Detroit Speed, Inc.

Chevy II Deep Tubs

P/N: 040404

Item	Component	Quantity
1	DSE Deep Tubs- Chevy II	2
3	Installation DVD	1
4	Templates	4

INTRODUCTION

Congratulations on your purchase of the DSE Chevy II Rear Mini-Tub Kit. Please read the entire set of instructions, watch the installation DVD, and fully understand all of the steps involved before beginning the project.

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.*

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. Cut out the three Mini-Tub Inner Wheelwell Templates that are provided for the floor and trunk pan. Take care to ensure that the correct templates for your car 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

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 lower templates 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. Remove any remaining *horizontal* flange along the arc of the factory wheel tub. See *Figure 8.*

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 floor pan template to trace the same pattern on the bottom of the frame rails, then cut and remove the outboard framerail wall. See *Figure 9.*

Figure 9a. Mark and Cut Vertical Ends First

Figure 9b. Follow Included Template

Figure 9c. Finished Frame Rail Clearance

ii. Drill out the factory lap flange welds and 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 DSE DEEP TUBS

1. Test fitting the new DSE Deep 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. **Make sure the tub fits correctly *before* proceeding to weld the new frame rail close out into place.**

2. Prepping the frame rails

i. Fabricate a new panel to close out the clearance area created on the side of the frame rail. Tack the panel into place (This panel is included if a Quadra-Link kit is being installed simultaneously). See *Figure 11.*

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

ii. Fabricate new front and rear flange pieces and tack 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 Deep Tubs

i. Finish trimming as necessary for tub fitment, then test fit the new 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 deep tub fitment, mark all of the mating surfaces for plug welding. Once the basic weld area has been traced, removing the 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 Deep Tubs

i. Install the tub, confirm 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 template to modify the rear seat brace that was removed earlier for clearance around the new wheel tubs, then weld the brace at both the top and bottom and along the new wheel 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.*

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 to modify the rear seat brace that was removed earlier for clearance around the new wheel tubs, then weld the brace at both the top and bottom and along the new wheel 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 into the new tubs. Make a simple template to modify the factory braces as necessary. See *Figure 22.*

Figure 22a. Fabricated Flange for 1966-67 Cars

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 tubs and the factory braces. See *Figure 23.*

Figure 23. Finished Passenger Side Trunk Brace

5. Due to the differences from car to car caused by factory GM tolerances, the trunk hinge may need to be trimmed slightly to clear the new 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 DSE mini tubs. Install the bare seat frame and mark points of interference between the seat frame and tubs. These points will have to be modified to clear the new 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.
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. *See Figure 26*

Figure 26a. Cutting the Cross Bar at the 2 ½" Mark

Figure 26b. Finished Flipped Cross Rod and 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 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 tub. See *Figure 27.*

Figure 27a. Finished Modified Seat Frame (Passenger Side)

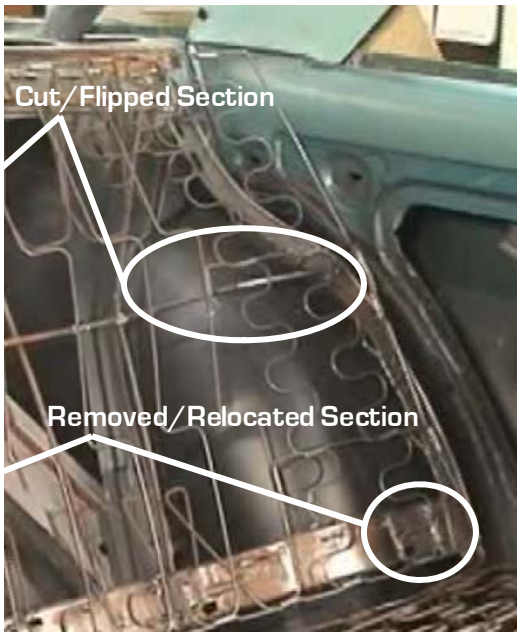

Figure 27b. Finished Modified Seat Frame (Driver Side)

8. Re-cover the seat bottom, 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.

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

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

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