7 + F8	24	P24
12	F14 + F8 + F7	2	P2
13	F14 + F10	24	P24
14	F14 + F8	2	P2
15	F14 + E1 + F10	6	P6
16	F14 + E1 + F8	2	P2
17	F14 + E1	14	P14
18*	F14 + E1	8	P8
19*	F14 + E1 + E4	12	P12

*For reference only; for all welds, see appropriate section



NOTES WITH REGARD TO REPAIR WORK

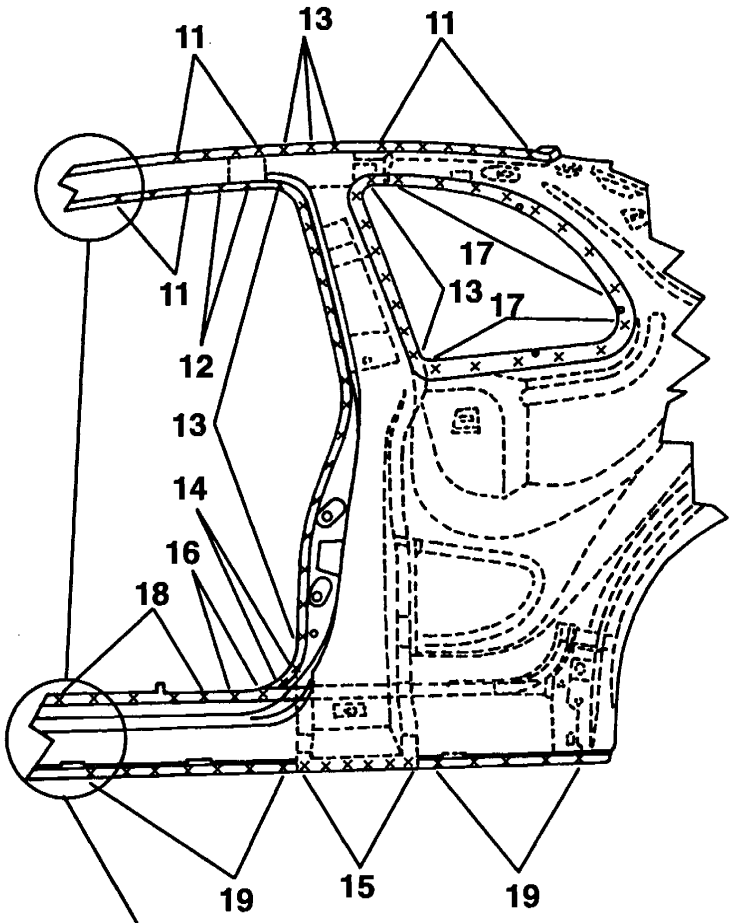
- The Side Aperture is serviced as an assembly. This assembly is divided into two sections. The first includes the Front Hinge Pillar and A-Pillar, while the second section includes the B-Pillar Reinforcement and Outer Quarter Panel.
- The Roof Panel overlaps the Side Aperture at the Roof to Side Aperture seam. The Roof Panel welds must be removed in order to service the Upper Side Aperture.
- If replacing only part of the panel, overlap and use continuous stitch welds and plug welds.

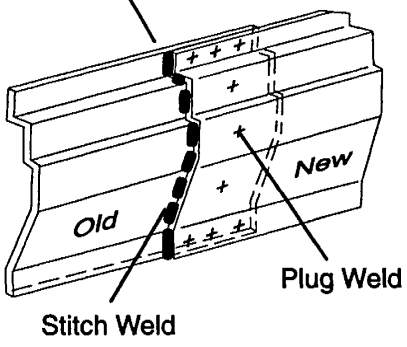
REMOVAL

1. The way you intend to replace this panel will determine whether you remove it as a single component or as a sub-assembly.
2. First you have to decide where would be the best place to section the panel, then find a spot on both panels that you can use for measurement.
3. Remember to stagger your overlap section for added strength.
4. Make a rough cut on the old panel, cut all the spot welds and remove the old panel.
5. Make a second measurement. Now make the final cuts and do a good clean job.

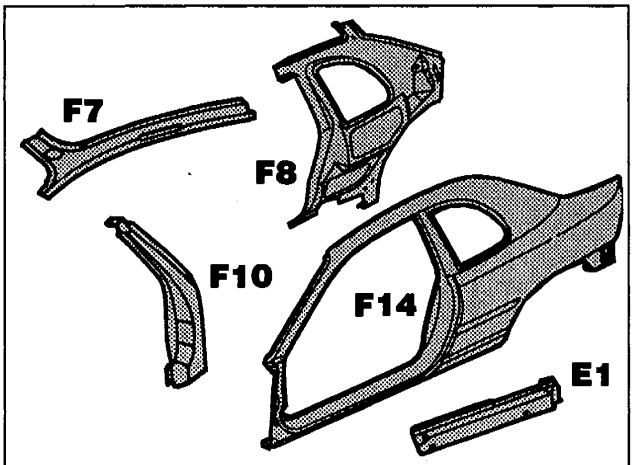
INSTALLATION

1. Use stitch welds to make a continuous MIG weld at the outer edge and plug welds to the inner panel from the outside.
2. Place the new Outer Body Side panel in place, making sure the alignment is correct.
3. Plug weld the new panel into place, MIG stitch weld the seams where the old panel and the new panel overlap. Then plug weld into existing panel.
4. Spray anti-corrosion weld-thru primer on weld surfaces prior to welding.



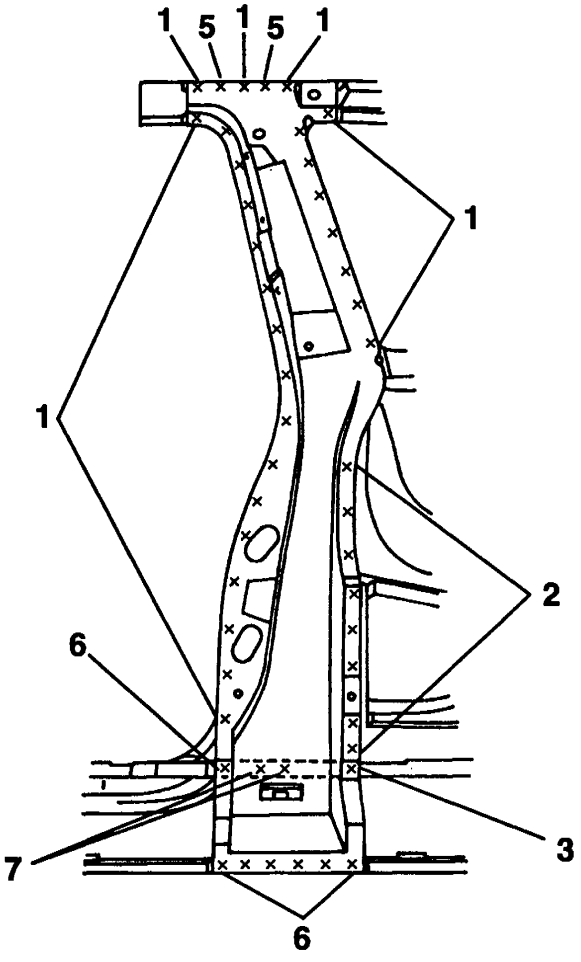


Reinforcement Pillar



No.	Welded parts	F	R
1	F8 + F10 + F14	27	P27
2	F8 + F10	8	P8
3	F10 + F8 + E2	3	P3
4	F10 + E1 + F14	6	P6
5	F10 + F8 + F7	2	P2
6	F10 + F8 + E1	1	P1
7	F8 + E1	2	P2

No.	Welded parts	F	R



NOTES WITH REGARD TO REPAIR WORK

- The Reinforcement Pillar is available only as part of a Side Aperture service assembly. If you are replacing the Reinforcement Pillar only, it will be necessary to section the new pillar in place.
- Refer to the Side Aperture for weld locations affecting the mounting of a new Reinforcement Pillar.

REMOVAL

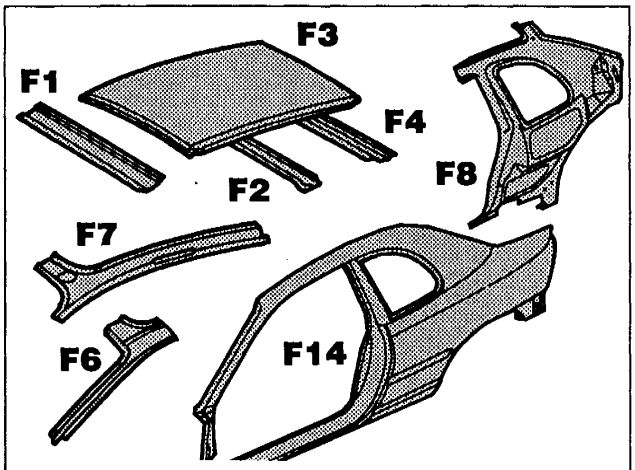
1. Drill 1/8" holes in the center of each spot weld as a guide for a 5/16" to 3/8" hole saw, or use a drill bit designed to cut spot welds.
2. Cut all spot welds, cut Reinforcement Pillar at rail area using new panel as guide.
3. Clean all mating surfaces to ensure a good fit of the new panel.

INSTALLATION

1. After placing holes in the new panel for the plug welds, fit the panel into position.
2. Stitch-weld outer edges of new part to the old panel you are overlapping.
3. Plug weld the new Reinforcement Pillar into place.
4. Spray anti-corrosion agent onto the new welds and inner surfaces.

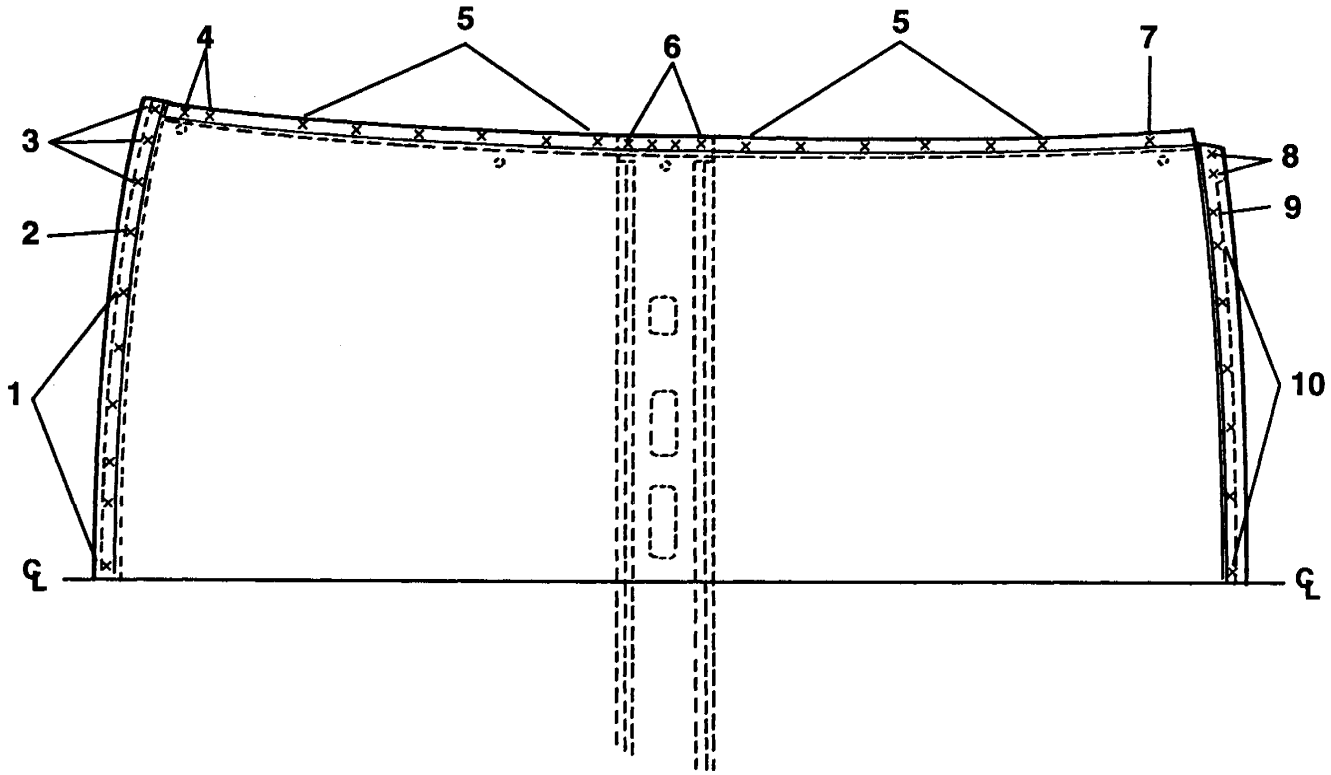
Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

Roof Panel and Inner Roof Rails



No.	Welded parts	F	R
1	F3 + F1	12	P12
2	F3 + F7 + F1	2	P2
3	F3 + F7 + F6	6	P6
4	F3 + F14 + F6	4	P4
5	F3 + F14 + F7	24	P24
6	F2 + F7	8	P8
7	F3 + F14	2	P2
8	F3 + F8	4	P4

No.	Welded parts	F	R
9	F3 + F4 + F8	2	P2
10	F3 + F4	12	P12
11	F4 + F8	14	P14
12	F7 + F1	14	P14
13	F6 + F7	6	P6
14	F6 + F7 + F14	13	P13
15	F5 + F7	2	P2
16	F5 + F6 + F14	16	P16
17	F6 + F9 + F14	1	P1
18	F6 + F9	2	P2



NOTE: All welds are symmetrical.

NOTES WITH REGARD TO REPAIR WORK

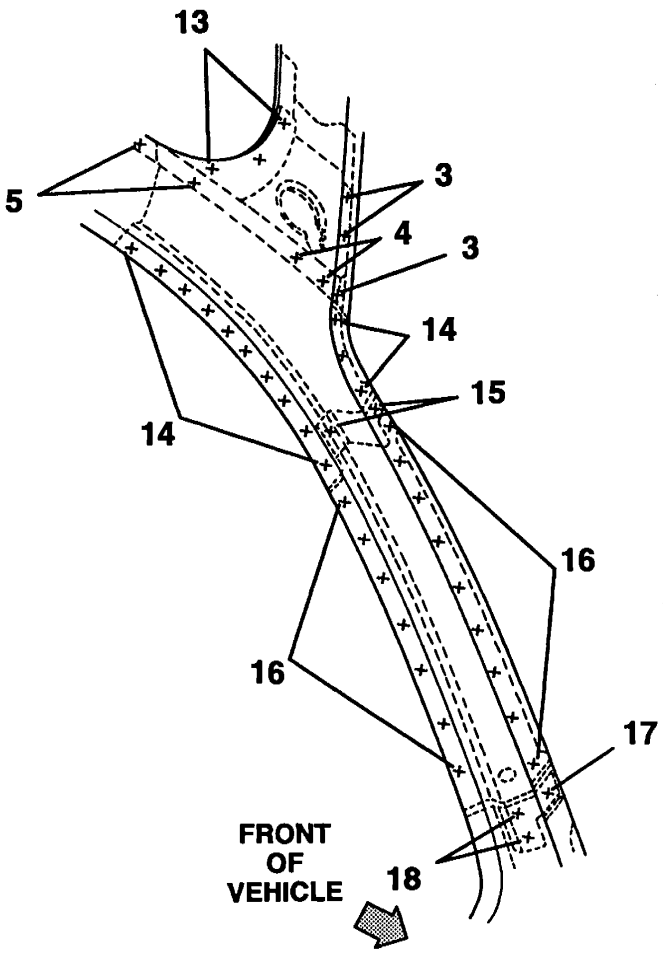
- Before heating Roof Panel to soften old adhesive, make sure all flammable materials are removed from roof inner and outer areas.
- Take care when handling the Roof Panel. The panel can be easily damaged by mishandling.
- Make sure to use the recommended adhesive for the roof bows.

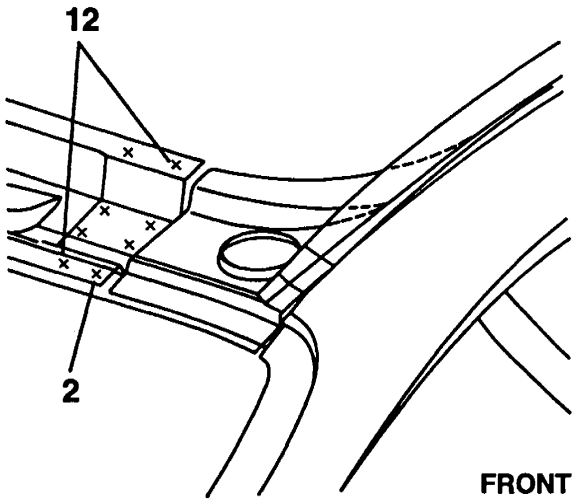
REMOVAL

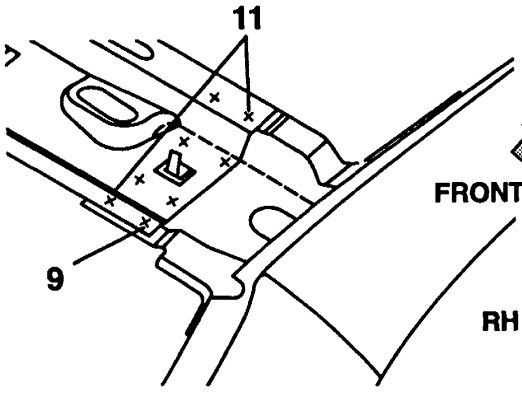
1. Cut and separate the spot welded locations, being careful not to damage any other panels.
2. Heat the top of the Roof Panel where adhesives are applied. It will make it easier to remove.
3. Remove the Roof Panel.
4. Remove any old adhesive on roof braces, using a mule skinner's wire brush or something as aggressive.

INSTALLATION

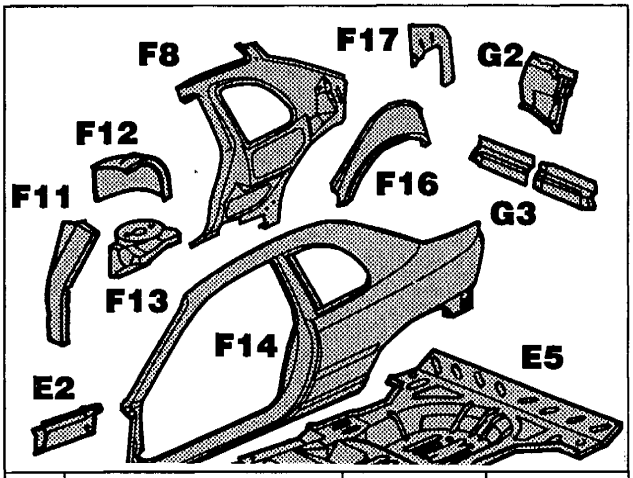
1. Temporarily align and mount the new Roof Panel onto the body. Make corresponding reference marks on the Roof Panel and body structure.
2. Use the old Roof Panel as a template to mark locations for plug welds on the Roof Panel.
3. Apply the adhesive to the Roof Bows and other mating surfaces and place Roof Panel into position as marked previously.
4. After checking alignment, clamp panel down.
5. Plug weld the roof panel into place.
6. Put the MIG welds at locations shown in the welding charts.
7. Finish seams as required.





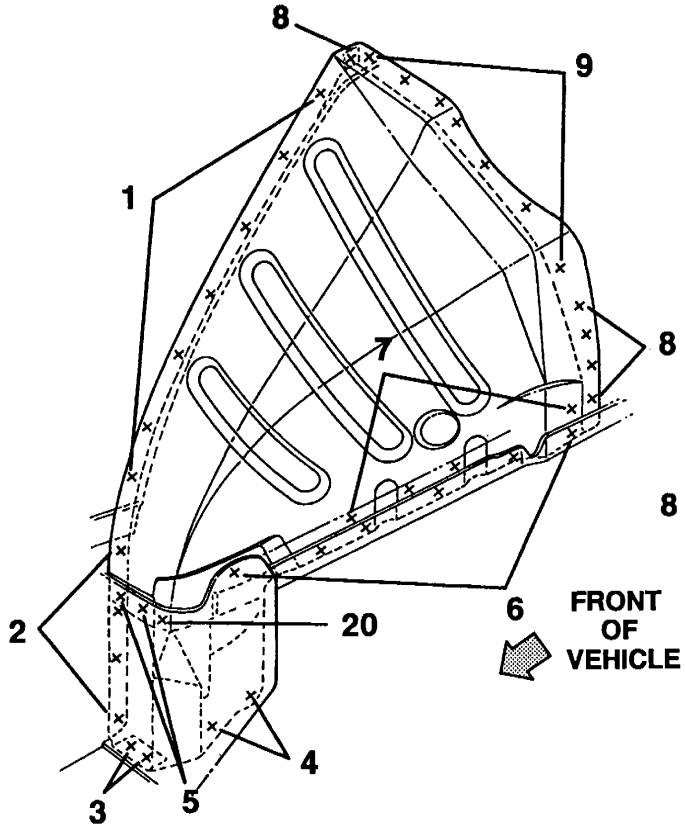


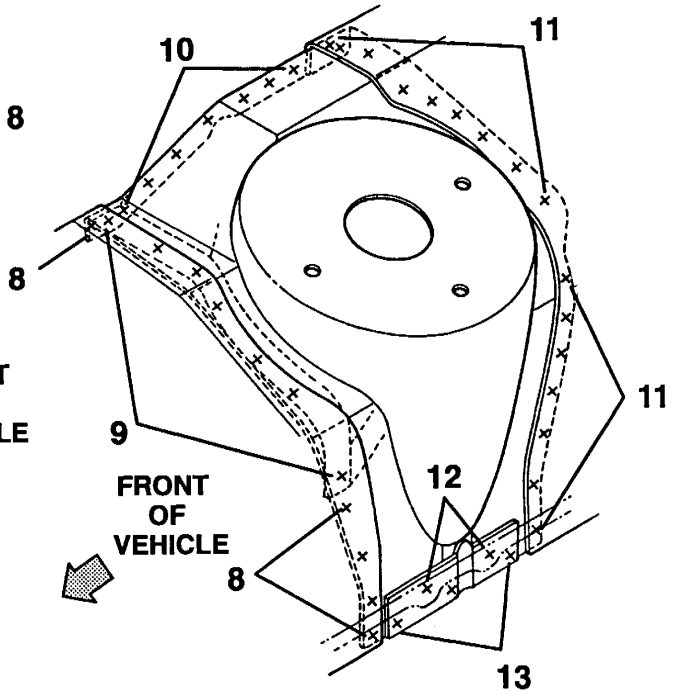
Inner Wheelhouse — Rear



No.	Welded parts	F	R
1	F11 + F8	7	P7
2	F11 + E2	4	P4
3	F11 + F14 + E2	2	P2
4	F11 + E2	2	P2
5	F11 + E5 + E2	2	P2
6	F11 + E13 + E5	6	P6
7	F11 + E13	4	P4
8	F13 + F11	5	P5

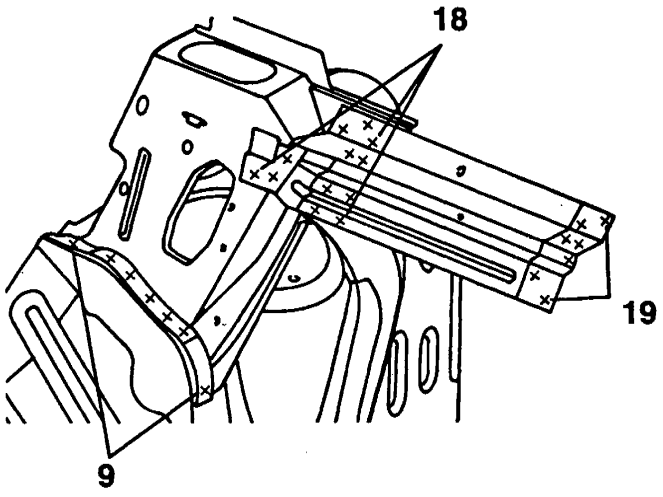
No.	Welded parts	F	R
9	G2 + F11 + F13	7	P7
10	F13 + F8	7	P7
11	F13 + F12	16	P16
12	F13 + E13	2	P2
13	F13 + E13 + E5	3	P3
14LH	F12 + F8	8	P8
14RH	F12 + F8	11	P11
15	F12 + E5	5	P5
16	F12 + E13	2	P2
17	F12 + E13 + E5	4	P4
18	G3 + G2	12	P12
19	G3 + G3	7	P7
20	F11 + E2	1	P1





NOTES WITH REGARD TO REPAIR WORK

- The Inner Wheelhouse Panel is welded at the seam where it mounts to the Inner Quarter Panel.
- Always remove flammable materials from areas being welded.



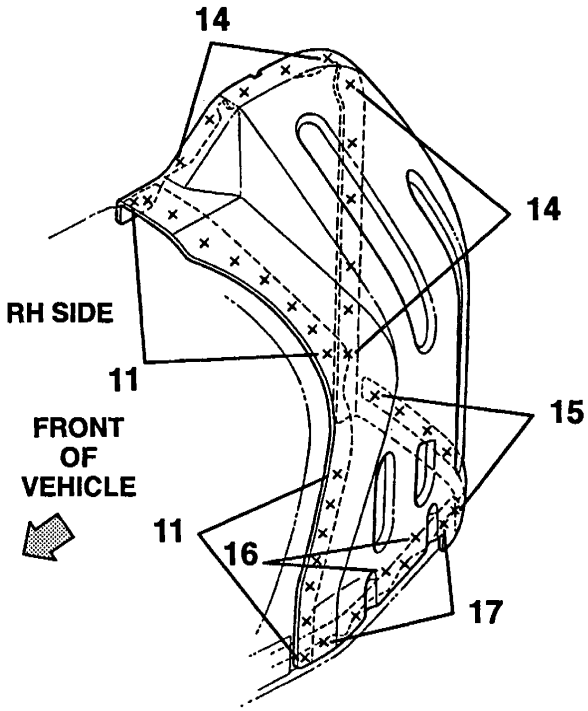
REMOVAL

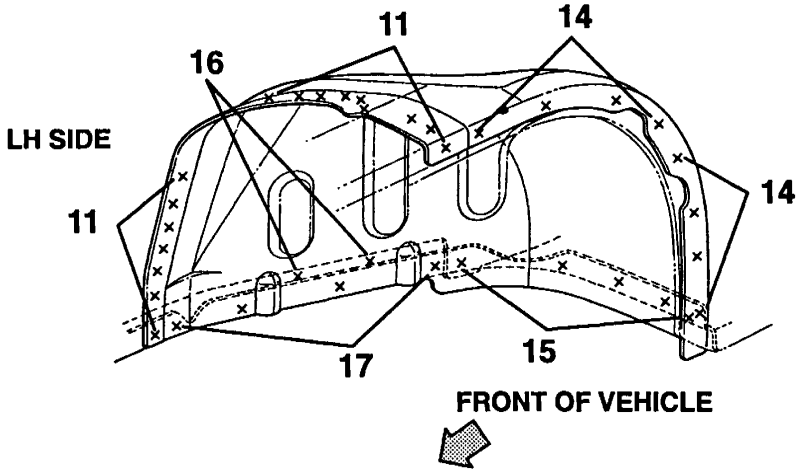
1. Begin removal of Inner Wheelhouse by rough cutting old panel to obtain access to spot welds.
2. Remove spot welds with a 5/16" or 3/8" spot weld cutter. Remove remainder of panel.
3. Clean old sealer from remaining panels and prep them for reassembly.

