





Before starting installation procedure please read <http://evomfg.com>Returns-Warranties-Shipping>

**CAREFULLY READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL AND KEEP FOR FUTURE REFERENCE. IF YOU HAVE ANY QUESTIONS ABOUT THE PRODUCT CALL EVO MANUFACTURING. FAILURE TO FOLLOW GUIDELINES COULD RESULT IN MALFUNCTION OF PARTS OR INJURY. PLEASE HAVE A TRAINED PROFESSIONAL ASSIST WITH OR INSTALL ALL PRODUCTS. INSTALLING EVO MFG PRODUCTS OR KITS DEMANDS SPECIFIC KNOWLEDGE, TOOLS AND EXPERIENCE. GENERAL KNOWLEDGE OF HOW TO USE LATER SPECIFIED TOOLS AND/OR LIMITED EXPERIENCE WITH EVO MFG PRODUCTS MAY NOT BE ENOUGH TO PROPERLY COMPLETE THESE TASKS. SOME OF EVO MFG PRODUCTS MAY REQUIRE TWO OR MORE PEOPLE TO INSTALL SAFELY AND CORRECTLY. DO NOT ATTEMPT ALONE, ALWAYS ENLIST THE HELP OF TRAINED PROFESSIONAL WHEN NEEDED.**

**Notes: Set Up Before installation**

**Drilling is required.**

**EVO MFG recommends this installation be performed by a trained professional.**

**Always use approved safety gear/glasses.**

**Wheel backspacing adjustments may be required.**

**Keep all mounting bolts loose (installed but not torqued) we will torque later at the end of complete installation**

**READ BEFORE INSTALL:**

Re-torque all bolts after first 100 miles

High Clearance Fenders recommended, tire size dependant

Re-torque all bolts every 3000 miles and after every off-road use

It is generally a good idea to apply liquid thread lock to all threaded bolts.

ALWAYS wear safety glasses and other approved safety gear when working on a vehicle.

All supplied bolts torqued according to chart at end of instruction.

It is recommended all installation be performed by a trained professional. Some modification may have to be done.

Paint all unfinished surfaces after install is complete.



Parts included: Table below shows JT Gladiator Rear Coilover Suspension Kit.

Description	#	Part #	Quantity
King Shocks Pair	1		1
Driver Rear Shock Mount	2	EVO-12474B	1
Pass Rear Shock Mount	3	EVO-12475B	1
Rear Trackbar Bracket	4	EVO-12423B	1
Trackbar Bracket Hardware	5	EVO-770078	1
JT Rear Brake Line	6	EVO-600170	1
JT Rear Bumpstop	7	EVO-12420	2
Carrier Bearing Spacer	8	EVO-12440	3
Rear Swaybar Link	9	EVO-12027RB	2
Swaybar Bushing	10	EVO-600077	4
Bushing Tube	11	EVO-20032	4
Crush Tube	12	EVO-20038	1
Rear Coilover Hardware	13	EVO-770093	1





#### **Recommended Tools:**

- Impact
- Standard sockets
- Metric Sockets
- Drill and extra-long 25/64" bit



#### **Safety Steps for installation**

- For installing EVO MFG products always use wheel chokes to block rear tires from rolling.
- Always make sure you have everything necessary ready before install.
- If you have to, carefully lift front of vehicle by front frame rails extending suspension until tires leave the ground, place frame on approved jack stands for vehicle. Verify all lines/wires are not over extended.
- Remove tires if needed for easier install.
- Make sure to wear safety equipment (eye protection, hand protection, foot protection etc.) at all times during installation.
- Make sure all safety precautions have been taken.
- Always check and replace any part of vehicle that is worn or broken before starting install.
- Do not mix anything EVO with weaker alternatives.
- It is generally a good idea to apply liquid threadlock to all bolts.
- Tighten included hardware to torque specifications in bottom table unless it is otherwise specified, factory bolts should be torqued to factory Jeep specifications.

