



Detroit Speed, Inc.  
1964.5 - 1970 Mustang Mini-Tubs  
P/N: 040405

Item	Component	Quantity
1	DSE Mini-Tubs - Mustang	2
2	Frame Rail Sections	2
3	Doubler Plate 4" x 3.25"	4
4	Doubler Plate 4" x 2"	4
5	Installation DVD	1
6	Template	1



## INTRODUCTION

Congratulations on your purchase of the DSE Mustang 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. INSTALLING THE DSE FRAME RAIL SECTIONS

1. Do each frame rail modification one side at a time to avoid vehicle distortion.
2. Remove original jounce bumpers and cut brackets off of rear frame rails. Grind frame rails smooth.
3. Measure 29" and 12" from the front surface of rear leaf spring bushing sleeve and mark the frame rail at these locations. Mark the vertical cut lines perpendicular to the trunk pan. Mark the horizontal cut lines with a straight edge perpendicular to car centerline. Do not use a square of the original frame rail as it is not parallel with car centerline. (Figures 1 and 2)



Figure 1



Figure 2

4. Hold the DSE frame rail section at these marked locations and reference the angled part of the DSE part to mark the angle cut line of the original frame rail. Cut the original frame section at the marked locations. Drill spot welds to help remove any remaining upper frame rail material. Use a grinder to clean and straighten the cut lines. (Figure 3)



**Figure 3**

5. Remove paint from the areas the DSE frame rail section will attach. Fit the DSE frame rail section in place and clamp securely. The DSE rail section should be parallel with car centerline. Mark out the top inside and outside edges of the DSE rail section. Mark the original frame rail bottom for a "pie cut" so it can be blended into the DSE rail section. (Figure 4)



**Figure 4**

6. Remove the DSE frame rail section to make the "pie cut" in the original rail. At this time lay out and drill plug welding holes in the trunk pan using the rail outline drawn earlier. Apply etching primer to the surfaces that will be in-accessible after the DSE rail section is installed.
7. Fit the DSE frame rail section back in place and clamp securely. Again make sure the rail section is parallel with car centerline. Align the bottom of the original frame rail that you "pie cut" to the DSE frame rail section and tack in place. After tack welding, stitch weld all remaining seams. Grind the welds smooth in preparation for doubler plates.
8. Hold the doubler plates in position and mark cut and bend lines as necessary. After cutting and bending the doubler plates layout and drill plug welding holes. Tack weld the doubler plates in position. Finish weld and plug weld each of the doubler plates and then finish grind the welds for a smooth, finished look. (Figures 5 and 6)



**Figure 5**



**Figure 6**

9. From the inside of the trunk remove any paint around the plug welding holes. Plug weld trunk pan to the top of the DSE frame rail section and grind smooth.
10. Repeat this process for the other side.



### III. INSTALLING THE DSE DEEP TUBS

(Note: If installing DSE Mustang Quadra-Link proceed with that kit at this point before installing the Deep Tubs. The Deep Tubs should be installed at the 2" standard depth in most cases. The extra 3" depth is primarily meant for 65-66 models to get a 315 tire. The 3" install will require cutting into and narrowing the DSE frame sections installed in the previous section. See tire fitment chart.)

1. Locate and document the position of any brackets that need to be removed to install the deep tub. Remove these brackets and save for re-use. Fastback shown below. (Figure 7)



Figure 7

- Coupe: Drill spot welds out of the upper decklid hinge mounting flange and separate. Cut the lower decklid hinge bracket out of the stock tub and remove the hinge assembly from the car. Remove the rear seat corner support completely from the car. First drill out spot welds in the upper areas of the bracket and separate from body structure. Cut the remaining section out of the stock tub and remove the bracket from the car. After the bracket is removed from the car grind spot welds and remove the stock tub material from the flanged area. Straighten and grind part smooth for re-use later. (Figures 8 and 9)



Figure 8



Figure 9



Fastback: Cut rear seat side structure away to clear the DSE deep tub. A pair of dividers can be used to layout your bend line. Set the dividers to 2" or 3" to match the depth of your tub install. Create an arc on the seat bracket keeping the dividers parallel with the floor (Figures 10 and 11). Center punch and drill out spot welds of the upper support and detach from the tub flange (Figure 12). Cut the stock tub around the inside of the support flange. Remove the support flange section for later use.

