



#C2624 Installation Instructions 2001-2010 Chevy/GM 2500/3500 HD 2wd 6" Suspension Lift

Read and understand all instructions and warnings prior to installation of product and operation of vehicle.

Zone Offroad Products recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known. Minimum tool requirements include the following: Assorted metric and standard wrenches, hammer, hydraulic floor jack and a set of jack stands. See the "Special Tools Required" section for additional tools needed to complete this installation properly and safely.

» PRODUCT SAFETY WARNING

Certain Zone Suspension Products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. Zone Offroad Products does not recommend the combined use of suspension lifts, body lifts, or other lifting devices.

You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

» TECHNICAL SUPPORT

Live Chat provides instant communication with Zone tech support. Anyone can access live chat through a link on www.zoneoffroad.com.

www.zoneoffroad.com may have additional information about this product including the latest instructions, videos, photos, etc.

Send an e-mail to tech@zoneoffroad.com detailing your issue for a quick response.

888.998.ZONE Call to speak directly with Zone tech support.

» PRE-INSTALLATION NOTES

1. Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
2. Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
3. Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.
4. Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
5. Secure and properly block vehicle prior to installation of Zone Offroad Products. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, Zone Offroad Products recommends rear alterations first.
7. Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

Difficulty Level

easy 1 2 **3** 4 5 difficult

Estimated installation: 4-6 hours

Special Tools Required

GM Style Torsion Bar Tool

Drill w/ 1/2" Bit

Tire/Wheel Fitment*

**Trimming Req'd*

Tire:

35x12.50

Wheels:

20 x 9 w/ 5.75" BS

17 or 18 x 9 w/ 5-5.5" BS

16 x 8" w/ 4.5" BS

Kit Contents

Qty	Part		
1	Steering Knuckle (drv)	2	Sway Bar Link U-Bracket
1	Steering Knuckle (pass)	2	Small Hourglass Bushing
1	Front Crossmember	4	Stem Bushing
1	Rear Crossmember	4	Stem Washer
1	Bolt Pack - Crossmembers	1	Bolt Pack - Sway Bar Links
2	Bump Stop	2	Rear 5" Lift Block
2	Crossmember Support Tube	4	9/16" x 2-1/2" x 14" U-bolt, Nuts, Washers
2	Torsion Bar Drop Brkt		
1	Bolt Pack - Torsion Bar Drop		
2	Large Hourglass Bushing (T-Bar Drop)		
4	Sleeve - 0.750" x 0.090" x 1.575"		
2	Sway Bar Link		

Important—measure before starting!

Measure from the center of the wheel up to the bottom edge of the wheel opening

LF _____ RF _____

LR _____ RR _____

INSTALLATION INSTRUCTIONS

1. Park the vehicle on a flat, clean surface and block the rear wheels for safety.
2. Disconnect the positive and negative battery cables.

» FRONT INSTALLATION

1. Raise the front of the vehicle and support with jack stands under the frame rails.
2. Remove the wheels.
3. Measure and record the length of the exposed thread on the torsion bar adjuster bolts **Figure 1**. Record the lengths here for use later during the installation

DRV Side: _____ PASS Side: _____



Figure 1

4. Unload the torsion bars but do not remove. Save adjuster bolt/retainer block.
5. Mark the unloaded torsion bars to indicate DRV side and PASS side. Also mark the bars to indicate front versus rear.

6. Remove the torsion bar adjuster plate by pushing the torsion bar forward to allow the plate to drop free. On most vehicles this will require using a hammer/punch or air hammer. Access the end of the torsion bar through the hole in the back of the torsion bar crossmember and drive forward. Leave the torsion bars in the lower control arms.
7. Remove the two bolts that attach the torsion bar crossmember to the frame rails **Figure 2**. Remove the torsion bar crossmember from the vehicle. Save bolts and crossmember.