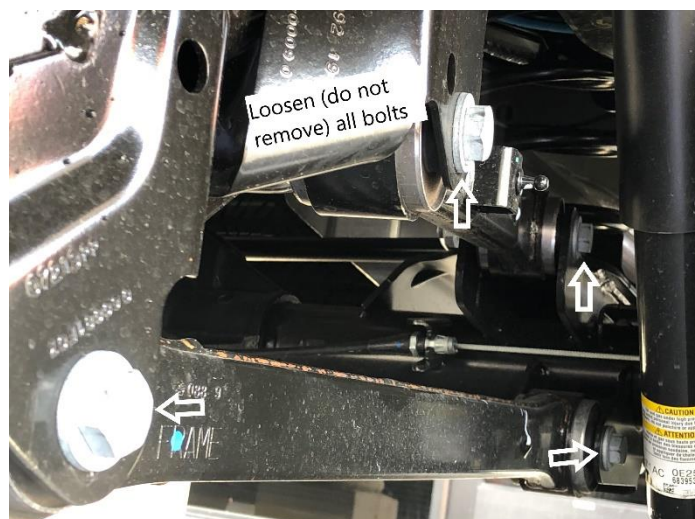




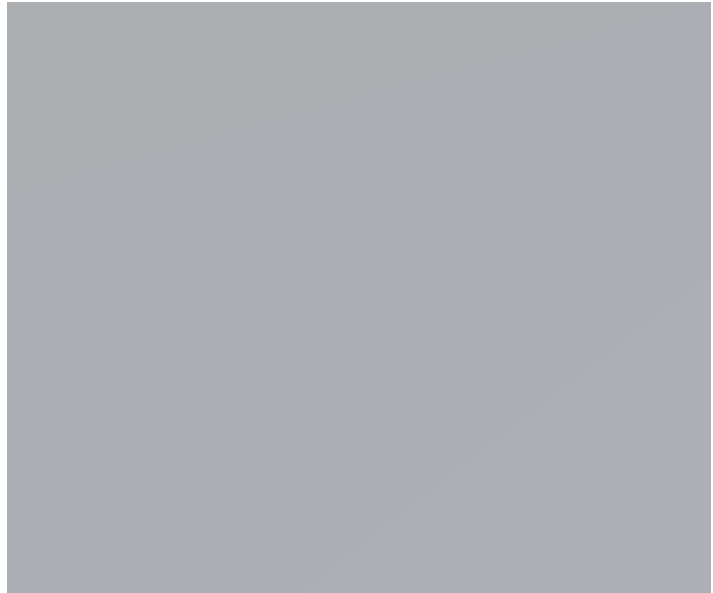
## INSTALL

After parking Jeep on a flat surface, chalk wheels and engage parking brake.

1. While safely parked on ground. Loosen all rear control arm and trackbar bolts at both axle and frame. **DO NOT REMOVE.** Just loosen a few turns to remove bolt compression on control arm bushings.



2. Carefully lift rear of vehicle with jack by frame until tires leave the ground by a few inches minimum.
  3. Carefully and securely set vehicle on weight approved jack stands. It is important that the vehicle is high enough that the tires are at least few inches from the ground as the axle will need to be lowered to remove and install parts.
  4. Remove rear wheels.
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5. Rubicon Models: At differential, carefully pull outward on red clip at axle disconnect until it stops. It should move out about a 1/8". Then depress clip and disconnect clip/connection.
  6. Remove breather hose from differential connection. **Vehicle wiring and hoses vary, make sure all wires, hoses, lines etc. from frame to axle are freed up giving ample length to move axle downward as needed before proceeding, verify wiring/hoses etc. do not get stretched while lowering axle during this installation.**
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7. While vehicle is on jacks, remove the carrier bearing bolts. Add the supplied 3 carrier bearing spacers in between carrier bearing bracket and mounting holes on crossmember. Use supplied M10 bolts to mount the carrier bearing.

**Apply liquid thread lock to all bolts**



8. Remove both driver and passenger side swaybar link bolts at axle and swaybar, remove swaybar links and rotate sway down and out of the way.

**There is a 6mm allen key inside both driver and passenger side rear lower sway bar bolts. Tighten the allen head to allow nut to unscrew.**





Vehicle wiring and hoses vary, make sure all wires, hoses, lines etc from chassis to axle are freed up giving ample length to move axle downward as needed before proceeding, verify wiring/hoses etc do not get stretched while lowering axle in next steps.

9. Lightly jack front driver side axle tube slightly. Support driver side axle with jack stand
10. With axle slightly supported remove both shock bolts from axle.
11. Repeat this step on passenger side.

