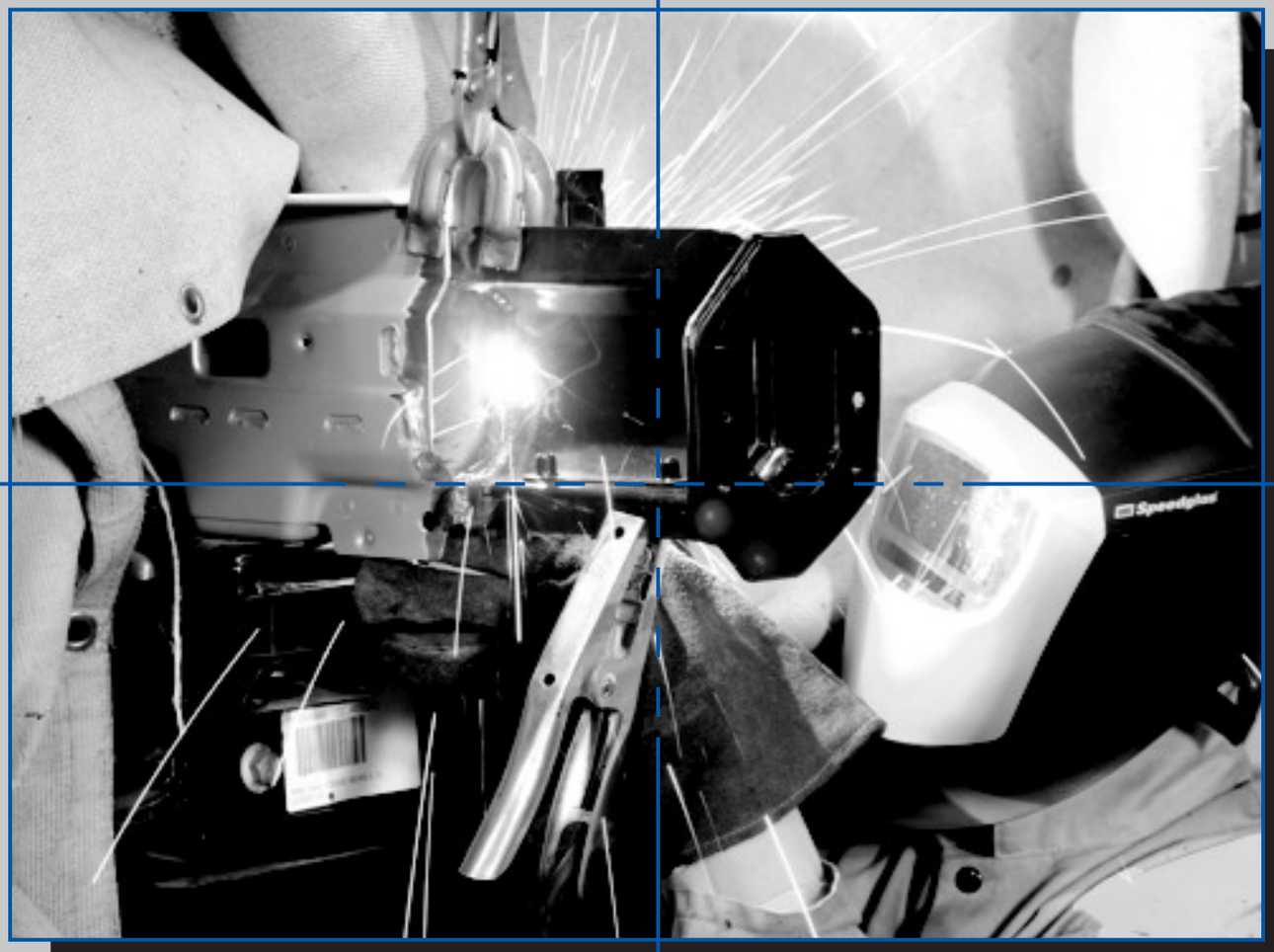
STRUCTURAL - SECTIONING PROCEDURE GUIDE



DODGE CHRYSLER Jeep®

SERVICE

STICK WITH THE SPECIALISTS®

SAFETY NOTICE

CAUTION

All SERVICE AND REBUILDING INSTRUCTIONS CONTAINED HEREIN ARE APPLICABLE TO, AND FOR THE CONVENIENCE OF, THE AUTOMOTIVE TRADE ONLY.

All test and repair procedures on components or assemblies in non-automotive applications should be repaired in accordance with instructions supplied by the manufacturer of the total product.

Proper service and repair is important to the safe, reliable operation of all motor vehicles. The service produces recommended and described in this publication were developed for professional service personnel, and are effective methods for performing vehicle repair. Following these procedures will help ensure efficient economical vehicle performance and service reliability. Some service procedures require the use of special tools designed for specific procedures. These special tools should be used as recommended throughout this publication.

Special attention should be exercised when working with spring-or tension-loaded fasteners and devices such as EClips, Circlips, Snap rings, etc., since careless removal may cause personal injury. Always wear safety goggles when working on vehicles or vehicle components.

It is important to note that this publication contains various Cautions and Warnings. These should be read carefully in order to minimize risk of personal injury or the possibility that improper service methods may damage the vehicle or ender it unsafe. It is important to note that these Cautions and Warnings cover only the situations and procedures Chrysler Corporation has encountered and recommended. Chrysler Corporation cannot possibly 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 has not undertaken any such broad service review. Accordingly, anyone uses a service procedure or tool that is not recommended in this publication must be certain that neither personal safety, nor vehicle safety, will be jeopardized by the service methods they select.

Index

FRAME DIMENSIONS

Back to Index

CHRYSLER 300, DODGE MAGNUM and CHARGER

FRAME DIMENSIONS

Back to Index

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

INDEX

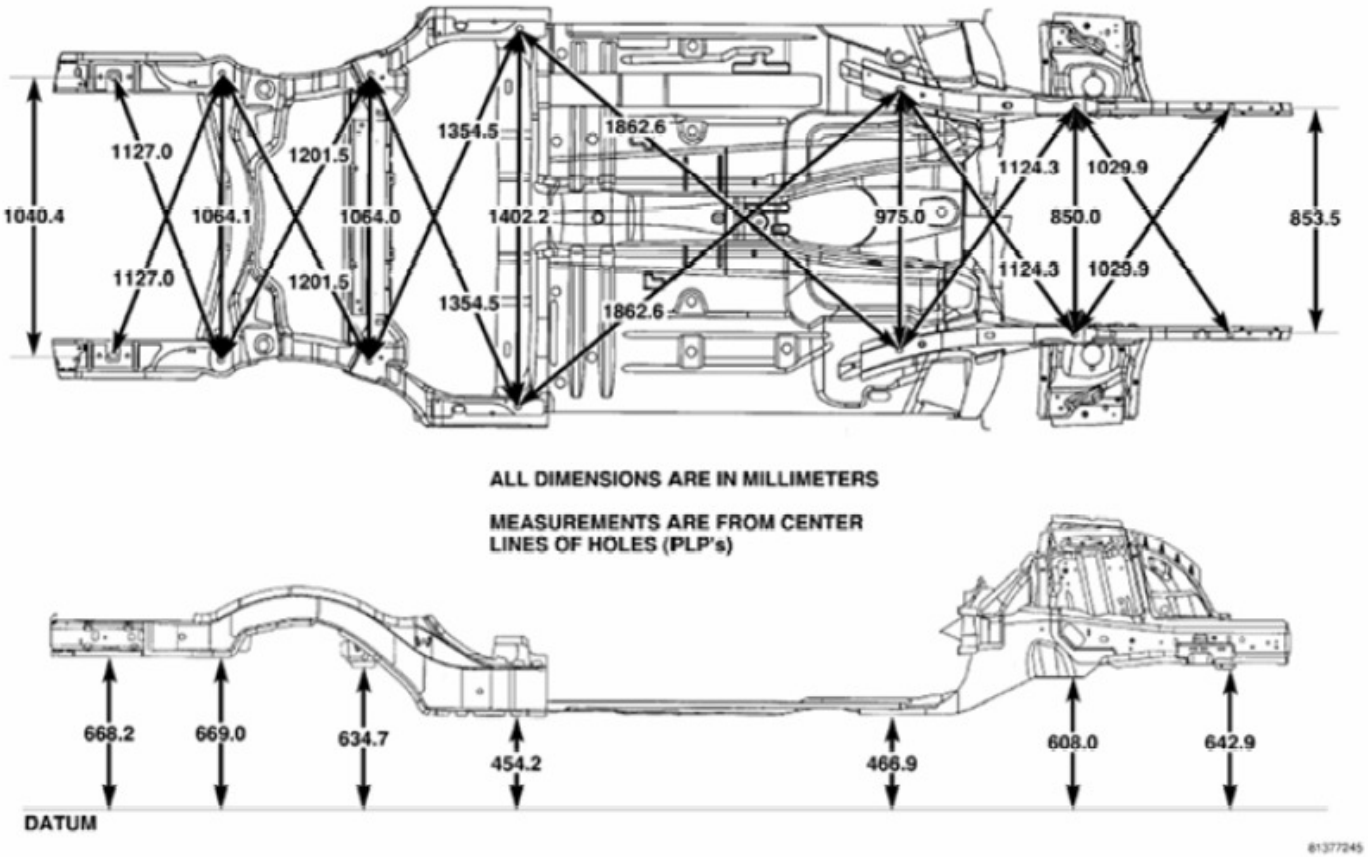


Fig. 1 FRAME DIMENSIONS

Back to Index

FRAME DIMENSIONS

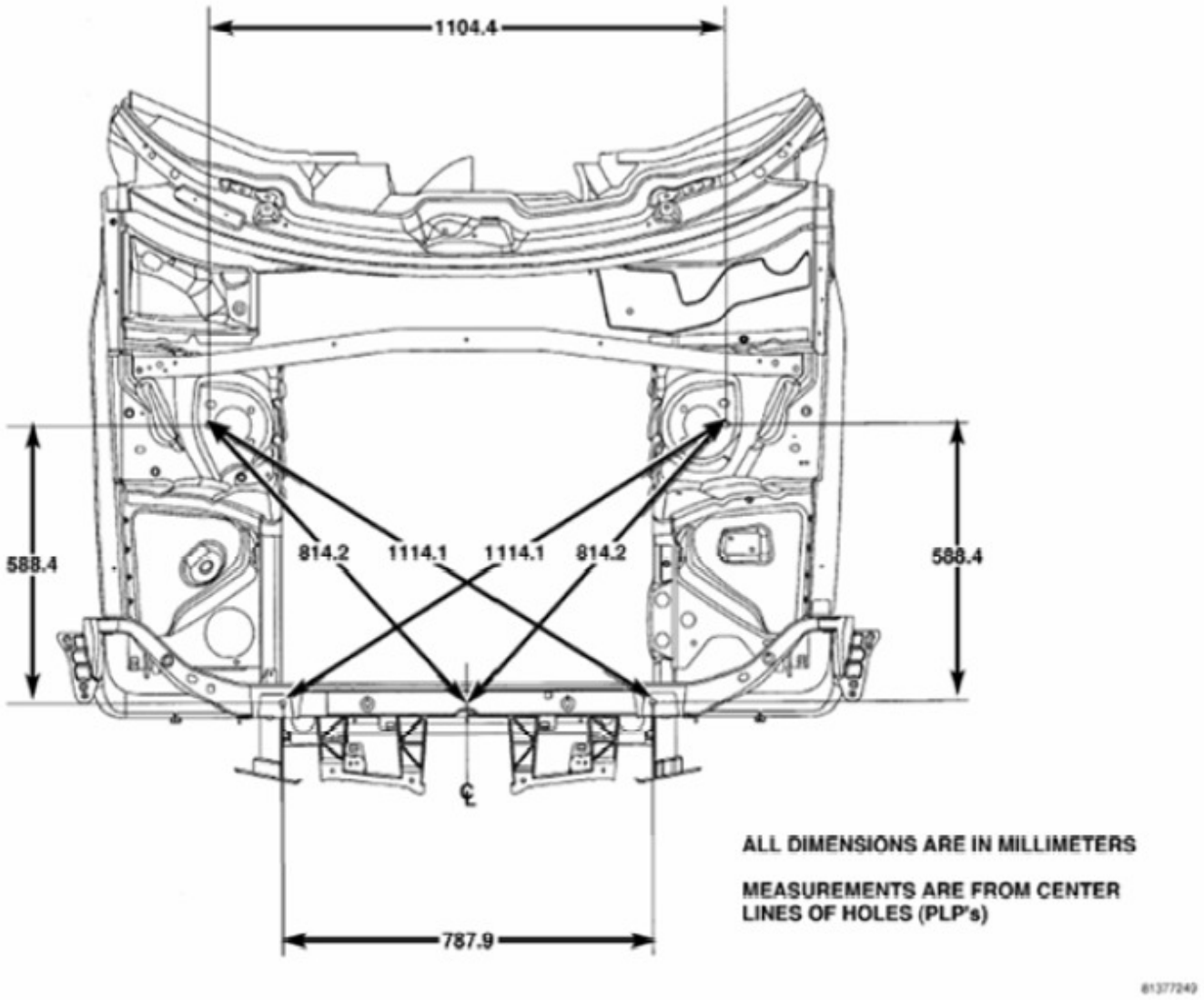


Fig. 2 ENGINE BOX DIMENSIONS

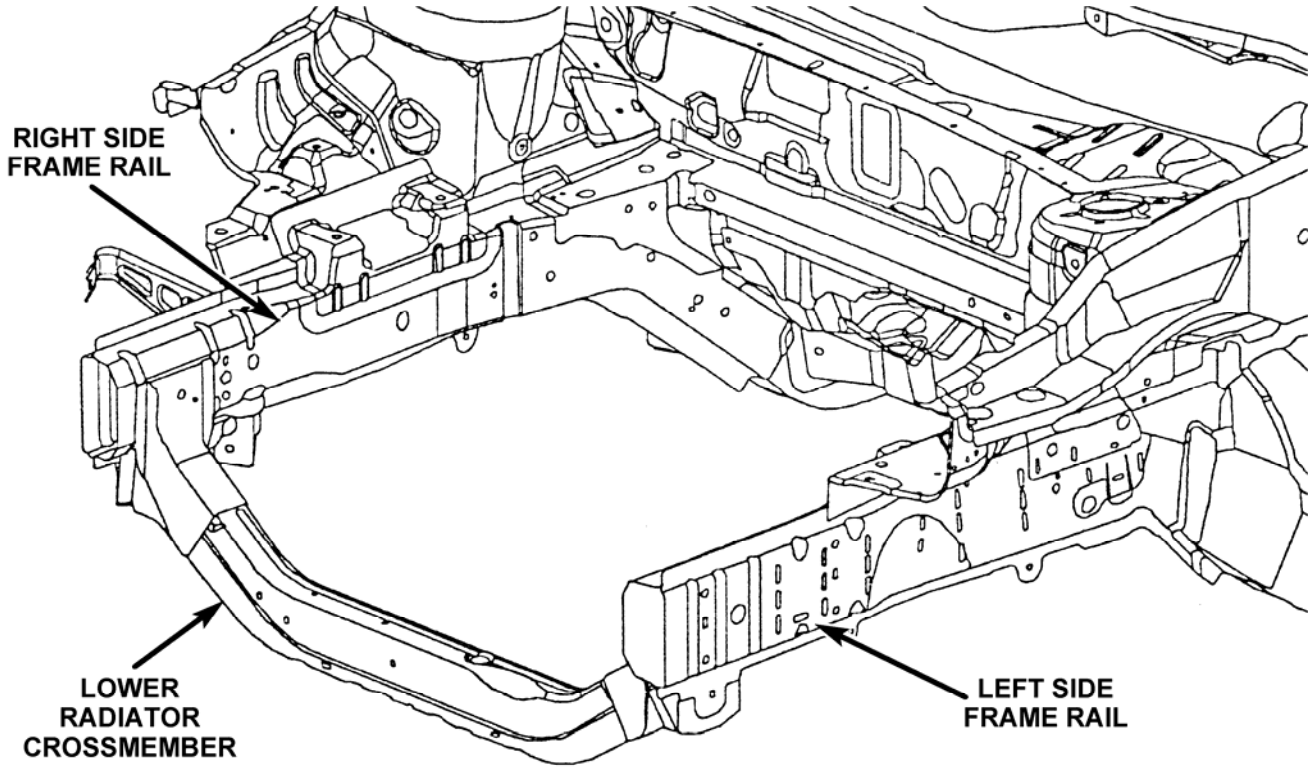
Back to Index

DODGE AVENGER – CHRYSLER SEBRING
FRONT FRAME RAIL SECTIONING PROCEDURE

1. With vehicle mounted to appropriate pulling and 3-dimensional measuring equipment, complete the following procedure paying particular attention to body dimensions while fitting and welding panels.

2. Remove bumper components, cooling module, headlamps, and all other components for clear access to repair area.

3. Remove welds holding lower radiator crossmember to damaged rail (if crossmember is damaged, remove completely).



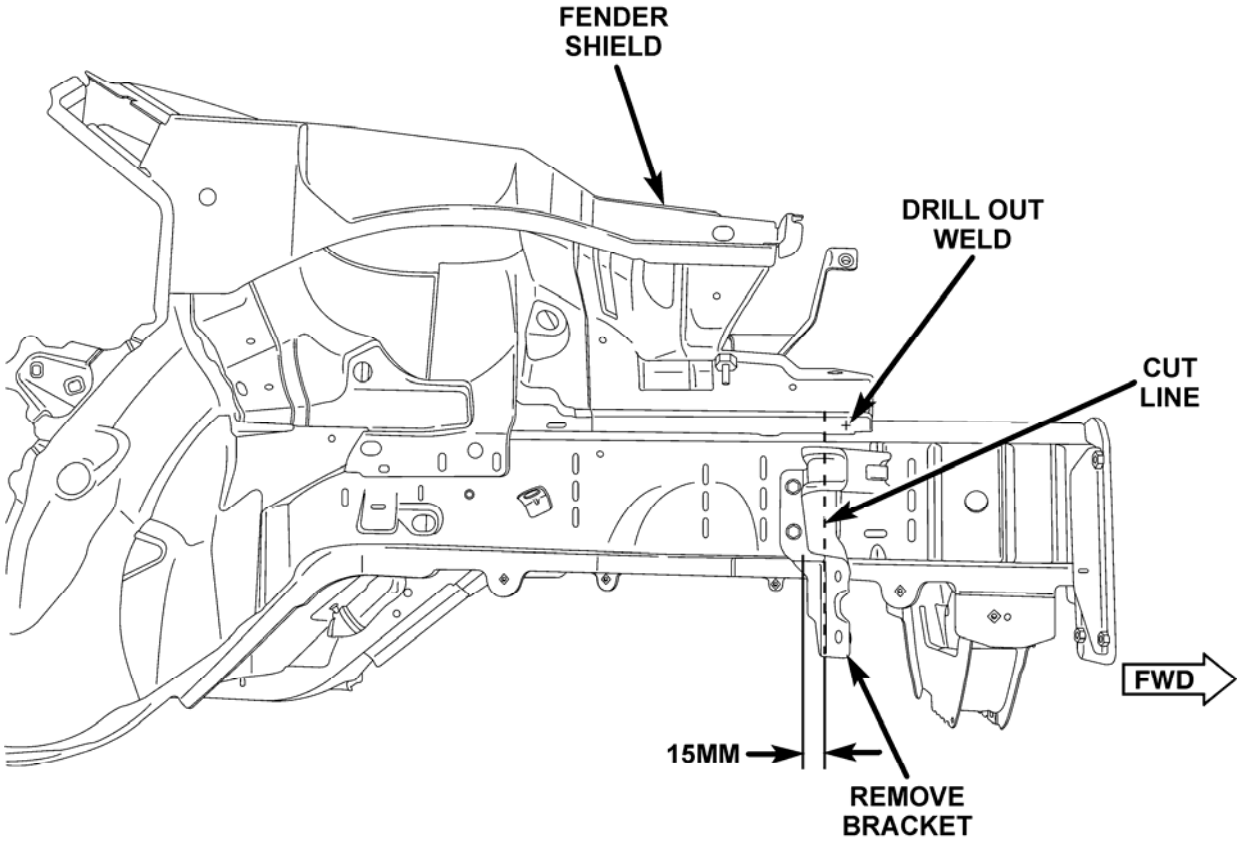
4. Right Side Front Rail:

a. Remove the 2 bolts attaching the washer bottle mounting bracket.

b. Drill out the first weld holding the fender shield to the front rails.

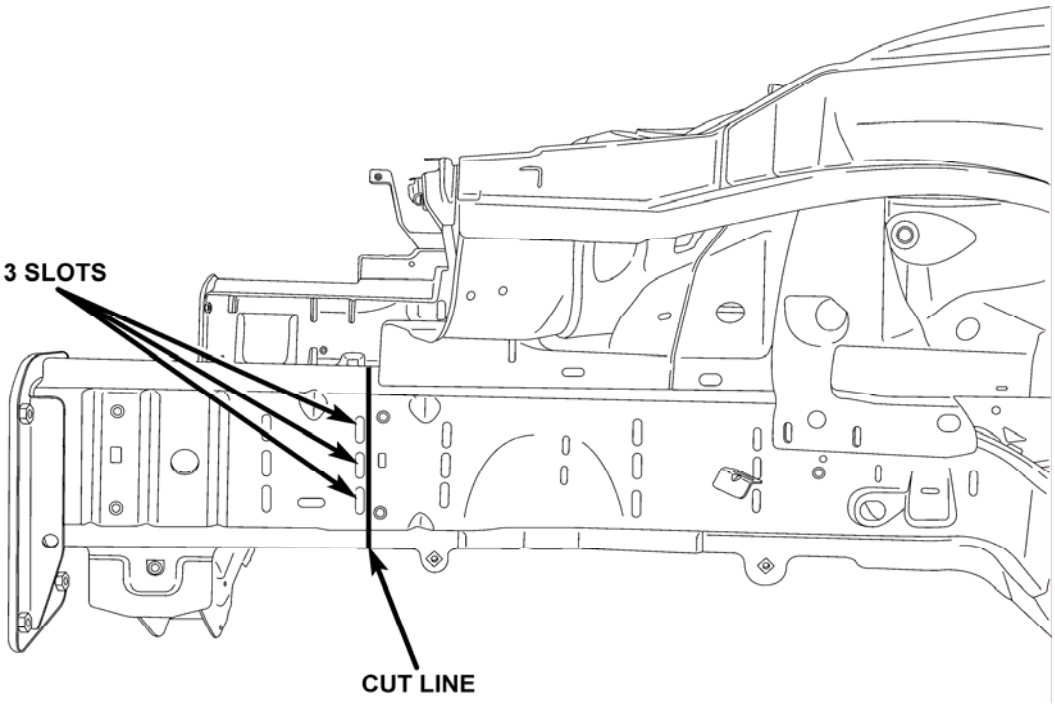
Back to Index

c. Vertically along a line 15mm (+/- 3mm) forward of the forward edge of the 2 holes.



5. Left Side Front Rail: Cut vertically along a line at the rearward edge of the 3 slots in the outer rail.

Back to Index



6. Mark the replacement part in the same location.

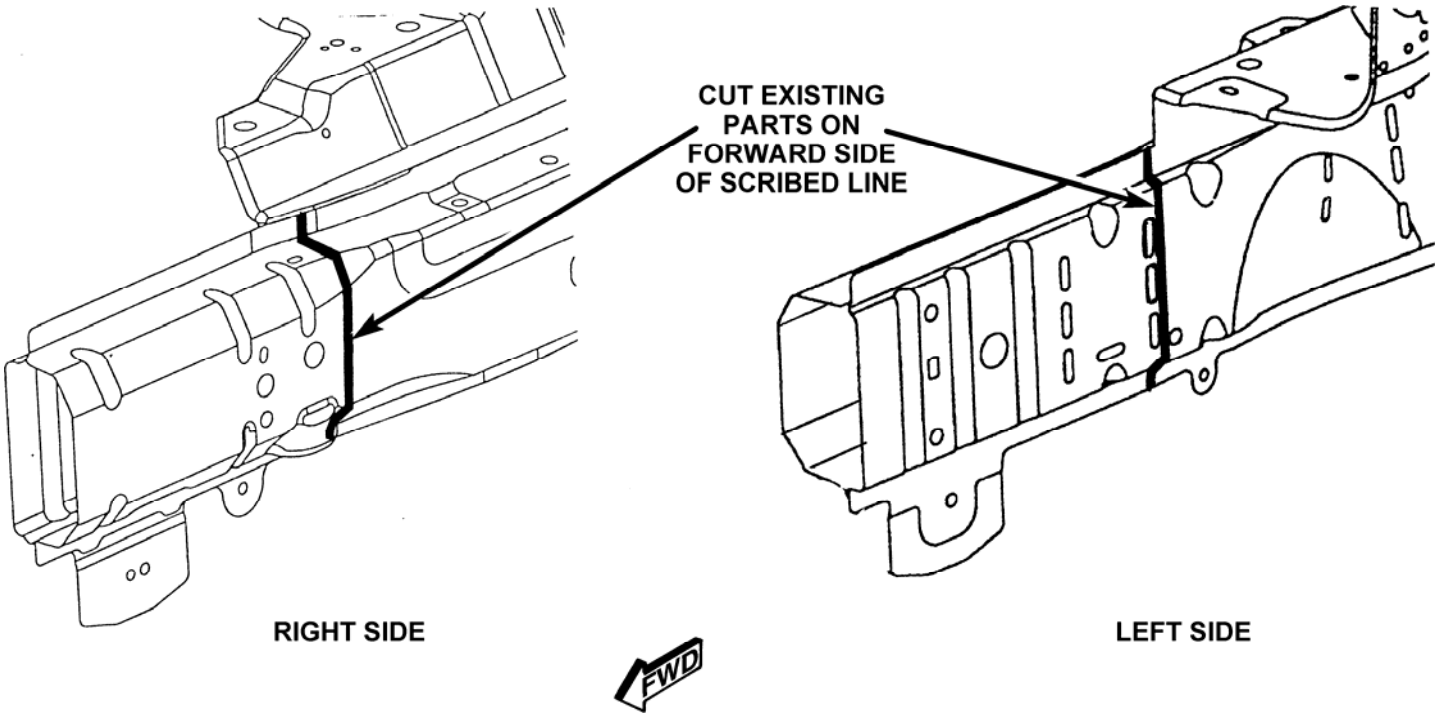
7. Using a cut-off wheel, reciprocating saw, or equivalent:

a. Cut all existing parts on the forward side of the scribe line using care not to damage the material that will not be removed.

b. Cut all replacement parts on the rearward side of the scribe line again using care not to make any additional damage, but do not discard any material yet.

8. Clean all sharp edges and create a slight taper for weld purposes.

Back to Index



9. From the remaining replacement part, cut a 19mm strip from both the inner and outer rail. Clip off the weld flanges, top and bottom, and dress edges. These pieces will be the weld backers.

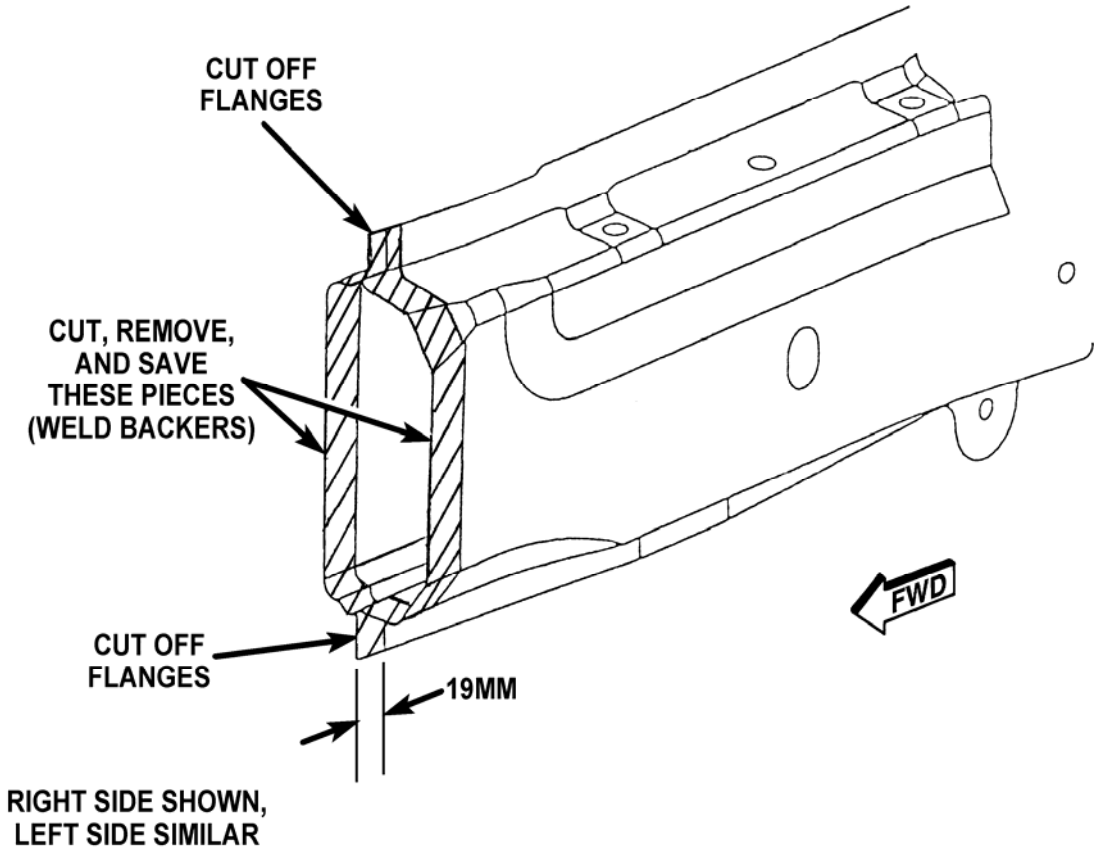
10. Prepare welding equipment per the weld chart at the beginning of the sectioning section.

11. Install the weld backers into the frame rail, centering them to cut edge. Clamp and tack the weld backer in position when proper fit is confirmed.

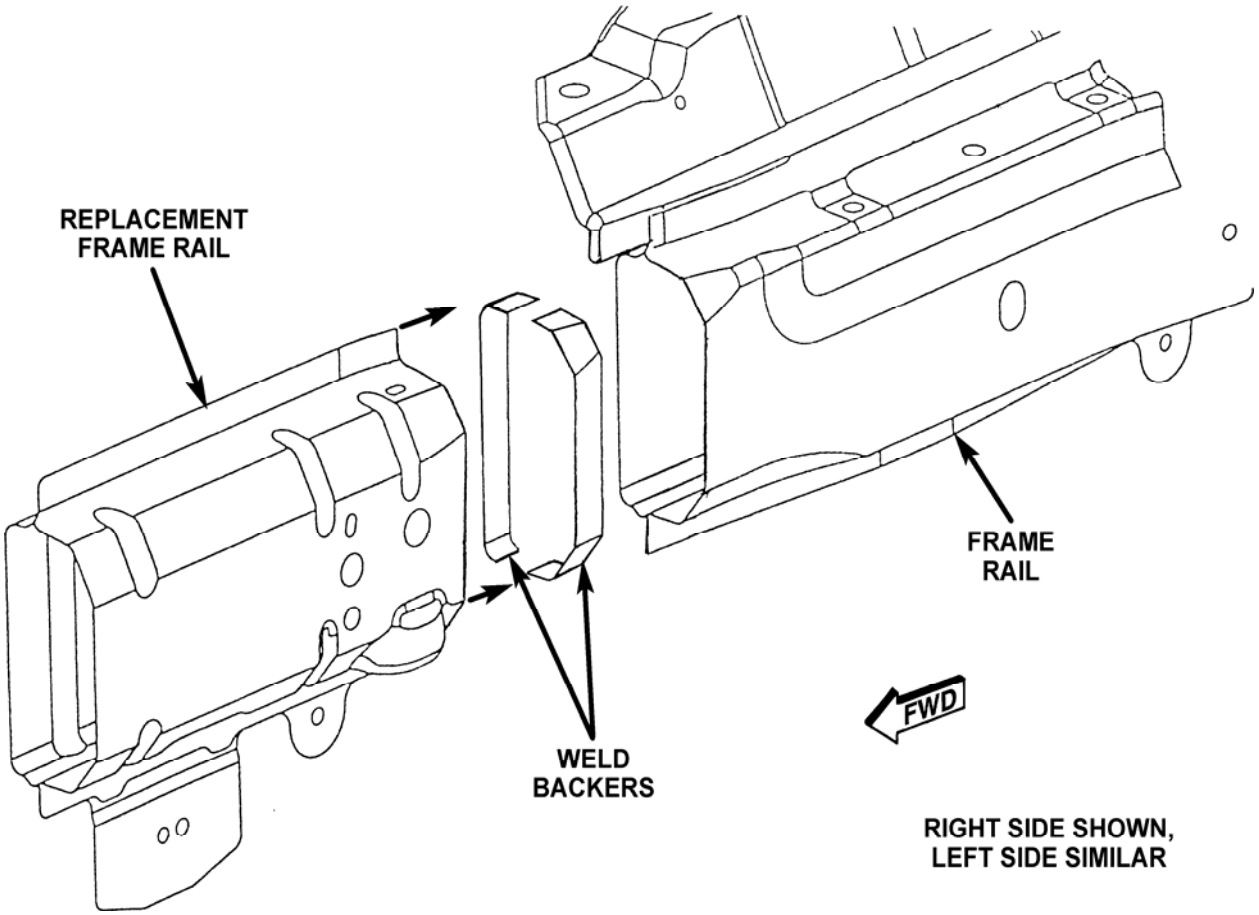
12. Weld using a skip-stitch method until the full length of the joint is completed on both the inner and outer rail. To avoid excessive heat buildup, move between the inner and outer rail during welding.

13. Dress welds without removing any base material paying particular attention to the mounting surface of the outer rail.

Back to Index



Back to Index



14. Either install new or reposition the lower radiator crossmember and clamp in place and weld.
15. Dress the welded area and apply corrosion resistant coatings inside and out.

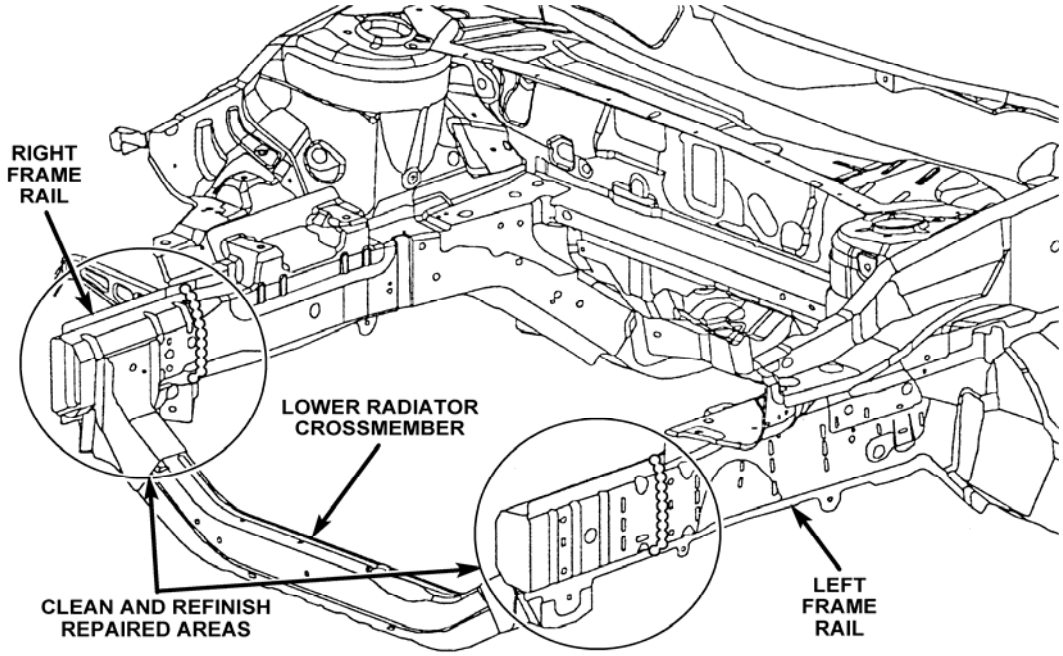
    a. Apply etch-primer to the inside of the frame rail repair area.

    b. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

    c. Apply a durable top coat to the outside of the repair area.

16. Complete other repairs.

Back to Index



Note: Use Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

Back to Index

DODGE AVENGER, CHRYSLER SEBRING FRAME DIMENSIONS

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

VEHICLE PREPARATION

Position the vehicle on a level work surface. Using screw or bottle jacks, adjust the vehicle PLP heights to the specified dimension above a level work surface. Vertical dimensions can be taken from the work surface to the locations indicated were applicable.

DESCRIPTION	FIGURE
FRAME DIMENSIONS (PLAN VIEW)	1
FRAME DIMENSIONS (SIDE VIEW)	2

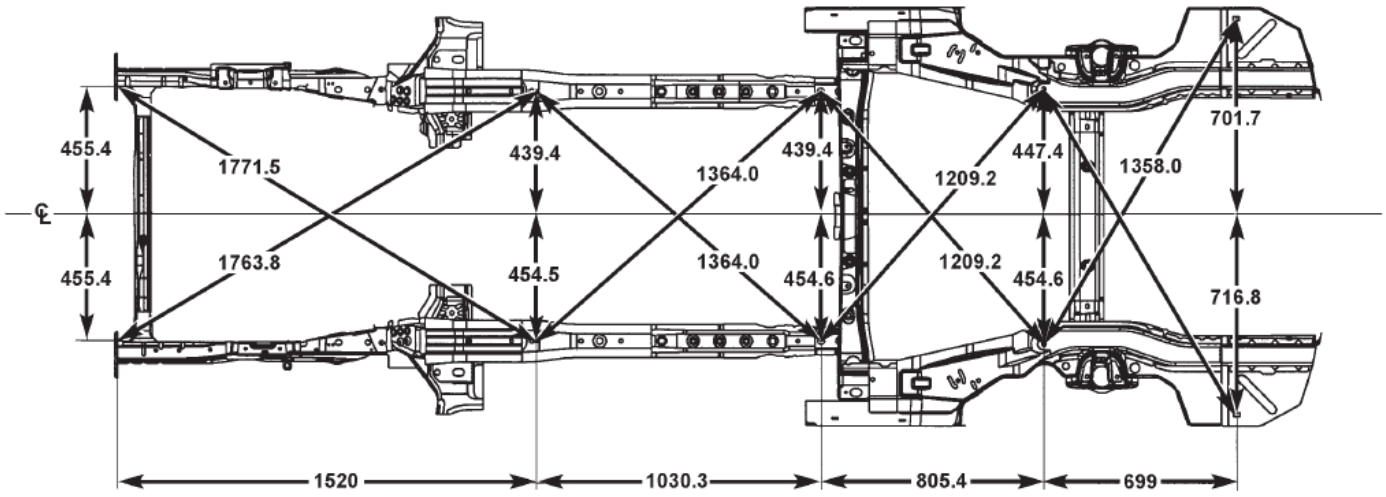


Figure 1. FRAME DIMENSIONS (PlanView)

Back to Index

FRAME DIMENSIONS

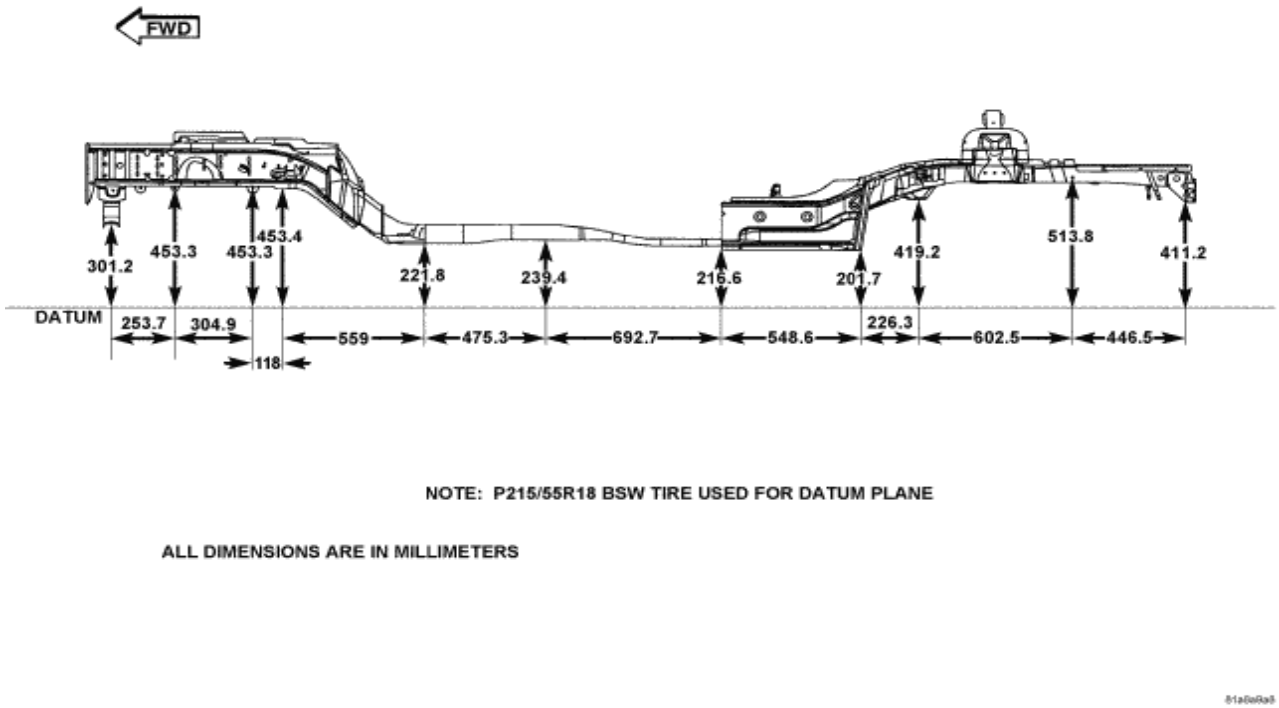


Figure 2. FRAME DIMENSIONS (SIDE VIEW)

Back to Index

DODGE CALIBER, JEEP COMPASS and PATRIOT FRAME DIMENSIONS

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

INDEX

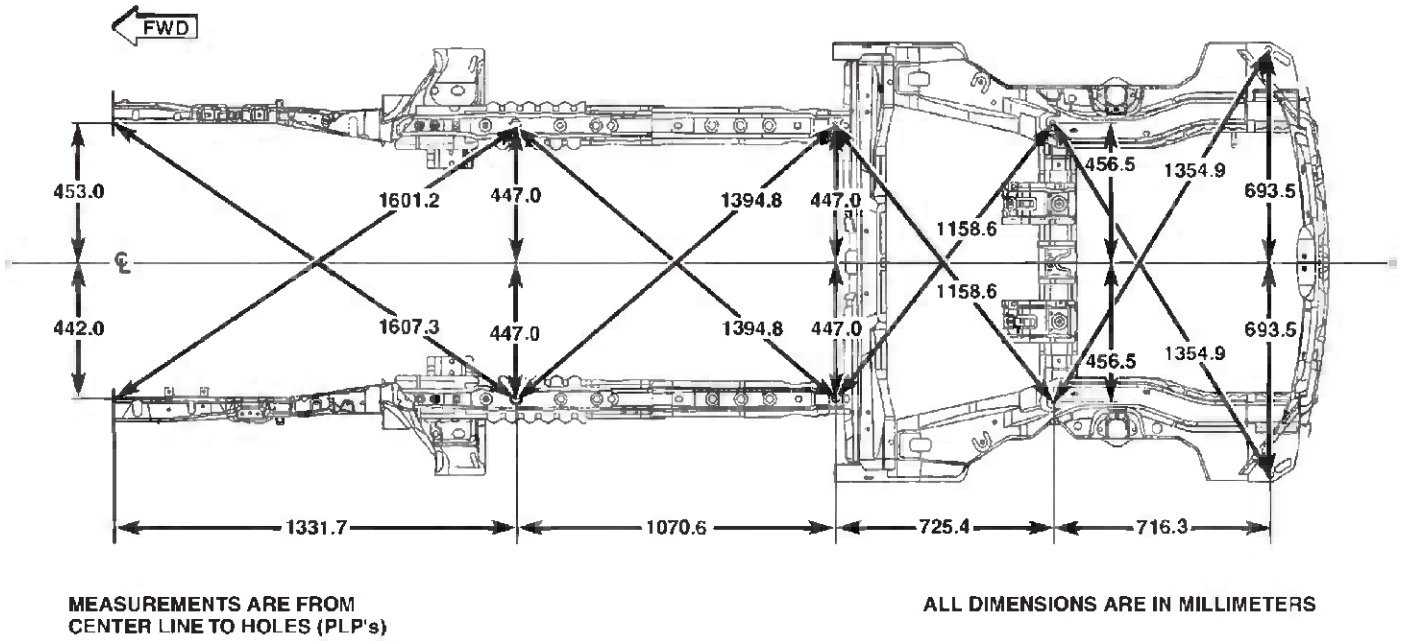
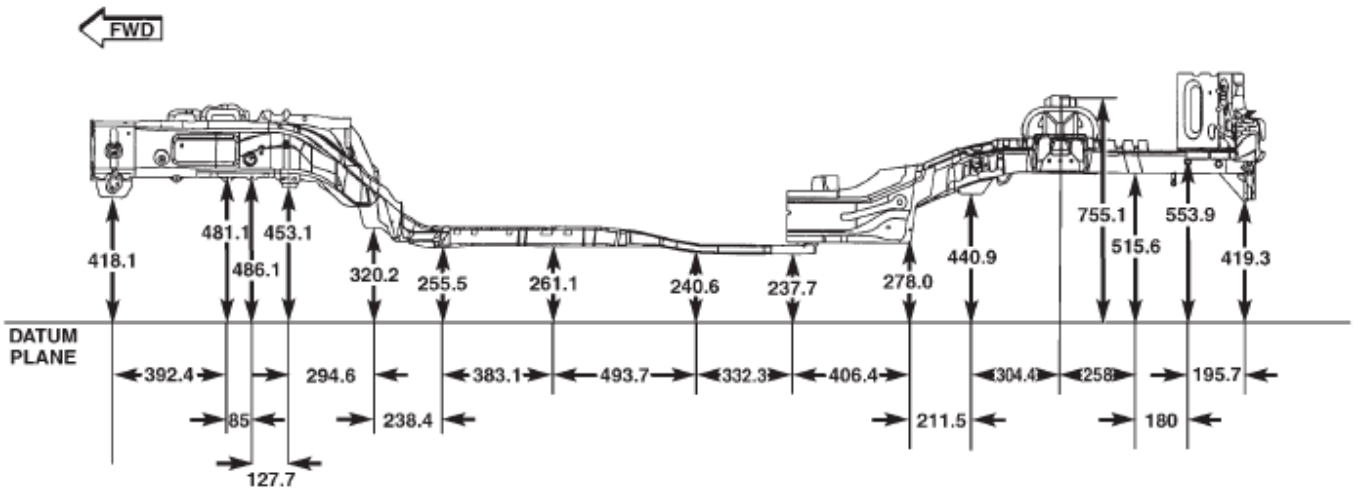


Figure 1. FRAME DIMENSIONS (PLAN VIEW)

Back to Index

FRAME DIMENSIONS



NOTE: P215/55R18 BSW TIRE USED FOR DATUM PLANE

ALL DIMENSIONS ARE IN MILLIMETERS

Figure 2. FRAME DIMENSIONS (SIDE VIEW)

Back to Index

CHRYSLER TOWN & COUNTRY/DODGE CARAVAN FRAME DIMENSIONS

Back to Index

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

INDEX

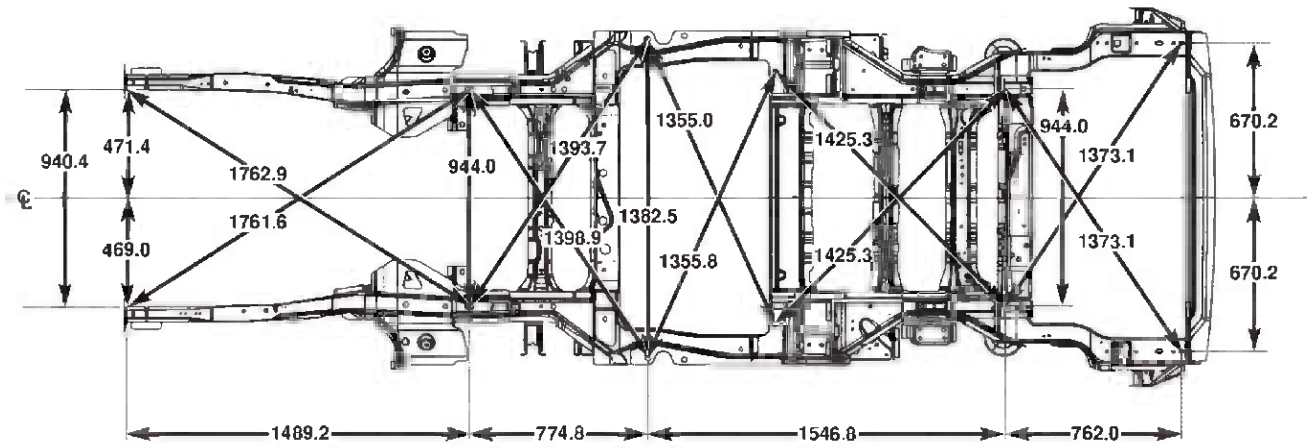
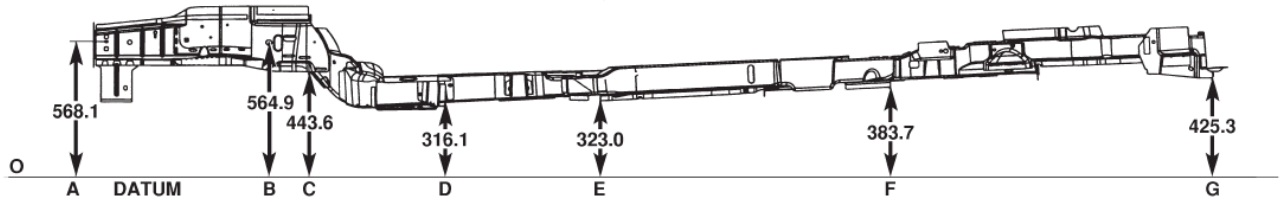


Figure 1. FRAME DIMENSIONS (PLAN VIEW)

Back to Index

FRAME DIMENSIONS



ALL DIMENSIONS ARE IN MILLIMETERS

MEASUREMENTS ARE FROM CENTER LINES OF HOLES (PLP's)

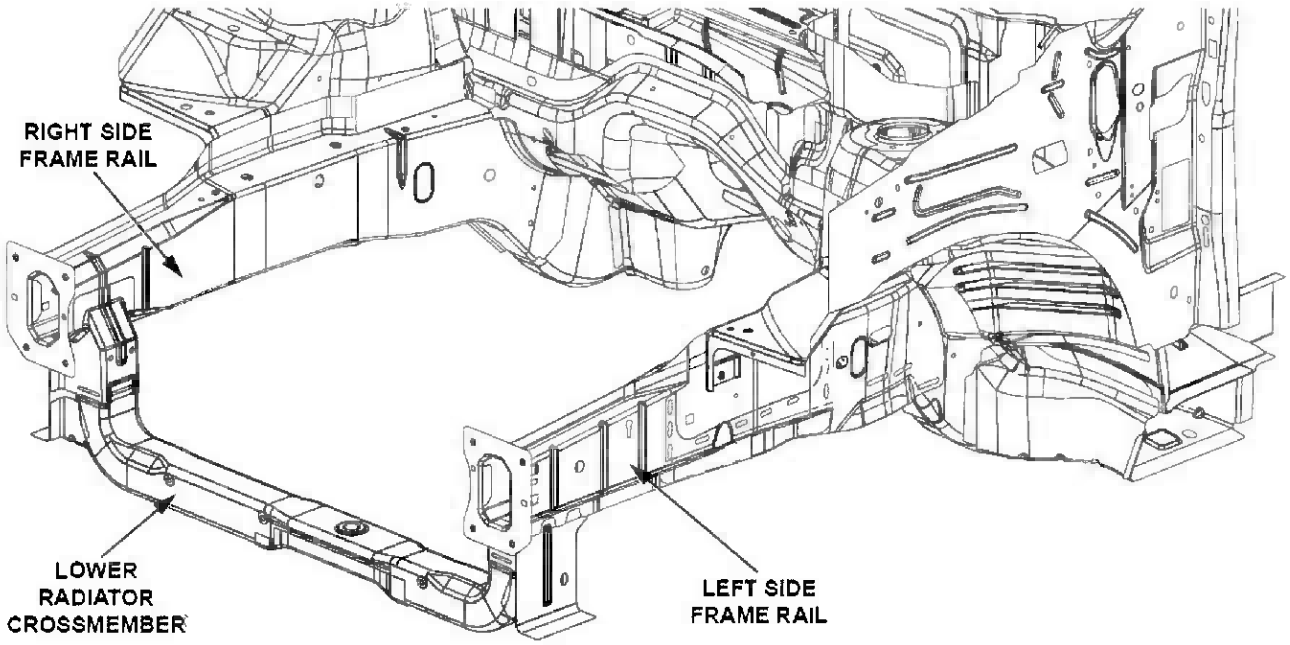
Figure 2. FRAME DIMENSIONS (SIDE VIEW)

Back to Index

CHRYSLER TOWN & COUNTRY/DODGE GRAND CARAVAN (RT) FRONT RAIL SECTIONING PROCEDURE

1. With vehicle mounted to appropriate pulling and 3-dimensional measuring equipment, complete the following procedure paying particular attention to body dimensions while fitting and welding panels.

2. Remove bumper components, front end module (including cooling module, headlamps and radiator carrier panel), and all other components for clear access to repair area.

