Detroit Speed, Inc.
1962-67 Chevy II Mini-Tubs
P/N: 040404

The Detroit Speed, Inc. Mini-Tubs are inner wheel housings designed to accommodate wider tire and wheel packages, including tires as wide as 295mm for the 1962-1965 Chevy II and 315mm for the 1966-1967 Chevy II. They are engineered for a precise fit, retain a stock appearance, and are available exclusively through Detroit Speed, Inc. The Mini-Tubs are 2-1/2" inches wider than stock, stamped from 18 gauge steel, made in the USA.

Item	Component	Quantity
1	Detroit Speed Mini-Tubs – 1962-67 Chevy II	2
2	1962-67 Driver & Passenger Side Frame Rail Closeout (99040212 & 99040218)	2
3	1962-67 Mini-Tub & 1962-65 Upper Seat Back Brace Templates (99040247)	1
4	1966-67 Driver Side Trunk Hinge Bracket Template (99040265)	1
5	1966-67 Upper Seat Back Brace Template (99040266)	1
6	Instructions	1

INTRODUCTION

Congratulations on your purchase of the Detroit Speed Chevy II Rear Mini-Tub Kit. Please read the entire set of instructions, watch the installation video available on the Detroit Speed website, and fully understand all of the steps involved before beginning the project. Always make sure to wear the appropriate safety equipment for the job and properly support the vehicle.

NOTE: There is an installation video available through the Detroit Speed website in the tech/install video section shown here: https://www.detroitspeed.com/1962-67-chevy-ii-installation-videos.

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

I. PREPARING THE VEHICLE

1. Raise the vehicle a few feet off of 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. Remove the trunk lid, springs, and hinges. Take care when removing the trunk springs as they are under high tension when installed.

II. REMOVING STOCK INNER WHEELWELLS

1. **Removing the seat back braces and trunk flanges**

   i. Begin inside the trunk by removing the two side trunk support flanges. On the passenger's side, grind and drill out the factory spot welds, then separate the upper and lower support flange pieces using a chisel. See Figure 1.

Figure 1- Separating the Passenger Side Trunk Support Flange

   ii. On the driver's side, cut the trunk support flange ¼" below the offset stamped into the support. See Figure 2 on the next page.

Figure 2 - Cutting the Driver Side Trunk Support Flange

iii. Cut the lower support flange pieces out of the factory wheel wells using a 3/32" 3M cut off wheel and set them aside for modification later. See Figure 3.

Figure 3 - Removing the Passenger Side Trunk Support Flange after Cutting

iv. For all models, cut out the two Mini-Tub Inner Wheel Well Templates (99040247). For the 1962-65 models, cut out the Upper Seat Back Brace Template (99040247). For the 1966-67 models, cut out the Upper Seat Back Brace Template (99040266). Take care to ensure that the correct templates for your vehicle are used, as the templates differ between 1962-1965 models and 1966-1967 models.

v. Line up the outboard edge of the upper seatback brace template with the vertical outer trim on the upper seatback brace inside the trunk. Trace and remove the template. See Figure 4.

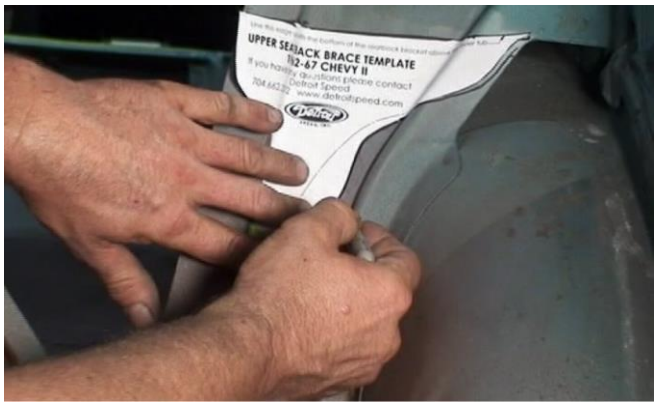

Figure 4 - Tracing the Template on the Seatback Brace (1962-65 model shown)

vi. Grind and remove the factory spot welds on the upper seatback braces. Cut along the traced template lines using a 3/32" 3M cutoff wheel, taking care to leave enough material for finish grinding later. After removing the main brace, the material in the bottom corner will need to be removed as well. See Figure 5.