**Varying axle jack tension to the right amount will alleviate load on the bolt and allow it to freely slide out.**



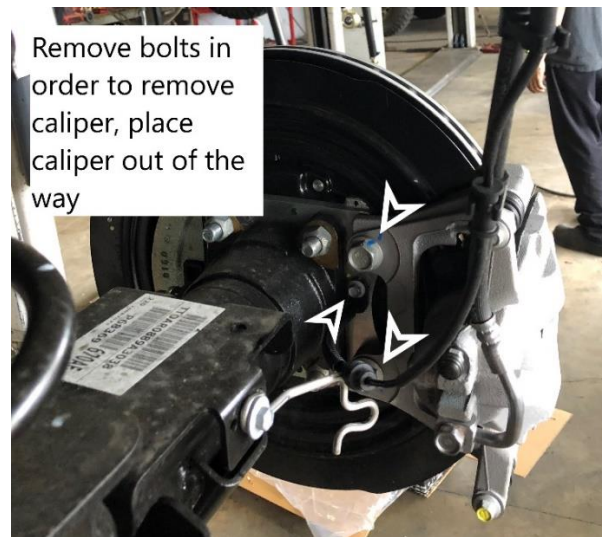
12. Remove rear trackbar bolt at axle. Retain hardware

13. Move trackbar up and out of the way.

14. Remove the two bolts holding caliper to axle, then remove the smaller speed sensor bolt and pull the sensor out of brake assembly.

15. Pull off calipers and sensor and support caliper assembly by frame. **Do not hang calipers by brake line.**

**Do not remove brake line at this time.**





16. Detach brakeline and wire retaining clips from the inside of frame where rear shock and bracket will be installed.

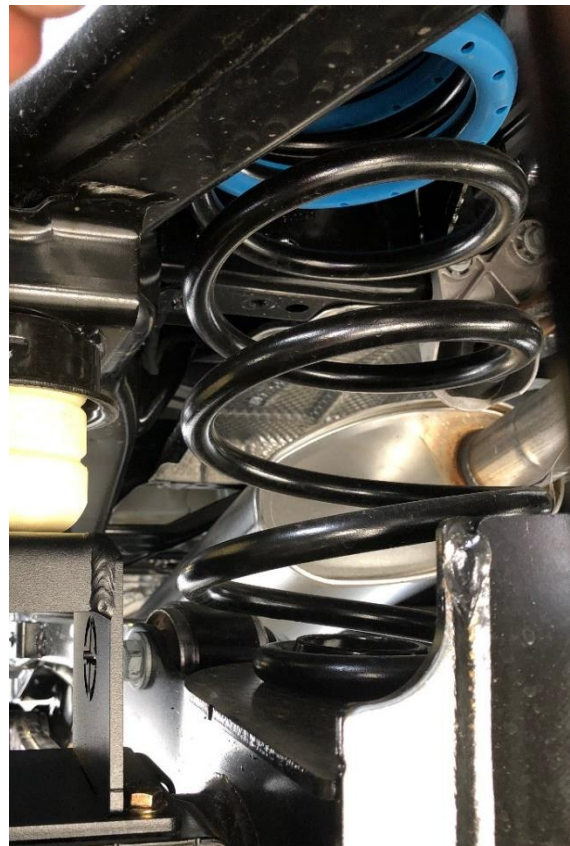
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17. Lower jack under axle giving room to remove rear springs. Be sure that springs can be easily removed, forcing the springs out when under any load is not recommended.

Repeat on passenger side

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18. Using a 25/64" drill bit, at a slight downward angle, drill through both sides of frame. **Make sure drill is angled in such a way that it wont drill into the subframe or brake lines on inner side of frame.**

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19. Using a 16mm retracting wrench remove factory bolt, retain for later use.

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20. Insert rear coilover support tower over factory rear shock mount at frame. And forward body mount stud.

Light trimming of pinch seam will be required. Reference picture.

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21. Loosely reinstall the body mount bolt, using a 16mm socket, through the EVO MFG reinforcement bracket and into the body mount bracket.

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22. Jack axle up until shock bolts line up with axle mounting holes. **Be very aware that vehicle does not lift off chassis/frame jack stands while jacking.**