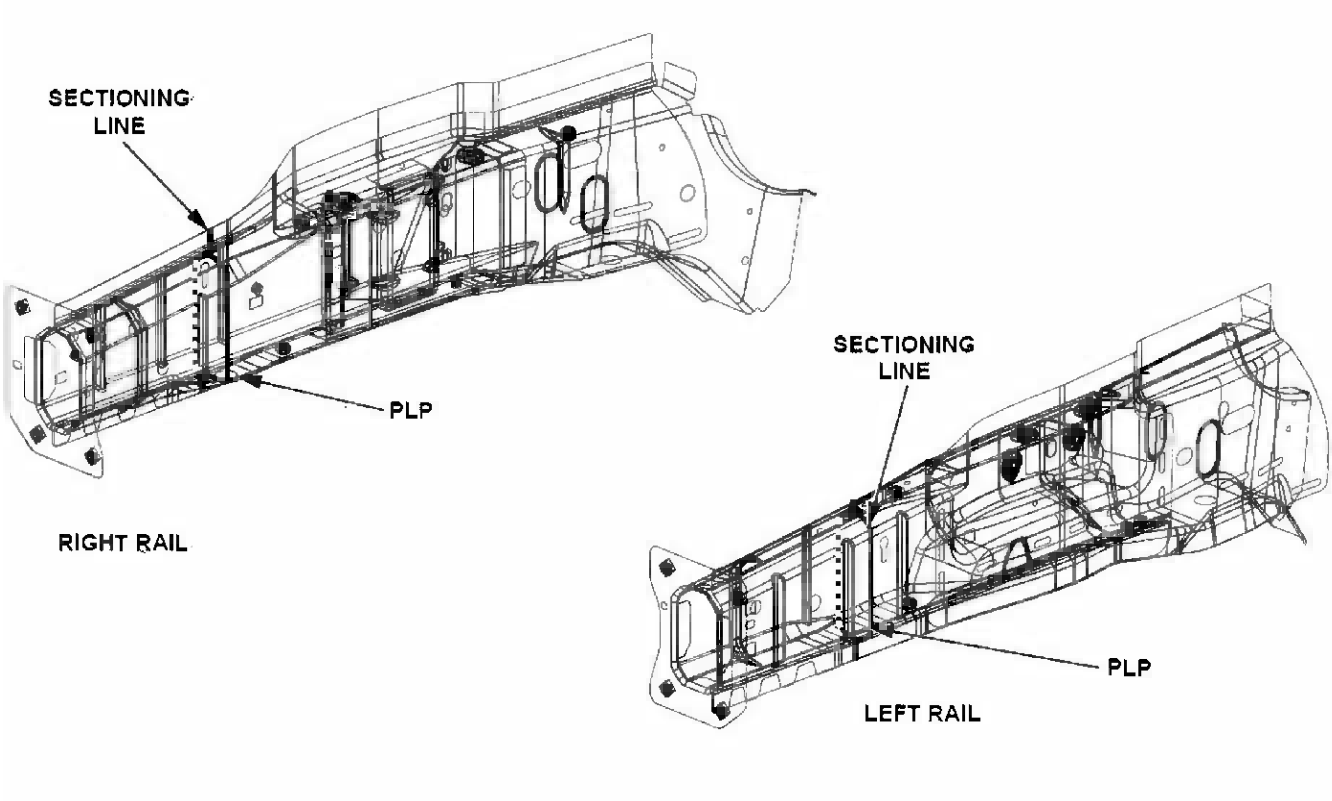


Back to Index

3. Confirm no damage remains rearward from the principal locating points (PLP). The PLP's are located on the bottom face of the rails – the right rail PLP is round, the left is square. If there is damage then the entire rail must be replaced.

4. Remove welds holding lower radiator crossmember to damaged rail (if crossmember is damaged, remove completely).

5. Using the forward edge of the PLP, mark the rails as shown in the illustration.

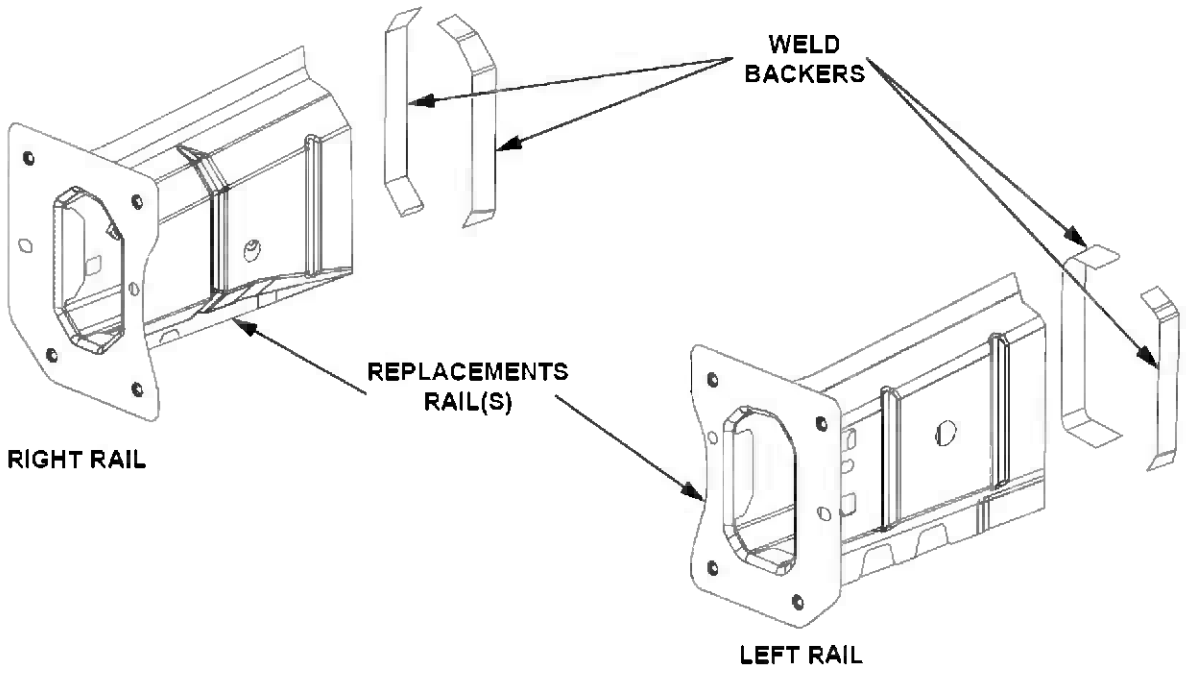


Back to Index

6. Cut the damaged rail off Using a cut-off wheel, reciprocating saw, or equivalent.

7. Mark the replacement rail and cut off the railtip exactly as was done to the damaged rail.

8. From the remaining replacement part, mark and cut a 19mm (.75”) strip and remove the weld flanges, top and bottom. These pieces will be the weld-backer.



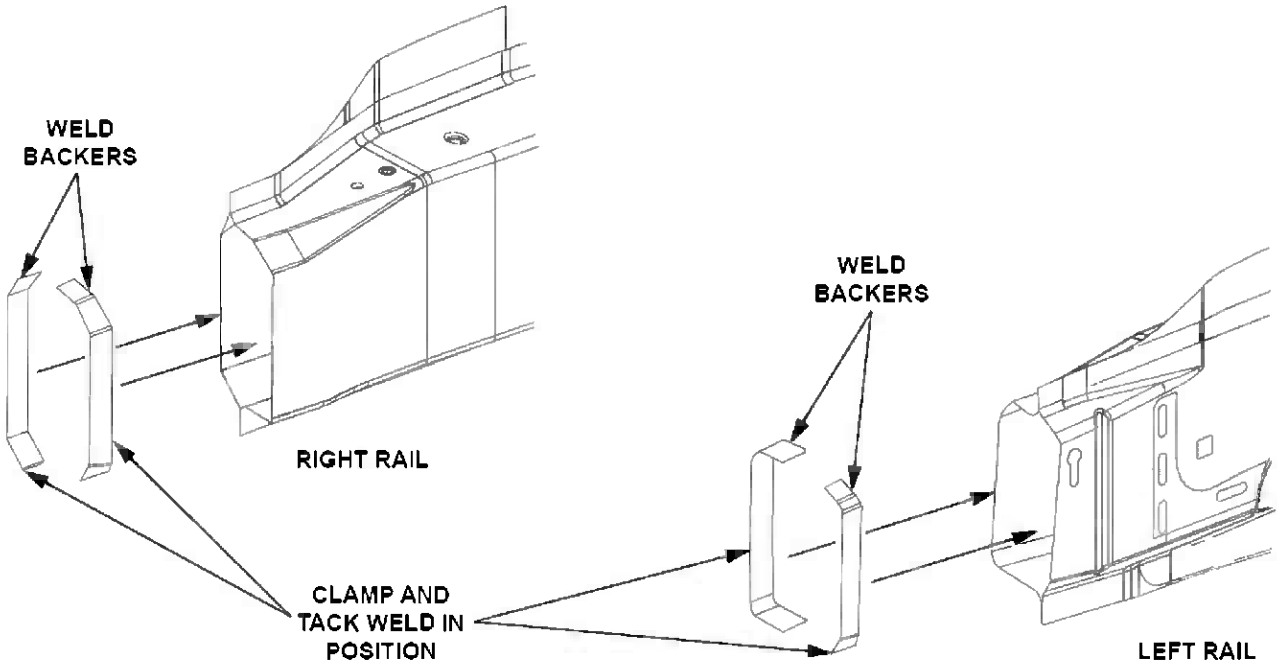
Back to Index

9. Smooth all cut edges of any roughness and burrs, and create a slight taper for weld purposes.

10. Remove all e-coat from the rail components within 2.0” of the joint, and also from the weld-backer.

11. Prepare welding equipment per the weld chart at the end of procedure.

12. Install the weld-backers into the frame rail, centering them on cut edge. Clamp and tack weld in position when proper fit is confirmed.



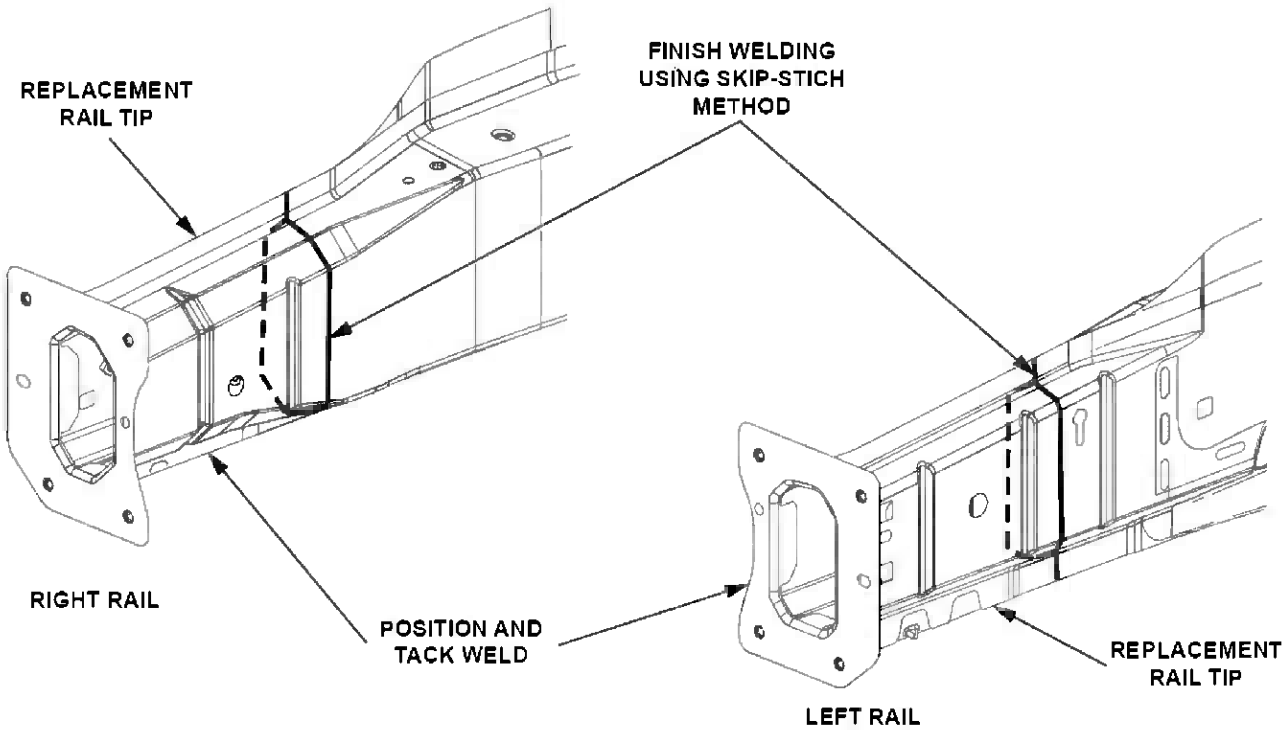
13. Fit the replacement tip to the rail and when proper positioning has been confirmed using 3-dimensional measuring equipment, tack weld in place.

Back to Index

14. Finish welding the butt-joint using a skip-stitch method until the full length of the joint is completely welded. To avoid excessive heat buildup and distortion, move between inner and outer rail during welding. Remove any weld material in the PLP hole to restore the original shape.

15. Dress the welds without removing any base material.

16. Either install new or reposition the lower radiator tie bar, and weld to the rail.



17. Dress the welded area and apply corrosion resistant coatings inside and out.

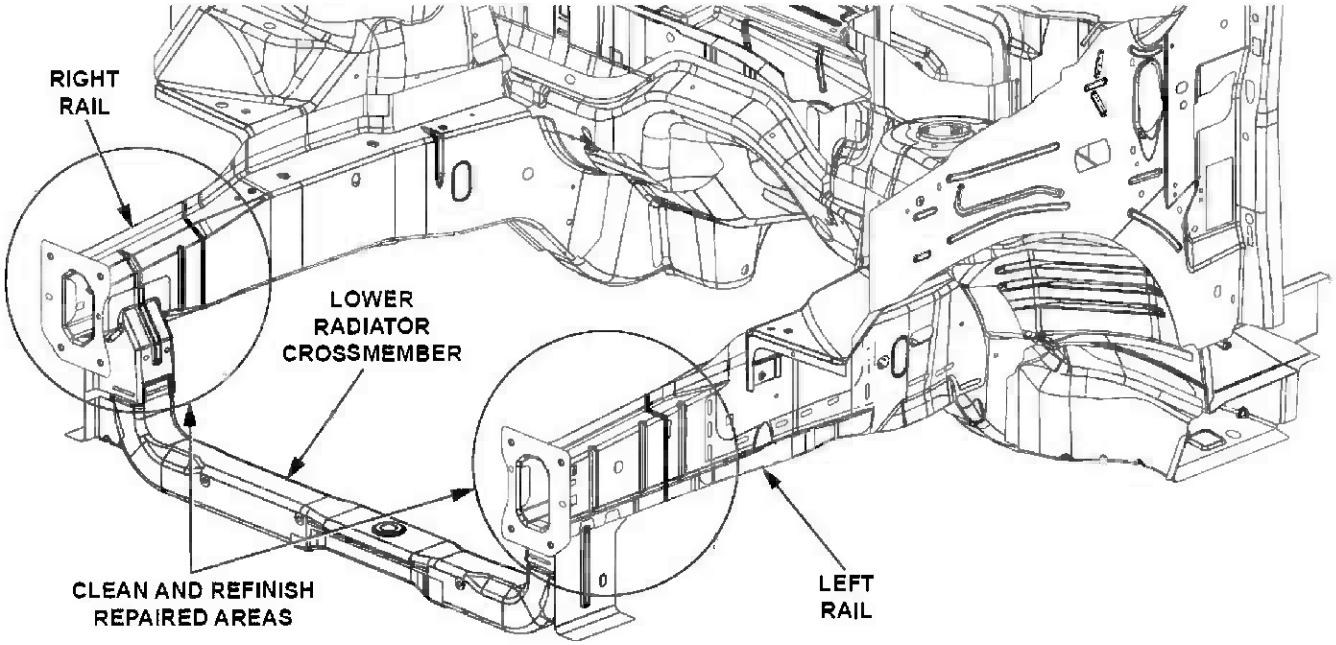
    a. Apply etch-primer to the inside of the frame rail repair area.

    b. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

    c. Apply a durable top coat to the outside of the repair area.

18. Complete other repairs.

Back to Index



Note: Use Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

Back to Index

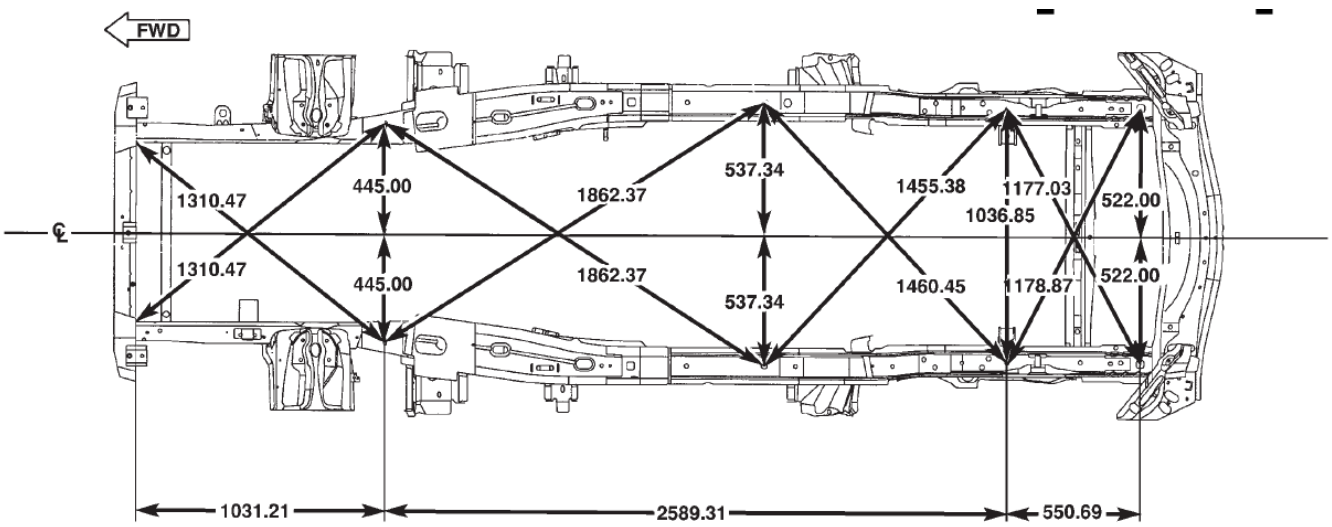
JEEP COMMANDER
FRAME DIMENSIONS

Back to Index

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

INDEX



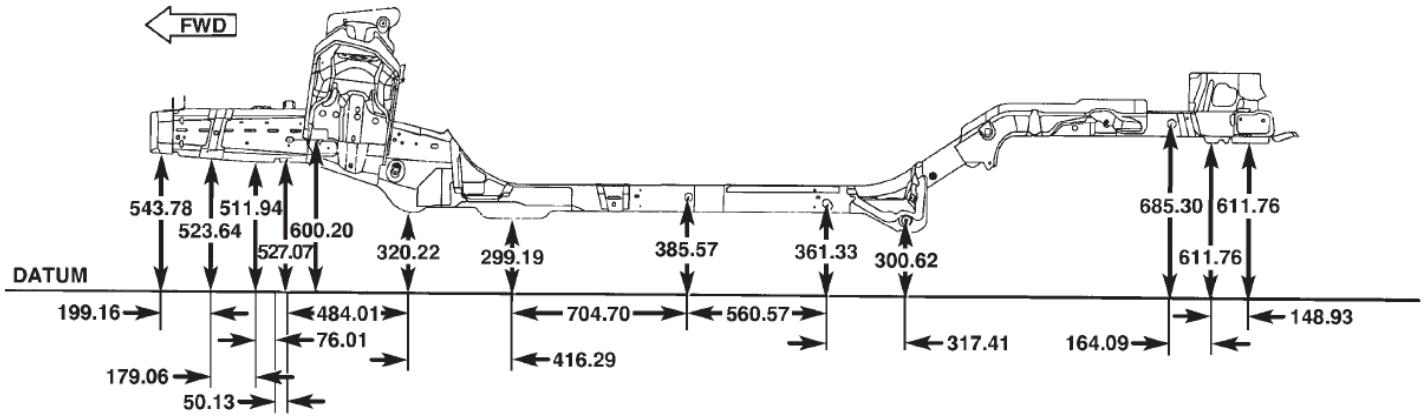
ALL DIMENSIONS ARE IN MILLIMETERS

MEASUREMENTS ARE FROM CENTER LINES OF HOLES (PLP's)

Figure 1. FRAME DIMENSIONS (PLAN VIEW)

Back to Index

FRAME DIMENSIONS



ALL DIMENSIONS ARE IN MILLIMETERS

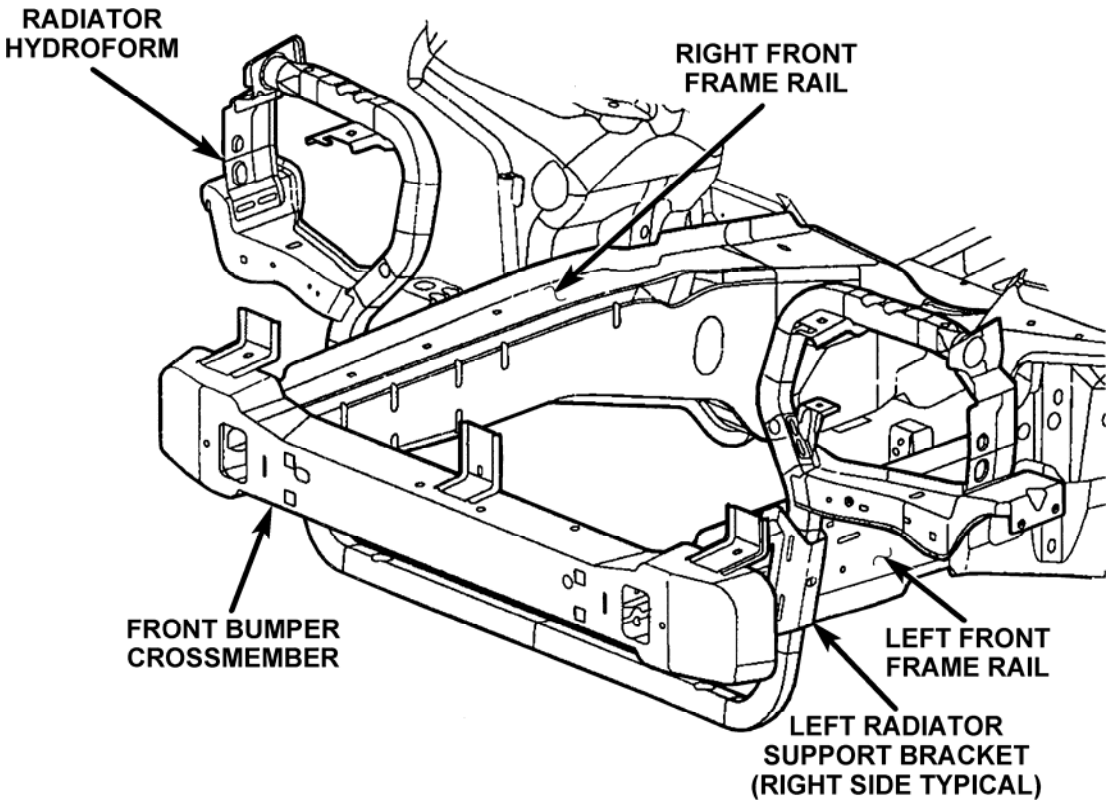
Figure 2. FRAME DIMENSIONS (SIDE VIEW)

Back to Index

JEEP COMMANDER/GRAND CHEROKEE
FRONT FRAME RAIL SECTIONING PROCEDURE

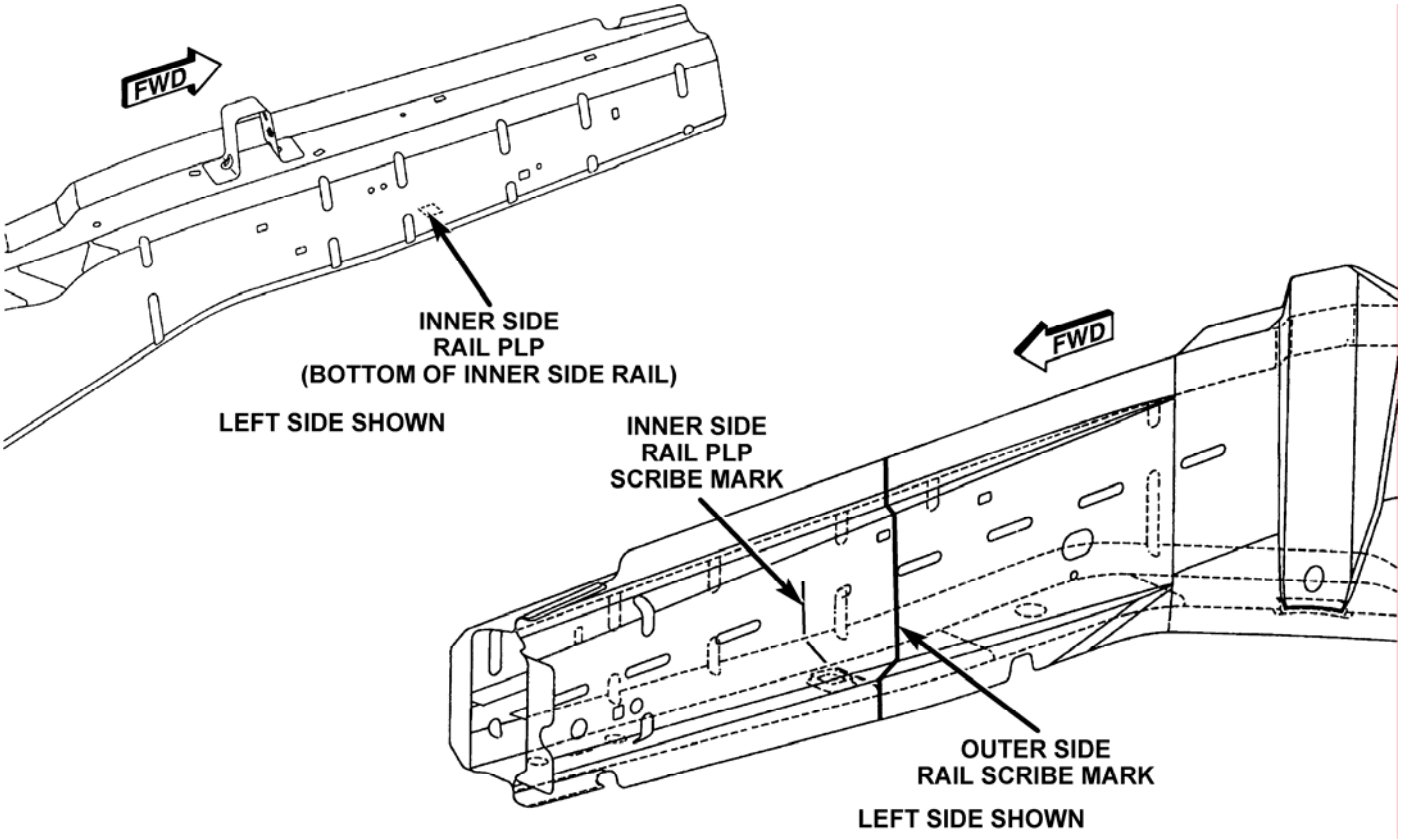
1. Remove front bumper cross member using a Rotabroach (hole saw).

2. Release welds securing radiator support brackets to the side of outer frame rails using a Rotabroach (hole saw) and only mill through the bracket if possible. If replacing one frame rail, replacing part of radiator hydroform can be done.



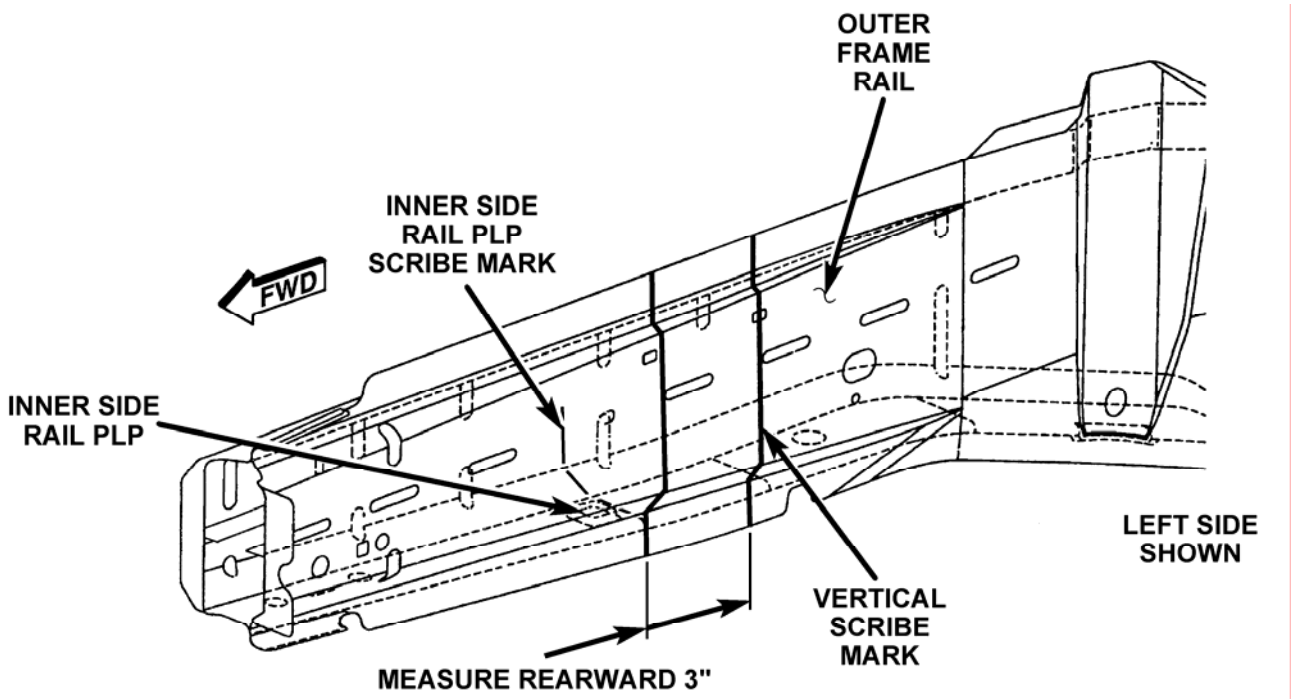
Back to Index

4. Using the forward edge of PLP hole on bottom of inner side member as reference, mark outer rail at top and bottom then create vertical scribe mark on outer frame rail.



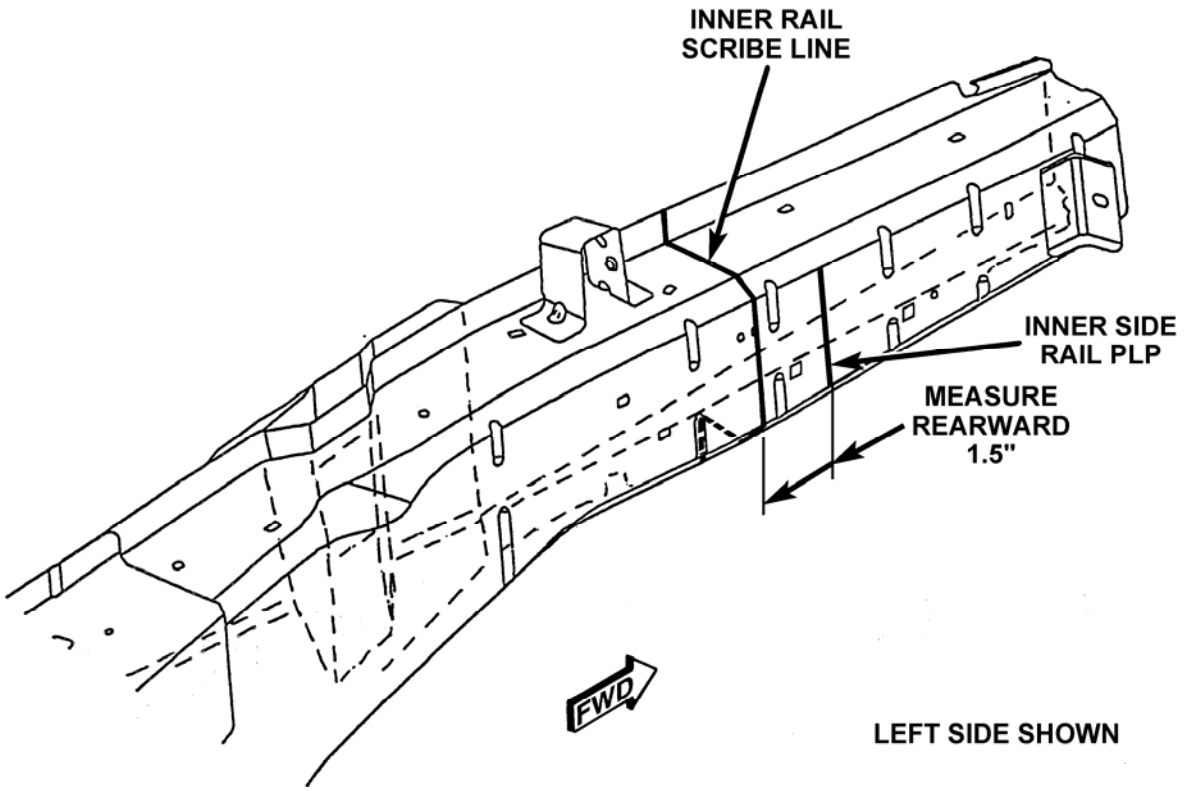
Back to Index

5. Using the forward edge of PLP hole on bottom of inner side member as reference, measure rearward 3" and mark outer rail at top and bottom then create vertical scribe mark on outer frame rail.



Back to Index

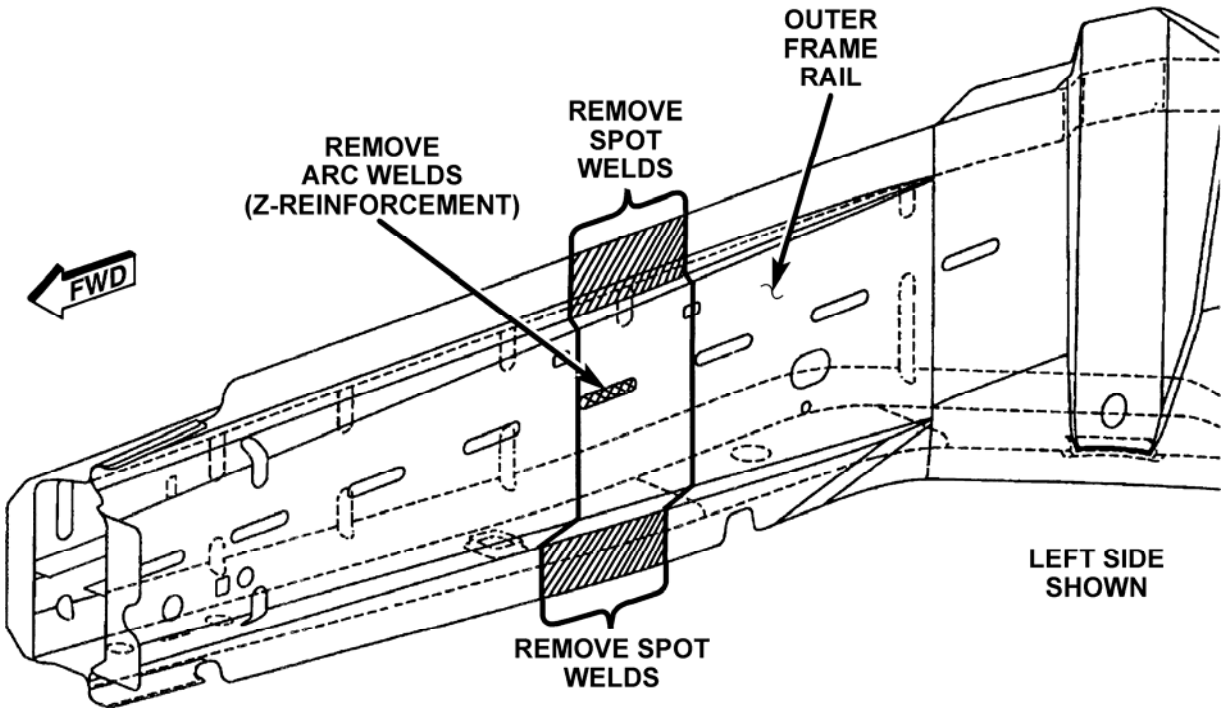
6. Using the forward edge of PLP hole on bottom of inner side member as reference, measure rearward 1.5" and mark inner rail at top and bottom then create vertical scribe mark on inner frame rail.



Back to Index

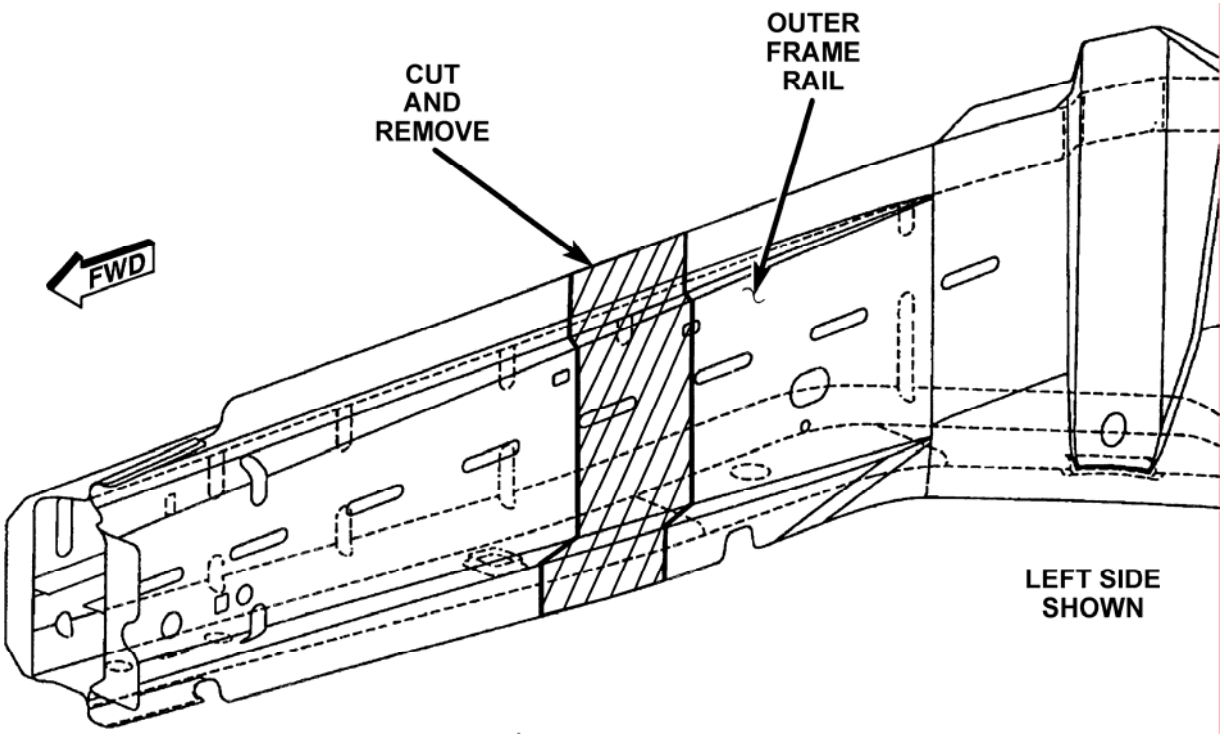
7. Remove spot welds holding the inner and outer side members together between the two scribe lines on the outer rail.

8. Remove the MIG welds holding the internal Z-reinforcement to the outer rail between the two scribe lines.



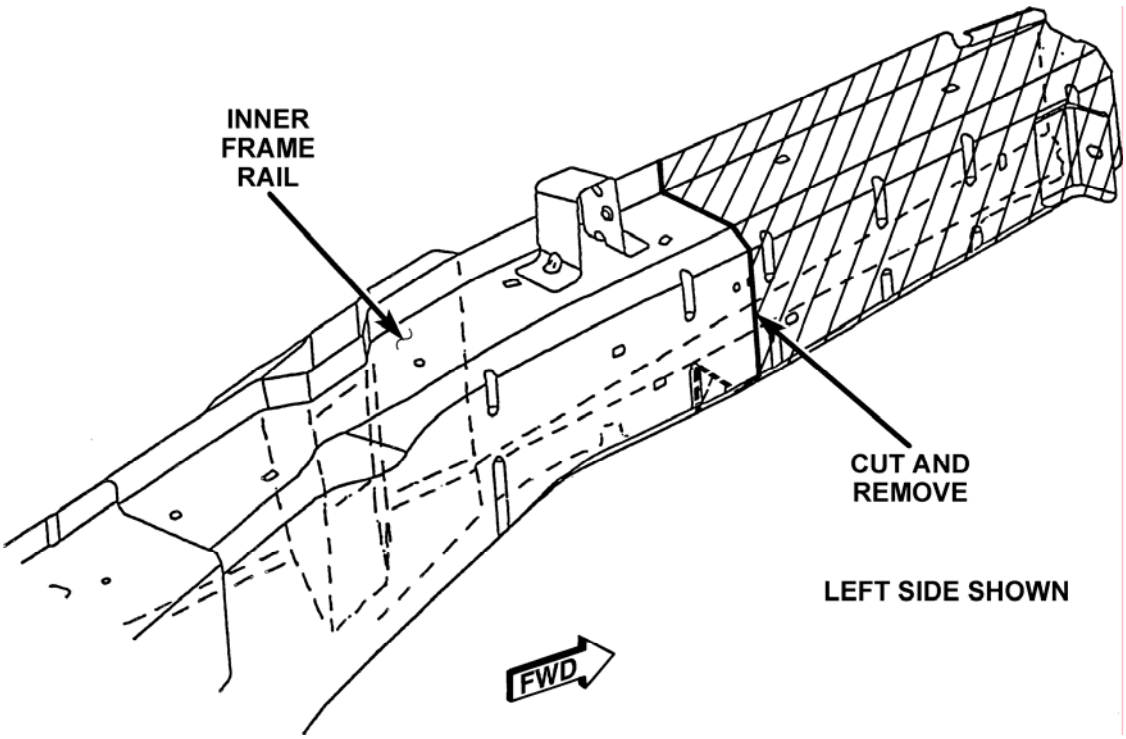
Back to Index

9. Carefully cut the outer side member top to bottom at the scribe lines using a cut-off wheel without damaging the inner side member or the Z-reinforcement inside the rail and remove the access panel or “window”.



Back to Index

10. Using a reciprocating saw, cut vertically down through the inner frame rail and Z-reinforcement at the scribe location on the inner rail.



Back to Index

11. Carefully clean and de-burr all cut edges and prepare for welding.

12. Remove any paint, e-coat, or other coatings within 1-inch of any weld area.

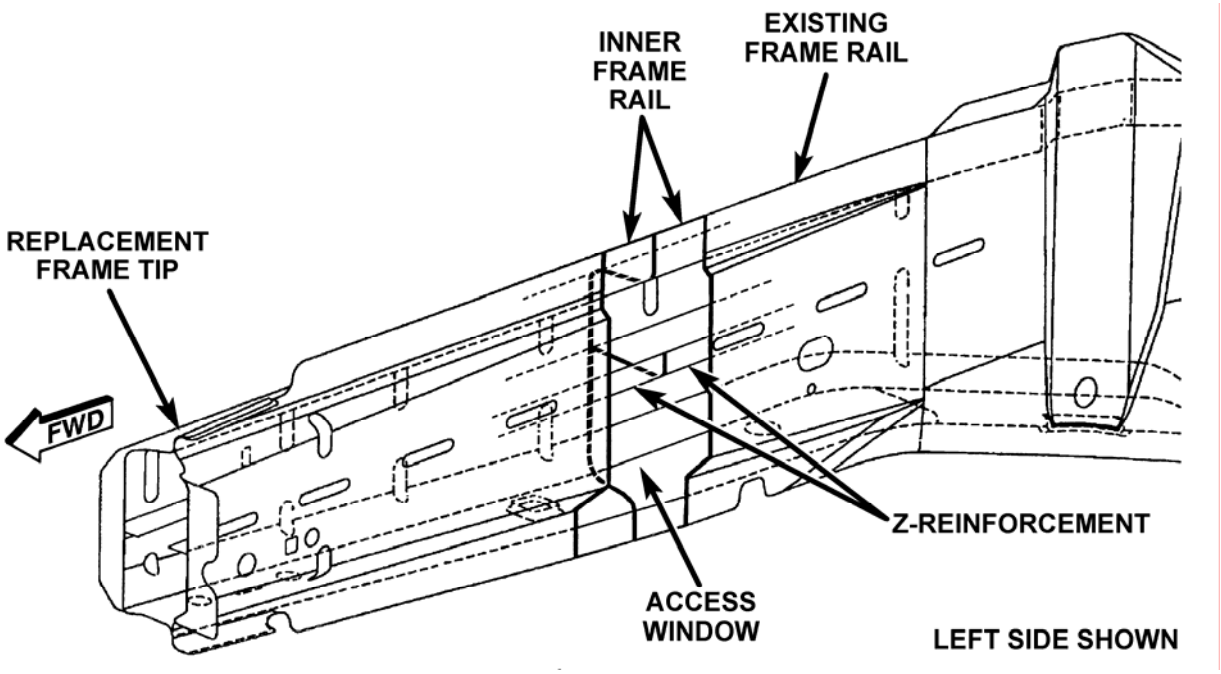
13. Using the same procedures previously described, prepare the service rail tip for installation.

14. Fit and position the new rail tip to the vehicle using XYZ dimensions and measurement equipment.

15. Confirm good joint fit-up with inner frame rail and Z-reinforcement and root gap equal to width of saw cut.

16. Tack weld the new tip into position using the weld chart located at the end of repair procedure section.

17. Reconfirm proper tip location.



Back to Index

18. Weld inner frame rail in the following sequence.
    a. Upper half from the access window.
    b. Lower half from exterior of rail
    c. Clean backside of above two welds in preparation for welding.
    d. Upper half from exterior.
    e. Lower half from access window.

19. Weld Z-reinforcement from top and from bottom, from inner side rail to outer side rail.

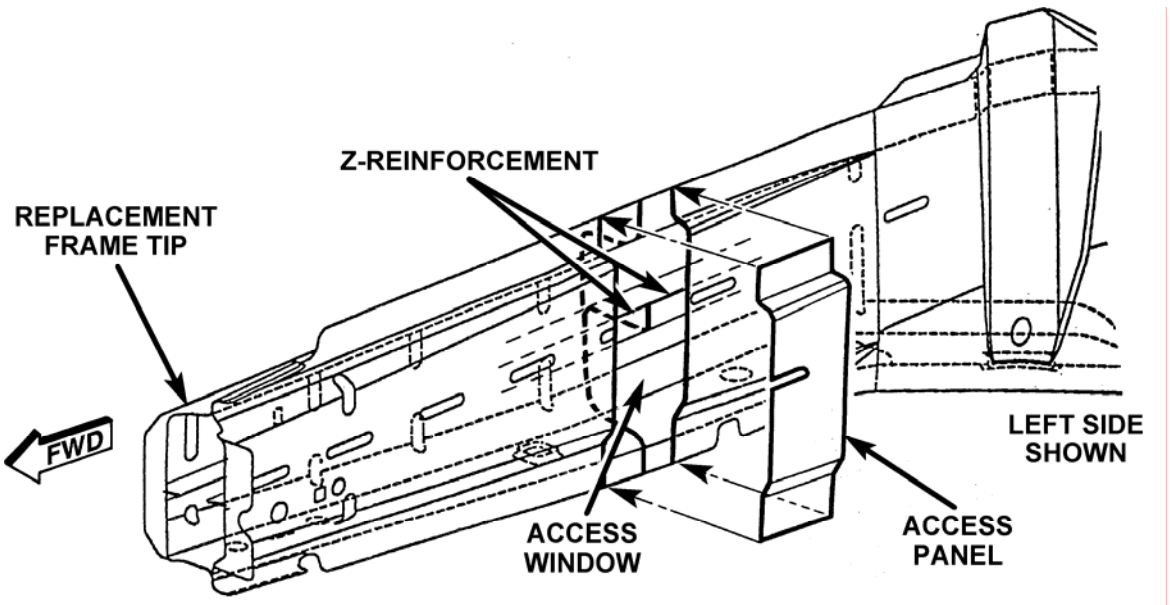
20. Prepare access panel for reinstallation.

21. Clamp the access panel back to rail assembly.

22. Weld the butt-joints completely using a skip/stitch method to reduce the heat affected zone and distortion.

23. Weld the access window at the top and bottom to the inner frame rail using ring filet (puddle) welds.

24. Install clamp to snug gap between outer rail and inner Z-reinforcements and MIG weld the outer rail back to the Z-reinforcement through the slots in the outer rail.

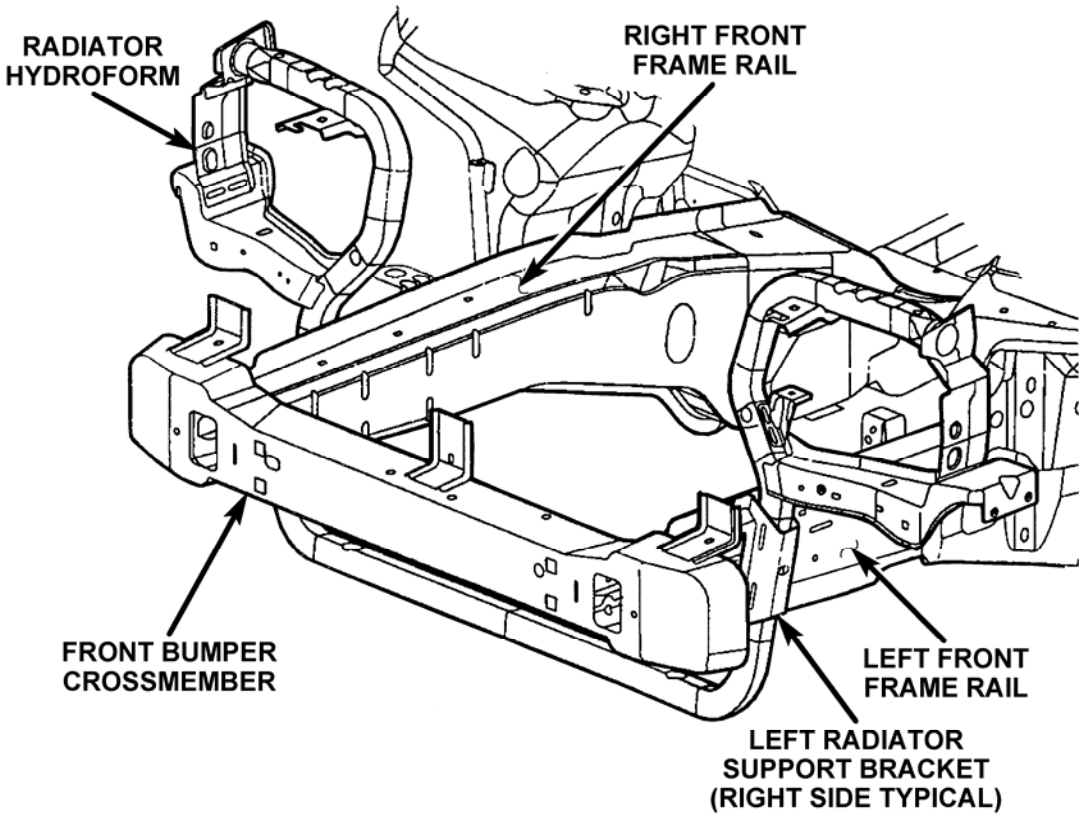


Back to Index

25. Install the radiator hydroform with four MIG welds holding each bracket to the outer frame rails at the location of the original welds.

26. Ensure that the cut-off location of the hydroform is the same as that removed earlier and modify if not.

27. Install the front bumper crossmember using MIG welds where the original spot welds were removed.



28 Dress the welded area and apply corrosion resistant coatings inside and out.

a. Apply etch-primer to the inside of the frame rail repair area.

b. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

c. Apply a durable top coat to the outside of the repair area.

Back to Index

DAKOTA FRONT FRAME TIP REPAIR

FRONT FRAME RAIL TIP REPLACEMENT

CAUTION: This procedure is designed to replace the front frame rail tips that have been damaged in the crush initiator zones. Prior to any cutting, the vehicle must be mounted on the appropriate frame repair equipment ("frame rack"), checked with three dimensional measuring equipment, and the necessary pull corrections made without the use of heat.

- If damage remains in the frame beyond the area covered by this service part after the pull, the frame must be replaced in its entirety.
- If damage to the front body structure is evident, repair the Front End Sheet Metal (FESM) fender rails as necessary.
- Inspect all body mount bolts for damage and replace if necessary.

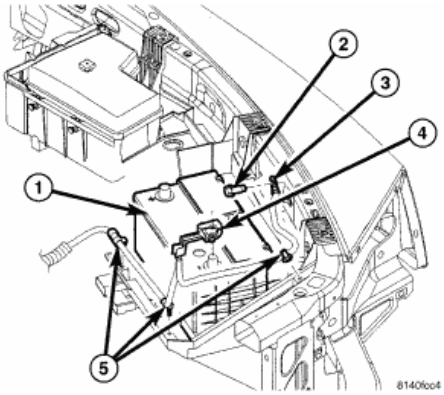
CAUTION: Inspect the tire winch assembly for damage. If any one or more of the following are evident, replace the winch assembly.

- Indications of cracked or bulging plastic.
- Housing flanges are bent or cracked.
- I winch was loose before repair.
- If the rivet heads are separated from the housing in any way.

