

Detroit Speed, Inc.
Lower Link Drill Guide
1979-93 Mustang & 1979-86 Capri
P/N: 010117

The Detroit Speed lower link drill guide was designed to give you additional lower link adjustment holes for your 1979-93 Mustang or 1979-86 Capri. This guide will help to locate and drill two additional lower link hole options in the factory lower link torque box. This will give you adjustment to maintain your instant center when lowering the vehicle as well as adjustment for drag racing or autocross competitions.



IMPORTANT:

All work should be performed by a qualified technician. Please read the entire set of instructions 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. If you have any questions before, during, or after the installation, feel free to contact Detroit Speed by phone at (704) 662-3272 or by email at tech@detroitsspeed.com.

Installation:

1. On a smooth level surface, block both sides of the front tires. Loosen the rear lug nuts and jack up the rear of the vehicle. Support the car in the rear by securely placing jack stands under the frame and the rear axle. Remove the rear wheels.
2. Remove the rear exhaust system. Remove the clamps holding the parking brake cables to the bottom of the framerail (Figure 1).

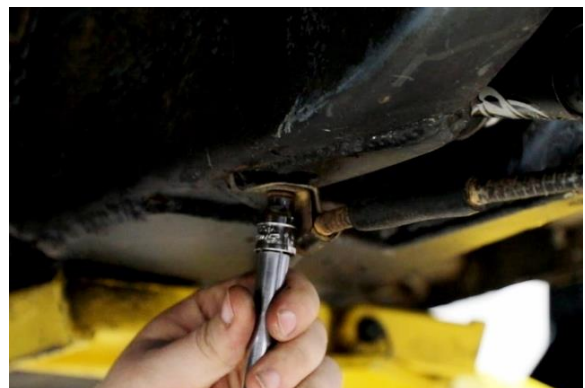


Figure 1 – Remove Exhaust and Parking Brake Clamps

3. Remove the lower link from the link pocket. **WARNING:** Only remove one of the lower links at a time (Figure 2).

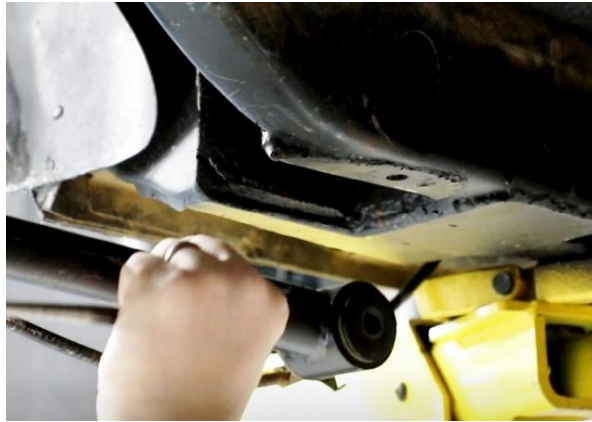


Figure 2 - Remove Lower Link

4. Place the drill guide into the slotted hole on the inboard side of the framerail. **NOTE:** You may need to clearance the tool as needed due to factory misalignment. Place the M12 lower link bolt that was removed into the center hole of the guide. Tighten the guide into place using your lower link M12 nut and washer (Figure 3).

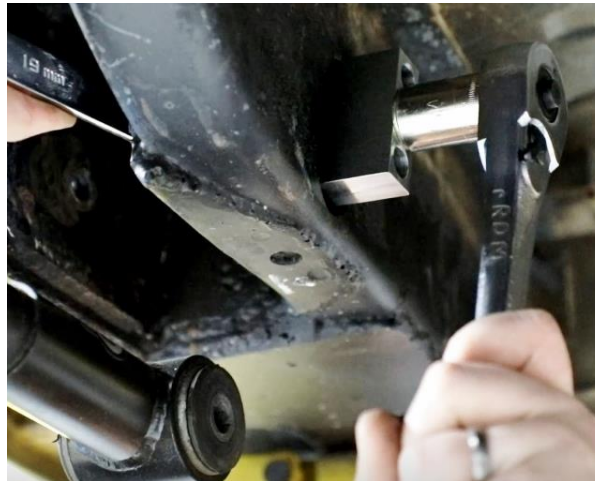


Figure 3 - Install Drill Fixture

5. Make sure the guide is perpendicular to the bottom side of the framerail using a level (Fig. 4).



Figure 4 – Level Drill Fixture

6. Use a $3/16$ " drill bit and spot drill a center location on the link pocket using the bottom hole in the guide. Then, use a $1/4$ " drill bit and drill a pilot hole through the inboard side of the link pocket leaving the guide in place (Figure 5).



