# Detroit Speed
# Second Generation Camaro/Firebird Mini-Tubs
## 1970-1981 Camaro/Firebird
## P/N: 040403DS

The Detroit Speed Mini-Tubs are inner wheel housings are designed to accommodate wider wheel and tire packages. They are engineered for a precise fit and retain a stock appearance. The DSE Mini-Tubs are wider than stock, stamped from 18-gauge steel and proudly Made in the USA. The Detroit Speed Mini-Tubs include driver and passenger side front and rear wheelwell flanges. It also includes templates and instructions, so you have all the components necessary to install this kit.


| Item | Component | Quantity |
|---|---|---|
| 1 | DSE Mini-Tubs – 1970-81 F-Body | 2 |
| 2 | Driver Side Front Wheelwell Flange | 1 |
| 3 | Passenger Side Front Wheelwell Flange | 1 |
| 4 | Driver Side Rear Wheelwell Flange | 1 |
| 5 | Passenger Side Rear Wheelwell Flange | 1 |
| 6 | Template (not shown) | 5 |
| 7 | Instructions | 1 |

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

NOTE: The DSE Mini-Tubs were designed to OEM sheet metal, therefore any aftermarket restoration sheet metal may require additional body work to fit to the DSE Mini-Tubs.

NOTE: There is an installation video available through the Detroit Speed website shown here: https://www.detroitspeed.com/1970-81-camaro-install-videos.

NOTE: If you are not installing the Detroit Speed Mini-Tub Leaf Spring Kit or the QUADRALink Kit, you will not need to use the Framerail Close-Out Template (99040069).

| Wheel and Tire Fitment | |
|---|---|
| 1970-81 Camaro/Firebird | |
| Wheel Size | Tire Size |
| 17" x 12" | 335/35R17 |
| 18" x 12" | 335/30R18 |

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.

Installation Instructions:

1. Raise the vehicle a few feet off the ground so the interior, trunk, and the underside of the vehicle are accessible. Ensure the vehicle is level and well supported.

2. Disconnect the battery cables.

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. Remove the rear suspension and axle.

5. Remove the seats, carpet, carpet padding, rear interior quarter trim panels, and package tray. Any other interior panels, headliner, door panels, etc., should be removed or masked well to protect them from grinding and welding sparks.

6. With the interior removed, mark the cut line to remove the seat back support. Drill out the spot welds and cut at the cut line and remove the remaining material. Figure 1 shows the cut line and the location of the spot welds. Figure 2 shows the piece cutout and removed.

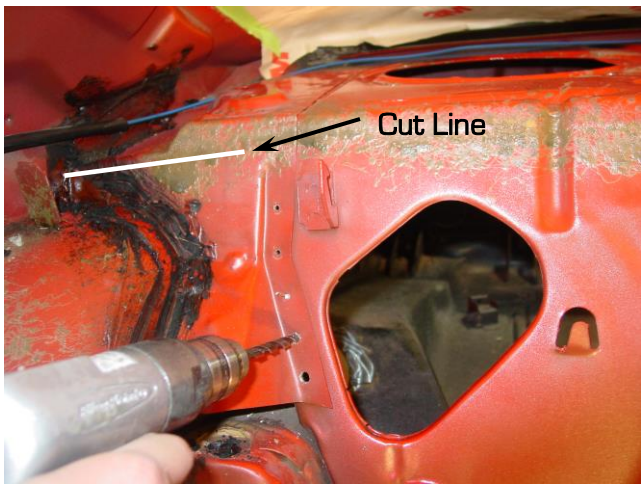


Figure 1 – Seat Support Cut Line


Figure 2 – Seat Support Removed

7. Cut out the Front and Rear Mini-Tub Inner Wheelwell Templates that are provided for the floor and trunk pan.

8. Position the Inner Wheel well Front Template inside the vehicle and center punch the hole for the new seat belt bolt hole, as shown in Figure 3. **NOTE:** This step is only for 1970-75 Camaro/Firebird.

Figure 3 – Inner Wheelwell Front Template with Tab

9. Remove the Inner Wheelwell Front Template and remove the tab used in the previous step.

10. Replace the template and trace around the wheelwell templates to form the cut line. Perform this step for both the rear seat floor pan (Figure 4) and the trunk floor pan (Figure 5).