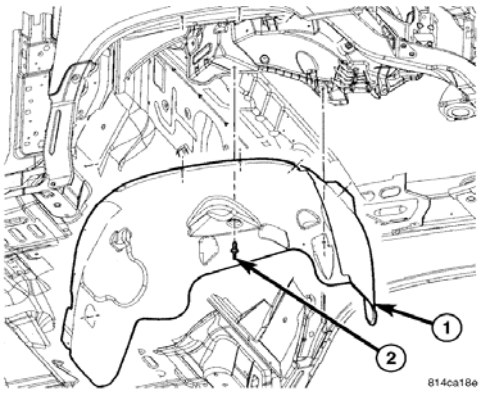
Back to Index

1. Before proceeding with this repair procedure review the required service warnings and precautions.

2. Disconnect and isolate the battery negative cable (4).

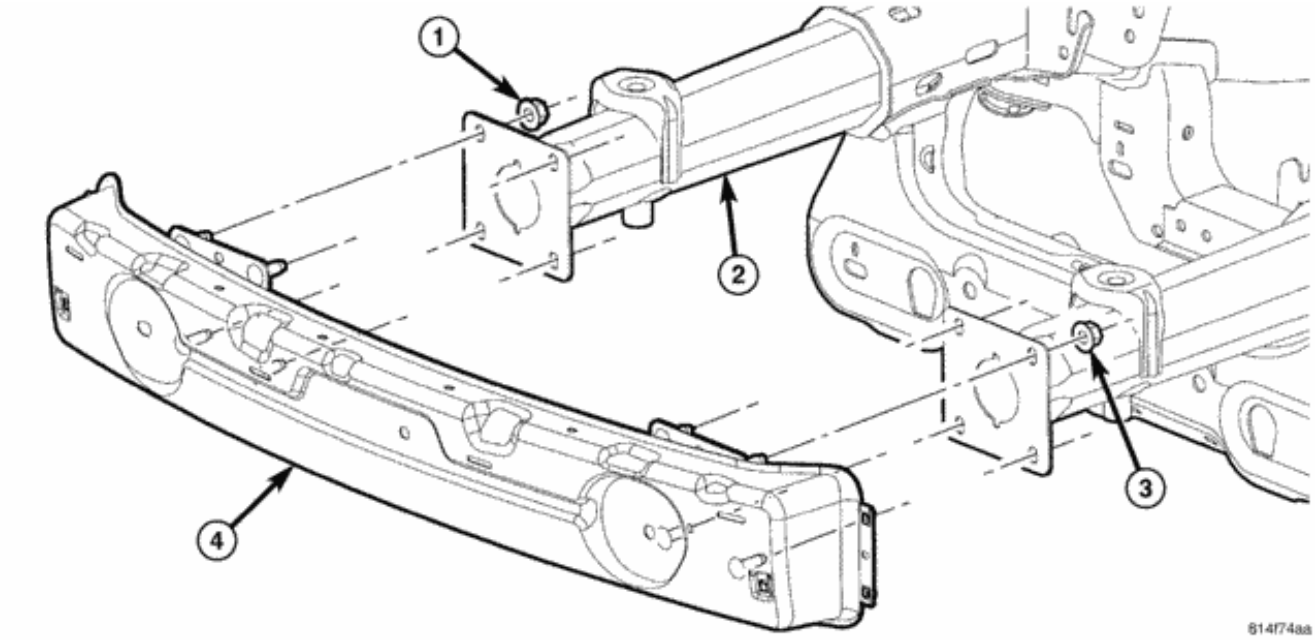


3. Remove the front fender liner of the side being serviced.



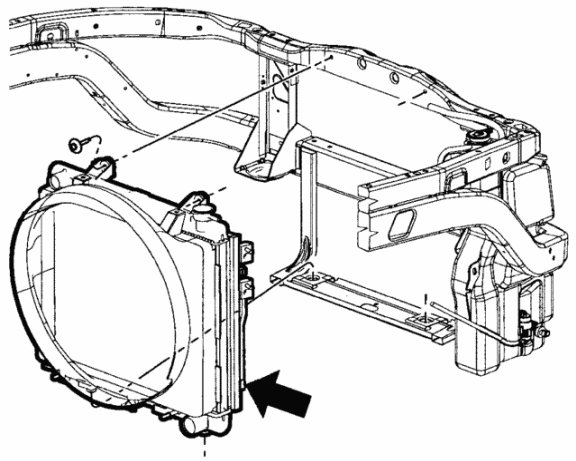
Back to Index

4. Remove the front fascia support (4).



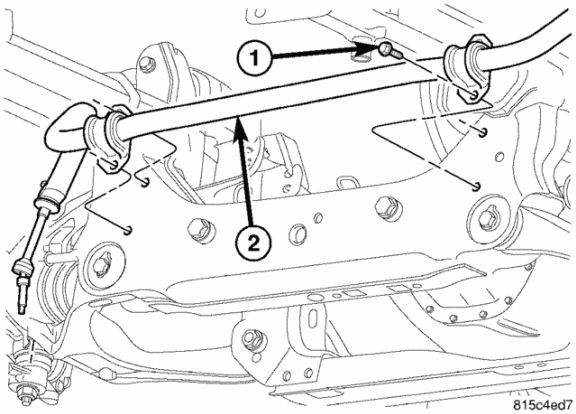
Back to Index

5. Remove the radiator and lower radiator hose.



815c4ed3

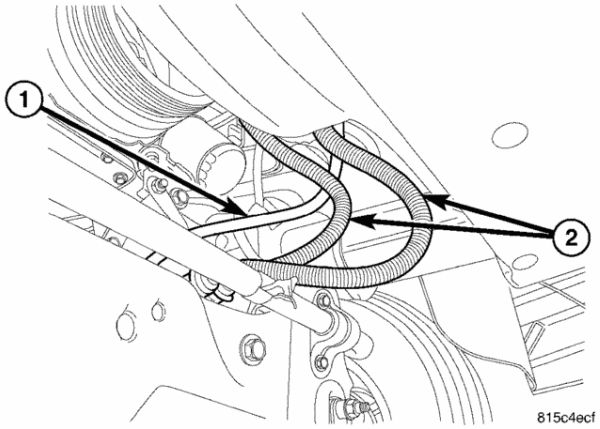
6. Remove the sway bar mounting bracket bolts (1) and position the sway bar (2) out of the way.



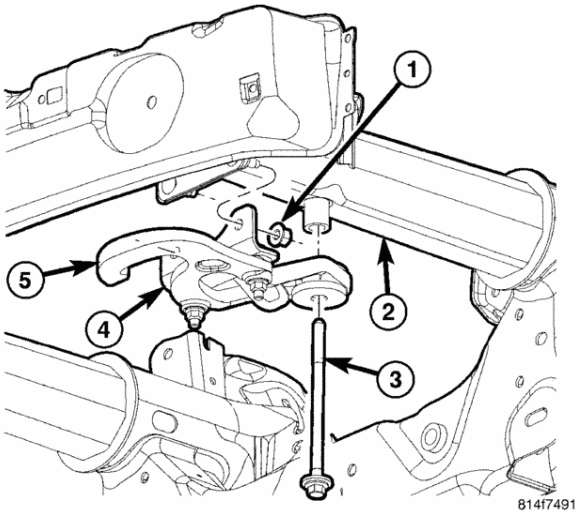
815c4ed7

Back to Index

7. For left side frame rail tips, position the power steering hoses (2) and axle vent hose (1), out of the way.



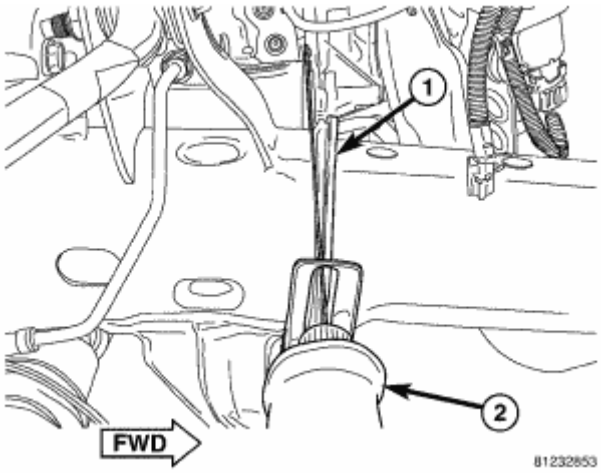
8. Remove the front structure mount bolt (3) to the Front End Sheet Metal (FESM) bracket and the lower bumper support nuts (1) attaching the tow hook (5), if equipped.



CAUTION: Do not use any flame or plasma cutting equipment to cut the frame in the next step. This is due to the inaccurate nature of the cut-line and the fact that the high temperatures achieved during the flame or plasma cutting will change the metal characteristics and may weaken the frame and/or repair location.

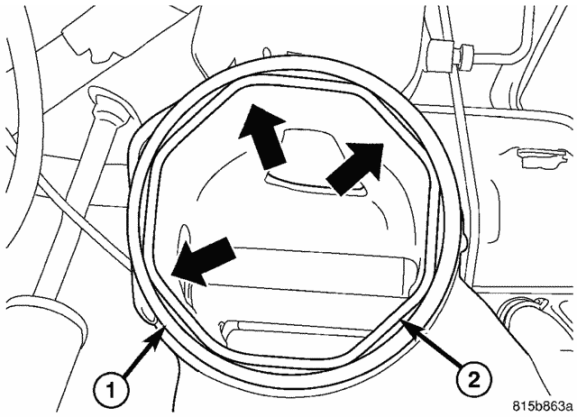
NOTE: Durango shown, Dakota similar.

9. Using a reciprocating saw (2) or equivalent carefully cut and remove the damaged frame rail tip behind the stop bracket (1).



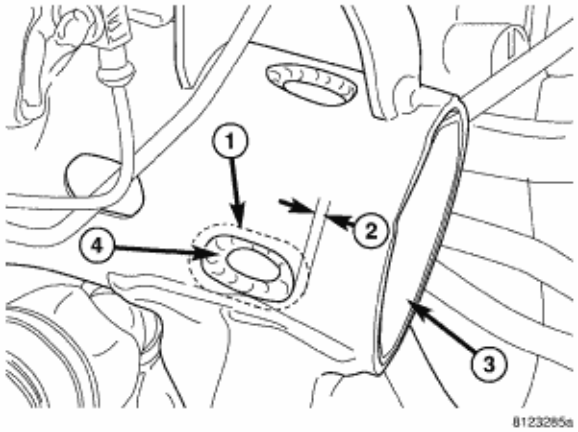
Back to Index

10. Remove the three puddle welds attaching the remaining frame tip section (2) to the frame (1) at the locations indicated. (Right side shown, left side similar.)



NOTE: Durango shown, Dakota similar.

11. Remove the welds (4) by cutting along the outside edge of the weld (1) approximately 1/8 in. (2) using a plasma cutter or drilling out and then using a grinder to remove the welds.



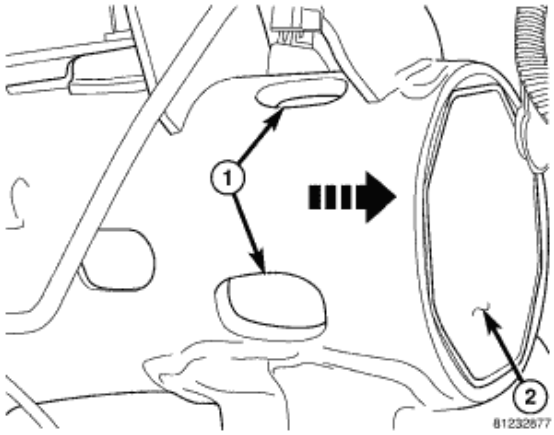
CAUTION: Oxyacetylene cutting torches or equivalent flame sources should never be used for cutting or welding. Only non-flame cutting methods should be used unless specified otherwise.

NOTE: Durango shown, Dakota similar.

12. With the puddle welds (1) removed, remove the remaining piece of the frame tip (2) from within the frame rail and discard.

13. Smooth and square the cut edges of the original frame.

14. Remove any burrs at the holes (1) and frame edges.



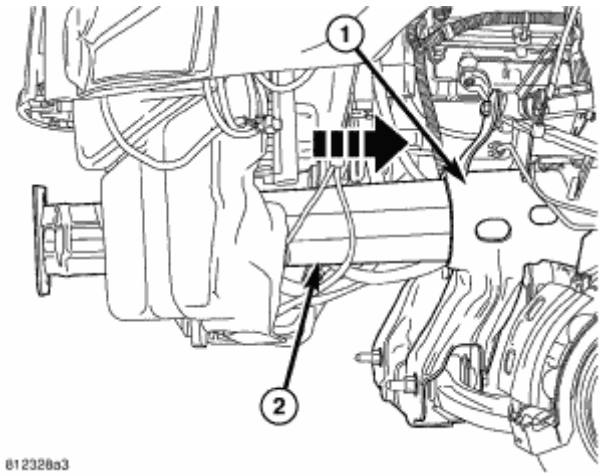
K
K

Back to Index

NOTE: Durango shown, Dakota similar.

15. Dry fit the new rail (2) to verify alignment, fit and make any adjustments as necessary.

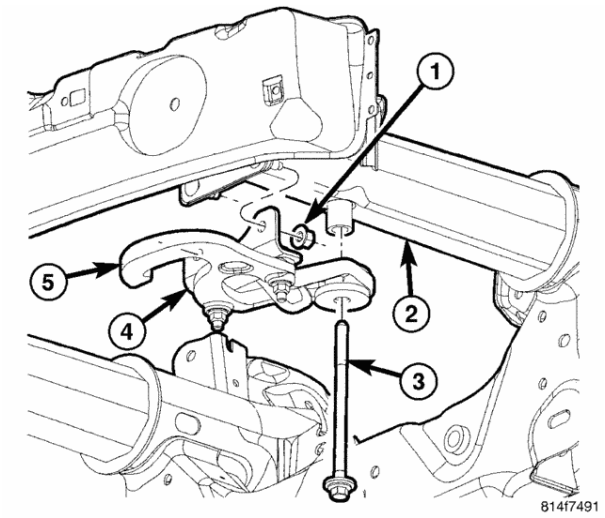
16. Remove all internal and external OEM e-coat within 25 mm (1.0 in.) of the weld joint on the replacement tip and the existing frame rail.



NOTE: Any burned surface coatings will need to be removed prior to application of corrosion preventative coatings.

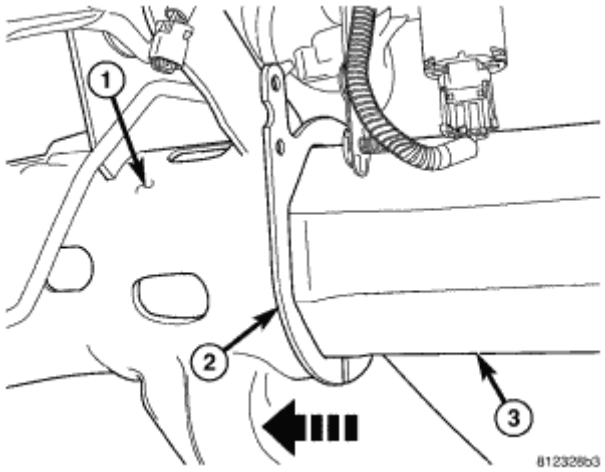
CAUTION: Shield the surrounding area and components from exposure to the welding spatter and heat.

17. Loosely install the lower FESM insulator and front structure mounting bolt (3).



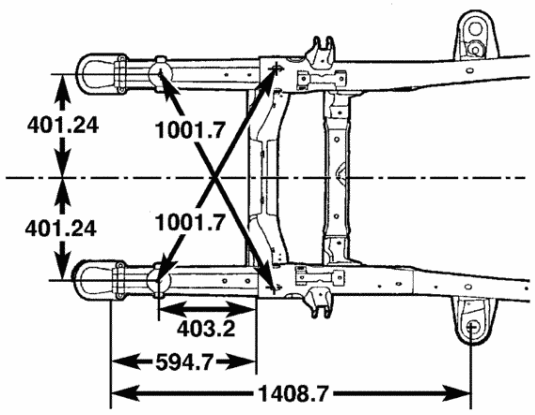
NOTE: Durango shown, Dakota similar.

18. Position the stop bracket (2) against the frame rail (1).



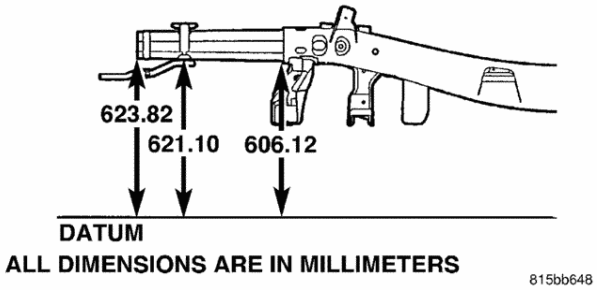
Back to Index

19. Using the appropriate measuring equipment, verify the front end sheet metal bracket's location in all three (X, Y, and Z) planes of space, and adjust if required.



CAUTION: Shield the surrounding area and components from exposure to the welding spatter and heat.

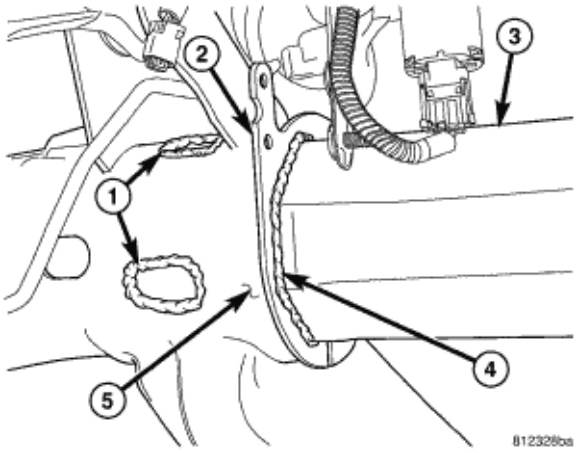
NOTE: Durango shown, Dakota similar.



20. When correctly fitted, tack the three upper ring fillet welds (1) to hold the tip (3) in position, and then complete the ring fillet welds (1).

NOTE: Ring-fillet welds may be filled in with weld material if an improved cosmetic appearance is desired.

21. Confirm alignment of the replacement frame rail tip.



Back to Index

22. Final welding should be performed in a skip (stitch) type method to minimize the heat buildup and frame distortion, utilizing the Weld Process Specifications at the beginning of the sectioning section. The preferred method is GMAW (MIG).

a. Apply root pass welds to the root joint (5) behind the stop bracket (2), one quadrant at a time, switching to the opposite side of the frame for each quadrant.

b. Apply root pass welds to the root joint in front (4) of the stop bracket (2), one quadrant at a time, switching to the opposite side of the frame for each quadrant.

c. Clean the welds of any flux and other impurities before proceeding with the cover pass welds.

d. Apply the cover pass welds in the same manner as described above.

23. Confirm alignment of the replacement frame rail tip.

NOTE: Any burned surface coatings will need to be removed prior to application of corrosion preventative coatings.

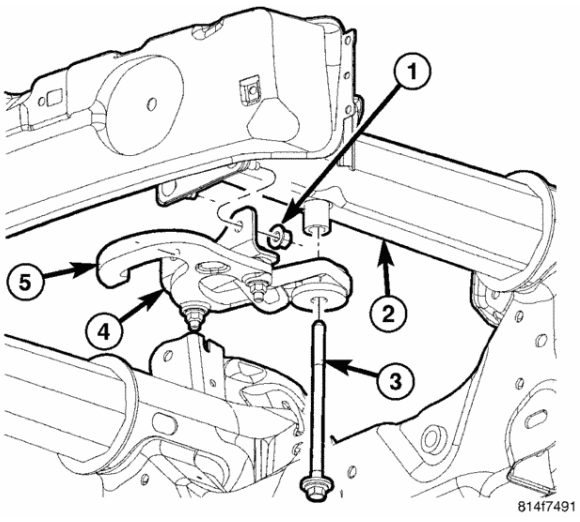
24. Dress the welded area and apply corrosion resistant coatings inside and out.

a. Apply etch-primer to the inside of the frame rail repair area.
b. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.
c. Apply a durable top coat to the outside of the repair area.

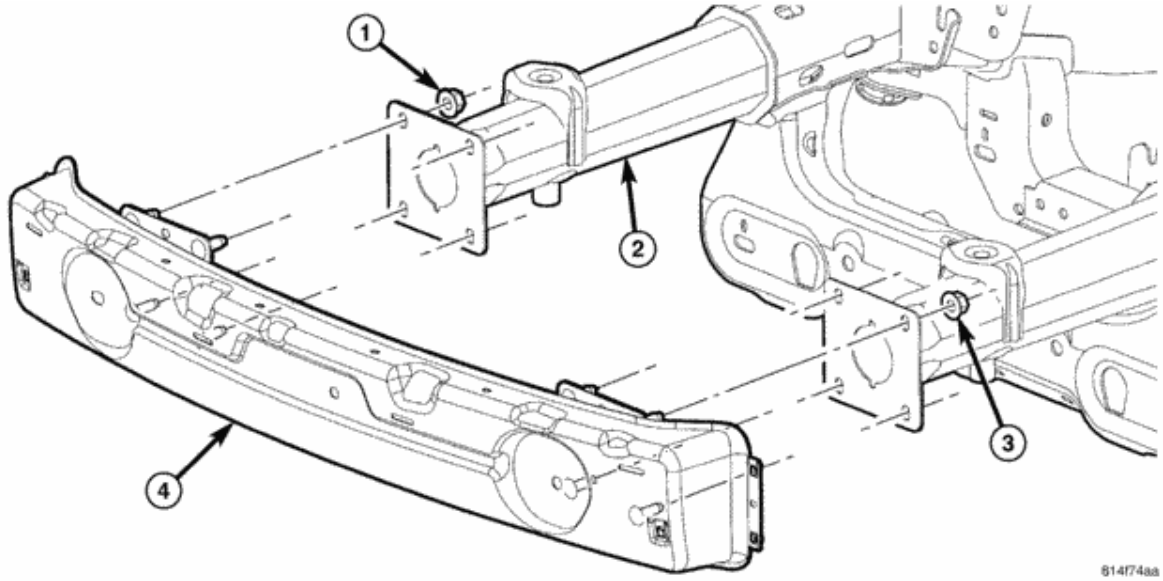
25. Install the tow hook assembly (5), if equipped, and install the two lower fascia support nuts (1).

26. Tighten the nuts (1) to 95 N·m (70 ft. lbs.).

27. Install the front body mount bolt (3) and tighten to 81 N·m (60 ft. lbs.).



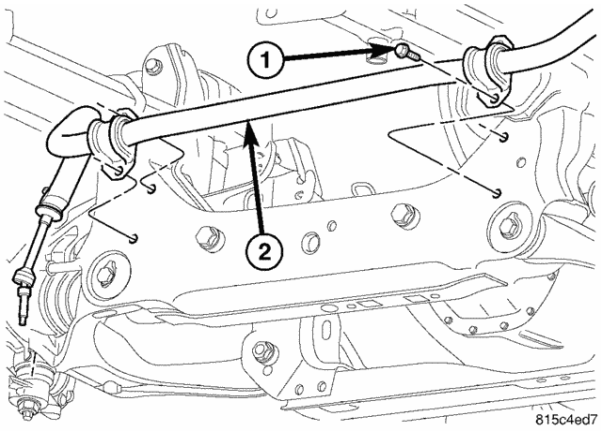
Back to Index



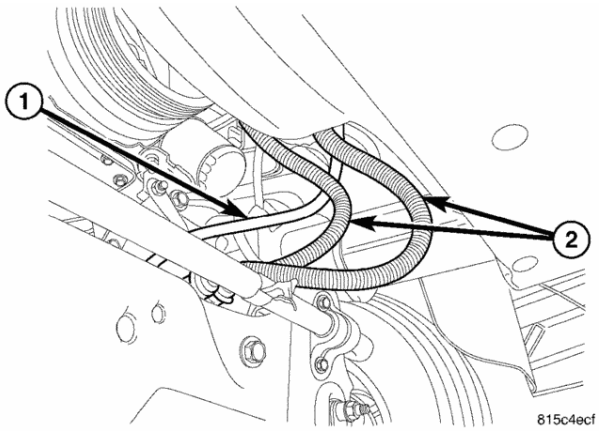
28. Install the front fascia support (4).

29. Position the stabilizer bar (2) back and install the support bracket bolts (1).

30. Tighten the bracket bolts (1) to the frame to 61 N·m (45 ft. lbs.).



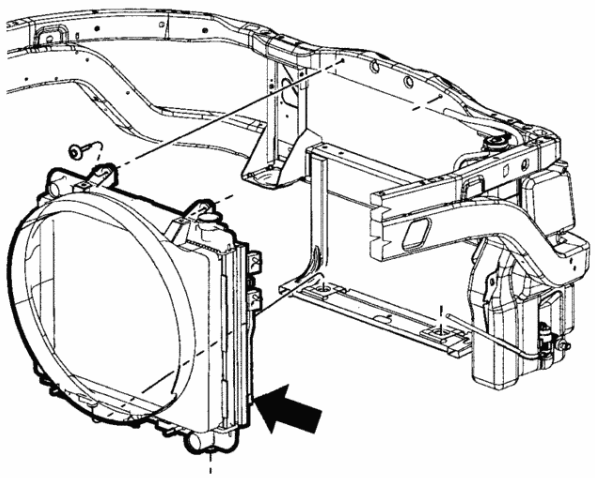
31. Position the power steering lines (2) and the axle vent tube (1) back into position, if necessary.



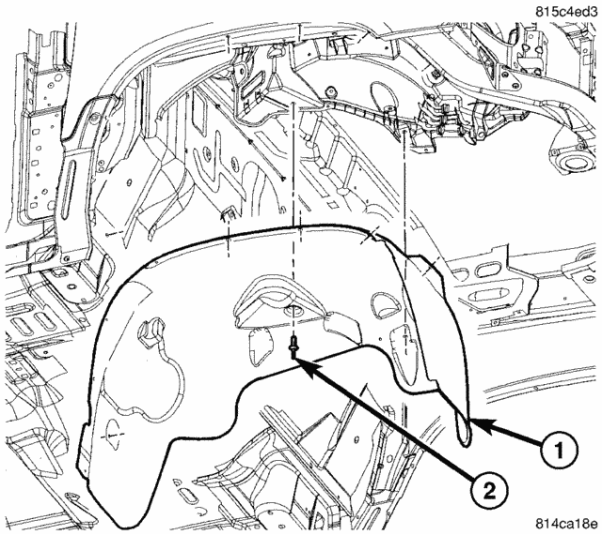
Jj

Back to Index

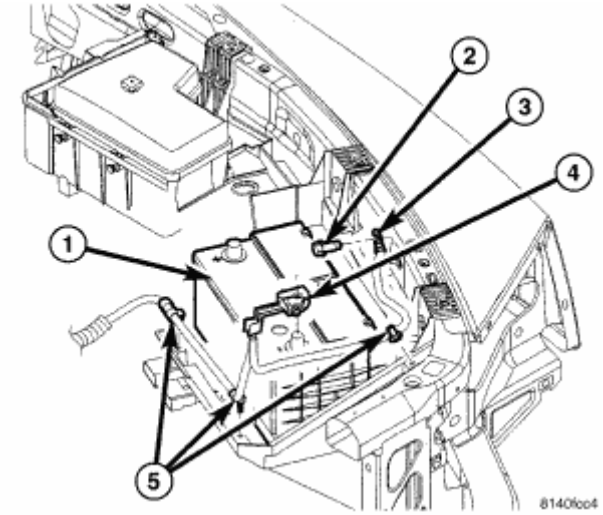
32. Install the radiator and lower radiator hose.



33. Install the front wheelhouse splash shield.



34. Connect the negative battery cable (4).



Back to Index

DODGE DAKOTA FRAME DIMENSIONS

Back to Index

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center to center of Principal Locating Point (PLP), or from center to center of PLP and fastener location.

VEHICLE PREPARATION

Position the vehicle on a frame alignment rack; refer to instructions provided with equipment being used. Adjust the vehicle PLP heights to the specified dimension above the work surface (datum line). Vertical dimensions can be taken from the datum line to the locations indicated were applicable.

DESCRIPTION	FIGURE
ND 33 ½ DOOR TOP VIEW – (4 X 2)	1
ND 33 ½ DOOR LEFT SIDE VIEW – (4 X 2)	2
ND 33 ½ DOOR TOP VIEW – (4 X 4)	3
ND 33 ½ DOOR LEFT SIDE VIEW – (4 X 4)	4
ND 84 4 DOOR TOP VIEW – (4 X 2)	5
ND 84 4 DOOR LEFT SIDE VIEW – (4 X 2)	6
ND 84 4 DOOR TOP VIEW – (4 X 4)	7
ND 84 4 DOOR LEFT SIDE VIEW – (4 X 4)	8

Back to Index

FRAME DIMENSIONS

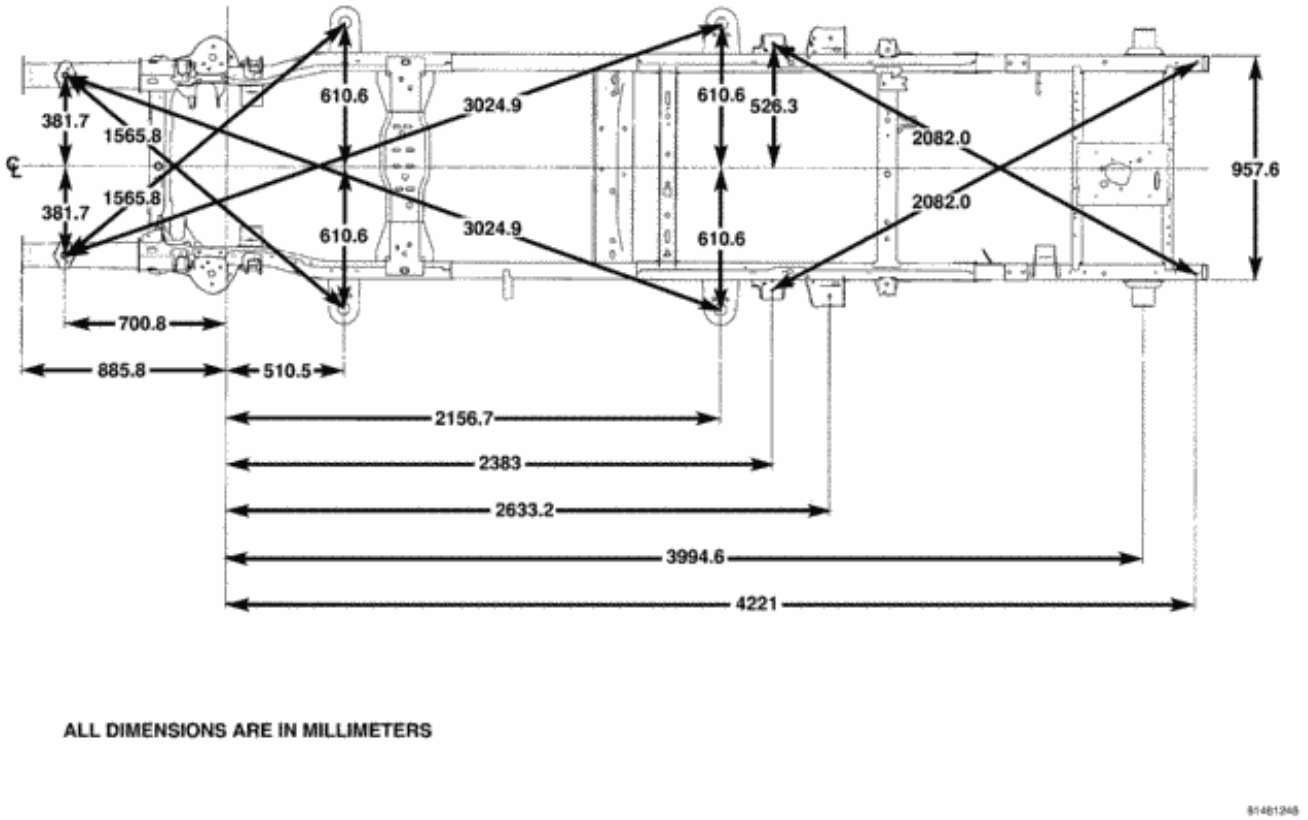
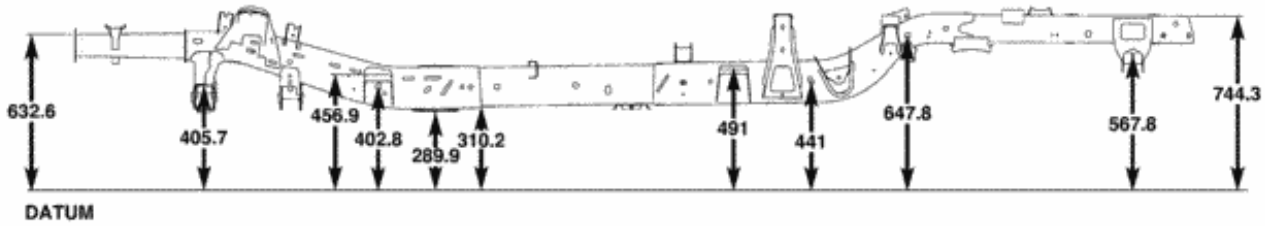


Figure 1. FRAME DIMENSIONS (ND 33 ½ DOOR TOP VIEW – 4 X 2)

Back to Index

FRAME DIMENSIONS

ALL DIMENSIONS ARE IN MILLIMETERS



DATUM LOCATED WITH P245 / 70R16 TIRE

814612d9

Figure 2. FRAME DIMENSIONS (ND 33 ½ DOOR LEFT SIDE VIEW – 4 X 2)

Back to Index

FRAME DIMENSIONS

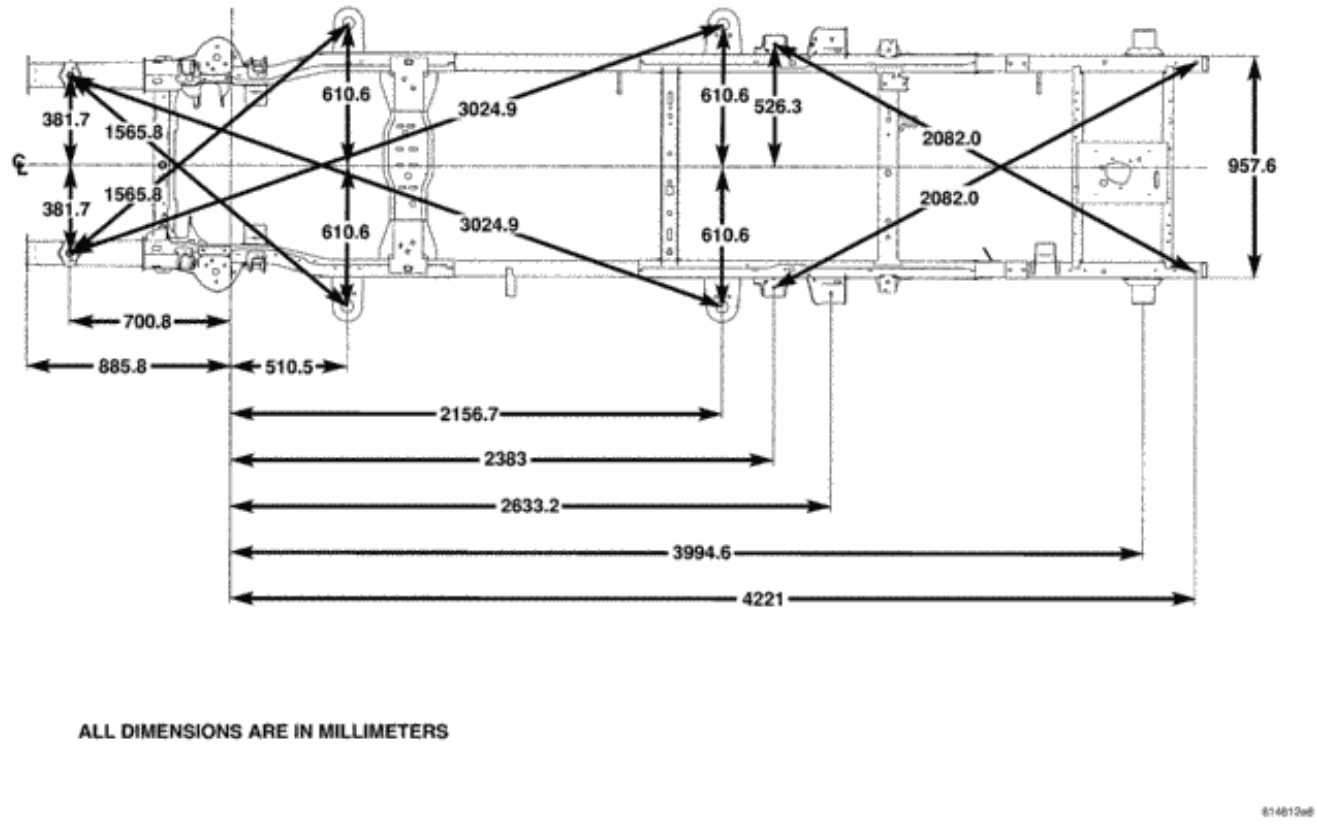


Figure 3. FRAME DIMENSIONS (ND 33 ½ DOOR TOP VIEW – 4 X 4)

Back to Index

FRAME DIMENSIONS

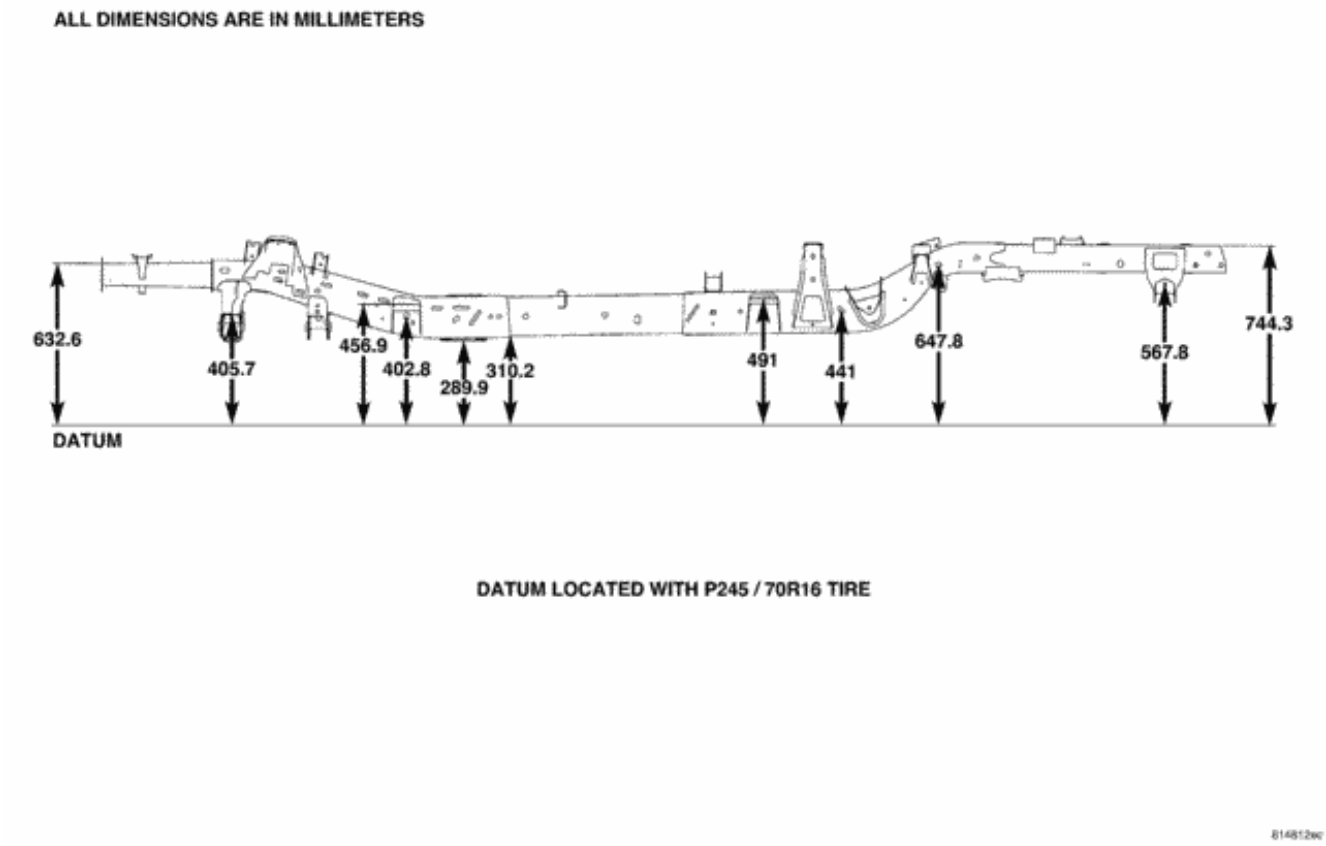


Figure 4. FRAME DIMENSIONS (ND 33 ½ DOOR LEFT SIDE VIEW – 4 X 4)

Back to Index

FRAME DIMENSIONS

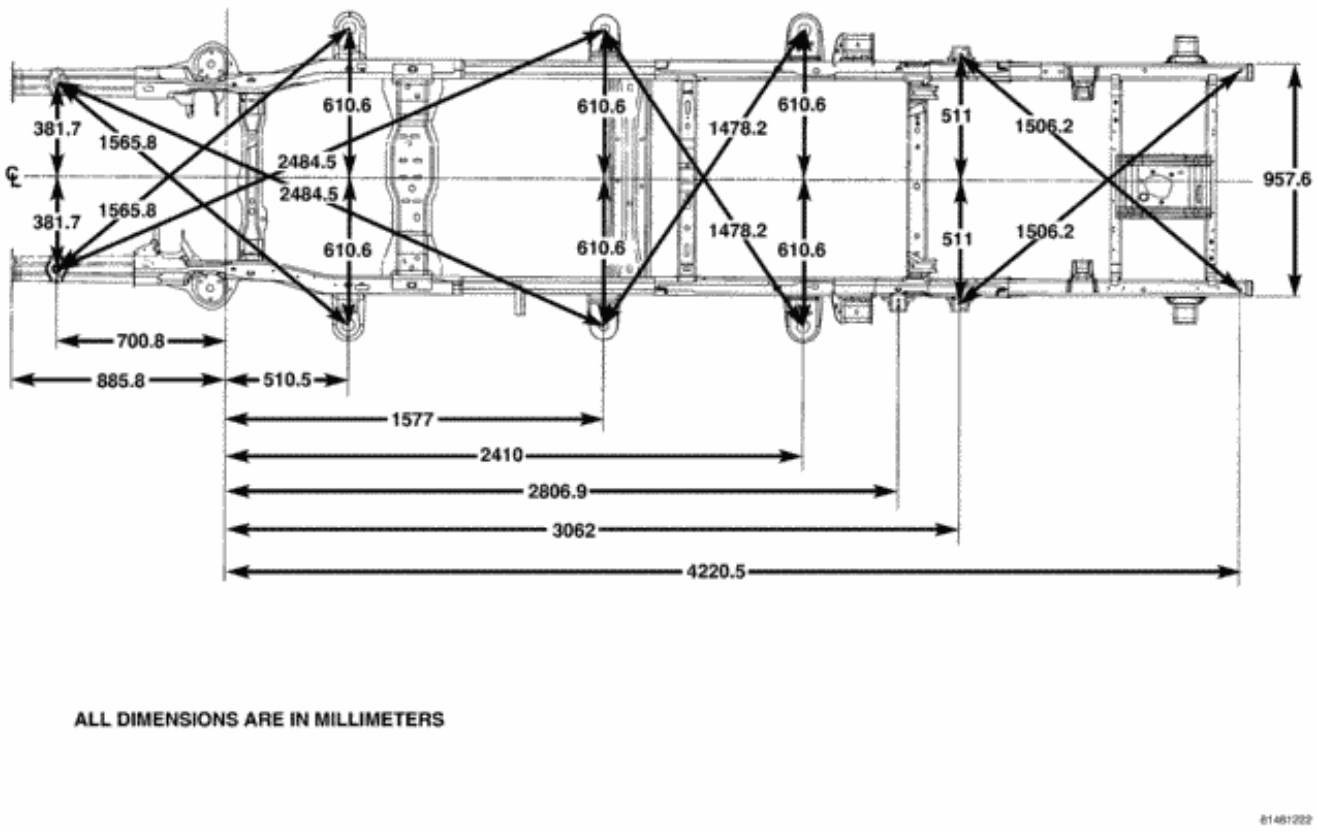


Figure 5. FRAME DIMENSIONS (ND 84 4 DOOR TOP VIEW – 4 X 2)

Back to Index

FRAME DIMENSIONS

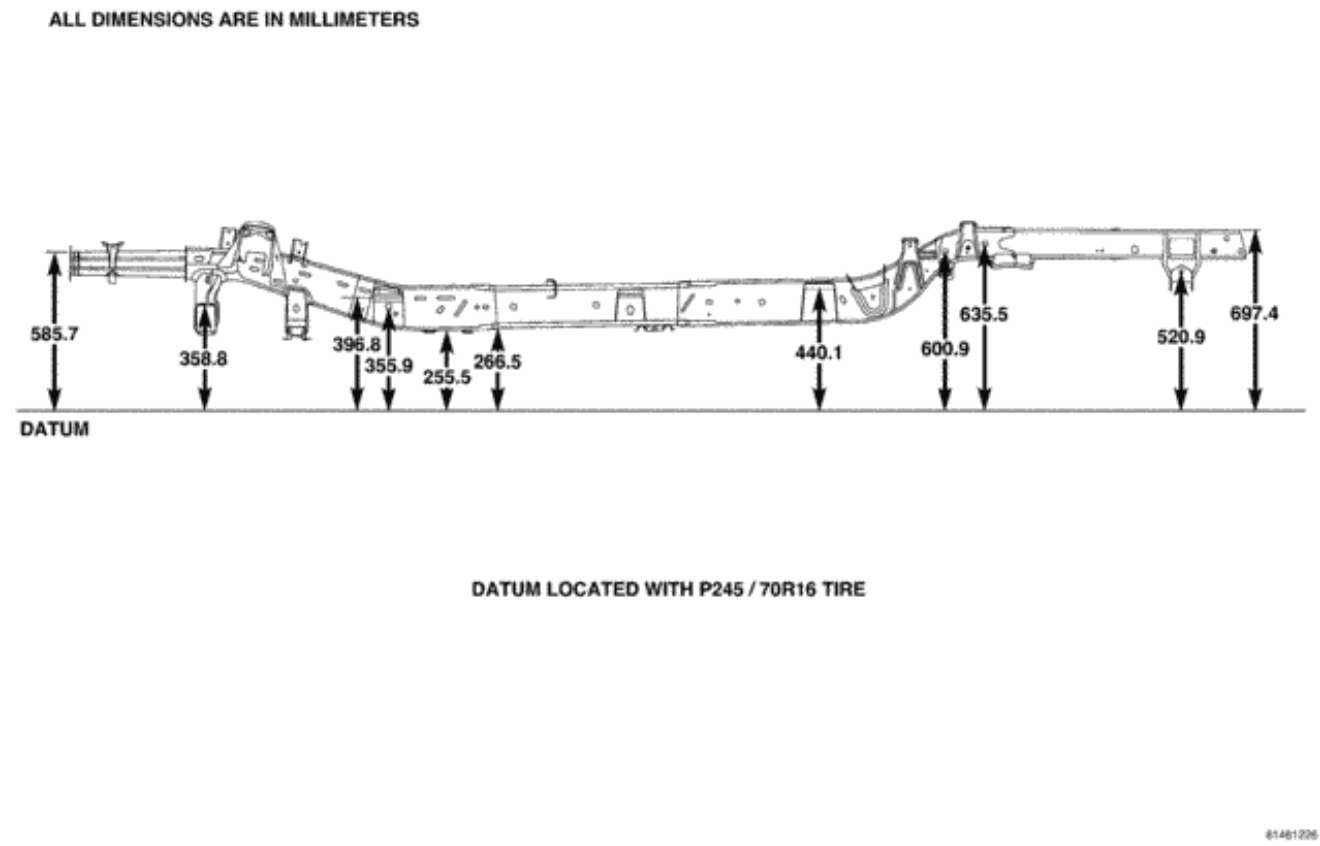


Figure 6. FRAME DIMENSIONS (ND 84 4 DOOR LEFT SIDE VIEW – 4 X 2)

Back to Index

FRAME DIMENSIONS

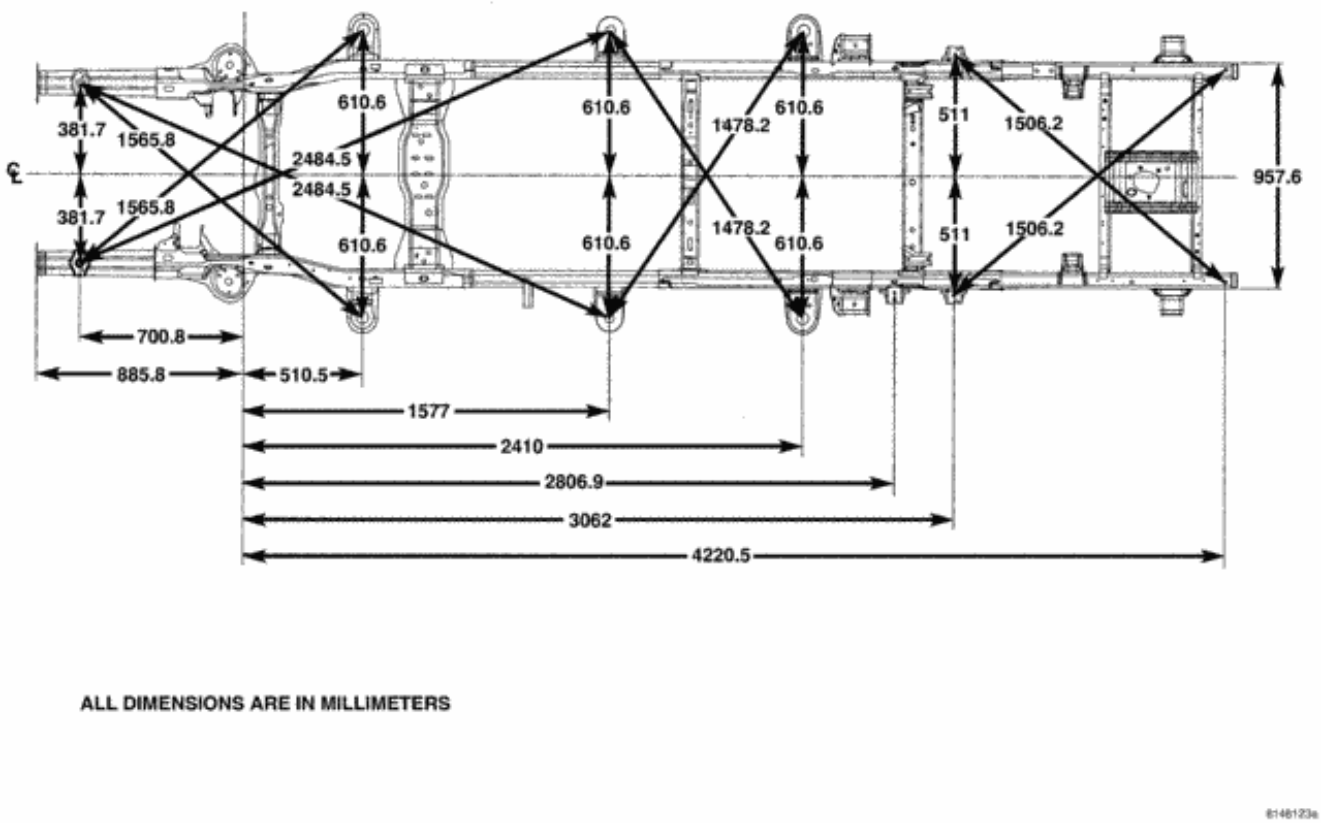


Figure 7. FRAME DIMENSIONS (ND 84 4 DOOR TOP VIEW – 4 X 4)

Back to Index

FRAME DIMENSIONS

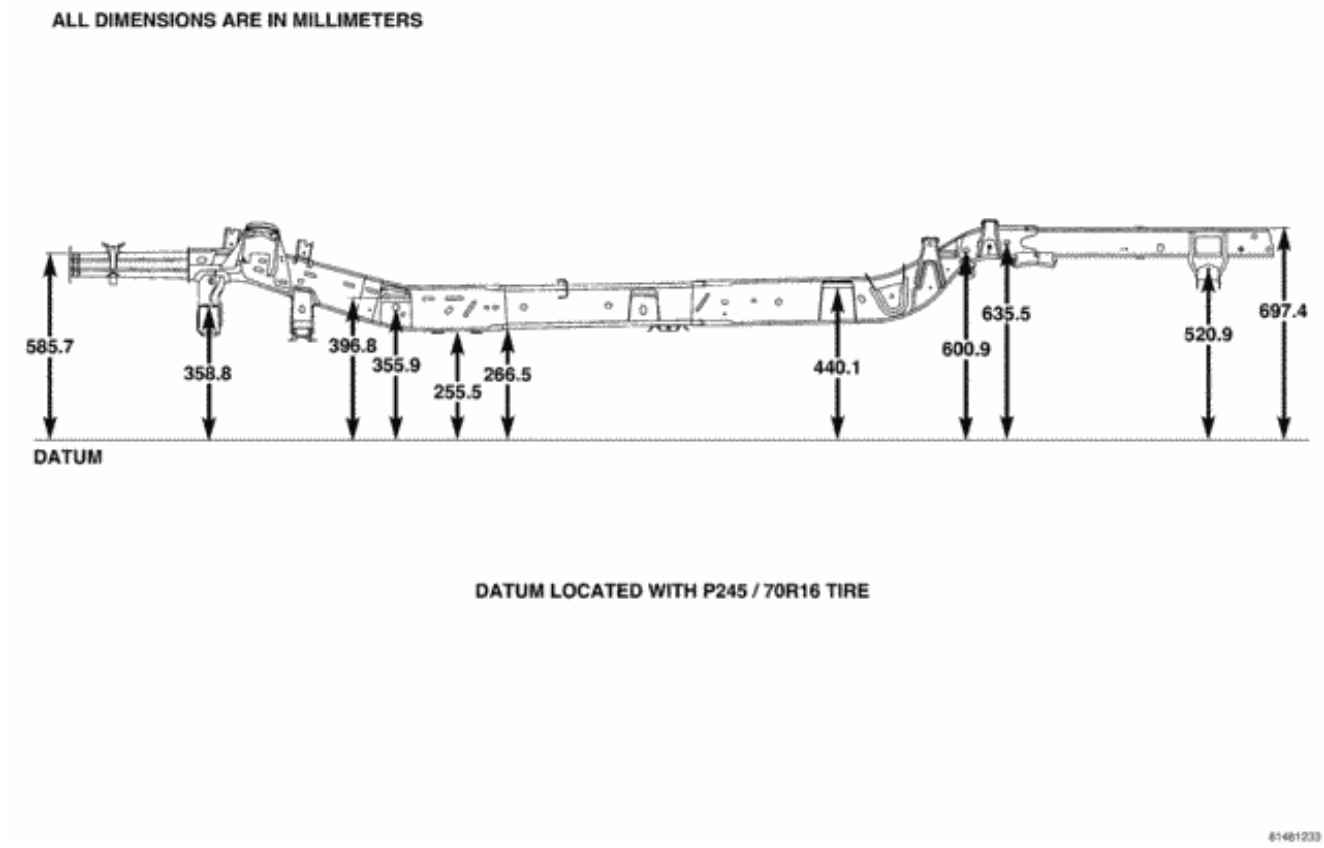


Figure 8. FRAME DIMENSIONS (ND 84 4 DOOR LEFT SIDE VIEW – 4 X 4)

Back to Index

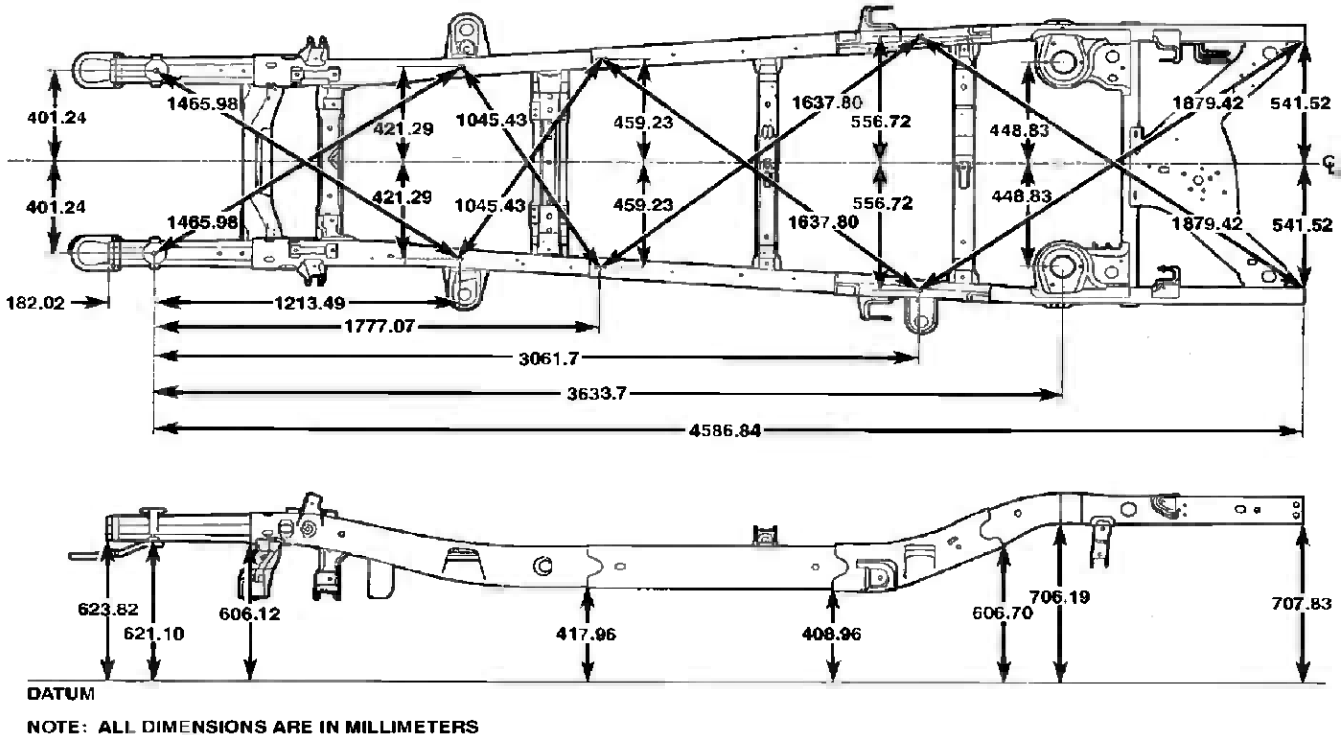
CHRYSLER ASPEN/DODGE DURANGO FRAME DIMENSIONS

Back to Index

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

INDEX



Back to Index

DODGE DURANGO/CHRYSLER ASPEN FRONT FRAME TIP REPAIR

CAUTION: Inspect the tire winch assembly for damage. If any one or more of the following are evident, replace the winch assembly.

