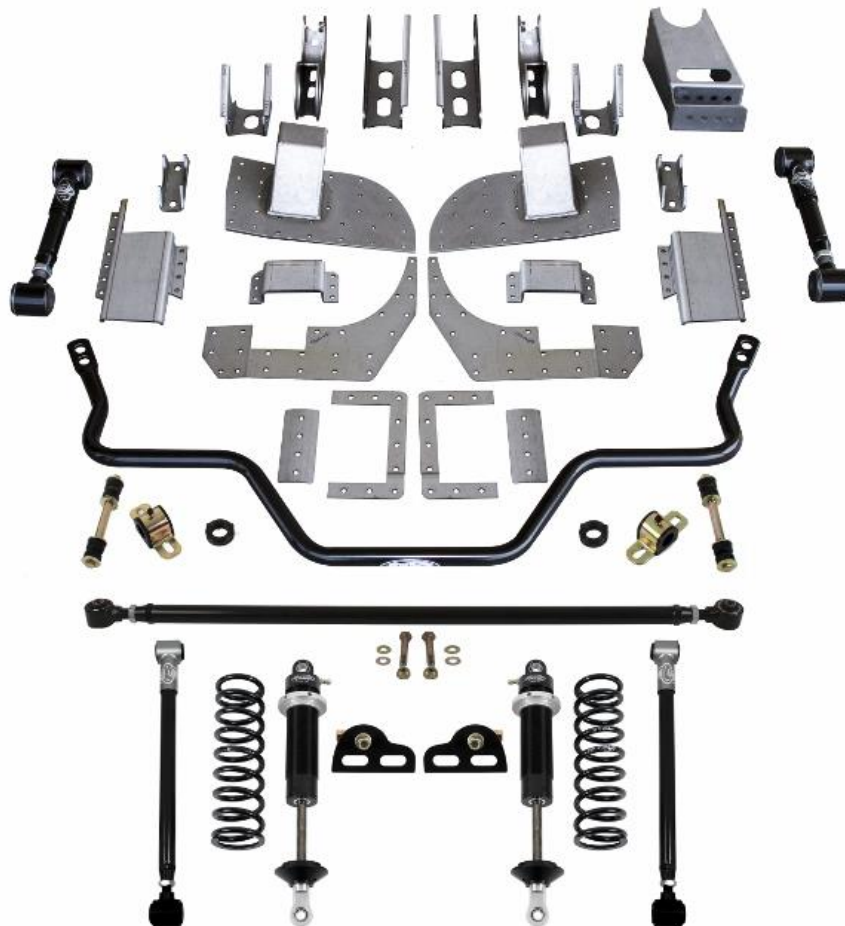


Detroit Speed
QUADRALink Rear Suspension Kit [3" Axle Tubes]
1982-92 Camaro/Firebird
P/N: 041722DS

The Detroit Speed QUADRALink Kit, eliminates the factory torque arm configuration. It features no-compromise suspension geometry and all links are independently adjustable. The kit adds upper link mounts to stock unibody structure and lower links are re-located on the axle using adjustable adapter brackets. The new Detroit Speed adjustable track bar features cross-axis pivot bushings. Upper and lower links features DSE "Swivel-Link" technology. This kit is designed to work with 3" axle tubes and includes Detroit Speed Rear Sway Bar, Coilover Shocks and springs.



Scan the QR code to guide you through the step-by-step installation video of the 1982-92 Camaro/Firebird DSE QUADRALink Rear Suspension Kit installation.

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

Item	Part Description	Quantity
1	Upper Link Body Mount, LH and RH	2
2	Upper Link Body Mount Inner Brace, LH and RH	2
3	Upper Link Body Mount Lower Doubler, LH and RH	2
4	Upper Link Body Mount Close-out, LH and RH	2
5	Upper Link Body Mount Tunnel Doubler	2
6	Upper Link Body Mount Outer Brace	2
7	Upper Link Axle Bracket (3" Tube)	2
8	Lower Link Axle Bracket, LH and RH (3" Tube)	2
9	Track Bar Axle Bracket Assembly	1
10	Lower Coilover Bracket Assembly, LH and RH (3" Tube)	2
11	Upper Rear Coilover Mount Assembly, LH and RH	2
12	1" Tubular Rear Sway Bar Assembly	1
13	Rear Sway Bar Axle Clamp, 3"	2
14	Upper Link Complete Assembly	2
15	Rear Lower Swivel Link Kit	1
16	Adjustable Track Bar Kit	1
17	Coilover Hardware	1
18	Rear Sway Bar Hardware	1
19	QUADRAlink Hardware	1
20	Axle Bracket Weld/Fab Spacers	2
21	Floor Cut Template	1
22	Instructions	1

Hardware Checklist – DSE Rear QUADRAlink Kit			
Part Number	Description	Quantity	Check
9304208	Track Bar Hardware Bag	1	
980093FS	M12-1.75 Stepped Shoulder Hex Head Bolt	2	
960081FS	M12-1.75 Flanged Nylock Nut	2	
970026FS	M12 Flat Washer	2	
9304203	Rear Swivel Link Hardware Bag	1	
980049FS	M12-1.75 x 90mm Hex Head Bolt	4	
960055FS	M12-1.75 Nylock Nut	4	
970026FS	M12 Flat Washer	8	
9304219	QUADRAlink Hardware Bag	1	
980082FS	M12-1.75 x 100mm Hex Head Bolt	2	
980049FS	M12-1.75 x 90mm Hex Head Bolt	2	
960055FS	M12-1.75 Nylock Nut	4	
970026FS	M12 Flat Washer	8	

Part Number	Description	Quantity	Check
9304220	Coilover Hardware Bag	1	
980026FS	1/2"-20 x 2-1/2" L Hex Head Bolt	2	
980038FS	1/2"-20 x 2-1/4" L Hex Head Bolt	2	
960004FS	1/2"-20 Nylock Nut	4	
960087FS	1/2"-20 Nylock Jam Nut	2	
970037FS	1/2" SAE Flat Washer	4	
970017FS	1/2" SAE Extra Thick Flat Washer	2	
99030321	3/4" OD x 1/2" ID x 5/8" L Steel Bushing	4	
031060	Detroit Speed Spanner Tool	1	
9304221	Rear Sway Bar Hardware Bag	1	
99030272	1" OD Polyurethane Sway Bar Bushing, Black	2	
99040196	Sway Bar Frame Bushing Bracket	2	
9304136	1" Double Split Lock Collar Assembly	2	
980051FS	7/16"-20 x 1" L Hex Head Bolt	4	
970042FS	7/16" SAE Flat Washer	8	
960050FS	7/16"-20 Nylock Nut	4	
99030189	Polyurethane Sway Bar End Link Grommets,	8	
99030190	Sway Bar End Link Stamped Washers	8	
99030191	Sway Bar End Link Sleeve Spacer, 2.9"	2	
980044FS	3/8"-16 x 7" L Hex Head Bolt	2	
960053FS	3/8"-16 Nylock Nut	2	
99040009	Super Grease	1	

Fastener Torque Specifications	
Application	Torque (ft./lbs.)
Swivel-Link and Track Bar Bolts	75
Swivel-Link and Track Bar Jam Nuts	50
Sway Bar Mounting Bolts	45
Split Lock Collar*	15
Upper Coilover Bracket Mounting Nuts	50
Upper and Lower Shock Mounting Bolts	60

*Blue Loctite 242

1. To begin installation, chock the front wheels and loosen the rear lug nuts. Raise and support the vehicle with jack stands under the frame. Make sure that the vehicle is level and well supported. Remove the rear wheels.
2. Disconnect the negative battery cable. Remove the rear suspension and axle. Remove the fuel tank and lines. Remove the seats, carpet and padding, rear interior quarter trim panels. Any other interior panels, headliner, door panels, etc., should be removed or masked well to protect them from grinding and welding sparks.
3. Cut out the provided floor cut template and position as shown below (Figure 1 on the next page). The top flange of the template should be 8-5/8" from the edge of the trunk surface. The inboard cut line of the hole should be 6-1/2" when measuring straight over to the inner quarter/wheel tub brace. **NOTE:** The floor has already been cut out in Figure 1 to better define the template position. This template can be used for both sides of the vehicle by flipping the template over.

