

Detroit Speed
Mini-Tubs
 1979-93 Fox Body Mustang, 1979-86 Capri
 PN: 040406DS

The Detroit Speed Mini-Tubs are inner wheel housings designed to accommodate wider wheel and tire packages, including tires as wide as 315mm. The DSE Mini-Tubs are engineered and designed for a perfect fit and retain a stock appearance. The mini tubs are wider than stock and come complete with instructions and a template. The required seat belt relocation bracket and hardware is also included so you may retain your factory rear seats. The mini tubs are stamped from 18-gauge steel and proudly **Made in the USA.**



Item	Part Description	Quantity
1	Detroit Speed Mini-Tub, RH	1
2	Detroit Speed Mini-Tub, LH	1
3	Seat Belt Anchor Relocation Bracket	2
4	7/16"-20 Top Lock Flange Nut	2
5	5/16"-24 x 1" L Hex Head Bolt	8
6	5/16"-24 Nylock Nut	8
7	5/16" SAE Washer	16
8	Mini-Tub Cutout Template	1
9	Instructions	1

Warning: All work should be performed by a qualified welder and technician.

NOTE: There is an installation video available through the Detroit Speed website under install video shown here: detroitsspeed.com/blog/post/fox_body_mini_tub_install_video.

Congratulations on your purchase of the Detroit Speed Fox Body Mustang Mini-Tubs. Please read the entire set of instructions and fully understand all of the steps involved before beginning the project. If you have any questions before, during or after the installation, feel free to contact us by phone at (704) 662-3272 or by email at tech@detroitsspeed.com.

Wheel and Tire Fitment	
1979-93 Fox Body	
Wheel Size	Tire Size
17" x 11"	315/35R17
18" x 11"	315/30R18

NOTE: We recommend welding one mini-tub in at a time because it is easier to fit and install the upper shock crossmember without one of the mini tubs in place. Cut and fit both sides however only weld one side in place until the upper shock crossmember has been fitted.

Tools/Equipment Needed for Install:

- Welding/Grinding PPE
- Welder
- Floor Jacks & Jack Stands
- Basic Hand Tools (Ratchet, Sockets & Wrenches)
- Torque Wrench
- Razor Knife
- Multi-Purpose Scraper
- Wire Brush
- Wire Wheel
- Small Torch (Not Required)
- Straight Edge
- Cut-Off Wheel
- Reciprocating Saw/ Air Saw
- Grinder
- Tin Snips
- Metal Shear
- Band Saw (Not Required)
- Vise Clamps
- Drill & Drill Bits
- Chisel
- Mallet/Hammer

Installation:

1. Raise the vehicle a few feet off the ground so the interior, trunk and underside may be accessed. Ensure the vehicle is level and properly supported.
2. Disconnect the negative battery cable. Remove the seats, carpet, padding and the interior quarter trim panels. Any other interior panels that you are concerned with being damaged should be removed or masked well to protect them from grinding and welding sparks (Fig. 1).



Figure 1 – Remove Interior

3. Remove the gas tank and fuel lines. **NOTE:** Make sure to eliminate all of the fuel vapors from the work area before continuing.
4. The rear axle does not need to be removed from the vehicle however you will need to remove the coil springs and shocks. If you are working on a hatchback vehicle, skip to Step 8, otherwise continue to the next step.
5. Remove the trunk lid tension springs. Take caution when removing the trunk springs as they are under high tension when installed. Then, weld a pencil brace from the upper hinge mounts to the side of the vehicle for support (Figure 2).