- Indications of cracked or bulging plastic.
- Housing flanges are bent or cracked.
- If winch was loose before repair.
- If the rivet heads are separated from the housing in any way.

1. Before proceeding with this repair procedure review the required service warnings and precautions.

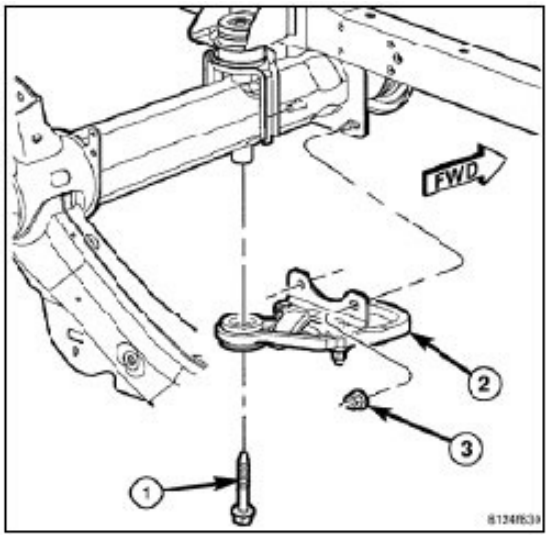
2. Disconnect and isolate the battery negative cable.

3. Remove the front wheelhouse splash shield.

4. Remove the front bumper if required.

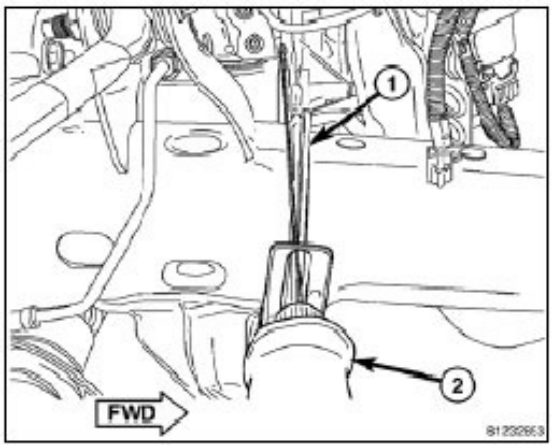
5. Remove the washer bottle, if required.

6. Remove the front cab mount bolt (1) to the Front End Sheet Metal (FESM) bracket and the lower bumper support nuts (3) attaching the tow hook (2), if equipped.



7. Using a reciprocating saw (2) or equivalent, carefully cut and remove the damaged frame rail tip behind the stop bracket (1).

CAUTION: Do not use any flame or plasma cutting equipment to cut the frame in step 7. This is due to the inaccurate nature of the cut-line and the fact that the high temperatures achieved during the flame or plasma cutting will change the metal characteristics and may weaken the frame and/or repair location.

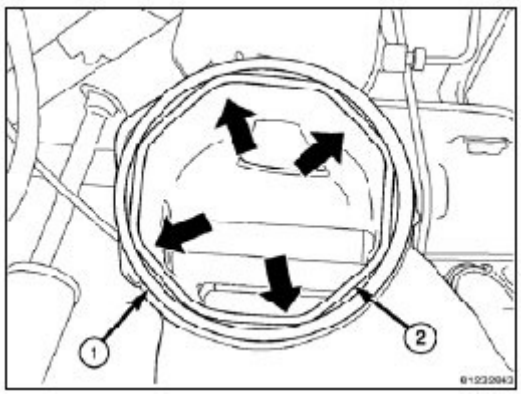


Back to Index

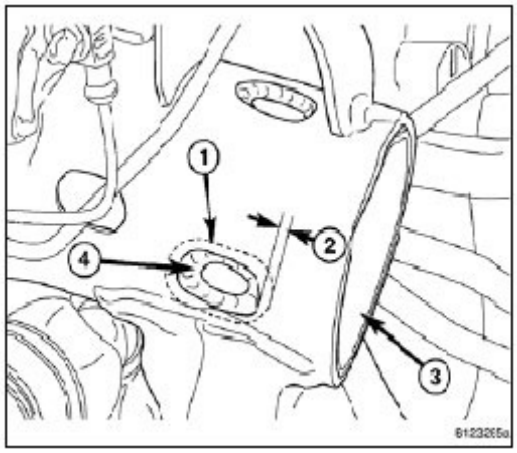
8. Remove the brake lines as necessary, to gain access to the upper fillet welds.

9. For the right side rail tip, remove the oil filter to gain access to the inner fillet weld.

10. Remove the four puddle welds attaching the remaining frame tip section (2) to the frame (1) at the locations indicated. (Right side shown, left side similar.)



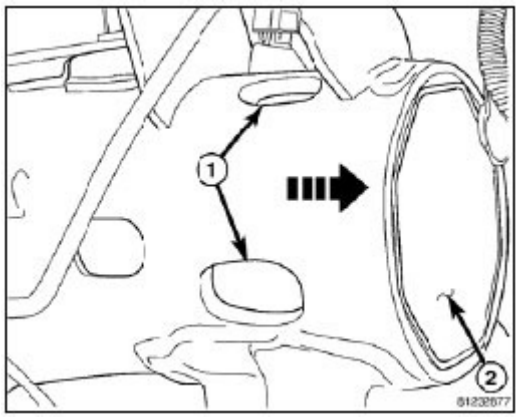
11. Using a plasma cutter, remove the welds (4) by cutting along the outside edge of the weld (1) approximately 1/8 in.(2).



12. With the puddle welds (1) removed, remove the remaining piece of the frame tip (2) from within the frame rail and discard.

13. Smooth and square the cut edges of the original frame.

14. Remove any burrs at the holes (1) and frame edges.



Back to Index

15. Dry fit the new rail (2) to verify alignment, fit and make any adjustments as necessary.

16. Remove all internal and external OEM e-coat within 51MM (2.0 in.) of the weld joint on the replacement tip and the existing frame rail.

NOTE: Any burned surface coatings will need to be
removed prior to application of corrosion preventative coatings.

CAUTION: Shield the surrounding area and components from exposure to the welding spatter and heat.

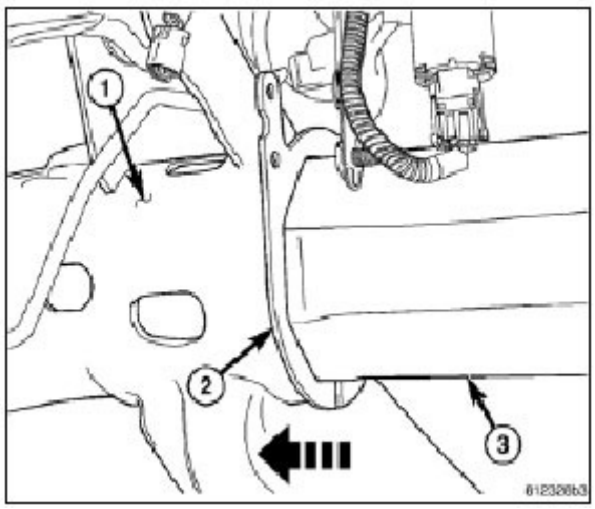
17. Loosely install the lower FESM insulator and cab mounting bolt.

18. Position the stop bracket (2) against the frame rail (1).

NOTE: If replacing the driver's side tip, the stop bracket mounting tab will not be utilized. The stop bracket may be rotated about the narrow end of the tip and repositioned so interference of tab with other parts is avoided. The mounting tab my also be cut off.

If replacing the passenger's side tip, the stop bracket mounting tab may be utilized if the vehicle is equipped with optional rear AC system.

CAUTION: Shield the surrounding area and components from exposure to the welding spatter and heat.



19. Using the appropriate measuring equipment, verify the front end sheet metal bracket's location in all three (X,Y,and Z) planes of space, and adjust if required (Chart supplied at end of instruction sheet).

Back to Index

20. When correctly fitted, tack the three upper ring fillet welds (1) to hold the tip (3) in position, and then complete the ring fillet welds (1).

NOTE: Ring-fillet welds may be filled in with weld material if an improved cosmetic appearance is desired.

21. Confirm alignment of the replacement frame rail tip.

22. Final welding should be performed in a skip (stitch) type method to minimize the heat buildup and frame distortion, utilizing the Weld Process Specifications at the beginning of the sectioning section. The preferred method is GMAW (MIG).

(a) Apply root pass welds to the root joint (5) behind the stop bracket (2), one quadrant at a time, switching to the opposite side of the frame for each quadrant.

(b) Apply root pass welds to the root joint in front (4) of the stop bracket (2), one quadrant at a time, switching to the opposite side of the frame for each quadrant.

(c) Clean the welds of any flux and other impurities before proceeding with the cover pass welds.

(d) Apply the cover pass welds in the same manner as described above.

23. Confirm alignment of the replacement frame rail tip.

NOTE: Any burned surface coatings will need to be removed prior to application of corrosion preventative coatings.

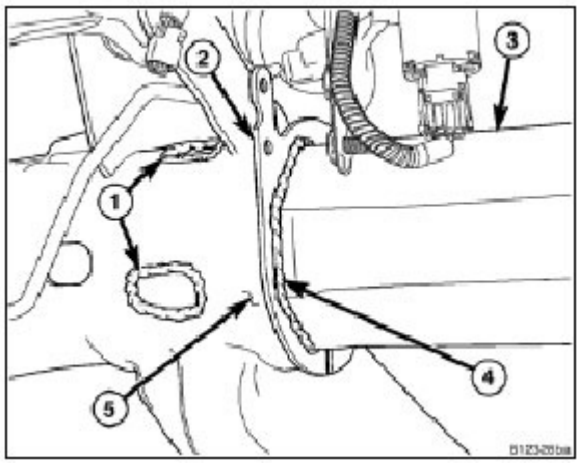
24. Dress the welded area and apply corrosion resistant coatings inside and out.

(a) Apply etch-primer to the inside of the frame rail repair area.

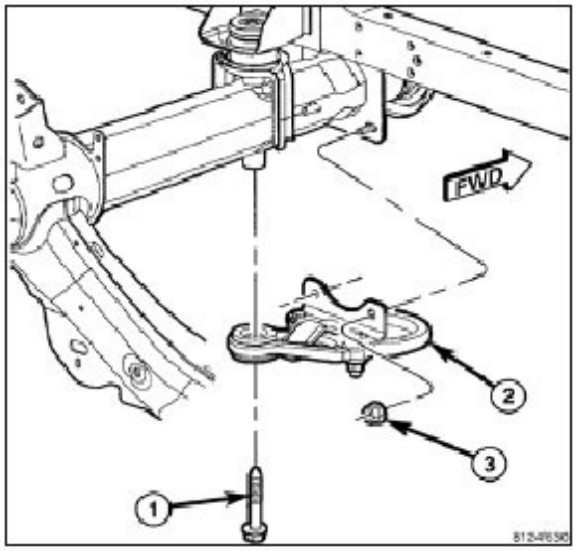
(b) Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

(c) Apply a durable top coat to the outside of the repair area.

25. Install the tow hook assembly (2), if equipped, and install the two lower bumper support nuts (3).



Note: Use Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent



26. Tighten the nuts (3) to 108 N·m (80 ft. lbs.).

27. Install the front body mount bolt (1) and tighten to 81 N·m (60 ft. lbs.).

28. Install the front bumper.

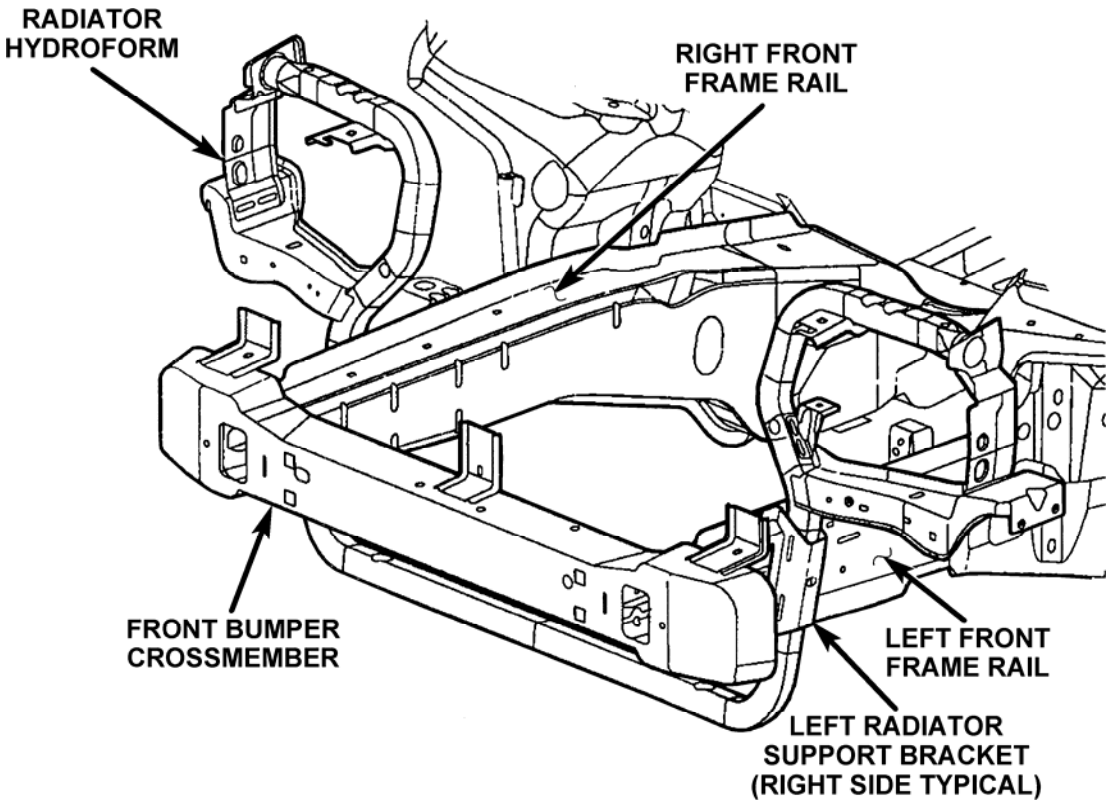
29. Install the front wheelhouse splash shield.

Back to Index

JEEP COMMANDER/GRAND CHEROKEE
FRONT FRAME RAIL SECTIONING PROCEDURE

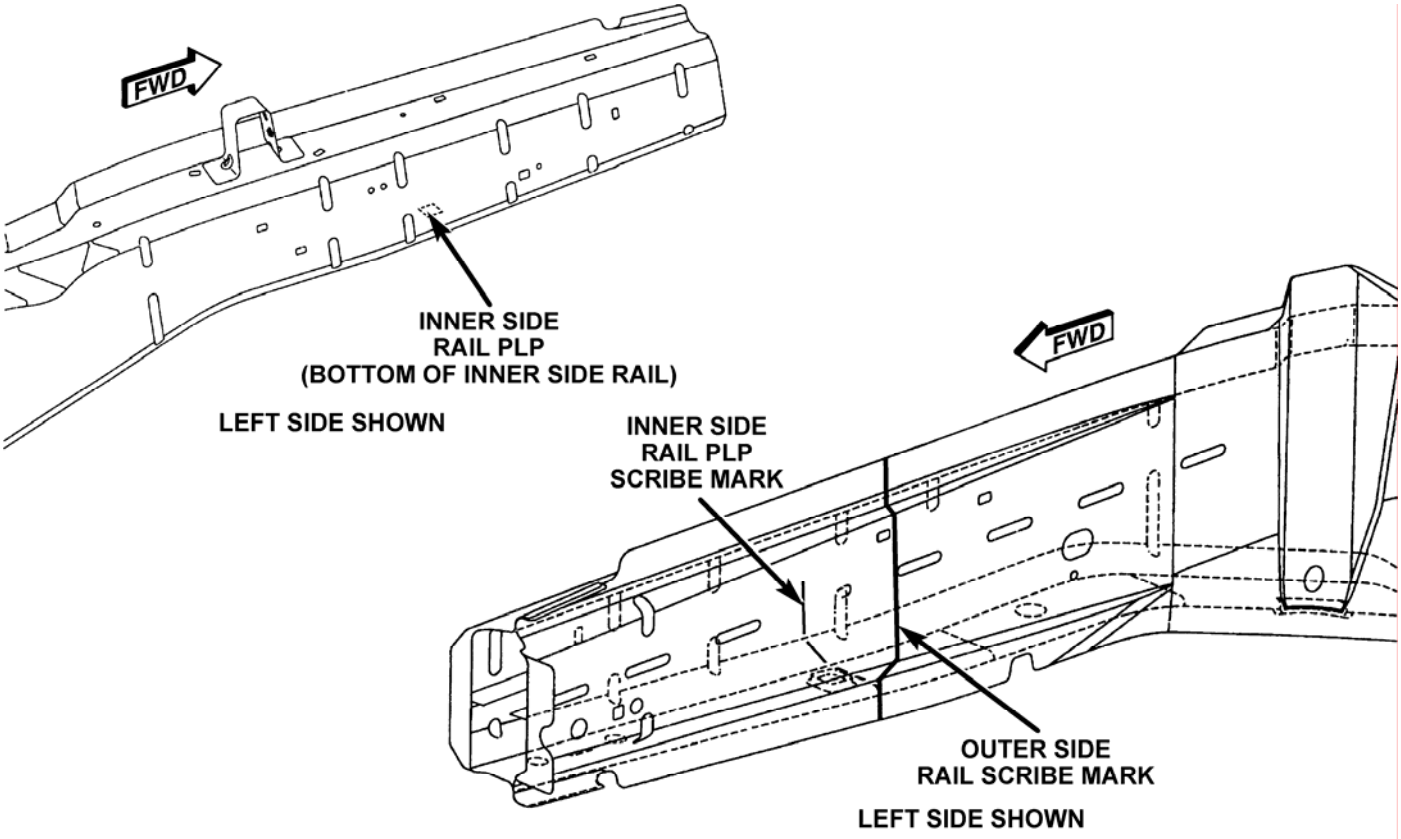
1. Remove front bumper cross member using a Rotabroach (hole saw).

2. Release welds securing radiator support brackets to the side of outer frame rails using a Rotabroach (hole saw) and only mill through the bracket if possible. If replacing one frame rail, replacing part of radiator hydroform can be done.



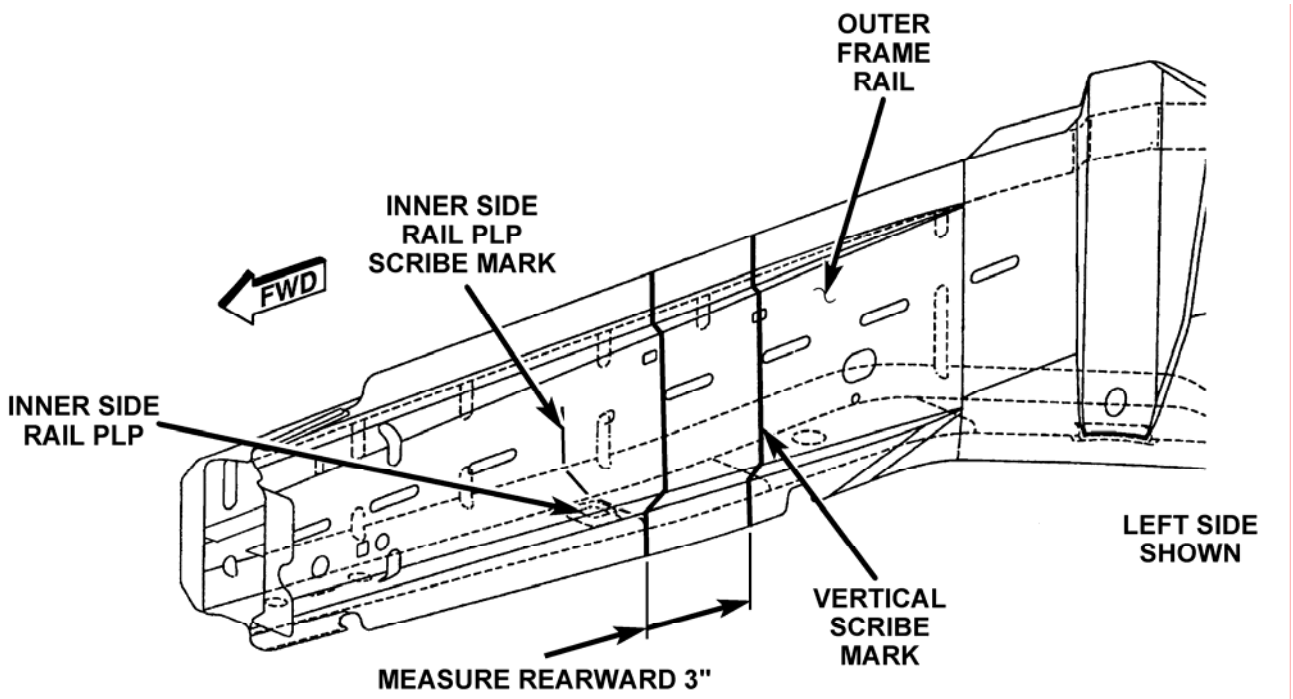
Back to Index

4. Using the forward edge of PLP hole on bottom of inner side member as reference, mark outer rail at top and bottom then create vertical scribe mark on outer frame rail.



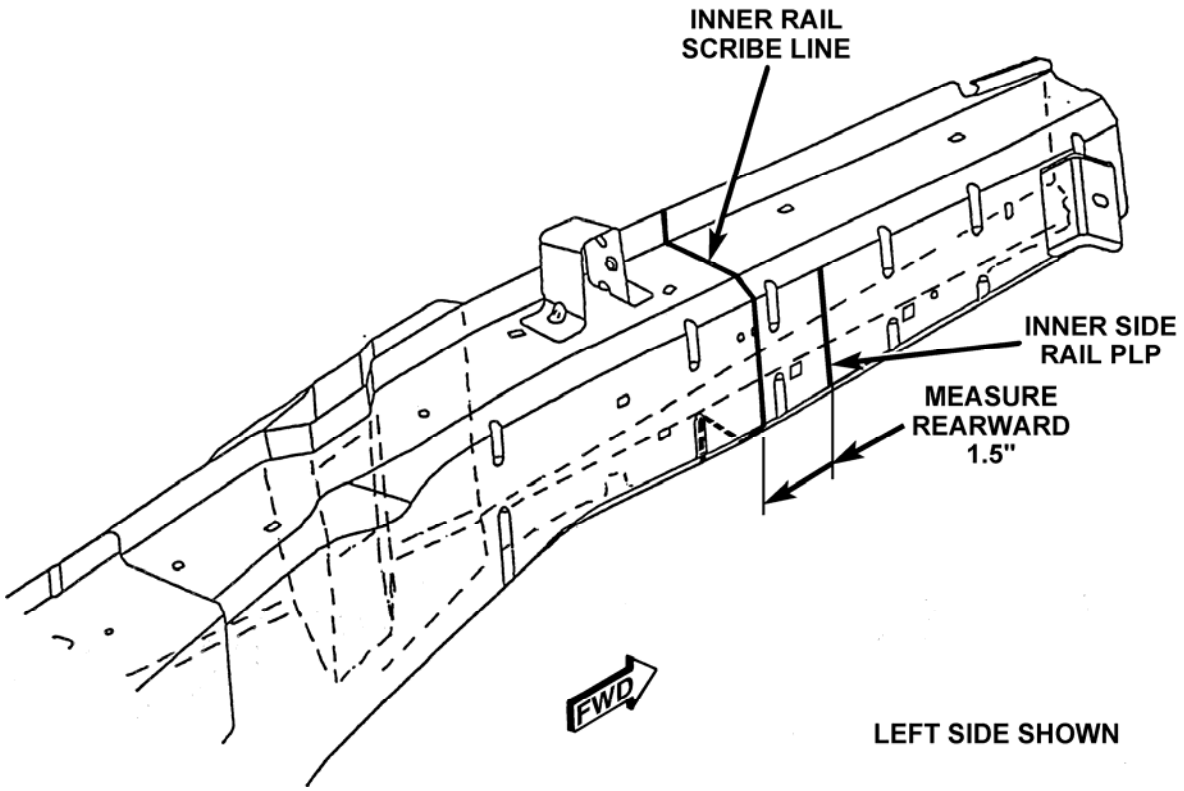
Back to Index

5. Using the forward edge of PLP hole on bottom of inner side member as reference, measure rearward 3" and mark outer rail at top and bottom then create vertical scribe mark on outer frame rail.



Back to Index

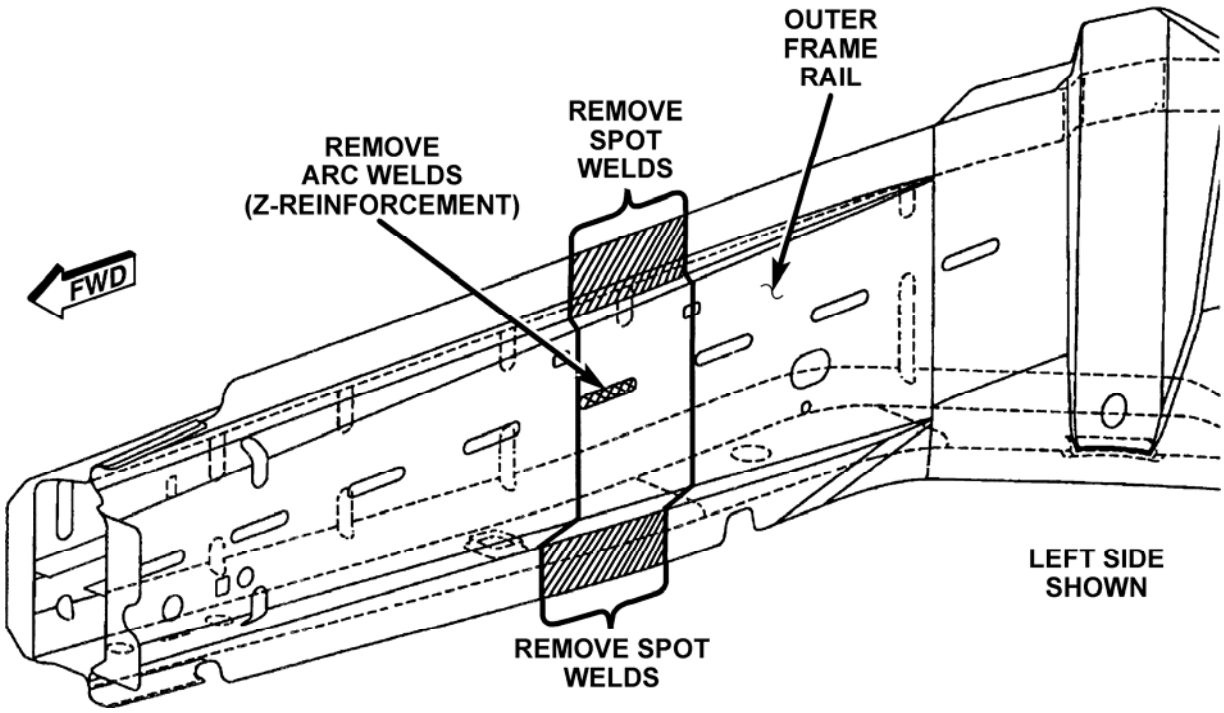
6. Using the forward edge of PLP hole on bottom of inner side member as reference, measure rearward 1.5" and mark inner rail at top and bottom then create vertical scribe mark on inner frame rail.



Back to Index

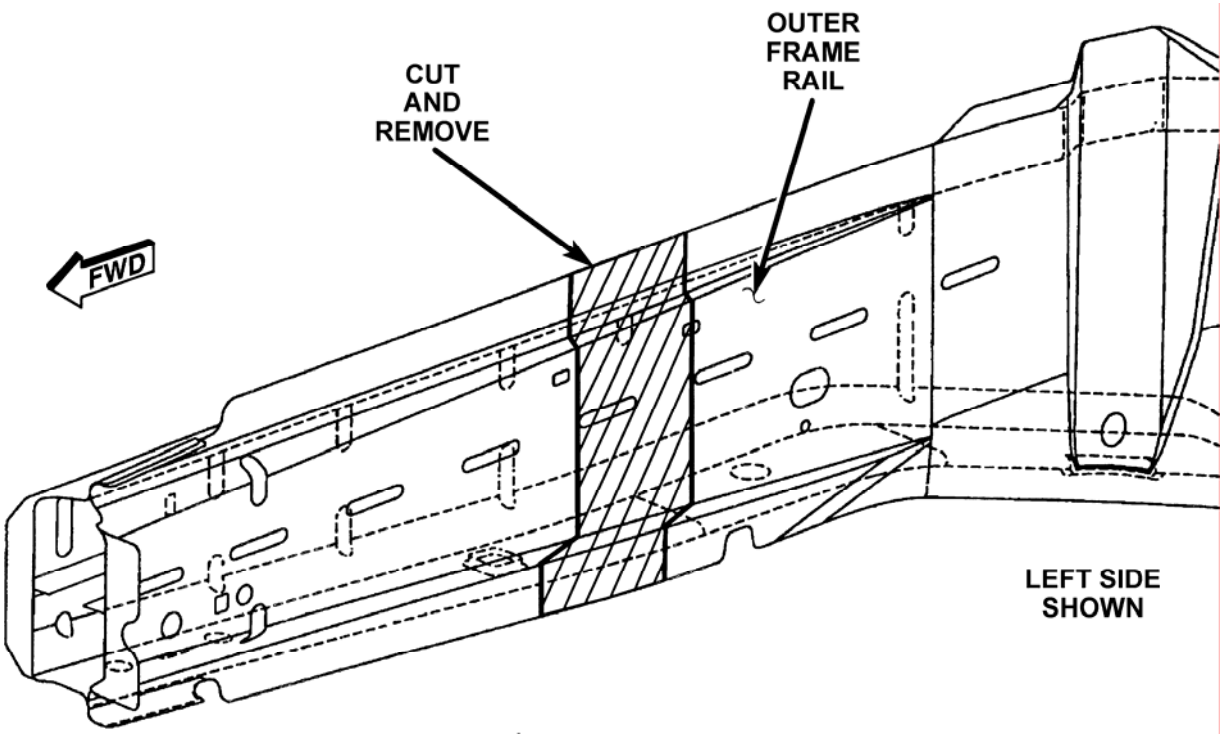
7. Remove spot welds holding the inner and outer side members together between the two scribe lines on the outer rail.

8. Remove the MIG welds holding the internal Z-reinforcement to the outer rail between the two scribe lines.



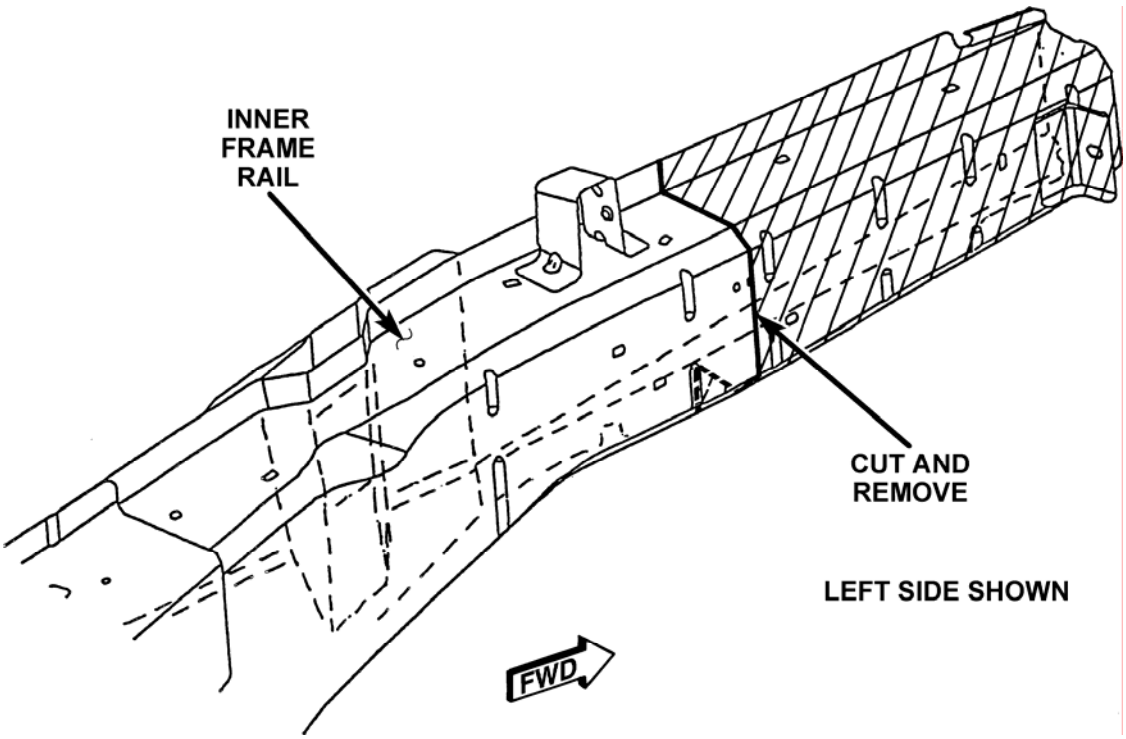
Back to Index

9. Carefully cut the outer side member top to bottom at the scribe lines using a cut-off wheel without damaging the inner side member or the Z-reinforcement inside the rail and remove the access panel or “window”.



Back to Index

10. Using a reciprocating saw, cut vertically down through the inner frame rail and Z-reinforcement at the scribe location on the inner rail.



Back to Index

11. Carefully clean and de-burr all cut edges and prepare for welding.

12. Remove any paint, e-coat, or other coatings within 1-inch of any weld area.

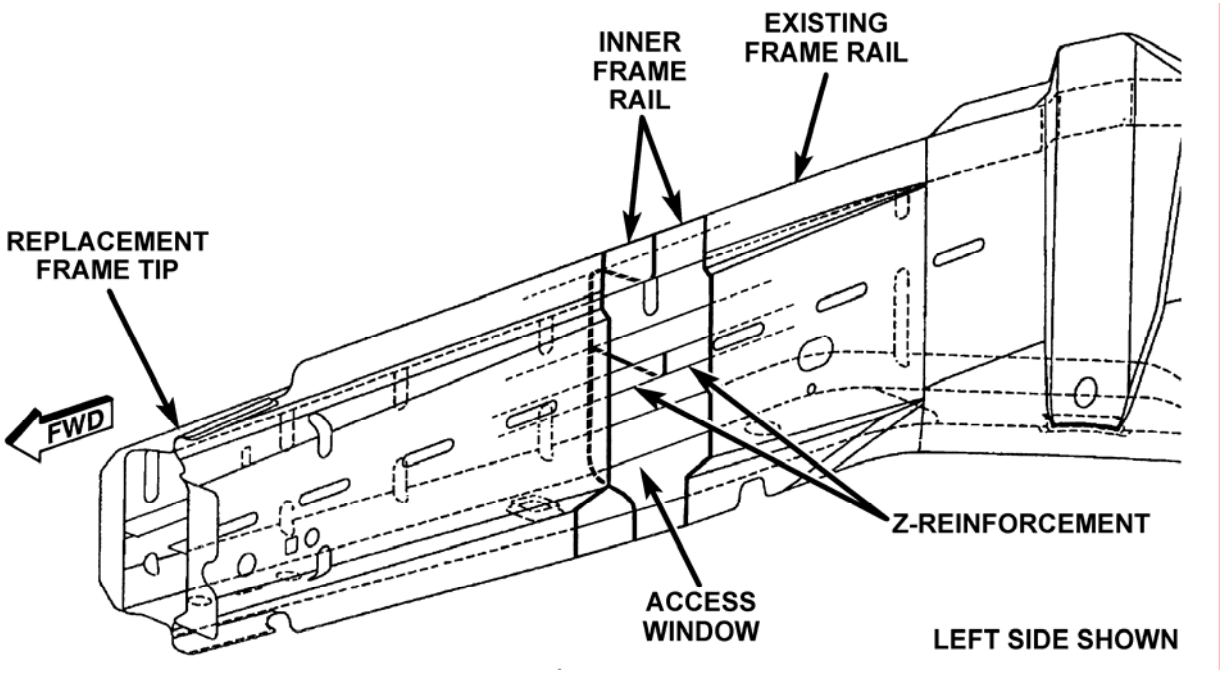
13. Using the same procedures previously described, prepare the service rail tip for installation.

14. Fit and position the new rail tip to the vehicle using XYZ dimensions and measurement equipment.

15. Confirm good joint fit-up with inner frame rail and Z-reinforcement and root gap equal to width of saw cut.

16. Tack weld the new tip into position using the weld chart located at the end of repair procedure section.

17. Reconfirm proper tip location.



Back to Index

18. Weld inner frame rail in the following sequence.
    a. Upper half from the access window.
    b. Lower half from exterior of rail
    c. Clean backside of above two welds in preparation for welding.
    d. Upper half from exterior.
    e. Lower half from access window.

19. Weld Z-reinforcement from top and from bottom, from inner side rail to outer side rail.

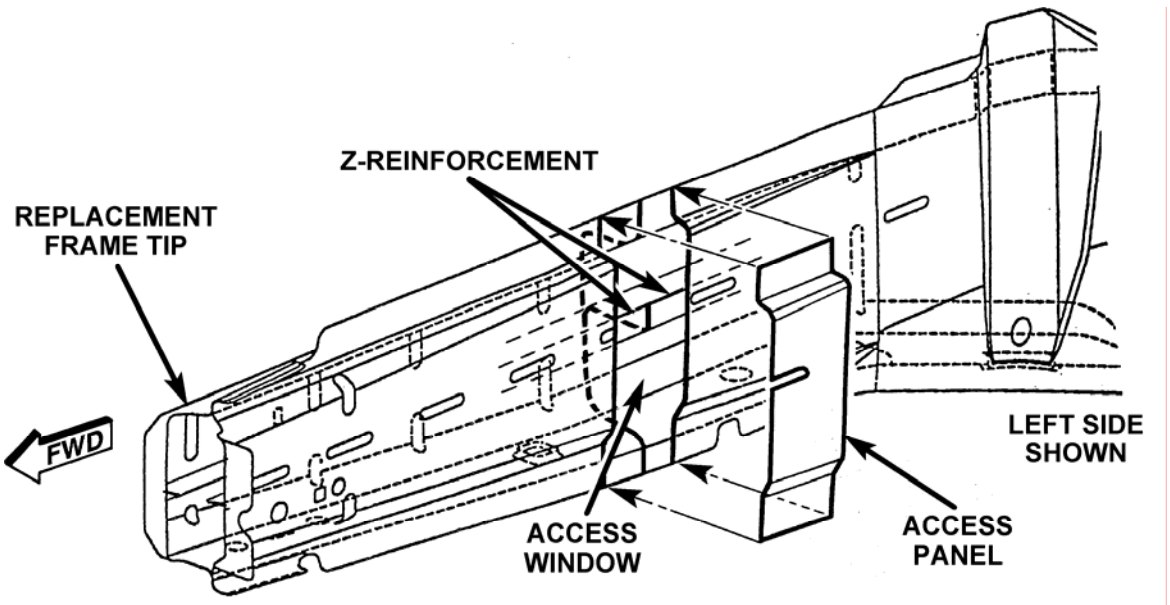
20. Prepare access panel for reinstallation.

21. Clamp the access panel back to rail assembly.

22. Weld the butt-joints completely using a skip/stitch method to reduce the heat affected zone and distortion.

23. Weld the access window at the top and bottom to the inner frame rail using ring filet (puddle) welds.

24. Install clamp to snug gap between outer rail and inner Z-reinforcements and MIG weld the outer rail back to the Z-reinforcement through the slots in the outer rail.

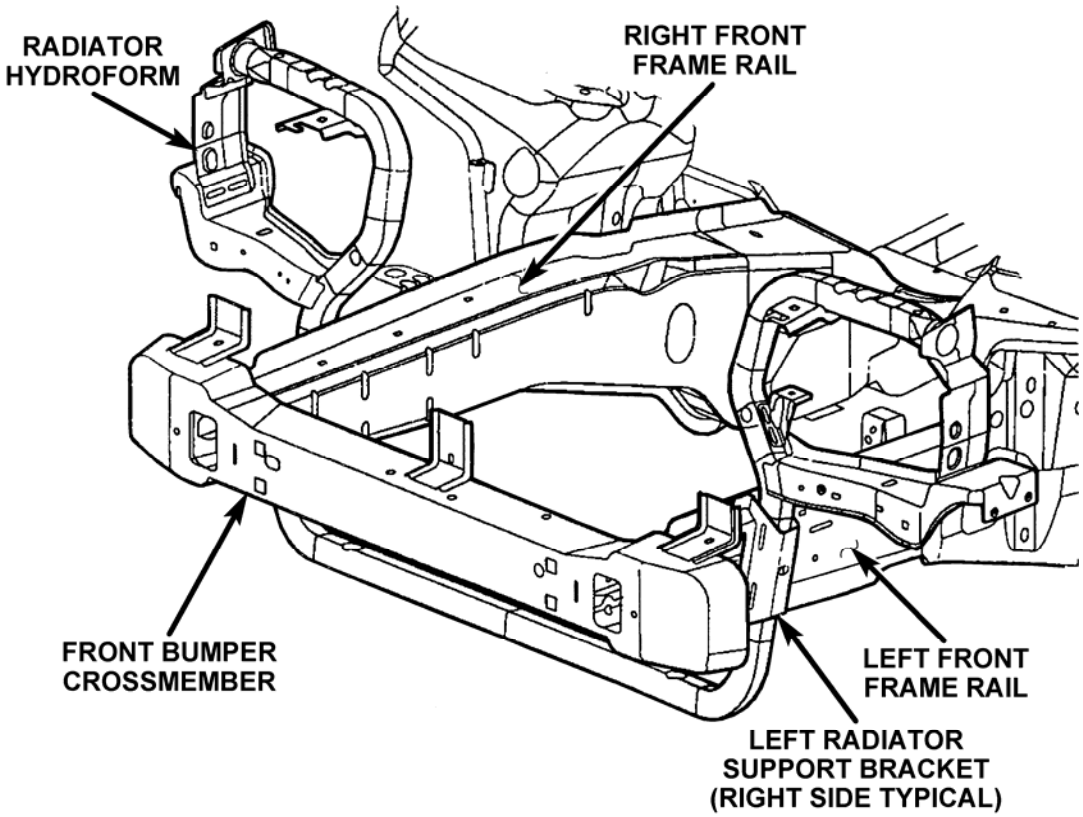


Back to Index

25. Install the radiator hydroform with four MIG welds holding each bracket to the outer frame rails at the location of the original welds.

26. Ensure that the cut-off location of the hydroform is the same as that removed earlier and modify if not.

27. Install the front bumper crossmember using MIG welds where the original spot welds were removed.



28 Dress the welded area and apply corrosion resistant coatings inside and out.

a. Apply etch-primer to the inside of the frame rail repair area.

b. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

c. Apply a durable top coat to the outside of the repair area.

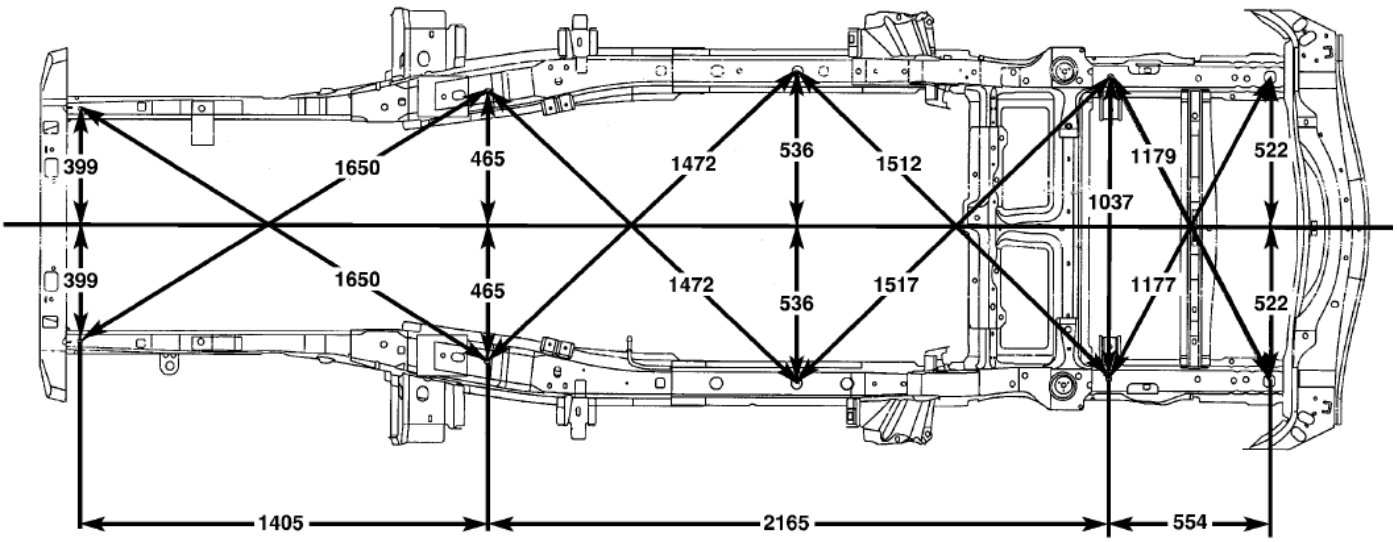
Back to Index

GRAND CHEROKEE
FRAME DIMENSIONS

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

INDEX



MEASUREMENTS ARE FROM CENTER

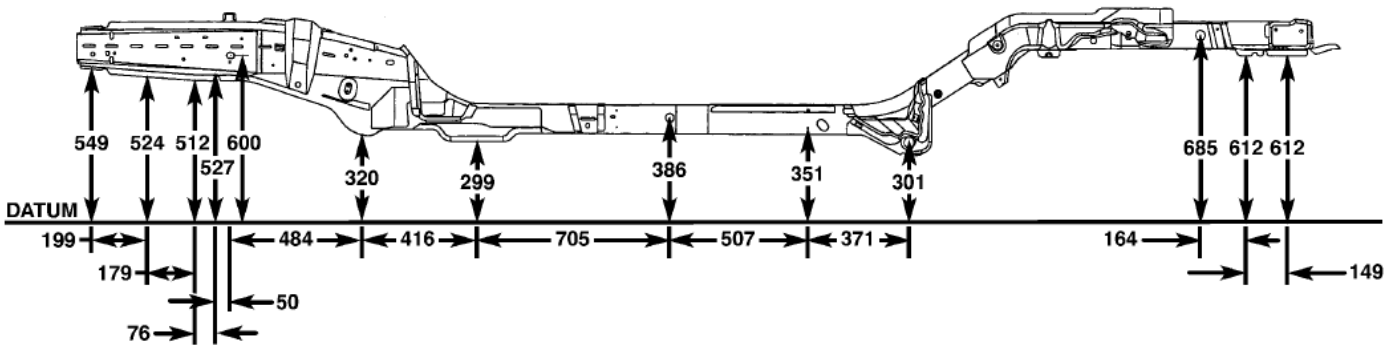
LINES OF HOLES (PLP's)

ALL DIMENSIONS ARE IN MILLIMETERS

Figure 1. FRAME DIMENSIONS (PLAN VIEW)

Back to Index

FRAME DIMENSIONS



NOTE: DATUM PLANE DETERMINED BY USING 245/65R17 TIRE.

ALL DIMENSIONS ARE IN MILLIMETERS

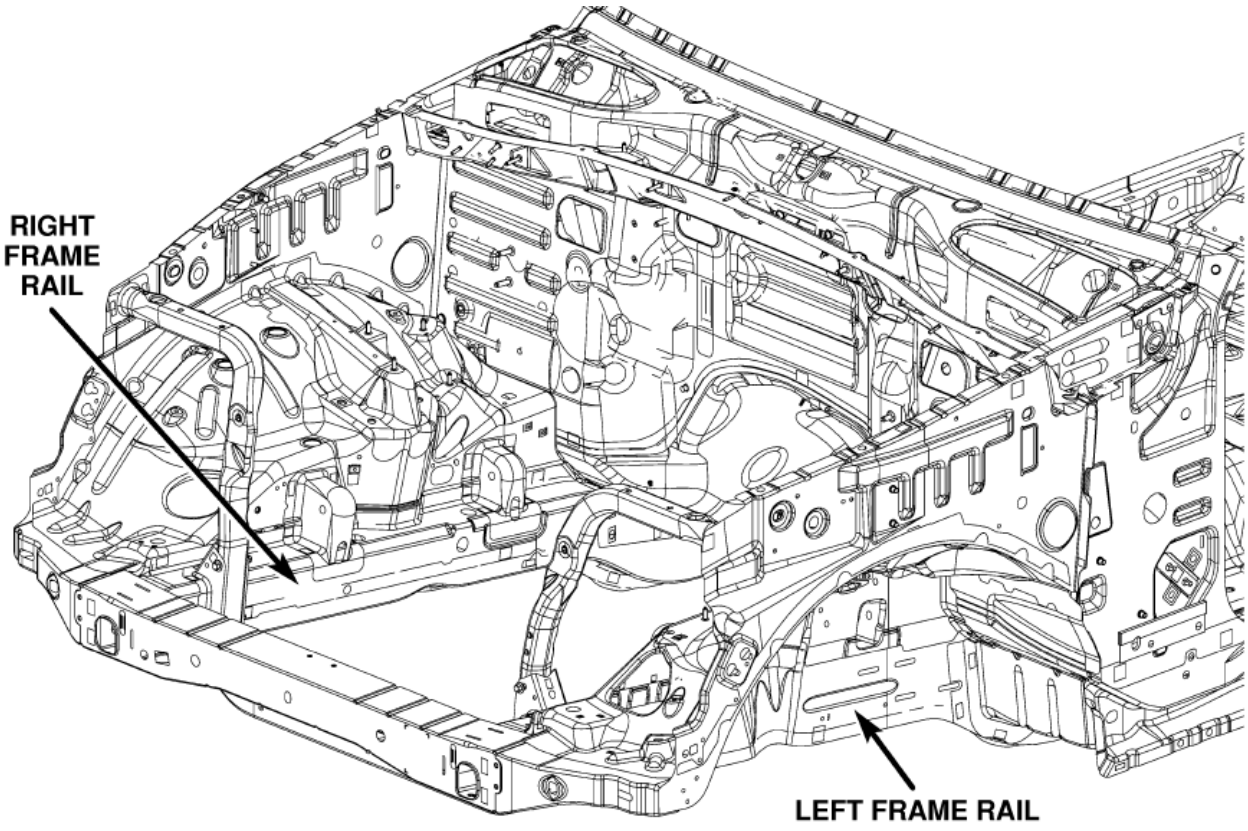
Figure 2. FRAME DIMENSIONS (SIDE VIEW)

Back to Index

JEEP LIBERTY (KJ, KK) - DODGE NITRO
FRONT FRAME RAIL SECTIONING PROCEDURE

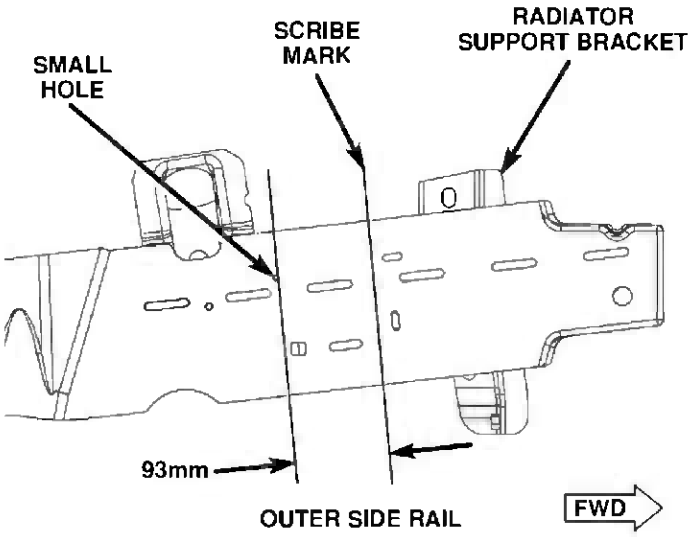
1. With vehicle mounted to appropriate pulling and 3-dimensional measuring equipment, complete the following procedure paying particular attention to body dimensions while fitting and welding panels.

2. Remove bumper components, cooling module, headlamps, and all other components for clear access to repair area.

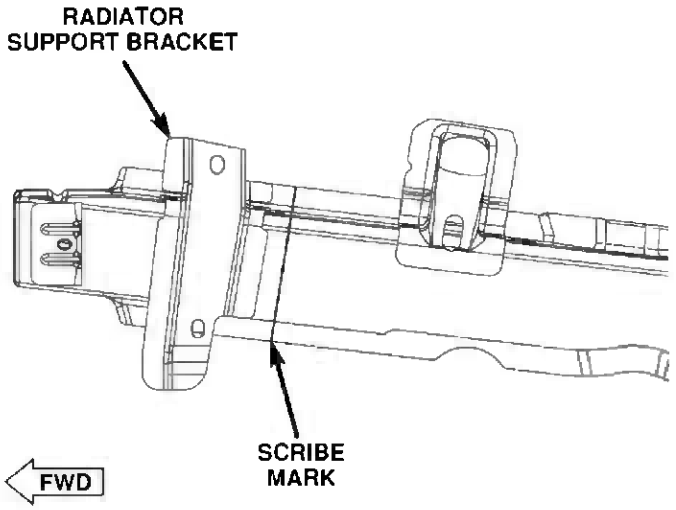


Back to Index

3. Using the center of the small PLP hole on the outer side member as reference, mark inner rail at top and bottom then create vertical scribe mark on inner frame rail.