23. Insert factory bolt and loosely attach nut. Follow factory torque specs for shock bolts.

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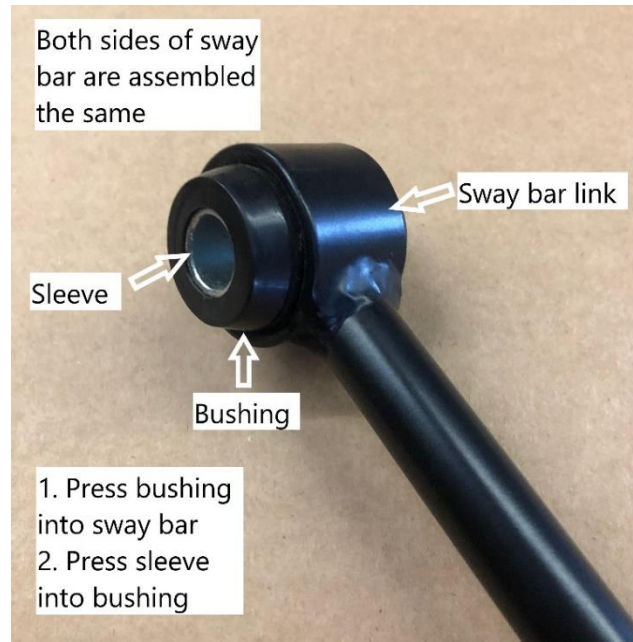
24. Tighten supplied 3/8" (rearmost) bolt and nut. Use table at bottom of instruction for proper torque specs.

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25. Assemble supplied rear swaybar links.  
Using light oil such as WD 40, lubricate inner surface of link loops. Tap or vice in supplied rubber bushings. Lubricate inner surface of rubber bushings. Tap or vice in supplied swaybar tube sleeves.

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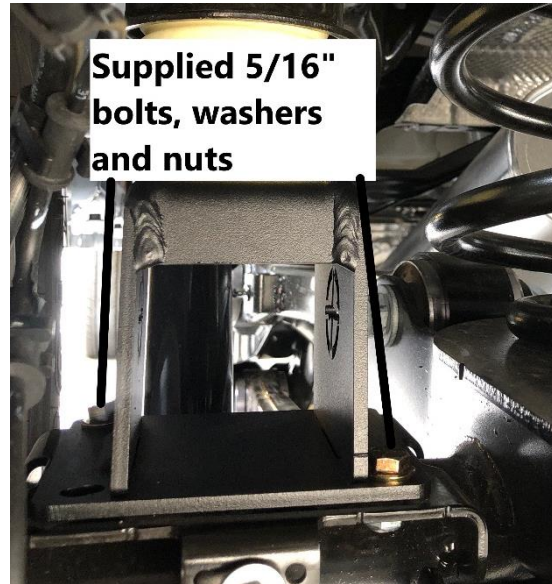


26. Install sway bars using factory hardware.  
Make sure axle side sway bar links are attached on inside of factory sway bar.

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27. Install rear bump stop extensions to axle pads on both passenger and driver side axle pads using supplied 5/16" x .75 bolts, washers and nuts.
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28. Remove rear trackbar bolt at axle. Move trackbar down under/out of factory bracket. Swing trackbar above axle bracket.
29. Take EVO bracket with U bolt side on the right, place it on the axle tube, slide the EVO bracket onto factory bracket from right to left. **EVO bracket slides INTO factory trackbar bracket not over the top.**
30. At lower original bolt mounting location, insert supplied crush sleeve into bracket and loosely install supplied bolt at this location. Loosely install supplied U Bolt at axle tube.
31. On driver side of bracket with bracket loosely installed, drill 3/8" hole through factory bracket. Install supplied hardware.
32. Torque all bracket bolts.
33. Insert trackbar into new higher trackbar location from the top down. Loosely install factory trackbar bolt. Do not torque trackbar bolt at this time. This should be done on the ground at ride height later in this installation.
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34. Reinstall the caliper and speed sensor on both sides of axle. Tighten bolts to Jeep specifications.

Remove banjo bolt from caliper (will be installing EVO MFG brake line)

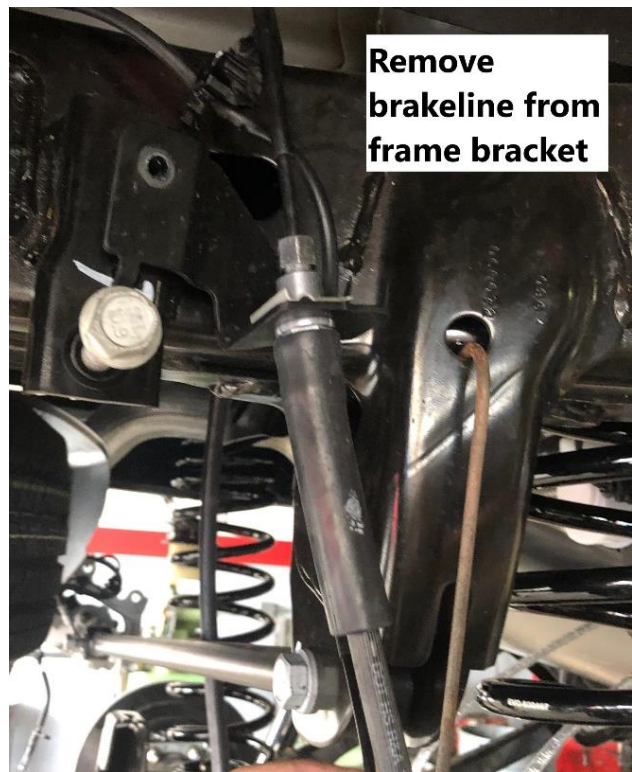
**Note:** Carefully move brake line. Do not crimp/pinch line. Always check for leaking fluids and that brakes work correctly.