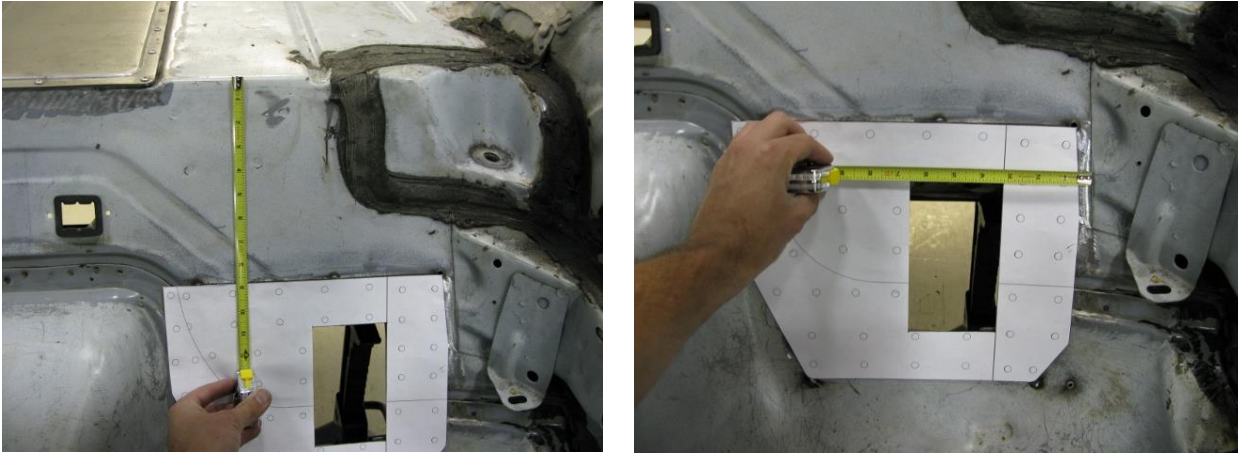


Figure 1 – Driver Side Shown

4. Mark the cut area from the template with a marker or scribe and remove the template. Remove this section of the floor pan with a cut off wheel. Once the hole is cut, the outermost cut line should be trimmed until the surface is flush with the frame rail (Figure 2). **NOTE:** The frame rail is on a slight angle so this side of the opening will not be square with the other three sides. Final trimming and alignment may be necessary due to variations in original vehicles.



Figure 2 – Trim to Match Frame Rail

5. Position the driver side upper link body mount in place with the top flange of the plate measuring 8-5/8" from the edge of the trunk floor as the hole template. **NOTE:** This measurement should be taken at **multiple** spots to make sure the plate is level in the structure of the car. It is important to have the upper link body mount square in the vehicle in order to keep the upper links as straight as possible.
6. The plate should also be pushed outboard against the frame rail (this sets the appropriate span). When viewing from the bottom, the flange that hangs through the floor will not contact the entire length of the frame rail due to the angle of the frame rail (Figure 3 on the next page). Once the plate position is finalized and welded, this flange can be hammered or clamped over to the rail and welded in place.



Figure 3 – Contact Flange

7. With the plate properly located, drill and install a few Cleco fasteners or sheet metal screws to hold it in place (Figure 4). Transfer the open hole locations to the sheet metal. Remove the plate and grind the hole locations to remove any paint for a clean plug weld. Also grind around the perimeter around the plate for welding.

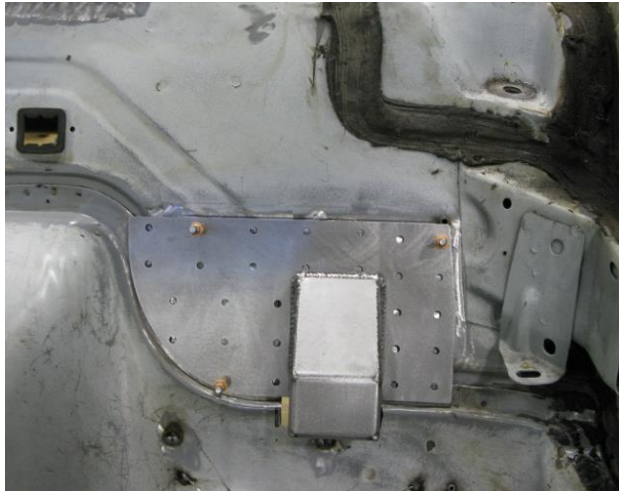


Figure 4 – Upper Link Body Mount Located

8. Install several sheet metal screws into the plate and remove any Cleco fasteners. Plug weld the remaining open holes as well as tack weld several places around the perimeter of the plate to the vehicle (Figure 5). Remove all sheet metal screws and plug weld the remaining holes in the plate. **NOTE:** You may need to hammer the plate to fit tightly against the vehicle on some areas due to sheet metal variations in original vehicles (Figure 6).



Figure 5 – Plug and Tack Weld in Place



Figure 6 – Hammer Plate

9. Once the plate is plug welded, stitch weld around the perimeter of the plate (Figure 7). Position the lower doubler plate around the bottom side of the upper link body mount. With the plate located around the upper link mount, transfer several plug weld holes to the sheet metal of the vehicle. Remove the lower plate and grind the hole locations clean for plug welding.

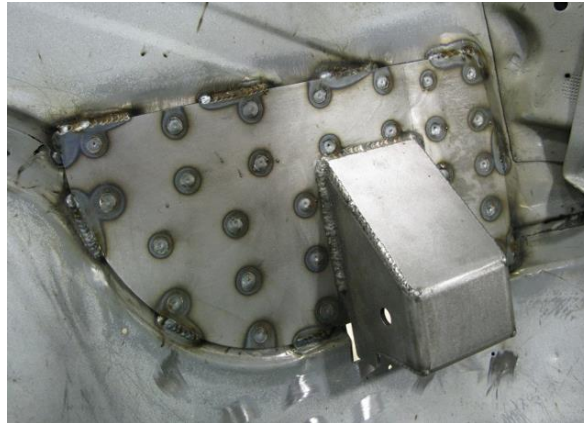


Figure 7 – Stitch Weld the Plate

10. Re-position the lower plate back in the correct location and use it as a template to drill and install Cleco fastener or sheet metal screw to hold the plate to the vehicle. Drill a few more holes and install sheet metal screws. Plug weld several open holes to the vehicle and also tack weld the perimeter of the lower doubler plate to the vehicle. (Figure 8).

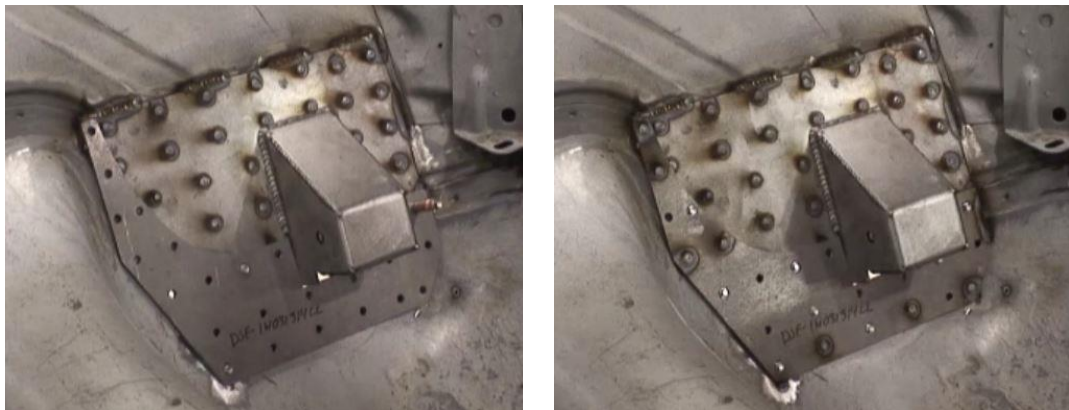


Figure 8 – Plug Weld Lower Doubler Plate

11. Remove all sheet metal screws and plug weld the remaining holes. Stitch weld around the perimeter of the lower doubler plate to the vehicle (Figure 9).



Figure 9 – Finish Weld Lower Doubler Plate

12. Fit the upper link body mount inner brace and the tunnel doubler plate to the vehicle. The inner brace should be located tightly against the upper link body mount allowing the tunnel doubler plate to slide between the tunnel and the inner brace (Figure 10). Due to vehicle variation, you may have to grind the inboard side of the inner brace to fit against the tunnel area.



Figure 10 – Fit the Inner Brace and Tunnel Doubler

13. Grind the area around where the tunnel doubler will contact the tunnel. Spray the inside of the inner brace and the area on the upper link body mount where the inner brace will cover with primer so no rust can form between these two surfaces once finish welded.
14. With the inner brace and the tunnel doubler plate in the correct position, trace the perimeter of the tunnel doubler to the tunnel using a marker or a scribe. Remove the inner brace to finish marking the tunnel doubler to the tunnel and also mark the plug weld locations to the tunnel.
15. Line the tunnel doubler up on your mark and tack weld it in place to the tunnel. Re-position the inner brace to make sure the inboard side will line up against the tunnel doubler. Once the location has been correctly verified, remove the inner brace and stitch weld the tunnel doubler to the tunnel (Figure 11).