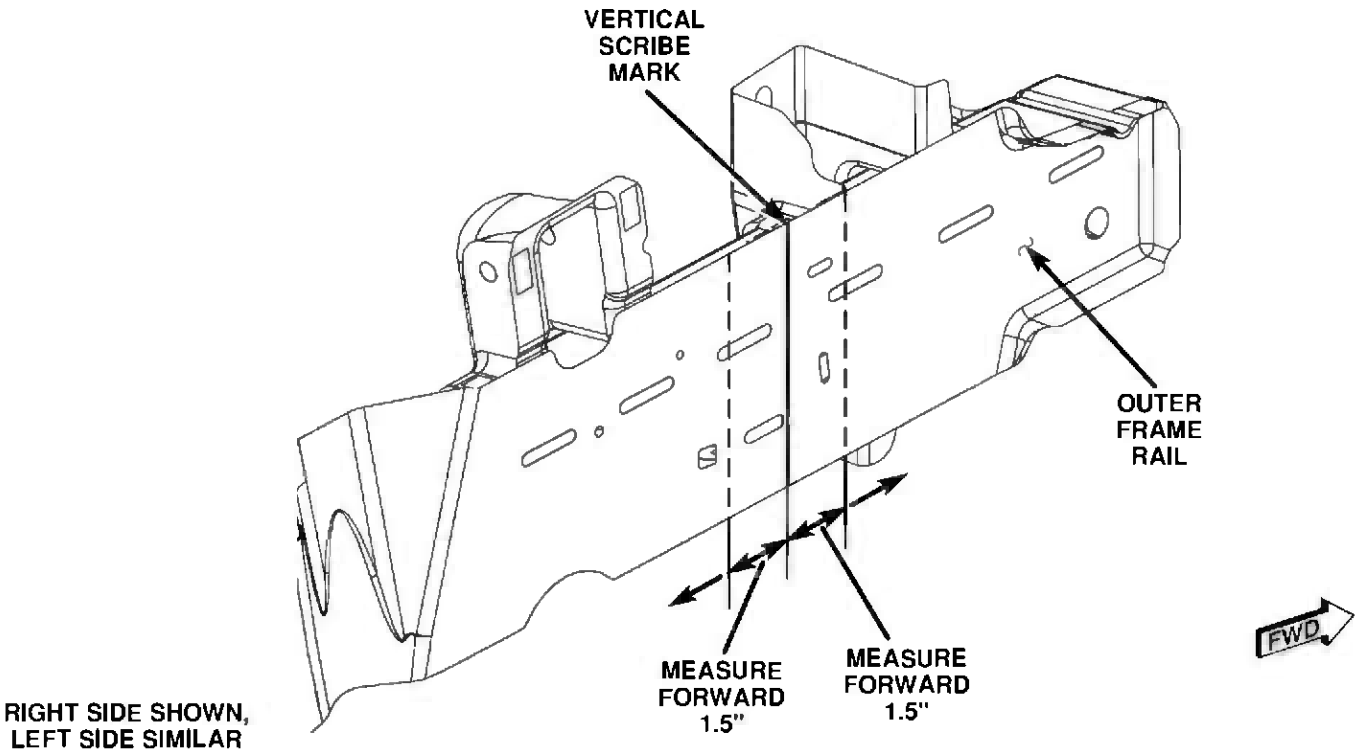
RIGHT SIDE SHOWN,
LEFT SIDE SIMILAR



INNER SIDE RAIL

Back to Index

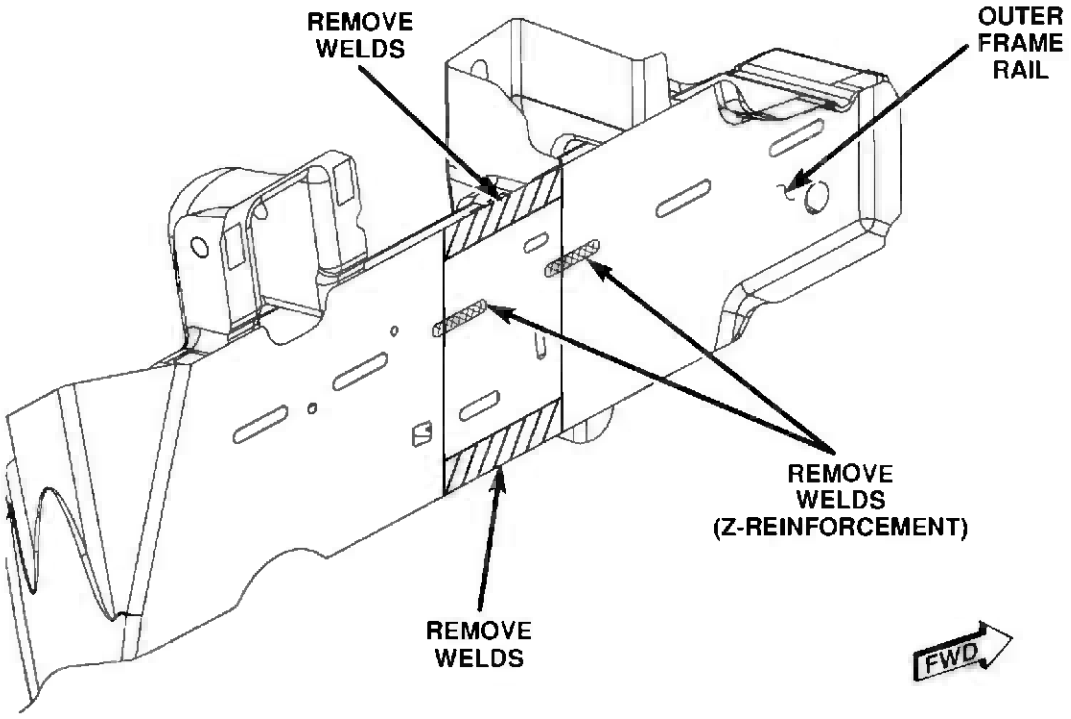
4. Using the scribe mark on the outer side member as reference, measure rearward 1.5" and forward 1.5"and mark outer rail at top and bottom then create vertical scribe mark on outer frame rail.



Back to Index

5. Remove welds holding the inner and outer side members together between the two scribe lines on the outer rail.

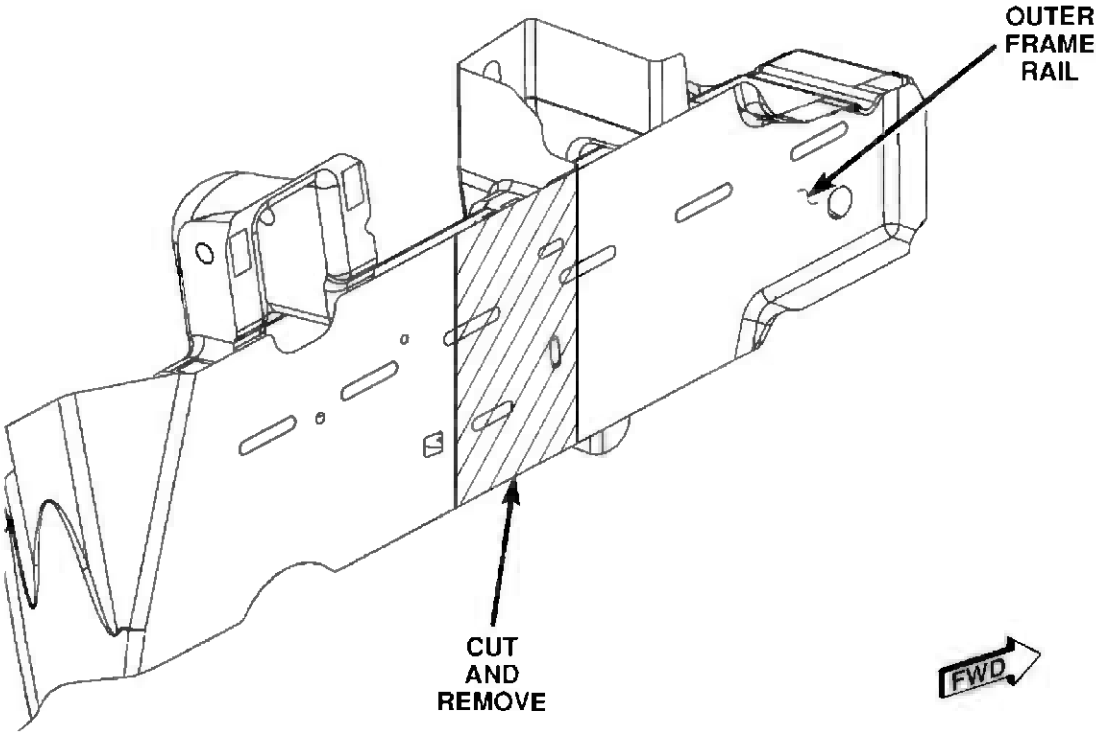
6. Remove the welds holding the internal z-reinforcement to the outer rail between the two scribe lines.



RIGHT SIDE SHOWN, LEFT SIDE SIMILAR

Back to Index

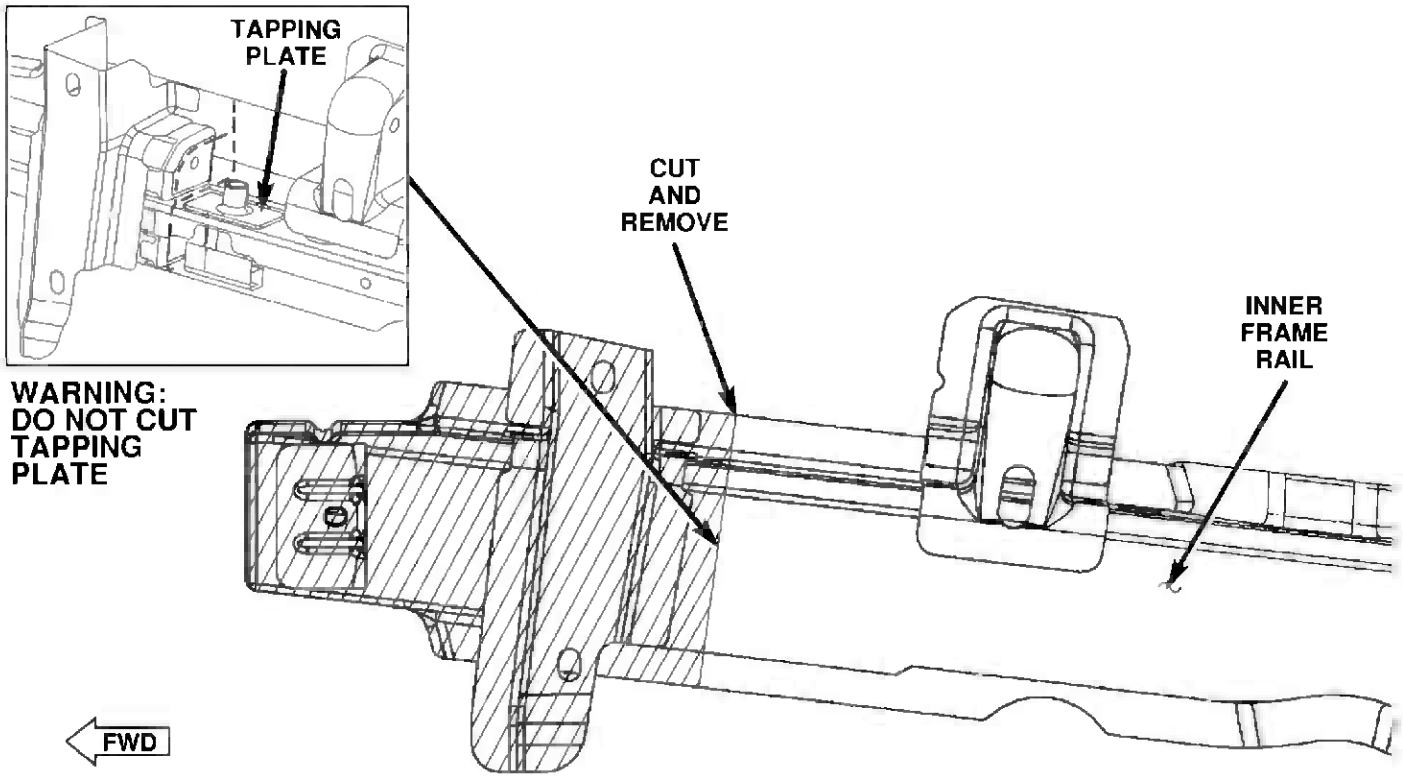
7. Carefully cut the outer side member top to bottom at the scribe lines without damaging the inner side member or the Z-reinforcement inside the rail and remove the access panel or window.



RIGHT SIDE SHOWN,
LEFT SIDE SIMILAR

8. Using a reciprocating saw, cut vertically down through the inner frame rail and Z reinforcement at the scribe location on the inner rail.

Back to Index



9. Carefully clean and de-burr all cut edges and prepare for welding.

10. Remove any paint, e-coat, or other coatings within 1-inch of any weld area.

11. Using the same procedures previously described, prepare the service rail tip for installation.

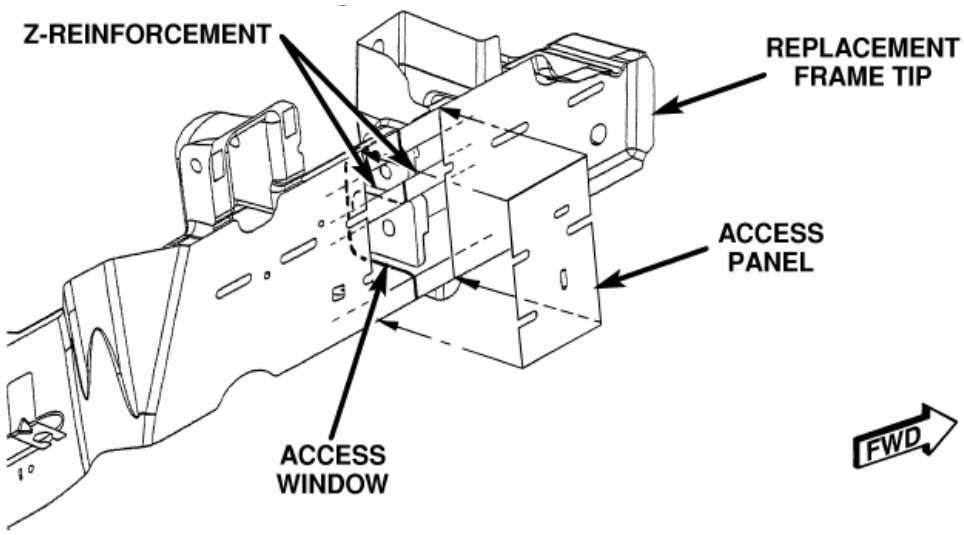
12. Fit and position the new rail tip to the vehicle using xyz dimensions and measurement equipment.

13. Confirm good joint fit-up with inner frame rail and Z-reinforcement and root gap equal to width of saw cut.

14. Tack weld the new tip into position using the weld chart located at the end of repair procedure section.

15. Reconfirm proper tip location.

Back to Index



RIGHT SIDE SHOWN, LEFT SIDE SIMILAR

16. Weld inner frame rail in the following sequence.
    a. Upper half from the access window.
    b. Lower half from exterior of rail
    c. Clean backside of above two welds in preparation for welding.
    d. Upper half from exterior.
    e. Lower half from access window.

17. Weld Z-reinforcement from top and from bottom, from inner side rail to outer side rail.

18. Prepare access panel for reinstallation.

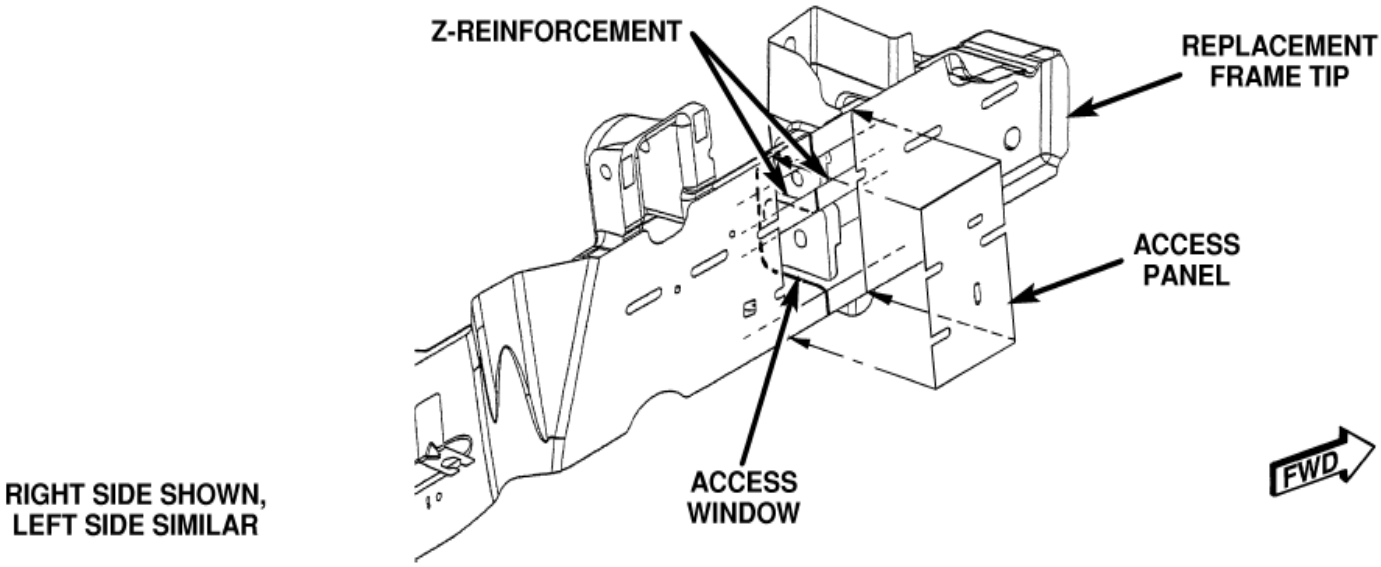
19. Clamp the access panel back to rail assembly.

20. Weld the butt-joints completely using a skip/stitch method to reduce the heat affected zone and distortion.

21. Weld the access window at the top and bottom to the inner frame rail using ring filet (puddle) welds.

22. Install clamp to snug gap between outer rail and inner Z-reinforcements and MIG weld the outer rail back to the Z-reinforcement through the slots in the outer rail.

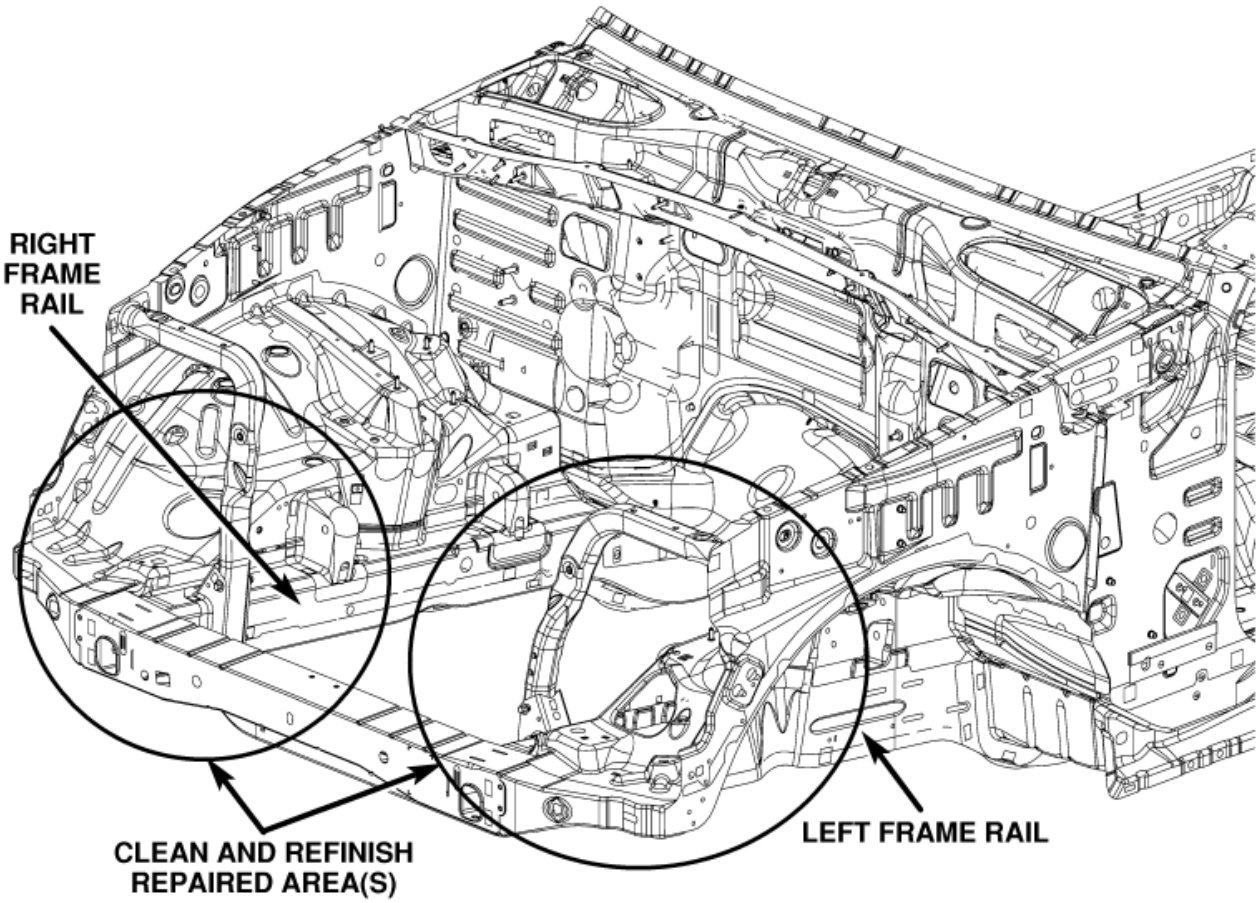
Back to Index



23. Dress the welded area and apply corrosion resistant coatings inside and out.

    1. Apply etch-primer to the inside of the frame rail repair area.
    2. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.
    3. Apply a durable top coat to the outside of the repair area.

Back to Index



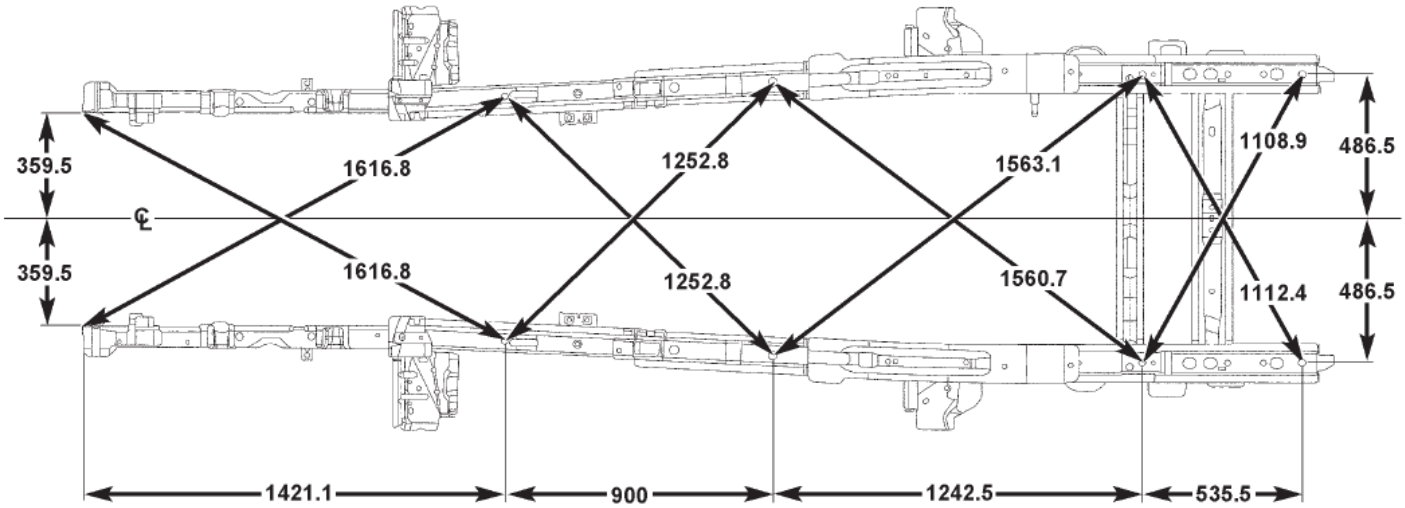
Note: Use Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

Back to Index

JEEP LIBERTY (KJ, KK)
DODGE NITRO
FRAME DIMENSIONS

FRAME DIMENSIONS
Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

INDEX

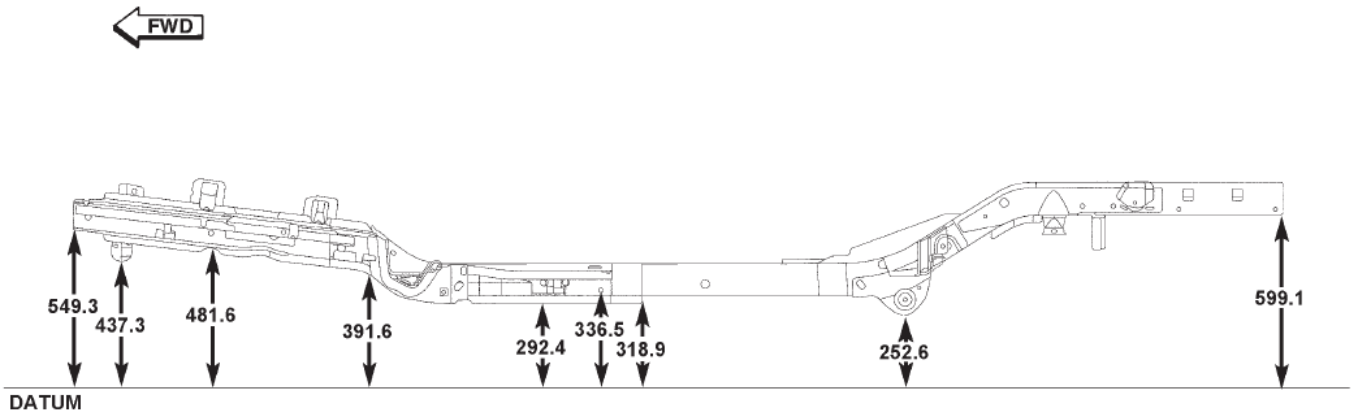


ALL DIMENSIONS ARE IN MILLIMETERS

Figure 1. PLAN VIEW

Back to Index

FRAME DIMENSIONS



ALL DIMENSIONS ARE IN MILLIMETERS

Figure 2. SIDE VIEW

Back to Index

CHRYSLER PACIFICA
FRAME DIMENSIONS

Back to Index

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

DESCRIPTION	FIGURE
FRAME DIMENSIONS (PLAN VIEW)	1
FRAME DIMENSIONS (SIDE VIEW)	2

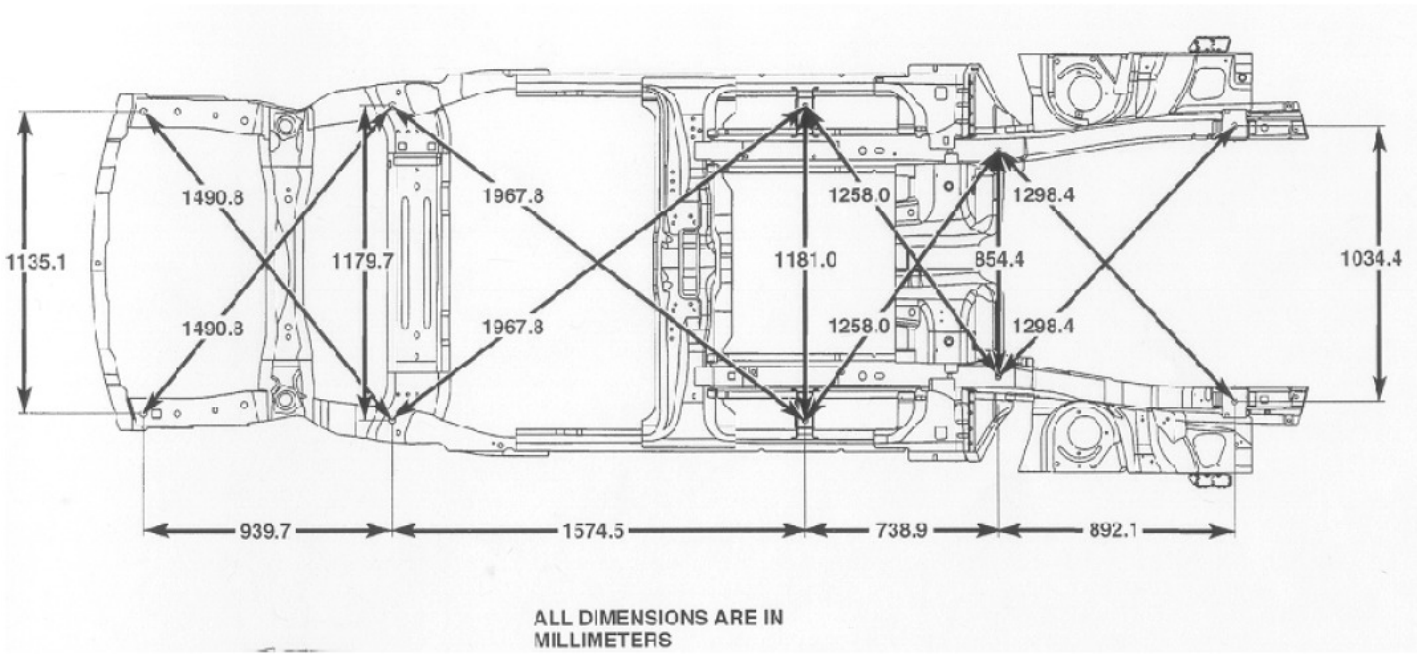


Figure 1. PLAN VIEW

Back to Index

FRAME DIMENSIONS

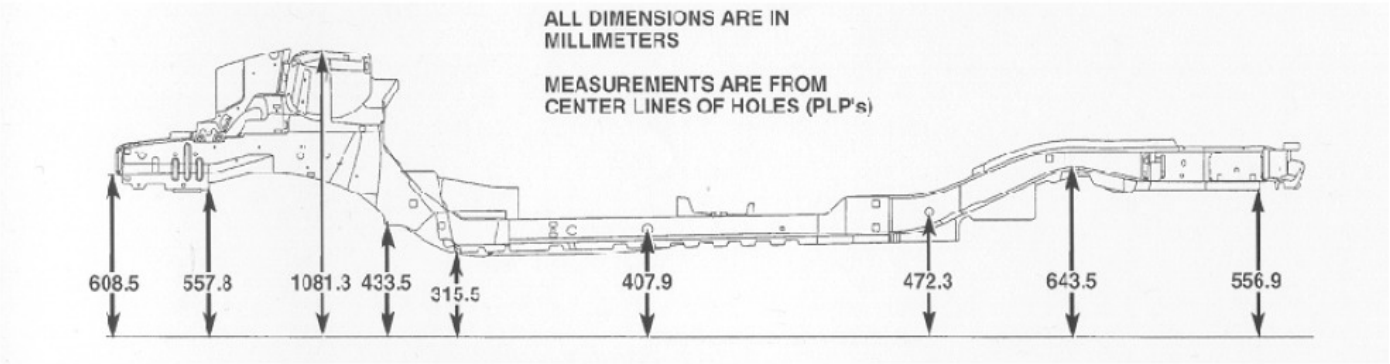
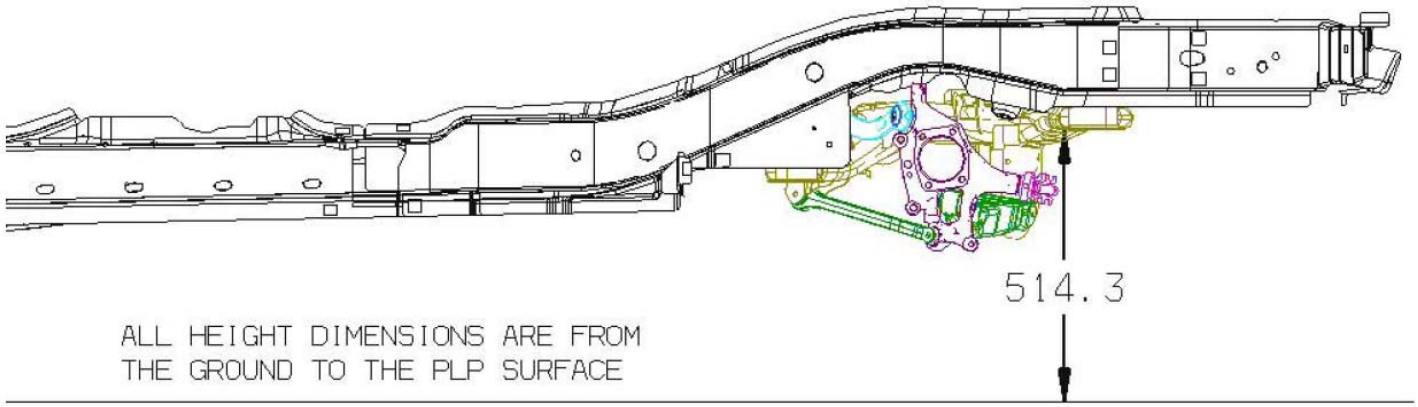
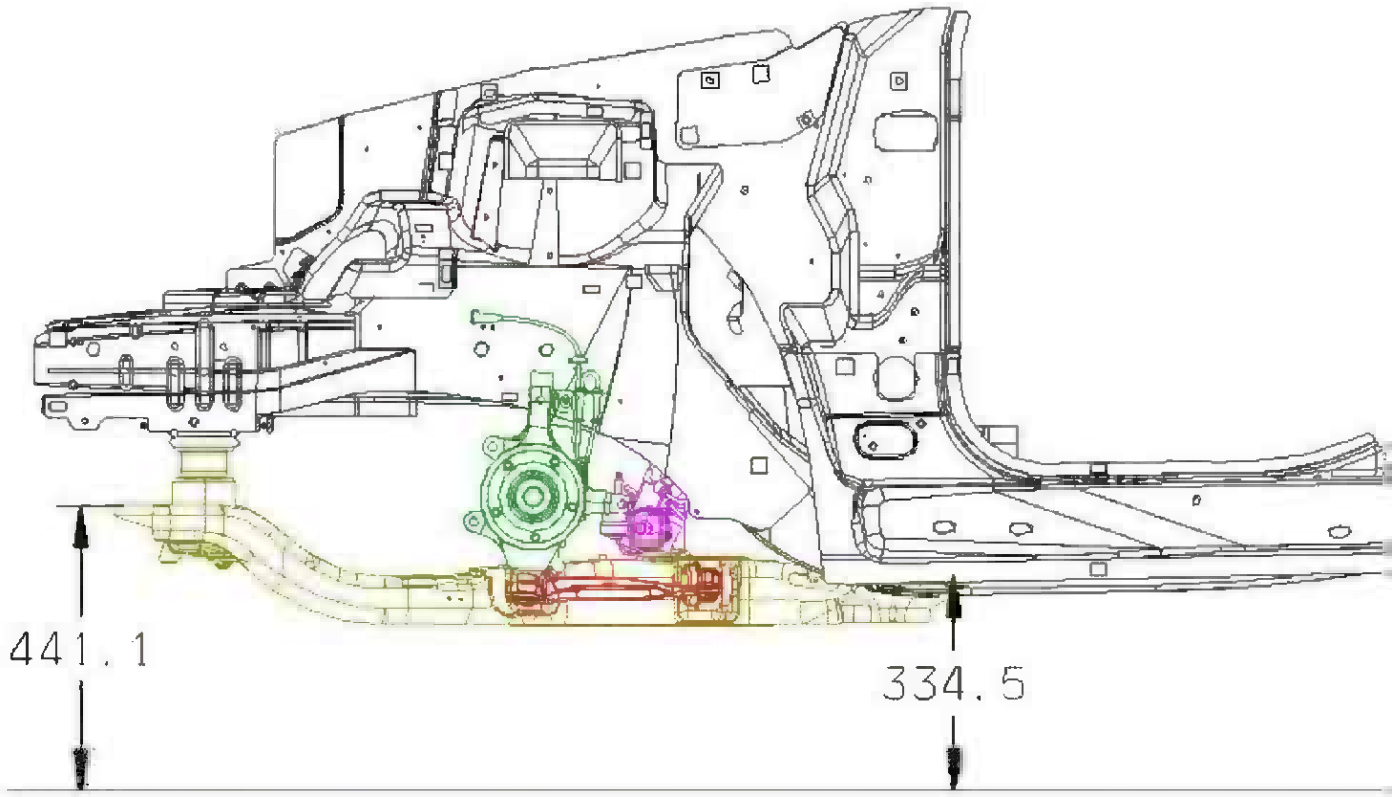


Figure 2. SIDE VIEW



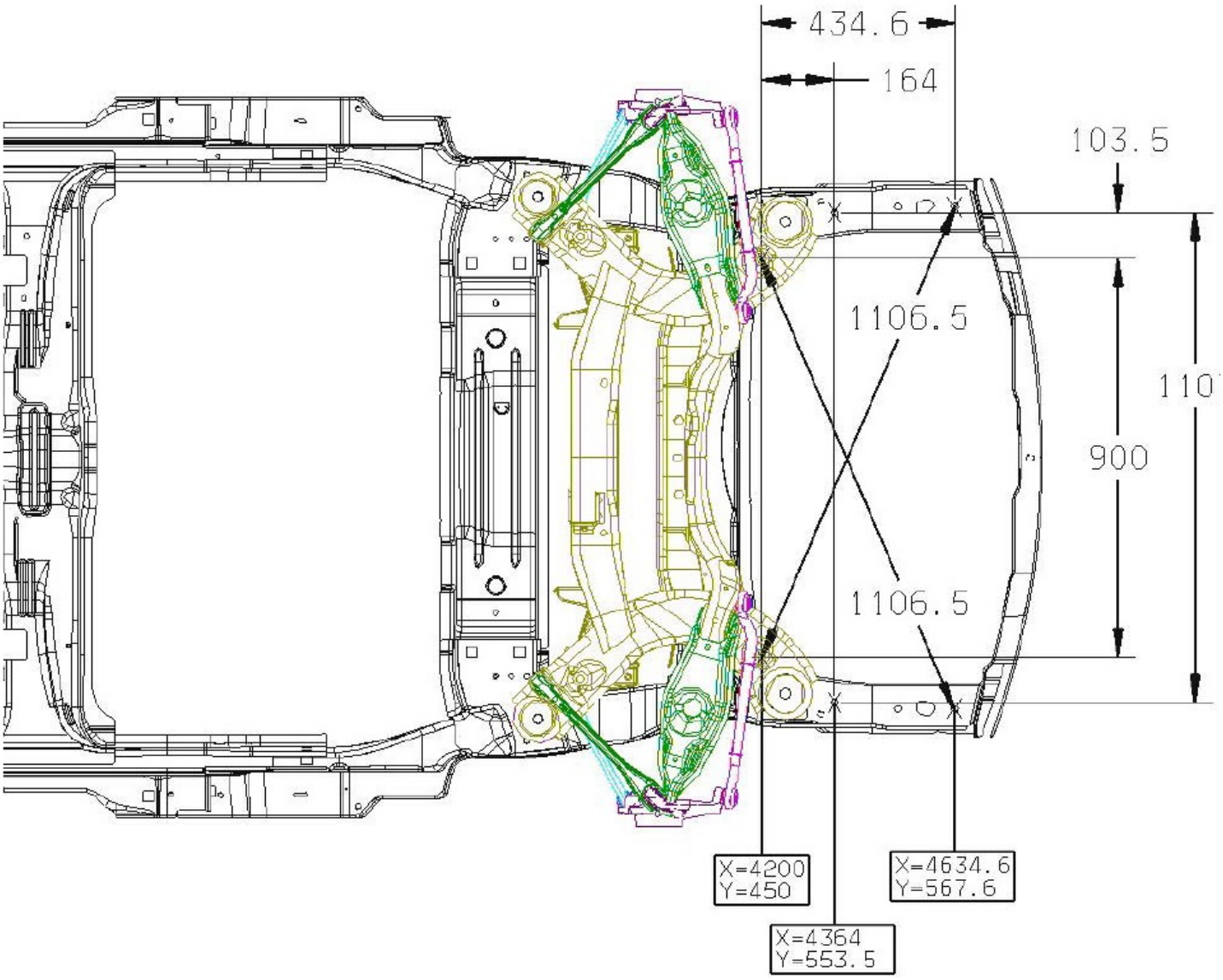
Back to Index

FRAME DIMENSIONS



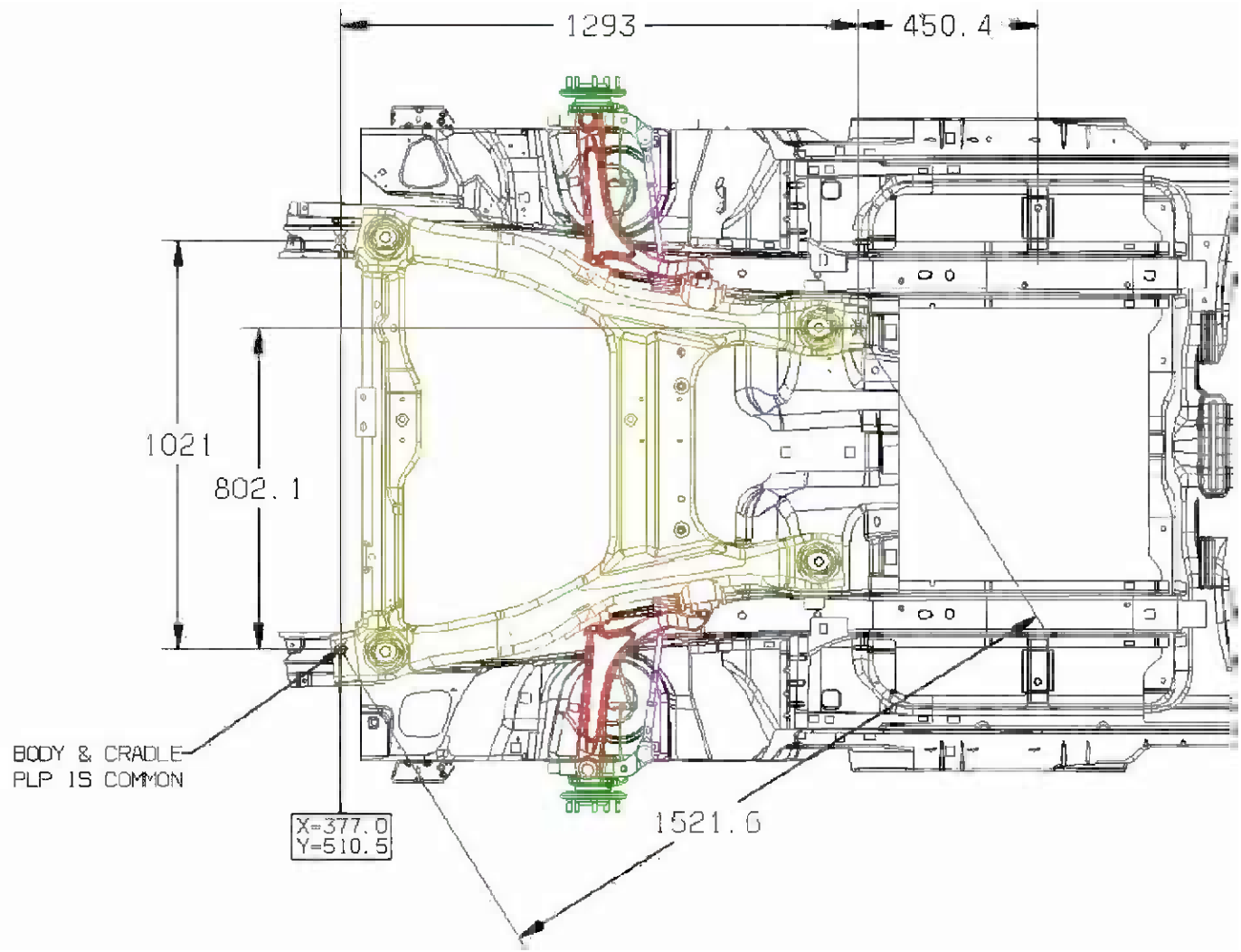
Back to Index

FRAME DIMENSIONS



Back to Index

FRAME DIMENSIONS



Back to Index

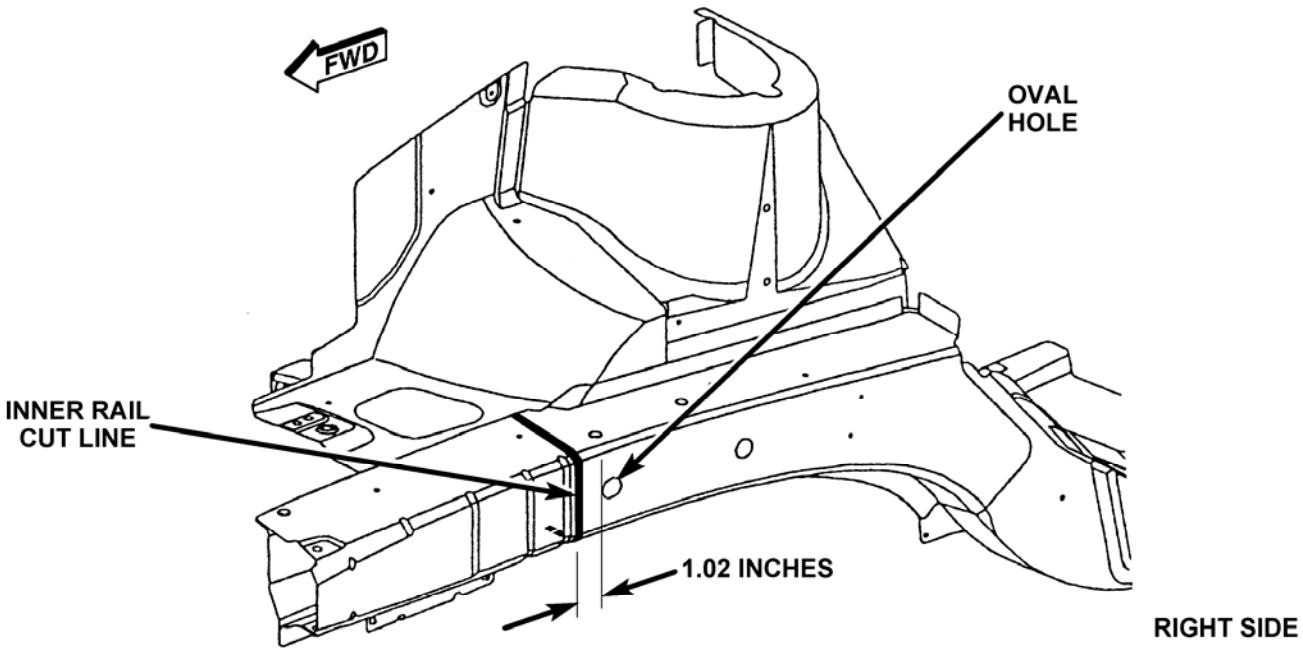
CHRYSLER PACIFICA
FRONT FRAME RAIL SECTIONING PROCEDURE

1. Prior to disassembly, three dimensional measuring equipment should be used to confirm no structural distortion exists rearward of the rail tip. All damage should be realigned before beginning repair.

2. Lower or remove cradle and driveline as needed for work access to inner rail.

3. Remove engine mount from top of frame rail.

4. Using the oval hole on the inner face of the rail, mark the frame rail 1.02 inches in front of the forward edge of the oval hole. Scribe a vertical line on the rail at the mark.

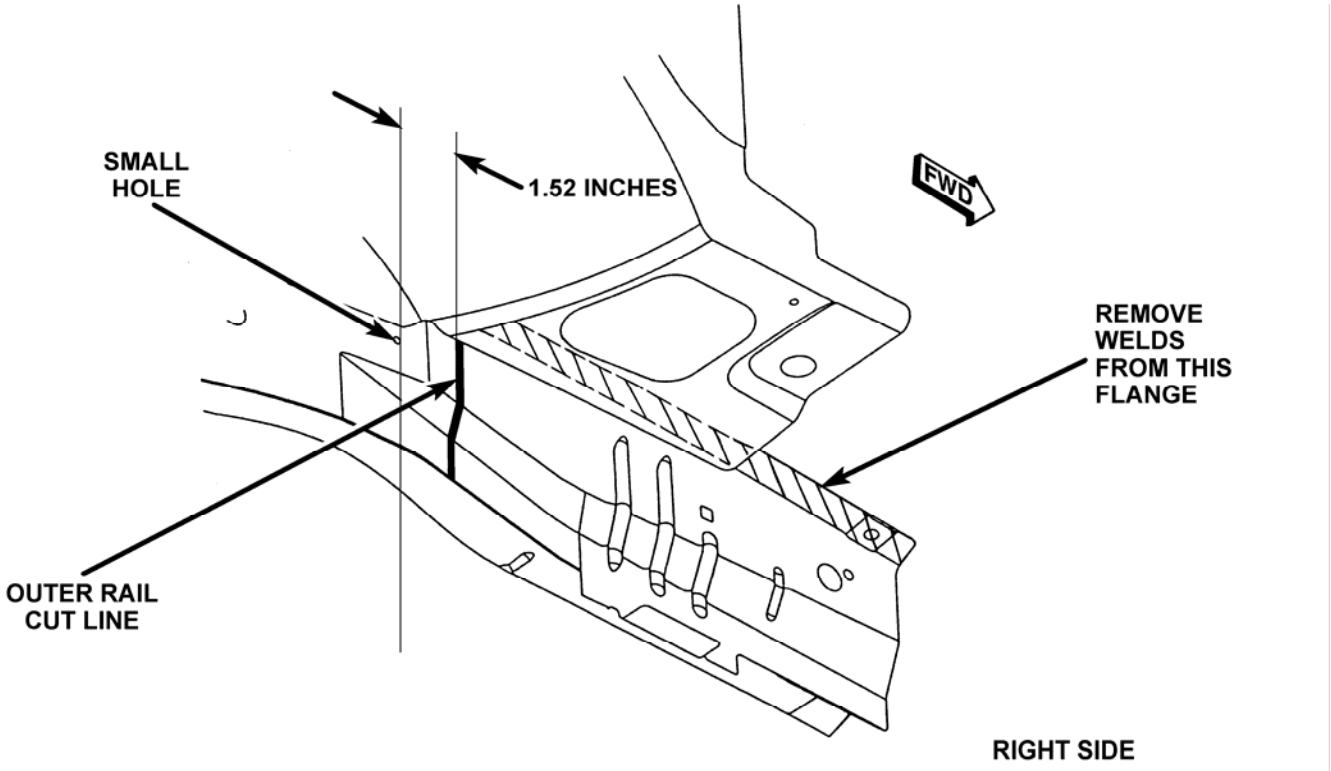


Back to Index

5. On the outer rail, locate the small hole situated under the notch where the upper weld flange transitions from vertical to horizontal. Mark the rail 1.52 inches in front of the forward edge of the hole. Scribe a vertical line on the rail at the mark.

6. Using a spot-weld cutter, remove welds at the mating of the front fender side shield to outer frame rail, and also the radiator support bracket attaches to the inner frame rail.

7. Using care so as not to damage other parts cut the inner and outer frame rails along the leading edge of the previously scribed lines.



Back to Index

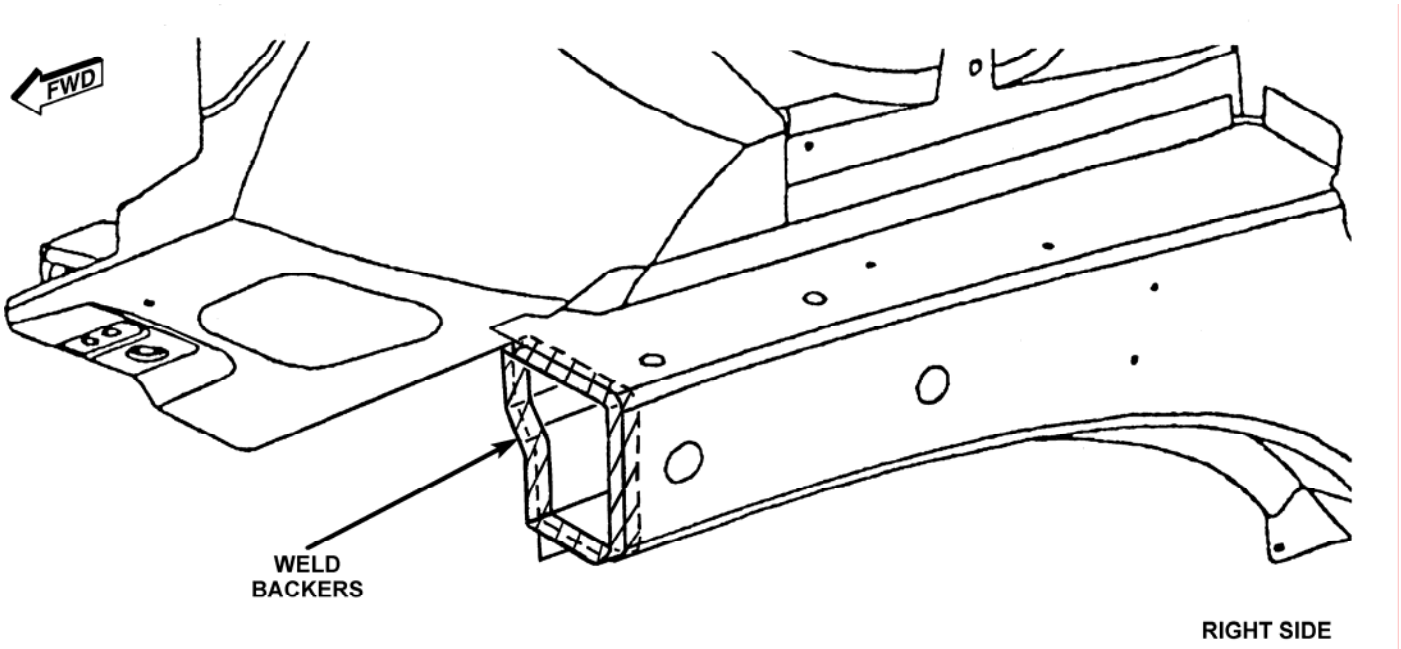
8. Prepare the replacement part by making scribe marks and cutting the service rail exactly as was done to the damaged vehicle.

9. Using the damaged rail tip as a source material, cut a 1 inch wide strip of material (along the original cut line) from the inner and outer rail. Fabricate the material as necessary to create weld backer inserts for installation of the replacement rail tip.

10. Lightly bevel the cut edges of the existing frame rail and the replacement rail tip. (Use a file to remove any rough edges at cut location to ensure proper fitment of replacement parts.)