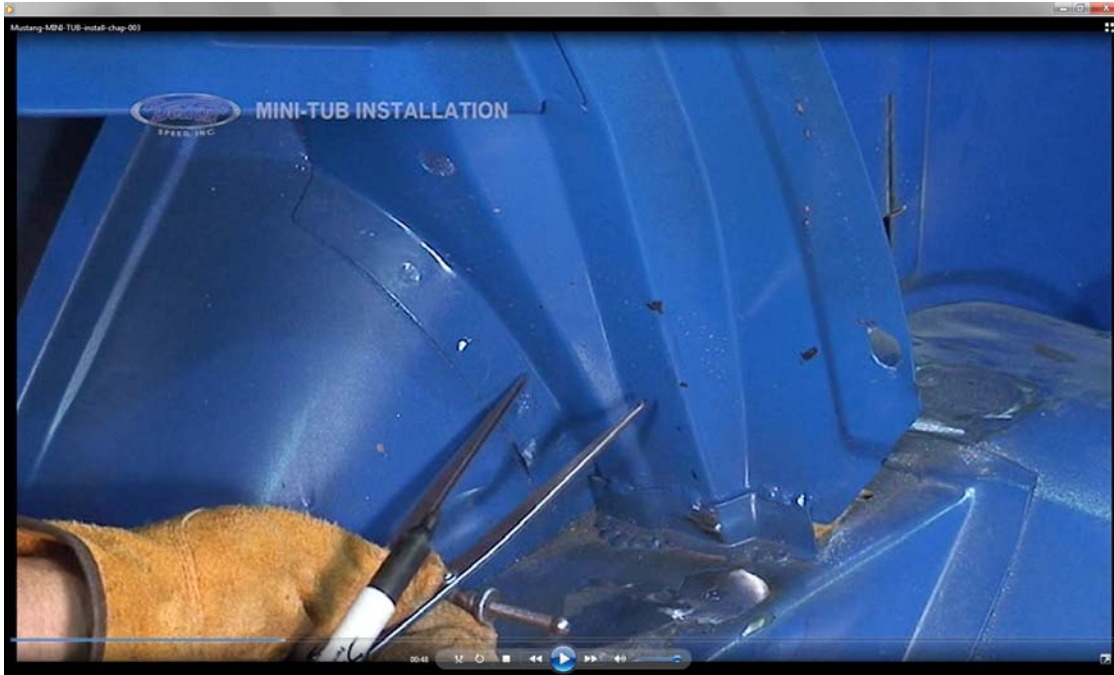


Figure 10



Figure 11



**Figure 12**

3. Cut the supplied Deep Tub floor pan cut template to the appropriate depth for your tub install. If you are doing a 3" tub install you will be cutting into the DSE frame rail sections installed earlier. Lay the template up against the original tub and then mark out your floor pan cut line. At this point begin removing the original tub by cutting vertically along the edge of the inner stepped surface, which is about 1" inboard of the inner-outer tub seam. Cut and remove the original lower front tub flange. Cut the remaining edge along the flange by the frame rail to allow removal of the main tub section. You now have better access, and can proceed with cutting the floor pan cut line made earlier with the template. After removing the floor pan section trim away any remaining small pieces. (Figures 13, 14, and 15)





**Figure 13**



**Figure 14**



**Figure 15**

4. For a standard 2" deep tub install, mark a cut line 1" from the tub edge on the new Deep Tub. Trim the Tub on this line and debur. (For a 3" deep tub install no trimming of the Deep Tub is required.) [Figure 15]



**Figure 15**

5. Fit the Deep Tub up into the car to check general fitment and gaps. Mark any gaps or tight spots accordingly and adjust. Re-fit the Deep Tub until all areas of fitment look acceptable.

6. Use a piece of poster board to trace the outline of the floor pan to make a template for your deep tub flange. Mark 1" increments along the curve of your line to finalize the template. Cut the template out and trace onto a section of 16-18ga steel. Cut the flange out and bend to fit the floor pan. When the flange fitment is good remove paint around where the flange will be welded. Spray etching primer to necessary surfaces that will be in-accessible later. Clamp flange in position and tack weld in place. Stitch weld the entire flange and grind smooth. [Figures 16 and 17]





