Detroit Speed
Subframe Connector Kit
1964.5-1970 Mustang
P/N: 010105DS

The Detroit Speed 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.

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	Templates	2
6	Instructions	1

Please read the instructions carefully and completely before beginning the installation. The Detroit Speed torque box kit must be installed before the Detroit Speed subframe connectors can be installed. 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 tech@detroitspeed.com.

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

NOTE: There is an installation video available through the Detroit Speed website in the tech/install video shown here: detroitspeed.com/blog/post/detroit_speed_1964_5-70_mustang_subframe_connectors_install.

Installation Instructions:

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.

3. Cut out and position the seat riser template with the seat mounting holes on the car. Trace the cut-out section of the template onto the seat riser (Figure 1).

Figure 1 – Trace Template on Seat Riser

4. Drill out the spot welds along the cut-out section of the seat riser as well as the spot weld holding the seat riser support bracket in place on the front side of the seat riser.

Figure 2 – Drill-Out Spot Welds

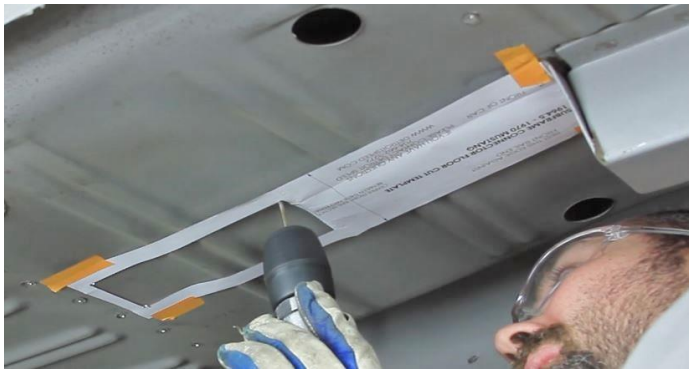
5. Cut out the section of the seat riser from the template. Pry back this section and remove it from the vehicle along with the support bracket (Figure 3). Save these components.

Figure 3 – Remove Seat Riser & Support Bracket

6. Cut out the section of the provided floor cut-out template and position it up against the back of the front frame rail underneath the vehicle as noted on the template. Use a straight edge off the pinch weld flange to center the template to make sure the cutout is parallel with the vehicle and that the subframe connector will mate up square with the torque box. (Figure 4).

Figure 4 – Locate Floor Cut-Out Template

7. Drill four pilot holes in the corners of the rectangular cut out in the template from underneath the vehicle. From inside the vehicle, connect the four pilot holes in the floor pan and remove this section from the vehicle (Figure 5).



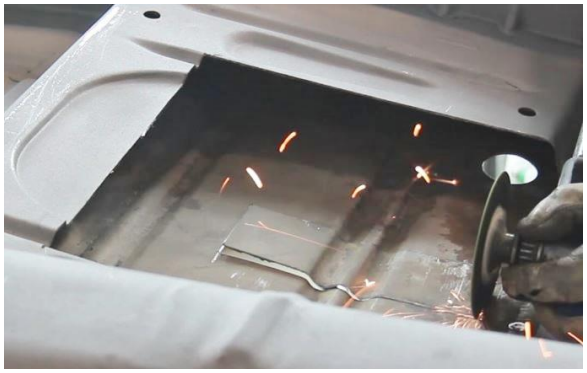


Figure 5 – Cut Floor Pan Front Frame Rail Doubler Installation

8. Measure the length of the original frame rails from underneath the vehicle from the transmission cross-member. Compare this measurement to the length of the front frame rail doublers as you may need to trim some material off the back (Figure 6).

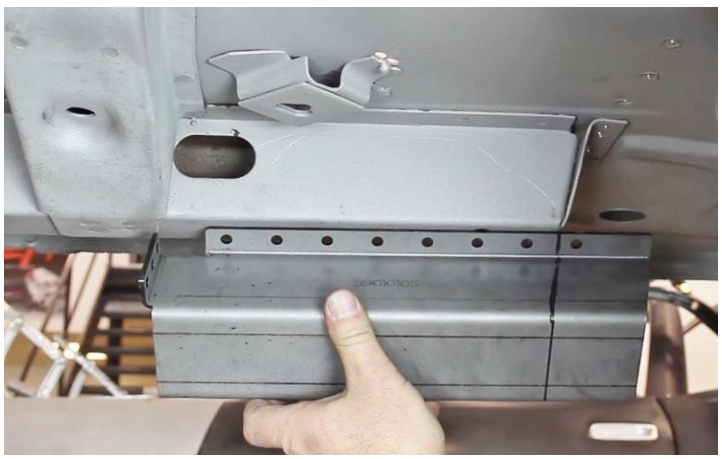


Figure 6 – Trim Frame Rail Doublers

9. Once the length has been verified, tap the front frame rail doublers over the original frame rails using a rubber hammer. The 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.

10. Plug weld the holes along the both sides of the frame rail doublers to the original frame rails as well as the bottom of the floor pan and the back surface of the transmission cross-member (Figure 7).

Figure 7 – Plug Weld Doublers

11. Center and position the frame rail doubler closeout on the end of the frame rail. The flanged surface of the closeout should be seated on the floor pan. Mark the bottom edge of the closeout and trim off the extra material so it sits flush against the edge of the frame rail. Grind the end of the frame rail smooth (Figure 8).

Figure 8 – Trim Frame Rail Doubler Closeout

12. Place the closeout against the end of the frame rail and plug weld it to the floor pan. Weld along the bottom edge of the closeout (Figure 9 on the next page). Grind all welds around the frame rail doublers for a smooth finish.

