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CSTSUSPENSION.COM

**19-21 DODGE RAM 1500 4WD**  
**CSS-D3-1**  
**6.5" LIFT KIT**

**\*DOES NOT FIT TRUCKS WITH FACTORY 22" WHEELS**

**\*TRUCKS WITH FACTORY OFF ROAD GROUP OPTION, FRONT DIFF SKID PLATE WILL NOT FIT AND GAS TANK SKID PLATE WILL NEED TO BE MODIFIED TO CLEAR REAR LINKS**

**READ THE FOLLOWING NOTES PRIOR TO INSTALLATION**

Do not alter the finish of any components. Changing the finish such as chroming, zinc-plating, or any type of painting, can cause structural fatigue of components.

Prior to installation, compare the parts list with the components received in the kit. If any pieces are missing please contact your local retailer or CST Performance Suspension at 951-571-0212, and you will be taken care of in a timely manner.

Read all instructions from start to finish before beginning installation. If these instructions are not properly followed, severe frame, tire, or suspension damage may result to the vehicle. If you incur a problem during the installation of this kit, first be sure you have followed the instructions from start to finish accurately and if so please call 951-571-0212; we will do our best over the phone to assist you with your problem, or direct you accordingly.

Vehicles that receive over sized tires should check ball joints, tie rod ends, bushings and steering components, as well as generally inspect the entire suspension front to rear every 2500 – 5000 miles for wear and replace as needed.

Also, we would love to see your truck completed. If you would like to have your vehicle featured on our social media pages and on our website gallery, please e-mail us at [sales@cstsuspension.com](mailto:sales@cstsuspension.com) with the pictures of your vehicle, list of mods, and your account name and we will get them posted. Thank you for supporting CST!!!



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**Before and after measurements**

We suggest you measure from the center of wheel hub to bottom of fender

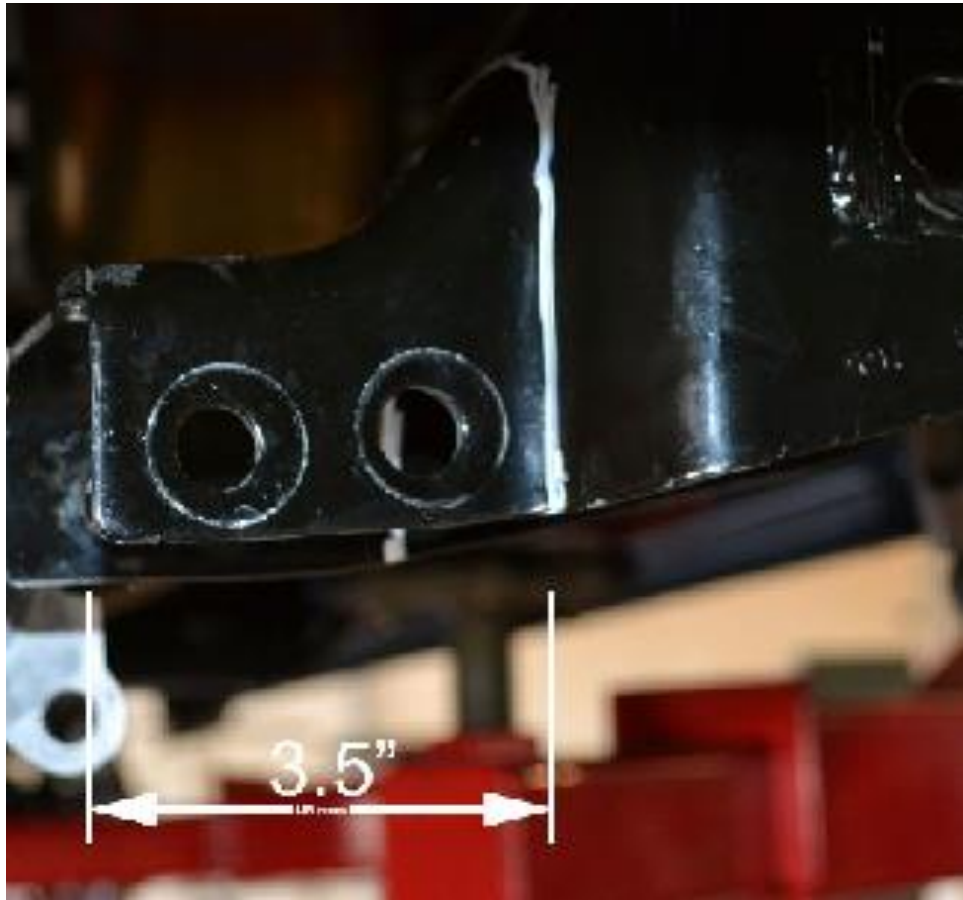
BEFORE: DF \_\_\_\_\_ PF \_\_\_\_\_ DR \_\_\_\_\_ PR \_\_\_\_\_