Figure 16



Figure 17



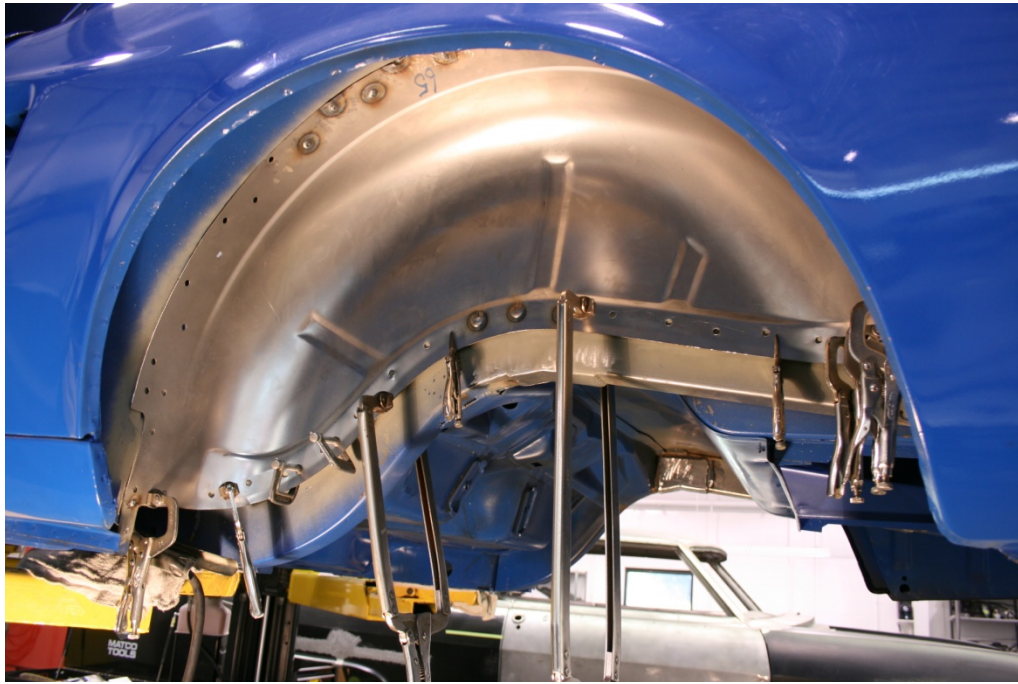
7. Remove paint from the stock outer tub in the areas where the new Deep Tub will attach. Fit the tub back into the car and clamp in place. Mark the outline of the tub fitment so you can layout out the plug weld holes. Remove the tub and layout evenly spaced plug weld hole locations. Drill the plug weld holes in the tub. Clean and spray etching primer on the new tub where it will be welded. Do the same for areas on the car the deep tub will be welded to. Fit the Deep Tub back into the car for the final time and clamp very securely. Start with a few tack welds at the very top of the tub then work into plug welds from the bottom side to the outer tub at the center. After several of these switch to plug welding to the floor pan flange in the center as well. Gradually work your way out from the center and use a body hammer to help fit the tub in as you weld. After welding come back and grind the welds smooth. [Figures 18-21]



**Figure 18**



**Figure 19**



**Figure 20**



**Figure 21**



8. Make a poster board template to re-create the small flap that was removed with the stock tub. Cut the part out of 16-18ga steel, spray with etching primer, and tack weld into position. Stitch weld, plug weld, and grind smooth to complete the small flap install. (Figures 22 and 23)



Figure 22



Figure 23



9. Return to inside the car and stitch weld the Deep Tub to the floor pan. At least 8 stitch welds or more are recommended. (Figure 24)



**Figure 24**

10. Coupe: Modify and fit lower section of decklid hinge bracket to the DSE Deep Tub. Weld upper part of hinge mount back to original flange piece still on the car. Stitch weld and plug weld to lower section into position. Fit the rear seat corner support that was removed earlier to the DSE Deep Tub. A small extension piece will probably have to be added to the top outboard edge since the bracket will be shifted inboard by the Deep Tub. Drill holes for plug welding in the applicable areas and tack the bracket into position. Weld any other remaining brackets back into position that were removed from the stock tubs. (Figures 25 and 26)