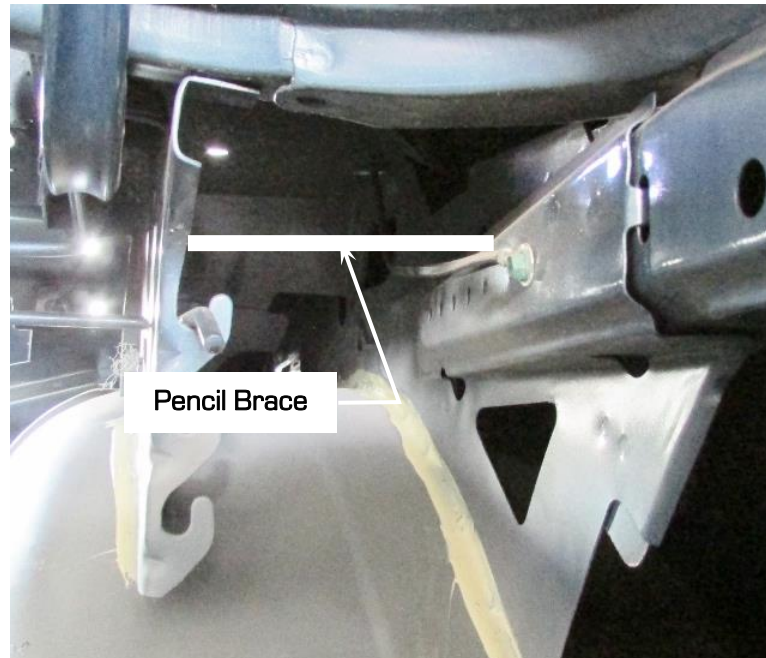


Figure 2 - Support Hinge Mounts

6. Drill out the spot welds so the trunk hinge bracket is free from the inner wheel tub.
7. Drill out the spot welds in the circled brackets to remove the rear seat brace connecting to the floor pan, trunk hinge and the inner wheel tub (Figure 3). Save these brackets as they can be modified and re-installed later.



Figure 3 - Remove Wheel Tub Brackets

- Using a knife and scrapper, remove a section of heat/ sound deadening material from the trunk floor. Cut along the stamped bead in the floor pan and inward from the front and back corner of the inner wheel tub (Figure 4). Use a scrapper to remove this material.



Figure 4 - Remove Trunk Pan Material

- Remove the seam sealer from the front and rear corner of the inner wheel tub (Figure 5). Use a wire brush for a clean surface.



Figure 5 - Remove Seam Sealer

- Remove the seam sealer around the factory upper shock mount (Figure 6). **NOTE:** It may be helpful to use a small torch from underneath the shock mount to make the seam sealer easier to remove.



Figure 6 - Upper Shock Mount

11. Wire brush the area around the upper shock mount for a clean surface (Figure 7).



Figure 7 - Wire Brush Shock Mount

12. Use a wire wheel to remove the undercoating at the seam between the inner and outer wheel tub. Remove the undercoating about 1" outboard of the seam (Figure 8).



Figure 8 - Remove Undercoating

13. Use a small torch to heat up the sealer in the back corner of the wheel tub. Remove the sealer in that corner with a scraper and a wire wheel (Figure 9).



Figure 9 - Remove Seam Sealer

14. Use a wire wheel to remove the undercoating along the bottom edge of the stock inner wheel tub. Locate the spot welds where it has been welded in place from the factory (Figure 10).



Figure 10 - Locate Spot Welds

15. Draw a reference line straight off the front corner of the wheel tub inward (Figure 11). **NOTE:** You do not want this reference line up against the profile of the wheel tub.



Figure 11 - Draw Reference Line

16. Transfer a reference mark by measuring from the back of the outer wheel tub to the end of the wheel tub flange at the trunk floor. Transfer that mark to the inboard side of the flange behind the inner wheel tub. This reference mark should be about 1" (Figure 12).



Figure 12 - Transfer Reference Location

17. Draw a vertical reference line at this transferred location on the wheel tub flange (Figure 13).



Figure 13 - Draw Reference Line

18. Cutout the provided mini-tub template. Place the template on the trunk floor with the rear edge of the template against the rear flange of the outer tub. **NOTE:** We recommend putting the paper template on card stock, so it is not as flimsy. Line up the template with your reference line from the previous step and tape it in place. Also, tape the template in place around the upper shock mount (Figure 14).