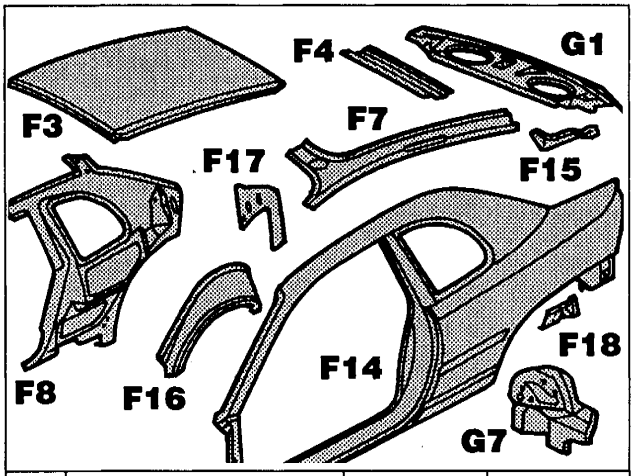
INSTALLATION

1. Using old panel as a guide, mark and punch holes in new Wheelhouse Panel.
2. Temporarily mount Wheelhouse in place.
3. Check fit and alignment.
4. Plug weld new panel in place.
5. Use an appropriate sealer to seal all seams.

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

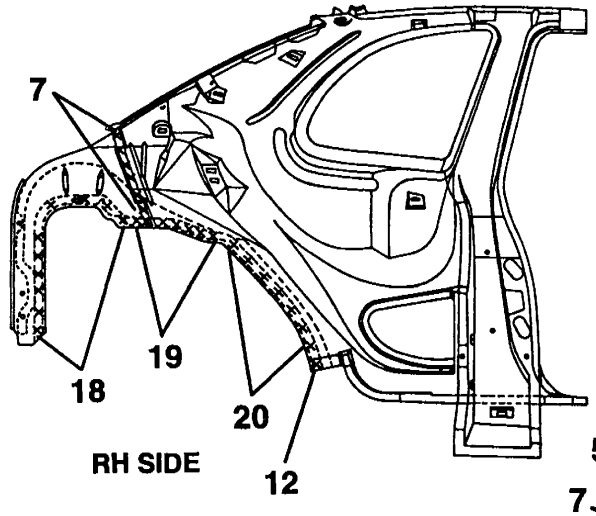


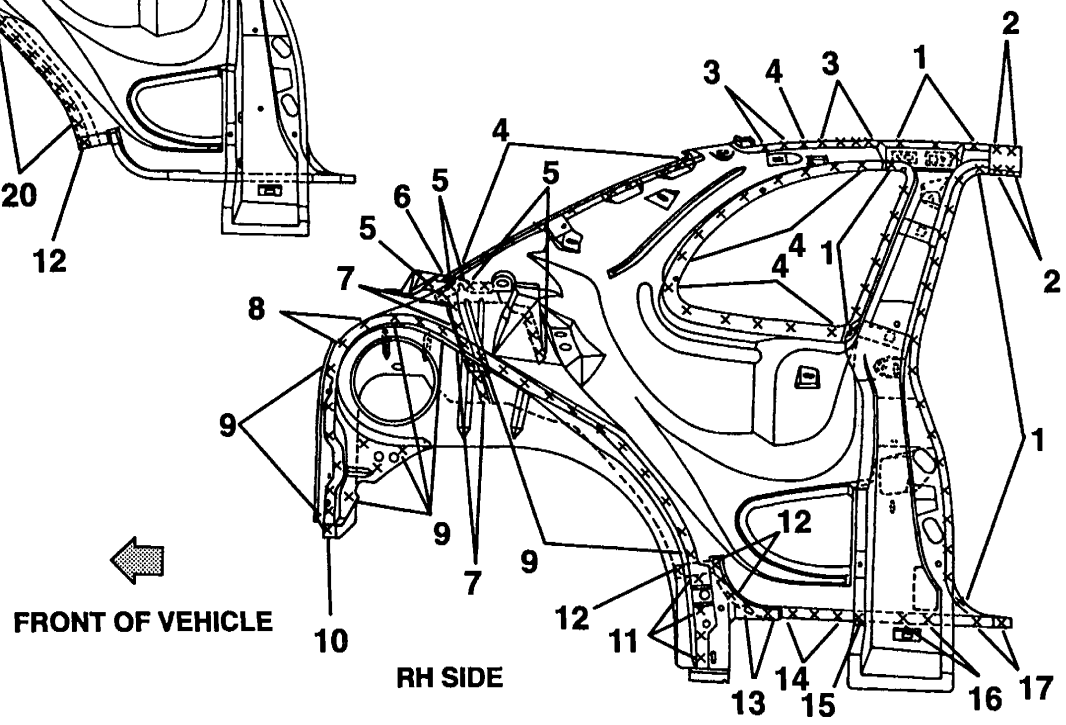




No.	Welded parts	F	R
1	F8 + F10 + F14	28	P28
2	F8 + F14 + F7	4	P4
3	F8 + F7	6	P6
4	F8 + F14	24	P24
5	F8 + G1	8	P8
6	F8 + F14 + G1	1	P1
7	F8 + F17	6	P6
8	F16 + F17	3	P3

No.	Welded parts	F	R
9	F8 + F16 + F17	24	P24
10	E5 + F17 + F14	1	P1
11	F16 + F18	4	P4
12	F8 + F18	4	P4
13	F8 + E2 + F18	2	P2
14	F8 + E2	3	P3
15	F8 + E2 + F10	1	P1
16	F8 + E1	2	P2
17	F8 + F14 + E1	2	P2
18	F8 + F12	10	P10
19	F8 + F13	6	P6
20	F8 + F11	7	P7
21	F14 + F16	22	P22





NOTES WITH REGARD TO REPAIR WORK

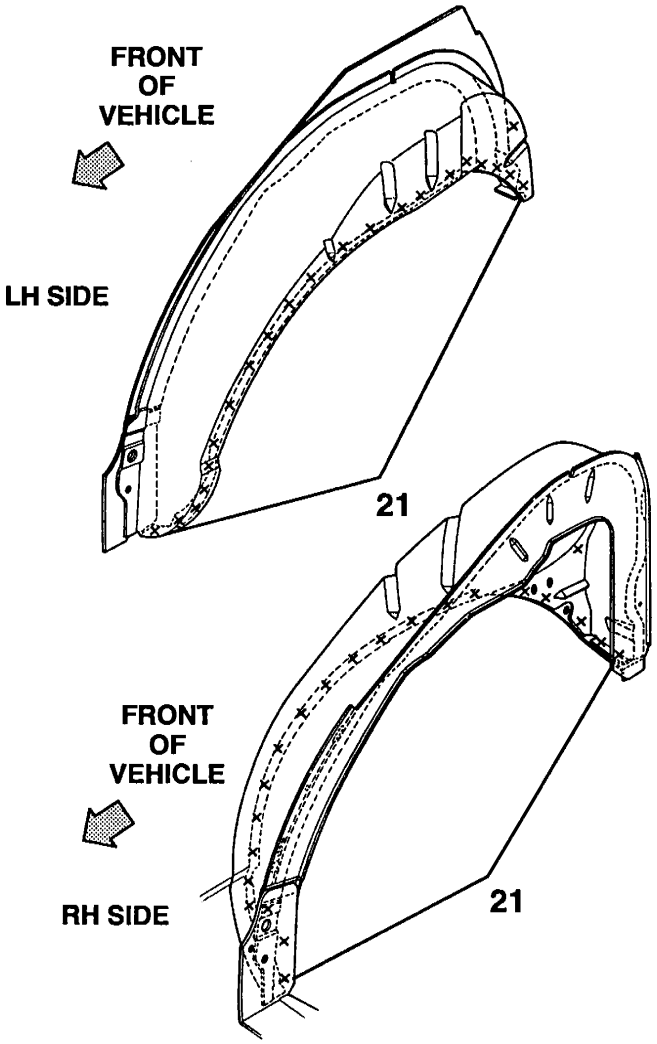
- For safety reasons, remove the fuel tank before performing work.
- On vehicles equipped with a sun roof, there are drain hoses running down the A- and B-Pillars. You may also encounter wiring harnesses in these pillars—be careful not to cut any of these materials.
- Remove all flammable materials from interior areas where working before welding.

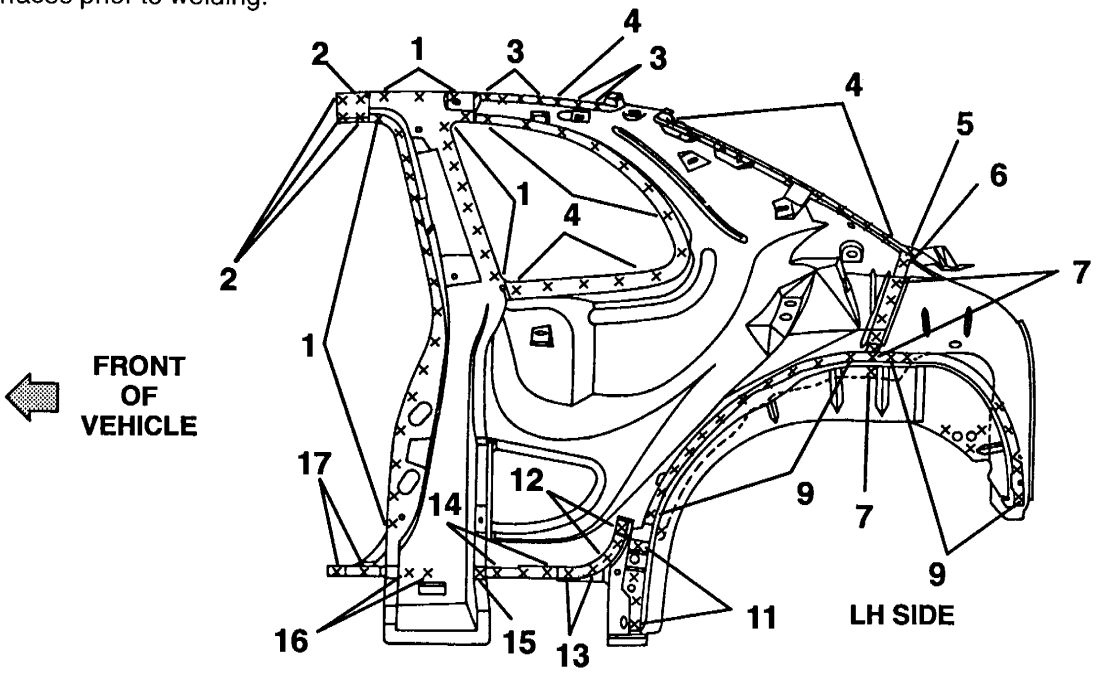
REMOVAL

1. After removal of all spot welds, you may have to use an air chisel to cut the old Quarter Panel away from the Inner Panels.
2. Clean all adjoining panels and prep them for placement of the new Inner Quarter Panel.

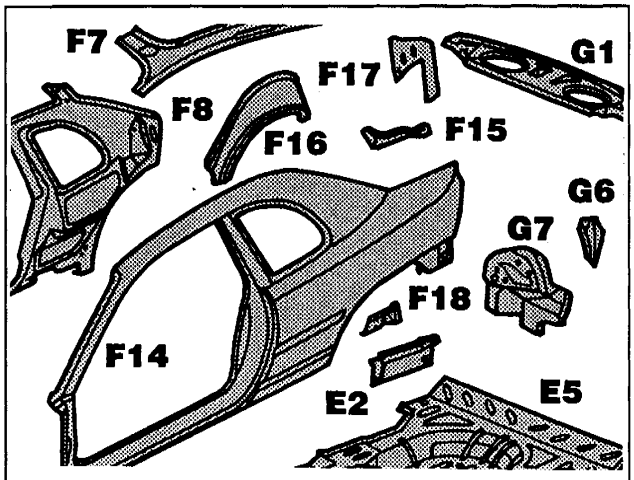
INSTALLATION

1. Mount the new Inner Quarter Panel and check fit to Inner Rear Wheelhouse and Outer Quarter Panel.
2. Tack weld the new Inner Quarter Panel into place.
3. Check the fit again to make sure everything fits perfectly.
4. Weld the Inner Quarter Panel into place.
5. Spray anti-corrosion weld-thru primer on weld surfaces prior to welding.



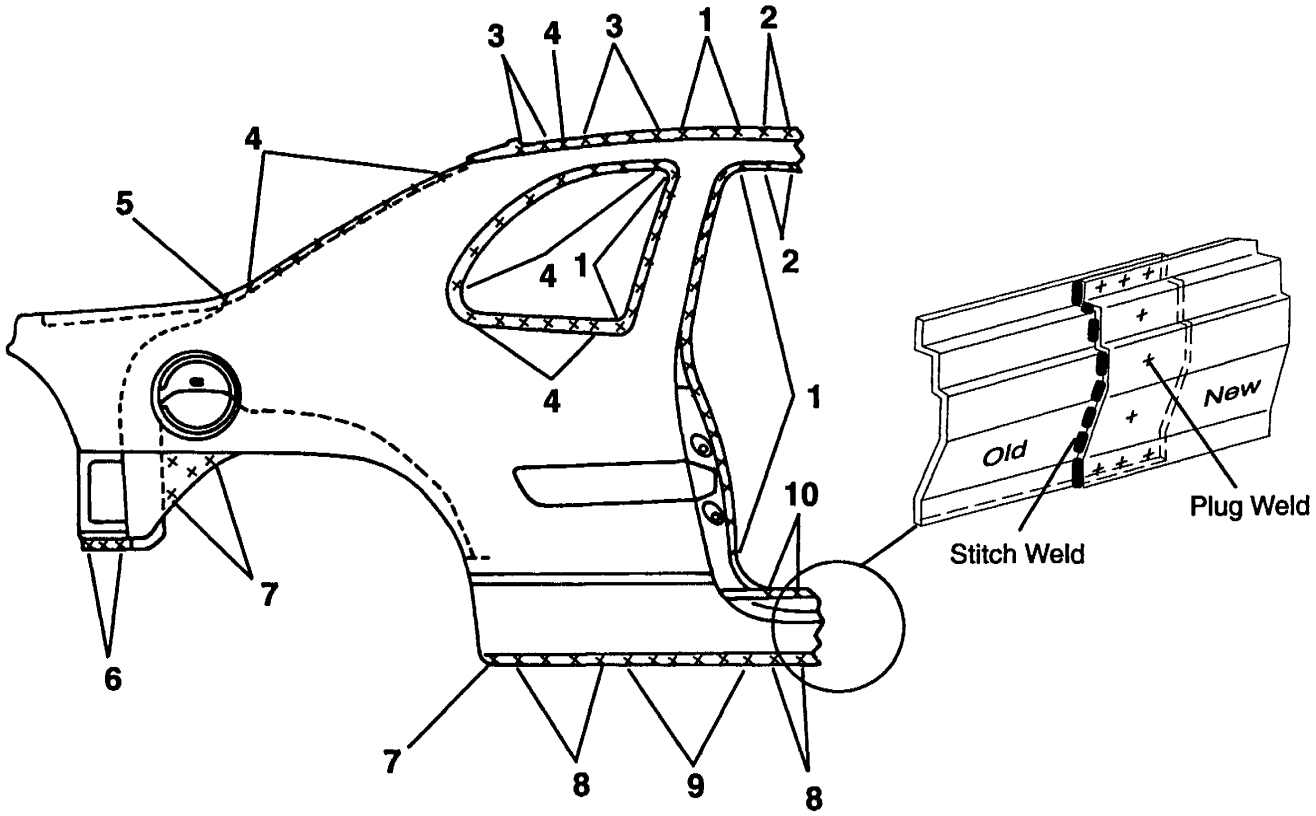


Quarter Panel — Outer



No.	Welded parts	F	R
1	F8 + F10 + F14	28	P28
2	F8 + F14 + F7	4	P4
3	F8 + F7	6	P6
4	F8 + F14	24	P24
5	F8 + F14 + G1	1	P1
6	F14 + E5	3	P3
7	F14 + F8 + E2	5	P5
8	F14 + E2 + E1	6	P6

No.	Welded parts	F	R
9	F14 + F10 + E2	6	P6
10	F14 + F8 + E1	2	P2
11	F14 + G6	5	P5
12	F14 + G7	5	P5
13	F14 + F15 + Extension	4	P4
14	F15 + Reinforcement	3	P3
15	F15 + G1	4	P4
16	F15 + G1 + G3	4	P4
17	F14 + F15	7	P7
18	F14 + F8	18	P18
19	F14 + F18	4	P4



NOTES WITH REGARD TO REPAIR WORK

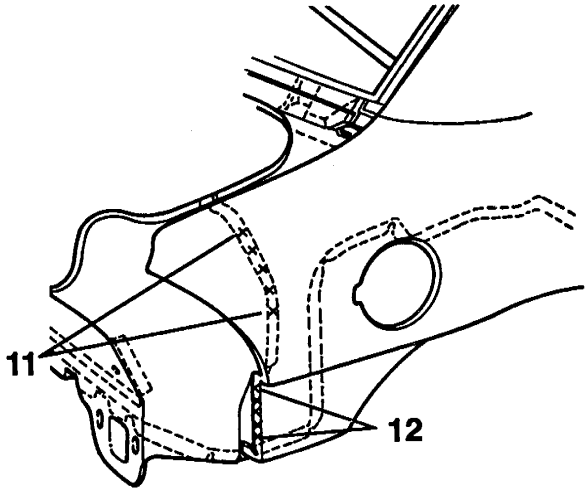
- For safety reasons, remove the fuel tank before performing work.
- On vehicles equipped with a sun roof, there are drain hoses running down the A- and B-Pillars. You may also encounter wiring harnesses in these pillars — be careful not to cut any of these materials.
- Remove all flammable materials from interior areas where working before welding.
- Protect all glass from sparks during cutting and welding.

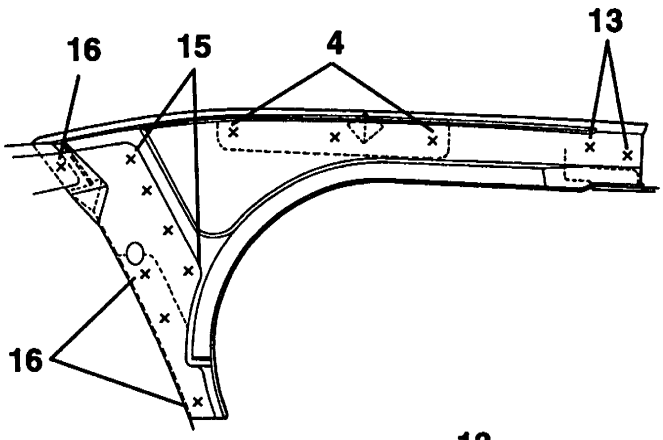
REMOVAL

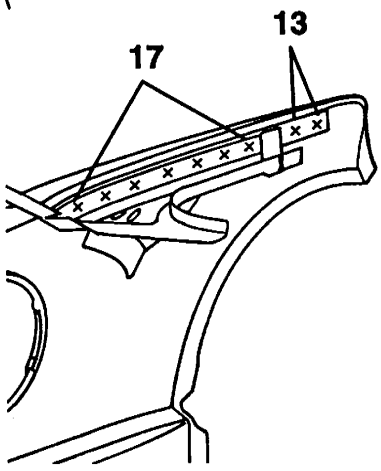
1. After removal of all spot welds, you may have to use an air chisel to cut the old Quarter Panel away from the Inner Panels.
2. Clean all adjoining panels and prep them for placement of the new Inner Quarter Panel.

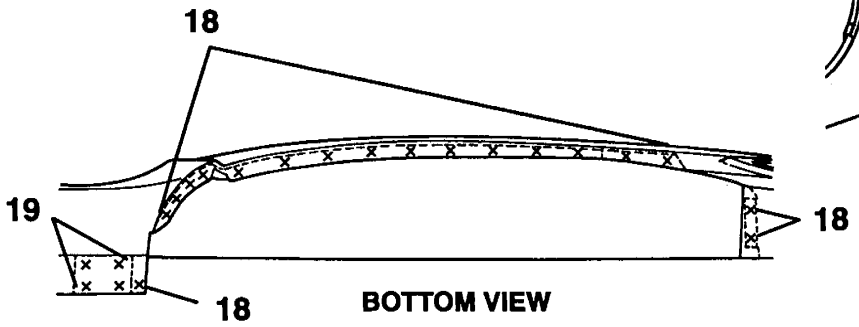
INSTALLATION

1. Mount the new Quarter Panel and check fit to Inner Rear Wheelhouse and other mating surfaces.
2. Apply adhesive as specified in the Structural Adhesives section.
3. Tack weld the new Inner Quarter Panel into place.
4. Check the fit again to make sure everything fits perfectly.
5. Weld the Quarter Panel into place.
6. Spray anti-corrosion weld-thru primer on weld surfaces prior to welding.

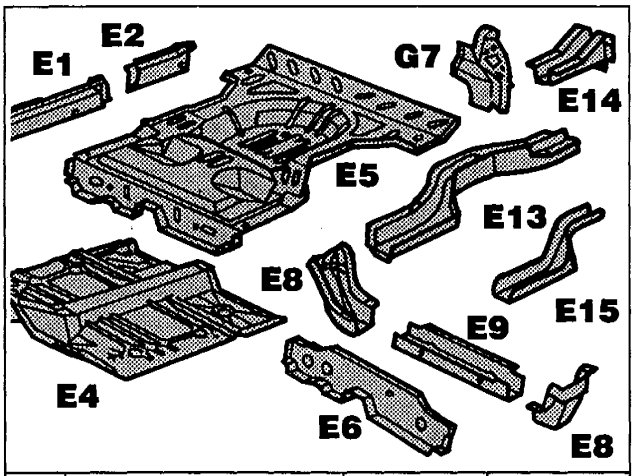








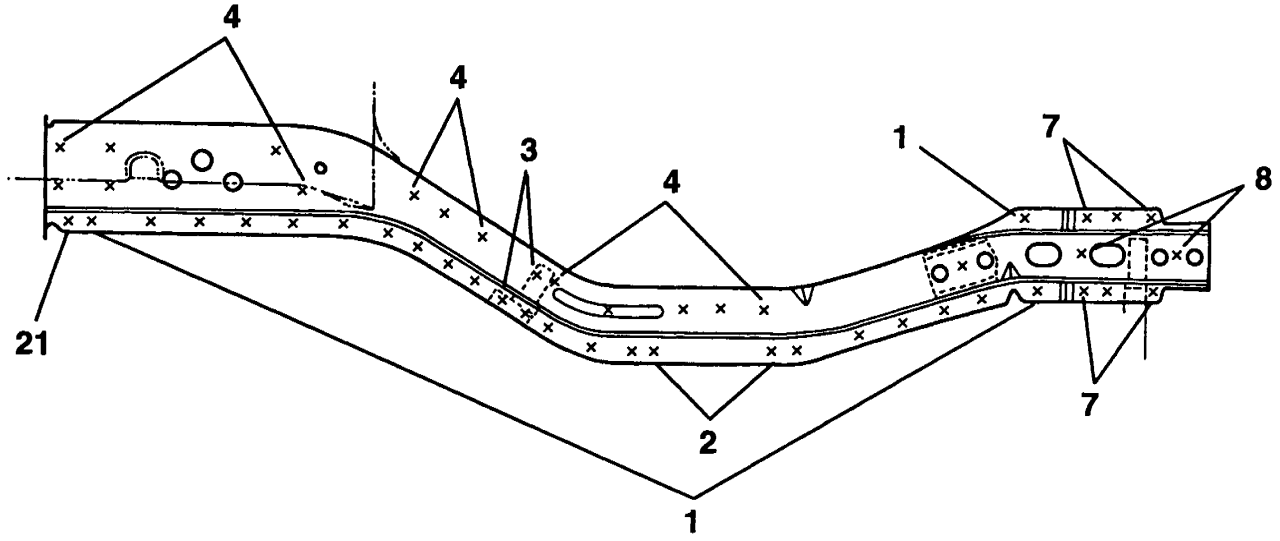
BOTTOM VIEW



No.	Welded parts	F	R
1LH	E13 + E5	20	P20
1RH	E13 + E5	19	P19
2	E13 + E8	2	P2
3	E13 + Mounting Bracket	3	P3
4	E13 + E5	14	P14
5	E13 + E5 + E6	6	P6
6	E2 + E6	3	P3
7	E13 + E14 + E5	6	P6

No.	Welded parts	F	R
8	E13 + E14	2	P2
9	E13 + E2	16	P16
10	E13 + E2 + F13	1	P1
11	E13 + E2 + E5	2	P2
12	E13 + F11	4	P4
13	E13 + F11 + E5	5	P5
14	E13 + F13 + E5	3	P3
15	E13 + F13	2	P2
16	E13 + E8	4	P4
17	E13 + F14 + E5	4	P4
18	E13 + F14	2	P2
19*	E13 + E14	6	P6
20	E14 + G7	5	P5
21	E13 + E1	1	P1

TOP VIEW



NOTES WITH REGARD TO REPAIR WORK

- The Rear Frame Rail is comprised of several rear structural components. The Rear Floor Pan Rear Suspension Center and Outer Crossmembers are serviced as an assembly. The Rear Floor Pan Side Rail and Side Rail Reinforcement are also serviced as assemblies.
- Remove all flammable materials from passenger compartment, rear seat area and trunk area. Cap all open fuel lines.

REMOVAL

1. Use a spot weld cutter to remove spot welds.
2. Use an air chisel to remove Rear Frame Rail components.

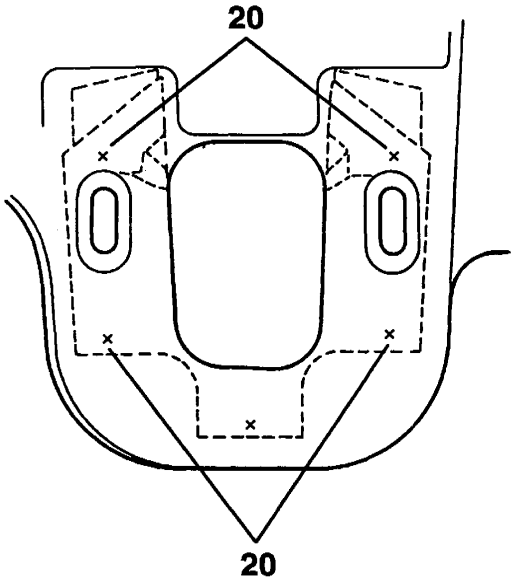
PREPARATION

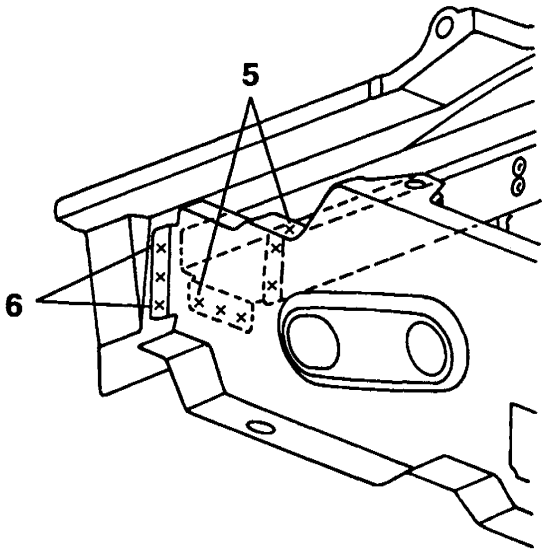
1. Repair any damage that may have been caused by removal of Rear Frame Rail assembly.
2. Use old Rear Rail as a guide for plug weld placement.