Figure 4 – Inner Wheelwell Front Template

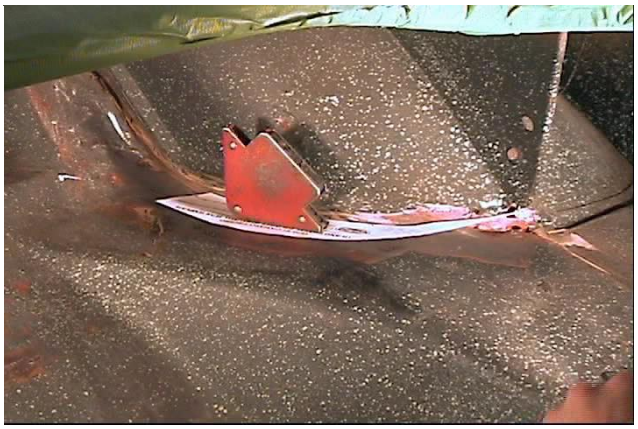


Figure 5 – Inner Wheelwell Rear Template

11. Extend the cut line upward along the seat back using 2" tape, as shown in Figure 6. This will connect the front and rear wheel well templates.

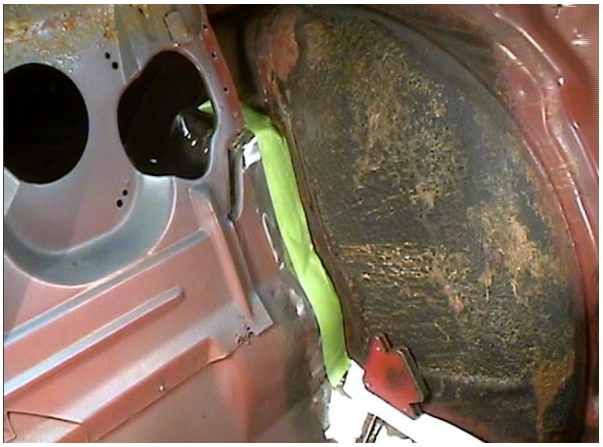


Figure 6 – Cut Line Extension Using 2" Tape

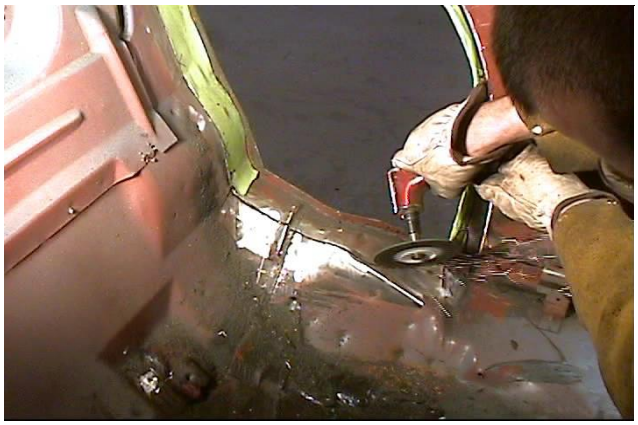
12. Identify the spot welds that connect the inner and outer wheeltubs and drill out the spot welds.

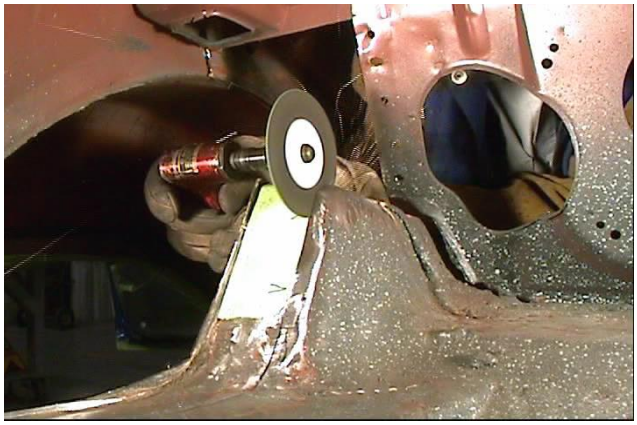
13. Remove the original inner wheel tub by using a 3/32" 3M cut off wheel in a die grinder. **NOTE:** This is only a rough cut. Make sure all appropriate safety attire is worn and all equipment is in proper working condition.

14. Measure 2-3/4" up from the bottom of the rocker panel pinch flange and mark with a line. Extend the forward edge of the line upward, as shown in Figure 7, to the new wheel tub opening. Remove the overlapped portion of the marked area.