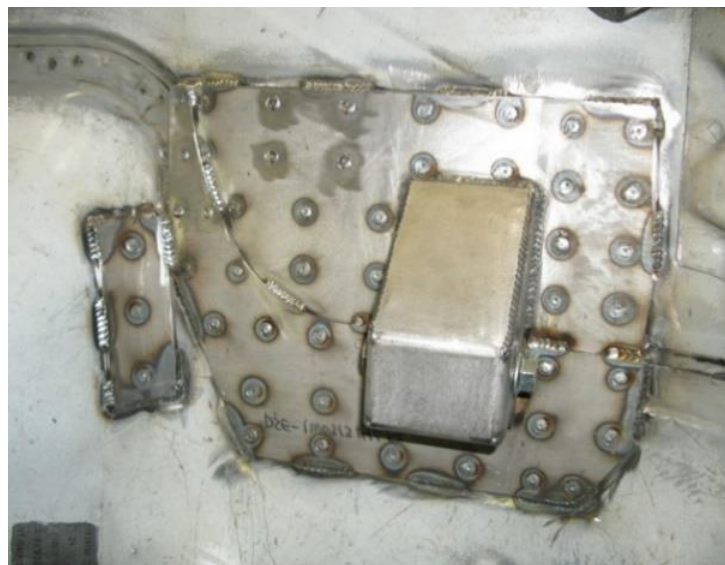


Figure 11 – Stitch Weld Tunnel Doubler

16. Position the inner brace against the upper link body mount. Using the plug weld holes in the inner brace, drill two holes and install sheet metal screws to hold it in place. Tack weld the inner brace to the vehicle. Remove the sheet metal screws and plug weld all holes. Stitch weld around the perimeter of the inner brace to the vehicle (Figure 12).



Figure 12 – Inner Brace

17. Spray the inside of the outer brace along with the area of the upper link body mount that will be covered by the outer brace with primer. Position the outer brace tightly against the upper link mount and line the plug weld tabs so they line up with the inner brace. Tack weld the outer brace to the vehicle (Figure 13).

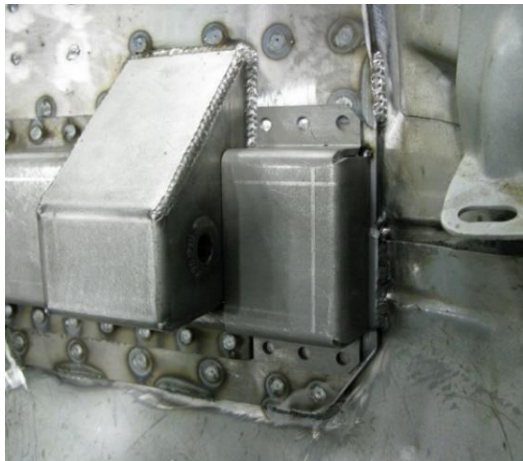


Figure 13 – Outer Brace

18. Plug weld all outer brace holes to the vehicle and stitch weld around the outside perimeter. Grind all welds smooth (Figure 14).



Figure 14 – LH Upper Link Body Mount

19. Move to the backside of the upper link body mount to weld the flange against the frame rail. Use a clamp to close the gap between the frame rail and the flange (Figure 15). Tack weld the flange to the frame rail and remove the clamp.



Figure 15 - Clamp Flange

20. Grind the floor pan around the upper link pocket for the upper link body mount close-out. Place the close-out around the inboard side of the upper link mount and tack weld in place using two of the plug weld holes (Figure 16).



Figure 16 - Plug Weld Close-Out

21. Plug weld all holes in the close-out to the vehicle. Stitch weld the flange to the frame rail. Then weld the break at the flange of the upper link body mount to the rest of the bracket (Figure 17). Grind all weld marks for a clean finish.



Figure 17 - Finish Weld Flange & Close-Out

22. Repeat Steps 3 through 21 for the passenger side of the vehicle. If you have purchased a DSE rear axle with the axle brackets already installed, proceed to Step 36.
23. Next, install the axle brackets. It is recommended that the axle brackets are installed when the axle tube flanges are not on the axle. If a new axle is being installed or the existing axle is being narrowed, install the axle brackets first, and then install the flanges. If the flanges are not removed, cut the axle brackets apart and weld them back together around the axle tube.
24. It is important that the correct width for the Swivel-Link bushings is maintained on the axle brackets when they are welded; therefore, the axle bracket fab spacers provided with the kit should be installed in the brackets during welding.
25. Position the axle brackets on the axle tubes (Figure 47). The track bar axle bracket attaches to the left lower link and lower shock mount axle brackets and will be installed later. **NOTE:** Detroit Speed offers a pinion centering tool (PN: 070202DS) that will be helpful in placing your axle brackets in the correct location on your axle tube (Figure 18). DSE recommends using a 1/2" pinion offset (axle/car centerline). Dimensions shown are symmetric about the axle/car centerline (Figure 47).

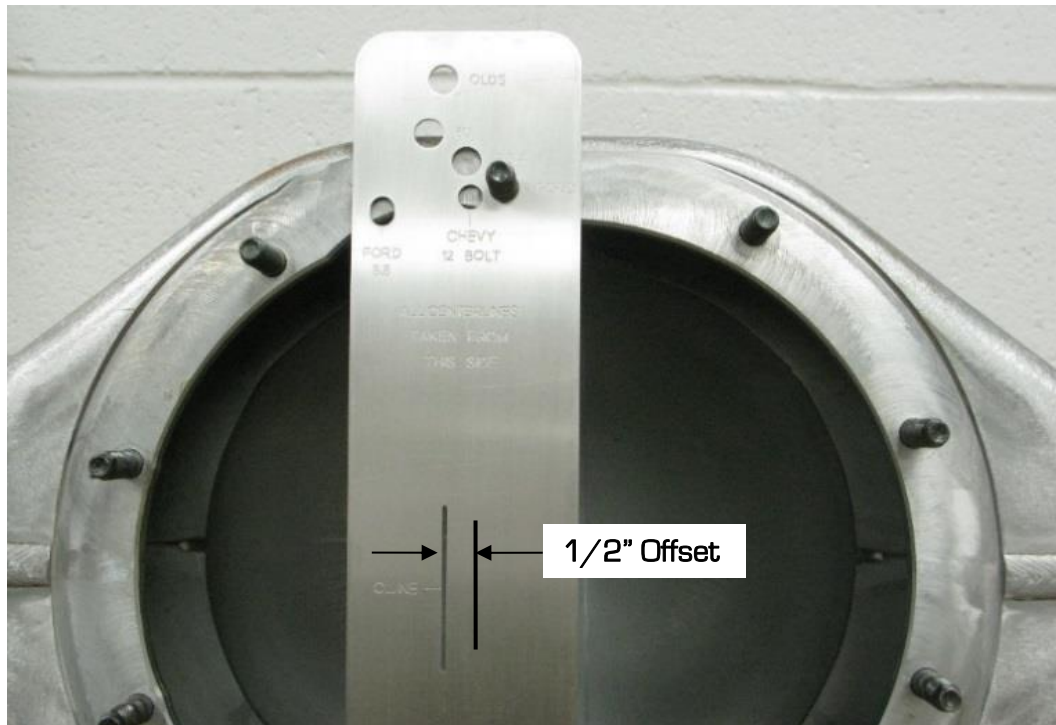


Figure 18 - 1/2" Pinion Offset

26. To install the upper link axle brackets, first set the rear axle on jack stands. Using a smart level on the center section mounting flange, rotate the housing so the angle is set at -4°, pointing towards the ground (Figure 47). Once the pinion angle is set, using a jack stand, shim/clamp the housing in place so it cannot rotate.
27. Position the upper link axle brackets on the axle tubes (Figure 47). Mark the area where the upper link brackets will be welded.
28. With the rear axle in position and the pinion angle still set to -4°, use a square or smart level and rotate the upper link axle brackets so that the back side is perpendicular to the ground (Figure 19 on the next page).