Figure 2

8. Remove the torsion bars by pulling them rearward out of the lower control arms. Set the torsion bars aside.
9. Disconnect the sway bar end links from the sway bar and the lower control arms **Figure 3**. Discard the link assemblies.
10. Disconnect the tie rod ends from the steering knuckles. Remove the tie rod end nuts and save. Strike the knuckle near the tie rod end to dislodge the tie rod end taper **Figure 3**. Remove the tie rod ends from the knuckles.



Figure 3

11. Disconnect the ABS brake wire from the connector at the top of the frame **Figure 4**. Remove the wire from the plastic retainers on the frame and upper control arm **Figure 5**.
12. Disconnect the rubber brake line brackets from the upper control arm and the steering knuckle **Figure 5**. Save hardware.

Step 6 Note

Unloading torsion bars: Torsion bars are under pressure even with the front suspension off the ground. A proper torsion bar tool is necessary to unload and remove the torsion bars from the vehicle. A tool designed specifically for GM torsion bars (#J36202 or equivalent) is required. This tool can be purchased from several sources and most part stores will lend these tools for little or no charge. Follow the individual tool instructions for proper use.



Figure 4



Figure 5

13. Remove the two bolts mounting the brake caliper assembly to the steering knuckle and hang the caliper out of the way **Figure 6**. Do not hang the caliper by the brake hose. Save mounting bolts.



Figure 6

14. If equipped, remove the rotor retaining clips from the wheels studs. These will not be reused. Remove the brake rotor and set aside.
15. Remove the upper ball joint nut. Thread the nut back on by hand one or two turns. Strike the knuckle near the upper ball joint to release the taper. Remove the upper ball joint nut (save) and remove the ball joint from the knuckle. Remove the lower ball joint nut and thread back on by hand one or two turns. Strike the knuckle near the ball joint to release the taper. Remove the ball joint nut and remove the knuckle from the lower control arm. Save the lower ball joint nut and set the knuckle/hub assembly aside.
16. Disconnect the shocks from the frame and lower control arm. Remove shocks, save lower mounting hardware and discard the rest.
17. Remove the front and rear lower control arm bolts and remove the control arms from the vehicle. Save the control arms and mounting hardware.
18. Remove the factory bump stops from the frame **Figure 7**. Save bump stops and hardware.



Figure 7

19. Inspect the inside factory control arm mounting holes. There will be a sharp lip left from the original control arm/hardware. Use a file or rotary grinder to remove the sharp lip left from the control arms **Figure 8**. This will allow the new crossmembers to be installed easily.



Figure 8

20. Locate the new front crossmember. Install the crossmember in the front lower control arm pockets so the offset in the crossmember is toward the front of the vehicle **Figure 9**. Fasten the crossmember with the original lower control arm hardware. Run the bolts from front to rear. Leave hardware loose.



Figure 9

Step 21 Note

Bump stop hardware is located in hardware pack #544.

21. Install the new provided bump stops on the wings on the new rear crossmember **Figure 10** with the provided 3/8" hardware. Tighten hardware securely.



Figure 10

22. Install the rear crossmember in the rear lower control arm pockets so the offset in the crossmember is toward the front of the vehicle. Fasten the crossmember with the original lower control arm hardware. Run the bolts from front to rear. Leave hardware loose. The factory rear cross member can be left in place if no interference to the replacement crossmember exists, otherwise it must be removed.
23. Install the factory lower control arms into the new crossmembers. Fasten the control arms with 5/8" x 5" bolts (front), 5/8" x 6" bolts (rear), nuts and 5/8" SAE washers **Figure 11**. Run the bolts from the front to rear. While installing the lower arms position the provided crossmember support struts over the bolts between the front and rear crossmembers. Leave hardware loose.

Step 23 Note

Lower control arm bolts/nuts/washers are located in hardware pack #544.