11. Remove any paint, e-coat, sealer, or other foreign substance within 1 inch of the weld zone.

12. Fit the weld backers into the original rail so that one-half is exposed and tack in place.

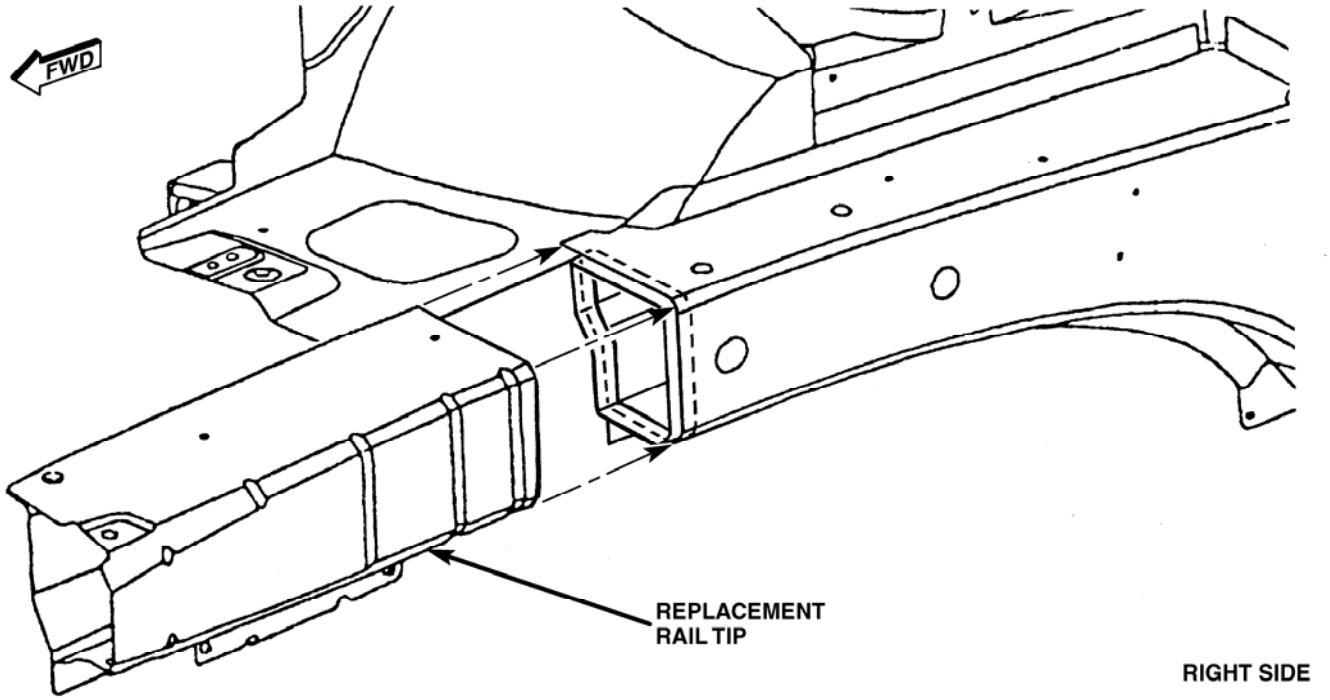


Back to Index

13. Slip the replacement rail tip into position over the sleeve, leaving a 1.5mm space between the two components for weld root gap, and temporarily secure in position with suitable fixtures.

14. Using three dimensional measuring equipment, confirm the railtip is in the correct position.

15. Weld the tip in position 360 degrees around in a staggered pattern to avoid distortion. Note: due to the zinc based material coating used on the steel is this area; flux-cored wire should be used to MIG weld the joint and avoid any weld porosity concerns. (Lincoln Electrode NR-211 MP—AWS E71T-11or equivalent)



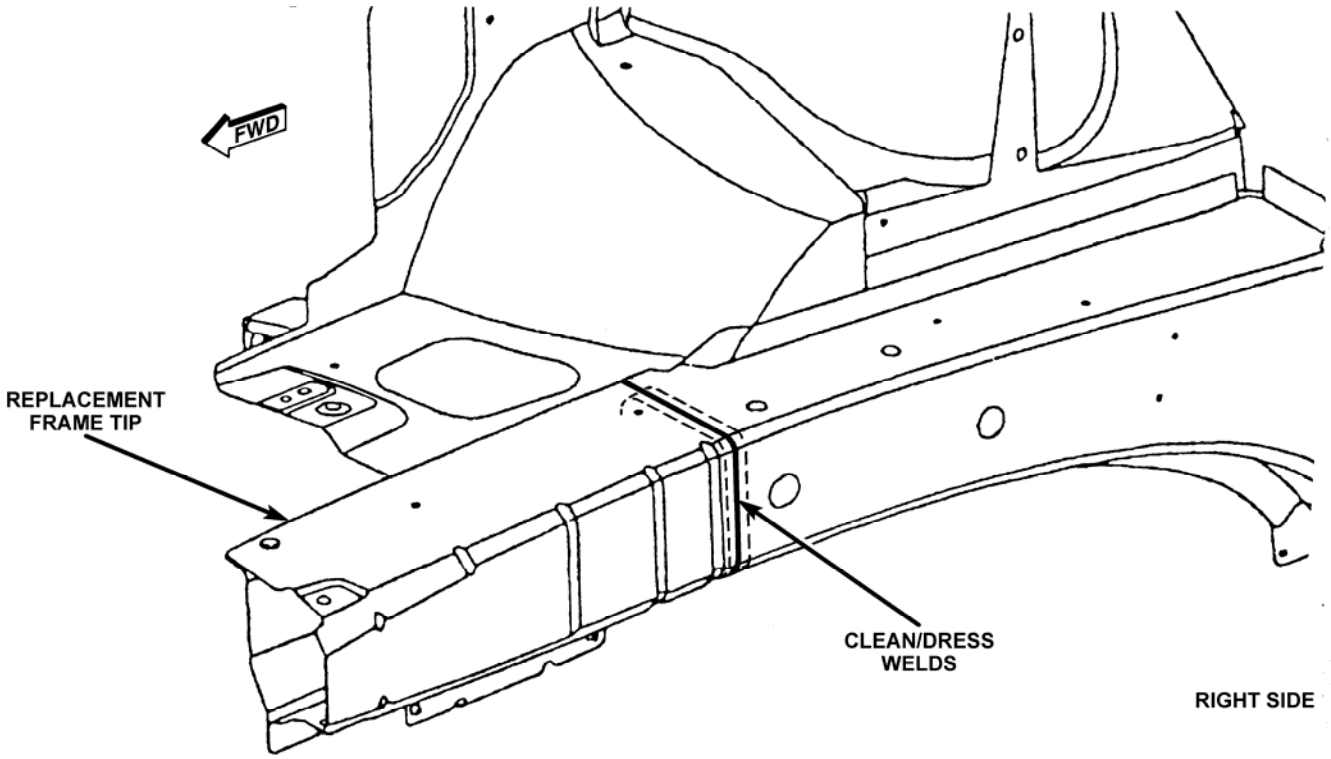
Back to Index

16. Dress the welded area and apply corrosion resistant coatings inside and out.

a. Apply etch-primer to the inside of the frame rail repair area.

b. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

c.Apply a durable top coat to the outside of the repair area.



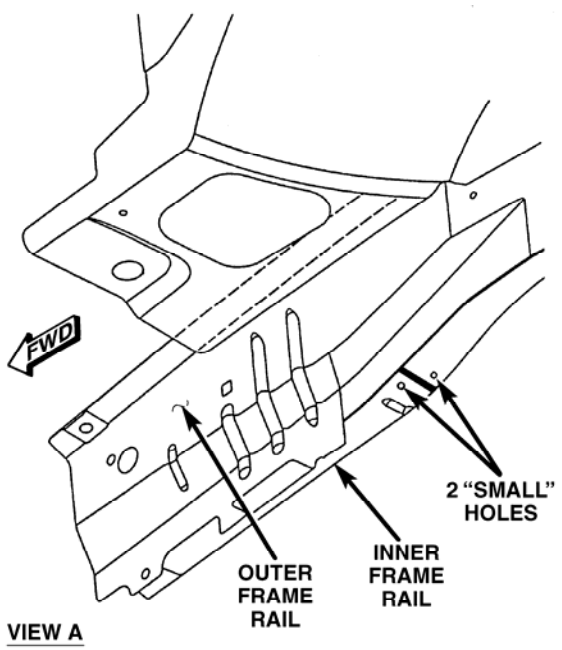
Back to Index

1. Prior to disassembly, three dimensional measuring equipment should be used to confirm no structural distortion exists rearward of the rail tip. All damage should be realigned before beginning repair.

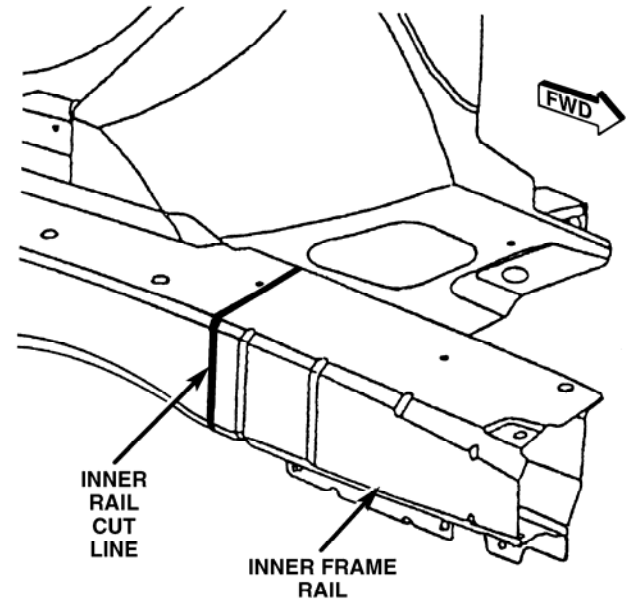
2. Lower cradle and driveline as needed for work access to inner rail.

3. Remove battery tray from top of frame rail.

4. Using the two small holes (View A) on the bottom flange of the inner frame rail, make a vertical scribe line on the face of the rail that is centered between the two holes. (View B)



VIEW A



VIEW B

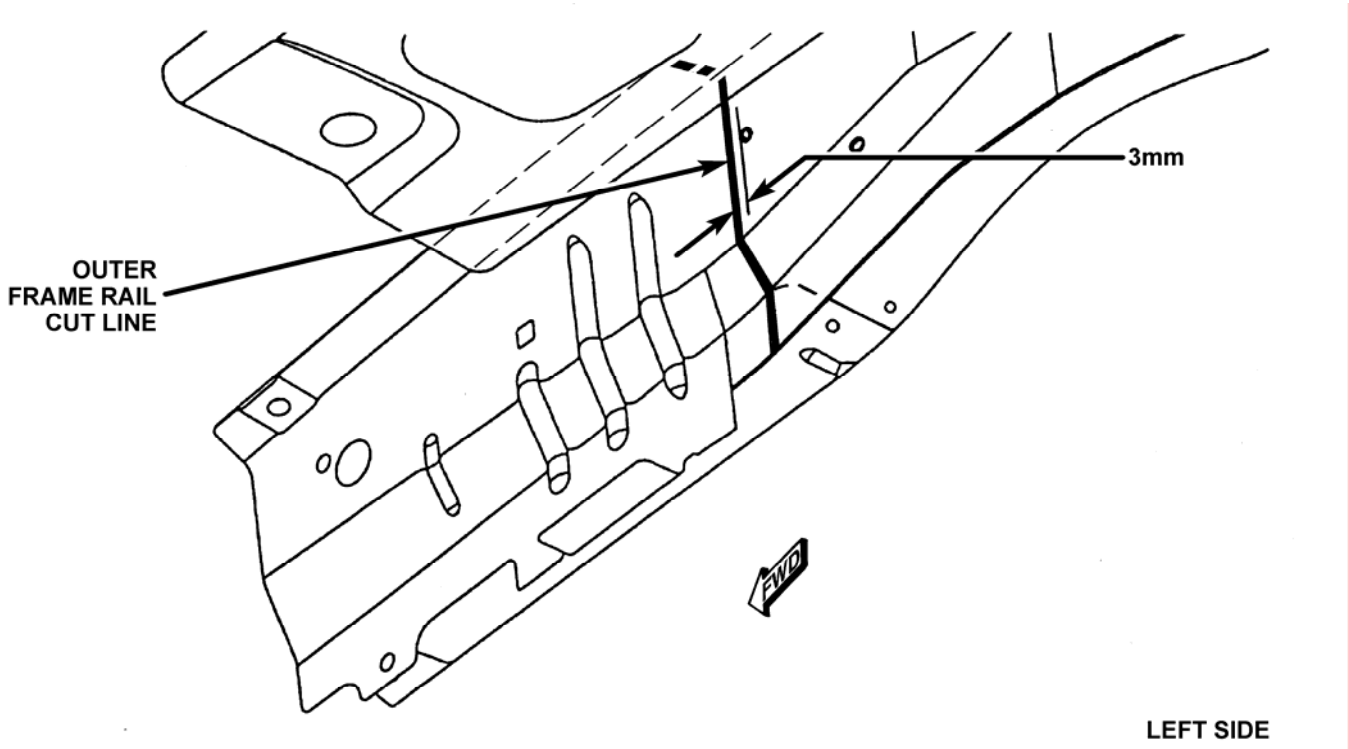
LEFT SIDE

Back to Index

5. On the outer rail, locate the small hole in the face of the rail, and mark the rail 3mm in front of the forward edge of the hole. Scribe a vertical line on the rail through the mark.

6. Using a spot-weld cutter, remove welds at the mating of the front fender side shield to outer frame rail, and also where the radiator support bracket attaches to the inner frame rail.

7. Using care so as not to damage other parts cut the inner and outer frame rails along the leading edge of the previously scribed lines.



Back to Index

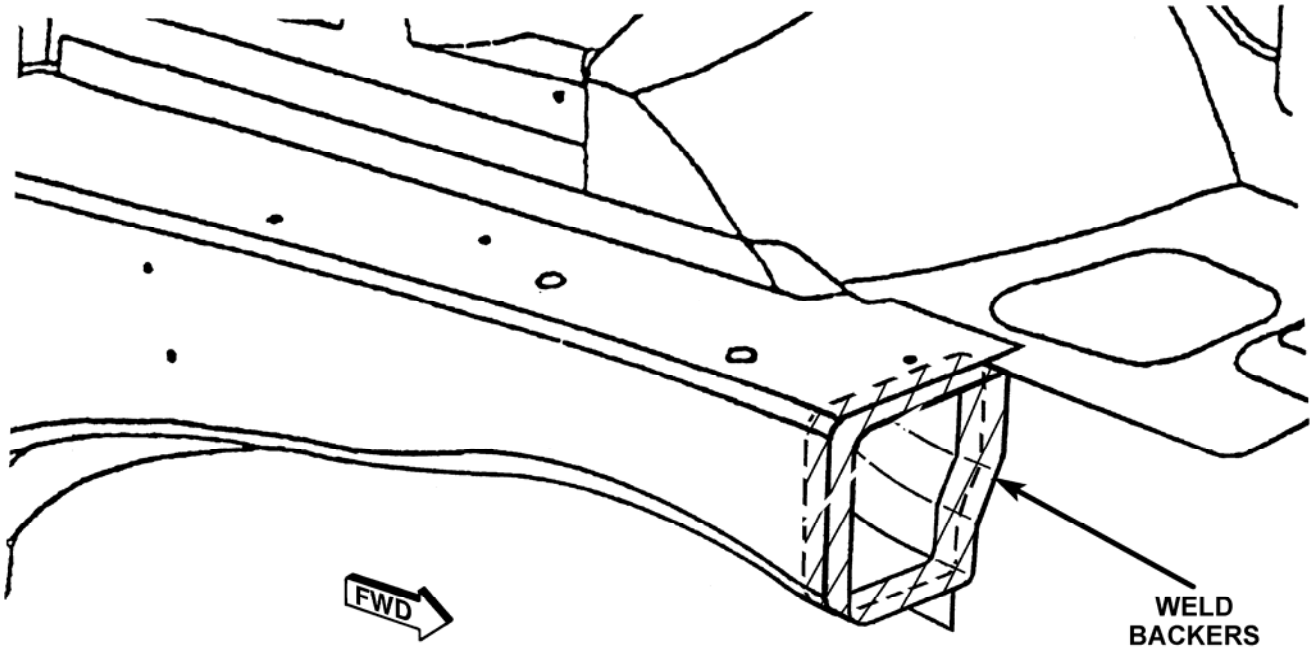
8. Prepare the replacement part by making scribe marks and cutting the service rail exactly as was done to the damaged vehicle.

9. Using the damaged rail tip as a source for material, cut a 1 inch wide strip of material (along the original cut line) from the inner and outer rail. Fabricate the material as necessary to create weld backer inserts for installation of the replacement rail tip.

10. Lightly bevel the cut edges of the existing frame rail and the replacement rail tip. (Use a file to remove any rough edges at cut location to ensure proper fitment of replacement parts.)

11. Remove any paint, e-coat, sealer, or other foreign substance within 1 inch of the weld zone.

12. Fit the weld backers into the original rail so that one-half is exposed and tack in place.

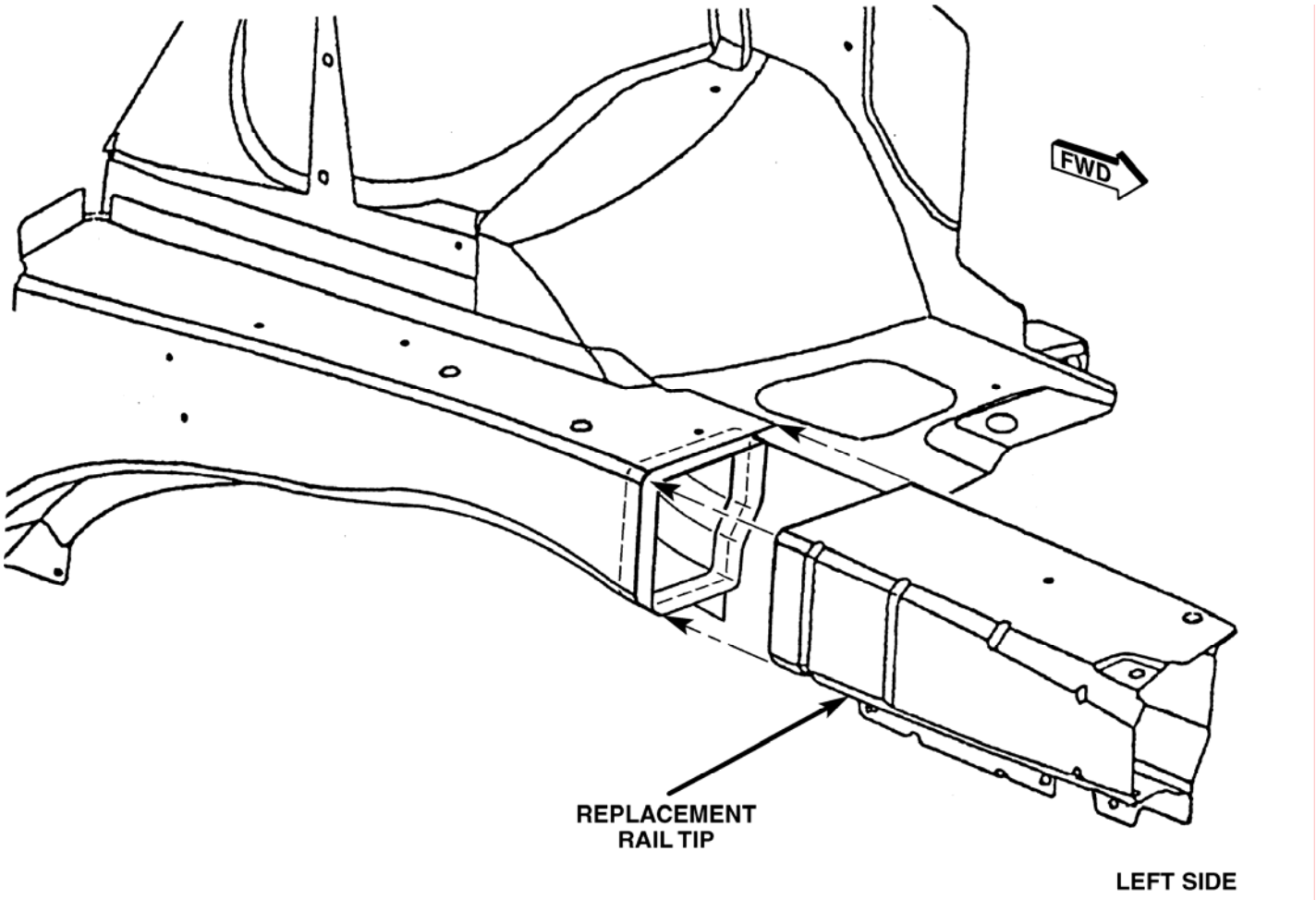


LEFT SIDE

Back to Index

13. Slip the replacement rail tip into position over the sleeve, leaving a 1.5mm space between the two components for weld root gap, and temporarily secure in position with suitable fixtures.

14. Using three dimensional measuring equipment, confirm the rail tip is in the correct position.



Back to Index

15. Weld the tip in position 360 degrees around in a staggered pattern to avoid distortion. Note: due to the zinc based material coating used on the steel on this area, flux-cored wire should be used to MIG weld the joint and avoid any weld porosity concerns. (Lincoln Electrode NR-211 MP—AWS E71T-11 or equivalent).

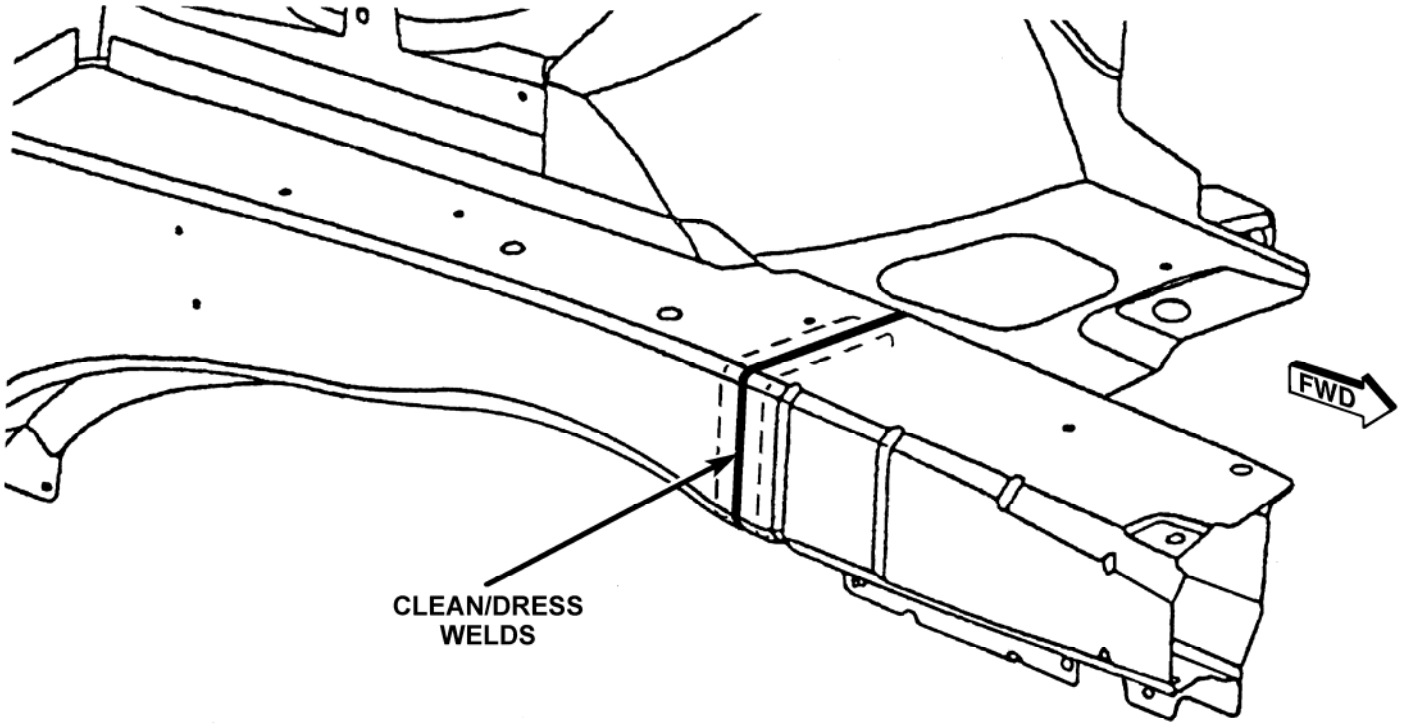
16. Check that the weld-backer does not cover any portion of hole in rail. If so, make a clearance with die grinder before applying corrosion protection coatings.

17. Dress the welded area and apply corrosion resistant coatings inside and out.

a. Apply etch-primer to the inside of the frame rail repair area.

b. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

c.Apply a durable top coat to the outside of the repair area.



LEFT SIDE

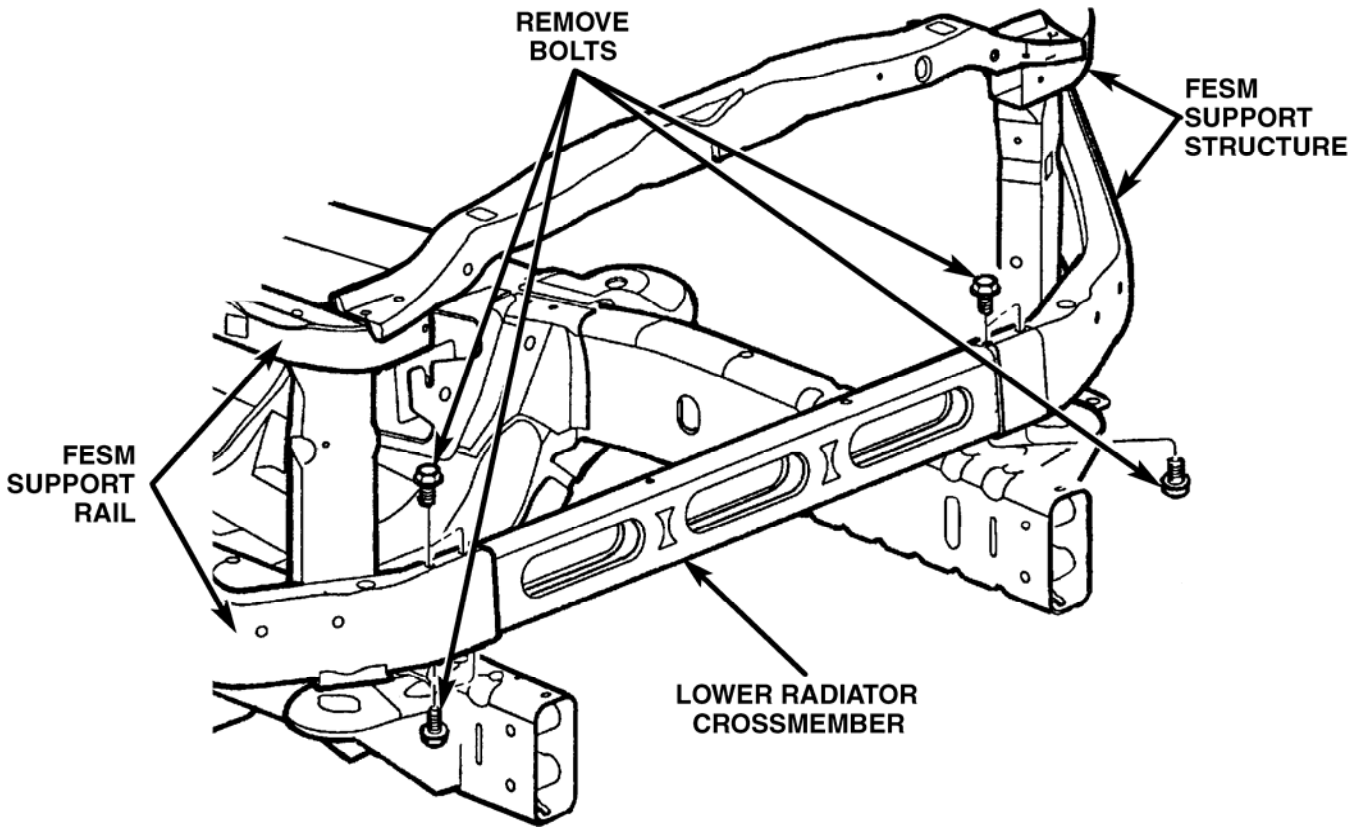
Back to Index

DODGE RAM
FRONT LOWER RADIATOR CROSSMEMBER REPLACEMENT (DURANGO AND DAKOTA SIMILAR)

1. Remove all components necessary to access crossmember.

2. Using three-dimensional measuring equipment confirm dimensional integrity of front end sheet metal (FESM) supporting structure and correct if necessary.

3. Remove bolts holding crossmember to FESM structure—four per side.



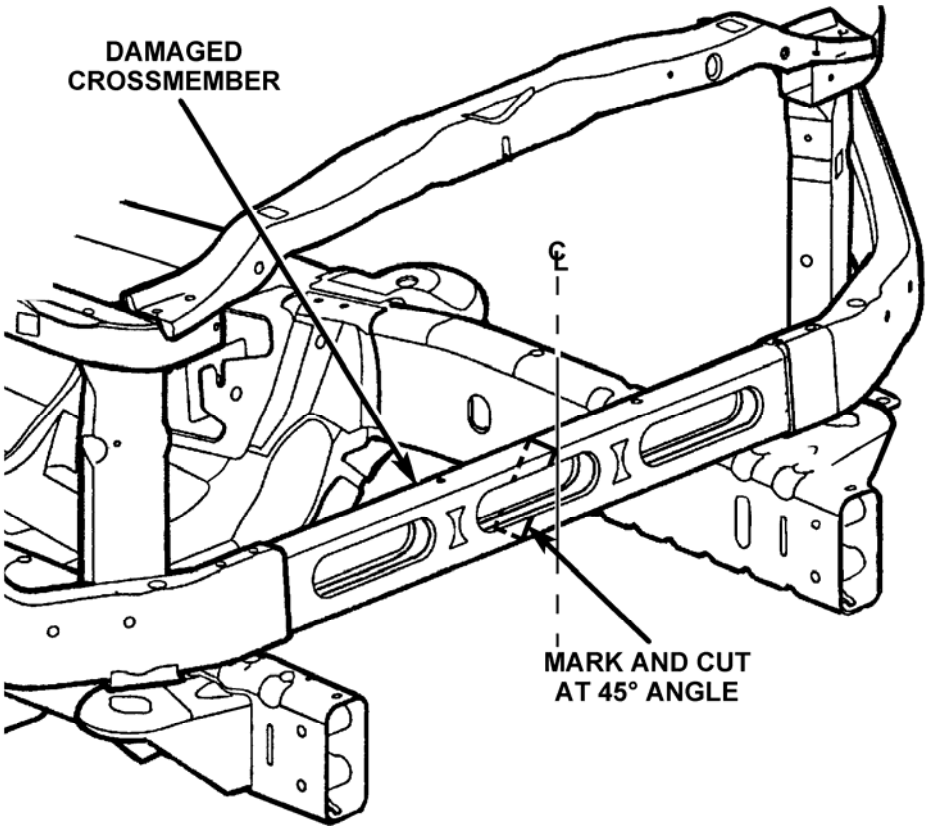
Back to Index

4. Using a reciprocating saw, or equivalent, cut old crossmember at a 45 degree angle and remove (when cut, slip one half of crossmember into FESM structure until bottomed, then pull other section out and free. Next remove remaining section.)

5. Cut new crossmember in center at a 45 degree angle.

6. Using old part cut and fabricate two weld backing inserts 2 inches wide—inserts should fit snugly into top and bottom of crossmember but not so tight that inserts will not slide for adjustment.

7. Slightly bevel cut edges of replacement crossmember at joining location.



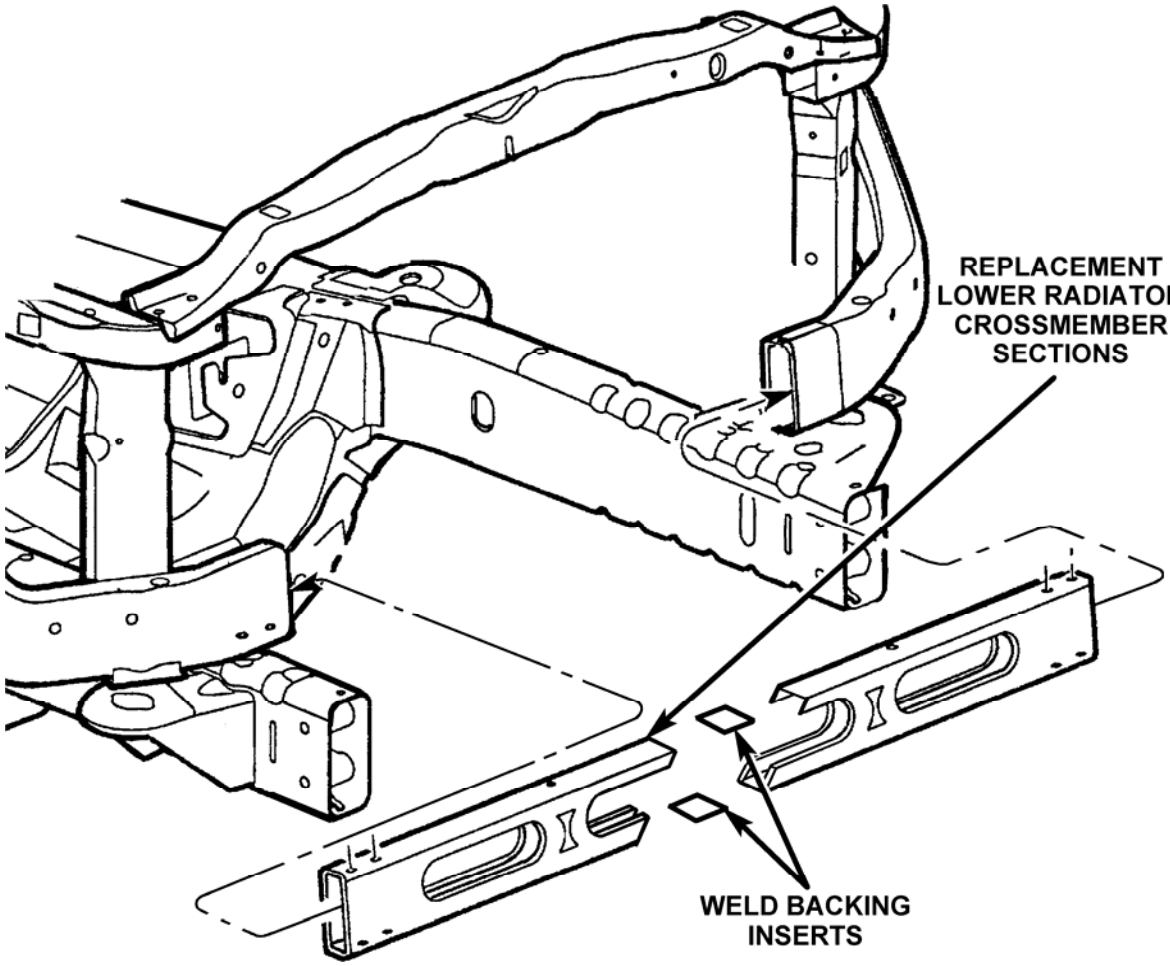
Back to Index

8. Install first half of crossmember into structure until bottomed out.

9. Install remaining section of replacement crossmember into opposite side of structure.

10. Install weld backing inserts into top and bottom of crossmember at joining location.

11. Ensure a weld root gap of approximately 1/16" and weld crossmember together—weld must be performed completely so that no gap remains from the cutting operation.



Back to Index

12. Dress crossmember weld and inserts for finishing.

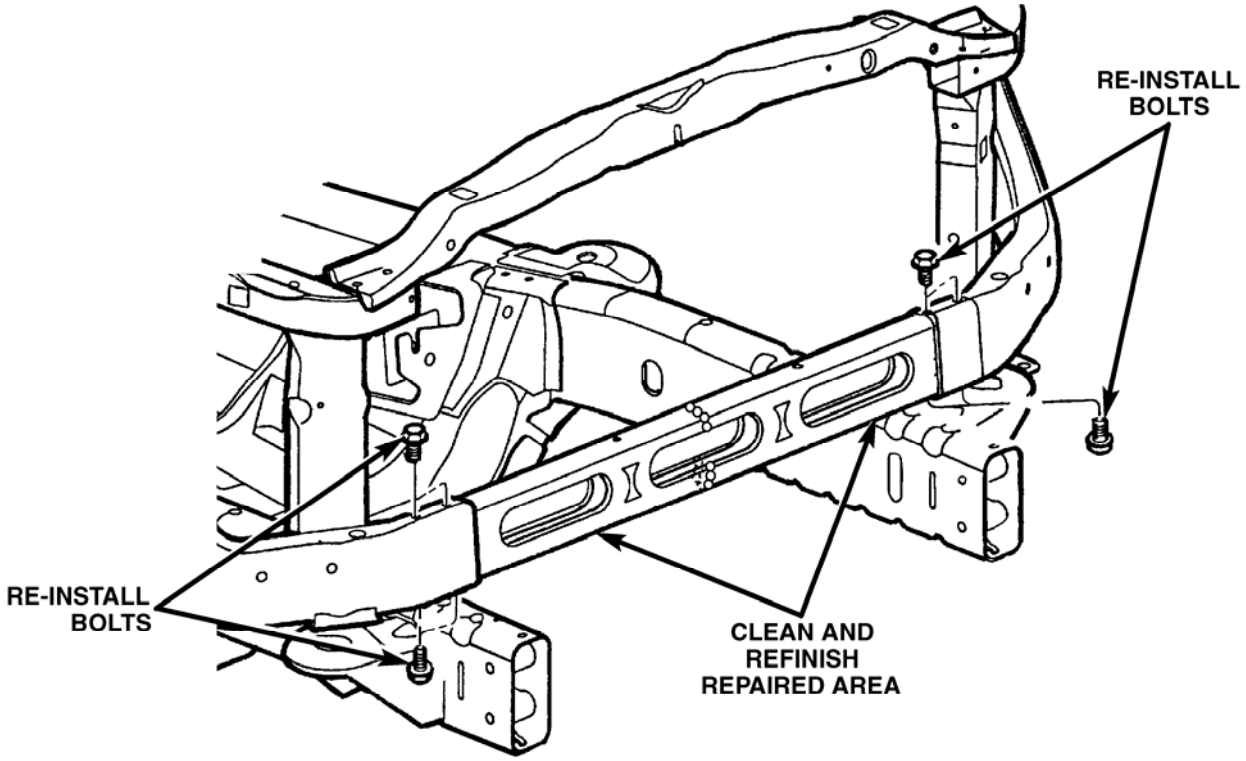
13. Apply corrosion resistant primer to all bare metal.

14. Apply paintable urethane sealant to all edges of inserts to seal out any corrosion causing agents.

15. Refinish crossmember.

16. Reassemble vehicle.

17. For the Dakota it will require removing the lower radiator crossmember (“cow-catcher”) from the damaged and new part before sectioning the crossmember. Then replacing after sectioning is done and completing steps 13-16.



Back to Index

DODGE RAM TRUCK LIGHT DUTY (2006 & NEWER)
FRONT FRAME RAIL TIP REPLACEMENT

CAUTION: This procedure is designed to replace the front frame rail tips that have been damaged in the crush initiator zones. Prior to any cutting, the vehicle must be mounted on the appropriate frame repair equipment ("frame rack"), checked with three dimensional measuring equipment, and the necessary pull corrections made without the use of heat.

- If damage remains in the frame beyond the area covered by this service part after the pull, the frame must be replaced in its entirety.
- If damage to the front body structure is evident, repair the Front End Sheet Metal (FESM) fender rails as necessary.
- Inspect all body mount bolts for damage and repair if necessary.

CAUTION: Inspect the spare tire winch assembly for damage. If any one or more of the following are evident, replace the winch assembly.

- Indications of cracked or bulging plastic.
- Housing flanges are bent or cracked.
- If winch was loose before repair.
- If the rivet heads are separated from the housing in any way.

Back to Index

1. Before proceeding with this repair procedure review the required service warnings and precautions.

2. Disconnect and isolate the battery negative cable.

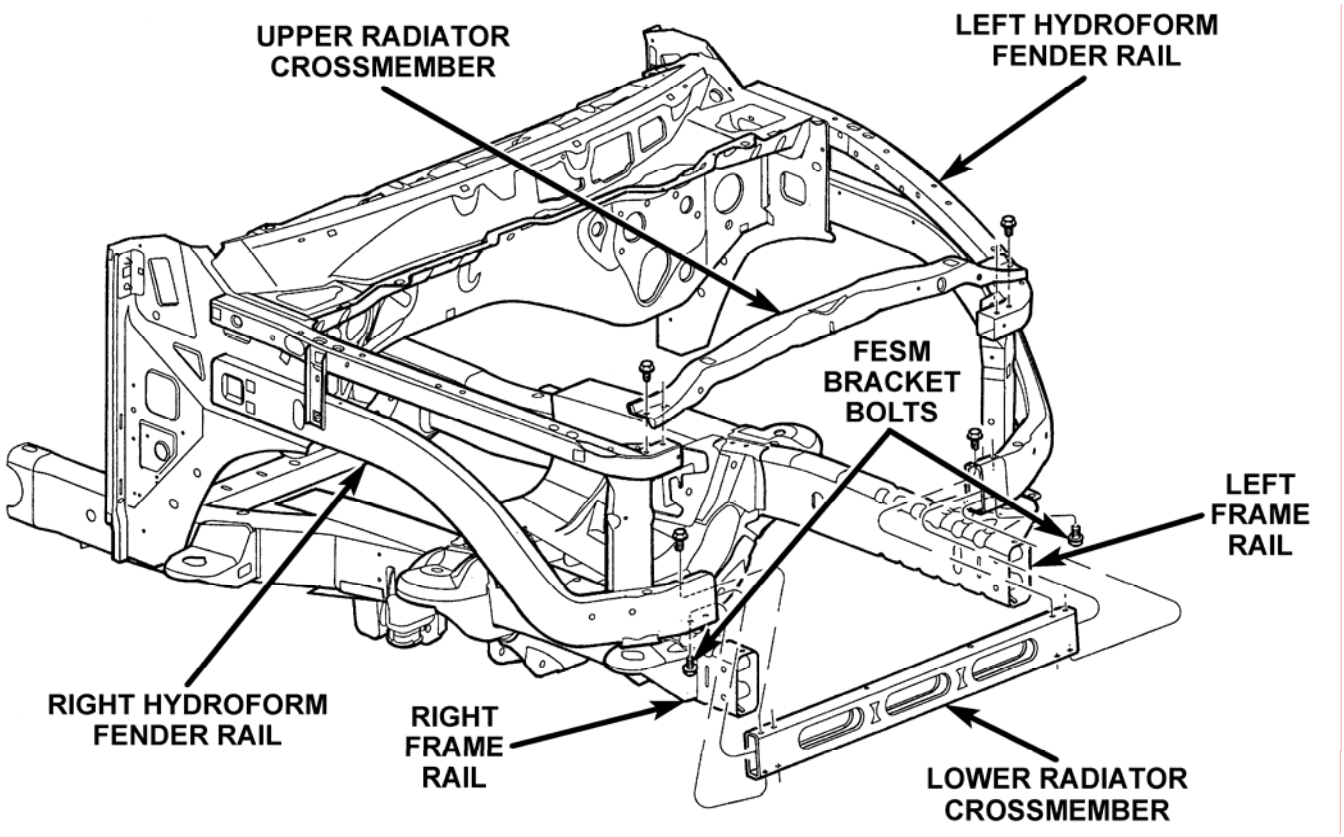
3. Remove the front wheelhouse splash shield.

4. Remove the bolts and position aside the wire harness and grounds, if required.

5. Remove the front bumper.

6. Loosen and lower the stabilizer bar mount and bar.

7. Remove the bolt from the front cab mount to the Front End Sheet Metal (FESM) bracket.

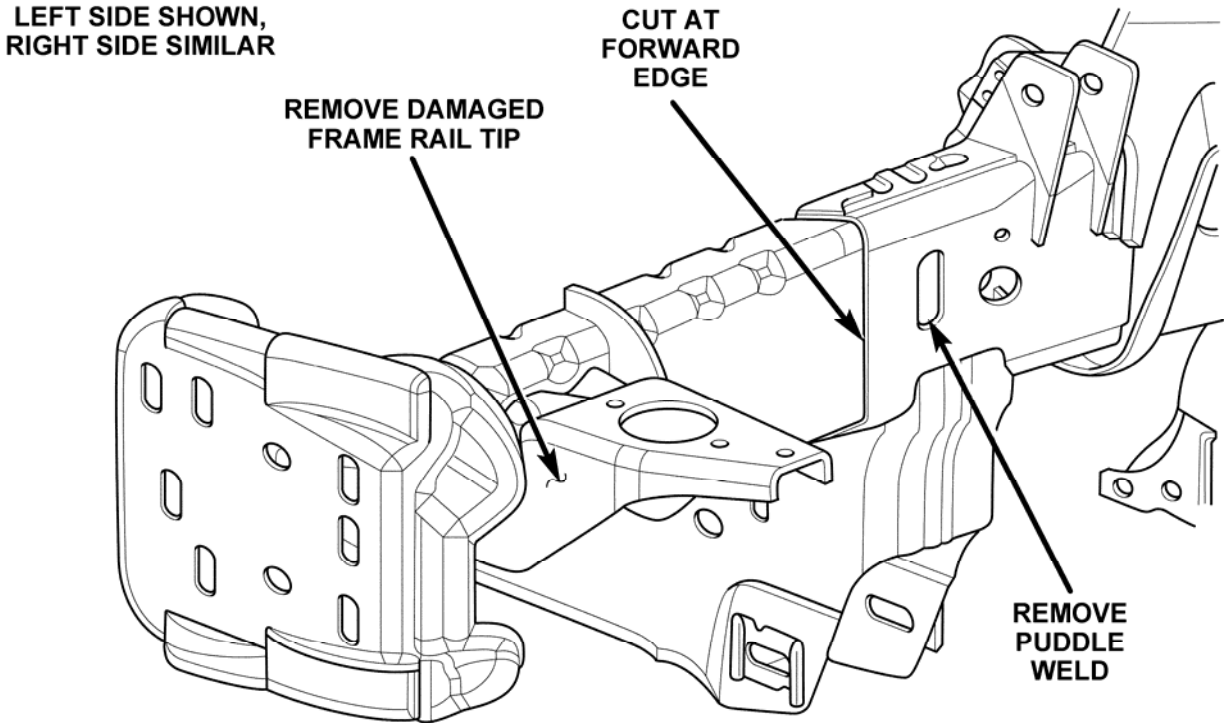


Back to Index

CAUTION: Do not use any flame or plasma cutting equipment to cut the frame in this procedure. This is due to the inaccurate nature of the cut-line and the fact that the high temperatures achieved during flame or plasma cutting will change the metal characteristics and may weaken the frame and/or repair location.

8. Using a reciprocating saw or equivalent tool, carefully cut and remove the damaged frame rail tip. Cut at the forward edge of the weld at the tip to frame joint; do not cut the main frame rail.

9. Using a plasma cutter, remove the puddle weld that attaches the frame tip to the frame rail.



Back to Index

10. With the puddle weld removed, grind any remaining weld and remove the remaining piece of the frame tip from within the frame rail and discard.

11. Smooth and square the cut edges of the original frame.

12. Remove any burrs at the hole and frame edge.

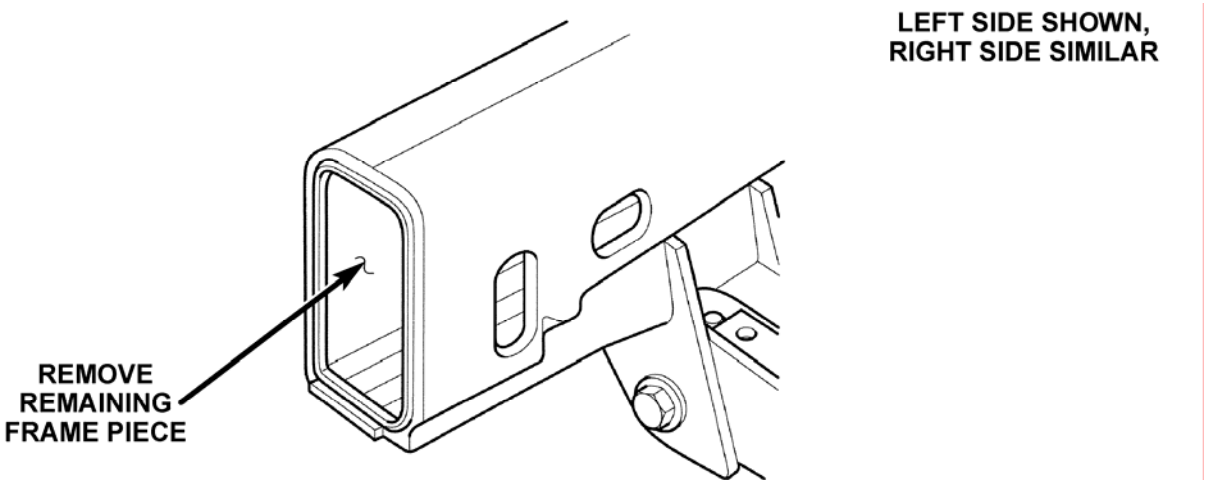
CAUTION: Shield the surrounding area and components from exposure to the welding spatter and heat.

13. Dry fit the new rail to verify alignment and make any adjustments as necessary.

14. Remove all internal and external OEM e-coat within 25 mm (1.0 in.) of the weld joint on the replacement tip and the existing frame rail.

15. When correctly aligned, tack weld the new rail tip into place.

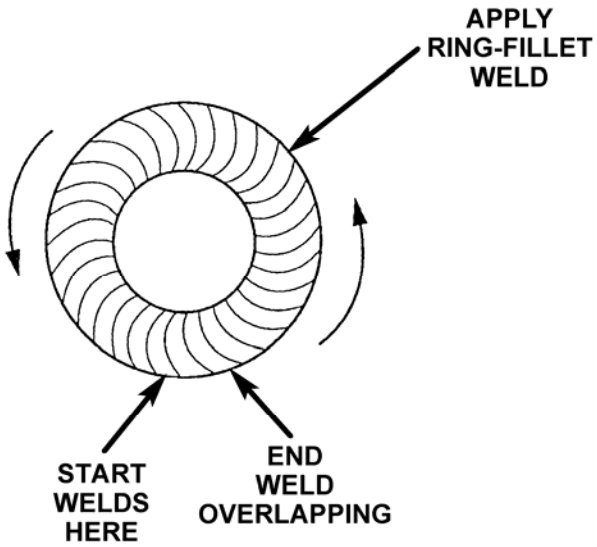
16. Confirm that the alignment of the replacement frame rail tip is within specifications.



Back to Index

17. Apply ring-fillet weld into the ring-fillet weld hole on the replacement frame tip.

18. Start the ring-fillet welds at location and follow around the circumference of the ring-fillet weld hole and end weld overlapping start point.



Back to Index

19. Welding at the tip to frame joint should be performed in a skip (stitch) type method to minimize the heat buildup and frame distortion, utilizing the Weld Process Specifications at the beginning of the sectioning section.

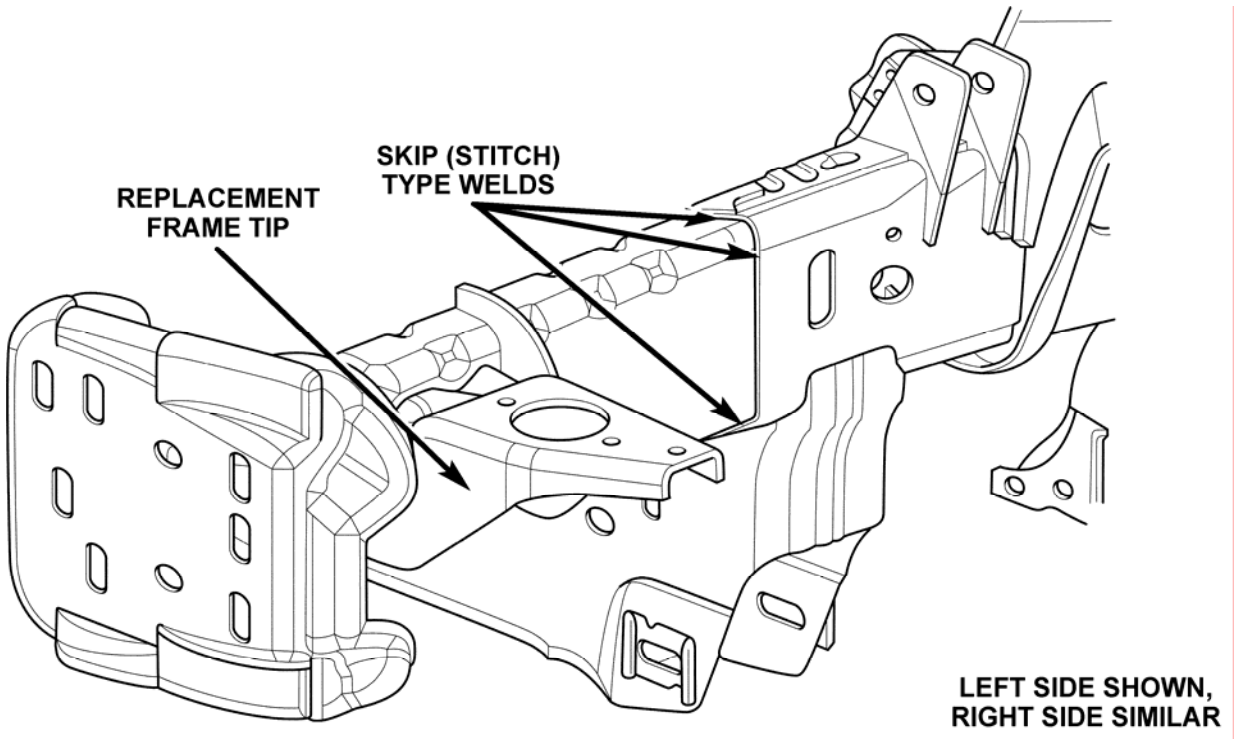
20. Apply root pass welds to the joint, one quadrant at a time, switching to the opposite side of the frame rail for each quadrant.

21. Clean the welds of any flux and other impurities before proceeding with the cover pass welds.

22. Apply the cover pass welds in the same manner as described above.

23. Confirm alignment of the replacement frame rail tip.

NOTE: Any burned surface coatings will need to be removed prior to application of corrosion preventative coatings.



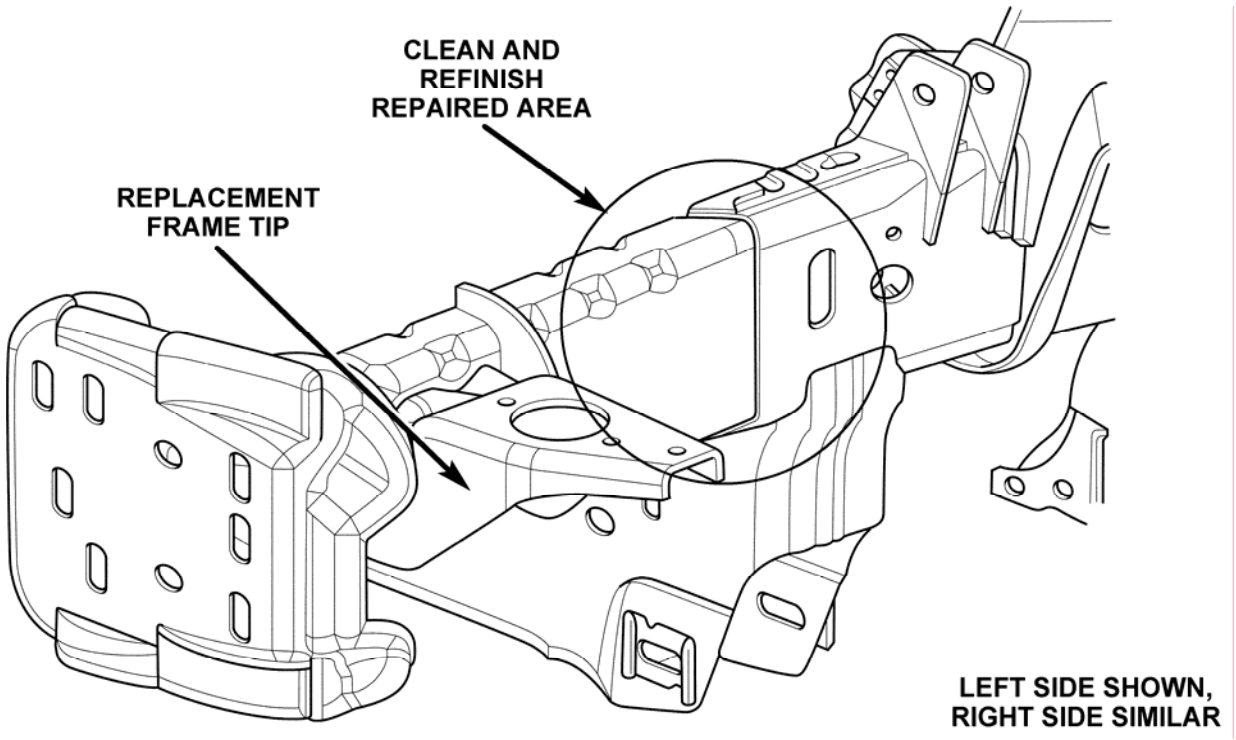
Back to Index

24. Dress the welded area and apply corrosion resistant coatings inside and out.

a. Apply etch-primer to the inside of the frame rail repair area.

b. Inside the rail, inject a creeping wax based rust inhibitor compound through the existing holes in the frame ensuring 100% coverage including the space between the original frame rail and the reinforcing sleeve; using Mopar Cavity wax kit (part # 68042969AA) / Undercoating kit (part # 68042967AA) or equivalent.

c.Apply a durable top coat to the outside of the repair area.