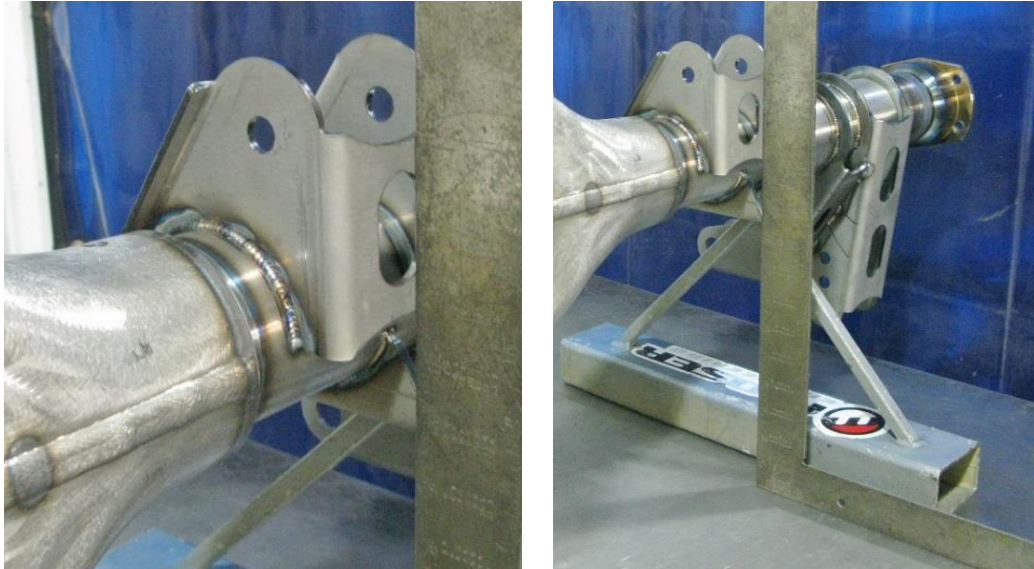


Figure 19 – Position Upper Link Axle Brackets

29. Tack weld the upper link axle brackets in place, and then verify that they are all positioned correctly. Weld the brackets securely in place (Figure 20).

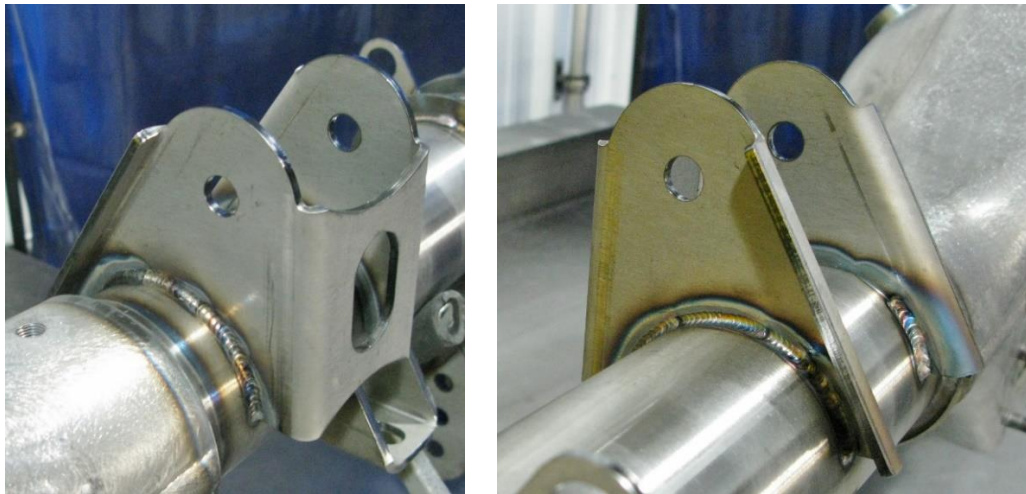


Figure 20 – Finish Weld Upper Link Axle Brackets

30. Next weld on the rear sway bar axle clamps to the bottom side of the axle tubes. With the housing still set to the -4° pinion angle, the bottom of the sway bar brackets should be parallel with the ground. (Figure 21).

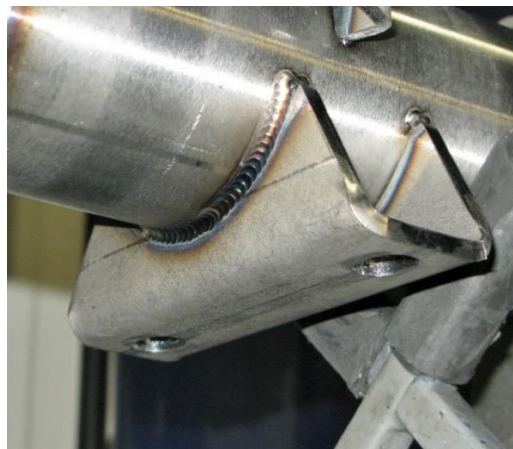


Figure 21 – Weld on Sway Bar Bracket

31. Next slide the lower shock bracket on the axle tube followed by the lower link axle bracket. There is a 1/2" hole in the brackets so you can align the two brackets together with a 1/2" bolt or drill bit (Figure 22). Rotate the brackets so that the lower link bracket adjusting holes are on the same centerline as the axle tube (Figure 47). The bottom surface of the lower shock bracket should also be parallel with the ground. Clamp the two brackets together and tack weld the brackets to the axle tube. **NOTE:** Detroit Speed recommends tack welding the two brackets together at the seam, so they don't move during final welding.

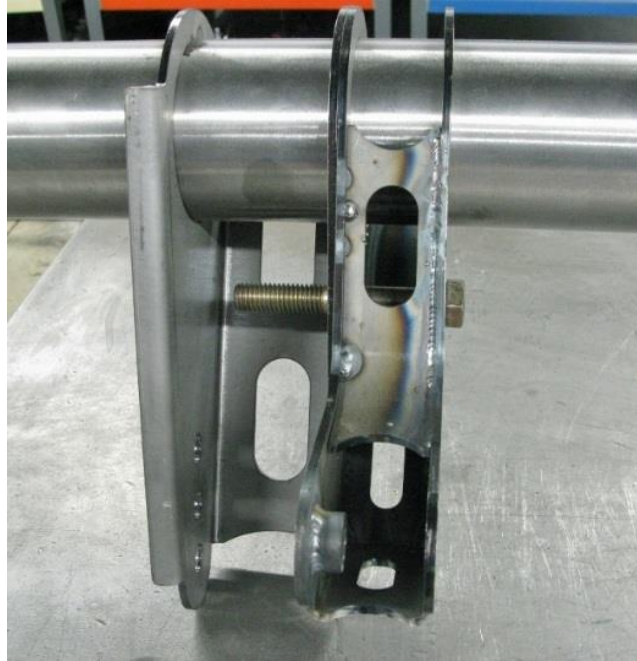


Figure 22 – Align Lower Link and Shock Brackets (RH Side)

32. Verify the brackets are in the correct location and finish weld the brackets around the axle tubes as much as possible. Weld the inside lower link bracket to the outside of the lower shock bracket. Weld on the provided brake line tabs to the inside flange of the lower shock bracket that works best for your application. (Figure 23). Repeat steps 31 & 32 on the opposite side of the axle.

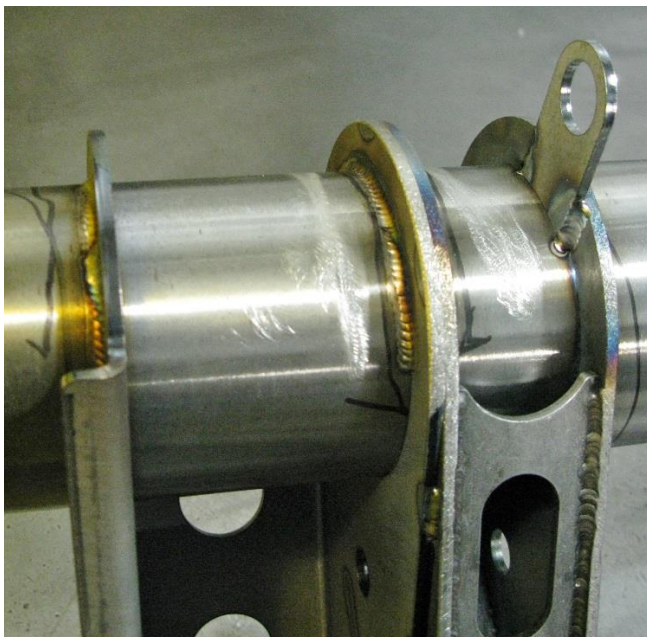


Figure 23 – Weld Brake Link Tabs

33. The track bar axle bracket mounts on the rear of the left hand side lower link and lower shock bracket (Figure 47). The bracket is notched to fit over and around the brackets (Figure 24). The surface with the four adjustment holes will be perpendicular to the ground and square to the axle tube (Figure 47). **NOTE:** You may need to grind the notches on the front edge of the track bar bracket to fit around the weld on the lower link and shock brackets at the axle tube.