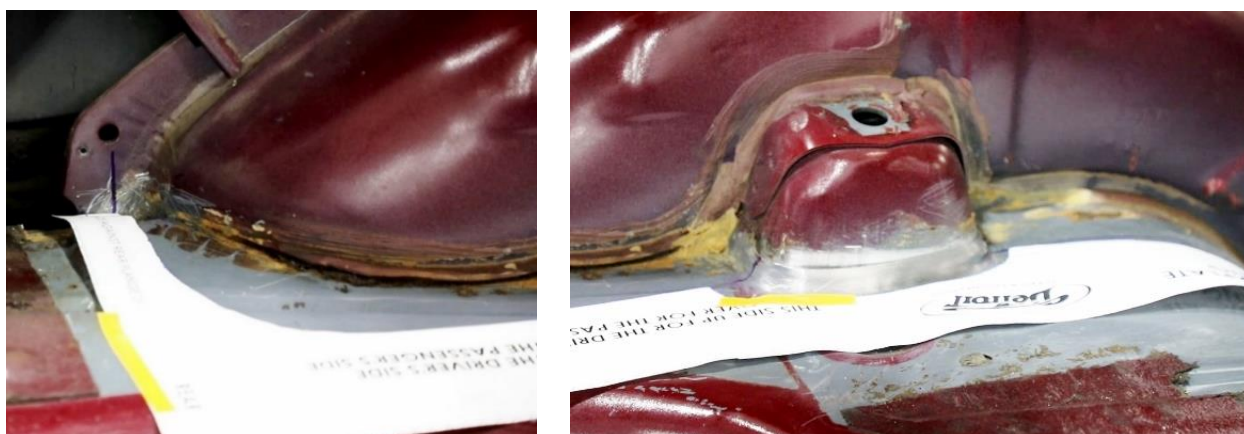


Figure 14 - Locate Rear Template

19. Locate the front edge of the template against the reference line you made in Step 15, inside of the rocker panel (Figure 15). Tape the template in place.



Figure 15 - Locate Front Template

20. Draw a cut line on the trunk floor along the dashed line of the template (Figure 16). **NOTE:** If you use the cutout template as directed, this will take the mini tub to the outside of the framerail at the rear of the wheel opening. The mini-tub has extra length if you want to do a custom install that will cut into the factory framerail. This will require boxing in the framerail on the inside.

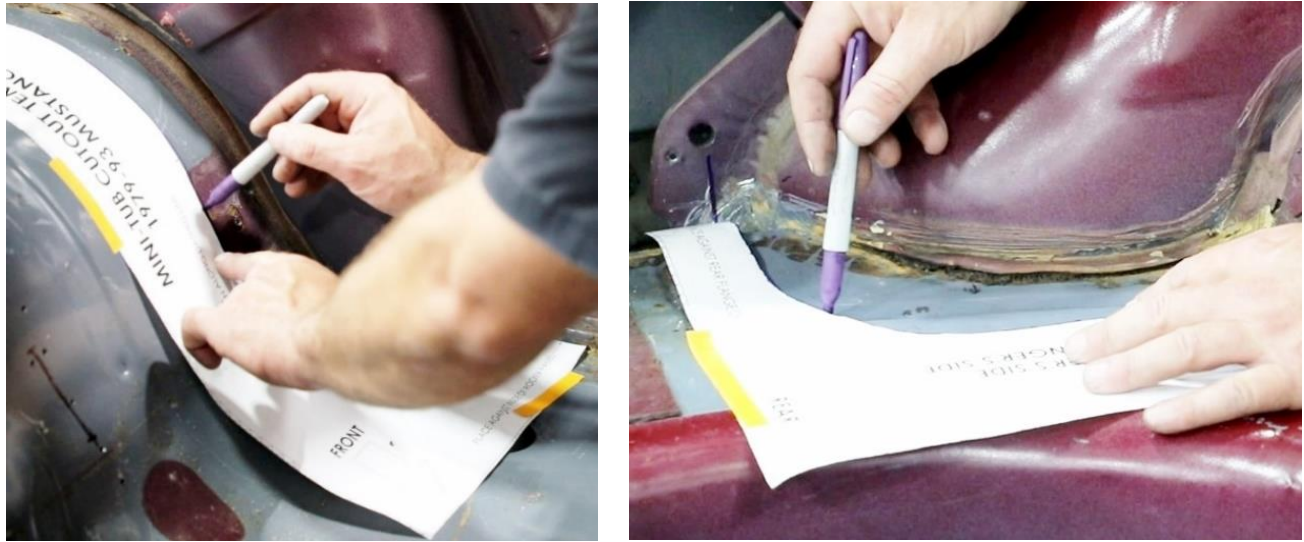


Figure 16 – Draw Cut Line

21. Remove the template and use an air saw to cut the inner wheel tub out. Make a cut at the bottom of the inner wheel tub above the trunk floor and around the profile of the upper shock mount (Figure 17). **NOTE:** At the front of the inner wheel tub, cut around the rear seat belt anchor and leave the inner flange where you exposed spot welds from Step 14. Then, cut around the top of the inner wheel tub on the inside of the flange. **CAUTION:** If you are installing the mini-tubs further into the frame rail than shown, you will need to leave more of this area on the front of the inner wheel tub, so you have a larger flange to weld to the new mini-tub.