Back to Index

25. Tighten bolt at the front cab mount to the FESM bracket to 81 N·m (60 ft. lbs.).

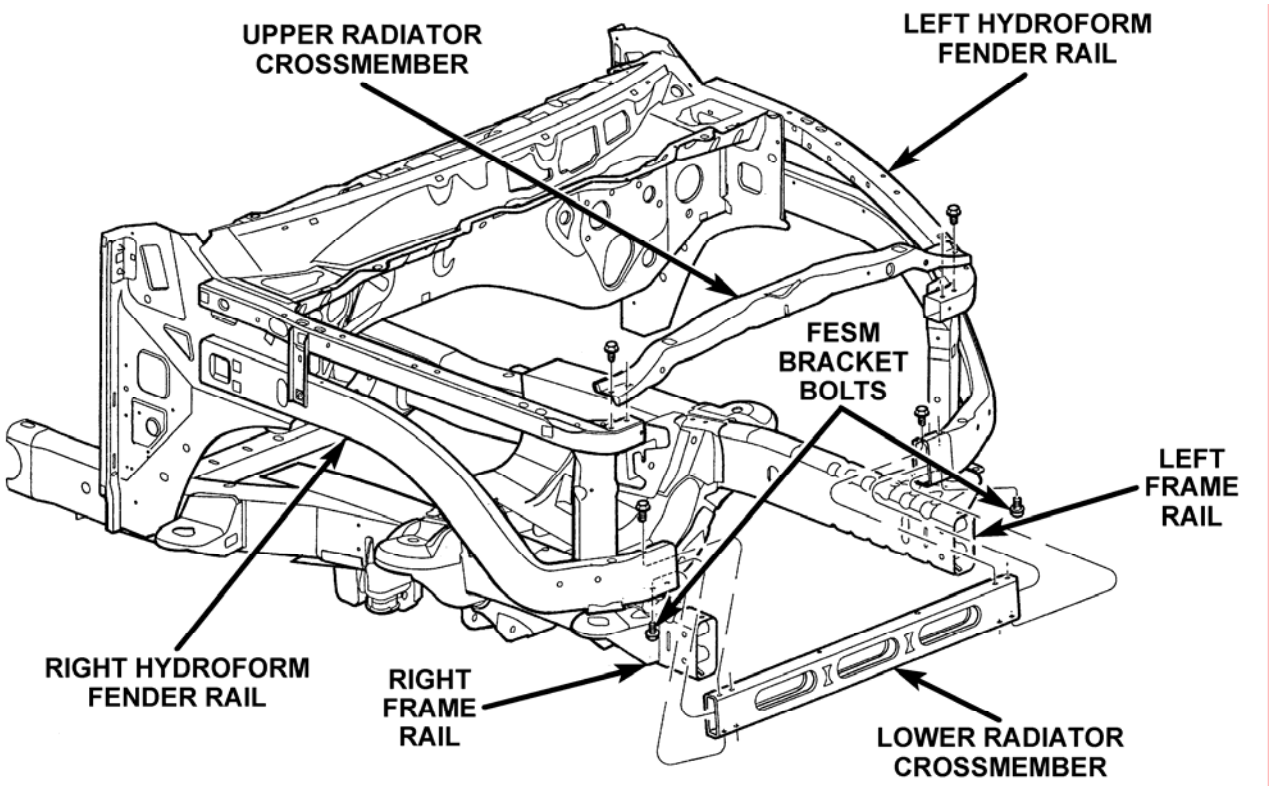
26. Install and tighten the stabilizer bar.

27. Install the front bumper.

28. Install wire harness and grounds as necessary.

29. Install the front wheelhouse splash shield.

30. Reconnect and isolate the battery negative cable.



Back to Index

LIGHT DUTY FRONT FRAME RAIL TIP REPLACEMENT (2002-2005)

SAFETY PRECAUTIONS AND WARNINGS

WARNING: USE EYE PROTECTION WHEN GRINDING OR WELDING METAL, SERIOUS EYE INJURY CAN RESULT.

- **BEFORE PROCEEDING WITH FRAME REPAIR INVOLVING GRINDING OR WELDING, VERIFY THAT VEHICLE FUEL SYSTEM IS NOT LEAKING OR IN CONTACT WITH REPAIR AREA, PERSONAL INJURY CAN RESULT.**
- **DO NOT ALLOW OPEN FLAME OR HEAT AND METAL SPATTER FROM ARC WELDING, TO CONTACT PLASTIC BODY PANELS. FIRE OR EXPLOSION CAN RESULT**
- **WHEN WELDED FRAME COMPONENTS ARE REPLACED, ENSURE COMPLETE PENETRATION WELD IS ACHIEVED DURING INSTALLATION. IF NOT, DANGEROUS OPERATING CONDITIONS CAN RESULT.**
- **STAND CLEAR OF CABLES OR CHAINS ON PULLING EQUIPMENT DURING FRAME STRAIGHTENING OPERATIONS, PERSONAL INJURY CAN RESULT.**
- **DO NOT VENTURE UNDER A HOISTED VEHICLE THAT IS NOT SUPPORTED ON SAFETY STANDS, PERSONAL INJURY CAN RESULT.**

CAUTION: 1500 series Dodge Ram trucks (2002 and later) are not designed for snowplow equipment. This front collision repair tip must not be installed on any truck equipped with a snowplow, or ever intended to be equipped with a snowplow.

CAUTION: This procedure is designed to replace the front frame rail tips that have been damaged in the crush initiator zones. Prior to any cutting, the vehicle must be mounted on the appropriate frame repair equipment ("frame rack"), checked with three-dimensional measuring equipment, and the necessary pull corrections made. If damage remains in the frame beyond the area covered by this service part after the pull, the frame must be replaced in its entirety.

CAUTION: Do not reuse damaged fasteners; quality of repair would be suspect. Failure to use only production fasteners or fasteners of equivalent hardness can result in loosening or failure. Do not drill any holes in the frame that are not specifically outlined in this, or other, DaimlerChrysler procedure as frame rail failure can result. When using heat to straighten frame components do not exceed 566ºC (1050ºF), metal fatigue can result.

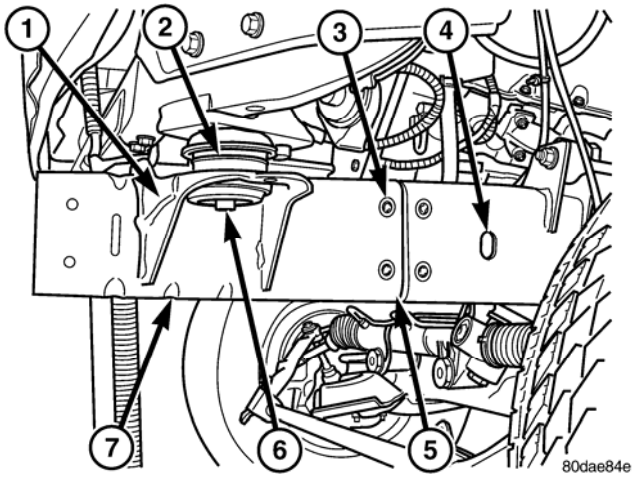
NOTE: Procedures for 4X2 and 4X4 are common except as noted in this procedure.

1. Disconnect and isolate the battery negative cable.
2. Remove the front wheelhouse splash shield.
3. Remove the bolts and position aside the wire harness and grounds, if required.
4. Remove the front bumper.
5. Loosen and lower the stabilizer bar mount and bar.
6. Remove the front cab mount bolt to the Front-End Sheet Metal (FESM) bracket. (Fig. 1)

Back to Index

7. Make a vertical mark on the inside and outside face of the frame rail 112 mm (4.5 in.) from the forward edge of the Principle Locating Point (PLP) hole in the sides of the rail. (Fig. 5)
8. Using a straightedge, connect the two lines on the top and bottom of the rail.
9. Using the service tip as a guide, re-check your cut lines to ensure the service tip will fit when the cut is made.

CAUTION: Do not use any flame or plasma cutting equipment to cut the frame in this procedure. This is due to the inaccurate nature of the cut-line and the fact that the high temperatures achieved during flame or plasma cutting will change the metal characteristics and may weaken the frame and/or repair location.



1- FRONT END SHEET METAL (FESM) BRACKET
2 - CAB INSULATOR
3 - RING-FILLET WELD/HOLE
4 - PRINCIPLE LOCATING POINT (PLP)
5 - WELD ROOT GAP 4 mm - 6mm (0.16 in. - 0.24 in.)
6 - FRONT CAB MOUNT BOLT
7 - REPLACEMENT FRAME TIP

10. Using a reciprocating saw or equivalent, carefully cut and remove the damaged frame rail tip. (Fig. 5)

NOTE: Two sleeve halves are included with each kit. Modifications as follow are necessary to create the correct sleeve assembly for each application.

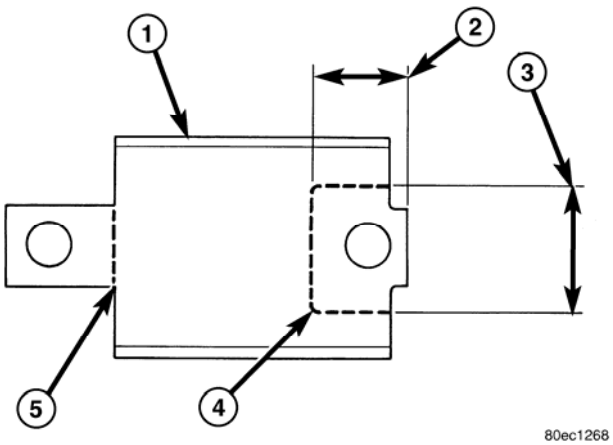
11. On 4X2 models, the "lower" sleeve is made by cutting off the tab and cutting out a notch in the bottom sleeve portion. Round the corners of the cut out to keep stress cracks from forming (Fig. 2). On 4X4 models the "lower" sleeve is used as provided.

Back to Index

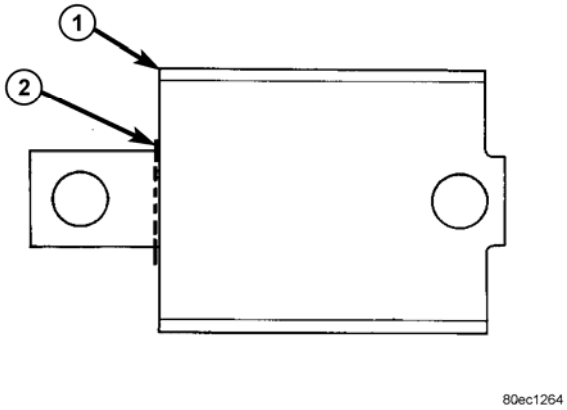
12. On both 4X2 and 4X4 models cut off the front tab on the "upper" sleeve portion. (Fig. 3)
13. The sleeve halves are shipped slightly oversized to allow custom fitting to each replacement frame rail tip. It is necessary to grind the mating surfaces to achieve the desired snug fit into the replacement tip (rail tube has increasing height rearward of the cut line). Once the two sleeve halves are fitted, bevel the edges 25° - 30°.

NOTE: Scribing a line 2 mm from the cut edge and then grinding back to the mark will simplify the bevel creation process and accuracy.

14. Remove any burrs at the beveled edges. Using the weld process table at the end of this procedure, weld the two halves of the repair sleeve together. (Fig. 13)
15. Clean the welds of any flux and other impurities and grind smooth before proceeding with the installation of the sleeve.
16. Find the centerline of the sleeve and scribe a centerline mark. Mark two additional lines 2 mm (0.08 in.) on either side of the centerline mark to help ensure the required 4 mm - 6 mm (0.16 in. - 0.24 in.) weld root gap. (Fig. 13)



1 - SERVICE SLEEVE LOWER HALF
2 - CUT DIMENSION 27 mm (1.06 in.)
3 - CUT DIMENSION 36.1 mm (1.42 in.)
4 - 4X2 CUTOUT
5 - FRONT TAB CUT LINE (4X2 ONLY)



1 - SERVICE SLEEVE UPPER HALF
2 - CUT LOCATION

Back to Index

JEEP WRANGLER
FRAME/BODY DIMENSIONS

Back to Index

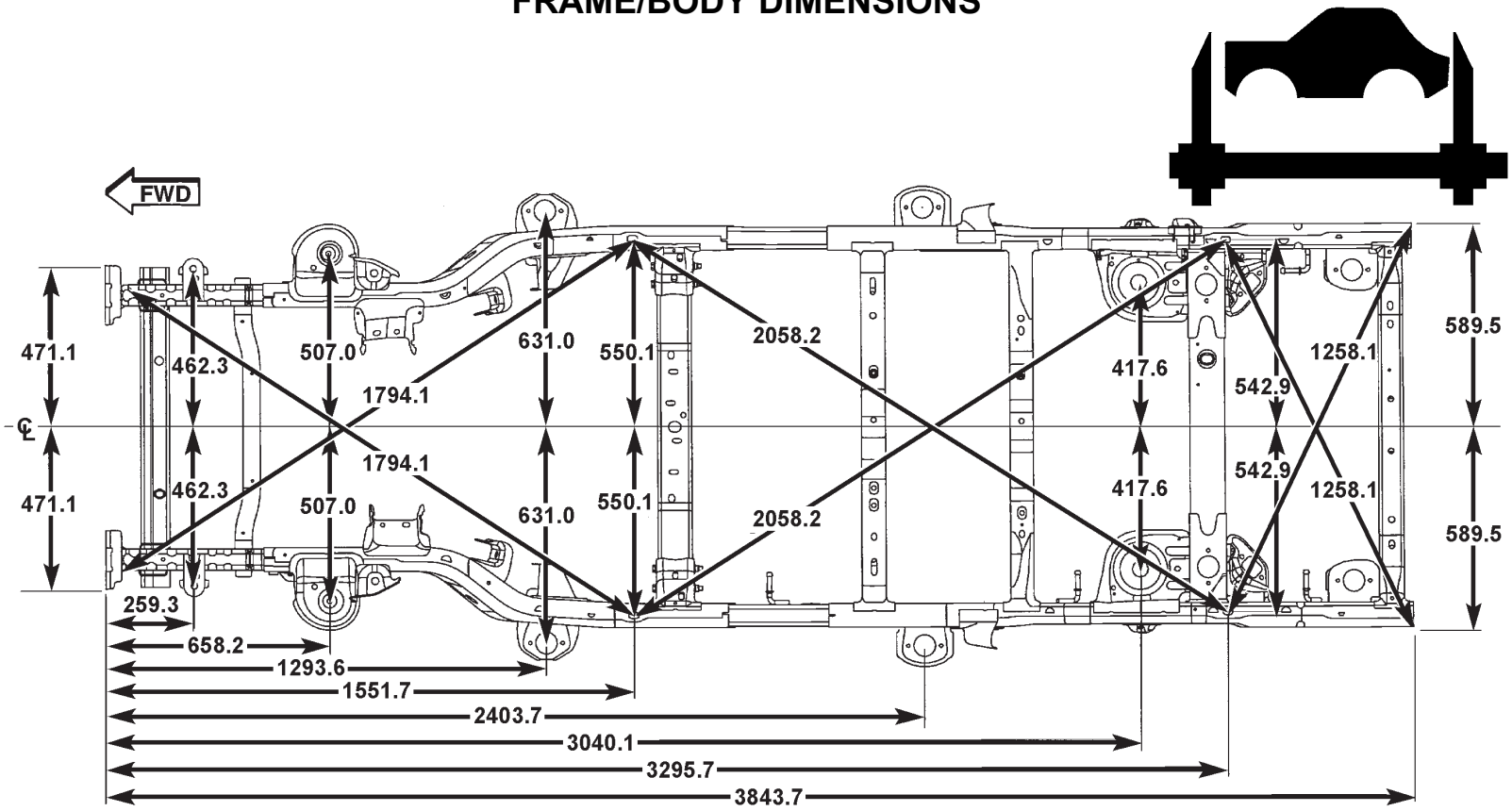
FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center of Principal Locating Point (PLP), or from center to center of PLP and transfer location. Vertical dimensions can be taken from the work surface to the locations indicated.

INDEX

Back to Index

FRAME/BODY DIMENSIONS



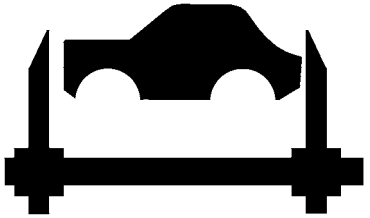
ALL DIMENSIONS ARE IN MILLIMETERS

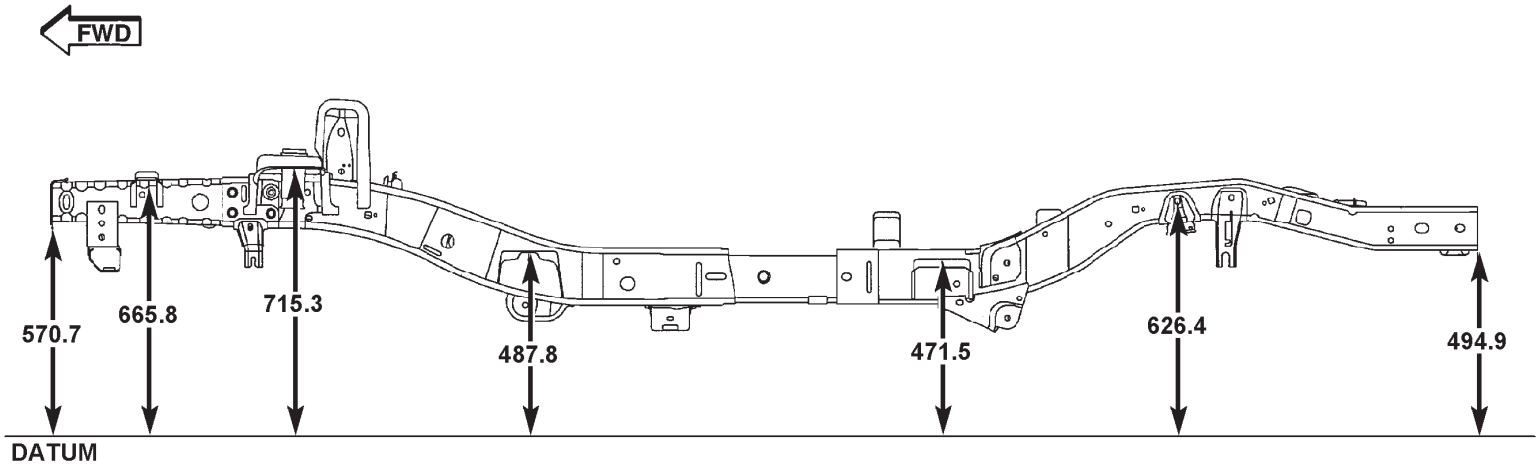
819f8ade

Figure 1. FRAME DIMENSIONS (PLAN VIEW) – JK72

Back to Index

FRAME/BODY DIMENSIONS





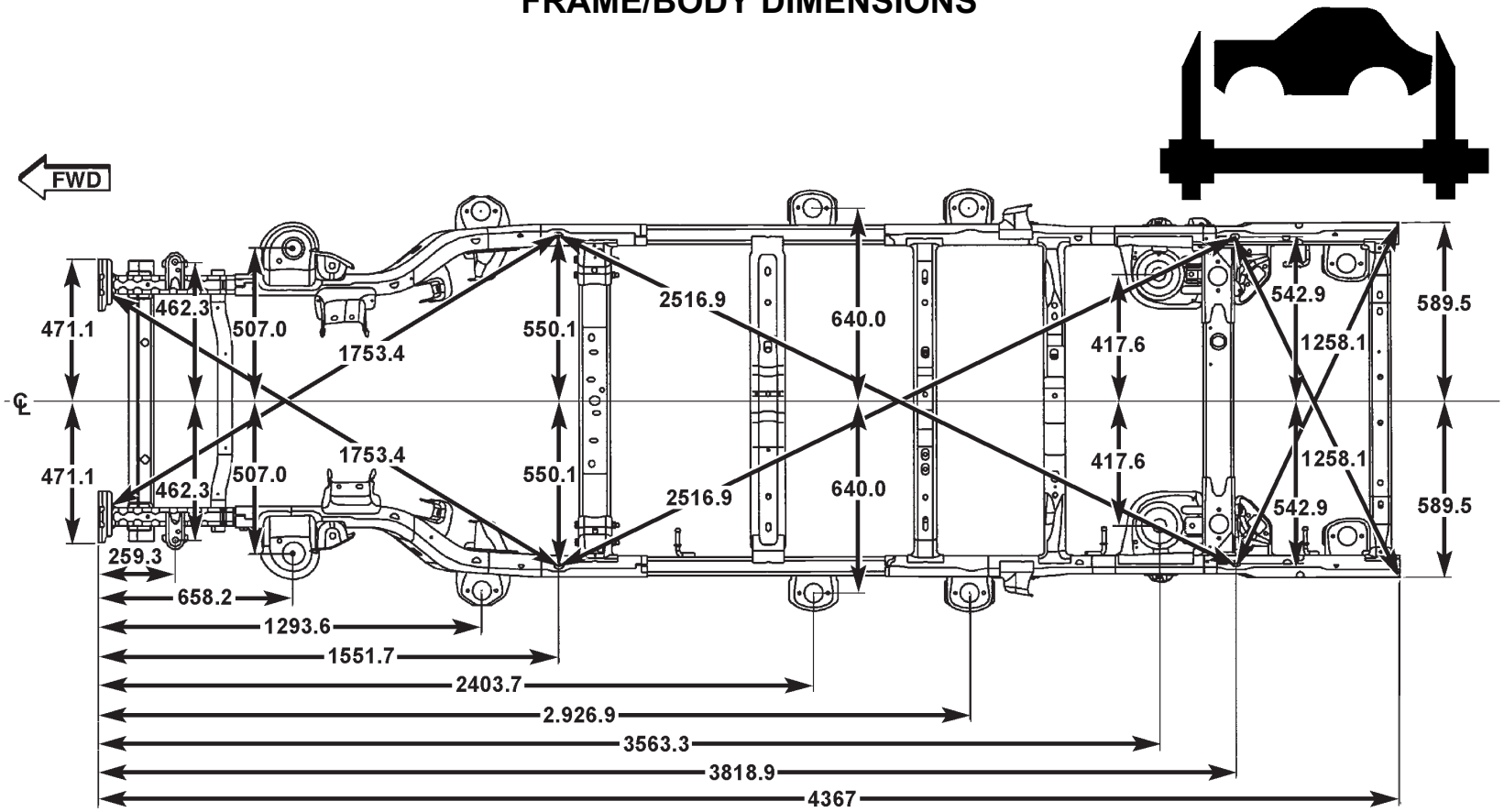
ALL DIMENSIONS
ARE IN MILLIMETERS

819f8ae6

Figure 2. FRAME DIMENSIONS (SIDE VIEW) – JK72

Back to Index

FRAME/BODY DIMENSIONS



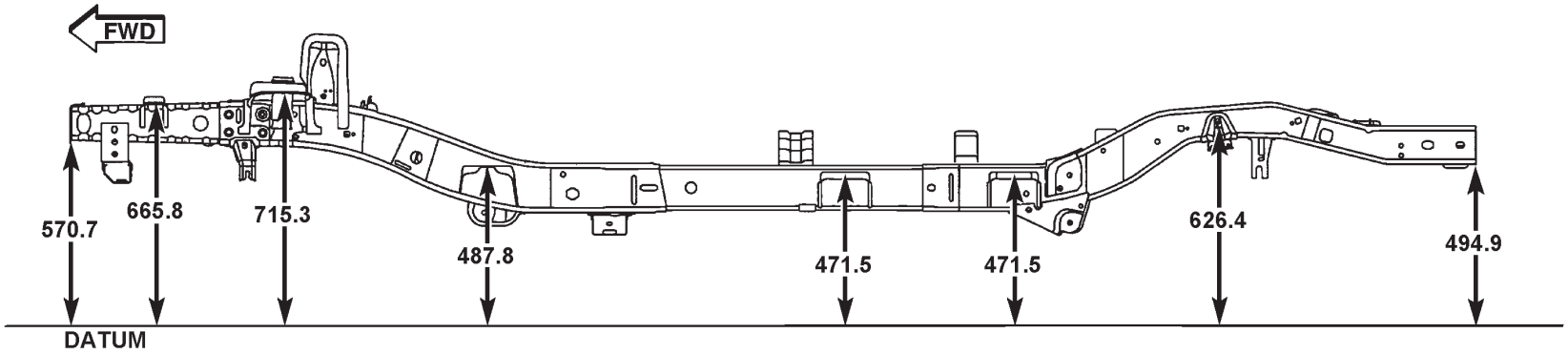
ALL DIMENSIONS ARE IN MILLIMETERS

819f8aec

Figure 3. FRAME DIMENSIONS (PLAN VIEW) – JK74

Back to Index

FRAME/BODY DIMENSIONS



ALL DIMENSIONS
ARE IN MILLIMETERS

819f8af1

Figure 4. FRAME DIMENSIONS (SIDE VIEW) – JK74

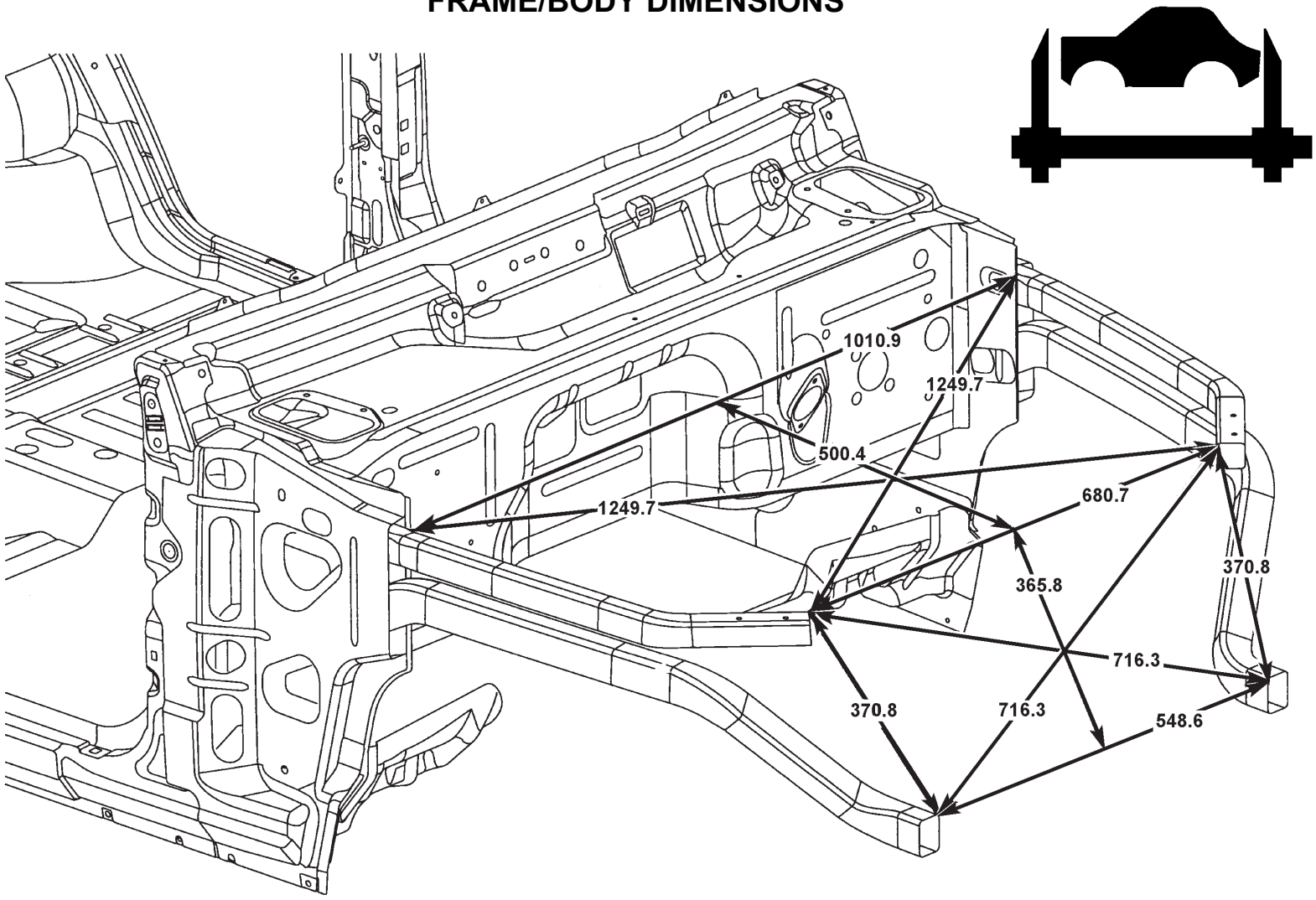
Back to Index

OPENING DIMENSIONS

DESCRIPTION	FIGURE
ENGINE BOX OPENING	1
WINDSHIELD OPENING	2
FRONT DOOR OPENING – JK72	3
REAR DOOR OPENING – JK74	4
“B” PILLAR CROSS/CAR – JK74	5
REAR DOOR OPENING – JK74	6
SWINGGATE OPENING	7

Back to Index

FRAME/BODY DIMENSIONS



ALL DIMENSIONS
ARE IN MILLIMETERS

8199b13d

Figure 1. ENGINE BOX OPENING

Back to Index

FRAME/BODY DIMENSIONS

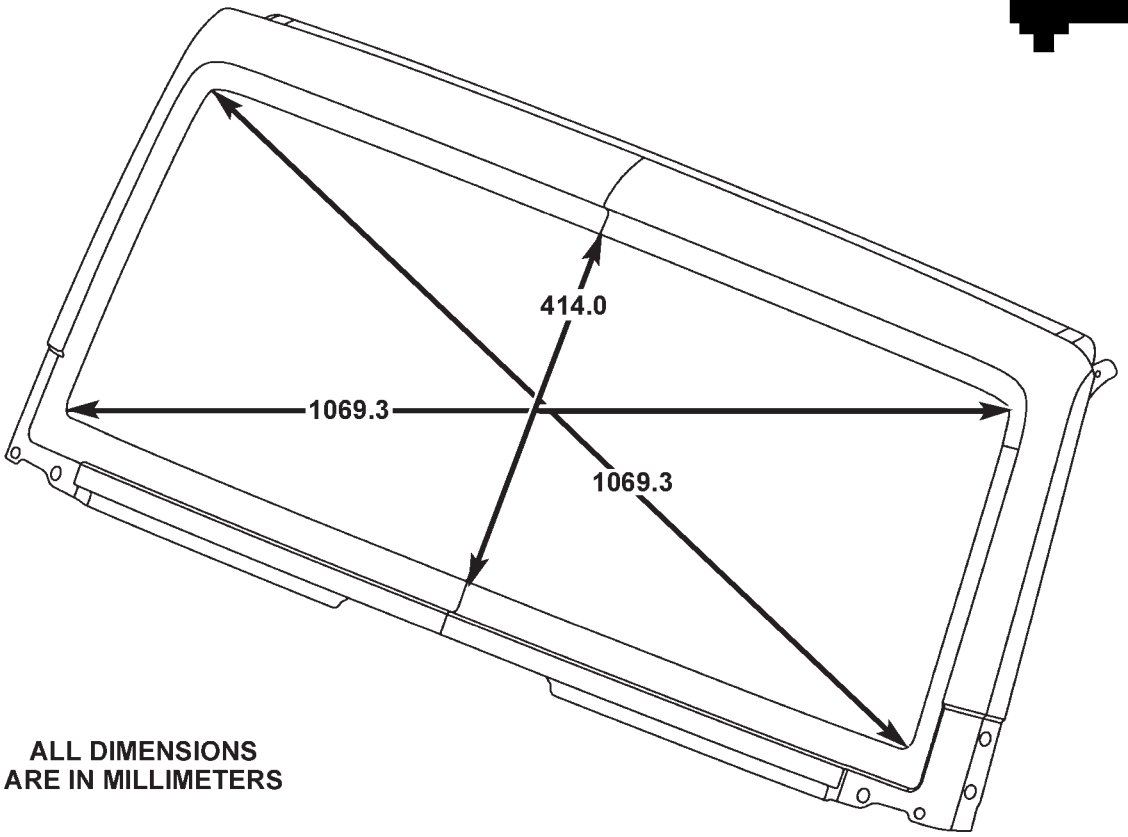


Figure 2. WINDSHIELD OPENING

Back to Index

FRAME/BODY DIMENSIONS

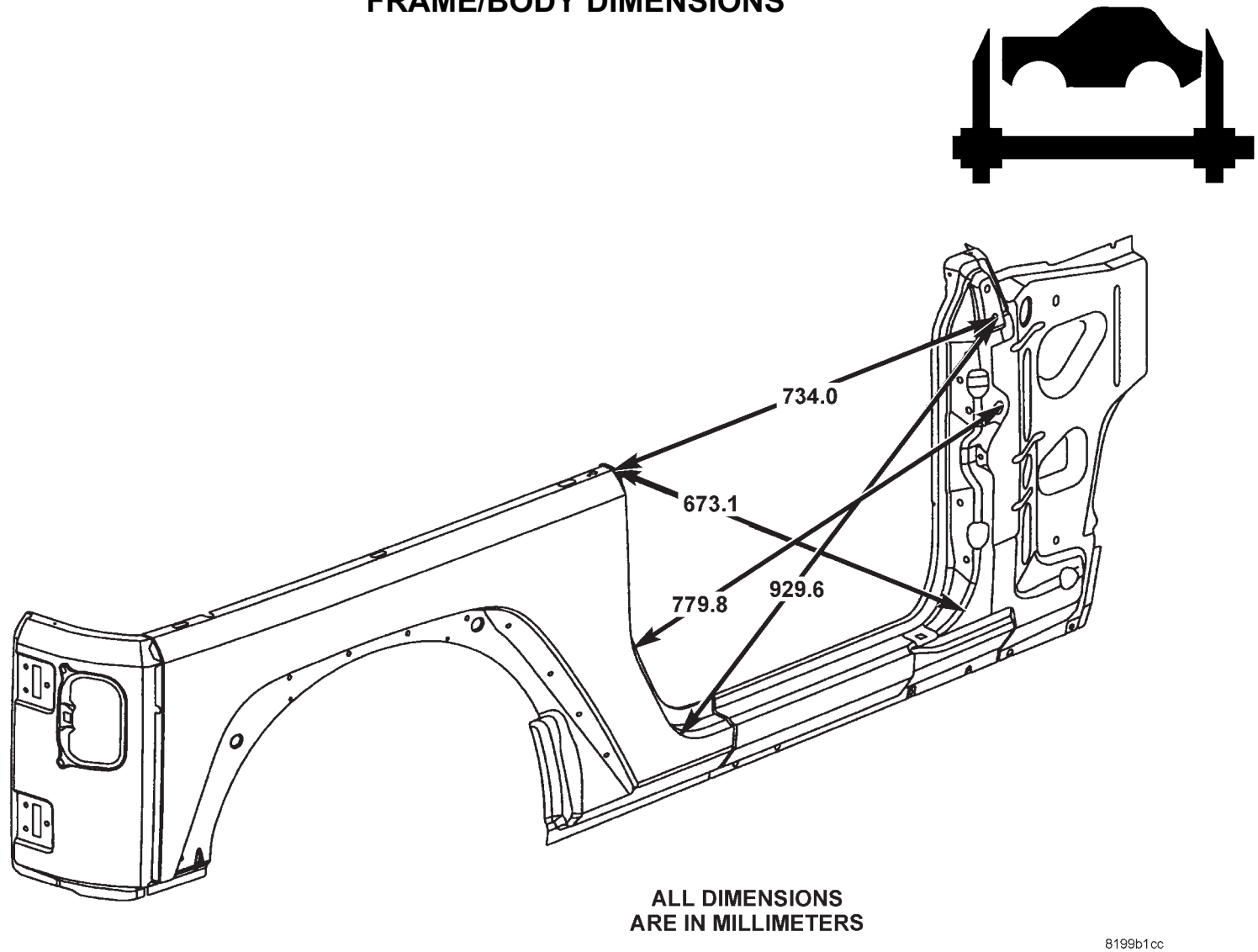
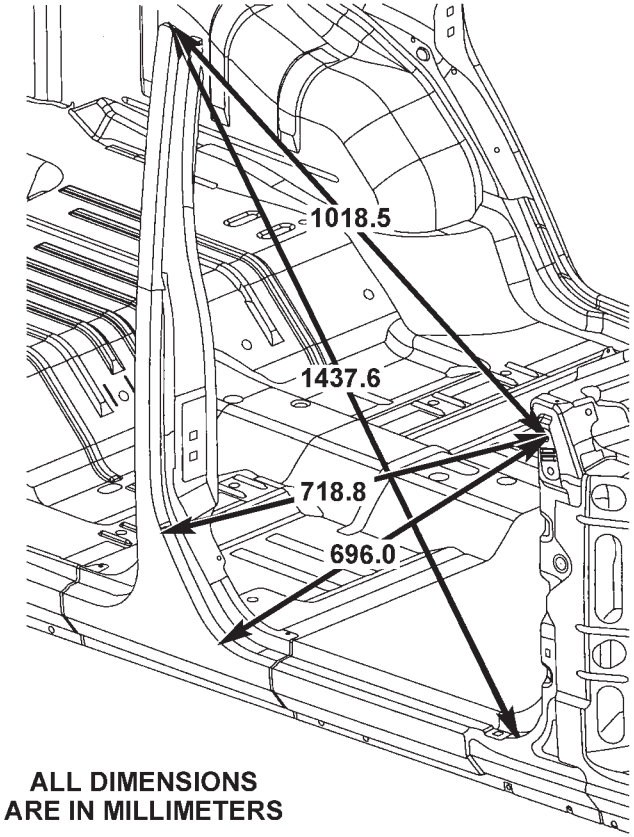


Figure 3. FRONT DOOR OPENING – JK72

Back to Index

FRAME/BODY DIMENSIONS



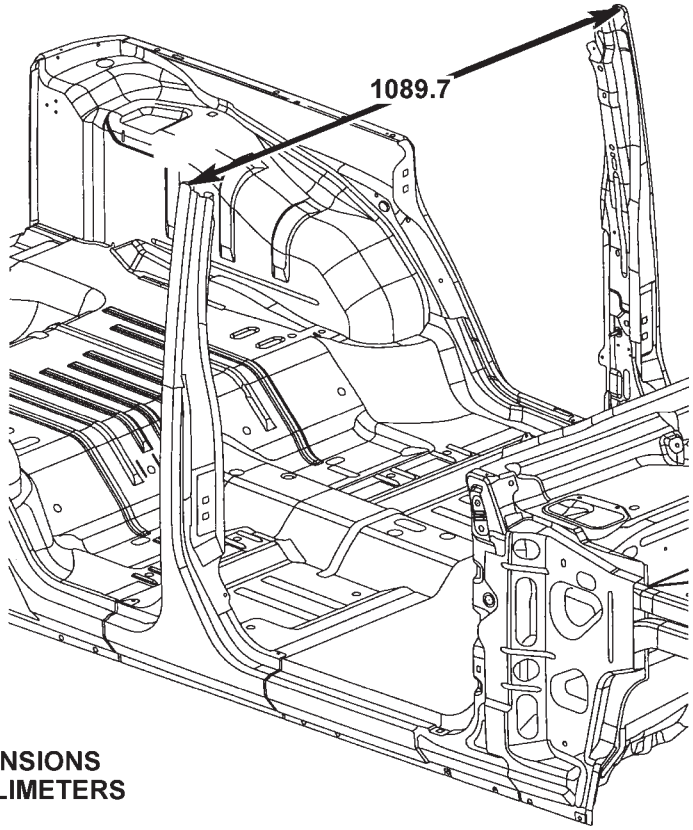
ALL DIMENSIONS ARE IN MILLIMETERS

8199b289

Figure 4. FRONT DOOR OPENING – JK74

Back to Index

FRAME/BODY DIMENSIONS



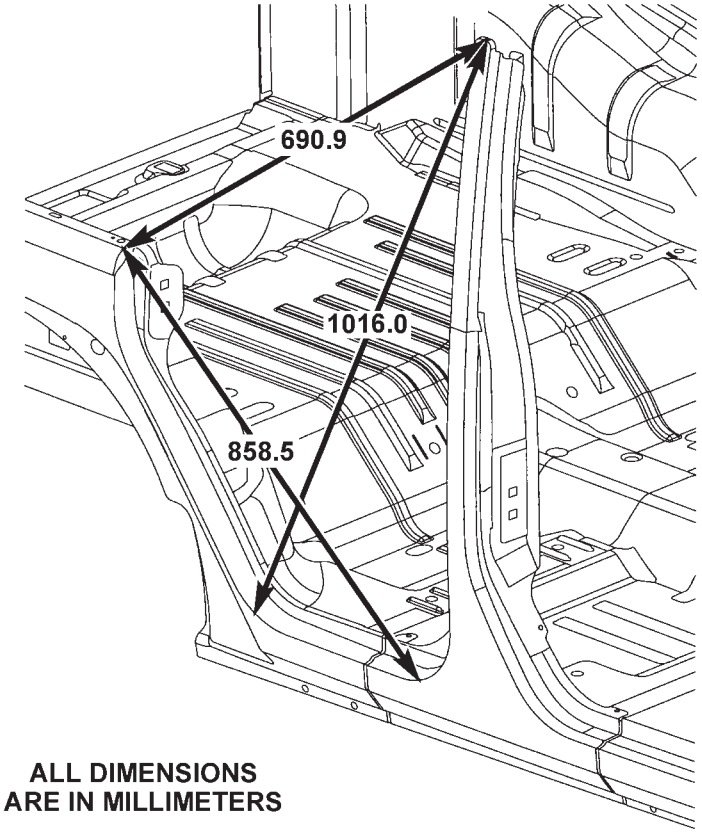
ALL DIMENSIONS ARE IN MILLIMETERS

8199c462

Figure 5. "B" PILLAR CROSS/CAR – JK74

Back to Index

FRAME/BODY DIMENSIONS



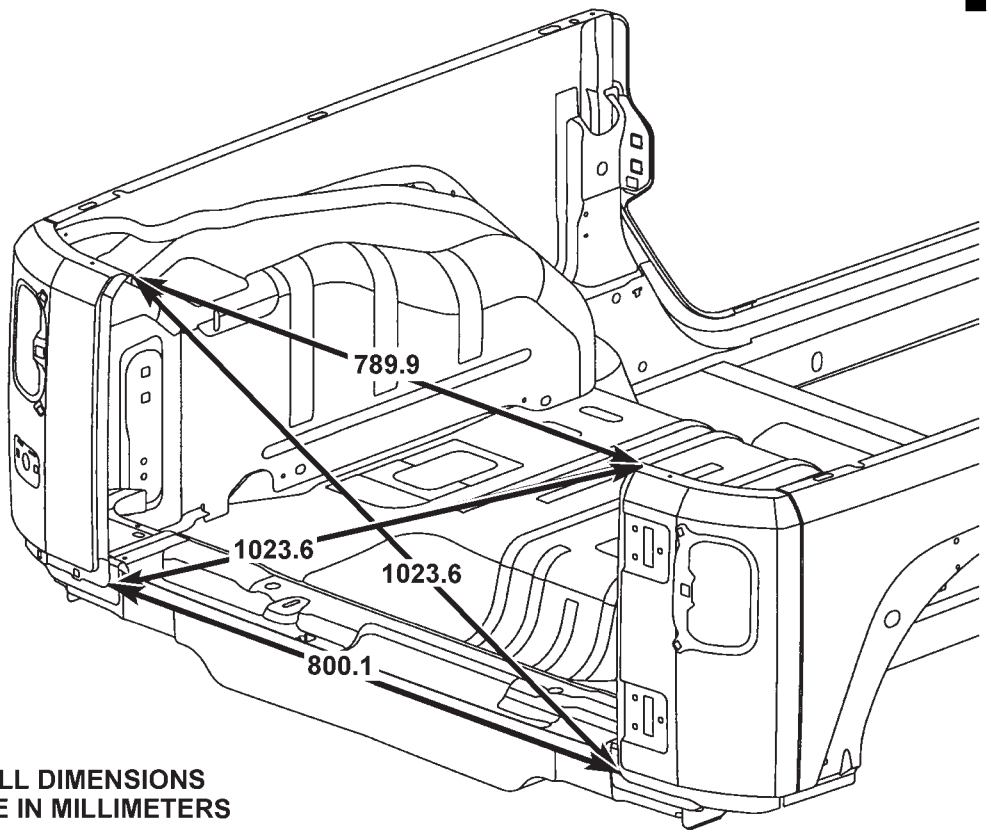
ALL DIMENSIONS ARE IN MILLIMETERS

8199c466

Figure 6. REAR DOOR OPENING – JK74

Back to Index

FRAME/BODY DIMENSIONS

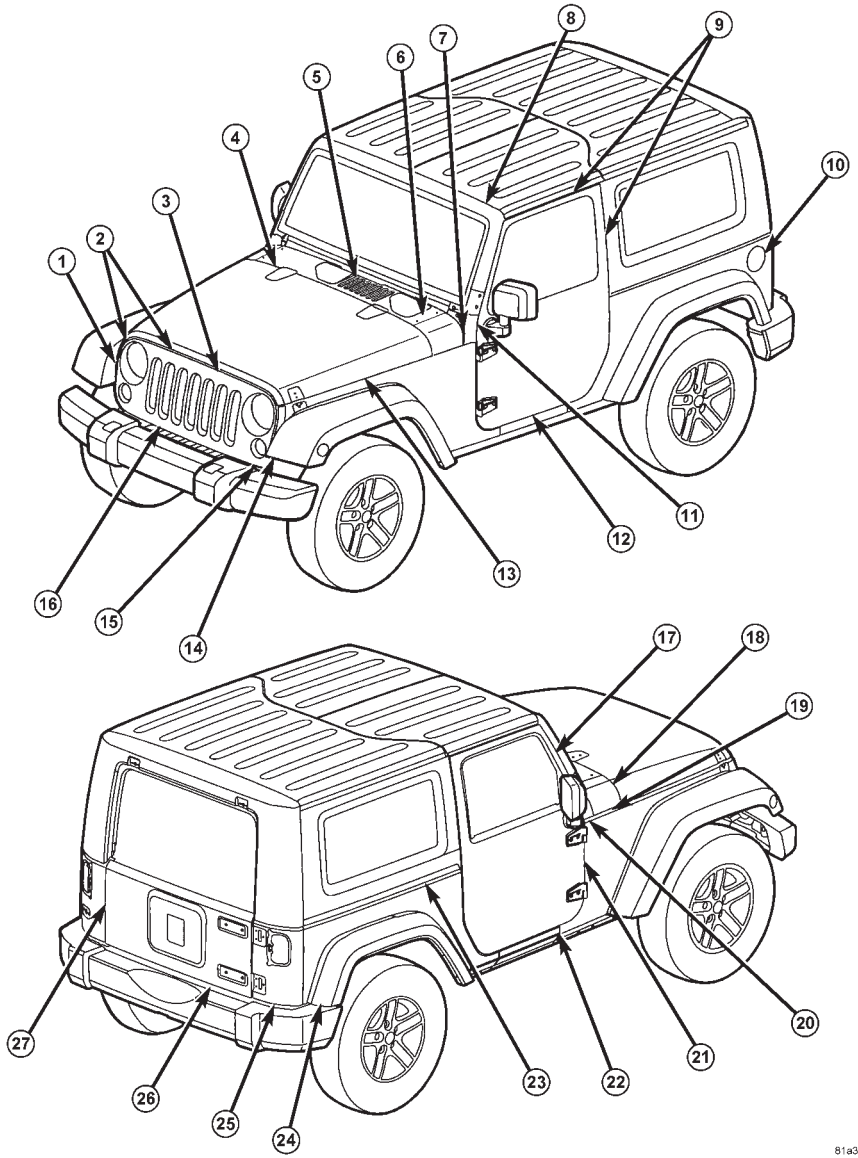


8199c479

Figure 7. SWINGGATE WINDOW OPENING

Back to Index

GAP AND FLUSH DIMENSIONS



Back to Index

GAP AND FLUSH DIMENSIONS

DIMENSION	DESCRIPTION	GAP	FLUSH
1	Fender to Grille	--	0.0 +/- 2.0
2	Hood/Fender to Grille	7.0 +/- 2.0 Parallel within 1.5 Side to Side 2.0	--
3	Hood to Grille	--	Hood O/F 1.0 +/- 2.0 Parallel within 1.5
4	Hood to Cowl Grille	7.0 +/- 2.0 Parallel within 1.5	0.0 +/- 2.0
5	Cowl Grille to Windshield	5.0 +/- 2.0 Parallel within 1.5	0.0 +/- 2.0
6	Cowl Grille to Cowl End Cap	5.5 +/- 1.5	0.0 +/- 1.5
7	Cowl Panel Windshield Reinforcement	To Windshield 4.0 +/- 1.5 Parallel within 1.5 To Cowl End Cap 3.0 +/- 2.0	--
8	Windshield to Hard/Soft Top	5.0 +/- 2.0 Parallel within 2.0	O/F 1.0 +/-2.0
9	Hard/Soft Top to Front Door	5.0 +/- 2.0 Parallel within 1.5	12.0 +/- 2.0 at Drip Rail 0.0 +/- 1.5 at Belt Line
10	Fuel Filler Door to Body Side	0.0 + 1.5/-0.0	--
11	Windshield Reinforcement to Door	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
12	Front Door to Body Side	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5 Allow additional +/- 0.5 with Side Curtain
13	Hood to Fender	6.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
14	Fender/Wheel Flare to Fascia	16.0 +/- 4.0 Parallel within 3.0	--
15	Grille to Bumper	11.0 +/- 4.0 Parallel within 3.0	--
16	Grille to Valance Cover	13.0 +/- 4.0	--
17	Windshield to Door	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5 Allow additional +/- 0.5 with Side Curtain
18	Hood to Cowl Grille End Cap	7.0 +/- 2.0 Parallel within 1.5	0.0 +/- 1.5
19	Cowl End Cap to Fender	5.5 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
20	Windshield Reinforcement to Fender	7.0 +/- 2.0	0.0 +/- 1.5
21	Fender to Door	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
22	Fender to Body Side	5.0 +/- 1.5	0.0 +/- 1.5
23	Hard/Soft Top to Body	16.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
24	Rear Bumper to Wheel Flare	19.0 +/- 5.0	0.0 +/- 4.0
25	Rear Bumper to Body Side	13.0 +/- 3.0	--
26	Rear Bumper to Swing Gate	34.5 +/- 3.0 Parallel within 3.0	--
27	Swing Gate to Body	5.0 +/- 1.5 Parallel within 1.5 Side to Side 2.0	0.0 +/- 1.5 Parallel within 1.5

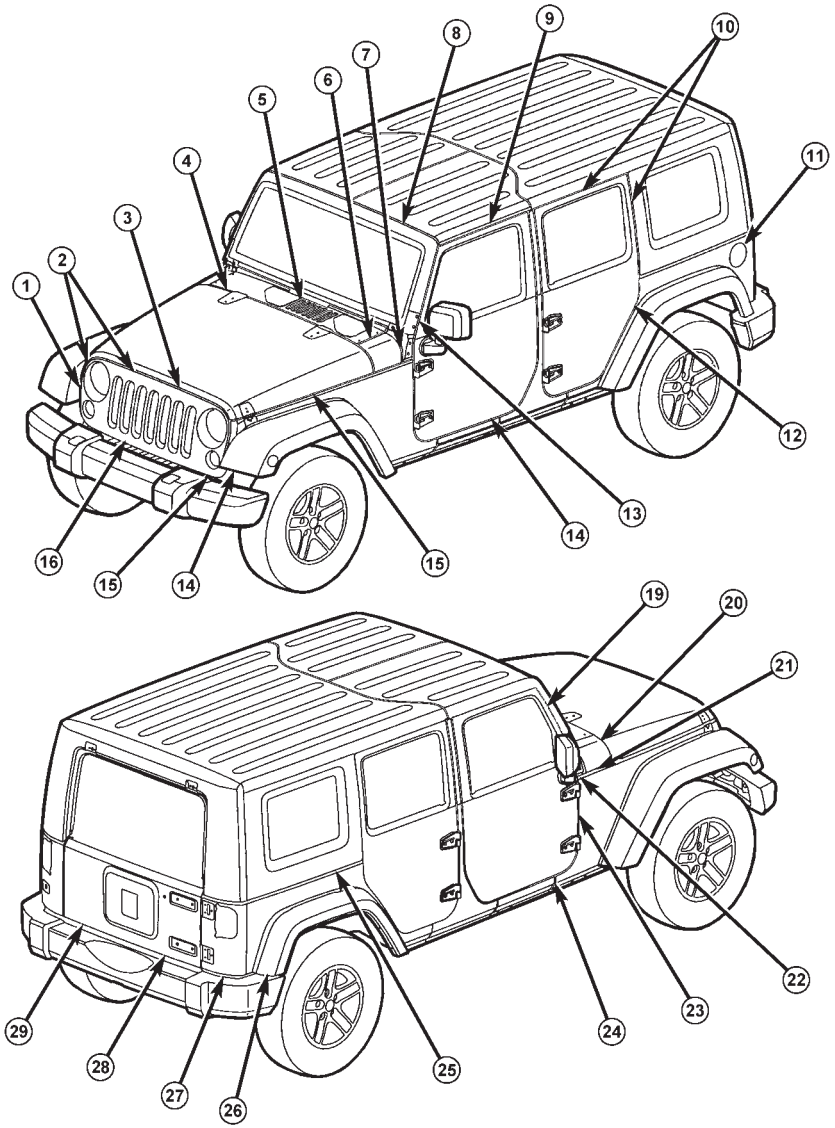
2007 JK72

NOTE:

All measurements are in millimeters. O/F = Over Flush U/F = Under Flush

Back to Index

GAP AND FLUSH DIMENSIONS



Back to Index

GAP AND FLUSH DIMENSIONS

DIMENSION	DESCRIPTION	GAP	FLUSH
1	Fender to Grille	--	0.0 +/- 2.0
2	Hood/Fender to Grille	7.0 +/- 2.0 Parallel within 1.5 Side to Side 2.0	--
3	Hood to Grille	--	Hood O/F 1.0 +/- 2.0 Parallel within 1.5
4	Hood to Cowl Grille	7.0 +/- 2.0 Parallel within 1.5	0.0 +/- 2.0
5	Cowl Grille to Windshield	5.0 +/- 2.0 Parallel within 1.5	0.0 +/- 2.0
6	Cowl Grille to Cowl End Cap	5.5 +/- 1.5	0.0 +/- 1.5
7	Cowl Panel Windshield Reinforcement	To Windshield 4.0 +/- 1.5 Parallel within 1.5 To Cowl End Cap 3.0 +/- 2.0	--
8	Windshield to Hard/Soft Top	5.0 +/- 2.0 Parallel within 2.0	O/F 1.0 +/-2.0
9	Hard/Soft Top to Front Door	5.0 +/- 2.0 Parallel within 1.5	12.0 +/- 2.0
10	Hard/Soft Top to Rear Door	5.0 +/- 2.0 Parallel within 1.5	12.0 +/- 2.0 at Drip Rail 0.0 +/- 1.5 at Belt Line
11	Fuel Filler Door to Body Side	0.0 + 1.5/-0.0	--
12	Rear Door to Body Side	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5 Allow additional +/- 0.5 with Side Curtain
13	Windshield Reinforcement to Door	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
14	Front Door to Body Side	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5 Allow additional +/- 0.5 with Side Curtain
15	Hood to Fender	6.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
16	Fender/Wheel Flare to Fascia	16.0 +/- 4.0 Parallel within 3.0	--
17	Grille to Bumper	11.0 +/- 4.0 Parallel within 3.0	--
18	Grille to Valance Cover	13.0 +/- 4.0	--
19	Windshield to Door	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5 Allow additional +/- 0.5 with Side Curtain
20	Hood to Cowl Grille End Cap	7.0 +/- 2.0 Parallel within 1.5	0.0 +/- 1.5
21	Cowl End Cap to Fender	5.5 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
22	Windshield Reinforcement to Fender	7.0 +/- 2.0	0.0 +/- 1.5
23	Fender to Door	5.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
24	Fender to Body Side	5.0 +/- 1.5	0.0 +/- 1.5
25	Hard/Soft Top to Body	16.0 +/- 1.5 Parallel within 1.5	0.0 +/- 1.5
26	Rear Bumper to Wheel Flare	19.0 +/- 5.0	0.0 +/- 4.0
27	Rear Bumper to Body Side	13.0 +/- 3.0	--
28	Rear Bumper to Swing Gate	34.5 +/- 3.0 Parallel within 3.0	--
29	Swing Gate to Body	5.0 +/- 1.5 Parallel within 1.5 Side to Side 2.0	0.0 +/- 1.5 Parallel within 1.5

2007 JK74

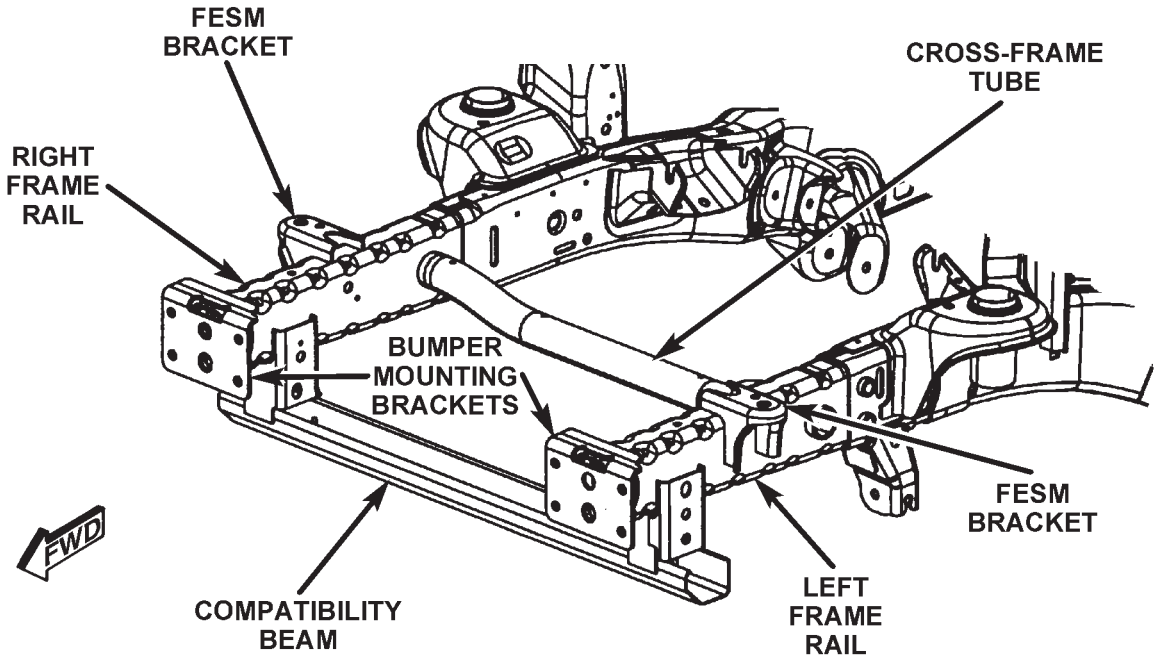
NOTE:

All measurements are in millimeters. O/F = Over Flush U/F = Under Flush

Back to Index

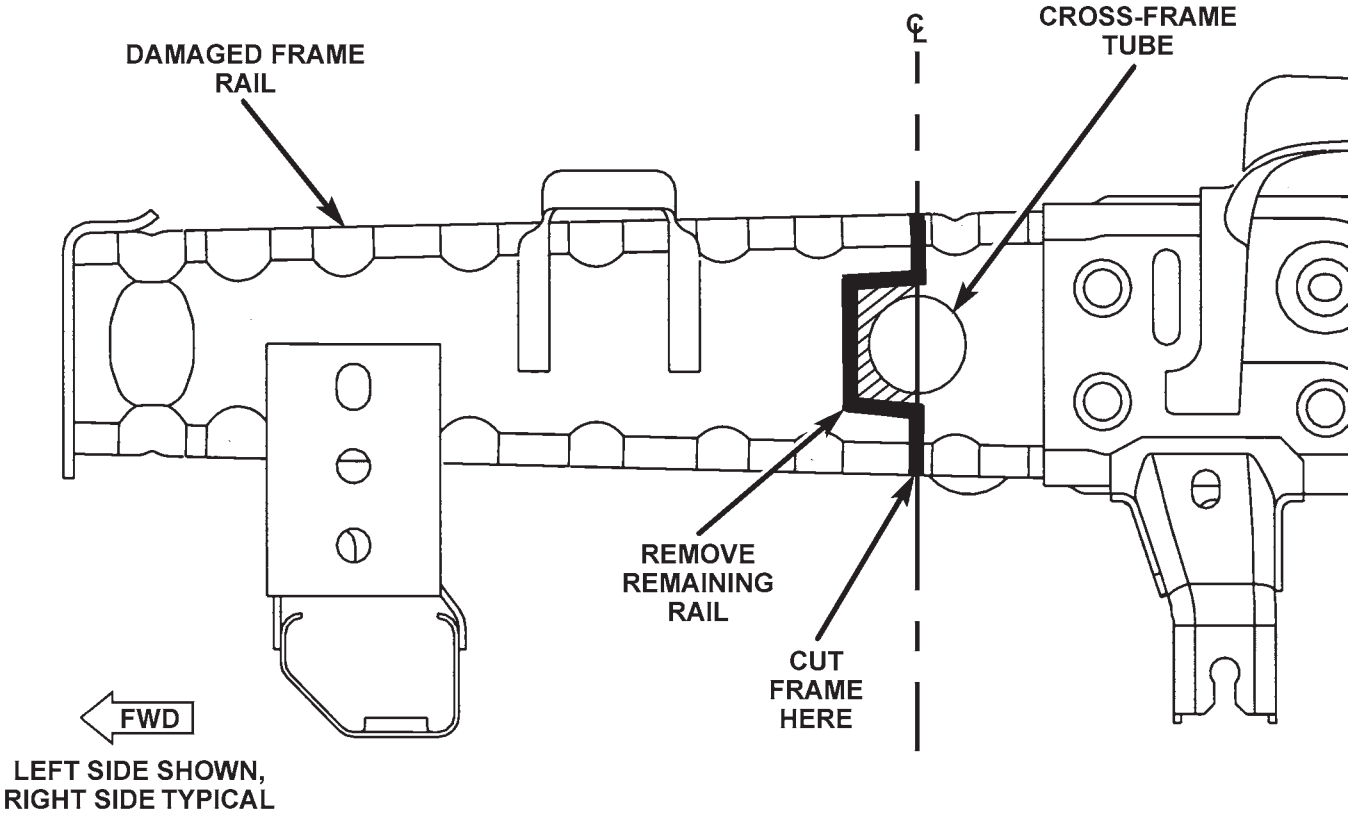
JEEP WRANGLER
FRAME REPAIR PROCEDURES
FRONT

1. Mount the vehicle on appropriate frame correction equipment (“frame rack”) and using a three-dimensional measuring system measure frame/body and correct to vehicle specifications.
2. Release welds holding compatibility beam brackets to rails and remove – if compatibility beam is to be replaced also, the brackets only need to be removed from the undamaged rail.



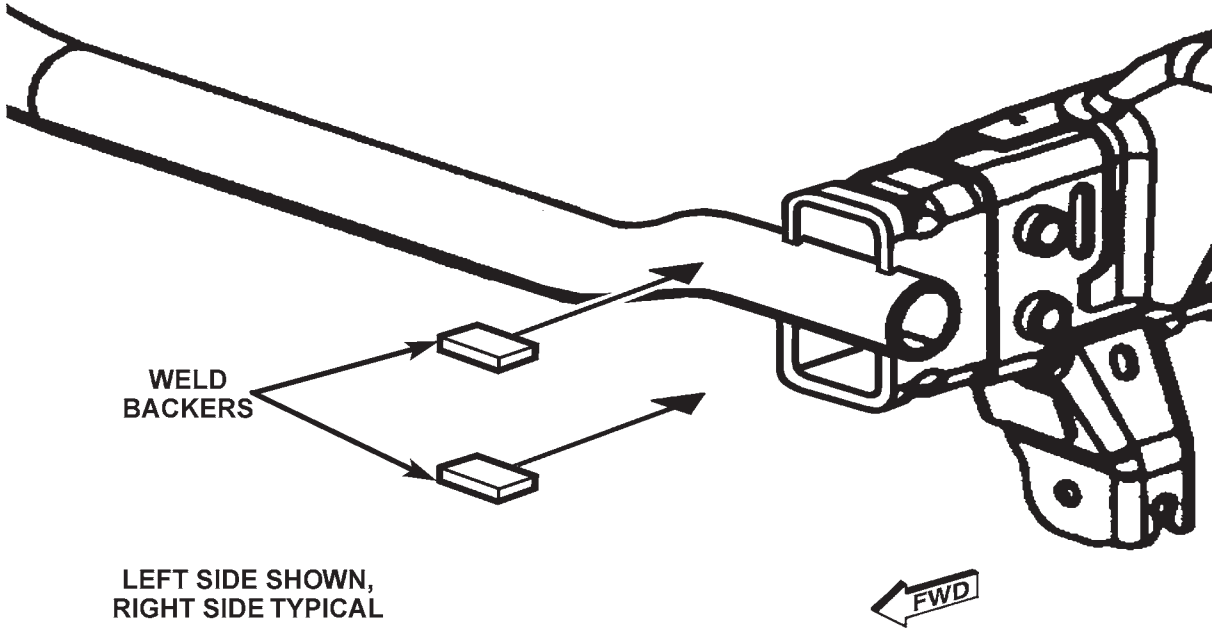
Back to Index

3. At the centerline of the cross-frame tube, use a reciprocating saw to make a vertical cut through the frame rail to the tube from both the top and bottom.
4. Using either a reciprocating saw or a plasma cutter, cut forward of the tube to release the rail from the tube.
5. Grind off any remaining rail or weld attached to the tubular crossmember forward of the original vertical cuts in preparation for the replacement part.
6. Any cuts into the tubular crossmember should be welded and dressed smooth before proceeding.



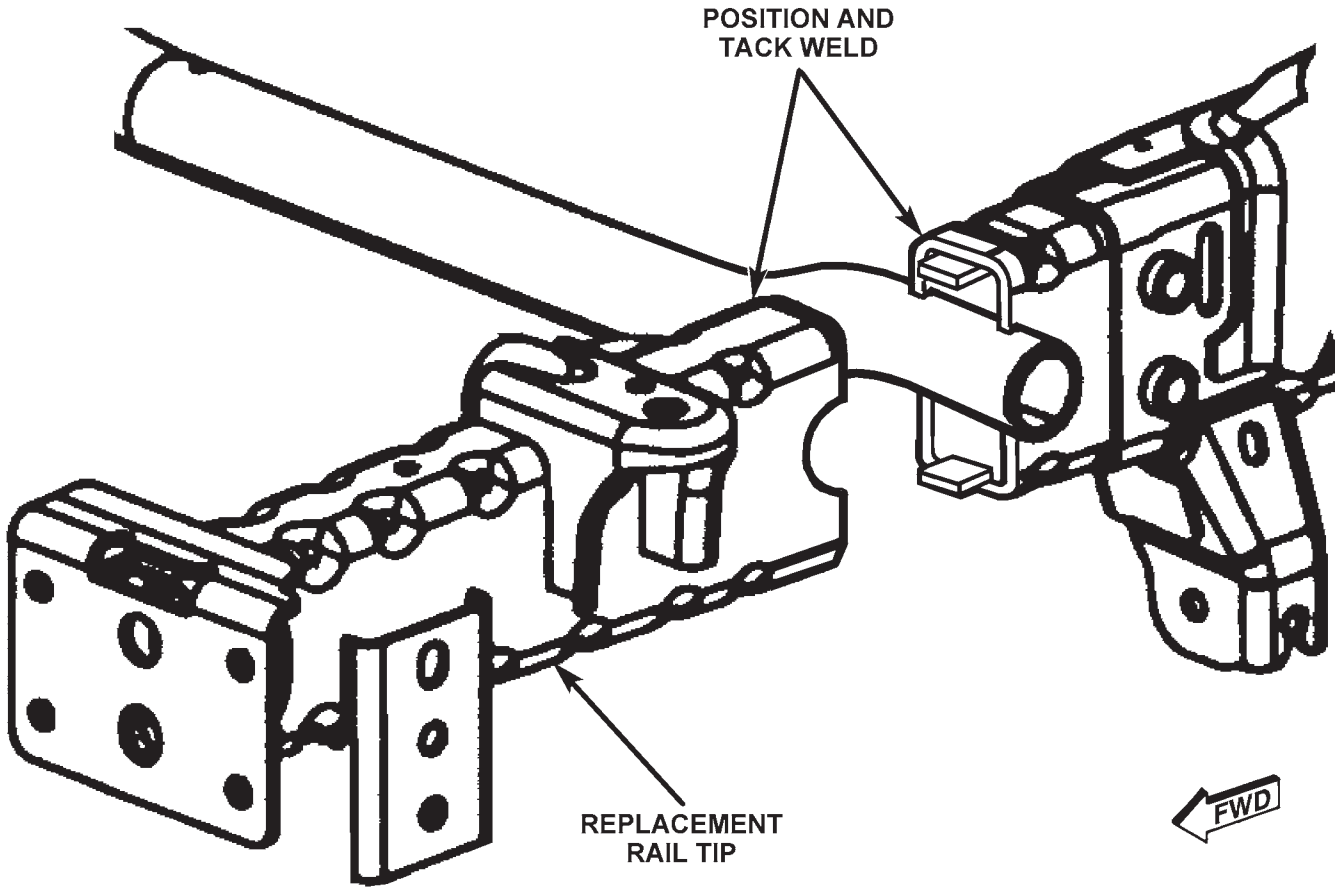
Back to Index

7. From the removed rail, cut weld-backers which will fit snugly into the original frame at the cut location. Position these backers so 1/2" protrudes from the section location.
8. Cut the service part vertically at the same location as the original frame.
9. Clean and de-burr all cut edges, remove e-coat within 1" of the joint from the inside and outside of all the surfaces.
10. Ensure that a slight bevel is created at the butt-weld joint to allow complete weld penetration.
11. Refer to the weld chart for proper weld rod and approximate welder settings, and adjust the welder to create a proper weld bead.



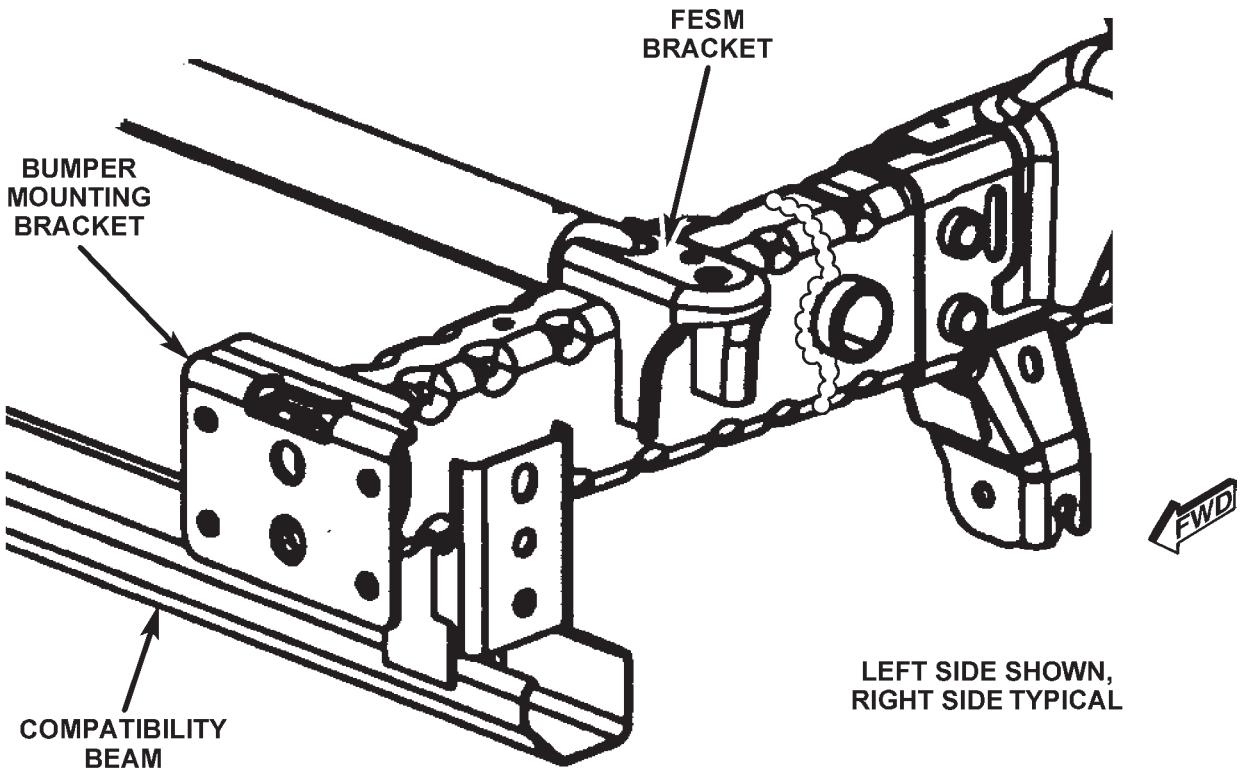
Back to Index

12. Position new (cut) rail tip in proper position and tack-weld in place.
13. Weld replacement tip in place using a skip-stitch process. Weld in 2" increments on opposing sides of the rail to avoid distortion while also allowing the rail to cool between the welding operations.



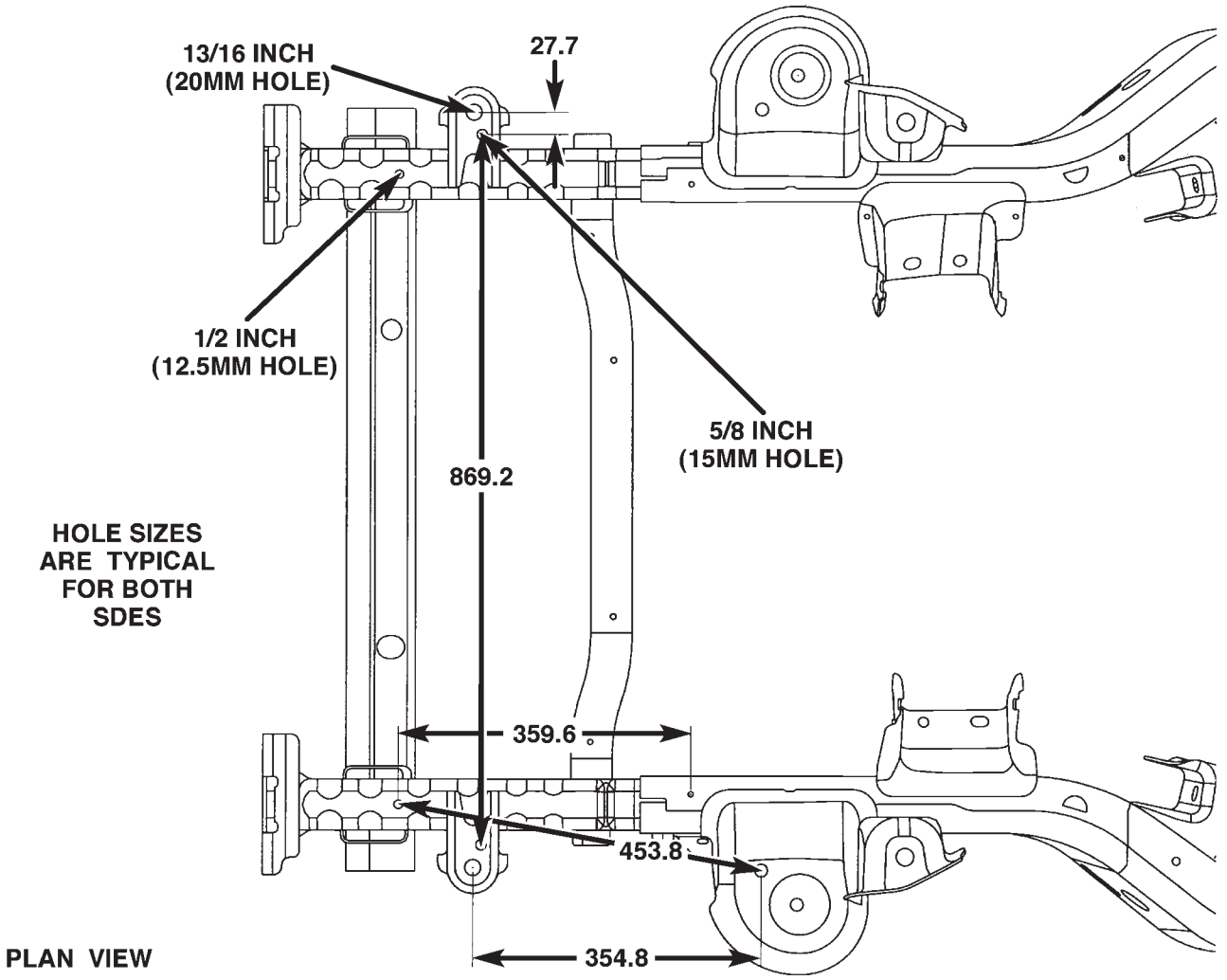
Back to Index

14. Position and tack-weld FESM bracket, bumper mounting bracket, and compatibility beam.
15. When dimensional accuracy is confirmed, finish weld all components using the original weld locations as a guideline.

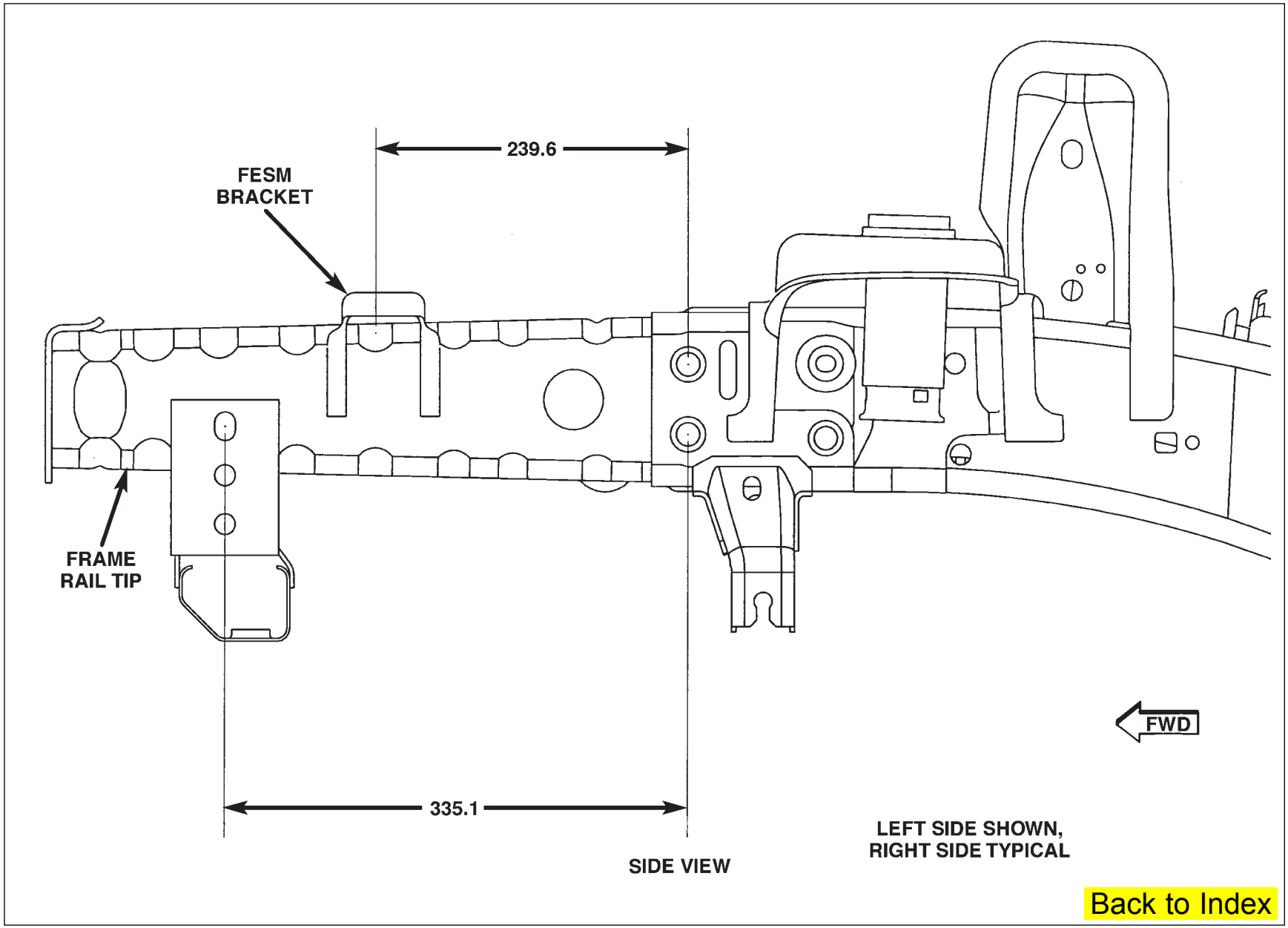


Back to Index

16. If the FESM brackets and bumper mounting brackets were not pierced, create the appropriate piercings at this time. Refer to the following diagrams for correct dimensions.

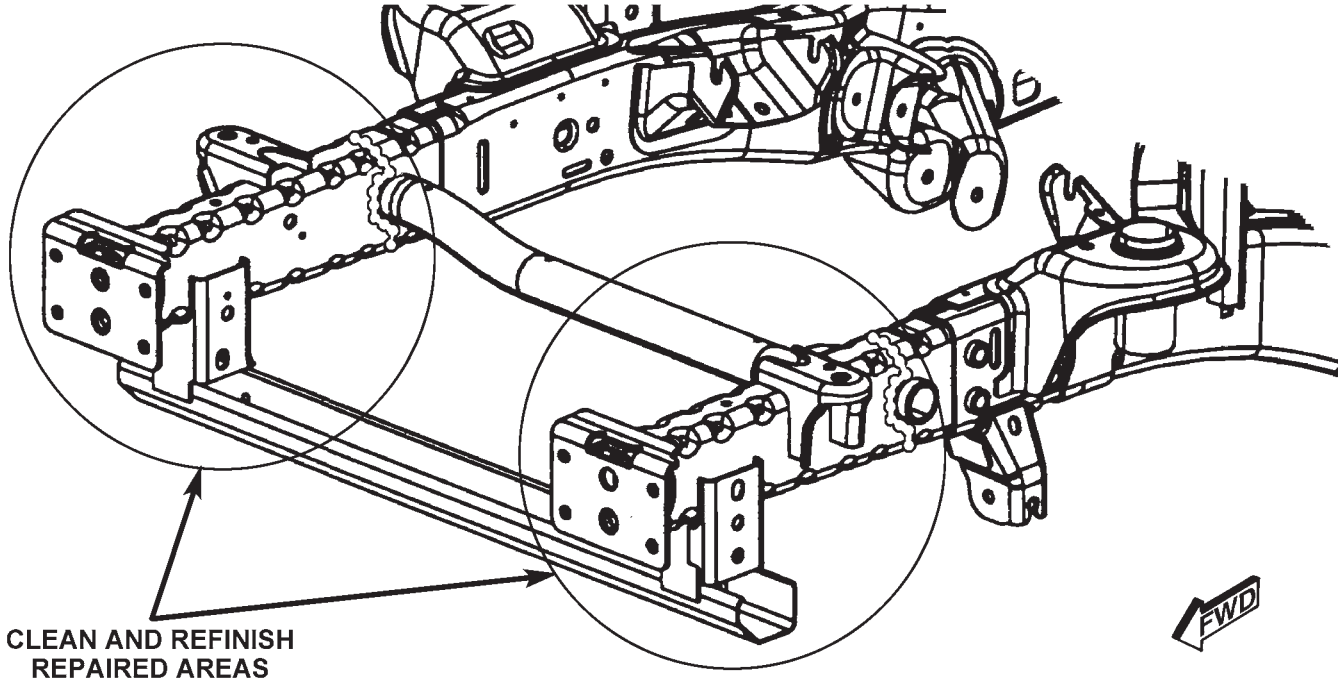


Back to Index



Back to Index

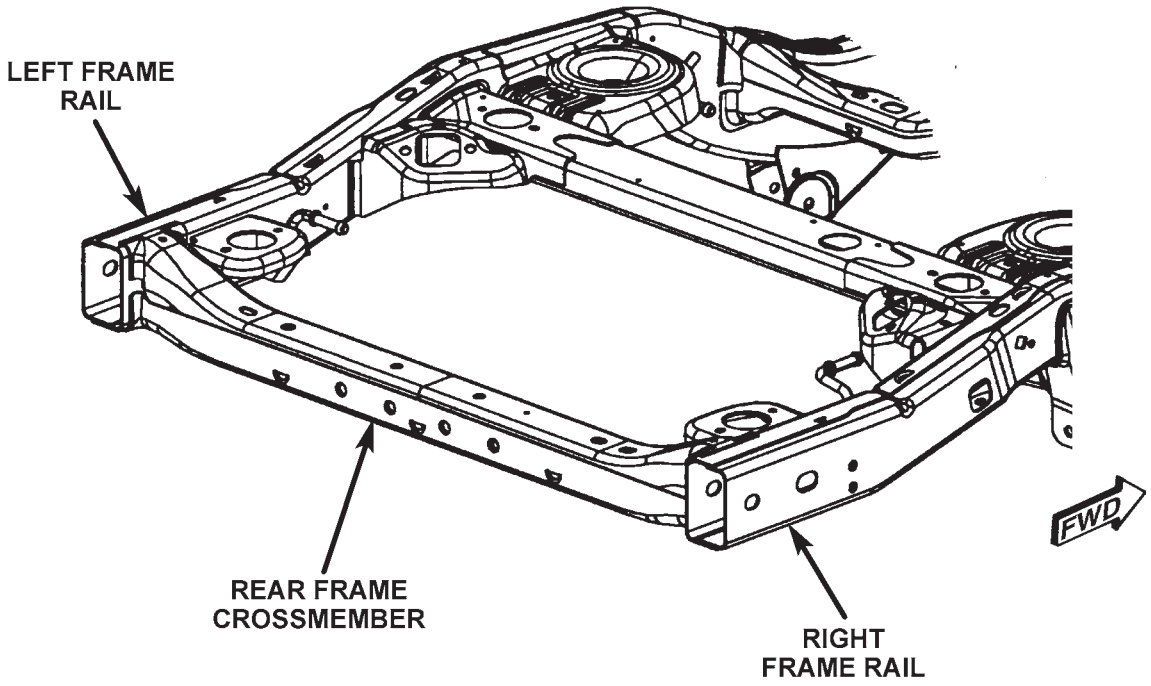
17. Cosmetically dress welds without removing any base metal – a skim coat of filler may be utilized for an improved cosmetic appearance.
18. Refinish all components to a production appearance.
19. On all areas inaccessible to the refinish operation, apply a creeping type rust proofing material ensuring 100% coverage. Be especially focused on those areas where welding may have burned off the original corrosion protection.



Back to Index

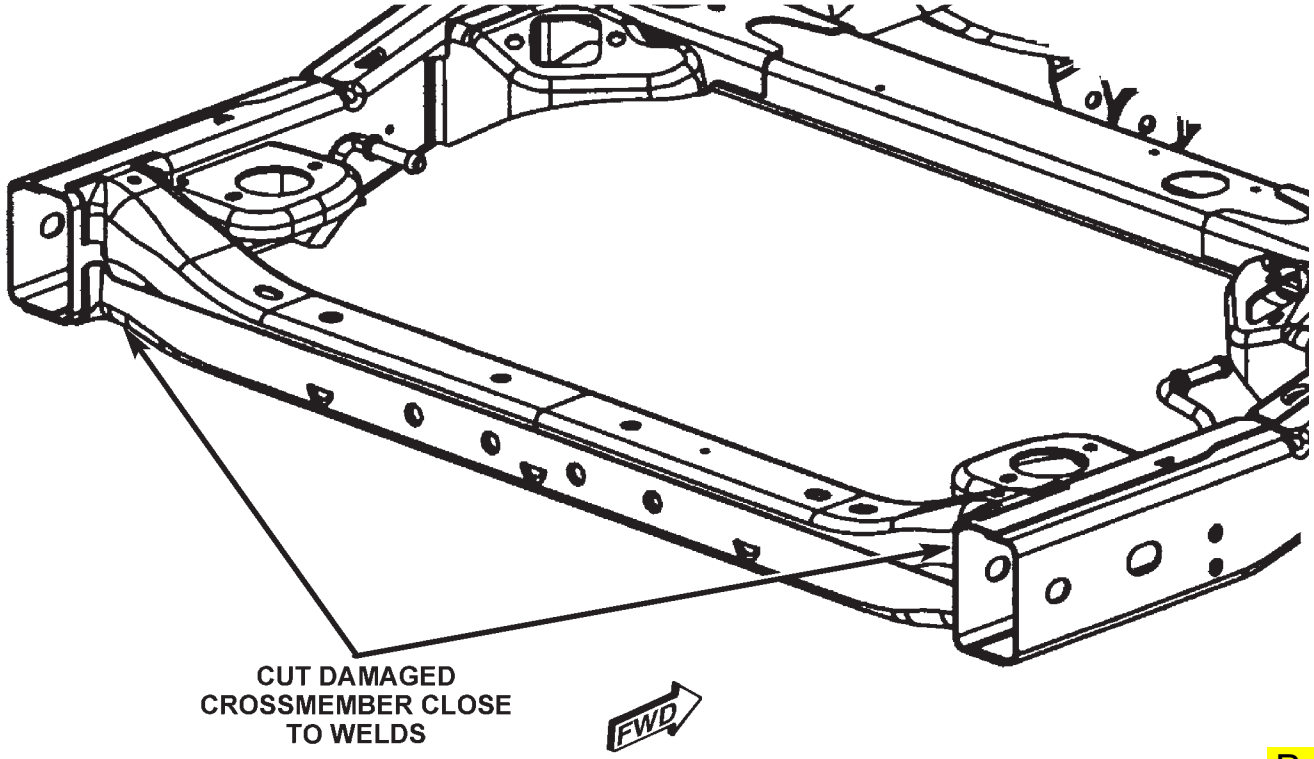
REAR CROSSMEMBER

1. Mount the vehicle on appropriate frame correction equipment (“frame rack”) and using a three-dimensional measuring system measure frame/body and correct to vehicle specifications.
2. Remove rear bumper components.
3. Remove hitch receiver or tow hook if equipped.
4. Release rear body mount fasteners, and loosen remaining body fasteners to allow lifting the body upward providing work access.



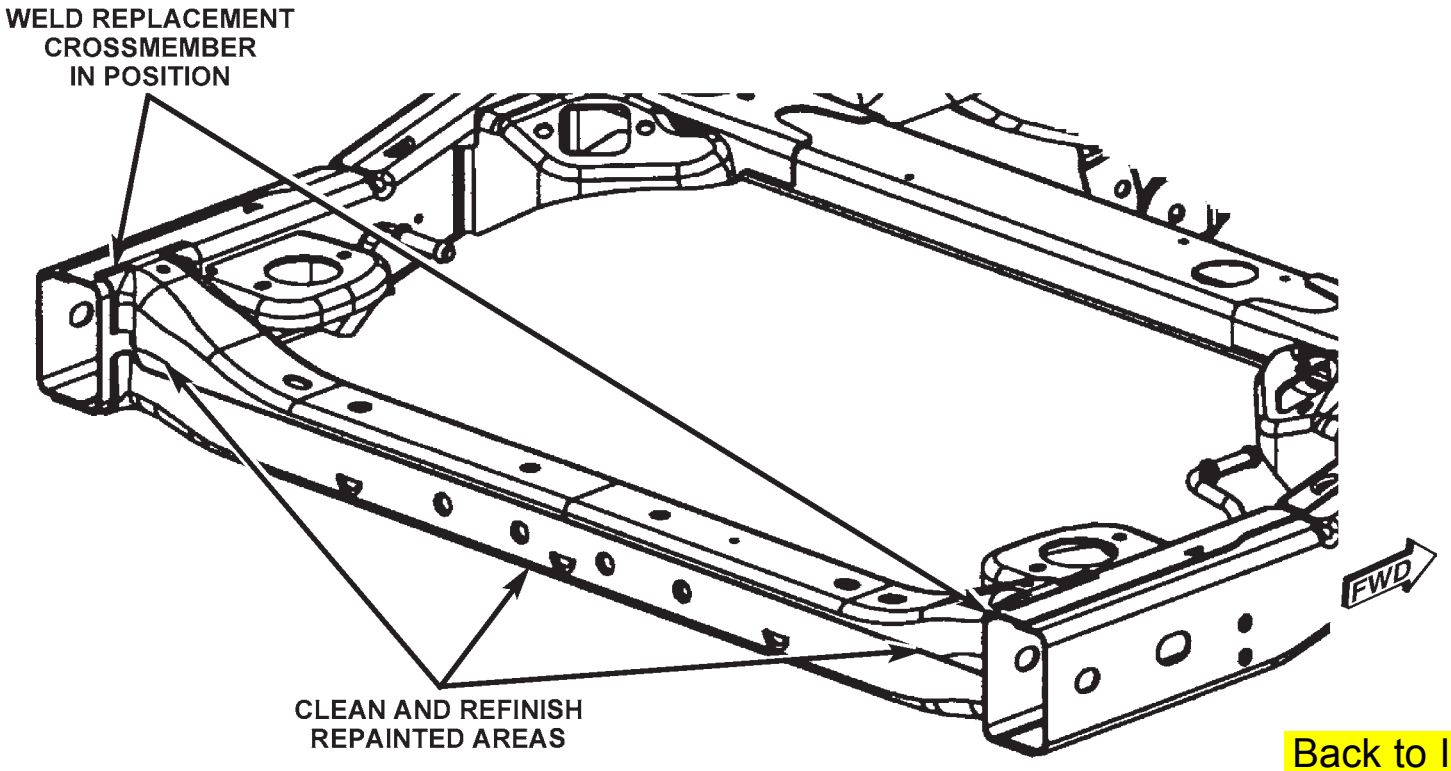
Back to Index

5. Using a reciprocating saw, or equivalent, cut the crossmember close to the welds to the side rails and body mount brackets and remove (each side of crossmember has a total of 7 welds).
6. Using an angle grinder, grind off remaining crossmember and weldments.
7. Dress new crossmember at weld locations so that a very shallow bevel is created and remove any e-coat, inside and out, on replacement part within 1-inch of weld zones as best possible.
8. Refer to the weld chart for proper weld rod and approximate welder settings, then using the old crossmember adjust the welder to create a proper weld bead.



Back to Index

9. Install the crossmember and locate using three-dimensional measuring equipment.
10. When proper, tack-weld crossmember securely in position.
11. Complete weld installation of crossmember ensuring proper weld penetration.
12. Clean welded area of any burned coatings or spatter.
13. Apply refinish materials to exterior of crossmember and side rails to restore appearance and corrosion protection.
14. Apply inner panel anti-corrosion material inside crossmember.
15. Install hitch receiver/tow hook.
16. Install bumper components.



Back to Index

Sectioning Procedures

Back to Index

COLLISION AND FIELD REPAIR
FUSION ARC WELDING PROCEDURE SPECIFICATIONS

COMPONENT PARTS	TRUCK FRAME		BODYSHELL EXTERIOR & UNDERBODY PANELS			
Material Type	Chrysler MS 264 (High Strength and Structural Quality Steels which includes HSLA, Martensitic, and Dual Phase materials) Chrysler MS 6000 (Zinc and Zinc Iron Alloy coated sheet steels)					
Material Thickness Range	2 mm - 4 mm		0.6 mm - 1.02 mm		>1.02 mm - 3.0 mm	
WELDING PROCESS	GAS METAL ARC (Note: 1)	FLUX CORED ARC	GAS METAL ARC (Note: 1)	MIG BRAZE (Note: 2)	GAS METAL ARC (Note: 1)	FLUX CORED ARC
ELECTRODE TYPE (AWS SPEC. A5.18)	AWS CLASS. ER70S-6	AWS CLASS. E71T-11 (Note 3)	AWS CLASS. ER70S-6	AWS CLASS. ERCuSi - A Silicon Bronze	AWS CLASS. ER70S-6	AWS CLASS. E71T-11 (Note 3)
ELECTRODE SIZE	0.035	0.045	0.023 - 0.025	0.035	0.035	0.045
ELECTRODE MAKER	Lincoln	Lincoln NR-211-MP	Lincoln		Lincoln	Lincoln NR-211-MP
WIRE FEED SPEED (in/min)	245-250 Vertical Down 70-90 Flat & Horizontal	110 Vertical Down 70-90 Flat & Horizontal	95-115 All Welds	150-155 Flat & Horizontal	245-250 Vertical Down 70-90 Flat & Horizontal	110 Vertical Down 70-90 Flat & Horizontal
TRAVEL SPEED (in/min)			10			
VOLTAGE	19-20	15-18	16-19	18-19	19-20	15-18
POLARITY	DCEP	DCEN	DCEP	DCEP	DCEP	DCEN
GAS FLOW (cfh)	25-35	N/A	25-35	25-35	25-35	N/A
ELECTRICAL STICKOUT (in)	1/2 - 5/8	3/8 - 1/2	1/2 - 5/8	5/8 - 3/4	1/2- 5/8	3/8 - 1/2
GAS TYPE	75% Ar 25% CO2	N/A	75% Ar 25% CO2	100% Ar	75% Ar 25% CO2	N/A
TYPE OF ARC TRANSFER	Short Circuit		Short Circuit	Spray	Short Circuit	

NOTES:

Caution: All welds should conform to the Chrysler vehicle engineering process standard PS 9472
These Procedure Specifications are appropriate as of this publication date 8/1/2007. Procedures may be superseded with new specs at a later date.

Always process to the thinner material thickness (TMT)

All persons performing welding must be qualified to weld in all positions.

(1) Must remove Zinc Coating on both sides of metal at the weld zone.
(2) MIG Braze welding process requires use of Pulse Arc or STT welding machine.
(3) Must use Lincoln product since E 71T-11 product differs from other suppliers.

Back to Index

Additional Information and Guidelines

- Chrysler highly recommends all repairers obtain weld training and demonstrate weld proficiency through testing programs such as I-CAR or the American Welding Society (AWS).

- As vehicle designs incorporate increasing amounts of advanced high strength steel (AHSS), at thinner thicknesses to reduce vehicle weight, engineers are in effect designing to the limits of the base materials and electrodes. The repair person job increases in importance when performing panel replacements. Especially when the repair weld differs from the production weld (resistance weld versus fusion weld). For this reason it is imperative that the technician not only be highly trained, and be able to demonstrate his abilities to follow both the original equipment manufacturer's and weld equipment manufacturer's recommendations. In addition, he should be provided with quality welding equipment and welding consumables. Ensure that all electrodes purchased meet AWS specifications and that there is a certification program in place to guarantee their quality. Cheap, inferior electrodes will compromise the integrity of the repair.

- Welding information may be obtained from:
    - AWS (http://www.aws.org/w/a/)
    - Lincoln Equipment (http://www.lincolnelectric.com/)
    - Miller Equipment (http://www.millerwelds.com/)
    - ESAB (http://www.esabna.com/us/en/)
    - Local welding and trade schools
    - Public and university libraries
    - Many other sources

Back to Index

Training

As with any equipment, proper training is required, and in the case of welding equipment this is no exception. The goal of automobile repair facilities and technicians is to restore the vehicle to its OEM condition.
Training must be considered a two-fold process:

- The technician must be well versed in how the equipment operates, how adjustments are made and what effects those adjustments have on the weld. The technician must also clearly understand the maintenance of the equipment and the impact of poor maintenance on welds and equipment longevity.
- The second, and most important, aspect of the training is weld quality confirmation. Destructive testing of weld coupons must be performed to ensure the minimum weld nugget size is created. Physical appearance of the weld is not enough to determine the quality of the weld. Additionally, poor welds may also reduce the durability, or quality, of the repaired vehicle in time.

It is required that technicians have received training regardless of the welding equipment or method they utilize. Both training in the specific field of welding, and the particular equipment, are necessary to ensure safe, durable, quality welds are obtained.

Back to Index

Chrysler Policy on the Use of Reconditioned Wheels

Reconditioned Wheels
Chrysler LLC does not recommend that customers use “reconditioned” wheels (wheels that have been damaged and repaired) because they can result in a sudden catastrophic wheel failure which could cause loss of control and result in injury or death.

For clarification:

• Cosmetic refinishing for the purpose of repairing a superficial flaw is an acceptable procedure providing it is limited to paint or clear coat only, the wheel is not modified in any way, and there is no exposure to paint curing heat over 200 degrees Fahrenheit.

• Damaged wheels are those which have been bent, broken, cracked or sustained some other physical damage which may have compromised the wheel structure.

• Repaired indicates that the wheel has been modified through bending, welding, heating, straightening, or material removal to rectify damage.

• Re-plating of chrome plated wheels is not an acceptable procedure nor is chrome plating of original equipment painted or polished wheels, as this may alter mechanical properties and affect fatigue life.

Additionally, Chrysler Global Warranty Administration
does not allow refinishing of wheels under warranty.

Back to Index

Chrysler Policy on the Use of Salvaged Air Bags, or Other Salvaged Restraint System Components

Chrysler LLC does not support the use of any supplemental restraint system (SRS) component, seatbelt component, or any other occupant protection component which has been removed from a vehicle previously damaged, flooded, burned, scrapped, or removed from use for any other reason – hereafter referred to as “salvage parts”.

Restraint system components are engineered, tested, and manufactured to protect vehicle occupants based upon both government mandated and internal corporate requirements relative to vehicle safety and occupant protection. New Mopar replacement parts are required to be equivalent to the originally installed parts and are tested to ensure these requirements are met. While some salvage parts may “appear” equivalent, there can be dramatic differences in the design and functional characteristics which could have a negative affect on the vehicle occupants in a future collision event. The specific design and functional characteristics cannot be determined by a visual inspection. Further, there is no way to test these characteristics short of deployment, in the case of an airbag, or a seatbelt deceleration load test, both of which are destructive tests.

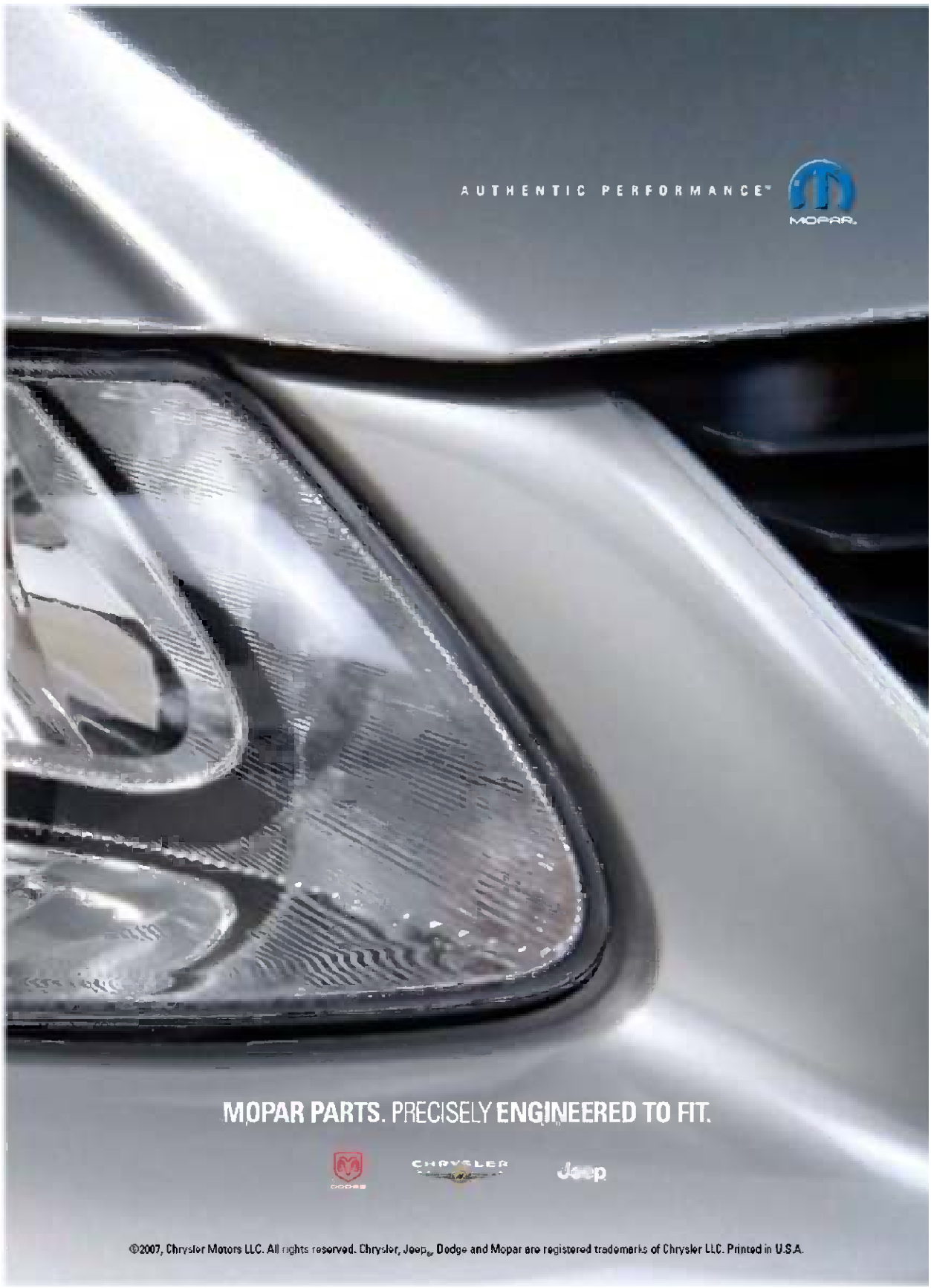
Salvage components may have been affected by:

- Crash impact loads
- Incorrect, improper, or inadequate disassembly and removal procedures
- Weathering or environmental exposure outside of that expected during normal use
- Flooding
- Smoke or heat damage
- Abuse

Additionally, salvage components are not traceable should a component recall be required in the future.

It is in the best interest of the current or future vehicle owner and/or occupants that repairs to the SRS, seatbelt and occupant protection system are made using new OE parts. Anything less than this may expose operators and occupants to unnecessary risk.

Back to Index



Back to Index

Back to Index

LORD Fusor® Metal Adhesives

OEM Approved and Aftermarket Guaranteed

LORD Fusor 108B Metal Bonding Adhesive (Medium)
LORD Fusor 110B Metal Patch Panel Adhesive Bondline Control (Fast)
LORD Fusor 112B Metal Bonding Adhesive (Slow)
(MOPAR #05083855AA)

- LORD Fusor 112B meets Chrysler MS-CD507 metal bonding specification
- OEM approved - more OEM approvals than all competitive products combined
- Easy to use - contains glass beads for exact bondline control
- Economical - requires up to 67% less adhesive than competitive products - 1 bead versus 3 beads
- Allows technician to bring repaired vehicle closer to pre-loss condition than ever before
- Improves corrosion protection versus welding alone
- Helps eliminate common body NVH concerns

For additional information, visit www.lord.com

LORD Ask Us How™

AUTHENTIC PERFORMANCE™ MOPAR

MAKE SURE YOU MAINTAIN FACTORY ANTI-CORROSION PROTECTION!

USE CHRYSLER-APPROVED CAVITY WAX & UNDERCOAT REPAIR KITS

To maintain the integrity of the repair, factory repair manuals require the replacement of corrosion barriers following any welding or repairs where metal is exposed. Don't take a chance on aftermarket products. Mopar Cavity Wax & Undercoat Repair kits exceed ASTM-117B testing standards and provide:

- Product confidence – both are Chrysler Engineering tested and approved
- No silicone formulations
- Economical application procedures
- Proven performance – both have undergone 600+ hours of salt spray exposure with no coating degradation

Mopar's Cavity Wax Kit gives you:

- Outstanding crevice penetration for fighting corrosion, even in the tightest areas
- A clean and simple application procedure that won't make a mess of the work shop or vehicle
- A custom installation kit, including one flexible direct spray wand, one flexible fan spray wand, and one rigid fan spray wand

Mopar's Undercoat Repair Kit provides:

- Proven durability – more than 100,000 miles of on-road testing
- A formulation that will not stain paint surfaces
- Easy-to-use application equipment that is both durable and effective

Undercoat Kit, Part No. 68042967AA
Cavity Wax Kit, Part No. 68042969AA
Undercoat Refill, 31 FL OZ (916.7ml) Part No. 68042968AA
Cavity Wax Refill, 31 FL OZ (916.7ml) Part No. 68042970AA

Don't cheapen your repair or gamble on aftermarket corrosion protection. Call your Chrysler, Dodge or Jeep® dealer today and insist on Authentic Mopar corrosion protection for your collision repairs.

DODGE CHRYSLER Jeep

Back to Index

WE SUPPORT
VOLUNTARY TECHNICIAN
CERTIFICATION
THROUGH

DEALER TECHNICAL OPERATIONS
CHRYSLER LLC

81-316-0859 **10/07 8M** **LITHO IN U.S.A.**

Back to Index