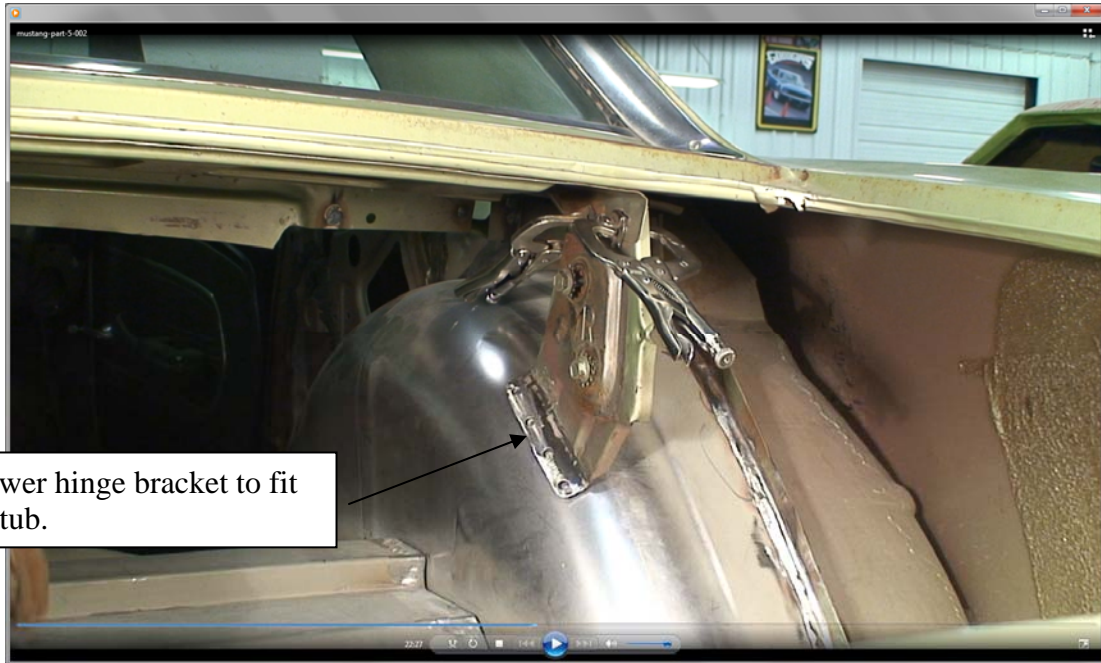


Figure 25



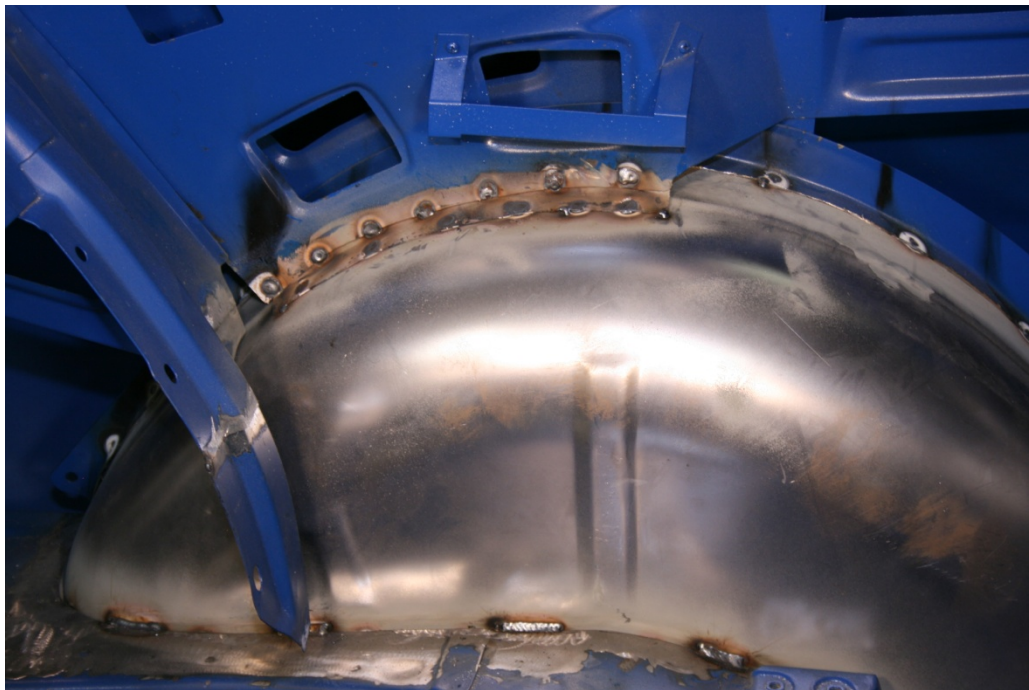
Figure 26



Fastback: Modify, fit and weld in the rear seat corner support that connects the DSE deep tub to the original rear seat structure. Modify, fit, and weld the upper support flange piece to the top of the deep tub. A flange will have to be added to the bend line marked out during removal. Weld any other remaining brackets that were removed from the stock tubs. (Figures 27 and 28)



**Figure 27**



**Figure 28**



#### IV. FINAL ASSEMBLY

1. Paint all bare metal to prevent the formation of rust.
2. Remove the rear seat cover and padding. Modify the of the seat frame to clear the DSE Deep 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. Modify rear interior trim panels as necessary to fit the DSE Deep Tubs.
4. 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@detroitsspeed.com](mailto:info@detroitsspeed.com) or 704.662.3272

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<b>Wheel &amp; Tire Fitment</b>	<b>Wheel Size</b>	<b>Tire Size</b>
<b>1964.5 - 1966 Mustang</b>	<b>17" x 10.5"</b>	<b>295/40R17</b>
<b>1964.5 - 1966 Mustang</b>	<b>18" x 10.5"</b>	<b>295/35R18</b>
<b>1964.5 - 1966 Mustang*</b>	<b>17" x 11"</b>	<b>315/35R17</b>
<b>1964.5 - 1966 Mustang*</b>	<b>18" x 11"</b>	<b>315/30R18</b>
<b>1967 - 1970 Mustang</b>	<b>17" x 12"</b>	<b>335/35R17</b>
<b>1967 - 1970 Mustang</b>	<b>18" x 12"</b>	<b>335/30R18</b>

**\*Framerail will need to be narrowed by 1" for this tire fitment.**