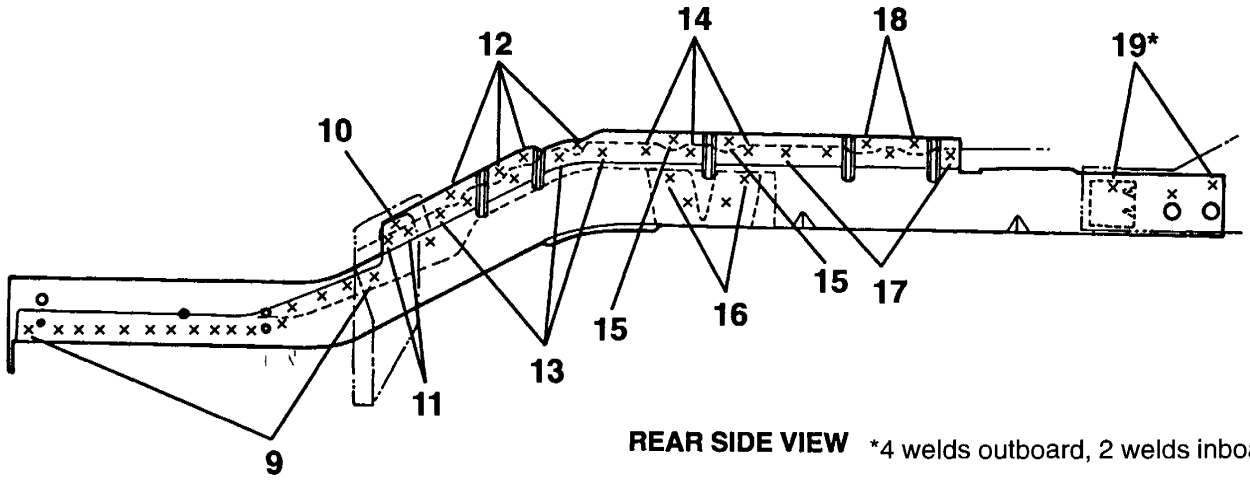
INSTALLATION

1. Temporarily mount the new Rear Frame Rail components to the Rear Floor Pan.
2. Measure each part and make corrections necessary to obtain perfect agreement with the other parts involved.
3. Plug weld the new components, making sure they are at least as strong as the original.

REAR VIEW

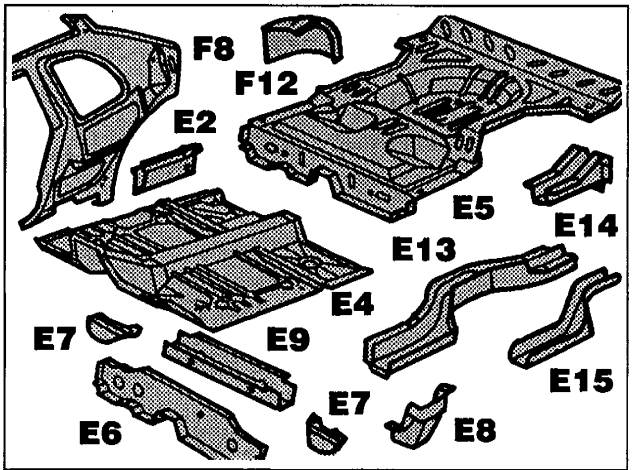






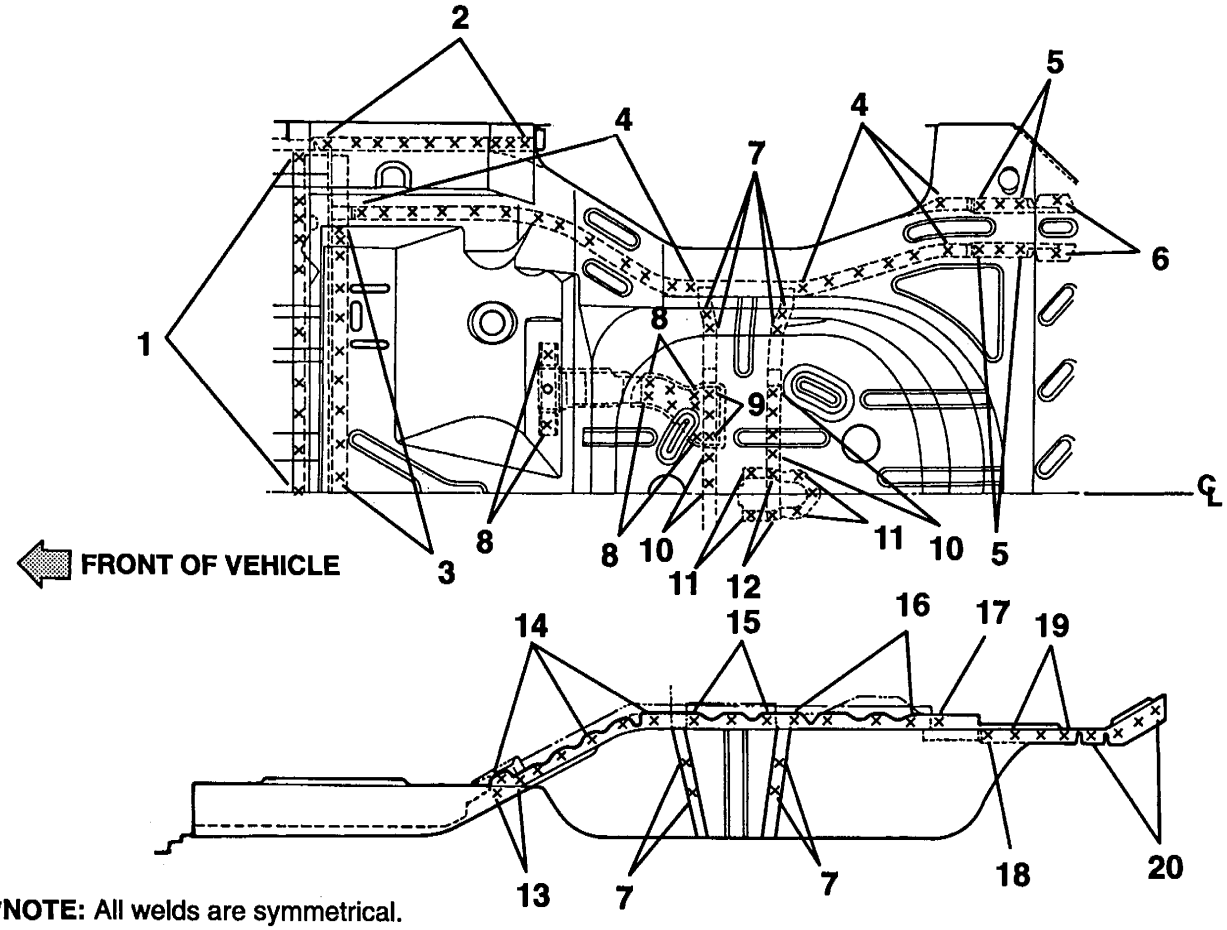
REAR SIDE VIEW *4 welds outboard, 2 welds inboard

Rear Floor Pan



No.	Welded parts	F	R
1	E4 + E6	19	P19
2	E5 + E2	20	P20
3	E5 + E6	20	P20
4	E5 + E13	40	P40
5	E5 + E14 + E13	12	P12
6	E5 + E14	4	P4
7	E5 + E8	8	P8
8	E5 + E7	18	P18

No.	Welded parts	F	R
9	E5 + E7 + E9	6	P6
10	E5 + E9	12	P12
11	E5 + Spare Tire Mount	5	P5
12	E5 + Spare Tire Mount + E9	2	P2
13	E5 + E2 + E13	4	P4
14	E5 + E13 + F11	12	P12
15	E5 + E13 + F13	6	P6
16	E5 + E13 + F12	8	P8
17	E5 + F16	2	P2
18	E5 + F8 + F14	2	P2
19	E5 + F14	6	P6
20	E5 + G7	8	P8
21	E5 + E2 + F11	4	P4
22	E5 + F12	8	P8
23	E5 + G7	6	P6
24	E5 + G8 + G7	2	P2
25	E5 + G8	8	P8



*NOTE: All welds are symmetrical.

NOTES WITH REGARD TO REPAIR WORK

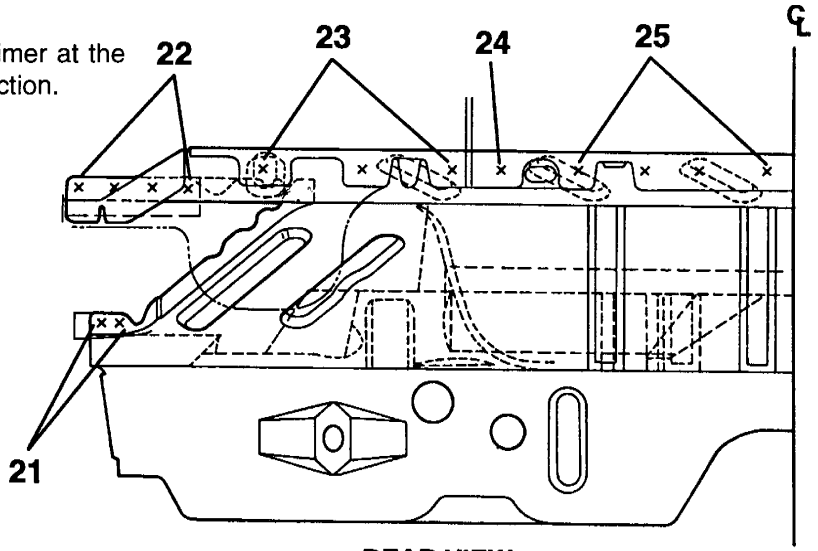
- Remove fuel tank and cap open fuel lines.
- Remove all flammable materials from passenger compartment, rear seat area and interior area.
- Refer to Inner Wheelhouse — Rear section for Inner Wheelhouse to Rear Floor Pan weld locations.

REMOVAL

1. Drill 1/8" hole in the center of each spot weld to be used as a guide if using a hole saw.
2. Use a 5/16"-3/8" hole saw to cut all spot welds or a drill designed to cut spot welds.
3. Use an air chisel to remove Rear Floor Pan, BUT be careful not to damage any mating components.

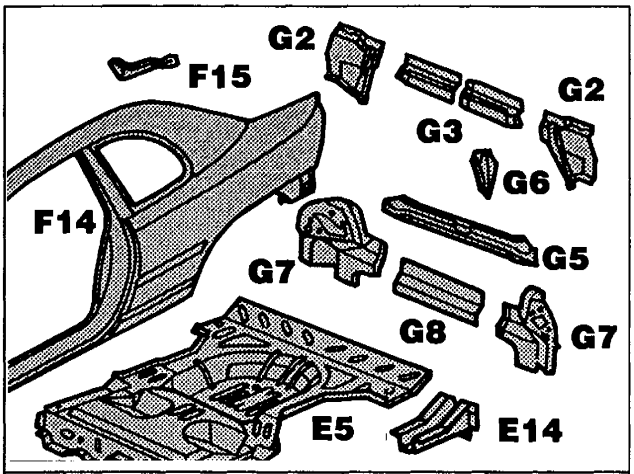
INSTALLATION

1. Repair any damage that may have been caused by removal of the Rear Floor Pan or other components.
2. Re-use the Floor Pan as a guide for plug weld placement and refer to the appropriate section for weld placement.
3. Temporarily mount the new Rear Floor Pan.
4. Measure each part and make corrections necessary to obtain perfect agreement with the other parts involved.
5. Plug weld the new Rear Floor Pan, making sure it is at least as strong as the original.
6. You will need to use weld-through primer at the seams to ensure good corrosion protection.



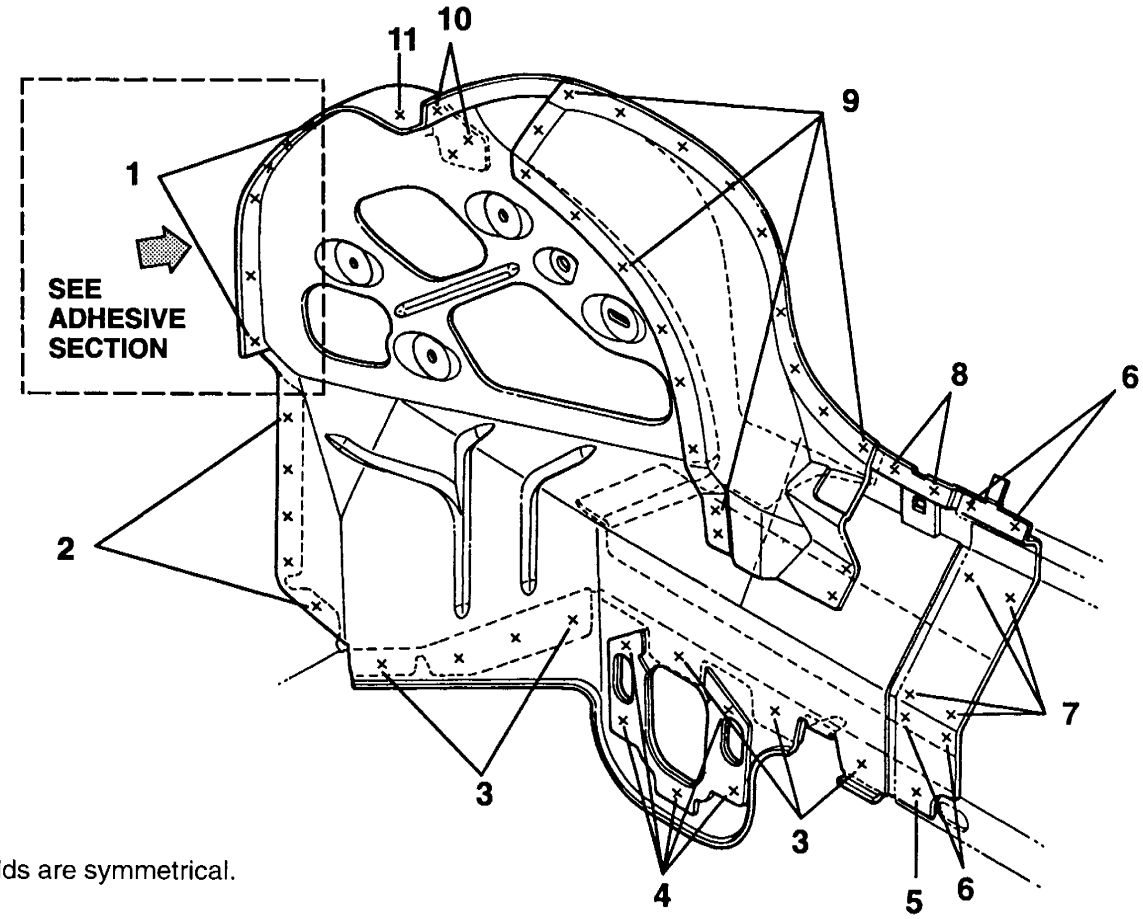
REAR VIEW

Rear Deck Opening



No.	Welded parts	F	R
1	G7 + G6	6	P6
2	G7 + F14	5	P5
3	G7 + E5	7	P7
4	G7 + E14	5	P5
5	G7 + G8 + E5	1	P1
6*	G5 + G7 + G8	8	P8
7*	G7 + G8	8	P8
8*	G7 + G5	22	P22

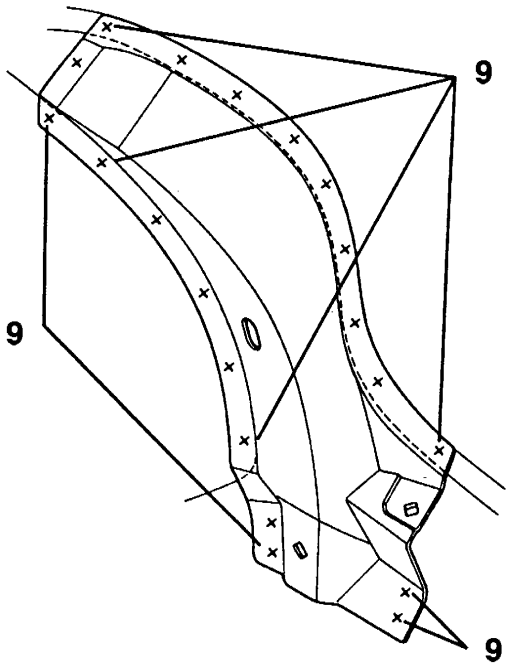
No.	Welded parts	F	R
9	G7 + G6 + Tail Panel Reinforcement	20	P20
10	G7 + Tail Panel Reinforcement	3	P3
11	G7 + F15 + G6	1	P1
12*	G5 + G8	16	P16
13*	G8 + E5	8	P8
14	G8 + Trunk Latch Reinforcement	7	P7



***NOTE:** Welds are symmetrical.

NOTES WITH REGARD TO REPAIR WORK

- Many Deck Opening components provide mounting points for many exterior components. It is critical to check for precise alignment when mounting these structural components.
- The Deck Opening Lower Panel Reinforcement and Center Panel are serviced as a sub-assembly.
- For safety reasons, do the repair with the fuel tank removed. Remove all flammable materials from interior area before welding.
- Refer to Quarter Panel—Outer section for additional information.



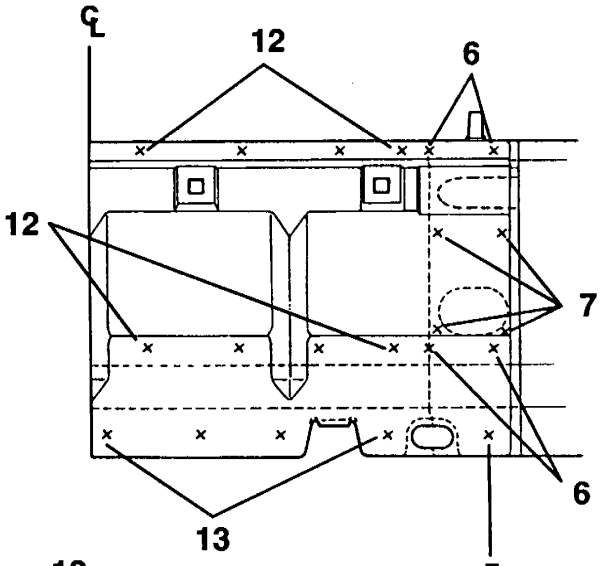
REMOVAL

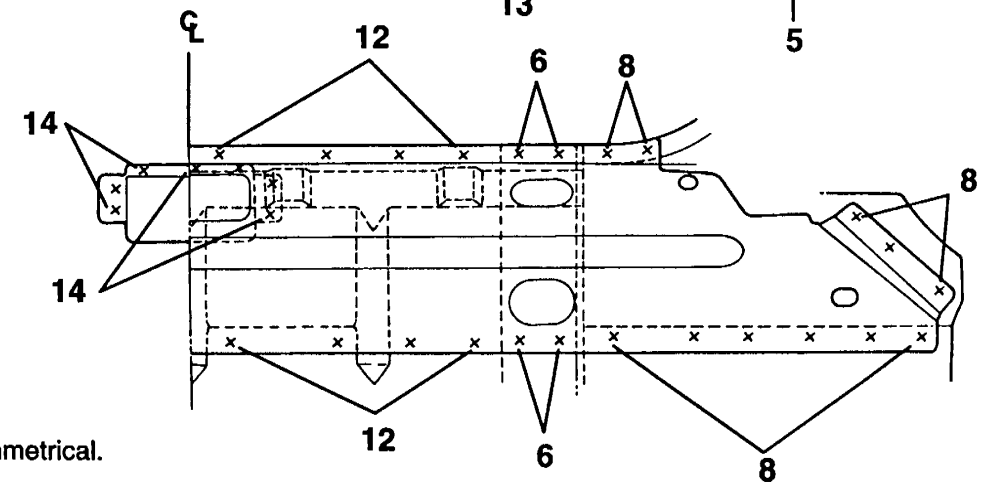
1. Cut the spot welds with a hole saw or equivalent.
2. Clean and prep all the panels to which you will be fitting the new Deck Opening components.

INSTALLATION

1. It may take a little extra time to fit the new panels for proper alignment.
2. Tack weld the new panels into place.
3. Plus weld the panels for a permanent repair.