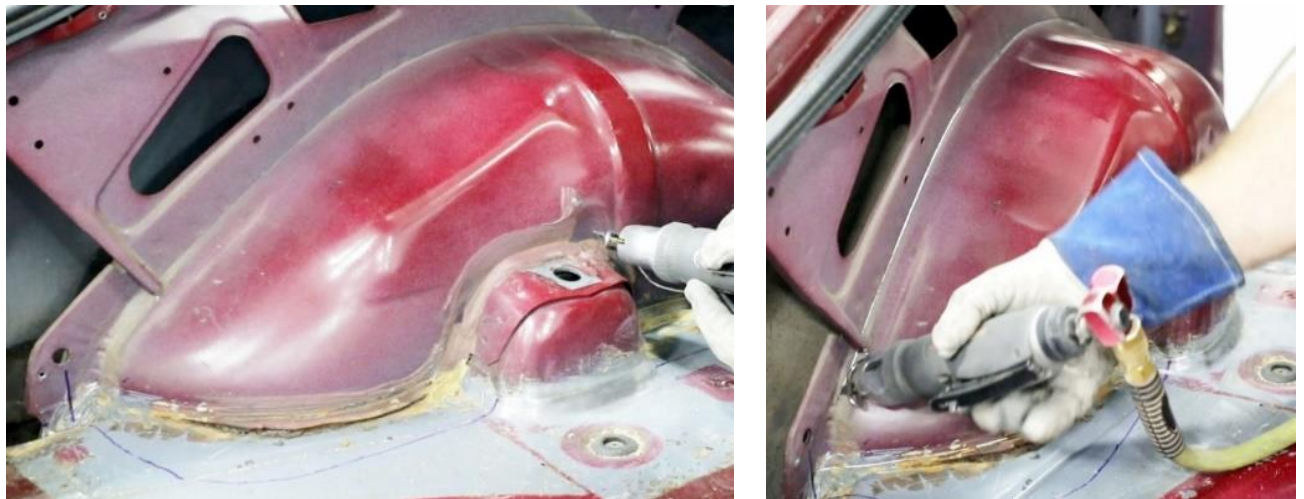


Figure 17 – Cutout Inner Wheel Tub

22. Now that the inner wheel tub has been removed, make a cleaner cut around the profile of the upper shock mount using the template cut line as a reference. Remove the trunk floor and any other factory structure that will be in the way of the new mini tub including the upper spring perch (Figure 18 on the next page).

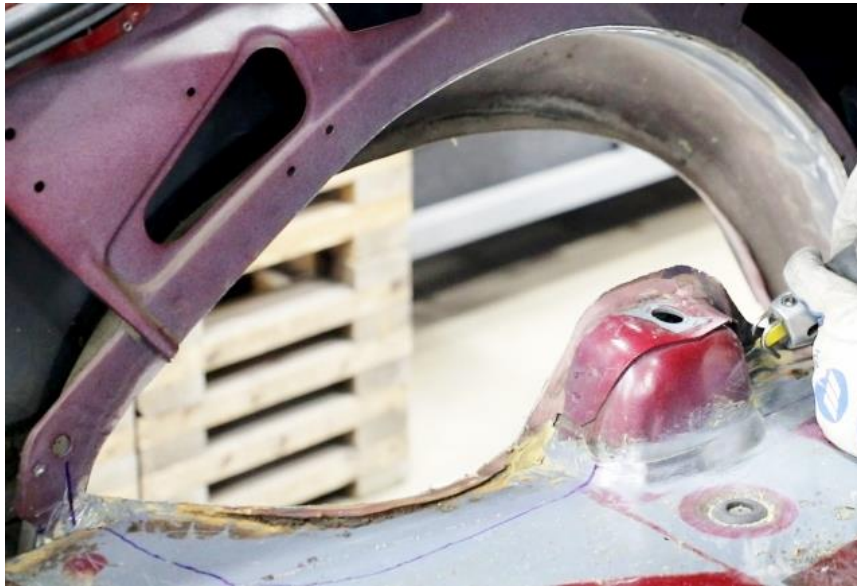


Figure 18 – Cut on Template Line

23. Continue to cut through the spring perch and other structure until you can remove that section from the vehicle (Figure 19).



Figure 19 – Remove Front Factory Structure

24. Cut through the rear side of the upper shock mount and around the factory wheel tub flange to remove this section of structure from the vehicle (Figure 20).



Figure 20 – Remove Rear Factory Structure

25. Trim the rear corner of the trunk floor against the wheel tub so that this surface is flush to accept the new mini tub (Figure 21).