Figure 11A



Figure 11B

24. Remove the hub bearing and brake dust shield from the factory steering knuckles **Figure 12**. Be sure to note which hub goes on which side of the vehicle. Locate the hub o-ring inside the knuckle hub bore. Using a small flat head screw driver remove the o-ring for use in the new knuckle **Figure 13**. Save mounting bolts, o-ring and hub, discard the knuckle and dust shield.



Figure 12



Figure 13

25. Locate the new steering knuckles and identify the driver's and passenger's side. Install the appropriate knuckle on the lower control arm and fasten with the original lower ball joint nut. Swing the knuckle up and attach to the upper ball joint with the original nut. Torque the upper ball joint nut to 37 ft-lbs and the lower ball joint nut to 74 ft-lbs **Figure 14**.



Figure 14

26. Install the factory hub o-ring into the new knuckle hub bore. Install the hub on the appropriate new knuckle so that the ABS line runs out under the steering arm (front). Fasten the hub with the factory bolts. Apply Loctite to the bolt threads and torque to 133 ft-lbs.
27. Install the brake rotor on the hub. Install the brake calipers on the knuckles with the original bolts. Apply Loctite to the bolt threads and torque the bolts to 125 ft-lbs. Be sure the brake hose is running under the upper control arm and behind the steering knuckle.
28. Reconnect the brake hose bracket to the upper control arms with the original bolt. Torque to 10 ft-lbs. Attach the second brake hose bracket to the holes in the back side of the steering knuckle with a provided 1/4" x 3/4" self-tapping bolt **Figure 15**. Torque to 10 ft-lbs.



Figure 15

29. Route the ABS line from around the back side of the knuckle and attach to the two threaded holes in the knuckle with the provided clamps and 1/4" hardware. From there run the ABS line up to the frame and reconnect to the connector and plastic retaining clip. Zip tie the ABS wire to the brake line to secure it out of the way,
30. Install the provided offset sway bar link u-bracket on the lower control arm in the original sway bar link hole with a 5/8" x 1-3/4" bolt, nut and washers **Figure 16**. Position the bracket so that it offsets in toward the center of the vehicle. In some cases it may be necessary to slightly clearance to hole for the 5/8" hardware.

Step 28 Note

The factory brake hoses can be adjusted in the factory brackets by lubing the hoses with silicone spray near and in the bracket. Brake hose hardware is located in hardware pack #544.

Step 29 Note

ABS line hardware is located in hardware pack #544.

Step 30 Note

All sway bar link bolts/nuts/washers are located in hardware pack #569

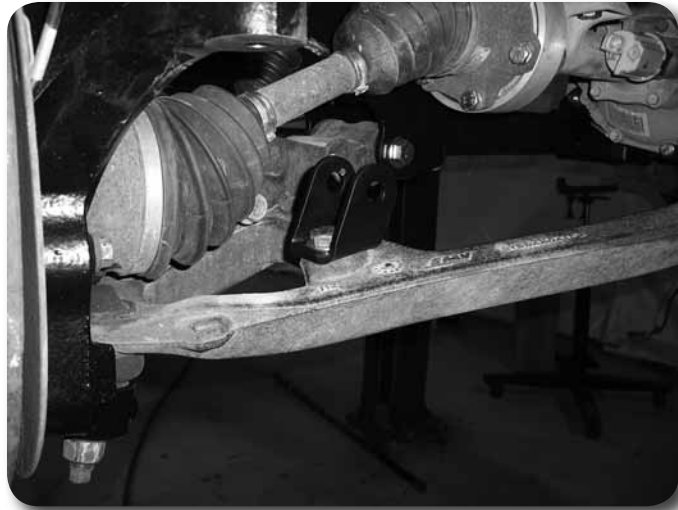


Figure 16

31. Locate the new front sway bar links, small hourglass bushings and (2) 0.750" OD x 1.575" long sleeves. Install the bushings and sleeves into the eyes of the links. Install the links into the new brackets on the lower control arms with 9/16" x 2-3/4" bolts, nuts and washers **Figure 17**. Run the bolts from front to rear and leave hardware loose.

