

INSTALLATION GUIDE



Part#: 014331



HARDCORE LIMITED LIFETIME WARRANTY

3-3.5" Front 2-2.5" Rear" Suspension System

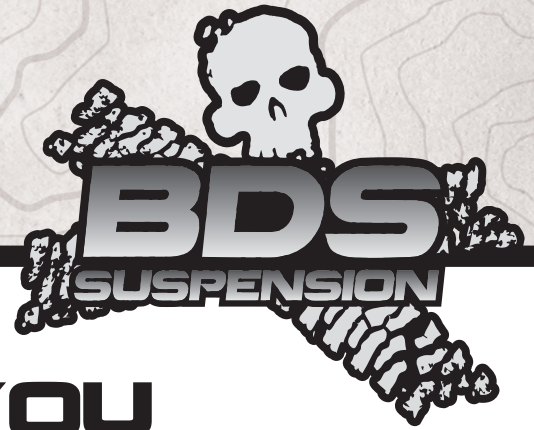
Jeep Gladiator 4WD | 2020-24

Rev. 060324

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Web: www.bds-suspension.com • E-mail: tech-bds@ridefox.com

Read And Understand All Instructions And Warnings Prior To Installation Of System And Operation Of Vehicle.



THANK YOU

Your truck is about to be fitted with the best suspension system on the market today. That means you will be driving the baddest looking truck in the neighborhood, and you'll have the warranty to ensure that it stays that way for years to come.

Thank you for choosing BDS Suspension!

BEFORE YOU START

BDS Suspension Co. 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.

FOR YOUR SAFETY

Certain BDS 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. BDS Suspension Co. 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.

BEFORE INSTALLATION

- Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
- Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
- 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.
- 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.
- Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
- If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
- 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.



Visit 560plus.com for more information.

TIRES AND WHEELS

Sport Models
3.5" Lift - 33x12.5 on 17x8 with 4.5-5"
Backspacing no rubbing
35x12.5 on 17x 8 with 4.5-5" Backspacing
rubbing under articulation will occur



Rubicon Models
3.0" Lift - 37x12.5 with stock wheels will not rub
fender
3.0 Lift - 37x12.5 on 17x8 with 4.5-5"
backspacing will rub under extreme articulation

BEFORE YOU DRIVE

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.

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. Longer replacement hoses, if needed can be purchased from a local parts supplier.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

CONTENTS OF YOUR KIT

Box Kit-014331		
Part #	Qty	Description
3396	2	Front Bump Stop Block
03315	1	Disconnect BRKT Tall DRV
03316	1	Disconnect BRKT Tall PASS
03374	2	JT 2" Rear Bump Stop Block
01473	2	Rear Sway Bar Link
A1024	2	Sway Bar Disconnect - Long
A356	1	Adjustable Track Bar
SB58BK	4	Bushing
62147	4	Spacer Sleeve
03005	2	Quick Pin
M03212-BK-01	3	Offset Polyurethane Spacer
A1046	1	Stud with Nut
A1045	1	Stud with Nut
01499	1	1/4" Spacer
162	1	.75 x 1.255 Sleeve
65	3	.75 x 1.650 Sleeve
163	1	.81 x 1.62 Sleeve
03326	4	Alignment Cam
843	1	Bolt Pack- Front Bump Stop
	2	3/8-16 x 3-3/4 Bolt
	2	3/8-16 serrated Flange Nut
	2	3/8" SAE Washer
J127	1	Bolt Pack - Front Disconnects
	2	12mm-1.75 x 75mm Bolt
	2	12mm-1.75 Prevailing Torque Nut
	4	12mm Flat Washer
	2	5/16-18x3/4 Bolt
	2	5/16-18 Prevailing Torque Nut
	4	5/16 SAE Flat Washer
839	1	Bolt Pack- Rear Bump
	4	5/16-18x3/4" Bolt
	4	5/16-18 Prevailing Torque Nut
	8	5/16" SAE Washer
913	1	Bolt Pack
	2	12mm-1.75 x 65mm Bolt
	4	7/16" USS Washer
	2	12mm-1.75 Prevailing Torque Nut
J172	1	Bolt Pack - 2024 JL 14mm Sway Bar Link
	2	14mm-2.00 x 80mm Bolt - Class 8.8
	2	14mm-2.00 Prevailing Torque Nut
	4	14mm Flat Washer - Clear Zinc
149	2	.750 x 0.095 x 1.680 DOM Sleeve