Figure 5a - Cutting the Seatback Brace

Figure 5b - Removing the Brace

Figure 5c - Removing the bottom corner flange

2. Removing the stock tubs

i. Position and trace the two Mini-Tub Inner Wheel Well Templates (99040247) around the factory wheel well, then rough cut along the contours of the factory inner wheel well. The factory wheel well should be free at this point, and can be removed for better access to the traced areas. See Figure 6.

Figure 6a - Tracing the Lower Templates

Figure 6b - Cutting the Factory Wheel well

Figure 6c - Removing the Factory Wheel well

ii. Rough cut along the traced sections using a 3/32" 3M cut off wheel, leaving enough material for finish work later. You will need to cut through the top of the frame rail—this is normal. Be sure to save the original seat belt anchors if your car is a 1966 or 1967. See Figure 7.

Figure 7 - Removing the Previously Traced Floor Pan Section

iii. Measuring from the outside of the remaining factory wheel housing, leave 4" of the original wheel house flange on the front and rear and remove the remaining flange past 4" (Figure 8a). Remove any remaining horizontal flange along the arc of the factory wheel tub (Figure 8b).

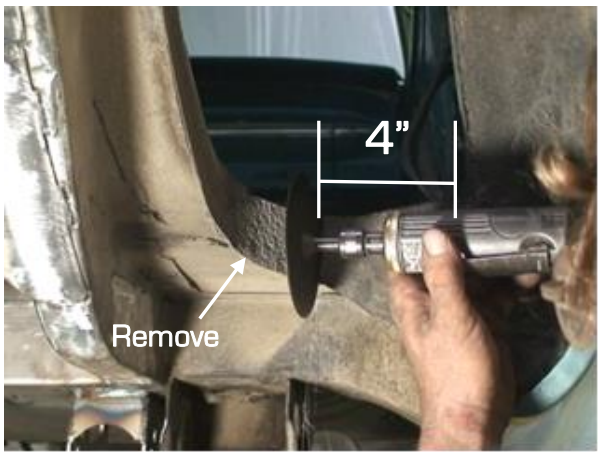

Figure 8a – Cutting the Factory Wheel House Flange

Figure 8b – Cutting the Factory Horizontal Flange

3. Modifying the frame rails

i. Use a straight edge to mark vertical lines along the outboard wall of the rear frame rails where the cuts previously made in the floor pan intersect the frame rails. Re-use the Mini-Tub Inner Wheel Well Templates (99040247) and place it on the bottom side of the frame rail. Trace this pattern onto the bottom side of the frame rails, then cut and remove the outboard framerail wall. See Figure 9.

Figure 9a – Mark & Cut Vertical Ends First

Figure 9b – Follow Included Template

Figure 9c – Finished Frame Rail Clearance

ii. Drill out the factory lap flange welds. Cut off the factory front lap flange. Cut off the outer layer of the factory rear lap flange and bend the inner layer down and into the wheel well. See Figure 10.

Figure 10a - Removing Forward Lap Flange

Figure 10b - Removing and Bending Rear Lap Flange

iii. Prep all of the edge surfaces by cleaning and de-burring the flange between the inner and outer wheel tubs.

III. INSTALLING THE Detroit Speed MINI-TUBS

1. Test fitting the new Detroit Speed Mini-Tubs

i. It is a good idea to clamp the tub in place using either locking pliers and/or self-tapping sheet metal screws. Make note of areas that will need trimming and finish grinding, then remove the tub again. Due to the variation in sheet metal and the frame rails in these vehicles, the amount of trimming required to fit the new mini-tub may vary. **Make sure the tub fits correctly *before* proceeding to weld the new frame rail close out into place.**

2. Prepping the frame rails

i. Locate the driver and passenger side frame rail closeout panels (99040212 & 99040218) to close out the clearance area created on the side of the frame rails. Tack the panels into place. See Figure 11.

Figure 11 - Fitting and Trimming the New Frame Rail Close Out

ii. Fabricate new front and rear flange pieces and tack weld them into place. See Figure 12.

Figure 12a - Fabricating the New Front Flange

Figure 12b - Fabricating the New Rear Flange

iii. Finish weld the frame closeout and flanges, and grind all welds smooth.

3. Prepping the Mini-Tubs

i. Finish trimming as necessary for mini-tub fitment, then test fit the new mini-tub again. This will be the final test fit, so double-check fitment at all mounting surfaces and adjust fitment before continuing.

ii. When you are satisfied with the new mini-tub fitment, mark all of the mating surfaces for plug welding. Once the basic weld area has been traced, removing the mini-tub allows for easier marking and punching of plug weld holes. Space your marks 1½" apart, and then punch your marks for welding. See Figure 13.