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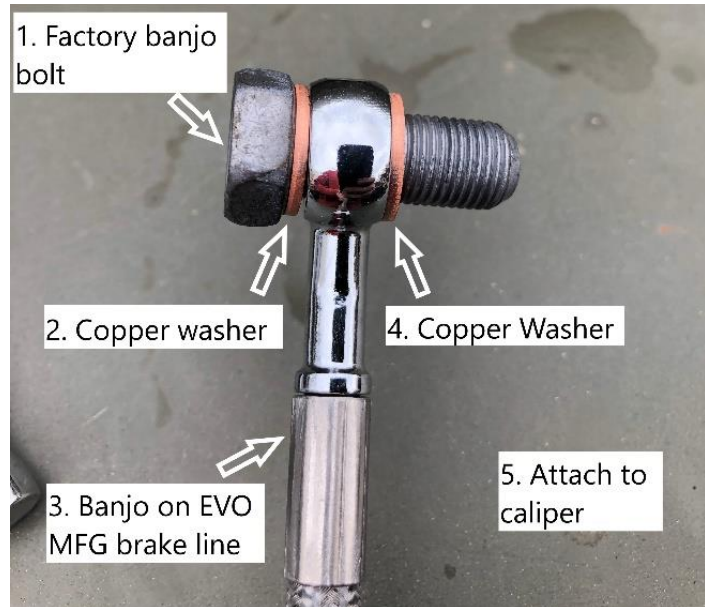
35. Moving swiftly/carefully separate the hard line from the bracket/hose on frame by holding hardline with a 12mm wrench and unscrewing the rubber hose with a 16mm wrench.

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36. Install new copper crush washers on to the factory banjo bolt, Insert the factory banjo bolt with copper crush washer on through the banjo of the new stainless-steel brake line, then slip another copper crush washer on.

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37. Using a 15mm socket, secure your new stainless steel break line to the break caliper using factory hardware, tighten the banjo bolt to 276 in. lbs. of torque (at caliper, hard line elbow extends towards front of vehicle and angled up as much as possible.)

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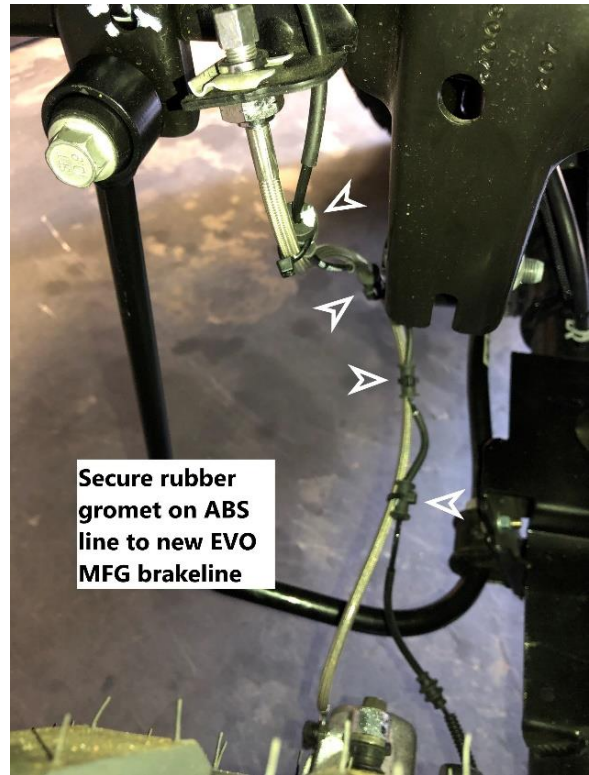
**Note:** Carefully move line. Do not crimp/pinch line. Always check for leaking fluids and that brakes work correctly. Bleeding brakes is extremely important to be done properly. Follow factory specifications in doing so. Consultation/should be performed by a trained professional mechanic.