Box Kit-034440		
Part #	Qty	Description
034440R	2	Front 3" Springs

Box Kit-032159		
Part #	Qty	Description
032159R	2	Rear 2" Springs

PRE INSTALLATION

IMPORTANT

It is required that ride height measurements be taken before and after installation. Measure from the **WHEEL AXLE CENTER** up to the **FENDER LIP** of the wheel opening. Do this for all 4 wheels. Record measurements below.**

BEFORE

Left Front _____ *Right Front* _____

Left Rear _____ *Right Rear* _____

AFTER

Left Front _____ *Right Front* _____

Left Rear _____ *Right Rear* _____



****These ride heights will be required if you have any ride height concerns after installation. Please be prepared to provide these to Technical Support.**

INSTALLATION INSTRUCTIONS

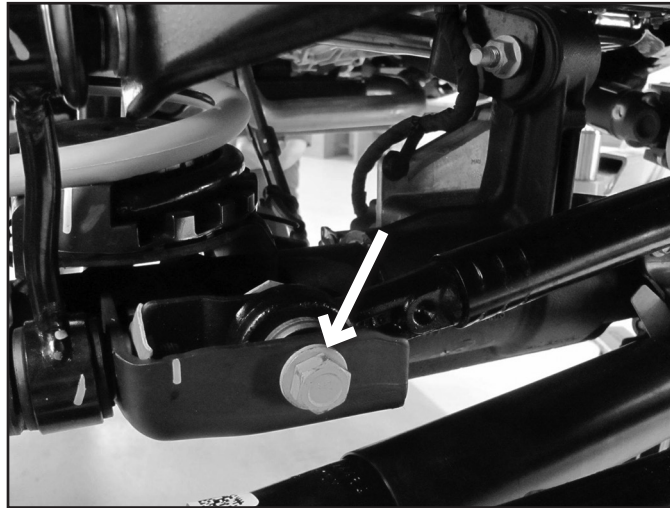
INSTALLATION INSTRUCTIONS

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Measure and record ride heights as described on page 4.
3. Disconnect the front track bar and discard Retain mounting bolts. (Fig 1)

SPECIAL TOOLS

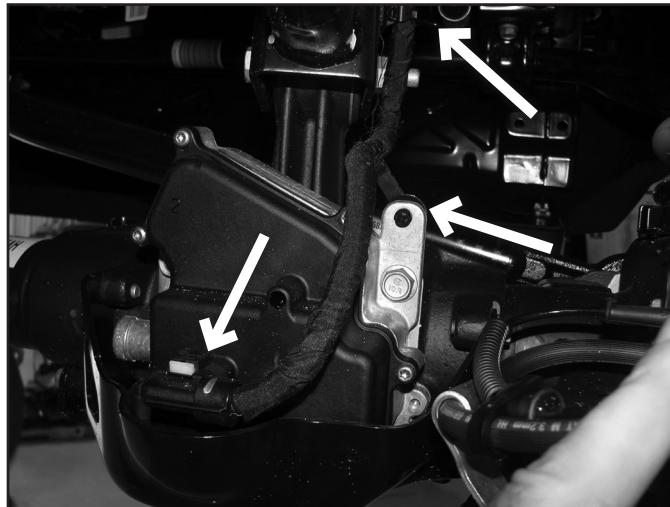
Rotary Grinder or carbide burr for alignment cam installation