Figure 5 – Drill Pilot Hole

7. Use a final drill size of $3/16$ " drill bit to drill out the bottom link hole on the inboard side of the lower link pocket (Figure 6).



Figure 6 – Drill Bottom Link Hole

8. Repeat the Steps 6 and 7 for the top hole in the drill guide (Figure 7).



Figure 7 - Drill Top Link Hole

9. Remove the drill guide from the lower link pocket. Place the guide into the lower link pocket where the link was installed. Due to vehicle variation, you may need to modify or grind only one side of the guide so it remains square and fits into the pocket (Figure 8).

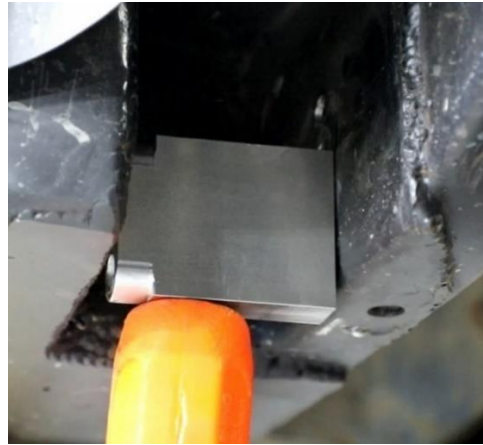


Figure 8 - Place Fixture in Link Pocket

10. Use a drift to line up the center hole of the drill guide with the factory lower link hole. Install the M12 lower link bolt through the factory lower link hole and the center hole in the drill guide (Figure 9).



Figure 9 - Install Drill Fixture

11. Use a drift to align the inboard lower link hole that was just drilled in the previous step with the bottom hole in the guide. Tighten the M12 hardware to keep the guide from moving (Fig. 10).



Figure 10 - Align Drill Guide

12. Place the drift in the top hole of the drill guide. Drill the outboard side of the link pocket using the bottom hole in the guide using a $31/64$ " drill bit. Use cutting fluid and slowly drill through the link pocket (Fig. 11). **NOTE:** Due to vehicle variation and the drill bit being used, you may need to clearance the framerail slot to allow your drill chuck to go deep enough to drill the 2nd hole.



Figure 11 - Drill Bottom Link Hole

13. Place the drift in the bottom link hole and repeat the same procedure for the top hole in the drill guide (Figure 12).



Figure 12 - Drill Top Link Hole

14. Remove the drill guide from the lower link pocket. Place the M12 flanged bolt through the inboard side of the top hole in the lower link pocket. Scribe the top of the flanged head onto the link pocket (Figure 13).



Figure 13 – Scribe Reference Location

15. Grind away the framerail section using the scribed line for a reference. Remove this layer of sheet metal so the head of the bolt will sit flush against the link pocket (Figure 14).



Figure 14 – Grind Bolt Clearance

16. Re-install the lower link into the pocket using the link hole of your choice (Figure 15 & 16 on page 7). Do not torque the lower link at this time. Repeat this procedure for the other side of the vehicle.

NOTE: Adding the Detroit Speed Rear Coilover Kit (PN: 042442) will give you the lower link adjustment options at the axle side (Figure 15 & 17). Adding the Detroit Speed Exo-Brace Kit (PN: 010115) will give you the upper link adjustment options on the chassis side (Fig. 15 & 18).

17. Re-install the park brake cable clamps back into the framerail and tighten.
18. Re-install the rear wheels and lower the vehicle to the ground. Torque the rear wheels to the manufacturer's recommended torque specifications. Settle the suspension by bouncing the vehicle several times and then torque all of the rear suspension pivot bolts to the factory recommended specifications (Detroit Speed – 75 ft-lbs.). Installation is now complete.

If you have any questions before or during the installation of this product please contact Detroit Speed at tech@detroitsspeed.com or 704.662.3272

NOTE: The measurements listed in the tables below were derived from actual measurements of the DSE test car. 4-13/16" center of axle tube to the bottom of the frame rail, CG is 19" off the ground. Entries in **bold** are recommended starting locations.