Figure 13a - Marking the Mating Surfaces for Welding

Figure 13b - New Tub Ready for Welding

4. Installing the Mini-Tubs

i. Install the mini-tub, confirm mini-tub position, and spot weld it to the newly fabricated flanges and framerails. Grind the welds after they are completed.

ii. Fabricate new front outer lap flanges and weld them into place. Bend the rear flanges back onto the new tub and weld them into place. See Figure 14.

Figure 14a - Welding Fabricated Front Lap Flange

Figure 14b - Rear Lap Flange Bent into Place

iii. Clean and smooth all welded surfaces in preparation for painting.

5. Modifying the Seatback Braces and Trunk Support flanges

i. 1962-1965:

1. Use the supplied Upper Seat Back Brace Template (99040247) to modify the rear seat brace that was removed earlier for clearance around the new mini-tubs, and then weld the brace at both the top and bottom and along the new mini-tub. See Figure 15.

Figure 15a – Trace Template on Brace

Figure 15b – Welding Modified Brace

Figure 15c – Finished Modified Brace

2. Use the original side trunk brace flanges to make a template that will help determine how the braces will need to be modified to fit with the new tubs. See Figure 16.

Figure 16 - Comparing Cardboard Template to Factory Trunk Flange

3. Carefully modify the flanges to fit, then test fit the flanges to ensure proper fitment before preparing the upper sections and wheel tubs for welding. Prime the flanges using a weld-through primer to eliminate the chance of future rust damage. See Figure 17.

Figure 17 - Modified and Primed Factory Trunk Flange

4. Use the modified flanges as a template to locate the flange weld holes in the new tub. Weld the modified trunk flange lower sections to the upper sections and the new wheel tubs. See Figure 18 and 19 on the next page.

Figure 18a - New Tub Marked for Flange Welding

Figure 18b - Finished Passenger Trunk Brace Flange

Figure 19a - Marking Driver Side Tub for Welding

Figure 19b - Finished Driver Trunk Brace Flange

ii. 1966-1967:

1. Use the included Upper Seatback Brace Template (99040266) to modify the rear seat brace that was removed earlier for clearance around the new mini-tubs, and then weld the brace at both the top and bottom and along the new mini-tub. See Figure 20.

Figure 20 - Marking the Upper Seatback Brace

2. Select an appropriate new location for the seat belt mount based on your car's floor pan. Using the saved seat belt mounts from earlier as a guide, mark the floor pan, then drill a new hole for the seat belt mounting bolt. Use the seat belt mounting bolt to hold the mounting plate and then plug weld the mounting plate into place. See Figure 21.

Figure 21a - Mark and Trim Belt Anchors

Figure 21b - Mark new Anchor Location

Figure 21c - Welding Anchor (Supported by Anchor Bolt)

3. Fabricate a new flange to tie the factory trunk hinge/braces onto the new mini-tubs. Make a simple template to modify the factory braces as necessary. See Figure 22.

Figure 22a - Fabricated Flange for 1966-67 Vehicles

Figure 22b - Trimming Factory Brace and Flange to Fit

4. Once proper fitment is achieved with the newly fabricated brace flanges, weld the brace flanges to the new mini-tubs and the factory braces. See Figure 23.

Figure 23 - Finished Passenger Side Trunk Brace

5. Due to the differences from vehicle to vehicle caused by factory GM tolerances, the trunk hinge may need to be trimmed slightly to clear the new mini-tubs. Modify the factory hinges as necessary. See Figure 24.

Figure 24 - Trimming Trunk Hinges for Clearance

IV. FINAL ASSEMBLY

1. Paint all bare metal to prevent the formation of rust.

2. Remove the rear seat cover and padding. Modify the bottom of the seat frame to clear the Detroit Speed mini-tubs. Install the bare seat frame and mark points of interference between the seat frame and mini-tubs. These points will have to be modified to clear the new mini-tubs.

3. Cut 2" from the center flat section of the lower main seat frame on each side. Save the removed material as it will be used to rebuild the frame at the end. See Figure 25.

Figure 25 - Cut 2" from Top and Bottom Rail

4. There is a diagonal support rod and a vertical support rod at the outside rear of each side of the frame. Measure and mark 5" from the vertical rod and 2 ½" from the diagonal rod on the cross rod, then cut the cross rod at the 2 ½" mark and at the attachment point to the main seat frame (Figure 26).