FIGURE 1



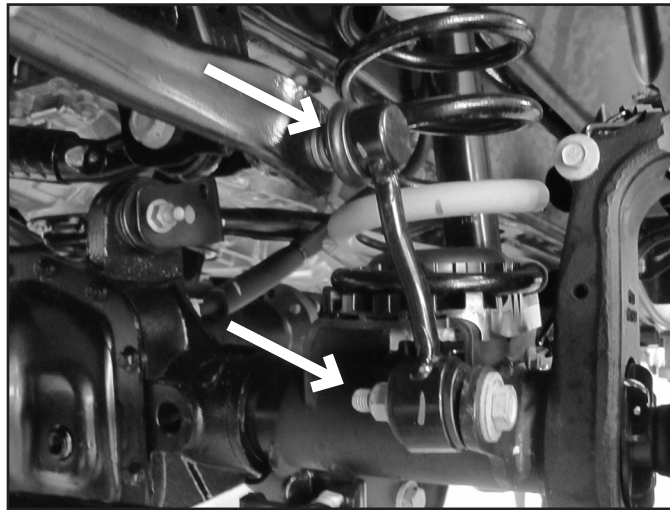
4. Raise the front of the vehicle and support the frame with jack stands behind the front lower control arm pockets.
5. Remove the wheels.
6. Disconnect the central axle disconnect (CAD) from the front axle as well as the two clip holding it to the axle. Rubicon models, disconnect the locker wire harness from the axle (Fig 2)

FIGURE 2



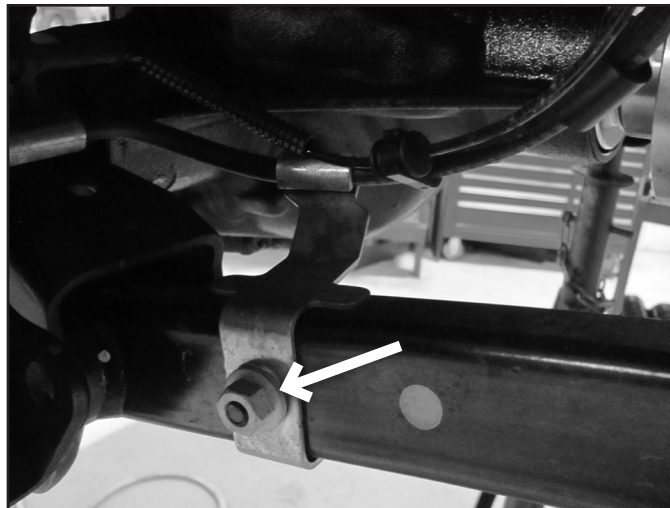
7. Disconnect the OE front sway bar links from the sway bar and the axle (Fig 3). Save lower hardware.

FIGURE 3



8. Disconnect the brake lines from the control arms to allow enough slack for coil removal (Fig 4). Support the front axle with a hydraulic jack. Remove the front shocks from the vehicle. Retain upper and lower mounting hardware.

FIGURE 4



9. Lower the front axle and remove the coil springs from the vehicle. Use care not to over extend the brake lines, or driveshaft.
10. Place a provided bump stop extension inside one of the new front coil springs and install the spring in the vehicle. Rotate the spring until it is seated properly in the axle mount. Ensure the upper coil seat pin aligns with the hole in the frame.
11. Attach the bump stop extension to the hole in the spring perch hole using the 3/8" x 3-3/4" bolt, washers, and serrated flange nuts (BP 843). Torque bolt to 29 ft-lbs. Repeat the spring/bump stop installation of the other side of the vehicle.




Tip *On the passenger side it may be easiest to remove the brake line bracket from behind the coil mount to gain better access to get the nut started on the bolt for the bump stop.*

12. Install the hourglass bushings in the shocks. Shorter ones for the front with the sleeve on the lower mount and the stepped spacers on each side of the upper mount. Fox shocks install with the body up, NX² shocks install with the body down. Using the factory hardware, torque the upper and lower bolts to 52 ft-lbs plus 55 degrees.
13. Adjust both quicker disconnects to the minimum length approximately 8" and tighten the jam nuts. Insert the longer sleeves into the upper bushing (male end) and slide the polyurethane spacer onto the upper sleeve so it will mount towards the swaybar. The links will be installed with the grease fittings forward.

IMPORTANT: Bushing cradles at both ends of quicker disconnect must remain parallel with each other when Jam Nut is tightened.

14. from the vehicle. Use care not to over extend the brake lines, or driveshaft.