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



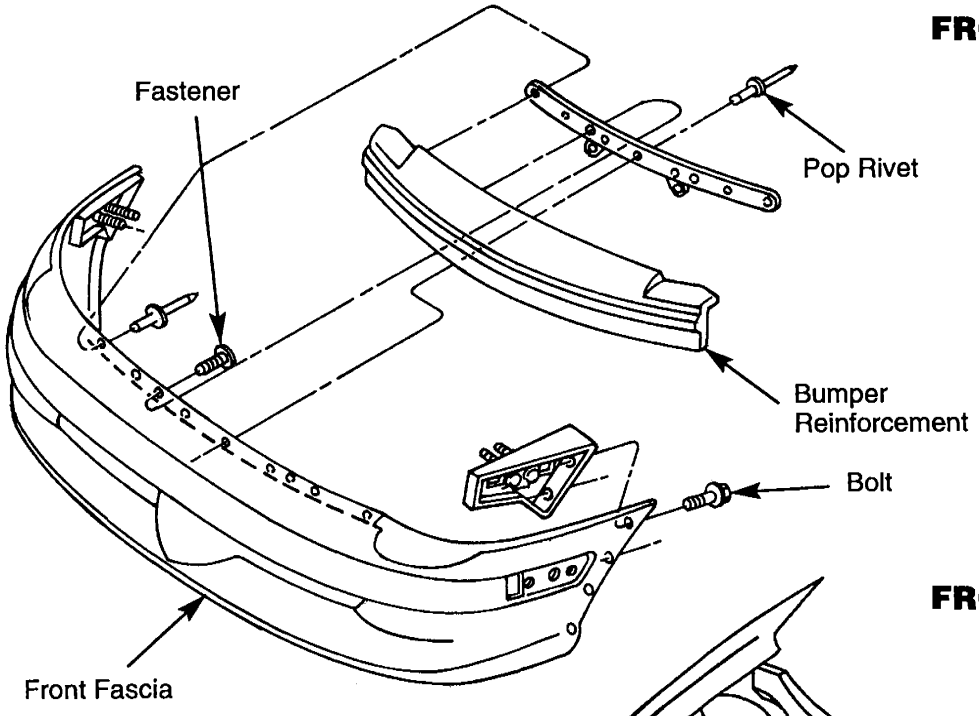


*** NOTE:** All welds are symmetrical.

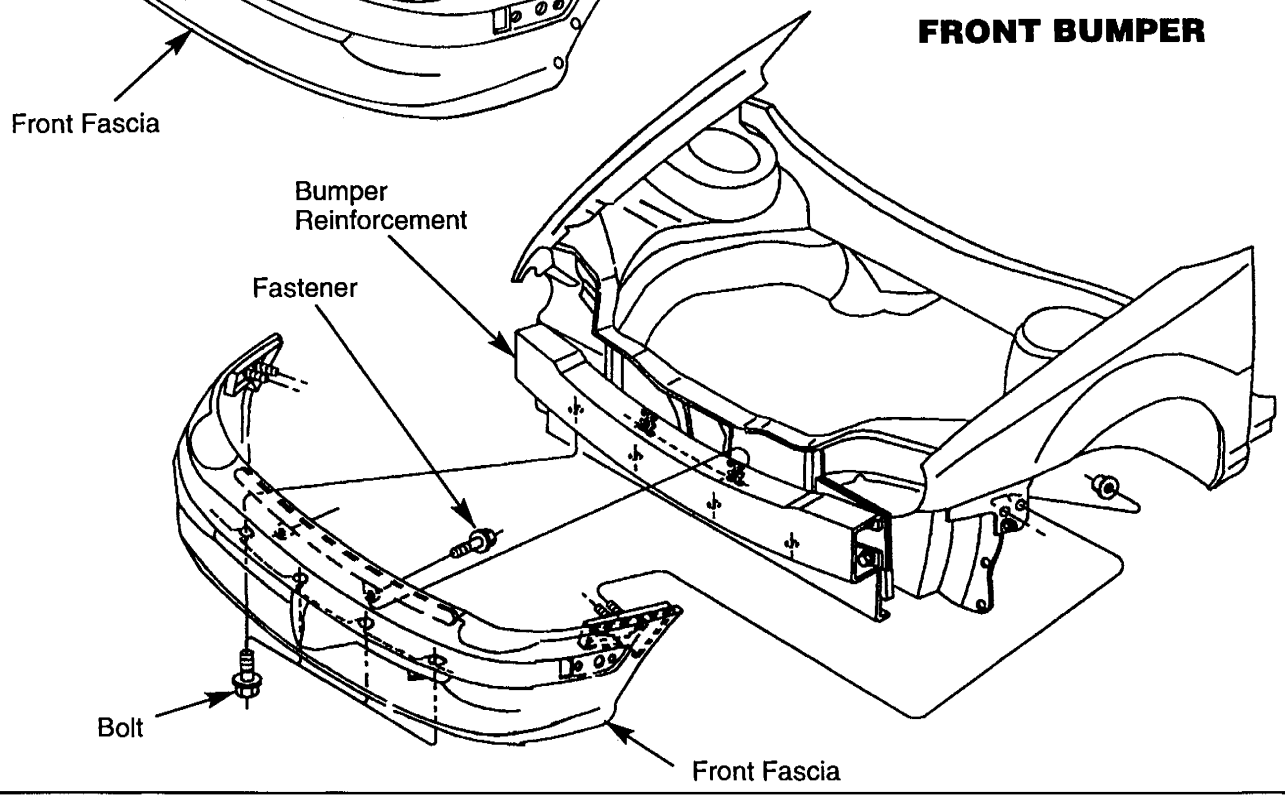
BUMPER SYSTEMS

Dodge/Plymouth Neon

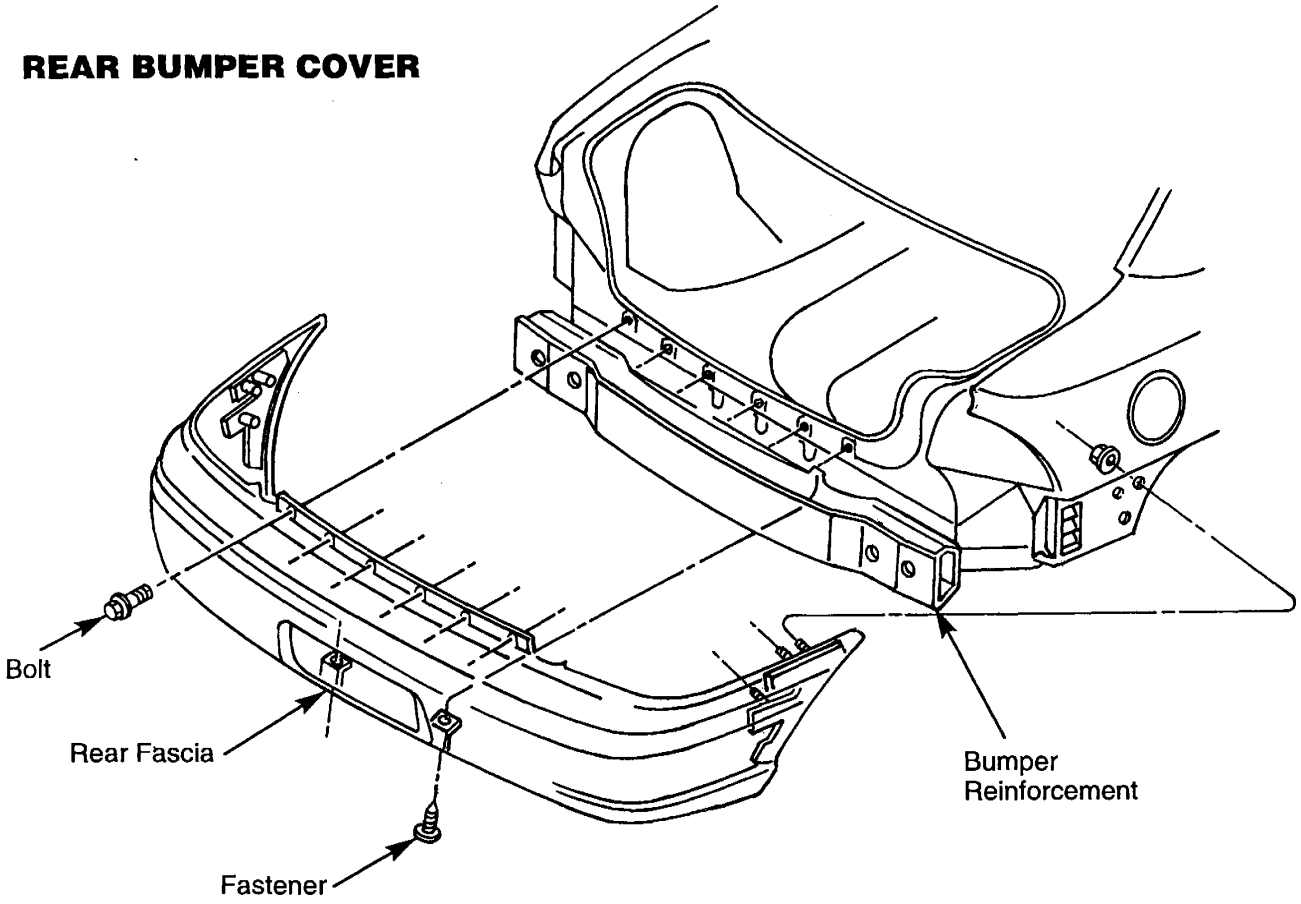
FRONT BUMPER



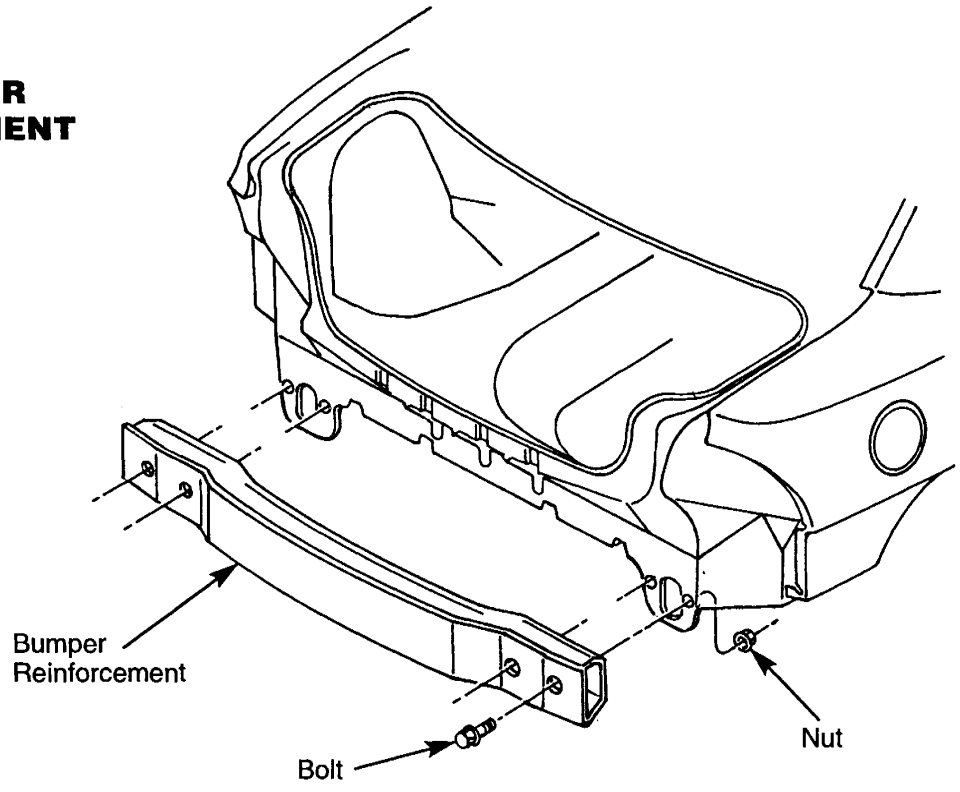
FRONT BUMPER



REAR BUMPER COVER

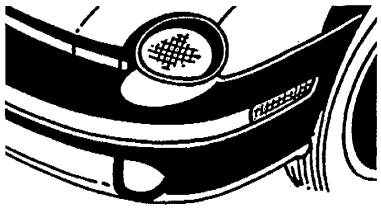


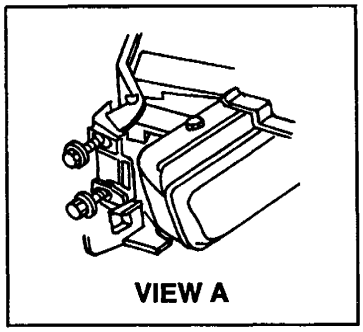
REAR BUMPER REINFORCEMENT



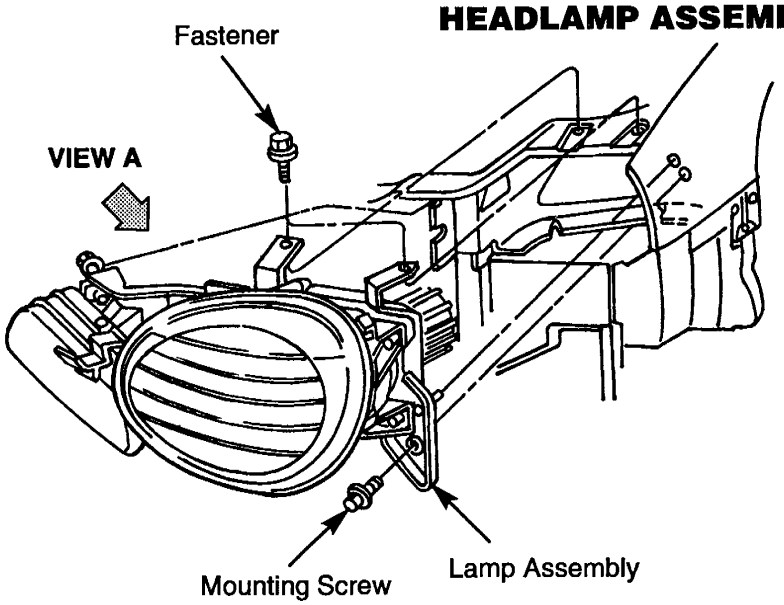
EXTERIOR LIGHTING

Dodge/Plymouth Neon

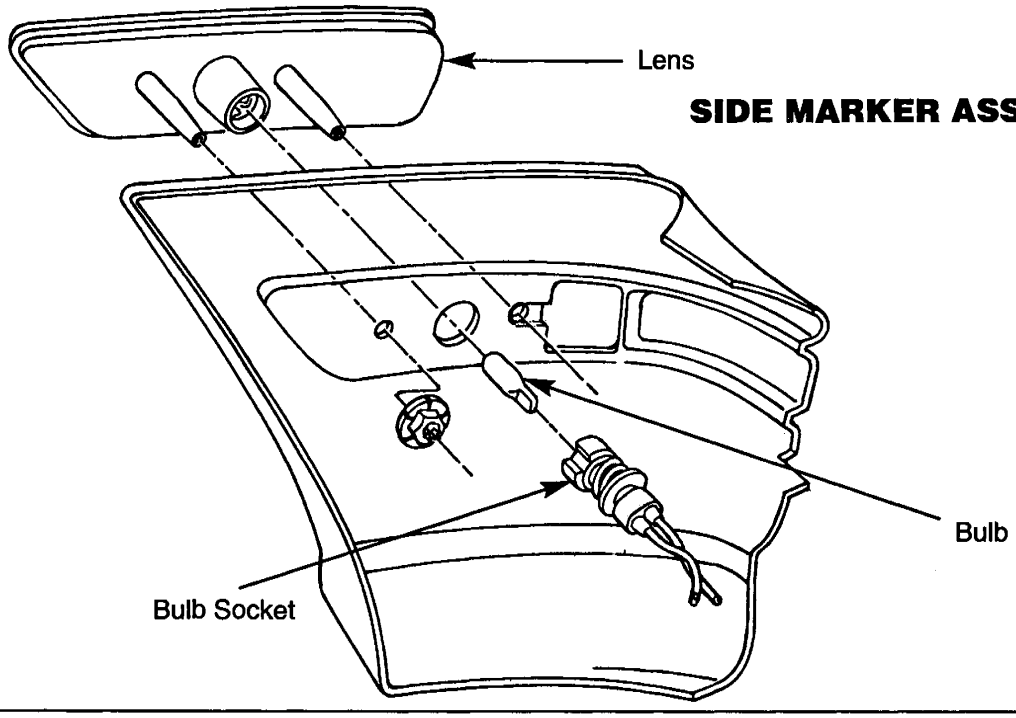




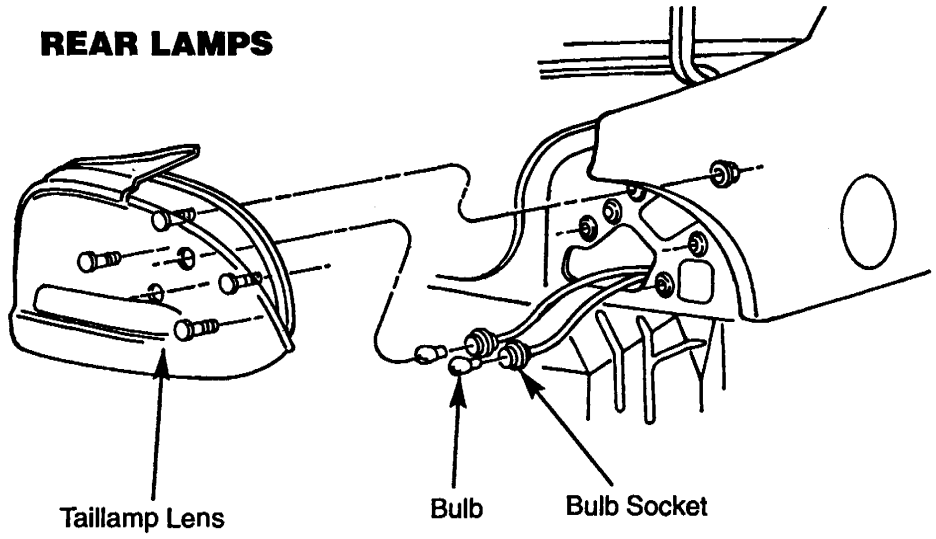
HEADLAMP ASSEMBLY



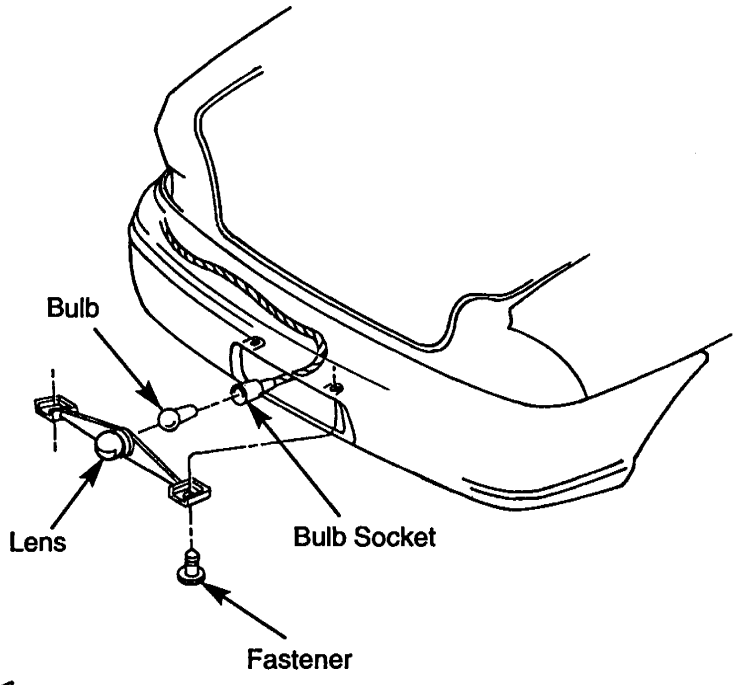
SIDE MARKER ASSEMBLY

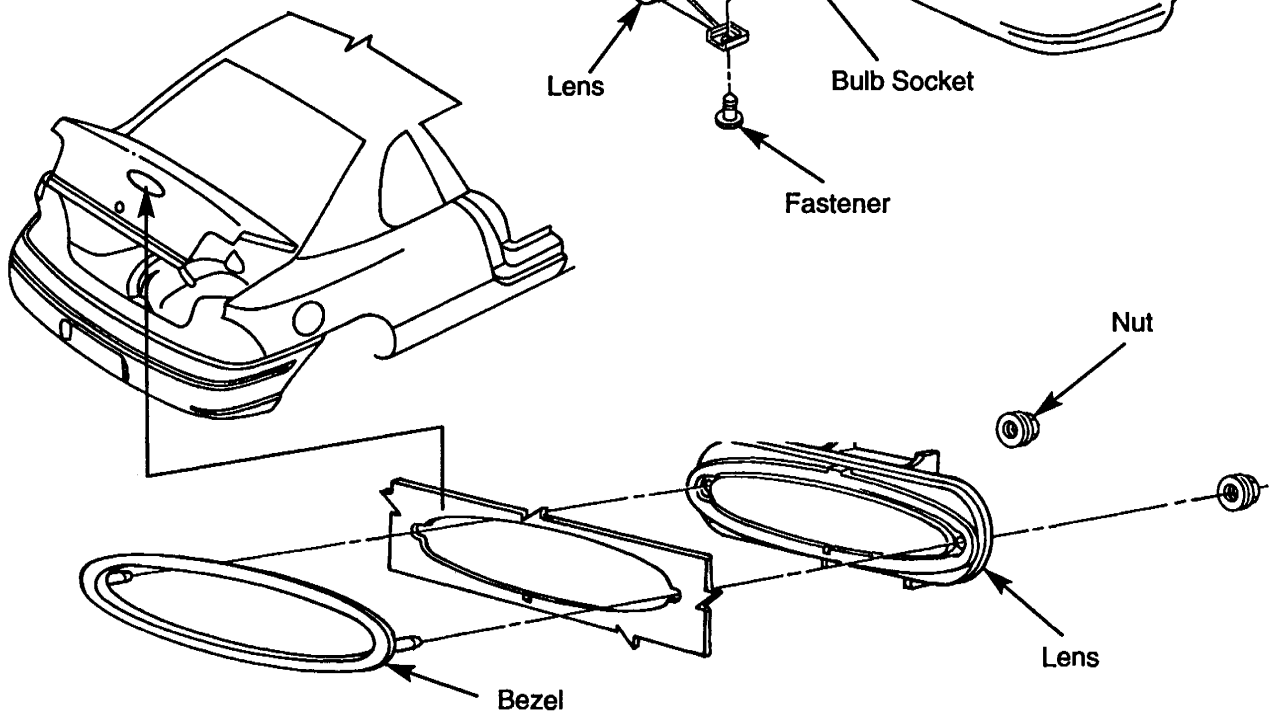


REAR LAMPS



NOTE: Tightening sequence is, (1) Outside, (2) Inside, (3) Top, (4) Bottom.

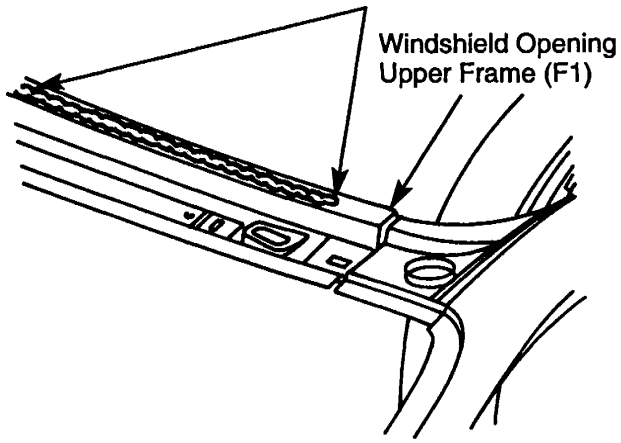




STRUCTURAL ADHESIVES

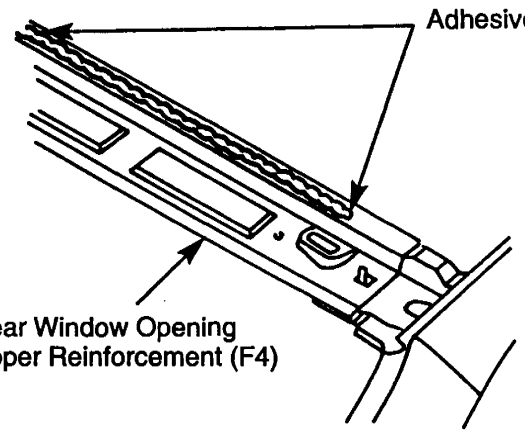
Dodge/Plymouth Neon

FRONT ROOF HEADER

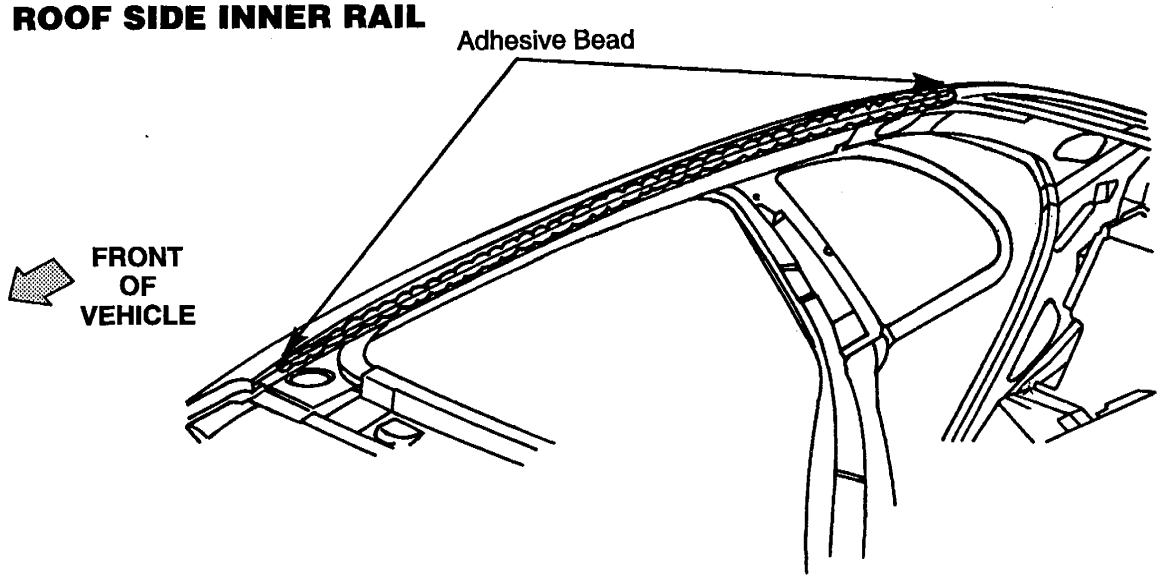


REAR ROOF HEADER

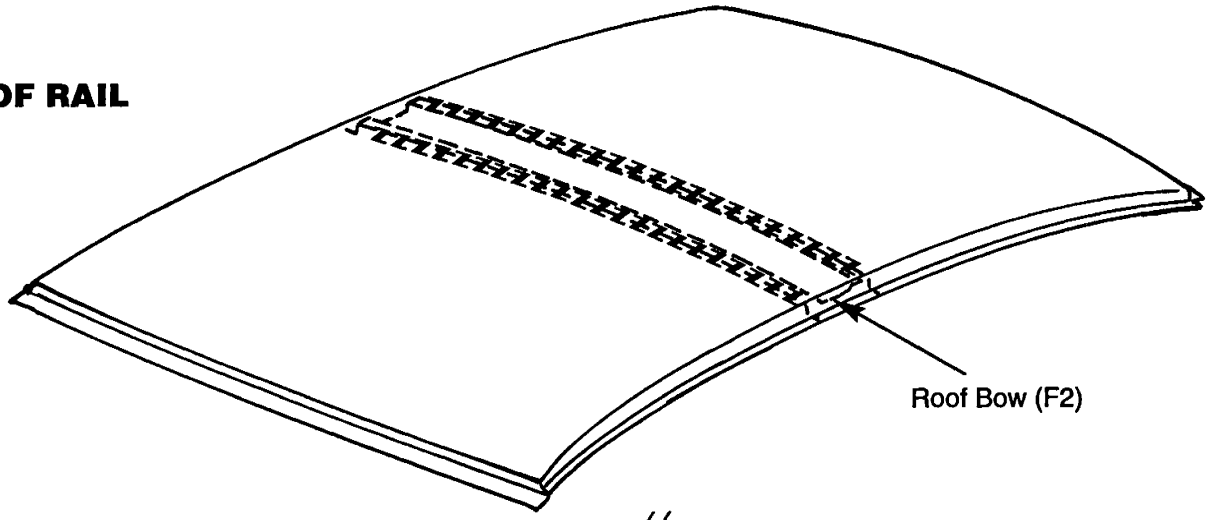
NOTE: Bead runs length of header.



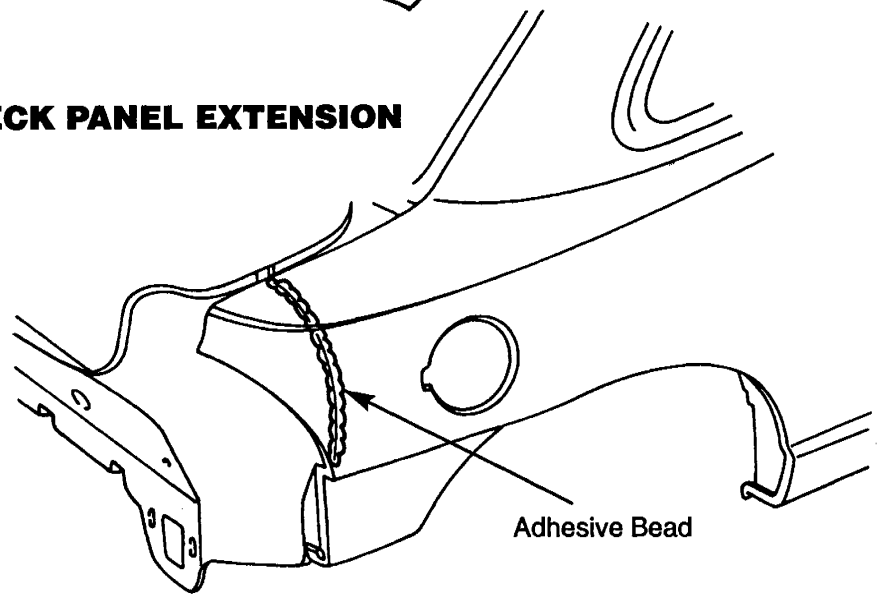
ROOF SIDE INNER RAIL



ROOF RAIL



LOWER DECK PANEL EXTENSION



BODY SEALING LOCATIONS

Dodge/Plymouth Neon

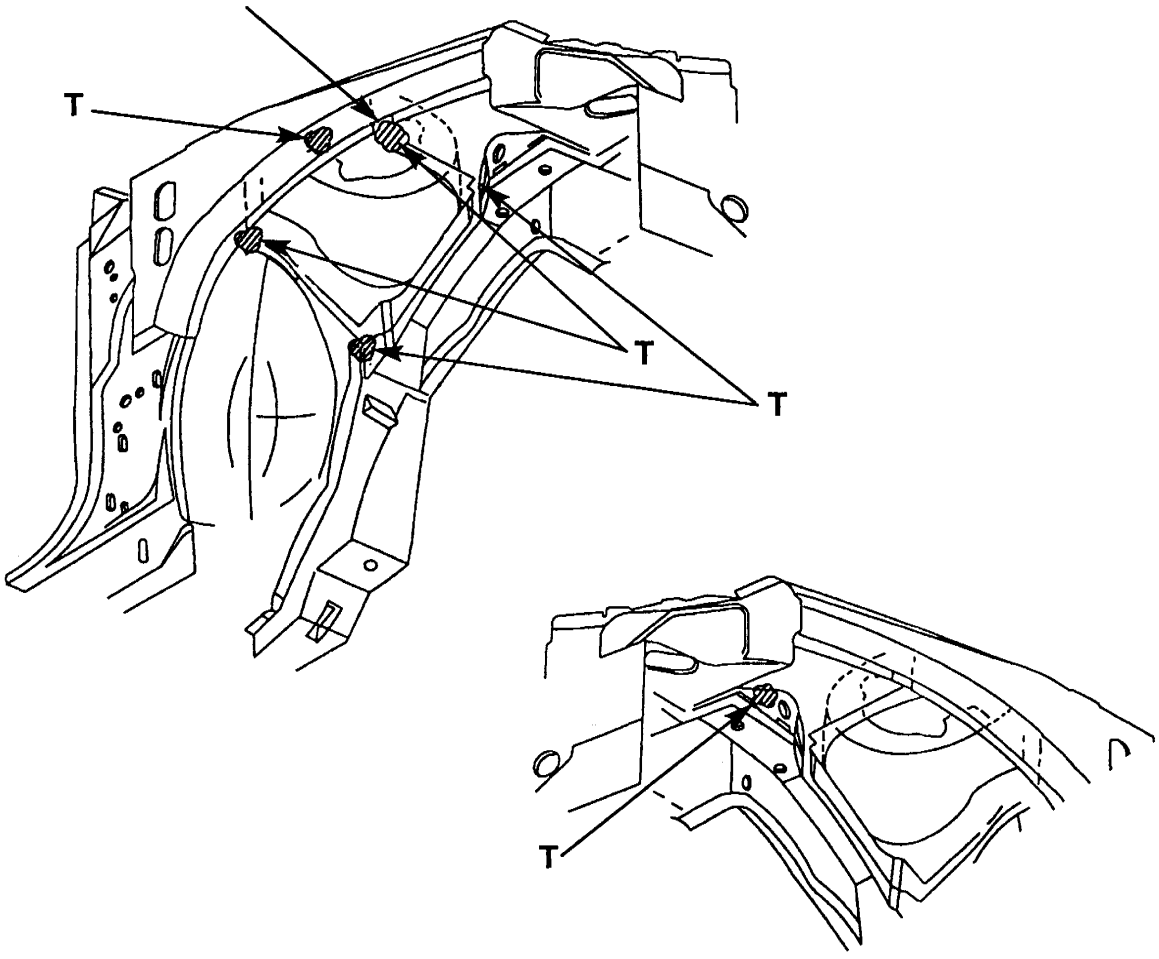
All repairs where panels were replaced have voids that must be filled with sealant. Sealant should be applied to all skips, pin holes in sealers and weld burn through holes on the interior and exterior of the vehicle that would permit leakage of water, air or exhaust fumes.