Figure 24 - Track Bar Axle Bracket

34. Tack weld the track bar axle bracket in place, verify its position. Finish weld the track bar bracket around the axle tube and to the lower link and shock axle brackets (Figure 25).



Figure 25 - Finish Weld Track Bar Axle Bracket

35. Once all of the axle brackets are fully welded in place, remove the spacers and check the axle for straightness (Figure 26). At this point the fabrication work is complete. If you have removed your axle tube flanges, send the housing to a qualified shop to have the ends welded (if necessary). Mocking up the vehicle before painting all of the components is recommended. Mock up includes installing all of the suspension components. **NOTE:** For the following Detroit Speed instruction photos, the suspension components have already been mocked-up and painted.

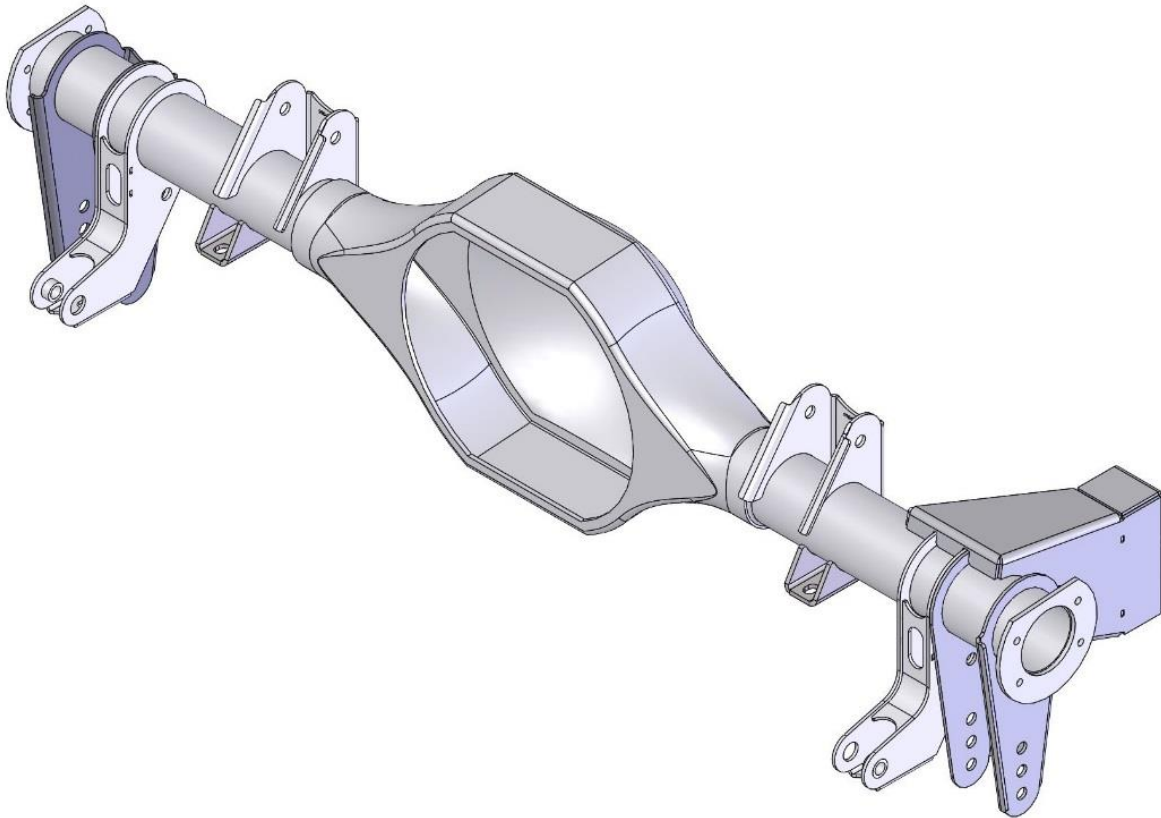


Figure 26 – Welded Axle Brackets.
NOTE: Ford 9" housing is not provided

36. Assemble the coilover shock and spring at this time.

For the base coilover shocks, remove the upper spring seat by first removing the snap ring using a set of snap ring pliers (Figure 27). Once the upper spring seat is removed you can install the spring over the end of the shocks. With the spring in place, install the upper spring seat along with the snap ring (Figure 28).



Figure 27 – Removing the Snap Ring



Figure 28 – Snap Ring Installed

For the adjustable coilover shocks, remove the upper spring seat from the retaining ring using a rubber hammer and moving it down off the upper shock mount (Figure 29). Remove the retaining ring from the upper shock mount and pass the upper spring seat over the upper shock mount (Figure 30). Slide the coilover spring over the top of the upper shock mount. Install the upper spring seat back over the top of the upper shock mount and re-install the retaining ring back onto the upper shock mount. Press the upper spring seat up onto the retaining ring so it locks in place.



Figure 29 – Remove Upper Spring Seat



Figure 30 – Spring Seat & Retaining Ring

37. Once the coilover shock and spring is assembled, install the upper coilover mount on the coilover shock. Use the provided $\frac{1}{2}$ "-20 x 2- $\frac{1}{2}$ " L hex head bolt and the $\frac{3}{4}$ " x $\frac{1}{2}$ " L steel bushing. Make sure the bolt head is facing in the correct direction and slide it through the upper coilover mount and through the body side upper shock eyelet. (Figure 31). **NOTE:** The shock monoball should be in between the welded tube on the bracketry and the floating spacer.



Figure 31 – Pre-assemble Shock

38. Using anti-seize on the thread, install the $\frac{1}{2}$ "-20 Nylock nut and washer onto the $\frac{1}{2}$ "-20 upper shock bolt. We do recommend that you torque the upper shock bolt at this time to 60 ft/lbs. as you may not be able to access it once it is installed in the vehicle. **NOTE:** If you are using the remote canister double adjustable coilover shocks, make sure the hose is facing the flat side of the upper coilover mount so the hose will point towards the rear of the vehicle.

39.Repeat steps 36 through 38 for the other coilover shock.

40.Determine the LH and RH upper coilover mount and install the correct assembly into the vehicle. Install the coilover shock and mount assembly into the vehicle through the factory shock location (Figure 32). The upper coilover mount should fit the contour of the vehicle in front of the factory coil spring perch. From the inside of the vehicle, thread the 1/2"-20 Nylock nut and washer onto the upper coilover mount and torque the nut to 50 ft/lbs. Repeat this step for the opposite side of the vehicle.



Figure 32 - Remote Canister Shock Shown

41.Install the upper link assembly into the upper link mount body mount using the provided M12-1.75 x 100mm Hex Head Bolts, Nylock nuts and washers. **NOTE:** For mock up, the Swivel-Link hardware does not need to be tightened yet. Install the lower link assembly into the vehicle at the factory trailing arm mount using the provided M12-1.75 x 90mm Hex Head Bolts, Nylock nuts and washers. All body side Swivel-Link bolts can be installed from the outboard side so the Nylock nuts are towards the inside of the vehicle (Fig. 33).



Figure 33 - Lower Swivel Link Body Mount

42.Position the rear axle in place under the car and install the links to the rear axle. The upper and lower link assemblies will be attached to the upper and lower link axle brackets using the provided M12-1.75 x 90mm Hex Head Bolts, Nylock nuts and washers. See the side view geometry diagram for information on link mounting positions (Figure 46).

43. The lower link axle bolt should be installed from the center of the vehicle so the Nylock nut is on the outside of the bracket. If the bolt is installed in the other direction, you may not be able to remove the bolt to make an adjustment with the wheel and tire installed (Figure 34).



Figure 34 – Lower Swivel Link Axle Mount

44. With all of the coilover shock mounts installed and the coilover shocks mounted at the upper coilover mount, jack up the rear axle of the vehicle to line up the coilover shocks with the holes in the lower coilover shock mount. **CAUTION:** Make sure the coilover shocks are out of the way when jacking up the rear axle.
45. Attach the lower shock eyelet to the lower coilover mount using the provided 1/2"-20 x 2-1/4" L Hex Head Bolt with the 3/4" x 1/2" L bushing. Use a floor jack to position the rear-end height so the bolts line up. The bolt should go in from the inboard side of the lower coilover mount and use the 1/2" Nylock jam nut and washer using anti-seize on the threads of the bolt. The shock monoball should be in between the welded tube on the bracketry and the floating spacer. Repeat for the opposite side of the vehicle. **NOTE:** If you are using the double adjustable shocks, keep the adjustment window facing forward of the axle for adjustment (Figure 35). Torque the lower 1/2"-20 shock bolts to 60 ft/lbs.