15. Place a provided bump stop extension inside one of the new front coil springs and install the spring in the vehicle. Rotate the spring until it is seated properly in the axle mount.
16. Attach the bump stop extension to the axle through the hole using a 3/8" x 2-3/4" bolt, nut, and 3/8" USS washers (BP 840). Torque bolt to 30 ft-lbs. Repeat the spring/bump stop installation of the other side of the vehicle.

 **Tip** *On the passenger side it may be easiest to remove the brake line bracket from behind the coil mount to gain better access to get the nut started on the bolt for the bump stop.*

17. Install the hourglass bushings in the shocks. Shorter ones for the front with the shorter sleeve on the lower mount and the longer sleeve with nylon spacers on each side of the upper mount. Fox shocks install with the body up, NX² shocks install with the body down. Using the factory hardware, torque the upper and lower bolts to 60 ft-lbs.
18. Adjust both quicker disconnects to the minimum length approximately 8" and tighten the jam nuts. Insert the longer sleeves into the upper bushing (male end) and slide the polyurethane spacer onto the upper sleeve so it will mount towards the swaybar. The links will be installed with the grease fittings forward.

IMPORTANT: Bushing cradles at both ends of quicker disconnect must remain parallel with each other when Jam Nut is tightened.

19. 2024 Models: Use the larger ID sleeves that will accommodate 14mm hardware
20. Using the provided 12mm x 75mm bolts, washers, and nuts loosely fasten the sway bar links to the sway bar with the bolts going from the outside towards the frame (Fig 5).
21. 2024 Models: Use the larger 14mm hardware found in bolt pack J172

FIGURE 5



Rubicon models have a factory electronic disconnect system. Follow these steps 15-20 to solid mount your sway bar links.

22. Set the sway bar into disconnect mode for ease of installation of the links to the axle.
23. Locate the 1-1/4" sleeve and insert it into the passenger side disconnect bushing.
24. Insert the 1/4" thick spacer and disconnect into the original sway bar link location. It may be necessary to slightly open up the link opening for ease of assembly.
25. Adjust the length of the quicker disconnect to 8". Fasten the link to the axle with the original hardware.

FIGURE 6



26. Install the remaining longer sleeve on the driver side and slide the polyurethane spacer onto the sleeve so it will mount towards the axle mount tab. Install the quicker disconnect to the inboard side of the axle tab with the original sway bar link hardware.

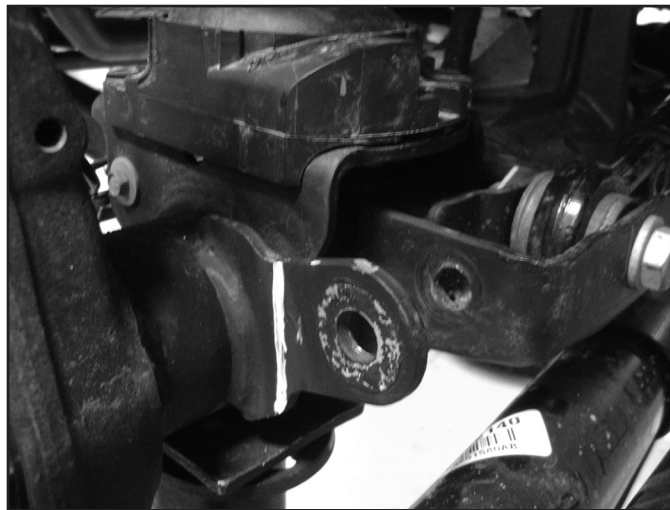
Note: If the link length was adjusted for the passenger side, match the length on the driver side link.

27. Torque the upper and lower hardware to 65 ft-lbs

NON-RUBICON MODELS FOLLOW STEPS 21-26

28. Non-Rubicon Models Only: Measure back 1-1/4" from the center of the sway bar link hole or just past the weld at the axle and make a vertical cut line. Cut off the tab at the mark and paint exposed metal.