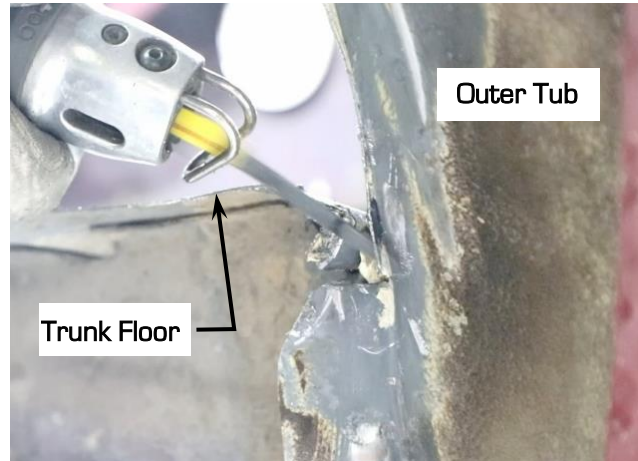


Figure 21 - Trim Trunk Floor

26. Use a wire wheel to clean up and expose the spot welds for the factory spring perch bracket, jounce bumper bracket and the rear seat belt anchor bracket (Figure 22).



Figure 22 - Expose Spot Welds

27. Drill out the spot welds holding on the jounce bumper to the side and bottom of the framerrail (Figure 23).

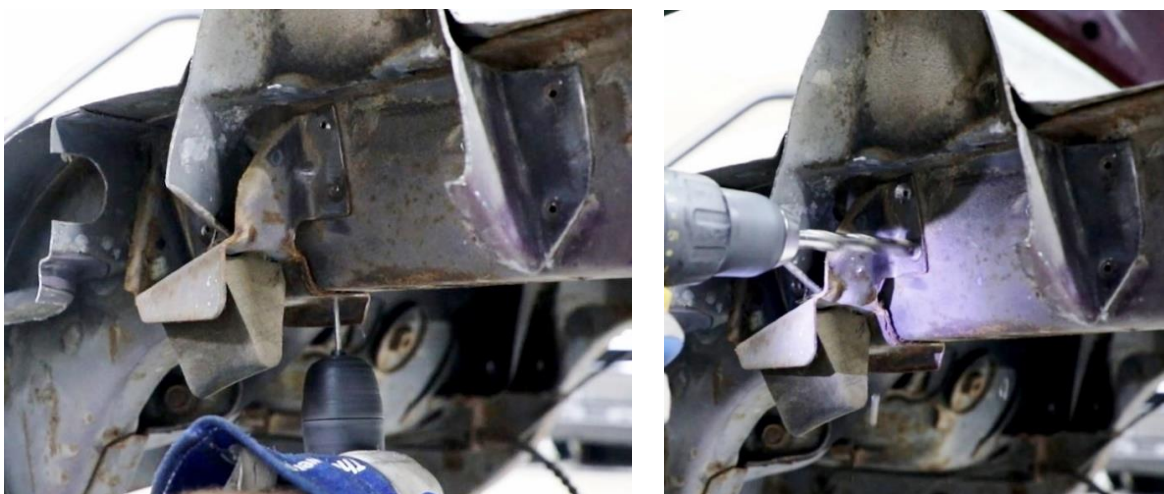


Figure 23 - Drill out Spot Welds

28. Use a chisel to remove the jounce bumper bracket from the framerail (Figure 24).



Figure 24 - Remove Jounce Bumper Bracket

29. Drill out the spot welds holding on the upper shock mount to the side and bottom of the framerail. Remove the upper shock mount with a hammer and chisel (Figure 25).



Figure 25 - Remove Upper Shock Mount

30. Drill out the spot welds holding the upper spring perch bracket to the trunk floor (Figure 26).



Figure 26 - Remove Spring Perch Spot Welds

31. Use an air saw to cut around the remaining upper spring perch locator so that just a gusset is left tying the trunk floor to the framerail (Figure 27). **NOTE:** This is also the fold down rear seat hinge mount for a hatch back vehicle.