AFTER: DF \_\_\_\_\_ PF \_\_\_\_\_ DR \_\_\_\_\_ PR \_\_\_\_\_

## Instructions:

1. Place the vehicle on a flat concrete or asphalt surface. Make sure the steering wheel is straight.
2. Disconnect the negative battery cable from the battery.
3. Jack up the vehicle and support it with 4 jack stands under the frame, never work under a vehicle that is not properly supported.
4. Remove the front wheels. (🔧🔩22mm socket)
5. Remove the factory front / lower skid plate. (🔧🔩16mm socket) (only on some models)
6. Separate the tie rod end from the spindle; remove the nut, apply light upward pressure on the tie rod end with a pry bar and smack the spindle with a hammer to jar the taper loose. Do not hit the tie rod end. If you are concerned about damaging your stock spindle you can use a removal tool. (21mm socket)
7. Separate the antilock wire where it clips together at the frame. Free the wire from the clips on the spindle, the arm, and the frame. (🔧🔩13mm socket)
8. Remove the two bolts that hold the brake caliper to the spindle. Hang the calipers out of the way with brake caliper hooks; do not let them hang on the lines. (🔧🔩21mm socket)
9. Remove the sway bar links and the sway bar. (🔧🔩18mm socket, 15mm socket)
10. Mark the hubs, lower arms, front axles and shocks driver and passenger so you can reinstall them on the same side they came off.
11. Loosen the nuts on the upper and lower ball joints. Leave the nuts on the ball joints about 1/2" to catch the spindle when you break the tapers loose. (🔧🔩21mm wrench, 24mm socket)
12. Break the upper ball joint loose, apply light upward pressure on the arm with a pry bar and hit the spindle near the upper taper with a hammer to break the taper loose. Do the same for the lower tapers. Do not hit the threads of the ball joint. If you don't want to damage your stock spindles you can use a removal tool.
13. Remove the large nut that holds the front axle to the hub. (🔧🔩36mm socket)
14. Remove the front lower bolt on the front shocks. (🔧🔩18mm socket)
15. Remove the nut for the upper ball joint and tip the spindle out. Tap the front axle out of the hub with a rubber mallet.
16. Remove the nut for the lower ball joint and remove the spindles.
17. Remove the lower arms. (🔧🔩24mm wrench, 24mm socket)
18. Remove the front shocks. (🔧🔩16mm socket)
19. Remove the cross member that is between the rear side of the lower arms. (🔧🔩15mm wrench, 18mm socket)
20. Unplug the wire from the front diff.
21. Use a paint pen to mark the clocking on the front driveshaft. Disconnect the driveshaft from the front diff and tie it up out of the way, do not remove the driveshaft from the transfer case. (🔧🔩15mm wrench)
22. Support the front diff and remove the hardware that holds the diff to the diff mounts. Remove the front diff, have someone help you with this step. (🔧🔩18mm socket)

23. Part of the frame on the driver's side where the lower arm was needs to be cut off. Mark a vertical line on the frame 3.5" in from the inside of the lower arm hole. Cut the frame and smooth out any sharp edges. Paint the bare metal to prevent rust.