FIGURE 7

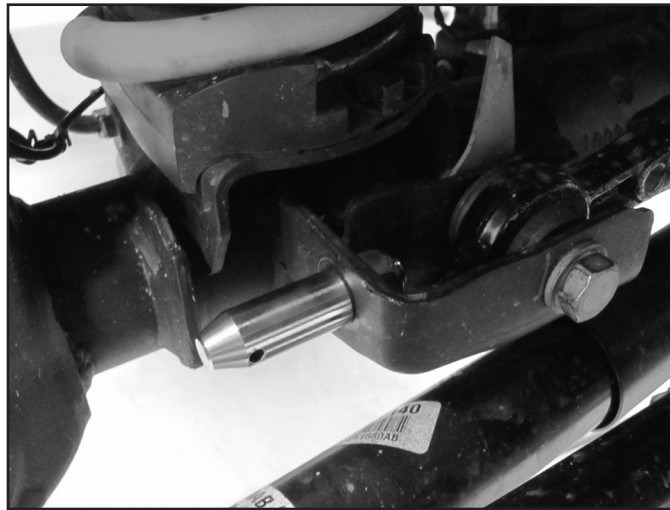


29. Attach the short mounting post into the original sway bar link mount hole on the track bar bracket. Tighten the post ensuring the click pin hole is horizontal or parallel with the ground. Tighten to 65 ft-lbs. (Fig 8)

Note: Apply a drop or spray of lubricant before threading on the nut. (Anti-seize, Oil, or Graphite all work)

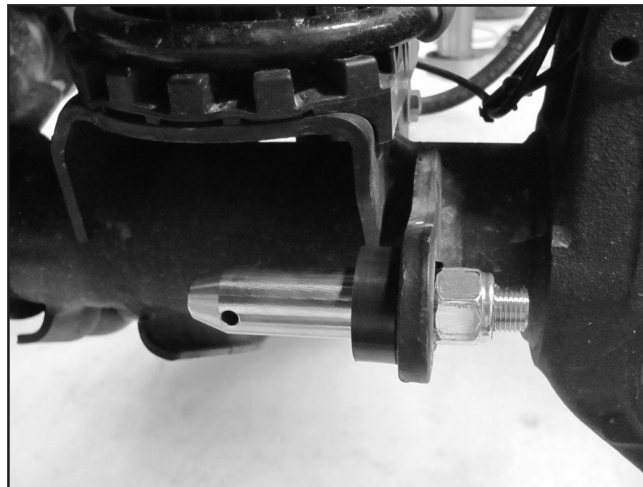
Note: A small screwdriver or punch inserted into the pin hole will keep the post from turning as you tighten it.

FIGURE 8



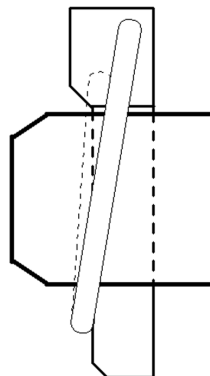
30. Attach the long mounting post with polyurethane spacer into the factory sway bar link mount. The stud should point towards the center of the vehicle. Tighten the post ensuring the click pin hole is horizontal or parallel with the ground. Tighten to 65 ft-lbs. (Fig 9)

FIGURE 9

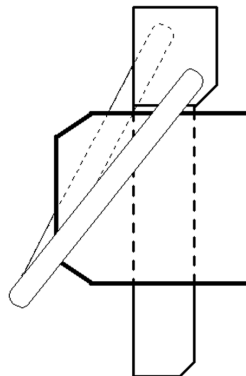


31. Torque the quicker disconnect to sway bar mounting bolts to 65 ft-lbs.
32. Insert click pins as illustrated to secure.