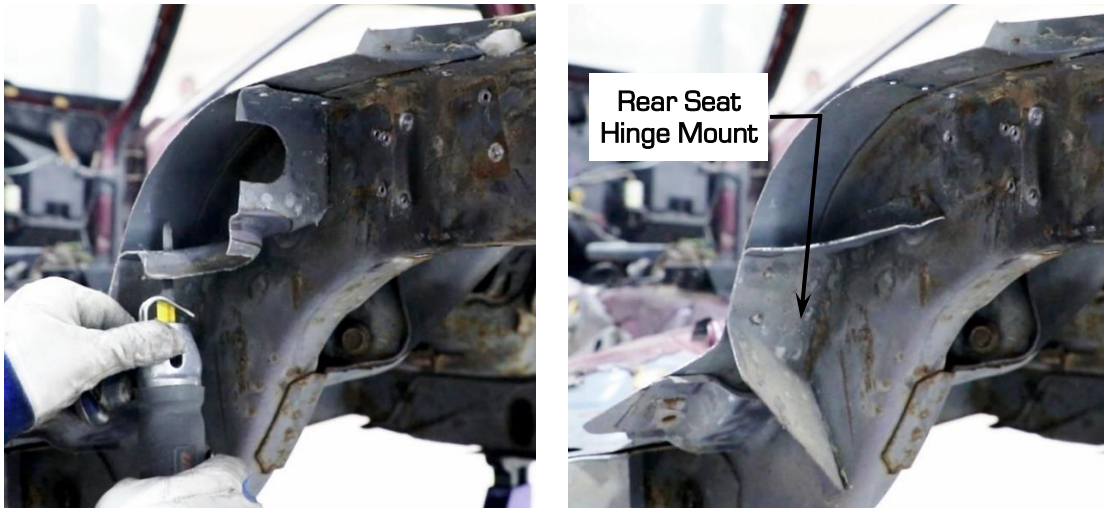


Figure 27 - Remove Spring Perch

32. Drill out the spot welds holding the seat belt anchor to the trunk floor. Cut the remaining trunk floor that sits on top of the seat belt anchor with a cut-off wheel. Trim the trunk floor to allow a straight edge for the mini tub (Figure 28).



Figure 28 - Remove Seat Belt Anchor

33. Flatten the edge of the trunk floor where the upper shock bracket was removed (Figure 29). Trim the corners for a straight edge.



Figure 29 - Flatten Trunk Floor

34. Drill out the spot welds holding the remaining front corner of sheet metal from the inner wheel tub flange. **CAUTION:** Be careful to only drill through one layer of sheet metal as the flange behind it will be used for the mini-tub install. Use a cut-off wheel to split the sheet metal at the seam of the inner and outer wheel tub (Figure 30).



Figure 30 – Remove Inner Wheel Tub Layer

35. Hammer the front corner flange forward so it stops against the back of the rocker panel and to the cut line from the template from Step 15. Use a wire wheel to remove any remaining seam sealer so you have a clean area for welding (Figure 31). **NOTE:** Make sure you have a sharp 90° edge at the front of the outer wheel tub.



Figure 31 – Adjust Flange

36. Grind the edge of the trunk floor and the top edge of the outer wheel tub smooth for the mini-tub install (Figure 32 on the next page). **NOTE:** Make sure all of the inner wheel tub is removed.



Figure 32 – Grind Sheet Metal

37. Test fit the mini tub into the vehicle. You will need to trim the front corner of the mini tub for proper fitment (Figure 33). **NOTE:** The mini tub is wider than it needs to be in case they are being installed past the fender rail.



Figure 33 – Test Fit Mini-Tub

38. Mockup your wheel and tire in the mini tub to make sure you have sufficient clearance between the tire and the mini tub before you weld them in place. DSE recommends using your rear axle to help locate your wheel and tires. **NOTE:** When installing the mini tubs in a Capri, you will need to make additional clearance by modifying the top of the frame rail/trunk floor to allow for a 315R18 tire size (Figure 34).

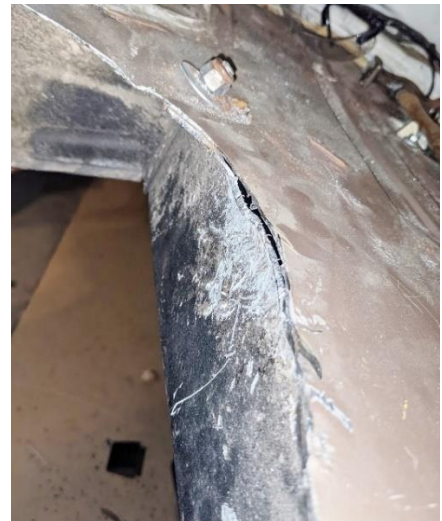


Figure 34 – Capri Modification

39. Re-position the mini tub back into the vehicle so that the stamped feature sits evenly with the trunk floor. Keep the inside wall of the mini-tub perpendicular to the trunk floor as possible. Make a reference line along the top arc of the mini tub using the outer wheel tub structure as a guide (Figure 35).

