



**Detroit Speed, Inc.
Subframe Connector Kit
1969 - 1970 Mustang
P/N # 010108**

Item	Component	Quantity
1	Subframe Connector	2
2	Front Frame Rail Doubler LH	1
3	Front Frame Rail Doubler RH	1
4	Front Frame Rail Doubler Closeout	2
5	Seat Brace	2
6	Templates	2
7	Installation DVD	1
8	Instructions	1



Detroit Speed and Engineering, Inc. subframe connectors are designed to give maximum longitudinal and torsional stiffness by integrating the connector into both the front and rear frame rails and the floor pan. Once installed, the subframe connectors are not visible from the side view of the vehicle and do not compromise vehicle ground clearance.

Please read the instructions carefully and completely before beginning the installation. The DSE torque box kit must be installed before the DSE subframe connectors can be installed. An instructional DVD has also been included to aid in the installation of these subframe connectors. Always make sure to wear the appropriate safety equipment for the job and properly support the vehicle. 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 info@detroitsspeed.com.

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 or 704.662.3272

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1. Begin by properly supporting the vehicle under the rear axle and front frame to avoid tension in the body when installing the connectors.
2. Remove or reposition your fuel and brake lines to provide adequate clearance for placing the templates and cutting the floor. Remove both front seats and carpet.

Front Frame Rail Doubler Installation

1. Lightly sand and clean front frame rail surfaces from the original transmission cross-member back. Straighten any distorted surfaces in the front frame rails.
2. Position the floor cut-out template up against the back of the front frame rails as noted on the template. Use a straight edge off the sides of the original frame rails to center the template. Also, reference the rocker pinch weld flange to make sure the hole cutout is parallel with the vehicle and that the SF connector will mate up square with the torque box. Once the template is properly positioned trace the floor cut-out section to the floor pan. Remove the template and cut-out the marked sections on the floor pan. Remove any paint from around the cut out and the original front frame rails. (Figures 1 & 2)



Figure 1



Figure 2

3. Install the front frame rail doublers over the original frame rails. It may be necessary to tap them on with a rubber mallet. Top flanges of the doublers should seat against the bottom of the floor pan. The front flange of the doublers should seat against the original transmission cross-member surface.
4. Once the doublers are in the correct location scribe the end profile of the original frame rails on each doubler. Remove the doublers and cut them at these scribe lines. Layout plug weld holes on the side and bottom surfaces of the frame rail doublers. Go ahead and drill out these plug weld holes now and de-bur. Clean and spray the doublers and mounting areas on the car with etching primer in preparation for final installation.

5. Place the doublers back on the rails and fit firmly for plug welding. (Figure 3)



Figure 3

6. Center and position the frame rail doubler closeout on the end of the frame rail. The closeout surface should be seated against the doubler edge that was just trimmed in the previous step. The flanged surface of the closeout should be seated on the floor pan. With each closeout held in this correct position mark the bottom doubler surface on each closeout. Trim each closeout on these marks so the bottom edge of the closeout is flush with each bottom doubler surface. Trim any other excess side material from each closeout and drill some plug weld as well.
7. Position the properly trimmed doubler closeouts in place and tack weld to the open end of the doublers.
8. Finish weld and plug weld each assembly. Grind smooth as necessary. (Figure 4)



Figure 4

Subframe Connector Installation

1. Take a reference dimension underneath the car that can be referenced inside the car at the seat riser. Transfer the floor cut-out centerline made in the previous step to the seat riser and mark.
2. Align the seat riser cut template with the seat mounting holes on the car. Trace the cut-out section of the template onto the seat riser. Remove the template and cut-out the marked section of the riser. The seat risers will need to be cut back 2" past the doubler to fit the subframe connector. Save the piece you cut out as it will need to be welded back on later. Reference the template to mark and remove the original seat brace section. Fit the DSE seat brace to mate up with the original brace where you previously cut it. (Figure 5)



Figure 5

3. Slide the subframe connector down through the floor pan from inside the car. The end of the subframe connector with the radius should lay on the floor pan following the torque box profile. Outline the subframe connector at this point on the floor pan so it can be cut out to allow the subframe connector to sit directly on the torque box. (Figure 6)



Figure 6

4. The forward end of the subframe connector will need to be trimmed to seat against the front frame rail doubler closeout surfaces. Once each connector is trimmed and fit properly outline each connector on the floor pan to layout plug weld holes. Also trace around the area where the connector will weld to the torque box and trim the floor pan cutout so you can weld directly to the torque box. Remove the connectors and drill the plug weld holes in the floor pan. Remove paint from the connector weld area as well.

NOTE: If you have a vehicle with a DSE Mustang Quadra-Link or Leaf Spring Mini-Tub Kit already installed you need to be aware when cutting the floor pan out in front of the torque box to not cut into the torque box metal.

The connector is cut in the middle so the angle can be "fine-tuned" to each vehicle. Spray some etching primer on bare areas that will be covered after welding.

Final Installation

1. Place the connectors back into final position and tack into place. Move underneath the car to final stitch and plug weld the connectors. Grind welds smooth as required. Move back inside the car and finish weld the other half of the connectors to the floor pan and torque boxes. Be sure to weld up the center cut in the connector as well. Insert the DSE seat brace into position and final weld. (Figures 7-9)



Figure 7



Figure 8



Figure 9

2. Position the seat riser section cut-out earlier and trim to fit over the newly installed subframe connector. Once the seat riser piece is trimmed and fit properly it can be welded back into the seat riser. (Figure 10)



Figure 10

3. Paint any remaining bare metal and re-assemble the interior. Reposition any fluid lines that were moved earlier underneath the car.

If you have any questions, please call Detroit Speed, Inc. at (704) 662-3272.