CORRECT



WRONG

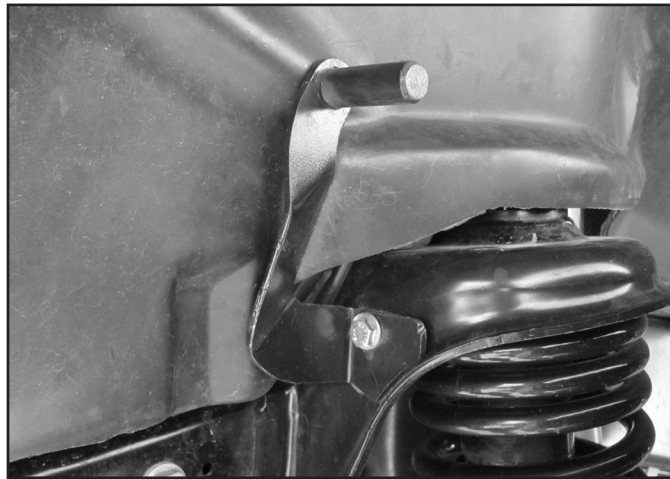


When properly installed, the ring on the Click Pin will "snap" against the shaft of pin. When installed backwards, the ring does not fit snugly against shaft.

ALL MODELS

33. Install the retention brackets using the provided 5/16" bolts into the factory hole in the front of the coil bucket as shown. These are designed to slightly form to the edge of the coil bucket to hold them in place.

FIGURE 10



34. This kit comes with optional alignment cams to regain the caster that was lost from the lift. With the front axle still support with a jack, loosen all 4 lower control arm bolts and remove the driver's side lower control arm bolt at the axle. The OE lower control arm mounts designed for alignment cams. The section behind the bolt must be removed to use the cam washers supplied in this kit. Special tools are made to perform this operation but are not necessary. The perforated sections can be removed most easily with a carbide burr or rotary grinding tool. Only the rear portion of the cam slot must be removed (Fig 3). Hint: Position the alignment cam between the slots and in line with the original hole to mark area that needs to be removed.

Note: Adjustable cams are required if you are NOT installing adjustable control arms.

FIGURE 11



35. When the perforated sections are removed from the lower control arm mount, reinstall the control arm to the axle with cams on factory bolt. Rotate the cams so that the bolt is as far towards the 'rear' of the slot as possible. Just snug the cam hardware so that the cam washers are retained within the stops. Final cam bolt torque will be completed with the weight of the vehicle on the suspension. (Fig 4)

FIGURE 12




36. Repeat cam washer installation on the passenger side.
37. Reattach the brake lines to the control arms, and any axle wire harness disconnected during the install.

ADJUSTABLE TRACK BAR INSTALL

38. Thread the hex adjustment collar all the way in. Then, thread out the axle side bushing until the eye to eye measurement is 33-1/4".

Note: This length is a starting point. Final adjustments to be made later.

39. Install the new track bar on the vehicle, installing frame side first. Ensure the gusset plate on the axle side is on top.

 **Tip** *The preferred method to aligning the axle side bolt is to have an assistant turn the steering wheel in small increments to shift the chassis. If working by yourself, a ratchet strap can be used.*

40. Set the length of the track bar by turning the hex adjustment collar. If necessary, a 1-1/2" wrench or accessory BDS129601 can be used. For reference, the factory length is 33-5/8" measured from eye to eye. Make adjustments as necessary to center the axle from side to side.


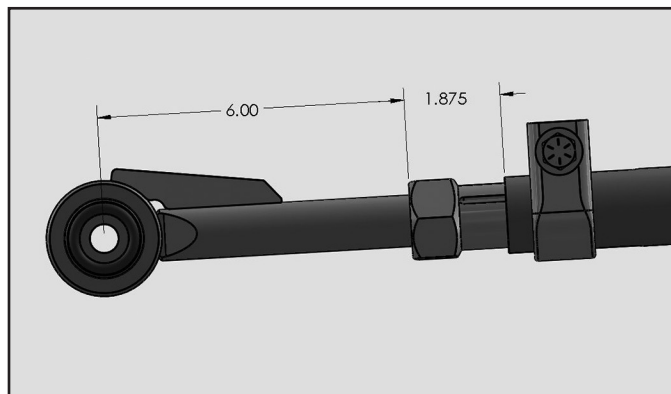
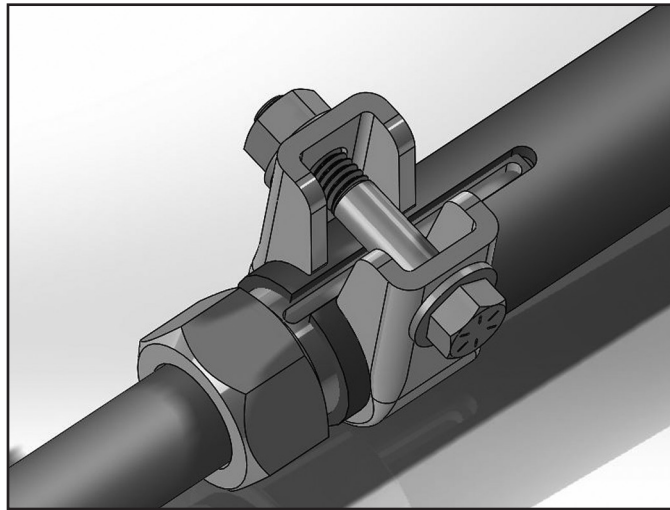
 **Caution** *In order to ensure proper thread engagement, do not extend the axle side bushing past 6", and do not extend the hex adjustment collar past 1-7/8".*