Typical areas of the exterior that must be sealed are listed on this page. Areas of the interior that must be sealed are floor pans, wheelhouses, dash panel and cowl sides.

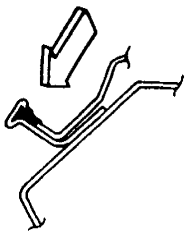
STRUT TOWER & WHEELHOUSE

T – Thumbgradable

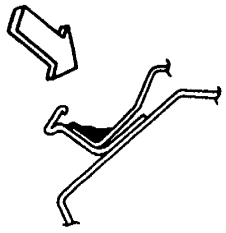
NOTE: Apply thumbgradable sealer from inside of engine compartment. This ball only.



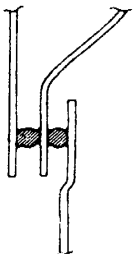
METHODS OF APPLYING AUTO BODY SEALANT



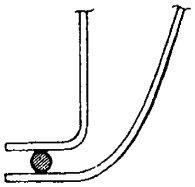
Hold gun nozzle in direction of arrow in order to effectively seal metal joints.



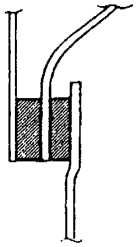
Do not hold gun nozzle in direction of arrow. Sealer applied as shown is ineffective.



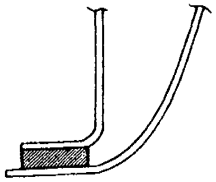
3 metal thickness



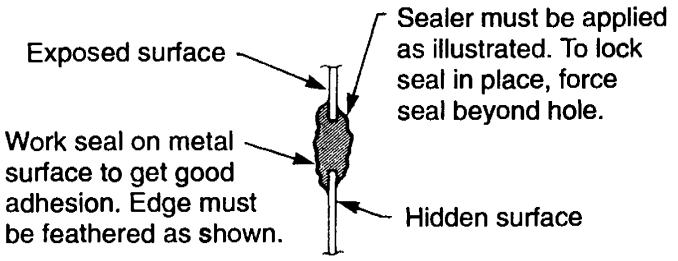
2 metal thickness

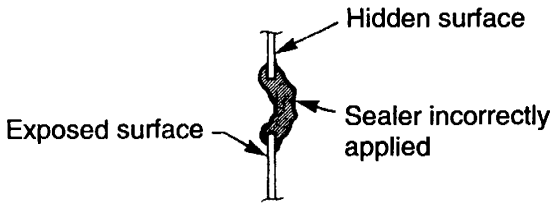


3 metal thickness



2 metal thickness





SYMBOLS

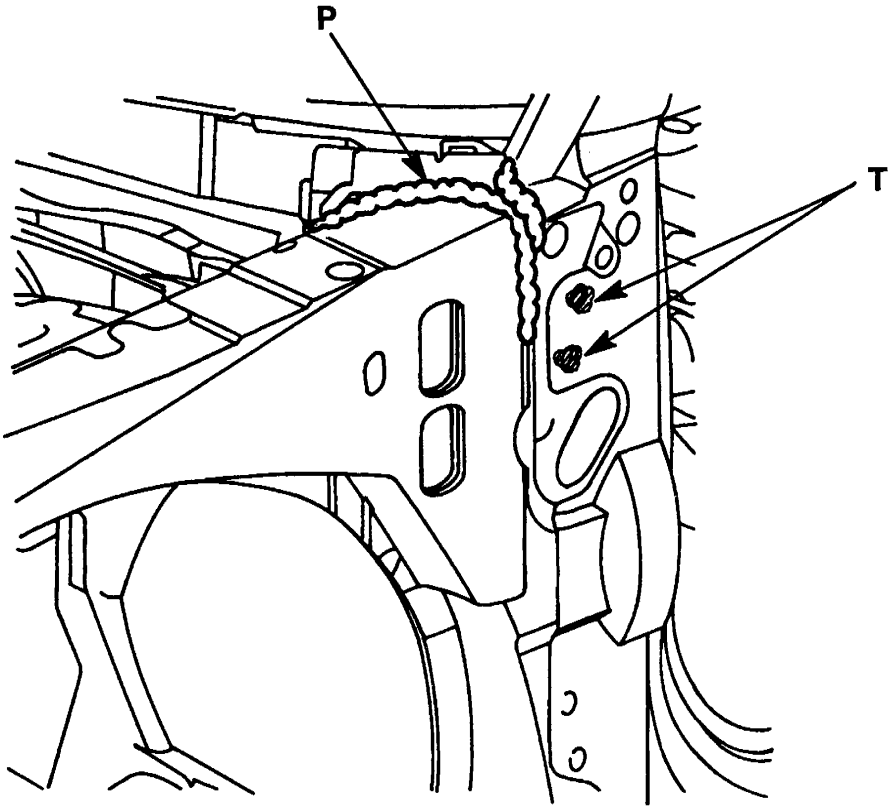
Extrudable thermoplastic

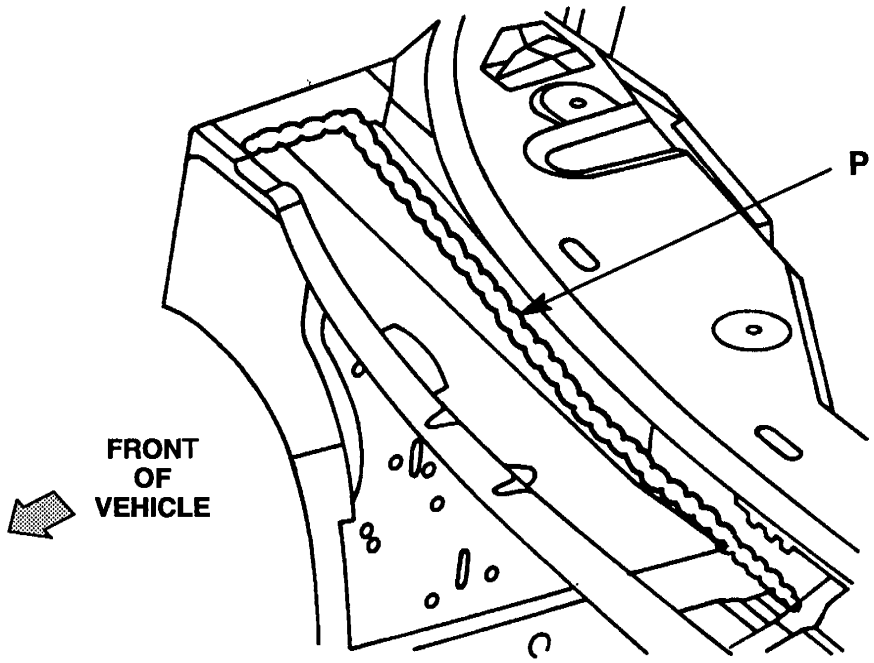
Exposed sealant

Hidden sealant

COWL SIDE & PLENUM

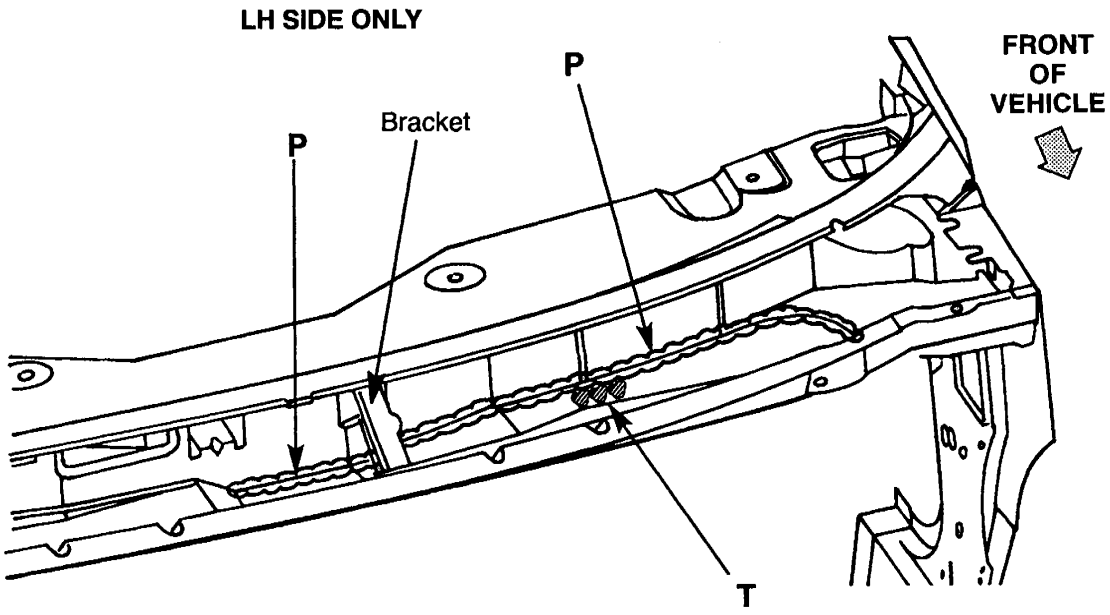
T – Thumbgradable
P – Pumpable

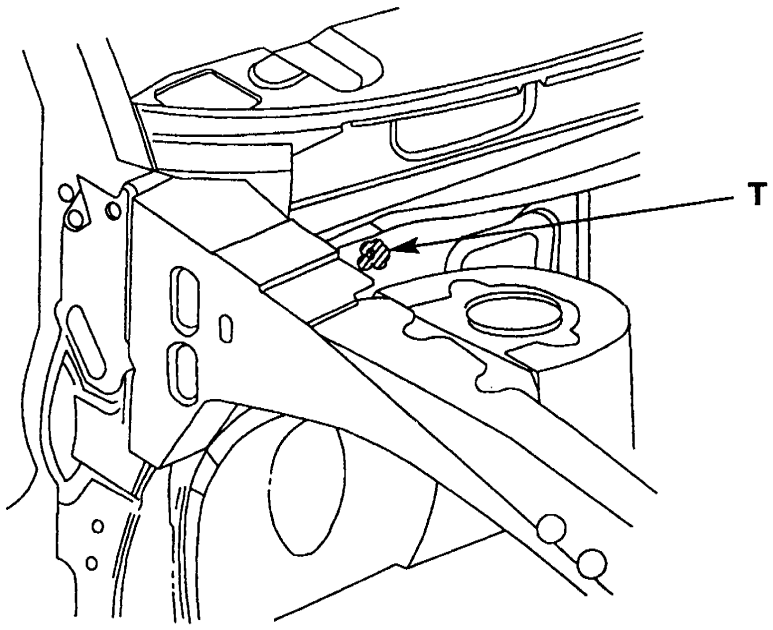




COWL SIDE & PLENUM

T – Thumbgradable
P – Pumpable

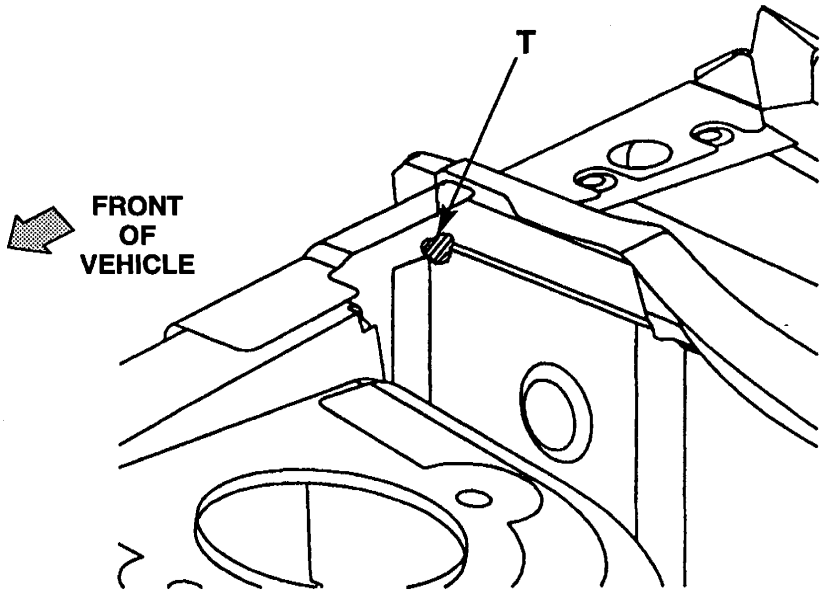


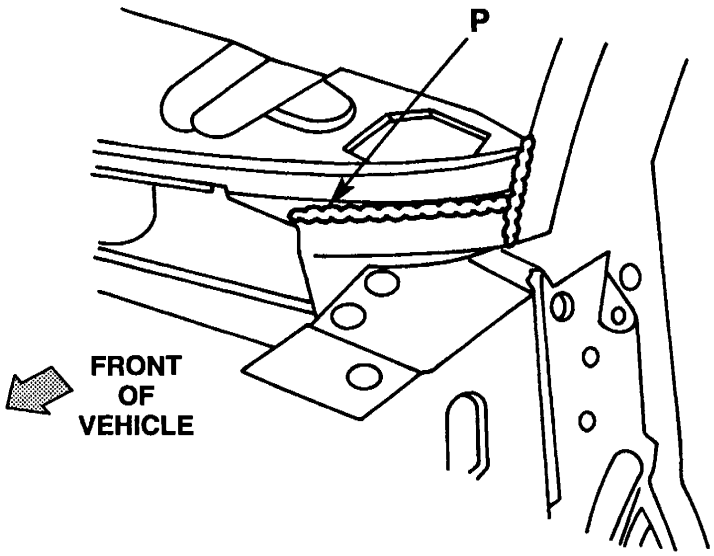


COWL SIDE & PLENUM

T – Thumbgradable
P – Pumpable

NOTE: Sealer must plug hole at joint of dash panel, cowl plenum & cowl side.





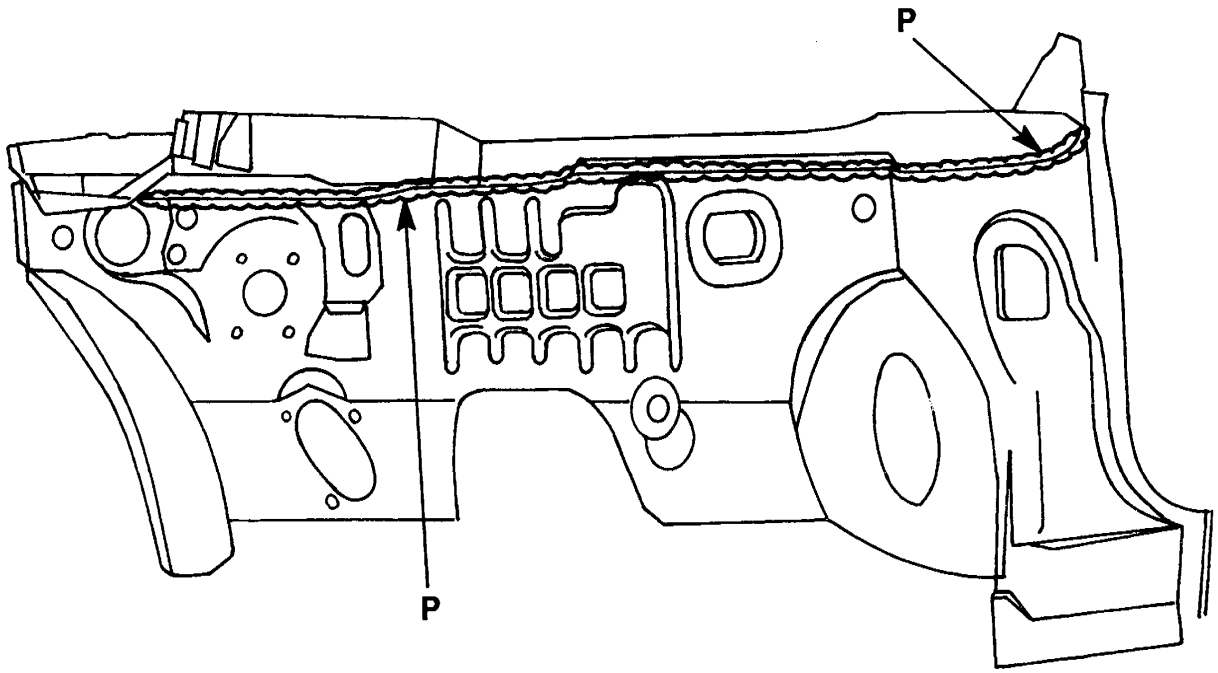
NOTE: Keep sealer off windshield sealing surface.

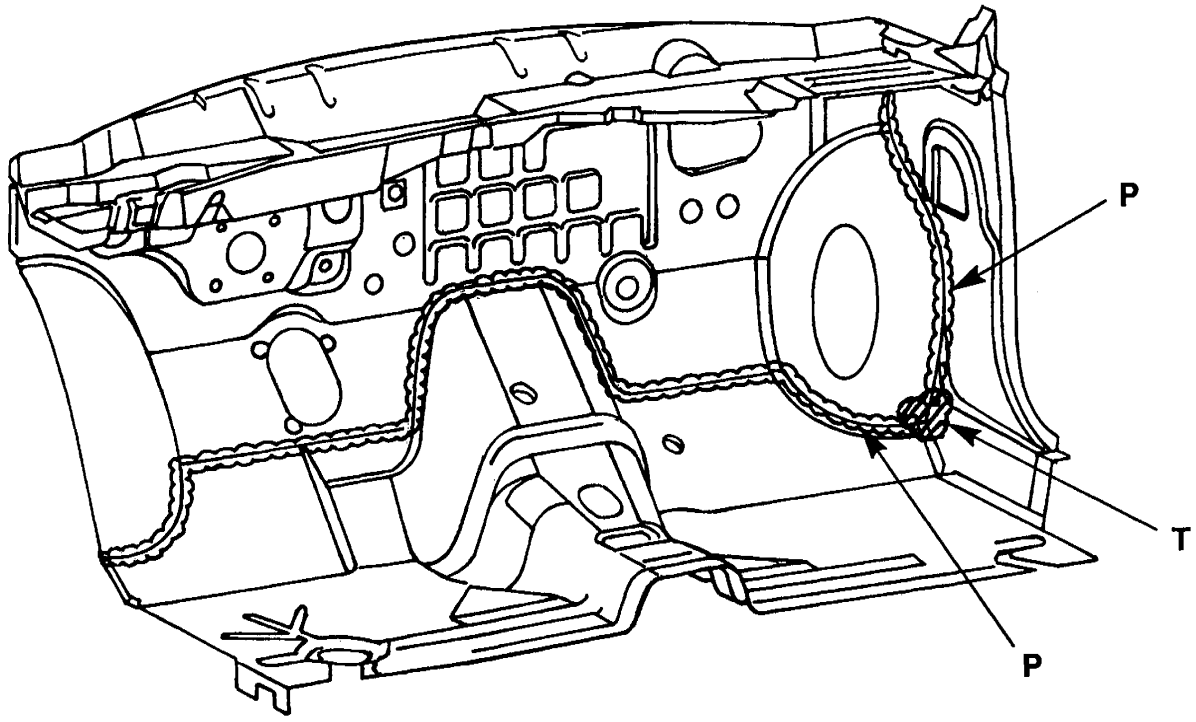
NOTE: Sealer must provide a smooth transition to windshield sealing surface.

DASH PANEL

T – Thumbgradable
P – Pumpable

NOTE: No sealer permitted on Instrument Panel mounting bracket surface.

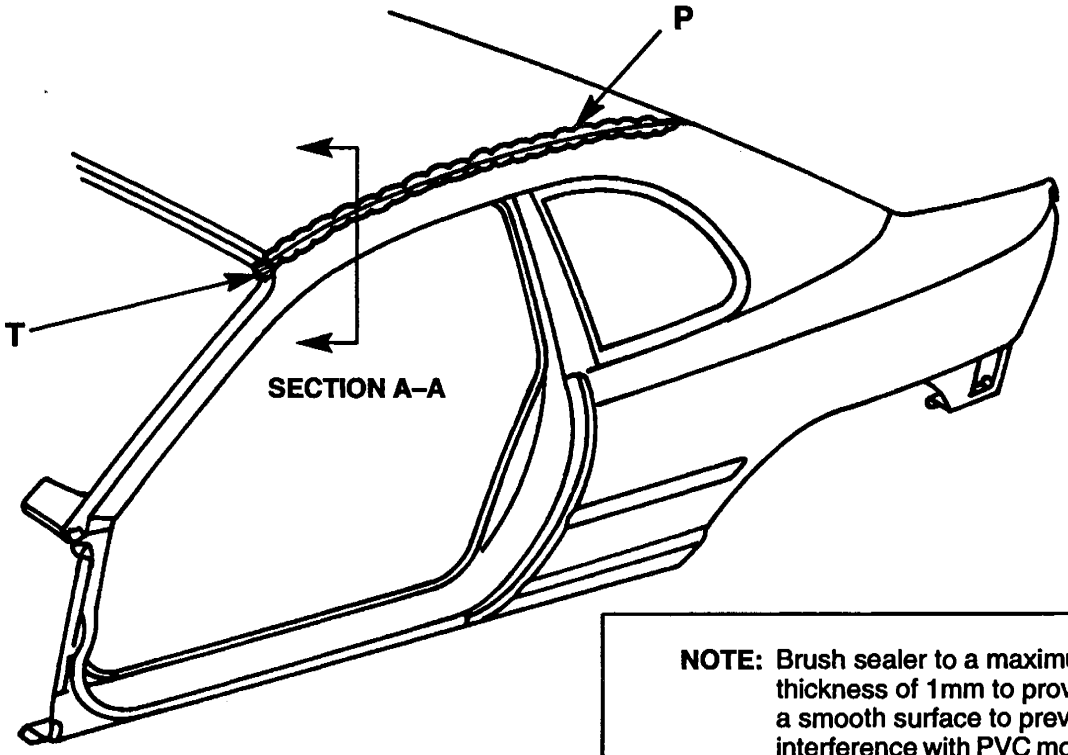




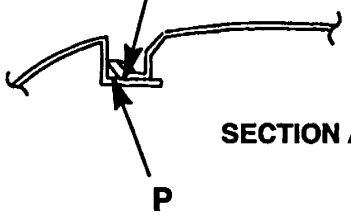
NOTE: Keep all access holes free of sealer.

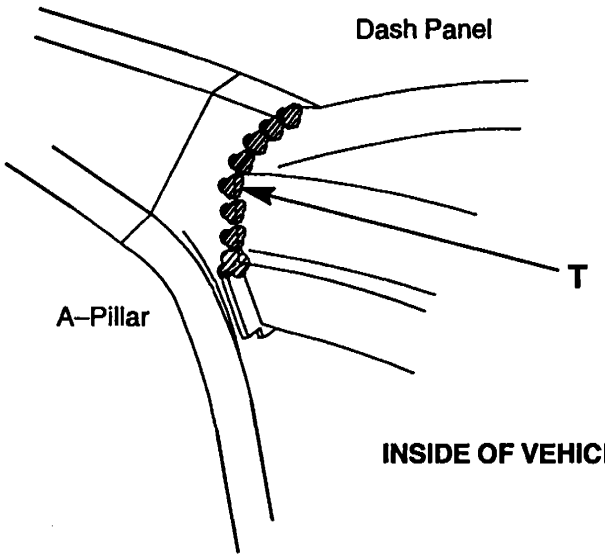
ROOF PANEL AND A-PILLAR

T – Thumbgradable
P – Pumpable



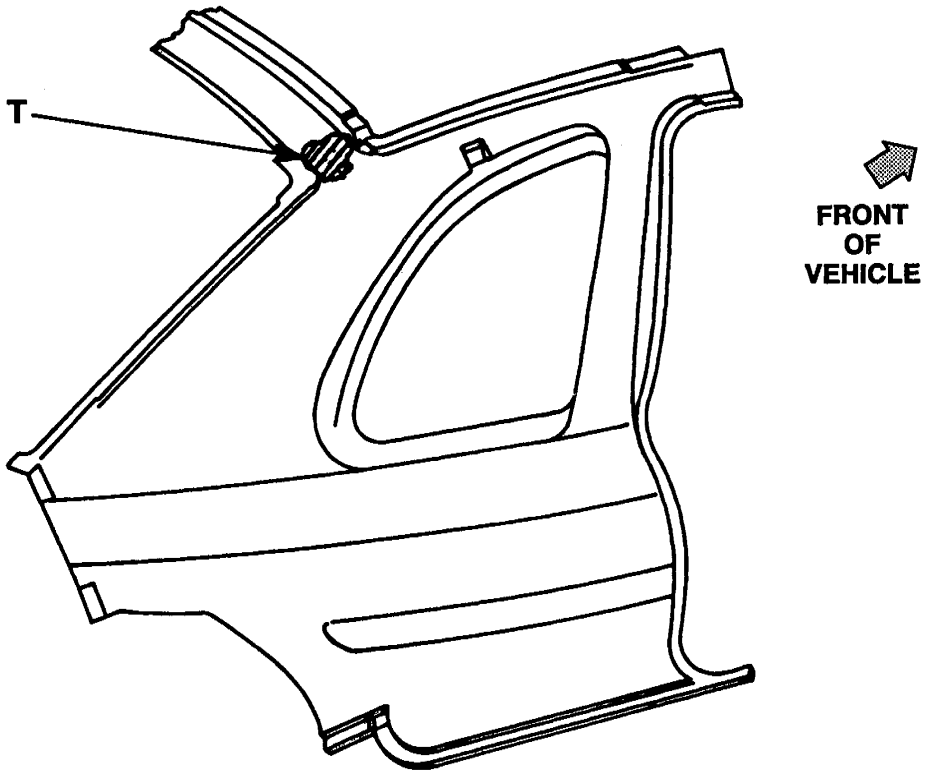
NOTE: Brush sealer to a maximum thickness of 1mm to provide a smooth surface to prevent interference with PVC molding.