24. Remove the diff wire push clips from the frame. Unhook them all the way until the diff wires split off from the loom. Reroute the diff wires so that they hang in between the front cross member and the rack & pinion.
25. Open parts bag # 1
26. Install drivers front diff bracket using stock hardware and Loctite, install with the tall side to the front of the truck. Round cut out to the bottom. Do not tighten at this time. (🔧=21mm wrench)
27. Install driver's rear diff bracket using supplied hardware. Round cut out to the bottom. Do not tighten at this time.
28. Install passenger side diff drop (3/8" thick part) using the supplied 12mm fully threaded bolts. Snug them, do not tighten at this time.
29. Install passenger side diff drop support bracket (1/4" thick with 4 spacers welded to it). Slide it over the upper bolts and install the supplied 12mm nuts. Do not tighten at this time.
30. Install the front diff using the supplied 1/2 x 2" bolts on the driver side front mount. Use the 1/2" x 2 1/2" bolts on the passenger side lower diff mount holes and 1/2" x 2" bolts on the passenger side middle holes that sandwich the passenger diff side bracket together. Use the 3, 1/2" x 1 1/4" bolts to attach the driver rear diff mount. See pictures on next page for reference.



*Above pic looking driver side to pass*



*Above pic looking rear to front of truck*



*Above pic looking front pass to driver side*



*Above pic looking driver rear to pass side*

31. Tighten all diff hardware at this time. All driver side hardware first then use the following order to do the passenger side. Lower bolts first, middle bolts second, upper bolts third and then tighten the upper 12mm nuts last.

32. Open Parts Bag #2

33. Install your new CST front sub frame using supplied 18mm bolts and washers. Bolts go from front to back. Use the large washers to align the sub frame with the stock adjustment holes. Use the supplied harness bracket on the rear of the passenger side to attach the diff wire harness to. Do not tighten.



34. Install your new CST rear sub frame using supplied 18mm bolts and washers. Bolts go from front to back. Do not tighten

35. Install lower control arms. To install the lower control arms you must remove 1 rear sub frame bolt. Pivot the sub frame, place lower control arm into sub frame using the OEM bolt, then put rear of sub frame back into place with supplied 18mm bolt. Repeat on opposite side. See pictures below.

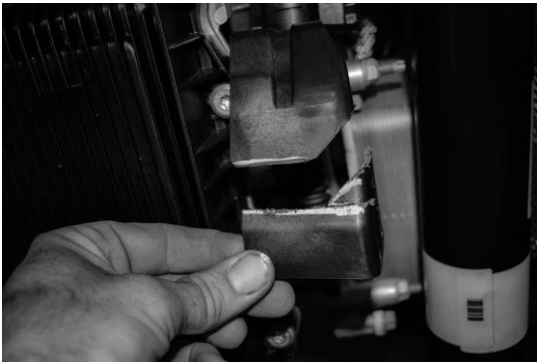


36. Tighten the 4 18mm Subframe cross member bolts and the 2 1/2" bolts on the passenger side rear crossmember. (🔧 1 1/16 wrench 1 1/16 socket) (🔧 3/4 wrench 3/4 socket)

37. If using CST replacement coilover, refer to those instructions now.

38. If you are using the factory coilover, use CST Part # CSS-D16-7. See instructions provided with those parts for installation.

39. Trim plastic guard around shift linkage to make clearance for the front driveshaft. See pictures below.



40. Open parts bag # 3. Install the front driveshaft using the new front driveshaft spacer and supplied 12mm bolts (16mm socket).