Figure 35 – Shock Adjustment Window

46. Thread the coilover adjusting nut down until there is some tension on the spring. Once tension is reached, turn the nut an additional three to four turns. Ride height will be adjusted later as this is simply a starting point.
47. Position the Detroit Speed adjustable track bar on the vehicle using the provided M12-1.75 stepped shoulder hex head bolts along with the M12 Nylock nuts and washers. Torque the bolts to 75 ft/lbs. The track bar axle bracket has four holes separated by 1" for adjustability. The top hole in the bracket is nominal for stock ride height. As you lower your ride height from stock you may want to use a lower hole in the track bar axle bracket (Figure 36). **NOTE:** Since this is also for mock-up, the hardware does not need to be tightened yet.



Figure 36 – Track Bar Axle Mount

48. Once the track bar kit is installed, verify that the rear axle is centered in the vehicle. It may be necessary to adjust the track bar to center the rear axle. **NOTE: There can be no more than 2" of exposed threads on the end link (3/4" of thread engagement in the tube).** This measurement does not include the jam nut [see page 28].



Figure 37 – Cross-Axis Pivot Bushing

49. Install the rear sway bar by installing the urethane bushings on the sway bar with the provided Super Grease. Position the Sway Bar bushings as close to the 90° bends on the Sway Bar as possible. Place the Sway Bar mounting clamps on the bushings at this time.

50. Position the sway bar on the rear axle clamp using the provided 7/16"-20 x 1" L Hex Head Bolts, washers and Nylock nuts. Repeat this procedure for both sides. Leave the Nylock nuts finger tight at this point.
51. Disassemble the sway bar end links and re-assemble the end links between the sway bar and the sway bar factory mount. **NOTE:** It may be necessary to reposition the sway bar in the mounts to better line up the end links. Do not over tighten the end links. The end links are tight when the polyurethane bushings start to compress (Figure 38). Repeat this for both sides.



Figure 38 – Sway Bar End Links

52. There are two mounting points on the sway bar for the sway bar end links. The chart below lists the rates for each hole (Figure 39). Detroit Speed recommends using the rearward mounting hole.

Sway Bar Rates	
Front Hole	620 lbf/in
Rear Hole	784 lbf/in

Figure 39 – Sway Bar Rates

53. With the sway bar installed, verify the bar is centered on the rear axle and tighten the brackets at the rear axle. Torque these bolts to 45 ft-lbs.

54. Separate the split lock collar into two pieces and place them around the sway bar to the inside of the sway bar clamps on the rear axle. Reassemble the collar using medium strength blue Loctite 242 on the bolts and torque to 15 ft/lbs. Repeat this step for both sides. **NOTE:** Position the collars tight to the urethane bushings when installing (Fig. 40).



Figure 40 – Install Split Lock Collars

55. After installation, lubricate the bushings with quality chassis grease.
56. Install the rest of the rear suspension. Install the wheels/tires, and rest the vehicle on all four tires. Double check that the rear axle is positioned correctly in the vehicle. It should be centered from side to side, and the wheelbase should be correct on both sides of the vehicle (101.0" for a 1982-92 Camaro/Firebird). The pinion angle should be measured and adjusted to your preference. -4° down is recommended. Raise and lower the vehicle to verify that there is no interference.
57. Remove all suspension components and paint or coat the QUADRALink components as desired. Now is a good time to install the exhaust system.
58. For final assembly, install the fuel tank and lines. **NOTE:** The fuel lines will need to be bent or modified slightly to clear the upper link.
59. Install the rear axle and rear suspension. Position the axle in the vehicle by adjusting the end links. **NOTE: There can be no more than 2" of exposed threads on the end link (3/4" of thread engagement in the tube). This measurement does include the jam nut (see page 28).** It should be centered from side to side, the wheelbase must be correct on both sides of the vehicle, and the pinion should be adjusted to the desired angle. Once the axle is in the proper position, torque the end link jam nuts to 50 ft/lbs. Do not torque the Swivel-Link hardware at this time.
60. Reinstall the rear wheels and torque to the manufacturer's recommended torque specs. Lower the vehicle so it is resting on all four tires.

61. Once the vehicle is set on the ground, settle the suspension by jouncing both the front and rear by hand by pressing down on the body. Check the ride height at this point and adjust as necessary by turning the coilover adjusting nut. Before adjusting the ride height, DSE recommends cleaning the threads of the shock. Once the threads are clean, apply dry bicycle chain lube to the threads of the shock body before adjusting the spanner nut and compressing the coilover spring. Allow the chain lube to dry before adjusting the spanner nut. If you have the non-adjustable shocks, the spanner nut has a soft tip set screw that will need to be tightened before the vehicle is driven.

NOTE: Detroit Speed does include a Spanner Tool (P/N: 031060DS) to adjust ride height however if you have the adjustable coilover shocks, Detroit Speed does offer an Adjustment Tool available as P/N 031061DS if needed (Figure 41).



Figure 41 – Detroit Speed Spanner & Adjustment Tools

62. Once the ride height has been adjusted properly, lock the spanner nut in place. If you have the base coilover shocks, tighten the set screw in the spanner nut to the shock body. If you have the adjustable coilover shocks, tighten the lock ring to the spanner nut so they lock together in place.

63. If the upgrade was purchased for the Single Adjustable, Double Adjustable Shocks or the Double Adjustable Shocks w/ Remote Canisters, refer to the appropriate sections below for adjustability.

Detroit Speed Single Adjustable Shock Applications

To change from the recommended “Detroit Tuned” valving, adjustments can be made independently to the rebound setting. The rebound is controlled by the knob at the upper shock mount (Shock is mounted body side down). The knob rotates clockwise (+) to increase the damping and counterclockwise (-) to decrease the damping (Figure 42a).



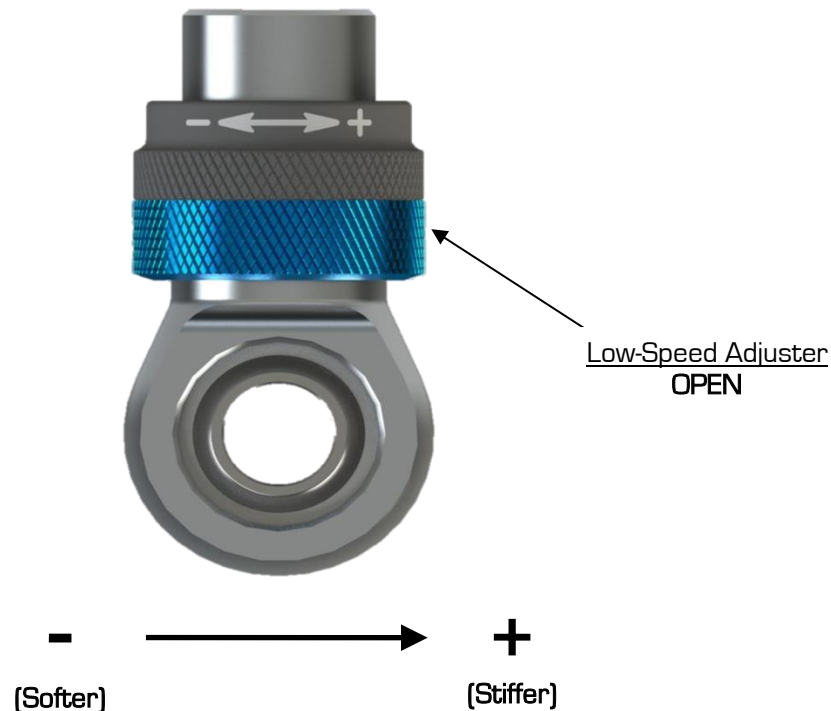
Figure 42a- Detroit Speed Single Adjustable Shocks

To return to the Detroit Speed recommended settings, turn the knob clockwise (+) to full damping. Once at full damping, turn counterclockwise (-) to reach the recommended settings. Refer to Figure 42b for the rebound settings.

Rebound (Shaft Knob)..... 15 Open (counterclockwise, -)

Figure 42b – Detroit Speed Recommended Settings

Adjuster Operation



- **Adjuster (60-64 Clicks)**

The low-speed adjuster is a “clicker” style adjuster meaning that its adjustment is measured by detents located inside the blue adjuster knob. There are 16 clicks per 1 revolution of the knob. It uses a right-hand thread in its operation which means as you increase low-speed, the adjuster will move up on the eyelet. The recommended change for an adjustment is 8 clicks at a time. The low-speed adjuster’s reference position is **full stiff** (closed, or all the way up) and referred to -0 (-0 = full stiff, -64 = full soft).

- **Tuning Notes**

- **Racetrack**

- For more grip, soften the damping.
 - For increased platform control, stiffen the damping.