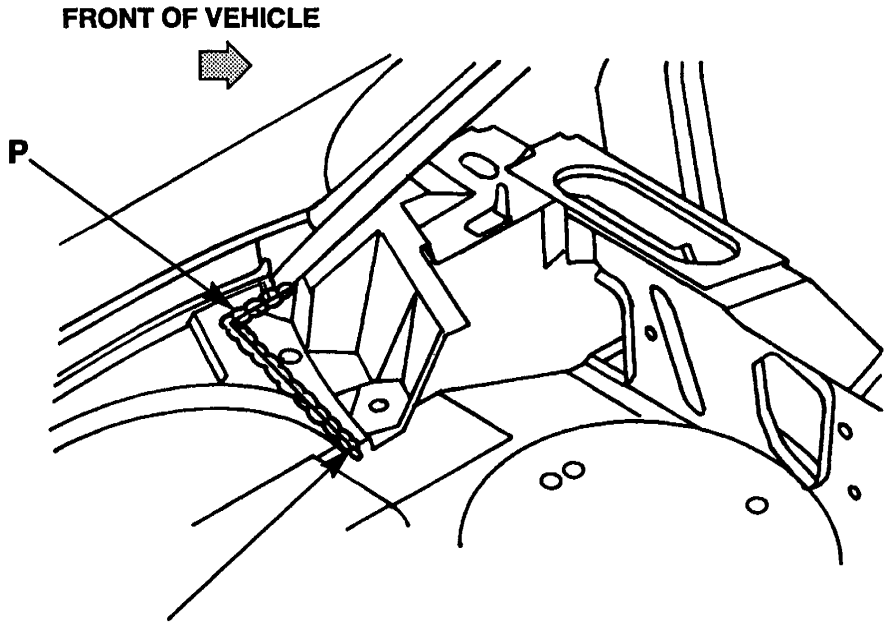




ROOF PANEL AND DRAIN TROUGH

T – Thumbgradable
P – Pumpable

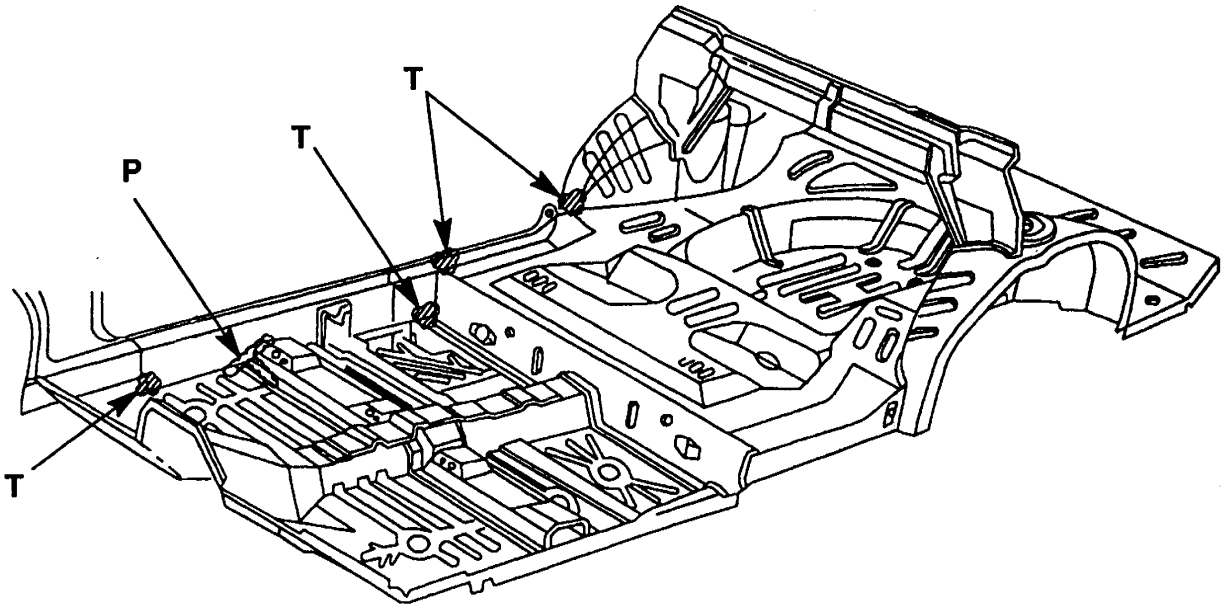




NOTE: Apply sealer upward on far side of vertical flange shown.

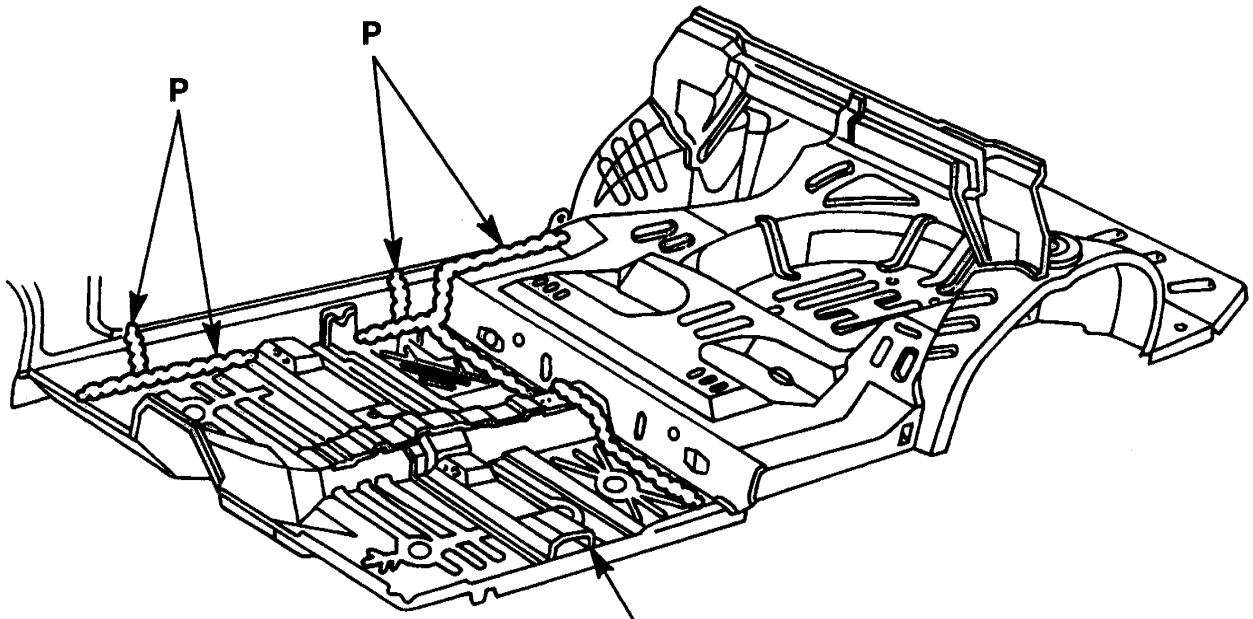
FLOOR PAN

T – Thumbgradable
P – Pumpable



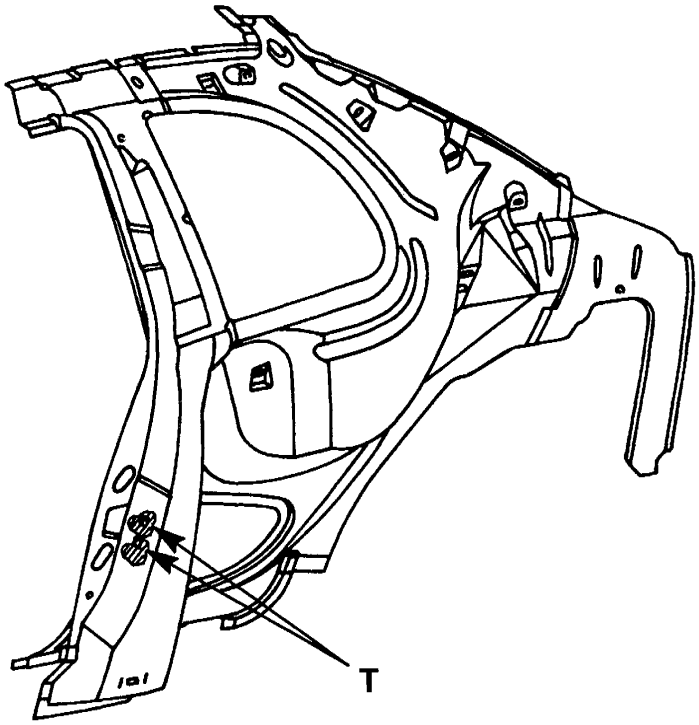
FLOOR PAN

T – Thumbgradable
P – Pumpable



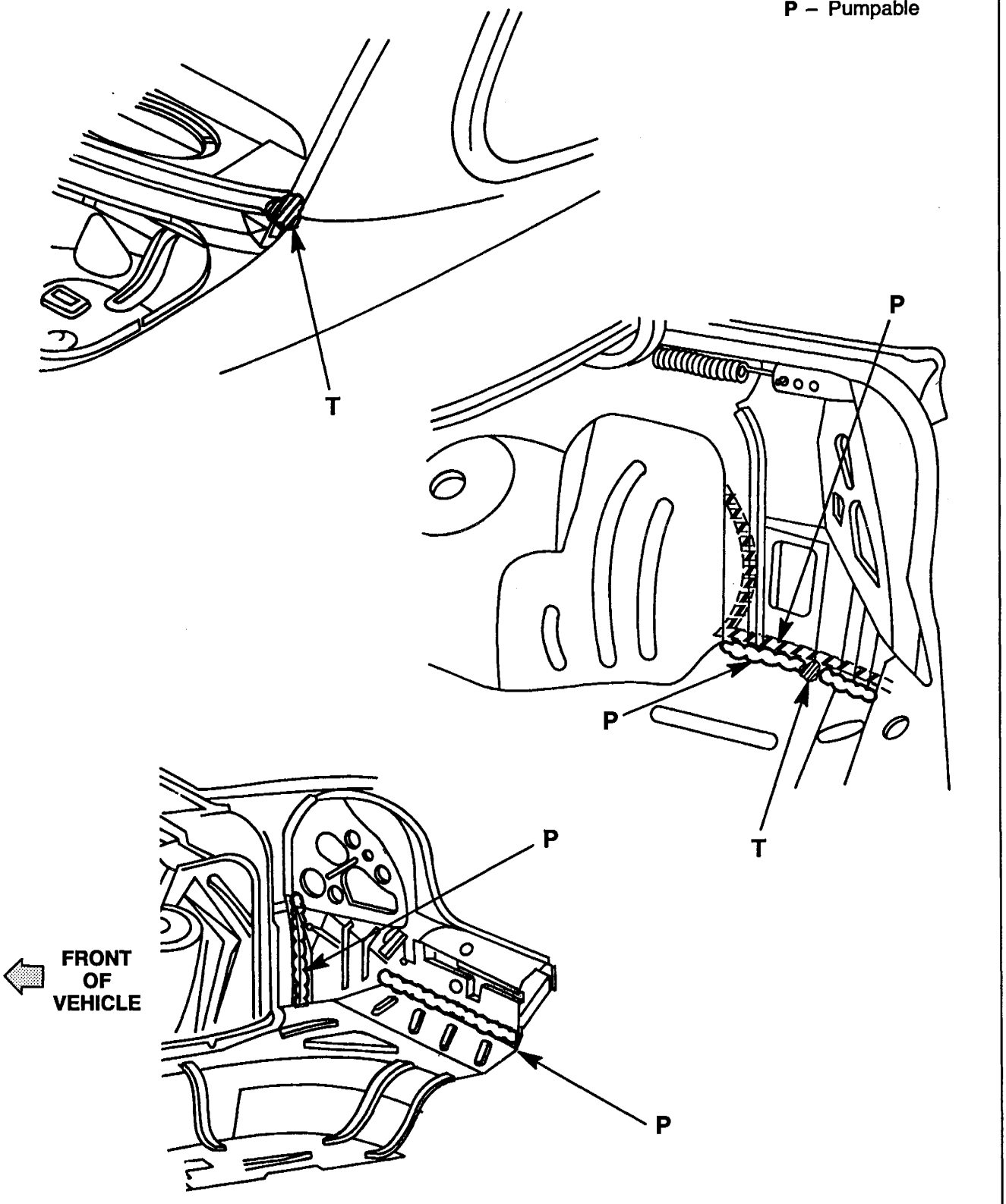
NOTE: Brush sealer smooth at crossmember to avoid decklid latch cable interference (LH side only).

B-PILLAR



TRUNK AREA

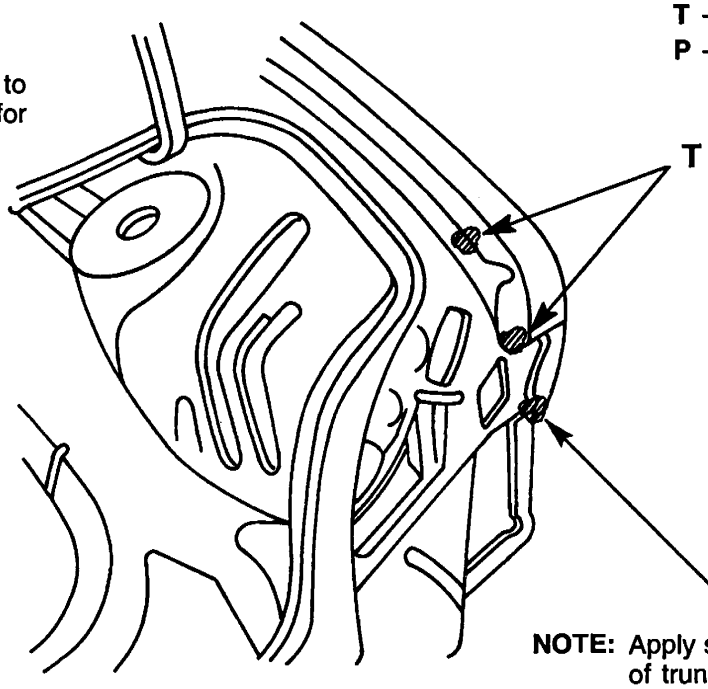
T – Thumbgradable
P – Pumpable



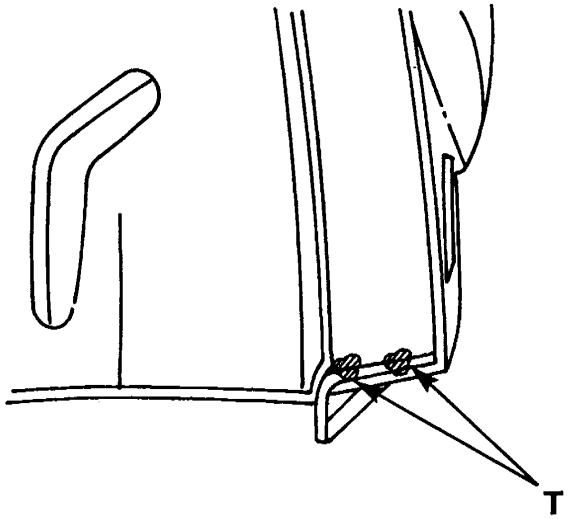
TRUNK AREA

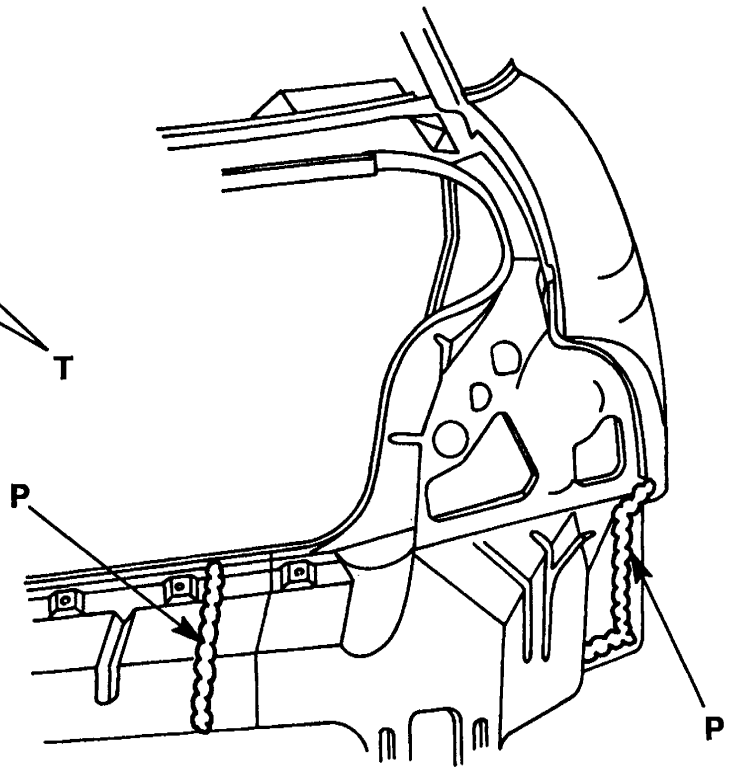
T – Thumbgradable
P – Pumpable

NOTE: Sealer may be applied to either side of metal for best appearance.



NOTE: Apply sealer from inside of trunk. Critical sealing operation.

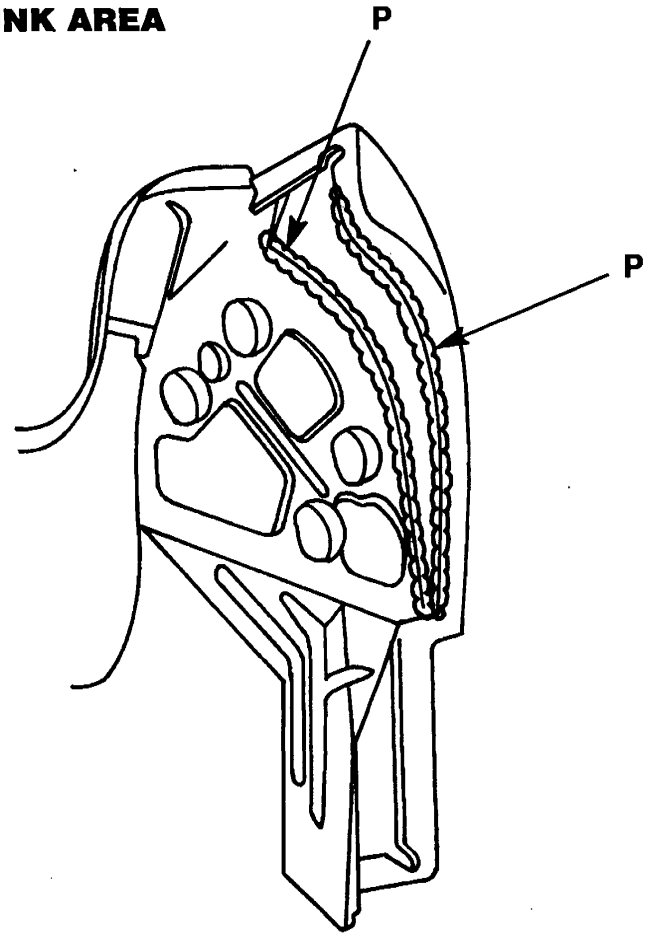




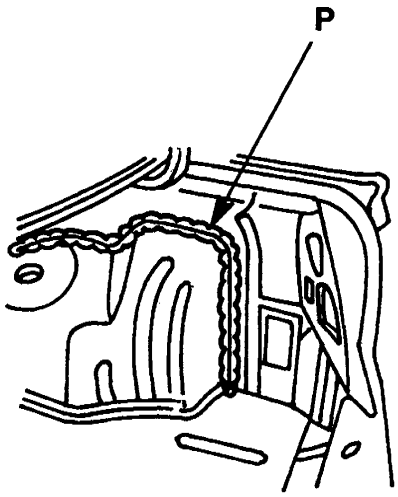
NOTE: Must be a 100% sealed joint. No secondary back up from inside vehicle.

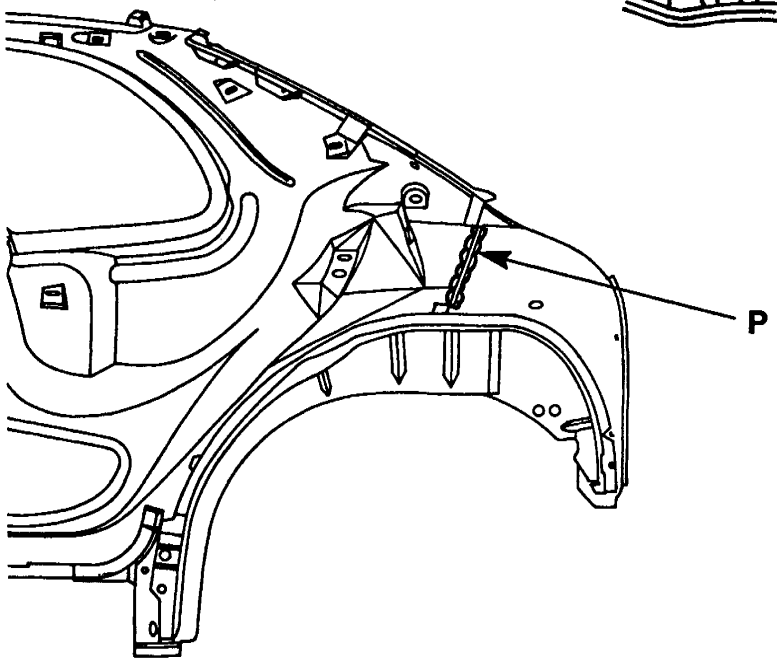
TRUNK AREA

T – Thumbgradable
P – Pumpable



NOTE: Keep taillamp gasket surface free of sealer.

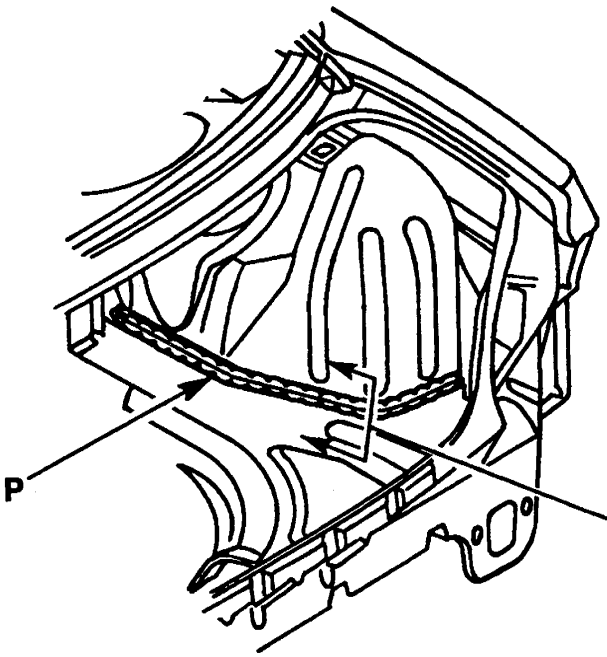


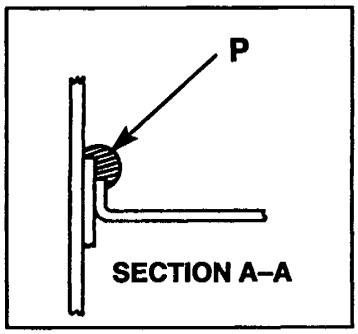


FRONT OF VEHICLE

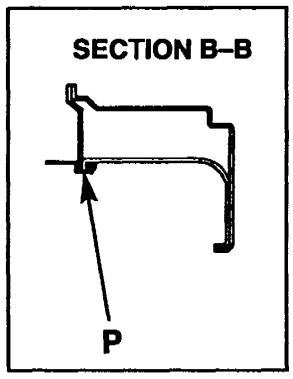
TRUNK AREA

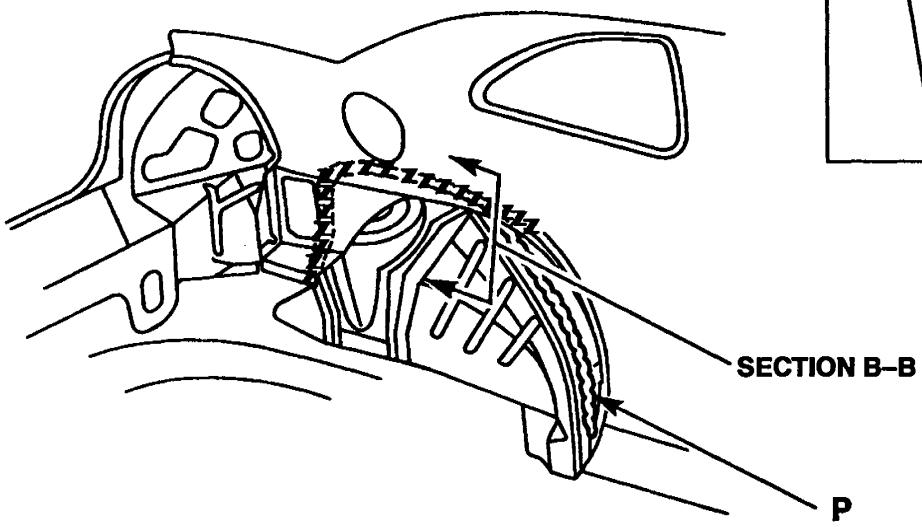
T – Thumbgradable
P – Pumpable





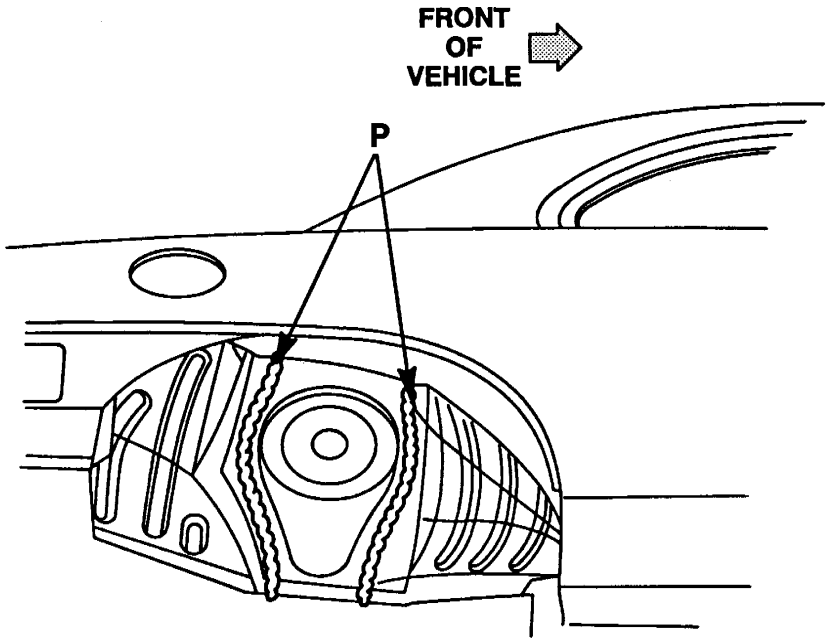
NOTE: Sealer appearance in this area is critical.