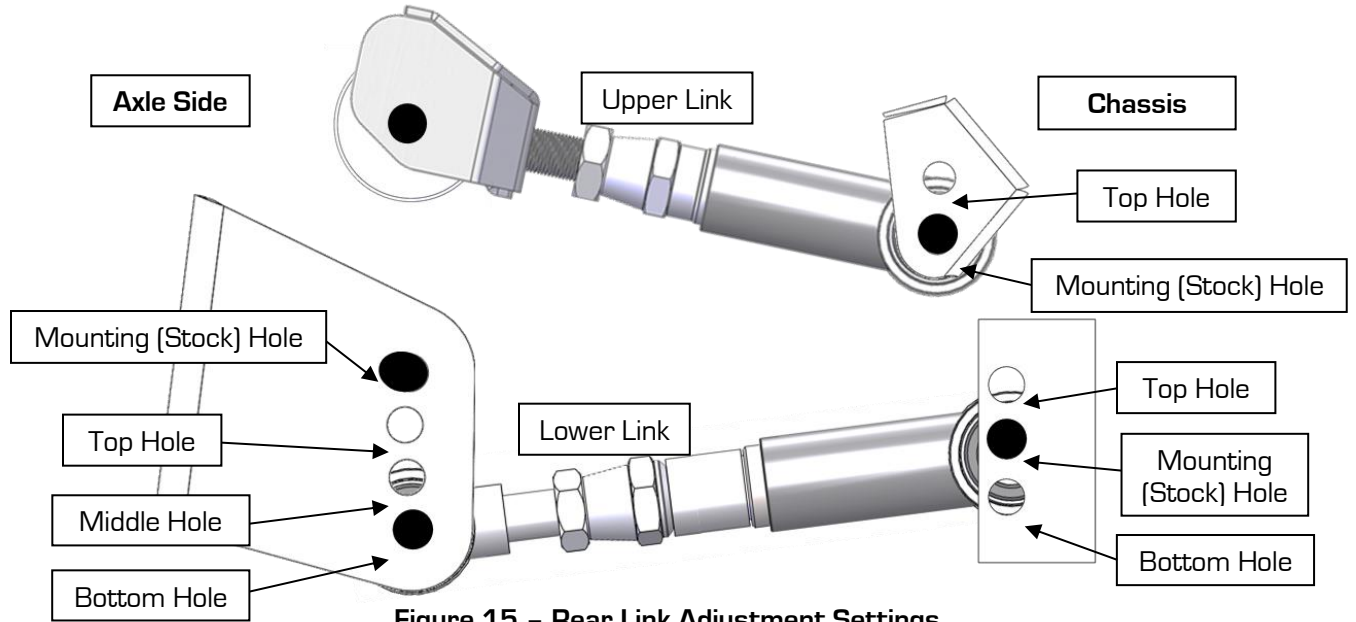


Figure 15 - Rear Link Adjustment Settings

NOTE: Instant center numbers are expressed as distance forward of rear axle centerline, then height above ground level.

Lower Link Axle Side Position	Instant Center	Anti-Squat
Stock Hole	41" / 8.5"	108%
Top Hole	36.7" / 9.5"	138%
Middle Hole	33.3" / 10.2"	162%
Bottom Hole	31" / 10.6"	182%

Figure 23 - Lower Link Adjustment Settings Using Coilover Kit

Upper Link Chassis Side in Stock Hole			
Lower Link Chassis Side Position	Lower Link Axle Side Position	Instant Center	Anti-Squat
Top Hole	Stock Hole	33.3" / 10.1"	162%
	Top Hole	30.5" / 10.7"	186%
	Middle Hole	28.5" / 11"	206%
	Bottom Hole	27" / 11.4"	223%
Middle (Stock) Hole	Stock Hole	41" / 8.5"	108%
	Top Hole	36.7" / 9.5"	138%
	Middle Hole	33.3" / 10.2"	162%
	Bottom Hole	31" / 10.6"	182%
Bottom Hole	Stock Hole	56.3" / 5.7"	54%
	Top Hole	46" / 7.7"	89%
	Middle Hole	40" / 8.9"	117%
	Bottom Hole	36.2" / 9.6"	141%

Figure 24 - Lower Link Adjustment Settings Using the Coilover Kit & Drill Guide.

Upper Link Chassis Side in Top Hole			
Lower Link Chassis Side Position	Lower Link Axle Side Position	Instant Center	Anti-Squat
Top Hole	Stock Hole	83.1" / 11.4"	73%
	Top Hole	60.5" / 12.8"	113%
	Middle Hole	49.5" / 13.5"	145%
	Bottom Hole	43" / 13.9"	172%
Middle (Stock) Hole	Stock Hole	173" / 5.8"	18%
	Top Hole	91.9" / 10.9"	63%
	Middle Hole	66.4" / 12.4"	100%
	Bottom Hole	54" / 13.2"	130%
Bottom Hole	Stock Hole	N/A	N/A
	Top Hole	186" / 5"	14%
	Middle Hole	99.7" / 10.4"	55%
	Bottom Hole	72" / 12.1"	89%

Figure 25 - Upper & Lower Link Adjustment Settings Using the Drill Guide, Coilover Kit & Exo-Brace Kit

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