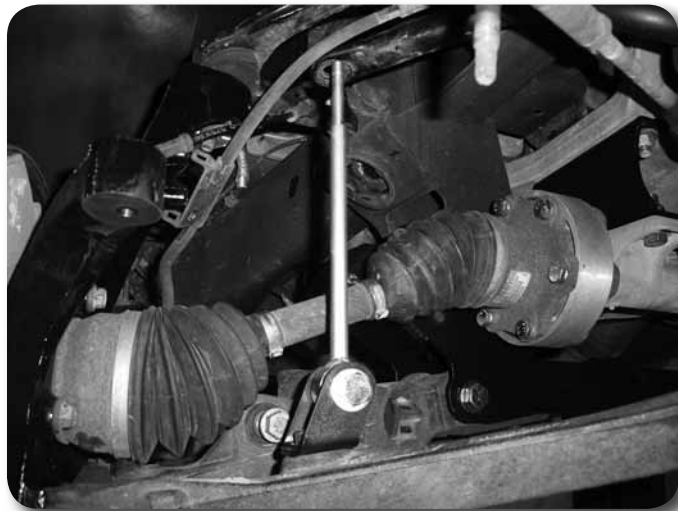


Figure 17

32. Install a provided stem washer followed by a stem bushing on each sway bar link. Install both links into the sway bar and install a second stem bushing followed by a second washer. Fasten the sway bar link upper assemblies with 3/8" nylock nuts **Figure 18**. Leave nuts loose.



Figure 18

33. Attach the tie rod ends to the knuckles. Fasten with the original nuts and torque to 37 ft-lbs.
34. Install the new shocks with the factory lower hardware and the new provided bushings/washers/nuts/sleeves. Tighten the upper hardware until the bushings begin to swell. Torque the lower bolt to 60 ft-lbs.
35. Install the torsion bars into the lower control arms and slide forward about 6". Be sure they are installed in the proper location and orientation.
36. Locate the provided torsion bar drop brackets, large hourglass bushings and (2) 0.750" OD x 1.575" long sleeves. Install the bushings and sleeves in the brackets.
37. Install the new torsion bar bracket on the frame by attaching the upper tabs to the original mount on the frame. Loosely position with a provided 9/16" x 3" bolt. Position the bracket so it is flush to the bottom of the frame and the 9/16" bolt is centered in the slotted holes in the brackets then mark the center of the lower slotted holes to be drilled **Figure 19**. With the hole positions marked, remove the bracket and drill the two new 1/2" holes at the marks.

Step 37, 38 Note

1/2" and 9/16" hardware for torsion bar brackets is located in hardware pack #577.



Figure 19

38. With the new holes drilled, reinstall the new torsion bar brackets on the frame with the provided 9/16" x 3" bolts, nuts, and washers through the factory mounts. Install 1/2" x 1-1/4" bolts, nuts and washers through the bracket and newly drilled holes **Figure 20**. Leave all hardware loose.



Figure 20

39. Attach the factory torsion bar crossmember to the new drop brackets and fasten with the original bolts **Figure 21**. Be sure the large torsion bar holes in the crossmember are toward the front. Torque factory bolts to 90 ft-lbs.



Figure 21

40. Go back and tighten the torsion bar drop bracket hardware, starting with the 1/2" (60 ft-lbs) followed by the 9/16" (95 ft-lbs).
41. Locate the original torsion bar adjuster plates. Slide the torsion bars back into the torsion bar crossmember and into the adjuster plates. The plates should fit on the torsion bars so that they positioned roughly horizontal in the vehicle.
42. Load the torsion bars with the appropriate tool. Reinstall the adjuster bolt/retaining plate assembly. Reset the torsion bar adjuster bolt position to the original height measurement taken at the beginning of the installation.
43. Install the front wheels. Torque the lug nuts to 140 ft-lbs. Lower the vehicle to the ground.
44. Bounce the front end to settle the suspension.
45. Tighten the upper sway bar link stem nuts until the bushings begin to swell. Torque the lower sway bar link bolt to 90 ft-lbs.
46. Torque the lower control arm bolts (4) to 125 ft-lbs.
47. Check all front hardware for proper torque.