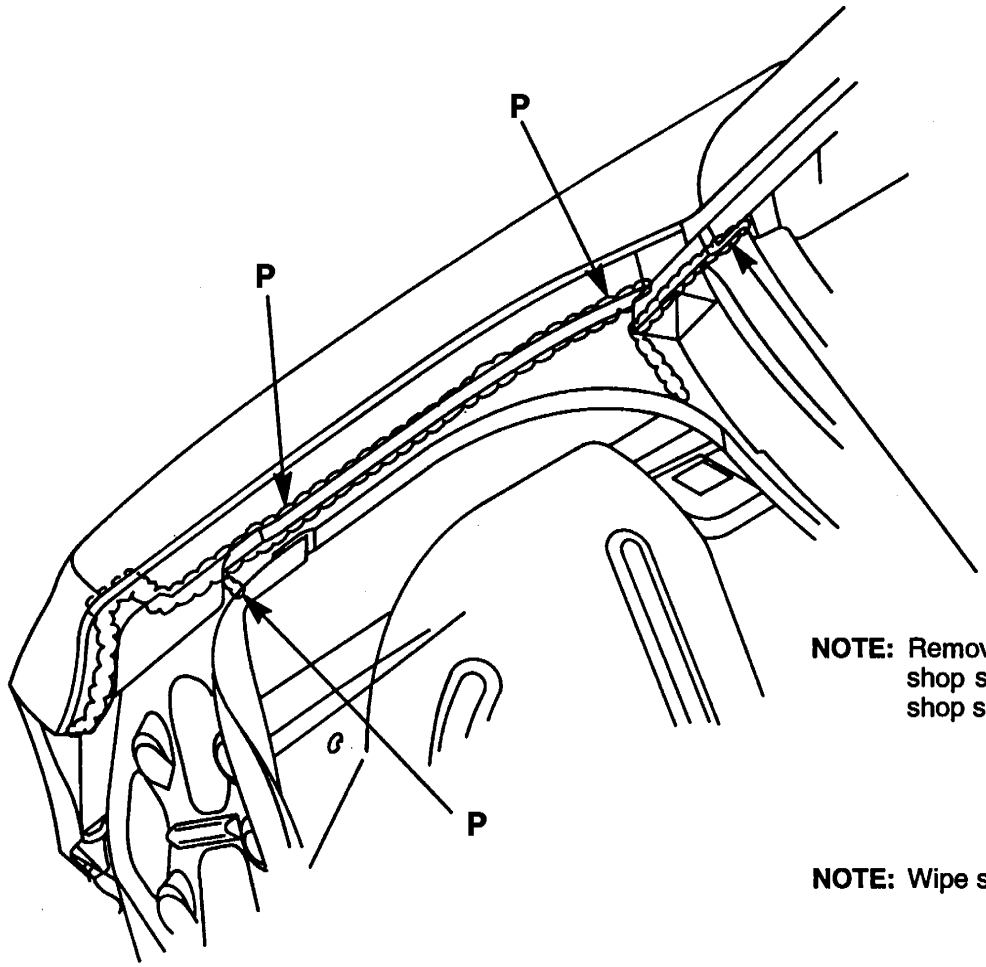


TRUNK AREA

T – Thumbgradable
P – Pumpable



NOTE: View from underneath vehicle.



NOTE: Remove expanded body shop sealer prior to paint shop sealer application.

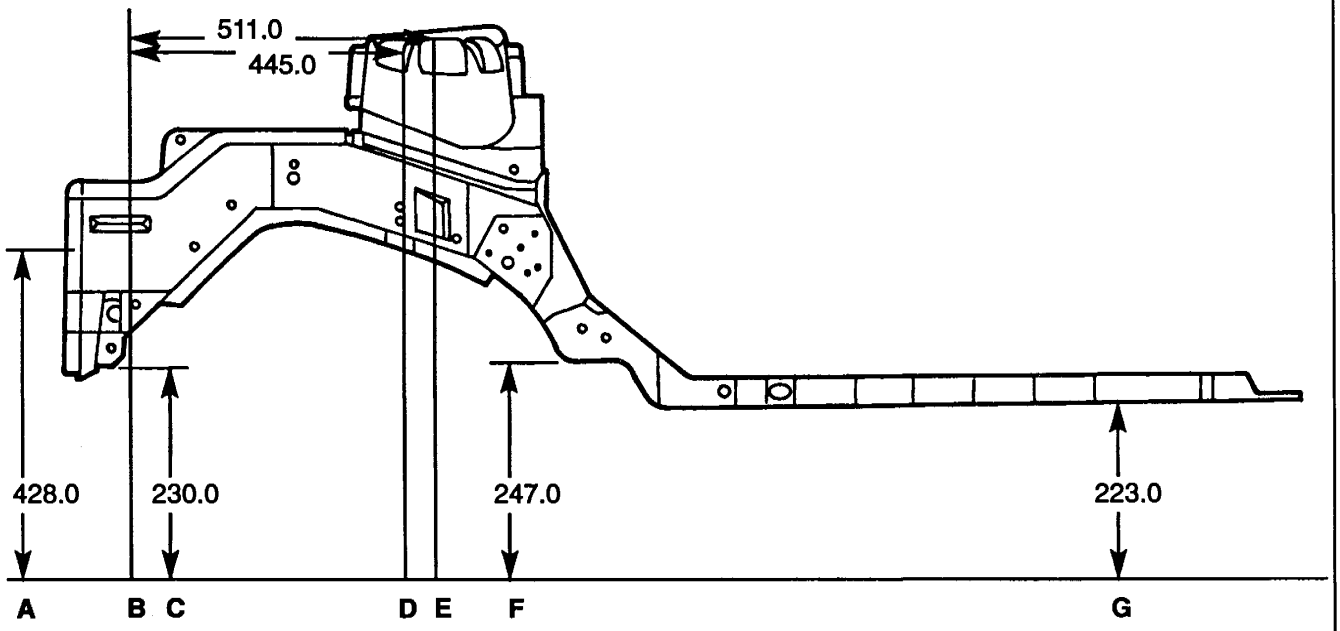
NOTE: Wipe sealer up into seam.

BODY DIMENSIONS & SPECIFICATIONS

Dodge/Plymouth Neon

FRONT FRAME RAIL

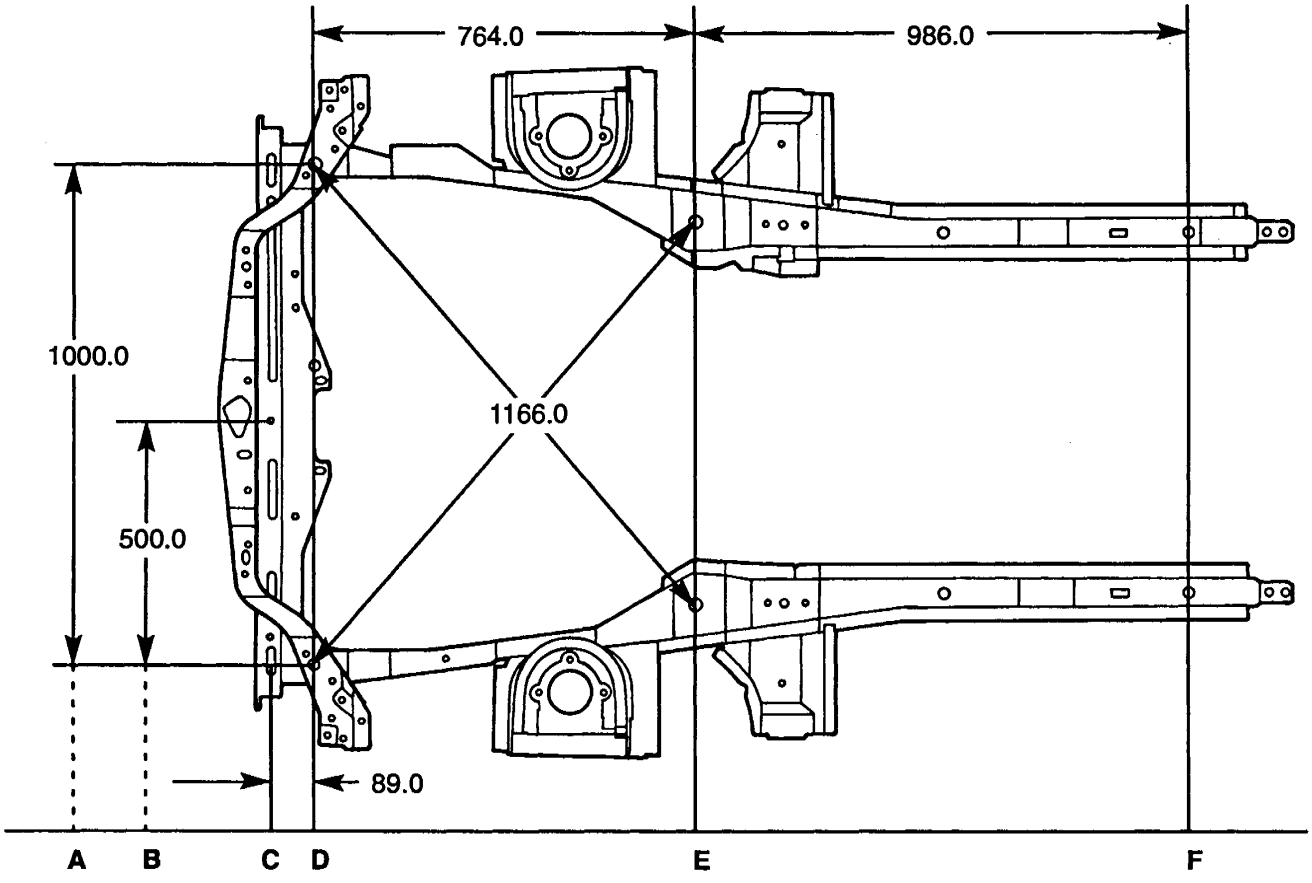
DIM.	DESCRIPTION
A.	Center of front reinforcement
B.	Trailing edge of headlamp support
C.	Lower edge of front rail
D.	Forward strut mounting hole
E.	Inboard strut mounting hole
F.	Lower edge of front side rail rear rail
G.	Lower edge of front side rail rear extension



NOTE: All dimensions in mm and from center of hole.

FRONT FRAME RAIL

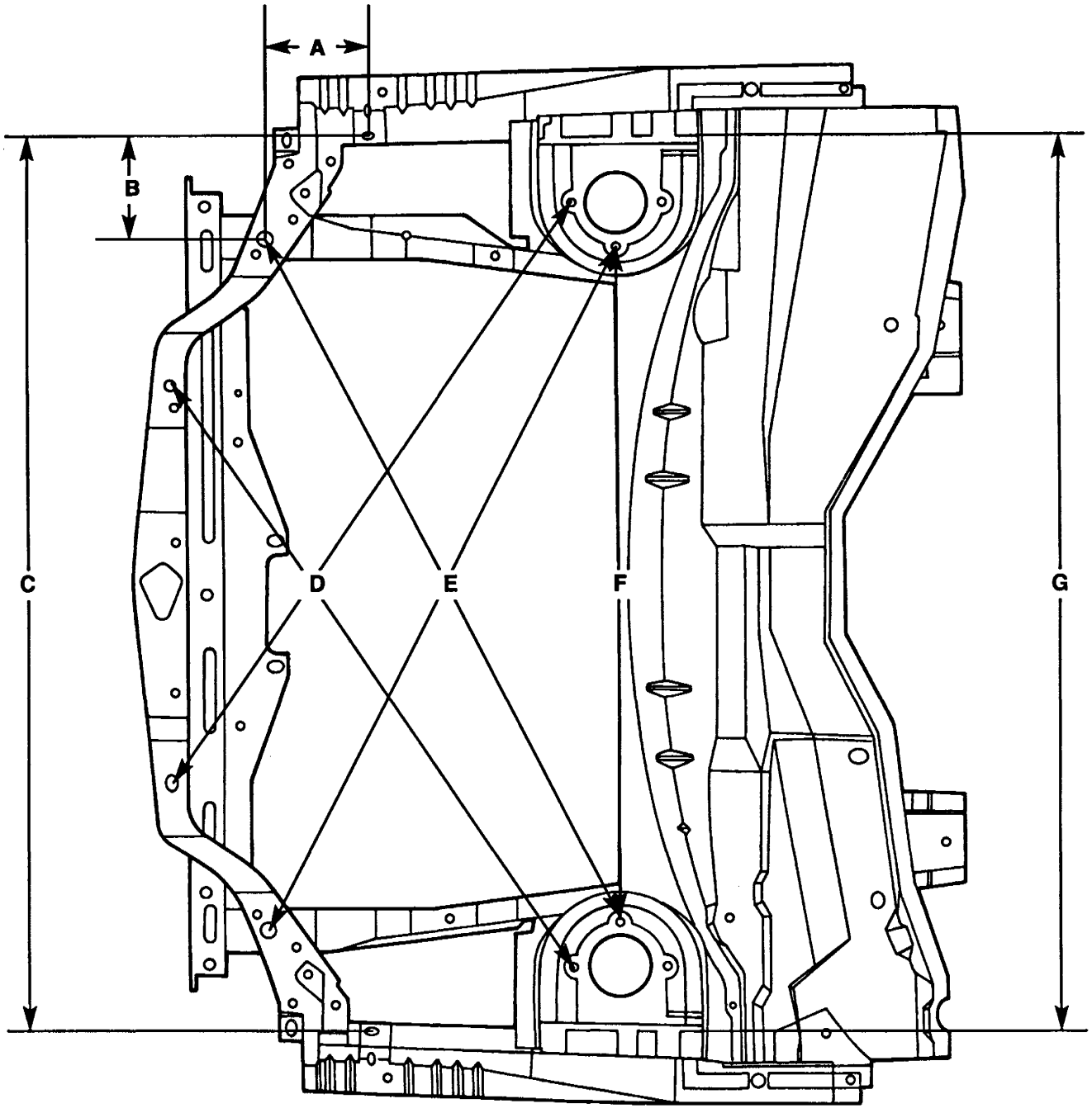
DIM.	DESCRIPTION
A.	Width of engine compartment forward Principle Locating Points (PLP)
B.	Center of lower crossmember to engine compartment forward PLP
C.	Center of lower crossmember
D.	Engine compartment forward PLP
E.	Engine compartment rear PLP
F.	Front rail rear extension rear PLP



NOTE: All dimensions in mm and from center of hole.

FRONT FRAME RAIL

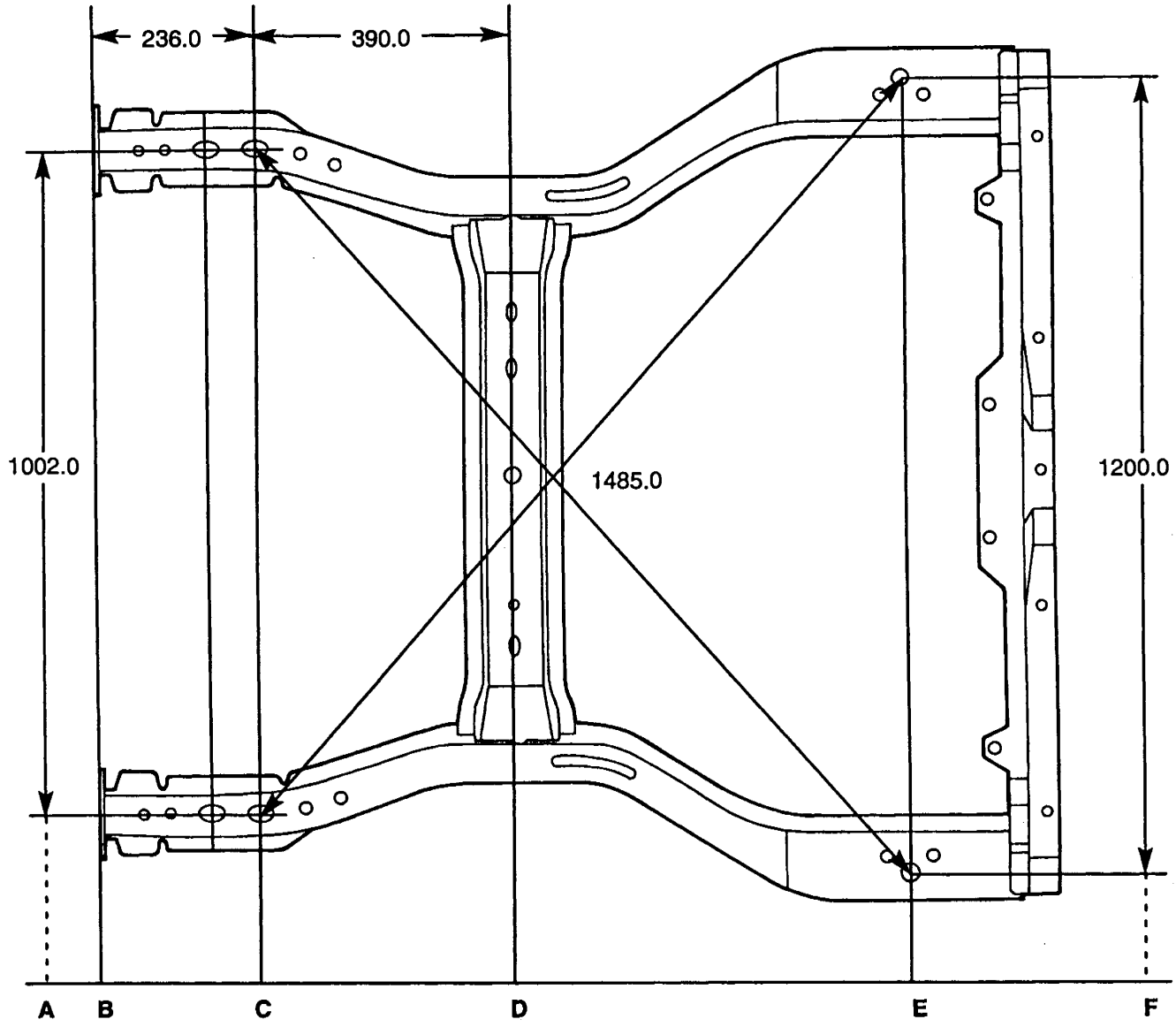
DIM.	MM	DIM.	MM
A.	150.0	E.	1184.0
B.	149.0	F.	973.0
C.	1299.0	G.	1305.0
D.	1028.0		



NOTE: All dimensions in mm and from center of hole.

REAR FRAME RAIL

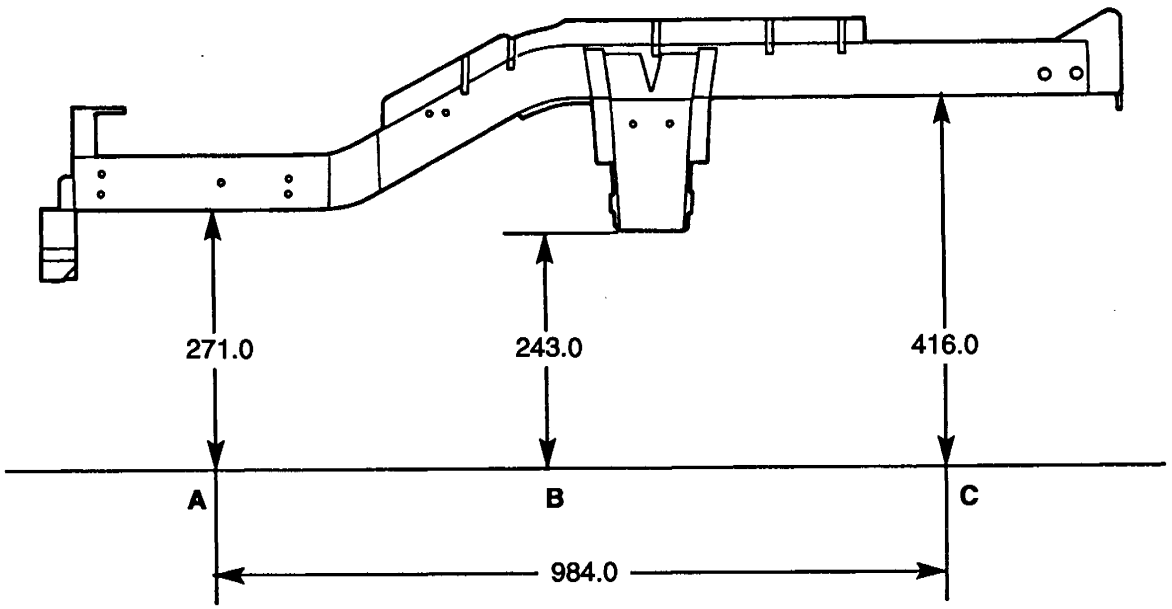
DIM.	DESCRIPTION
A.	Width of rear rail forward Principle Locating Points (PLP)
B.	Front of rear rail
C.	Rear rail second forward PLP
D.	Center of rear suspension crossmember
E.	Rear rail rear PLP
F.	Width of rear PLP



NOTE: All dimensions in mm and from center of hole.

REAR FRAME RAIL

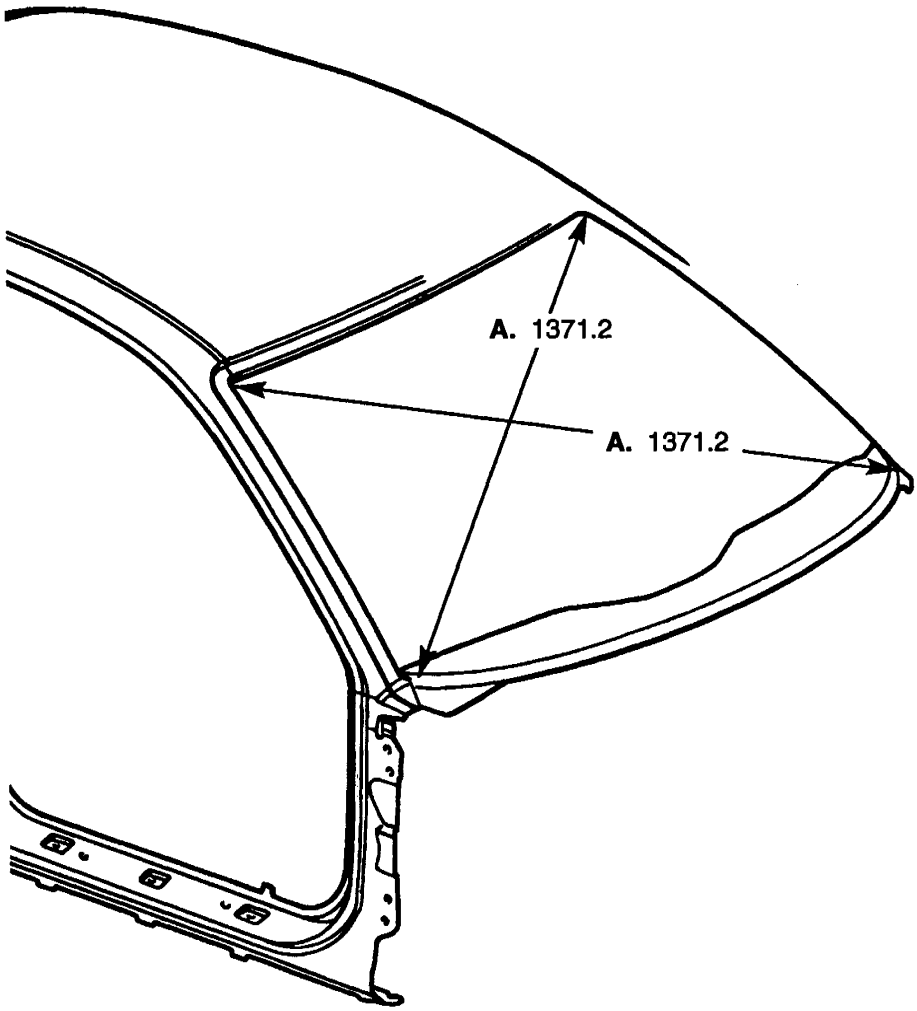
DIM.	DESCRIPTION
A.	Front lower surface of rear rail
B.	Lower surface of suspension crossmember
C.	Rear lower surface of rear rail



NOTE: All dimensions in mm and from center of hole.

WINDSHIELD OPENING

DIM.	DESCRIPTION
A.	Center of radius at top corner to center of radius at bottom corner.



REAR BODY OPENINGS

DIM. **DESCRIPTION**

A. Center of radius upper corner to center of radius lower corner.

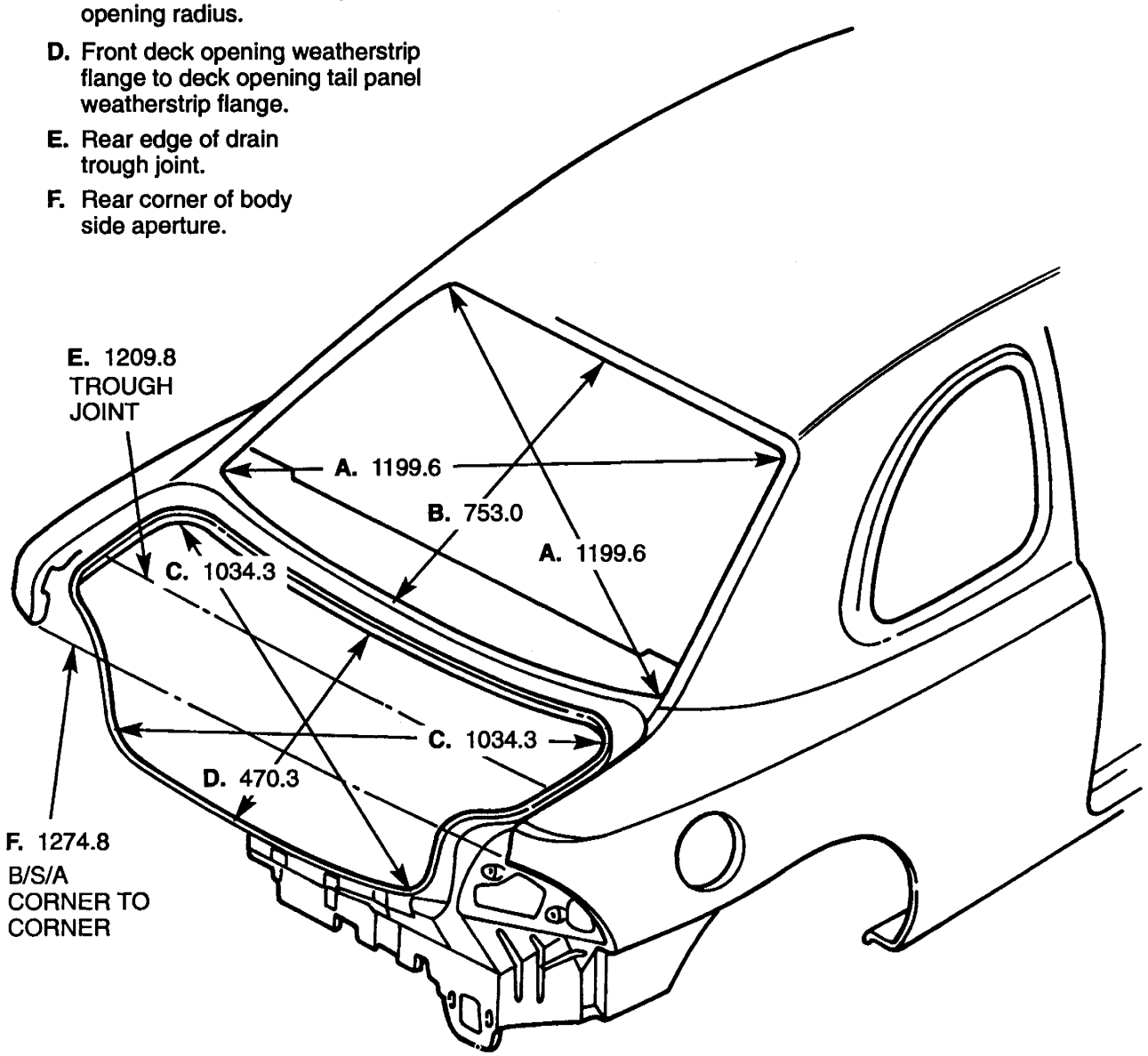
B. Lower edge of back glass upper mounting flange of rear deck opening weatherstrip flange.