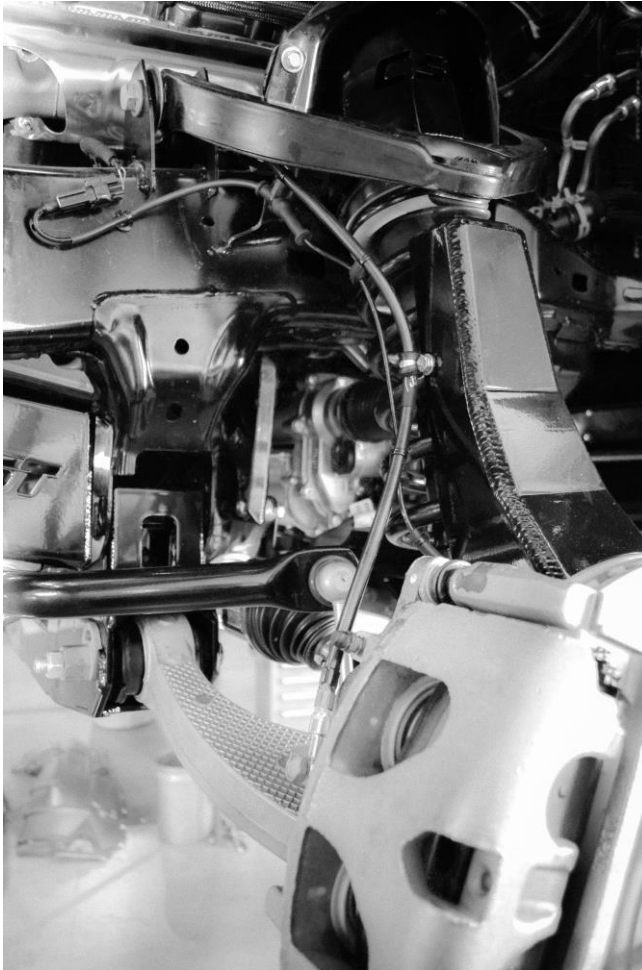


41. Remove the hubs from the stock spindles and install them into the new spindles. Use the factory hardware to attach the hubs to the new CST spindles. Install factory dust shields onto new CST spindles. Use the stock bolts and Loctite on the bolts. (🔧=21mm socket)
42. Attach the spindle to the lower ball joint using the stock nut; slide the front axle into the hub at the same time as up pivot the arm and spindle to attach to the upper control arm. Attach the spindle to the upper control using the factory nut. You may need to jack up the lower arm to be able to attach the upper taper.
43. Attach bottom of shock to lower arm using the OEM bolt and nut. Use Loctite and tighten.
44. Open Parts Bag #5.
45. Install the brake line brackets. There is a driver and passenger side bracket, the bracket shown in the photo below is the driver's side. Remove the bolt that holds the brake line to the frame. Install the bracket to the frame using the stock bolt. Carefully bend the brake line down to the lineup with the lower holes on the bracket. Bolt the brake line to the new bracket using the supplied 5/16" bolt and hardware.
46. Remove factory brake lines and install the new CST brake line kit. See brake line instructions. Be extremely careful not to cross thread fitting! The oem threads are extremely tight. Be careful when installing new brake lines to factory hardline. Make sure you bleed the brakes after installing the new brake lines.



47. Bolt the brake caliper to the spindle using the stock bolts and Loctite. (🔧🔧21mm socket)

48. Attach brake lines to spindle using supplied 3/8" adel clamp and hardware. See pic for reference.



49. Reconnect the antilock wires. Attach to spindle using supplied ½” adel clamp and hardware.



50. Attach the antilock wire to the brake line with a zip tie. Turn the wheels both ways and make sure the brake lines do not rub on anything or get pinched during turning and suspension travel. Zip tie the lines as necessary to keep the brake lines and antilock wires in a safe location. Re attach plastic clip at the frame, use pic for reference.

51. Install tie rod ends.

52. Open Parts Bag #4.

53. Install the sway bar drop mounts using the OEM bolts. Bolt the swaybar to the drop mounts using the supplied 3/8 x 1 ¼” bolts. Re attach sway links to lower control arm using factory hardware.



54. Open Parts Bag #6. Install the lower skid plate using the supplied ½” bolts and washers.

55. If using CST part # CSS-D16-6 for the rear of the truck. See those instructions now.

56. Install the tires and set the vehicle on the ground. Torque the lug nuts to 100 ft-lbs. Tighten the bolts for the front lower arms. (⌘—⌘18mm wrench, 22mm socket)

57. Depending on what tire/rim combination you run, you may need to do a little trimming to the front bumper and the steps. Do so if needed.



58. If needed, adjust the camber and the toe to get them approximately straight. (🔧16mm wrench, 24mm wrench, 24mm socket, 17mm wrench)
59. Do a final inspection of every part you installed and make sure all the bolts are tight.
60. Reattach the battery cable.
61. Make sure brakes are bleed properly and you have a firm pedal.
62. Have the truck professionally aligned.
63. Be sure to perform a suspension/wheel re-torque between 300-500 miles of initial use.

**For technical assistance call CST at 951-571-0212**

**Or e-mail us @ [sales@cstsuspension.com](mailto:sales@cstsuspension.com)**

**Thank you for buying CST Performance Suspension!**