48. Check all brake lines for proper clearances. Adjust as necessary.
49. Check tire/wheel clearance with the fenders/bumper as well as with the steering knuckle. It is not uncommon to trim the lower plastic valance of the bumper slightly to add proper tire clearance while turning.

» REAR INSTALLATION

1. Block the front wheels for safety. Raise the rear of the vehicle and support with jack stands under the frame rails, just ahead of the front leaf spring hangers.
2. Remove the wheels.
3. Disconnect the parking brake cable brackets (2) from the driver's side frame rail **Figure 22**. Save all hardware.



Figure 22

4. Disconnect the factory brake line bracket attached to the top of the differential **Figure 23**.



Figure 23

5. Support the center of the axle with a hydraulic jack. Remove the factory shocks from the axle and frame. Save hardware and discard shocks.
6. With the axle still well support remove the passenger's side u-bolts. The u-bolts will not be reused. Slowly lower the axle and remove the factory block from the axle. The factory block will not be reused.

7. Lower the axle just enough to install the new provided 5" lift block between the axle and the spring. Align the pin in the block with the hole in the axle and the hole in the block with the leaf spring pin. It may be necessary to loosen the driver's side u-bolts slightly to allow the axle to lower far enough to install the block. The block is not tapered so it can be installed in either direction.
8. Using the support jack, raise the axle so that the axle, spring and block are all touching. Install the new provided u-bolts, nuts and washers allow with the factory u-bolt plate **Figure 24**. Snug u-bolts but do not tighten.



Figure 24

9. Repeat the installation on the driver's side of the vehicle. Pay special attention to all of the brake lines and wires. Do not allow them to get over-extended.
10. Locate the brake line clamp bolt on the driver's side axle shock mount. This bolt must be trimmed flush with the inside surface of the bracket to avoid contact with the new shock **Figure 25**. Trim the bolt with a reciprocating saw or cut-off wheel.



Figure 25

11. Locate the new shocks/bushings/sleeves. Install the provided hourglass bushings and sleeves in the new shocks. Install the shocks in the vehicle with the original hardware. The body of the shock must be mounted to the axle. In some cases the axle shock brackets will need to be bent open slightly to provide clearance for the new, wider shocks. This can be easily done by putting an adjustable wrench on side of bracket that needs to be formed and bending out just enough to clear the shock body. Torque shock bolts to 70 ft-lbs.

12. Reattach the parking brake cable brackets to the driver's side frame rail. It may be necessary to remove the driver's side cable from the rear most bracket to allow for enough slack. Torque bracket bolts to 20 ft-lbs.
13. Reattach the rear brake line bracket to the top of the differential. Torque hardware to 20 ft-lbs. Check the brake line for slack. If more slack is needed, using pliers carefully bend the brake line mounting bracket upward **Figure 26**.



Figure 26

14. Install the wheels. Torque lug nuts to 140 ft-lbs. Lower the vehicle to the ground.
15. Bounce the rear of the vehicle to settle the suspension.
16. Torque the u-bolts to 90-100 ft-lbs.
17. Check all rear hardware for proper torque.

» POST-INSTALLATION

1. Check all hardware for proper torque.
2. Reconnect the positive and negative battery cables.
3. The vehicle will need a complete front end alignment.
4. Check all hardware after 500 miles.
5. Adjust headlights.

Post-Installation Warnings

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

Recommend Alignment Specifications

CASTER (Drv/Pass)

$4.00^{\circ} \pm 1.00^{\circ} / 4.75^{\circ} \pm 1.00^{\circ}$

CAMBER

$+0.25^{\circ} \pm 0.50^{\circ}$

TOE

$+0.10^{\circ} \pm 0.20^{\circ}$