C. Center of deck opening front corner radius to rear tail panel deck opening radius.

D. Front deck opening weatherstrip flange to deck opening tail panel weatherstrip flange.

E. Rear edge of drain trough joint.

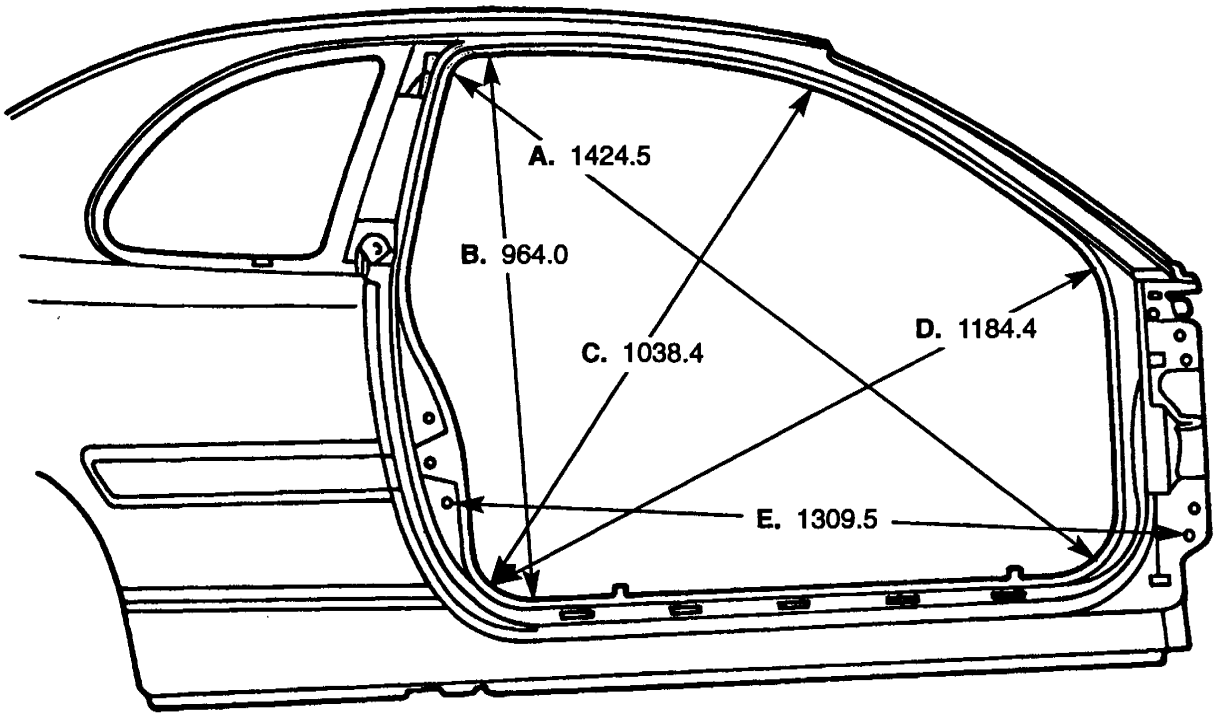
F. Rear corner of body side aperture.



NOTE: All dimensions referenced from center of hole.

DOOR OPENING

DIM.	DESCRIPTION
A.	Upper rear corner center of radius to lower front corner center of radius.
B.	Rear pillar to body side aperture upper seam to body side aperture lower seam.
C.	Front edge of roof panel of A–pillar to center of front door lower front corner.
D.	Center of radius at bottom to center of radius at lower A–pillar.
E.	Courtesy lamp switch hole to front lower bottom hinge bolt hole.



NOTE: All dimensions referenced from holes are from centerline of hole.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
A														
B														
C														
D														
E														
F														
G														
H														
I														
J														
K														
L														
M														
N														
O														
P														
Q														
R														
S														
T														
U														
V														
W														

This is a very easy way to write up your measurement information. You can tell at a glance when a dimension changes, and you can do what is necessary to stay in specification before you proceed.

Here's how to use this sheet or a similar one since each vehicle manufacturer supplies critical measuring point information.

Each time a correction is made to restore the body to its proper dimension, all readings should be taken again, in addition to the dimension you have just corrected.

The A-B-C, etc. are the measuring point dimensions. The 1-2-3, etc. are the readings taken at measurement step 1 — measurement step 2, etc.

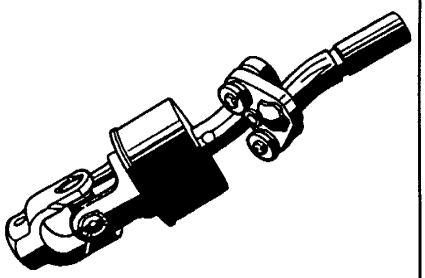
This sheet tells you at a glance how you stand in restoring the body to its proper state.

When using the tram and centering gage system, *always* compile a list of dimensions each time you measure. This provides the information for measurement comparison, especially during the pulling and straightening phase of body collision repair.

The manufacturer of the equipment supplies information, so be sure you constantly review it and bulletins so you will be up to date on repair techniques.

STEERING COLUMN COUPLER

Dodge/Plymouth Neon



STEERING COLUMN COUPLER

Overview

In the event of a collision, the steering column of the Dodge/Plymouth Neon is designed to detach at a coupler located above the flex-joint steering attachment (see Fig. 1). The flex-joint attachment is the part of the steering column assembly that resembles a typical universal joint.

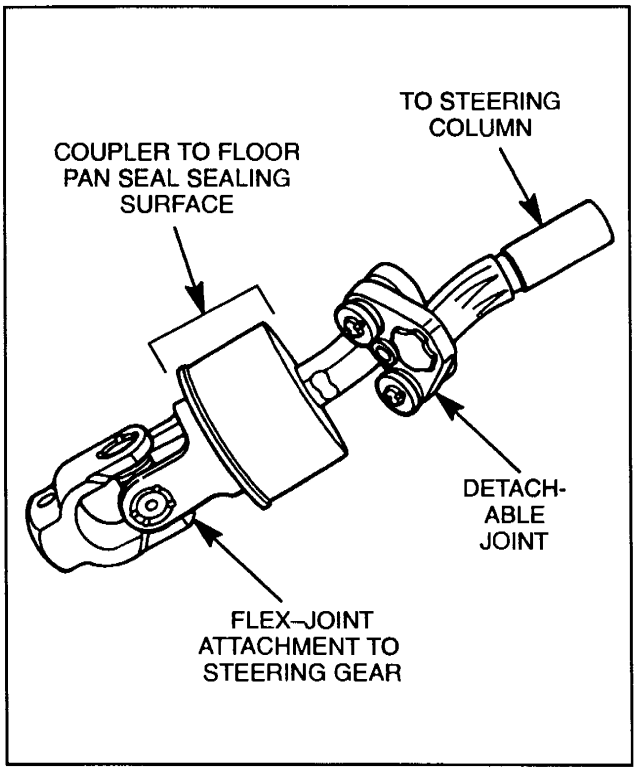


Fig. 1 Steering Column Coupler

This detachable coupler incorporates two release washers which allow the joint to separate into two pieces (Fig. 2), if necessary, when a vehicle is involved in a collision.

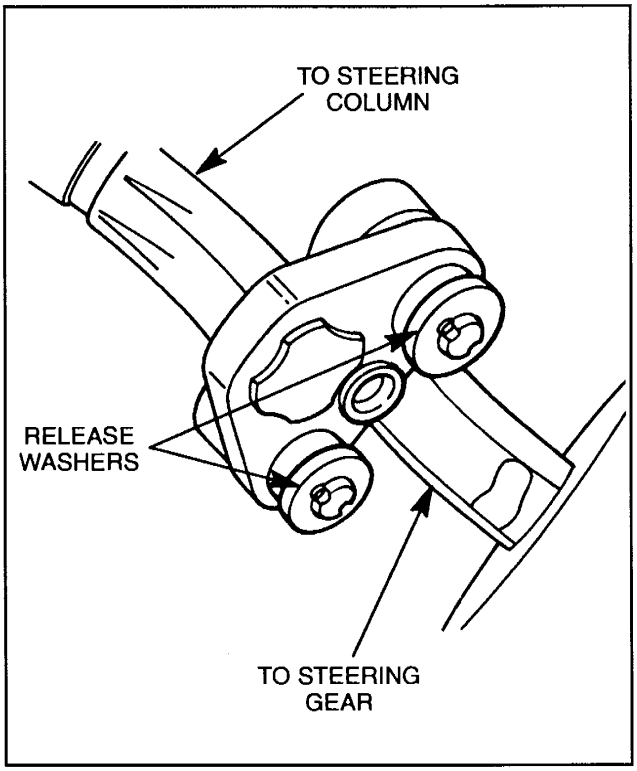


Fig. 2 Steering Column Coupler Release Washer

Steering Column Coupler Inspection

The steering column coupler should be inspected whenever a vehicle is involved in any of the following conditions:

1. A vehicle is involved in a collision which deploys the airbag, regardless of the extent of damage to the vehicle.
2. If a vehicle is involved in an impact to the front suspension or under carriage, which results in any type of damage to the front suspension crossmember.

3. Under any conditions where the steering column assembly or steering column shaft are involved in a force which moves the steering column downward.

Steering Column Coupler Inspection Procedure

Follow these steps when diagnosing a suspect steering column coupler:

1. Remove the retaining pin in the upper to lower steering column pinch bolt (Fig. 3)

2. Loosen the upper to lower steering column coupler pinch bolt (Fig. 3) from the steering coupler. The pinch bolt nut is caged to the coupler and is not removable. Then separate the upper steering coupler from the lower steering coupler shaft.

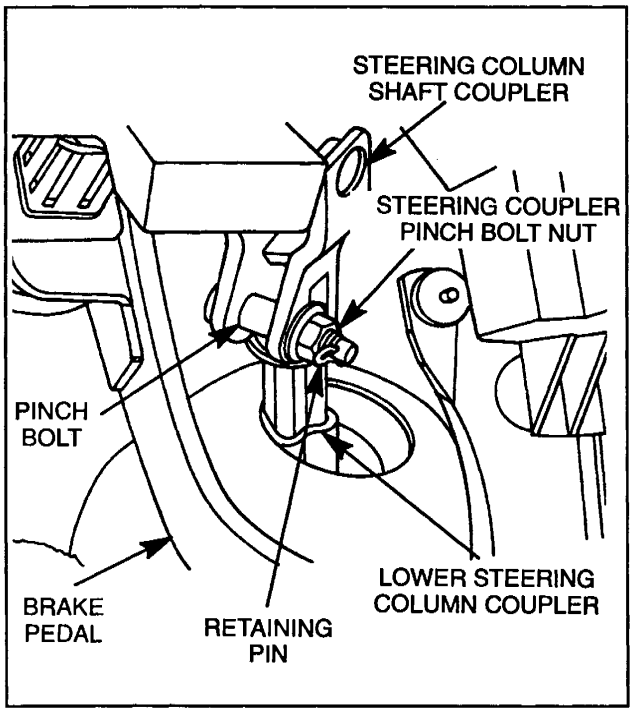


Fig. 3 Upper to Lower Steering Column Coupler

3. Remove the steering column coupler cover (boot), (Fig. 4) enclosing the steering column coupler.

4. Inspect the coupler in the following areas. Inspect the release washers (Fig. 5) to ensure they are both on the coupler pins. Inspect the two peening marks on the coupler pins to ensure they are clear and not deformed. Also inspect the two rubber spacers to ensure they are not damaged. If any of these conditions exist, the steering coupler **MUST** be replaced.

NOTE: The steering gear must be removed from the vehicle for replacement of the coupler.

5. If the coupler does not require replacement, re-install the steering column coupler cover (Fig. 4).

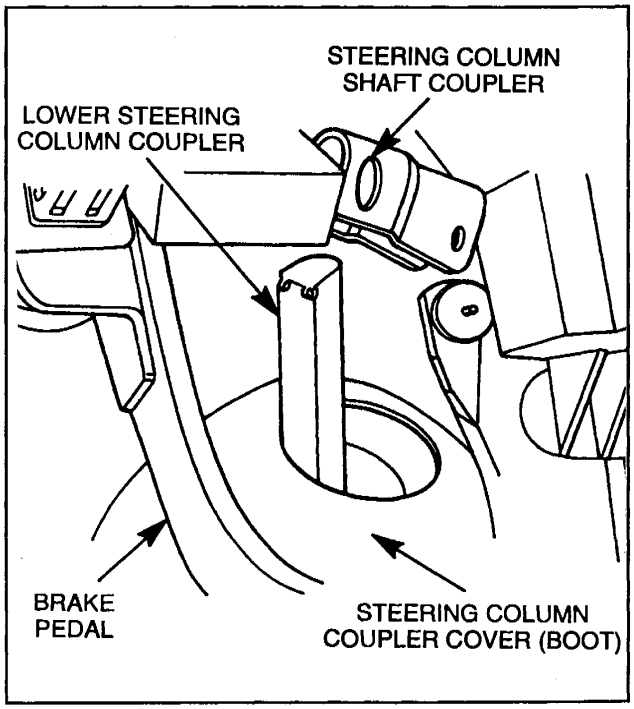


Fig. 4 Steering Column Coupler Cover (Boot)

6. Before re-attaching the coupler, ensure the front wheels of the vehicle are positioned straight-ahead. Align and assemble the upper steering column coupler to the lower steering column coupler pinch bolt. Torque the pinch bolt to 28 N·m (250 in. lbs.). **Be sure to install upper to lower steering coupler pinch bolt retaining pin (Fig. 3).**

Steering Column Shaft Coupler Replacement

If diagnosed to be defective, the steering column coupler assembly (Fig.1-6) can be serviced as a separate component of the steering system, thus not requiring replacement of the entire steering column assembly. The steering gear assembly will need to be lowered on the front suspension crossmember to allow for replacement of the steering gear coupler assembly.

Removal

1. Remove the steering column assembly from the vehicle. Refer to the Steering Column Removal

Section in the Dodge/Plymouth Neon Service Manual for required removal procedure.

CAUTION: Steering column shaft must be supported during removal of spring pin (Fig. 6). This is required to prevent damage to steering column bearings.

2. Remove the steering coupler from the steering shaft (Fig. 6) by removing the spring pin from the coupler and sliding the coupler end of the steering shaft.

Installation

CAUTION: Steering column shaft must be supported during installation of coupler spring pin (Fig. 6). This is required to prevent damage to steering column bearings.

1. Install the steering coupler on the steering shaft until correctly positioned to allow the spring pin to be installed in the coupler. Then install the spring pin into the coupler until it is flush with the surface of the steering coupler (Fig. 6).

2. Install the steering column assembly into the vehicle. Refer to the Steering Column Installation Section in the Dodge/Plymouth Neon Service Manual for the required installation procedure.

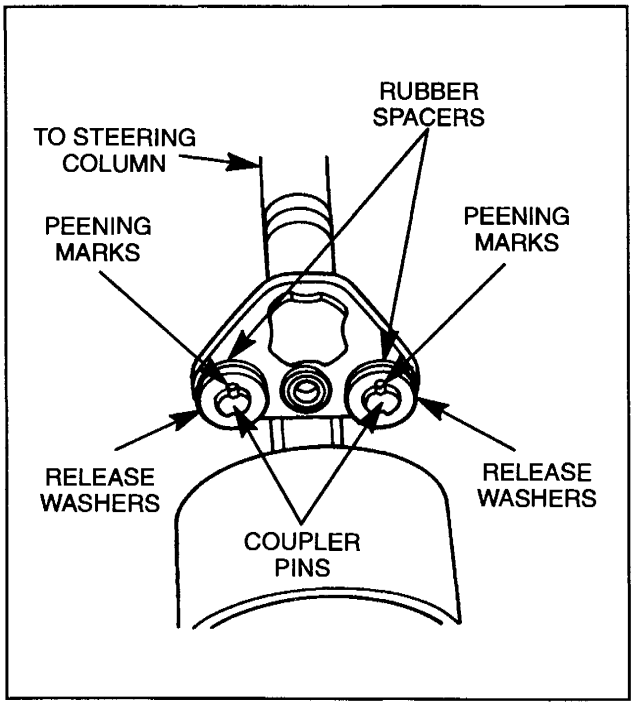


Fig. 5 Steering Column Coupler Inspection

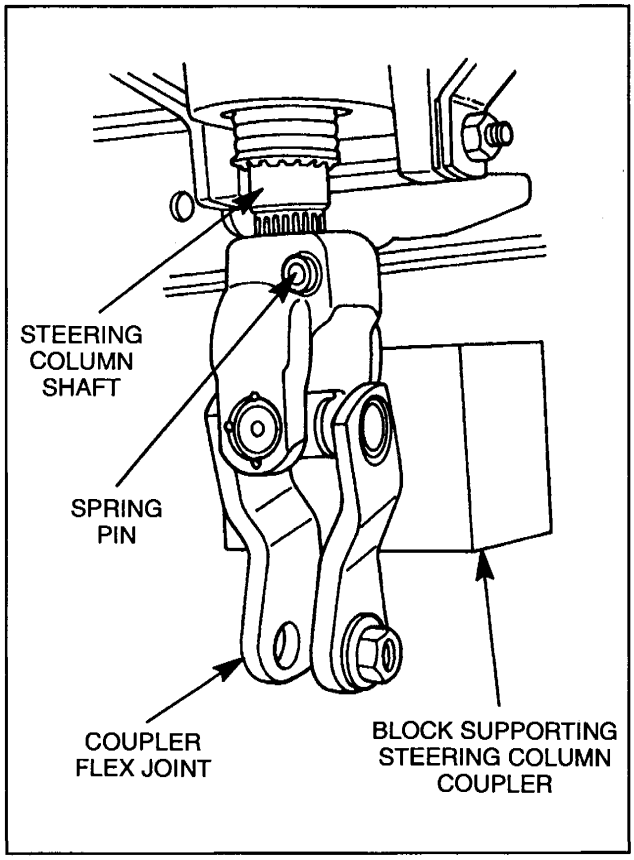
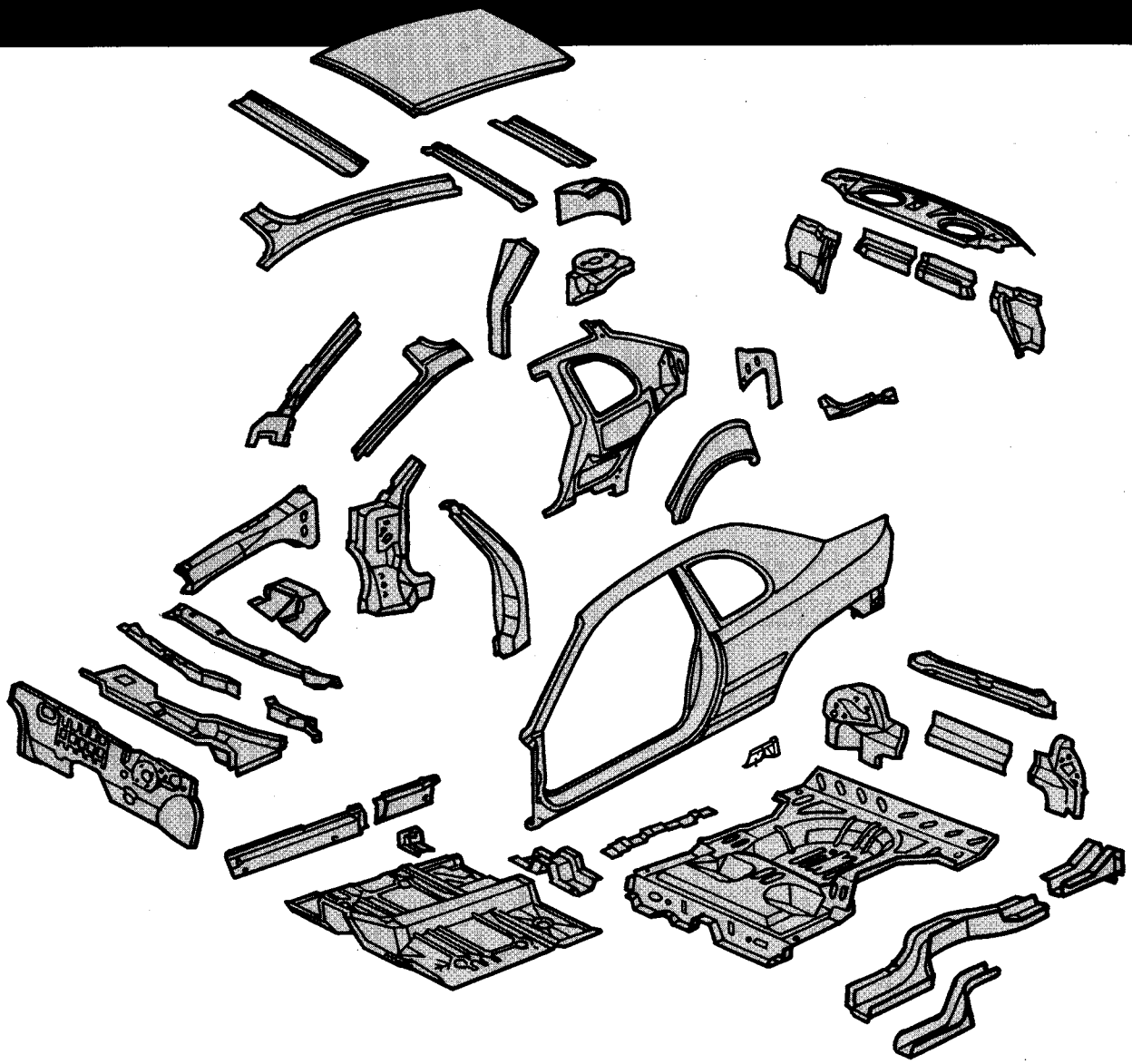


Fig. 6 Coupler Removal and Installation on Steering Column Shaft

Unibody Dimensions, Joints and Seams



Dodge/Plymouth Neon 2-Door

TECHNICAL TRAINING

CHRYSLER CORPORATION
CUSTOMER SATISFACTION & VEHICLE QUALITY

SAFETY NOTICE

This publication's purpose is to provide Technical Training information to individuals in the automotive trade. All test and repair procedures must be performed in accordance with manufacturers' service and diagnostic manuals. All ***Warnings, Cautions,*** and ***Notes*** must be observed for safety reasons. The following is a list of general guidelines:

- Proper service and repair is critical to the safe, reliable operation of all motor vehicles.
- The information in this publication has been developed for service personnel, and can help when diagnosing and performing vehicle repairs.
- Some service procedures require the use of special tools. These special tools must be used as recommended throughout this Technical Training Publication, the Diagnostic Manual, and the Service Manual.
- Special attention should be exercised when working with spring– or tension–loaded fasteners and devices such as E–Clips, Cir–Clips, Snap Rings, etc., because careless removal may cause personal injury.
- Always wear safety goggles when working on vehicles or vehicle components.
- Improper service methods may damage the vehicle or render it unsafe.
- Observe all ***Warnings*** to avoid the risk of personal injury.
- Observe all ***Cautions*** to avoid damage to equipment and vehicles.
- ***Notes*** are intended to add clarity and should help make your job easier.

Cautions and ***Warnings*** cover only the situations and procedures Chrysler Corporation has encountered and recommended. Chrysler Corporation cannot know, evaluate, and advise the service trade of all conceivable ways in which service may be performed, or of the possible hazards of each. Consequently, Chrysler Corporation has not undertaken any such broad service review. Accordingly, anyone who used a service procedure or tool that is not recommended in this publication must be certain that neither personal safety, nor vehicle safety, is jeopardized by the service methods they select.

TECHNICAL TRAINING

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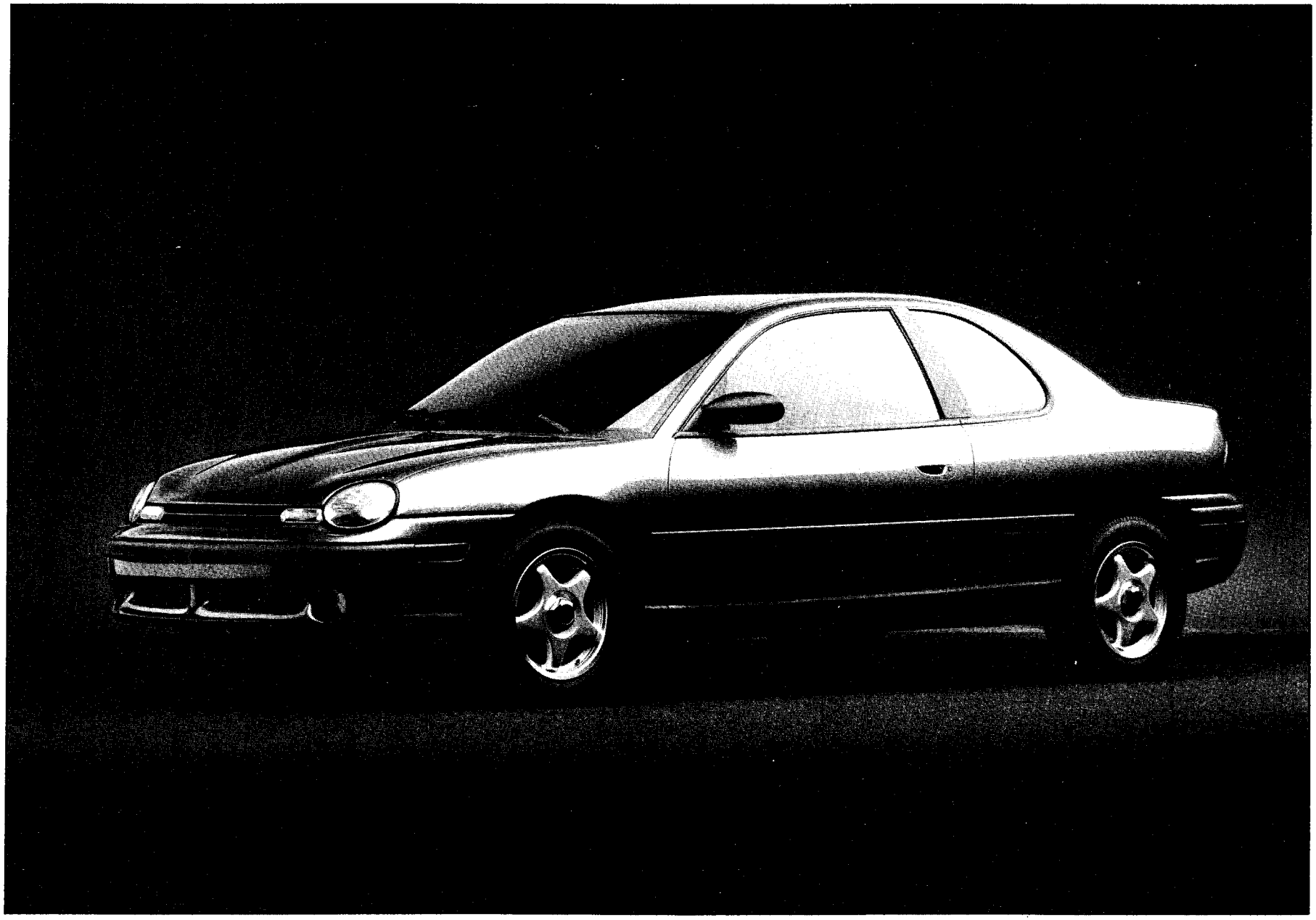

Dodge/Plymouth Neon