Figure 7 - Marking Tab for Removal

15. Cut the floor pan and trunk pan along the marked lines and 2" tape, as shown in Figures 8 and 9. This allows proper clearance for the DSE Mini-Tub.





Figures 8 & 9 - Metal Removal for Clearance of DSE Deep Tubs

16. Clean and de-burr the flange between the inner and outer wheel tubs.

17. Test fit the new DSE Mini-Tub. It is a good idea to clamp the tub in place using locking pliers and/or self-tapping sheet metal screws.

18. Mark 1/4" below the lower edge of the DSE Mini-Tub on the frame rail. This will be used for locating the new wheel tub flange along the frame rail.

19. Mark the wheel tub flanges and templates at the same location on the wheelwell opening to allow for proper flange to template alignment, as shown in Figure 10 on the next page.

Figure 10 - Front Flange Alignment

20. Transfer the bend profile from the supplied Inner Wheelwell Front and Rear Templates to the supplied front and rear flanges accordingly. Figures 11 and 12 show the respective template to flange layout. **NOTE:** The templates are provided as a general shape. Bend the flanges to fit your car and your specific cut line. This should be done for both the front and the rear flanges.

Figure 11 – Front Template Bend Profile

Figure 12 – Rear Template Bend Profile

21. Mark the floor pan to flange profile, as shown in Figure 13, on the flange from the top side of the floor pan. Remove the excess material from the flange. Perform this step for both the front and rear flanges.

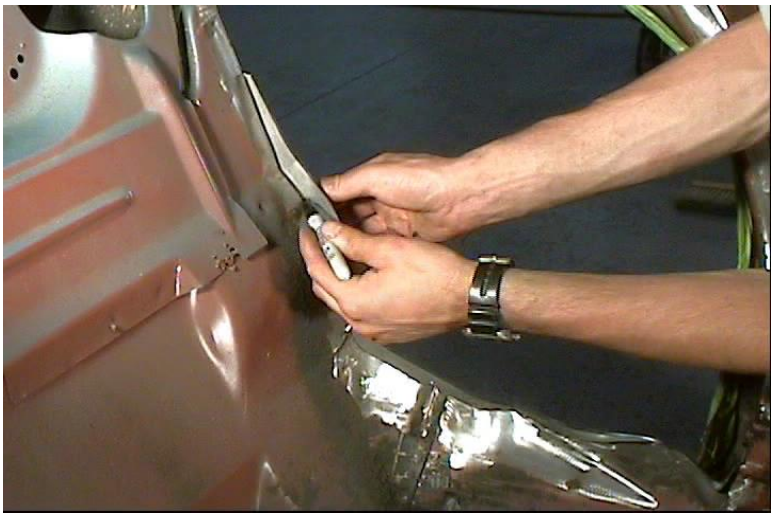


Figure 13 – Marking Front Template to Floor Pan Profile

22. Tack weld the front and rear flanges to the body as shown in Figure 14.

Figure 14 – Tack Weld Tub Flanges

23. Test Fit the mini tub to check the tub to flange fitment as shown in Figure 15. Make any adjustments to the flanges if needed. **NOTE:** DSE recommends placing 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 wheels and tires.