Figure 9 – Weld Closeout

Subframe Connector Installation

1. From inside the vehicle, slide the subframe connector down through the floor pan. The end of the subframe connector with the radius should lay on the floor pan following the profile of the torque box. Outline the subframe connector onto the floor pan so it can be cut out to allow the connector to sit directly on the torque box (Figure 10).

Figure 10 – Outline Connector

NOTE: If you are not installing the Detroit Speed QUADRALink or Leaf Spring Mini-Tub Kit, you will need the Detroit Speed Torque Box Kit (P/N: 010109). At this point you will need to install the torque boxes.

2. Cut out the floor pan only where you traced the subframe connector. **NOTE:** Be careful not to cut the torque box directly behind the floor pan sheet metal (Figure 11).

Figure 11 – Cut Floor Pan

3. Fit the subframe connector back into position. Make sure the connector sits directly on the front of the torque box as well as up against the end of the front frame rail doubler from underneath the vehicle (Figure 12). The forward end of the subframe connector will need to be trimmed to seat against the front frame rail doubler closeout surfaces. Trim the connector as needed for a good fit.

Figure 12 – Fit Subframe Connector

4. Once you have a good fit, tack weld the slot at the center of the connector where it is bent. This is left open in case you need to make an adjustment in the angle of the connector for fitment. Remove the connector from the vehicle and fully weld the slot in the connector (Figure 13 on the next page). Grind the weld on the connector smooth for a clean finish. Spray some etching primer on bare areas that will be covered after welding.

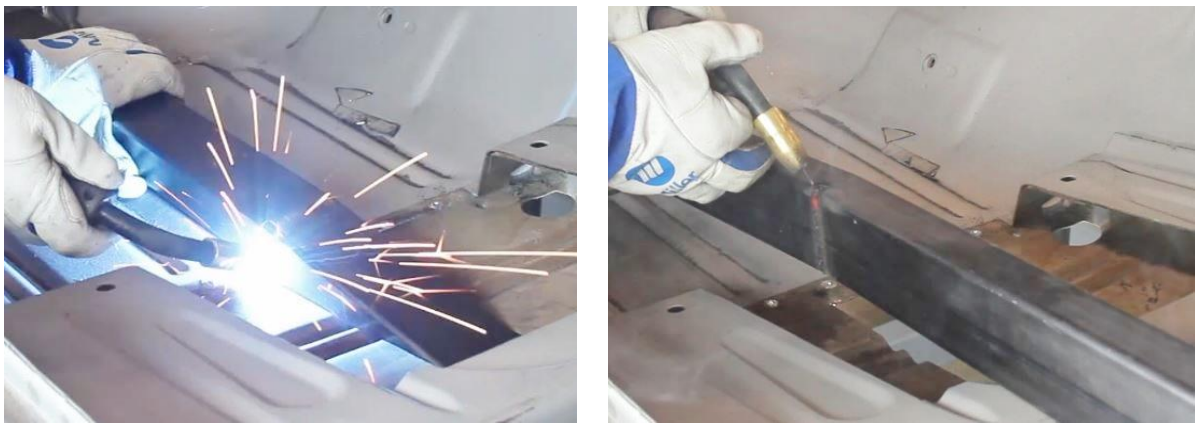


Figure 13 – Weld Adjustment Slot in Connector

5. Position the subframe connector back in place and tack weld a spot at the back to the torque box and then to the front frame rail doubler underneath the vehicle (Figure 14).

Figure 14 – Tack Weld Connector in Place

6. Fully weld the connector to the floor pan underneath the seat riser from inside the vehicle (Figure 15).

Figure 15 – Weld Connector Underneath Seat Riser

7. Fully weld the front of the subframe connector to the front frame rail doubler from underneath the vehicle (Figure 16). Stitch weld the connector to the floor pan and fully weld the end of the connector to the torque box. From underneath the vehicle, weld the connector to the floor pan where it passes through.

Figure 16 – Weld Front of Connector

8. Place the section of the seat riser that was removed earlier and lay it back into the vehicle on top of the subframe connector. Mark the seat riser where the subframe connector will need to pass through (Figure 17). Cut out the marked section of the seat riser.

Figure 17 – Cut-Out Seat Riser

9. Place the seat riser back into the vehicle and trim the slot for the subframe connector as needed. Once you have a good fit, tack weld the seat riser back into the vehicle. Weld the seat riser to the subframe connector where it passes through (Figure 18).

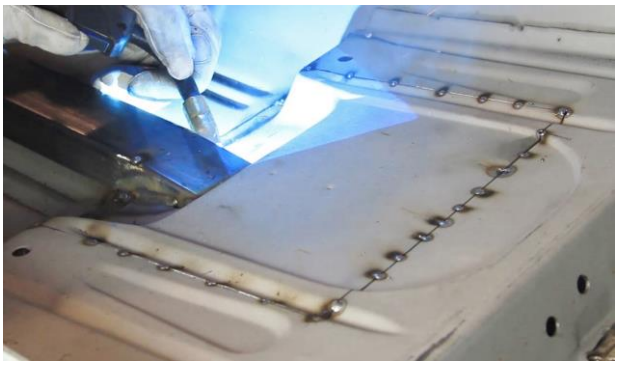


Figure 18 – Weld Seat Riser to Connector

10. Weld the seat riser to the subframe connector where it passes through. Finish weld the seat riser in place and grind the welds for a smooth finish (Figure 19).

Figure 19 – Grind Welds Smooth

11. Repeat this procedure for the opposite side of the vehicle to install the other Detroit Speed subframe connector. The installation is now complete (Figure 20).

Figure 20 – Finished Installation

12. 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 before or during the installation of this product, please contact Detroit Speed at tech@detroitspeed.com or 704.662.3272

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