- **Street**

- For a more comfortable ride, soften the damping

***DO NOT FORCE KNOB WHEN IT STOPS TURNING, YOU MAY DAMAGE THE ADJUSTER AND INTERNAL HARDWARE**

Detroit Speed Double Adjustable Shock Applications

To change from the recommended “Detroit Tuned” valving, adjustments can be made independently to both the high and low speed settings. The rebound is controlled by the sweepers at the upper shock mount. The sweepers rotate clockwise (+) to increase the damping and counterclockwise (-) to decrease the damping. The sweepers can be seen in Figure 43a.



Figure 43a – Detroit Speed Double Adjustable Shocks

When adjusting the low speed rebound start at full (+) position, when adjusting the high speed rebound start at full (-) position. To return to the Detroit Speed recommended settings turn the sweeper clockwise(+) to full damping for the low speed setting, and counterclockwise (-) to full damping for the high speed setting. Once at full damping, turn counterclockwise (-) for the low speed setting, and clockwise (+) for the high speed setting to reach the recommended settings. Refer to Figure 43b for recommended settings.

Low Speed Rebound [Sweeper]..... 15 sweeps (counterclockwise)(-)
High Speed Rebound [Sweeper]..... 4 sweeps[clockwise](+)

Figure 43b – Detroit Speed Recommended Settings

Detroit Speed Double Adjustable Shocks w/Remote Canisters

To change from the recommended “Detroit Tuned” valving, adjustments can be made independently to both the high and low speed settings. The rebound is controlled by the sweepers at the upper shock mount. The sweepers rotate clockwise (+) to increase the damping and counterclockwise (-) to decrease the damping. Refer to Figure 44a.

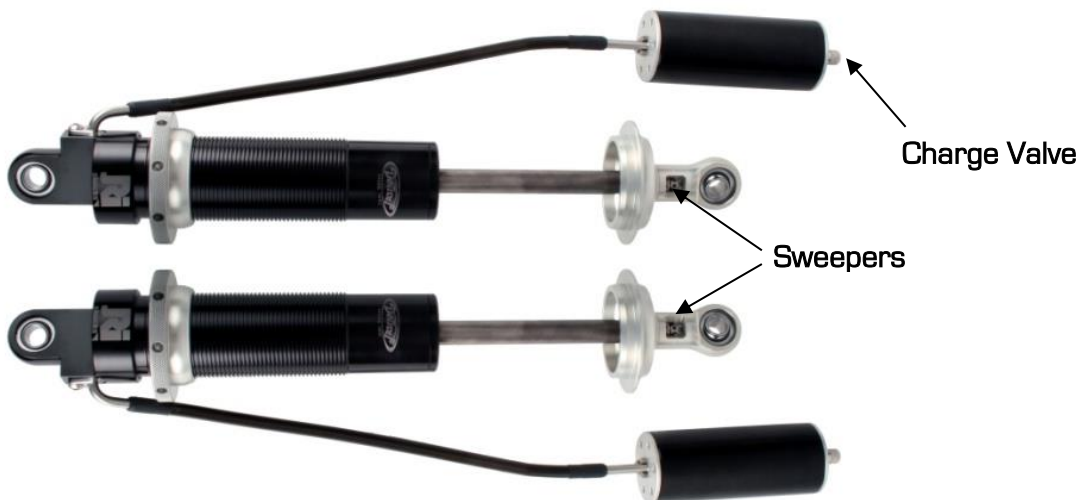


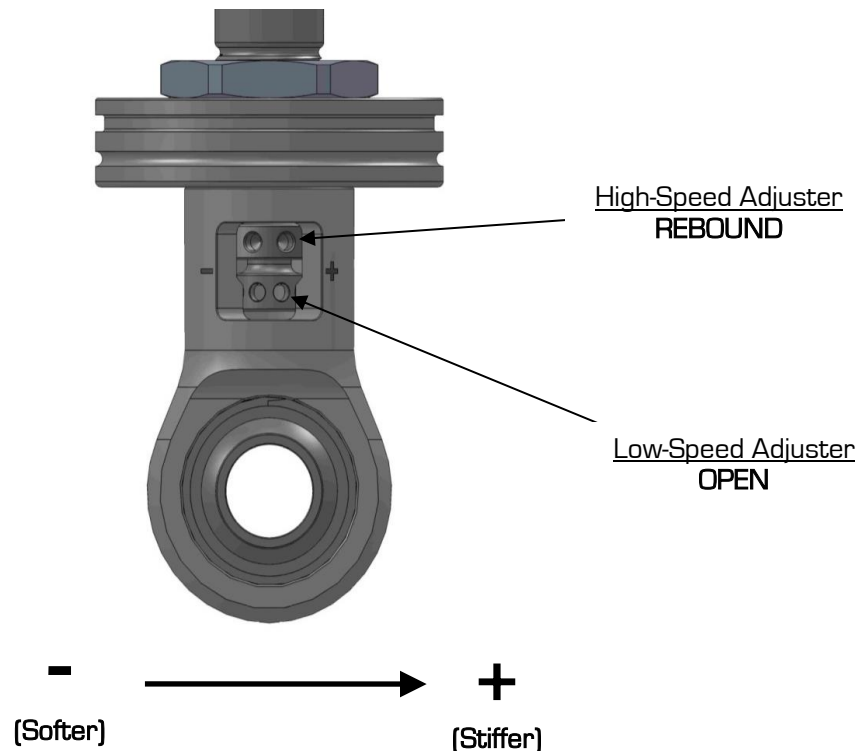
Figure 44a – Detroit Speed Double Adjustable Shocks w/Remote Canister

When adjusting the low speed rebound start at full (+) position, when adjusting the high speed rebound start at full (-) position. To return to the Detroit Speed recommended settings turn the sweeper clockwise(+) to full damping for the low speed setting, and counterclockwise (-) to full damping for the high speed setting. Once at full damping, turn counterclockwise (-) for the low speed setting, and clockwise (+) for the high speed setting to reach the recommended settings. Refer to Figure 44b for recommended settings.

Low Speed Rebound [Sweeper]..... 15 sweeps (counterclockwise)[-]
 High Speed Rebound [Sweeper]..... 4 sweeps[clockwise][+]

Figure 44b – Detroit Speed Recommended Settings

Adjuster Operation



- **High-Speed Adjuster (12 Sweeps)**

The high-speed adjuster is a “sweep” style adjuster meaning that its adjustment is measured by the location of the adjuster in the eyelet window. It uses a left-hand thread in its operation which means; as you increase high-speed, the adjuster will move down in the window*. The high-speed adjuster’s reference position is **full soft** and referred to as +0 (+0 = full soft, +12 = full stiff).

- **Low-Speed Adjuster (25 Clicks)**

The low-speed adjuster is a “clicker” style adjuster meaning that its adjustment is measured by detent grooves located inside the high-speed shaft. It uses a right-hand thread in its operation which means; as you increase low-speed, the adjuster will move up in the window. The low-speed adjuster’s reference position is **full stiff** and referred to as -0 (-0 = full stiff, -25 = full soft).

**The low-speed adjustment does not change when adjusting the high-speed.*

To aid in the installation of the reservoirs, we also offer a set of Billet Aluminum Remote Canister Mounts. The canister mounts are available exclusively through Detroit Speed, P/N: 032102DS (Figure 45).