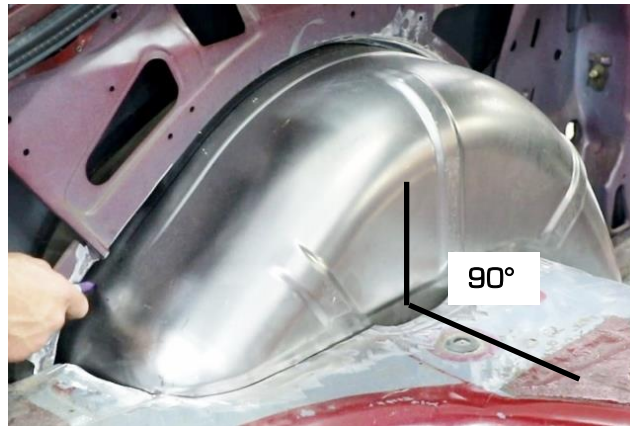


Figure 35 – Mark Reference Line

40. Remove the mini tub from the vehicle and clamp it in a vice. Place 3/4" wide masking tape along the outboard side of the reference line. Draw another reference line along the opposite side of the masking tape, this will be your cut line (Figure 36).



Figure 36 – Draw Cut Line

41. Use a metal shear along your drawn cut line to remove the extra material on the mini tub to fit your application (Figure 37). Re-install and clamp the mini-tub into your vehicle.



Figure 37 – Trim Mini-Tub

42. Position the mini tub back into the vehicle and clamp it in place. Make sure the edge of the mini tub overlaps and fits into the factory step in the outer wheel well. Otherwise, you will have a gap at the top of the mini tub (Figure 38).

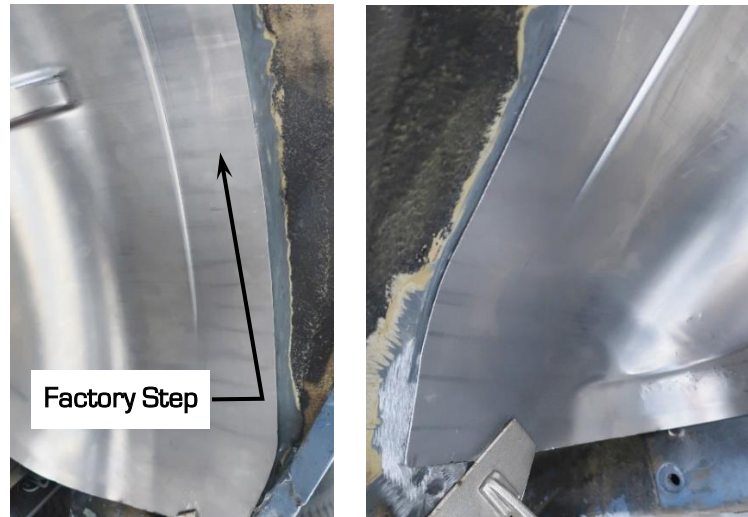


Figure 38 - Overlap Mini-Tub and Outer Tub

43. Begin tack welding the mini tub in place in multiple spots along the trunk floor from inside the vehicle. Then, stitch weld around the top arc of the mini tub (Figure 39).



Figure 39 - Tack Weld Mini-Tub

44. Tack weld the flange at the front corner to the mini tub (Figure 40). Hammer the flange to fit tight against mini tub and stitch weld.



Figure 40 - Tack Weld Flange

45. Finish weld the mini-tub to the trunk floor from inside the vehicle. Stitch weld the mini-tub to the outer wheel well along the seam (Figure 41).



Figure 41 – Finish Weld around Mini-Tub

46. Use template paper to trace the open shape left from the upper shock bracket in the trunk floor. Use some of the sheet metal that was removed from the mini tub in Step 41 and cut out a close out piece using a band saw (Figure 42).



Figure 42 – Fabricate Closeout

47. Place the closeout over the hole in the trunk floor. Tack weld the closeout to the mini-tub and trunk floor and then finish weld (Figure 43).



Figure 43 – Weld Closeout

48. Place one of the provided seat belt anchor relocation brackets on the floor pan inboard of the mini tub where there is a recess in the floor pan. The angled end of the bracket will sit near the mini tub (Figure 44).