FIGURE 13



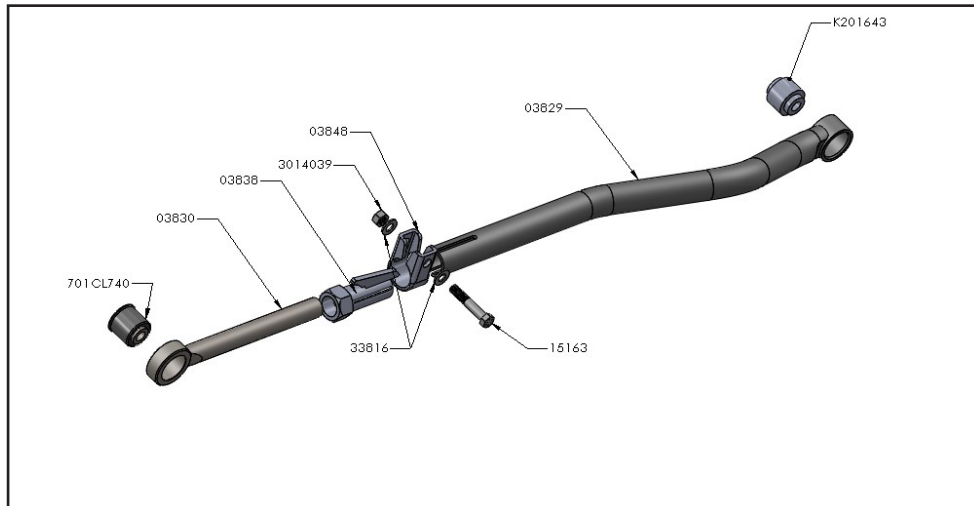
41. Ensure that the clamp is located 1/2" from the end of the tube, facing up. This is to avoid contact with other suspension/ steering components. Also ensure that the clamp is centered upon the slit on the end of the tube. Both the slit on the tube and the slit on the hex adjustment collar must be perfectly aligned. This is illustrated in Figure 14 below.

FIGURE 14



42. Using a 5/8" socket and 11/16" wrench, tighten the pinch bolt to 40 ft-lbs.

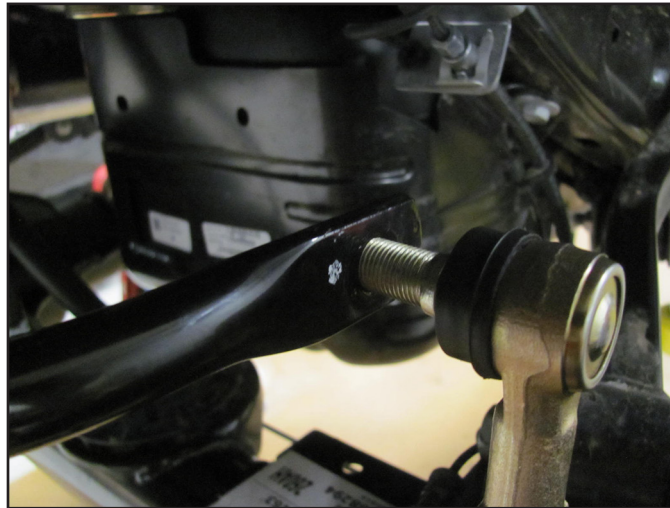
FIGURE 15



REAR INSTALLATION

43. Disconnect the track bar at the axle with the vehicle still on the ground. Retain factory hardware and nut tab.
44. Raise and support the vehicle with jack stands positioned in front of the lower suspension arm brackets. Remove the tires.
45. Remove the sway bar links from the axle and sway bar (Figure 16)