Figure 26 – Cutting the Cross Bar at the 2-1/2" Mark

5. Flip the cut section of the cross rod so that the end that was closest to the vertical support rod can be re-mounted to the seat frame, and the end that was mounted to the seat frame can be reattached to the rest of the cross rod.

6. Weld the flipped section of the cross rod into place, then bend the diagonal rod to the 5" mark on the cross rod. Weld the diagonal rod to the cross rod (Figure 27).

Figure 27 – Finished Flipped Cross Rod & Bent Diagonal

7. Cut the contoured pieces of the main lower seat frame off of the vertical main seat frame rails. Weld these contoured pieces to the remaining center flat section (so that the contoured pieces move in 2" on each side, clearing the new mini-tubs) then use the saved 2" sections of material to complete the gaps left between the contours and the vertical main seat frame rails. Test-fit the modified seat frame. At this point, the diagonal bar, cross bar, and lower seat frame should all clear the new mini-tub (Figure 28).

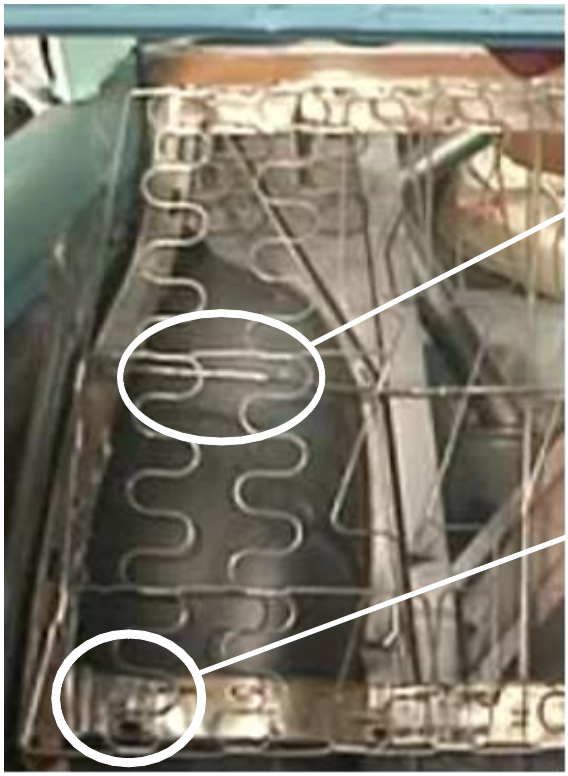

Figure 28a – Finished Modified Seat Frame (Passenger side)

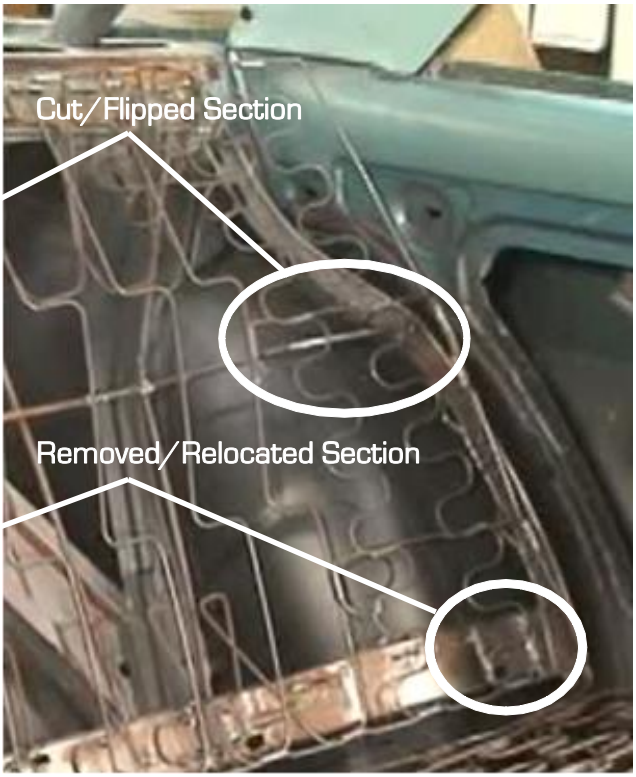

Figure 28b – Finished Modified Seat Frame (Driver Side)

8. Re-cover the seat bottom, and then 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.

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

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