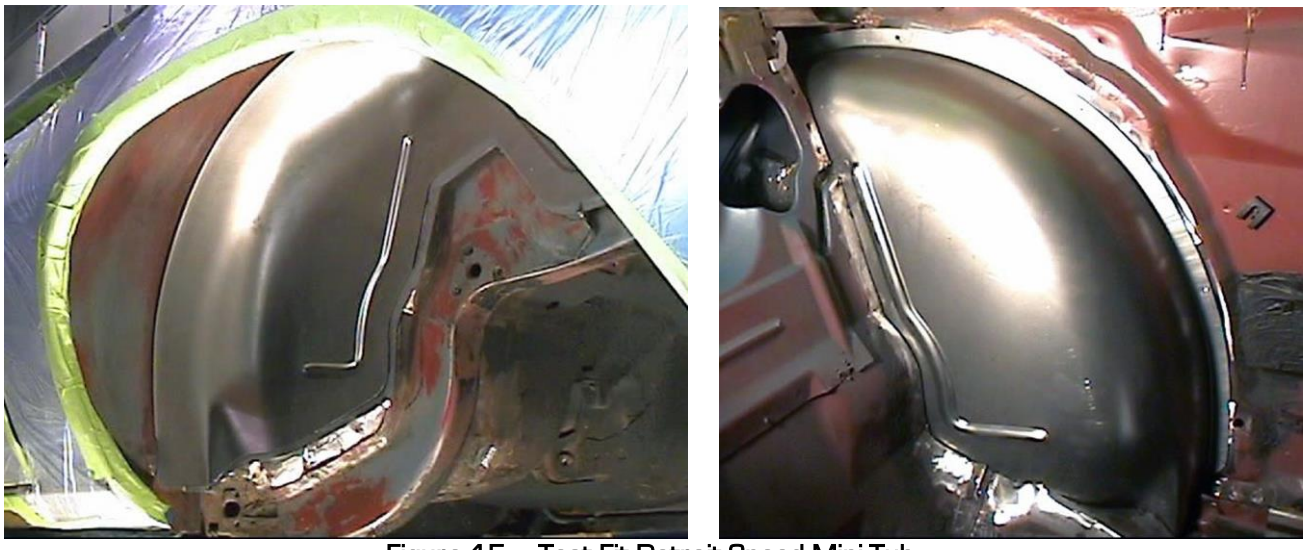


Figure 15 – Test Fit Detroit Speed Mini-Tub

24. Mark along the inside of the floor pan and the trunk pan onto the Detroit Speed Mini-Tub. **NOTE:** This line will be used for reference when drilling the holes for spot welding.

25. Remove the Detroit Speed Mini-Tub from the vehicle and finish welding the flanges to the body.

26. Locate marks 1-3/4" apart, as shown in Figure 16 on the next page, between the reference line and the outer edge of the Detroit Speed Mini-Tub. Repeat this step on the flange between the inner and outer wheel tubs.

Figure 16 – Mark Tub Mounting Surfaces

27. Drill a series of 9/32" holes in the previously marked locations for the spot welds. A drill bit, Uni-Bit, or sheet metal punch can be used for this process.

28. Reinstall the Detroit Speed Mini-Tub and secure it with sheet metal screws and/or locking clamps. **NOTE:** It is a good idea to spray weld through primer on all surfaces that will be welded to prevent future rust formation.