FIGURE 16



46. Remove the rear inner fender liners by removing the 3 bolts to gain access to the upper shock bolt .
47. Support the axle with a jack under the center of the differential and remove the shocks from the frame and axle, Retain factory hardware.
48. Lower the axle enough to remove the factory springs. Note the orientation of the upper spring isolators. Make sure there is adequate slack on all brake lines.

Note: Before installation be sure to transfer the coil wrap from the factory coils onto the upper windings of the new coils.

49. Install the shorter pair of coil springs with the larger windings on top into the rear of the vehicle with the orientation similar to stock. The upper isolators have a locating pin that fits into a hole in the frame. Raise the axle to compress the springs enough to hold them in place.
50. Install bushings and sleeves into the rear sway bar links, Install links to the frame with factory hardware, Install links to sway bar using included hardware (BP913). (Figure 17) Torque M12 hardware to 60 ft-lbs, torque factory hardware to 55 ft-lbs

FIGURE 17



51. Install the rear bump stop blocks using 5/16" hardware (BP 839) (Figure 18) Torque to 20 ft-lbs

FIGURE 18



52. Install the hourglass bushings and sleeves into the shocks. Fox shocks install with the body up, NX² shocks install with the body down. Install using the factory hardware, torque the upper and lower bolts to 89 ft-lbs

Note: The bushings will have to compress slightly to get the shock in the mount, try walking the shock into place by tilting the shock back and forth against the spacers while pushing the shock up into place..

53. Re-install inner fender.
54. Install the wheels and torque lug nuts to manufacturer's specifications.
55. Lower the vehicle to the ground and bounce the front to settle the suspension. Torque the front control arm bolts to 103 ft-lbs plus 145 degrees.
56. Attach Front track bar to axle and tighten front trackbar mounting hardware to the proper torque specifications, 52 ft-lbs plus 115 degrees on the frame end and 52 ft-lbs plus 155 degrees on the axle end.
57. Reattach the rear track bar to the axle with factory hardware. Torque the track bar bolt to 100 ft-lbs.
58. Double check all hardware for proper torque.
59. Lubricate all grease zerk fittings on the Quicker Disconnects using common wheel bearing grease or equivalent.
60. Check all fasteners after 500 miles and at regularly scheduled maintenance intervals.



WE WANT TO SEE YOUR RIDE!

Grab photos of your BDS-equipped truck in action and send them in for a chance to be featured. Send it in to our Bad Ass Rides customer gallery at bds-suspension.com/bar and post them on the BDS Fan Page on Facebook at facebook.com/BDSSuspensions. Don't forget about your BDS swag! BDS offers t-shirts, hoodies, decals and more available on the BDS website or through your local BDS distributor.

TIME TO HAVE SOME FUN

Thank you for choosing BDS Suspension.

For questions, technical support and warranty issues relating to this BDS Suspension product, please contact your distributor/installer before contacting BDS Suspension directly.

Component	Torque (FT-LBS)
Front Bump Stop	29
Upper Shock Hardware	52 plus 55 degrees
Lower Shock Hardware	52 plus 55 degrees
Front Sway Bar Link Bolts	65
Front Quick disconnect Post	65
Front Driveshaft Flange	89
Lug Nuts	130
Front Lower Control Arm	103 plus 145 degrees
Front Track Bar Pinch Bolt	40
Front Track Bar at Frame	52 plus 115 degrees
Front Track Bar at Axle	52 plus 155 degrees
Rear Sway Bar Links (12mm)	60
Rear Sway Bar Links (OE Hardware)	55
Rear Upper Shock Hardware	89
Rear Lower Shock Hardware	89