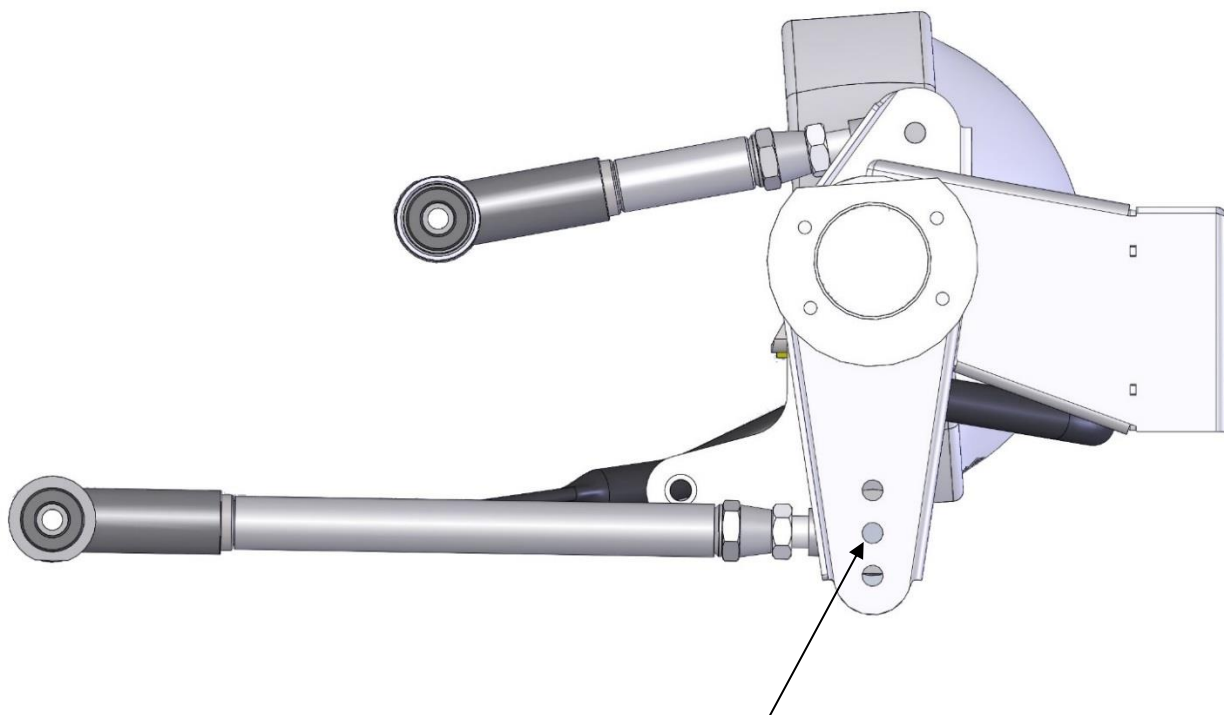


Figure 45 – Billet Aluminum Remote Canister Mounts

64. Settle the suspension by bouncing the vehicle several times. With the vehicle at ride height, torque the Swivel-Link and track bar bolts to 75 ft/lbs. Confirm the rear axle position again. Double check that all of the bolts and jam nuts are tightened to their respective torque specifications.
65. Install the rear interior quarter trim panels along with any other interior panels, headliner, door panels, etc. that were removed. If you plan to re-install the carpet and rear seats, they will need to be modified because of the upper link body mount.
66. You will need a rectangular cutout in the carpet and padding to allow the upper link body mount to pass through and re-install the carpet. **NOTE:** The floor cut template that you used earlier may help in locating the cutout for the carpet and padding. For the rear seat back modification, remove the foam insert from the fabric and mark where the upper link body mount will contact the back of the foam insert. Remove enough foam from the insert so it will sit back in the original position.
67. Re-install the carpet and the rear seats. The 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

Legal Disclaimer: Detroit Speed is not liable for personal, property, legal, or financial damages from the use or misuse of any product we sell. The purchaser is solely responsible for the safety and performance of these products. No warranty is expressed or implied.



Nominal Position Shown

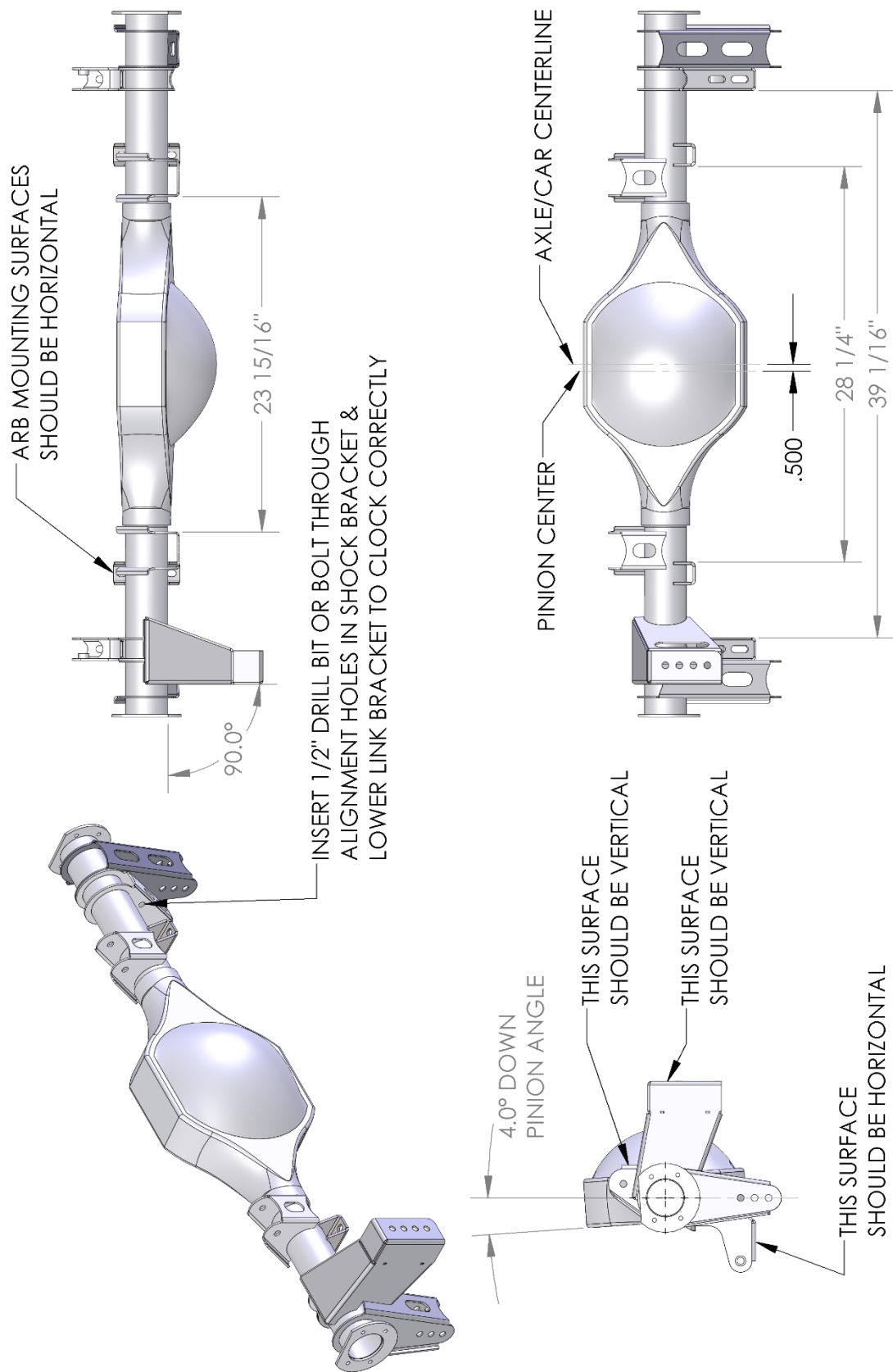
Instant Center: 48.5" Forward of Rear Axle Centerline
8.6" Above Ground Level

* *See chart below for adjustment info* *

Lower Link Adjustment Settings

Axle Bracket Position	Instant Center	Notes
Top Hole	101.4" / 6.5"	
Middle Hole	48.5" / 8.6"	Detroit Speed Nominal Setting
Bottom Hole	55.4" / 10.5"	
<i>Instant center numbers are expressed as distance forward of rear axle centerline, then height above ground level.</i>		

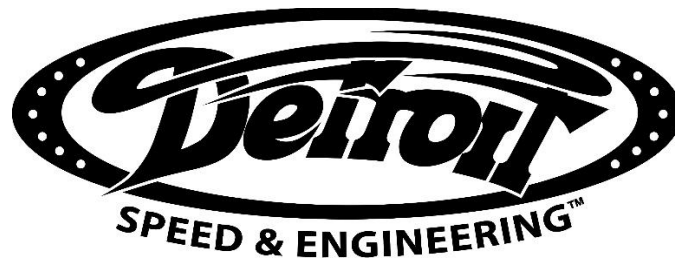
Figure 46– Link Mounting Positions



***NOTE THAT THE CENTERLINE OF THE AXLE IS NOT LOCATED AT THE CENTER OF THE PINION, AND DEPENDING ON AXLE TYPE, MAY NOT BE LOCATED AT THE CENTER OF THE CARRIER HOUSING. THE PINION IS OFFSET TO THE PASSENGER SIDE OF THE VEHICLE. DSE USES 1/2" OFFSET. DIMENSIONS SHOWN HERE ARE SYMMETRIC ABOUT AXLE/CAR CENTERLINE.**

Figure 47 - Axle Bracket Location

Once again, we appreciate your business.
If you have any questions during the installation of this product, call (704) 662-3272.



Detroit Speed
Swivel-Links

WARNING:

There can be no more than 2" of exposed threads on the end link (3/4" of thread engagement in the tube). This measurement does include the jam nut (see below).