29. Plug weld all the holes as shown in Figure 17. Remove any sheet metal screws used and plug weld the remaining holes.

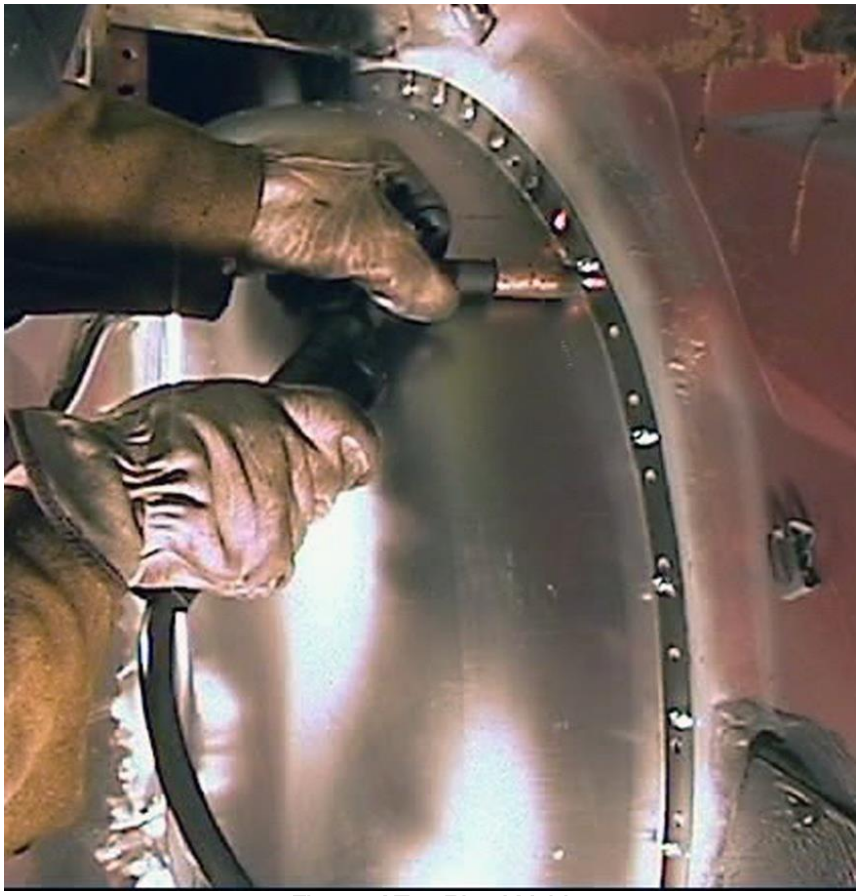


Figure 17 – Plug Weld

30. Weld the Detroit Speed Mini-Tub to the body side flanges along the bottom edge of the tub as shown in Figure 18.

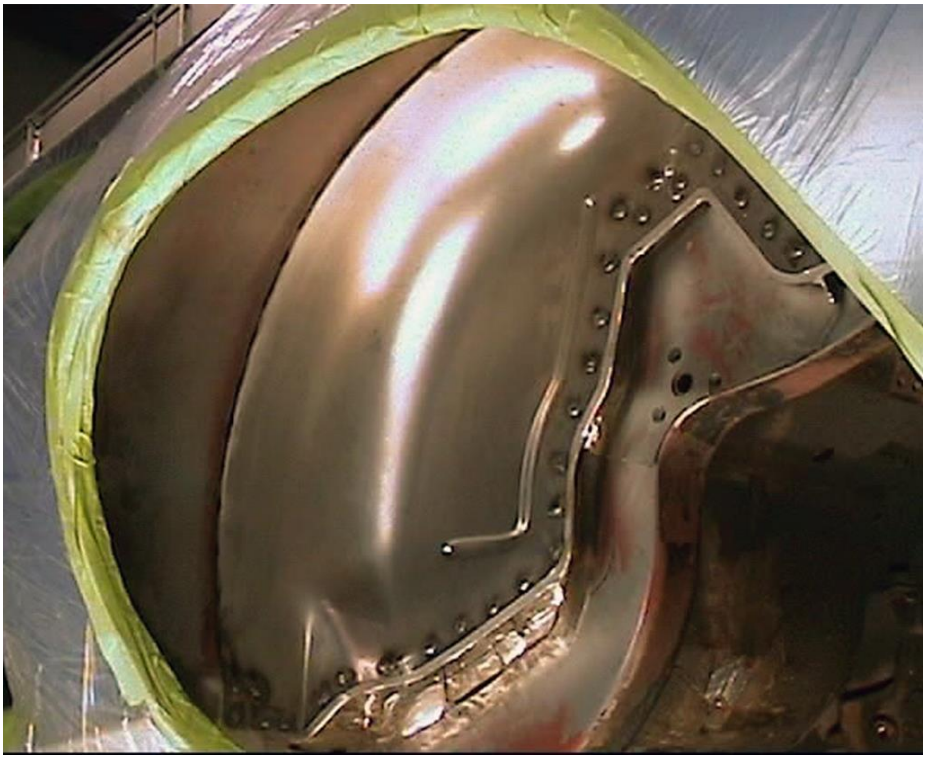


Figure 18 – Weld Mini-Tub to Side Flanges

31. Grind and smooth the spot welds after the welding is complete as shown in Figure 19.

Figure 19 – Smooth Spot Welds

32. Bend the outer wheeltub overlap flat against the Detroit Speed Mini-Tub and spot weld it in place as shown in Figure 20.

Figure 20 – Wheel Tub Overlap

33. Lay out the new seat back bracket on 18-gauge sheet metal as shown in Figure 21.


Figure 21 – Seat Back Bracket Panel

34. Clamp the seat back bracket in place and spot weld it to the new Detroit Speed Mini-Tub and seat back as shown in Figure 22.

Figure 22 – Seat Back Bracket Installed

35. The rear seat requires modification. Follow the steps below to perform the modification.

a) Remove the rear seat cover and padding. Modify the bottom of the seat frame to clear the Detroit Speed Mini-Tubs, as shown in Figure 23 below.

Figure 23 – Rear Seat Frame Modification

b) Narrow the back of the rear seat approximately 2" on both sides as shown in Figure 24.

Figure 24 – Narrowed Rear Seat Frame

c) Reinstall the rear seat padding and seat cover.

d) Modify the rear interior quarter trim panels, as shown in Figure 25 on the next page, by adding approximately 2 inches of material to allow clearance for the mini tubs.

Figure 25 – Modified Interior Quarter Trim Panels

e) Reinstall the package tray, rear interior quarter trim panels, carpet padding, carpet, seats, gas tank, rear suspension, and any additional interior panels that were removed for the installation process.

36. Enjoy your new Detroit Speed Mini-Tubs!

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