Figure 44 – Seat Belt Relocation Bracket

49. Measure off the edge of the rocker panel at 9-1/2" and 12-1/2". Mark these two locations. Draw a vertical line on the floor pan to the area where the seat belt relocation bracket will be located (Figure 45).



Figure 45 – Draw Location Lines

50. Place the bracket so that the center of the four holes line up with the vertical lines drawn in the previous step. Transfer punch the four holes in the bracket to the floor pan. These hole locations should sit on both sides of the framerrail underneath the floor pan (Figure 46).



Figure 46 – Transfer Punch Holes

51. Start with a pilot drill and drill all four holes through the framerail flange. **CAUTION:** Before you drill to your final drill size, make sure you are drilling through the center of the framerail flange. Drill out to a final drill size of $21/64$ " being careful not to drill into the frame rail (Figure 47).

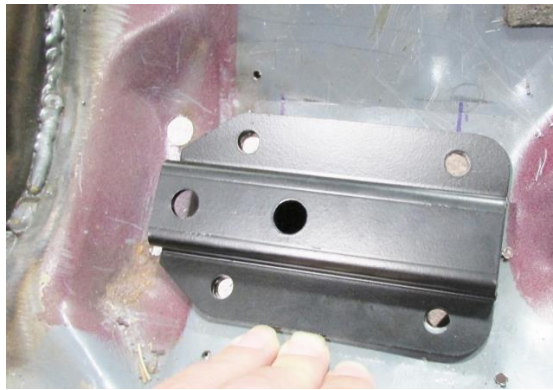


Figure 47 - Drill Bracket Mounting Holes

52. Place the provided $5/16$ "-24 x 1" L hex head bolts and $5/16$ " washers into the bracket and test fit the bracket with the newly drilled holes. With the bracket in place, transfer punch the larger hole in the center of the bracket to the floor pan (Figure 48).

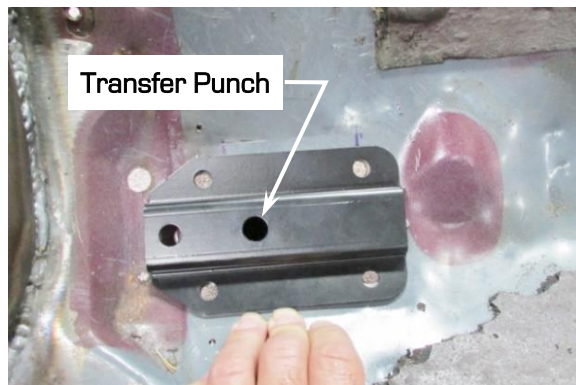


Figure 48 - Transfer Punch

53. Start with a pilot drill and drill out the marked location. Drill out to a final drill size of $29/64$ " being careful not to drill into the framerail.

54. Install two of the $5/16$ "-24 x 1" L hex head bolts and $5/16$ " washers into two of the bracket holes on the angled end. Mount the seat belt assembly to the seat belt relocation bracket using the provided $7/16$ "-20 top lock flange nut and factory seat belt anchor bolt and torque to 45 ft.-lbs. (Figure 49). **NOTE:** Make sure the anti-rotation tab on the seat belt assembly locks into the hole in the bracket.



Figure 49 - Seat Belt Assembly

55. Install the relocation bracket into the floor pan using the provided 5/16"-24 hex head bolts, 5/16"-24 Nylock nuts and 5/16" washers (Figure 50). Torque the hardware to 20 ft.-lbs. (240 in.-lbs.).



Figure 50 - Torque Seat Belt Assembly

56. If you are working on a hatchback vehicle, skip to the next step. Shorten the trunk hinge bracket that was attached to the stock inner wheel tub and weld it back in place between the trunk hinge and the mini tub (Figure 51). Modify the rear seat brace bracket and re-attach it to the mini tub.



Figure 51 - Re-attach Trunk Hinge Bracket

57. Repeat this procedure for the opposite side of the vehicle.

58. The installation of the mini tubs is now complete (Figure 52 on the next page). We recommend that all seams receive seam sealer to prevent the possibility of water intrusion and all bare metal be primed and painted.



Figure 52 - Mini-Tub Install

59. Reinstall the rear interior quarter trim panels. They will need to be trimmed to fit around the new mini tubs.
60. Reinstall the carpet padding, carpet, seats, rear suspension and any additional interior panels that were removed for the installation process.

If you have any questions before or during the installation of this product, please contact Detroit Speed at tech@detroitsspeed.com or 704.662.3272

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