38. Using zip tie loosely secure rubber gromet on abs line to new brake line once installed.

Do NOT tighten more than a few clicks after being loosely secured.

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39. Once set on ground, roll vehicle about 10 feet at a slow pace to let all suspension components to settle.

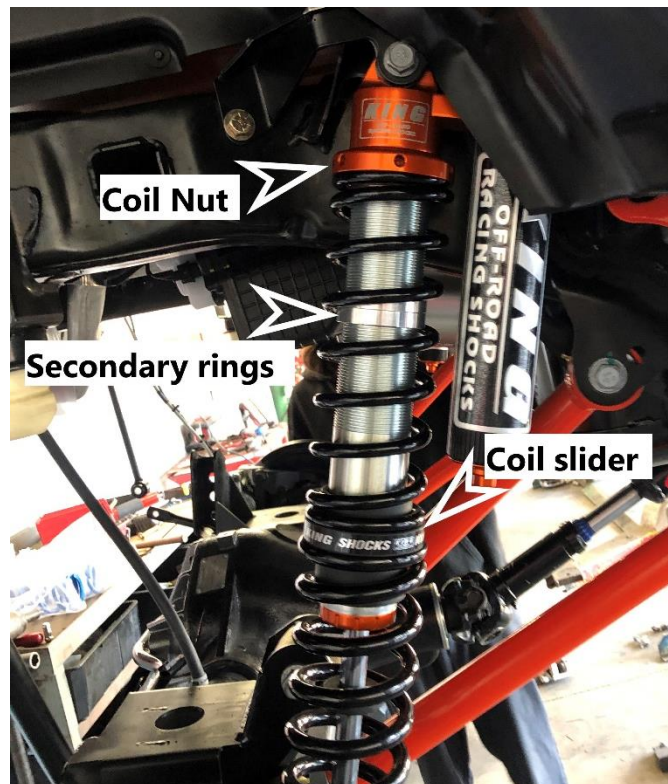
40. Put in park and turn vehicle off, chalk tires.

Reconnect all disconnected wiring and breather hoses. Verify adequate length of all wiring/hoses at full drop of suspension and adjuster as needed.

41. Once vehicle is on ground under its own weight. Access lift requirement/adjustment needed (“I would like it 1” higher/lower”). If changes in lift need to be made. Carefully lift vehicle up by front frame until tires leave the ground, extending suspension fully and carefully set on jack stands. Using Allen wrench, loosen set screw on coil nut, do not remove set screw.
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42. Using a spanner tool or other, turn coil up to lower the body or turn down to raise the body. At this point additional lift will be roughly 1 to 1 on your previous assessment of lift. Moving coil nut 1” will roughly raise or lower the body the same distance. Most setups will have the coil nut threaded down between roughly 1-2 inches.
43. Tighten coil nut set screw located on coil nut.
44. Carefully lift vehicle, remove jack stands lower vehicle down to the ground.
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Tighten all control arm/trackbar/all other bolts to spec.

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## **Set-Up and General Coilover Notes:**

Please read **before and after** installation: Included are things you should know before and after installation of coilovers and some final setup tips to maximize the performance advantages of coilovers.

Coilovers can tend to make some sliding sounds while driving. We are stepping into race car parts and some level of sound is to be expected.

Once final adjustments have been made on spring compression and the vehicle is at a lift/ride height that you are satisfied with. Rotate the top and bottom springs so that that each end of the top and bottom coil that rest on the coil slider are 180 degrees opposite each other. This will help balance the coil slider evenly and alleviate some of the associate noises. If this is unsatisfactory for your needs, there are aftermarket spring sliders that can be purchased additionally that will help alleviate this noise. Please give us a call for information on this accessory product.

Spring compression applied with the coil nut on top of the springs will VARY between all vehicles and may be different at all 4 corners. This is due to added and or removed weight to the vehicle. The fact that all 4 corners have different weights from the factory, added accessories and or removing factory components all play a part in the vehicles corner weight and are always varying. Do not be afraid to adjust each coilover spring nut differently on each corner.

We recommend if 3" or more spring compression/preload is needed to achieve your desired lift height, our HD Coilover Spring set should be used, they are sold separately, contact EVO MFG for more information. Lastly the passenger side is heavier and will require slightly more spring compression.

Achievable lift height will vary between each vehicle due to the added and/or reduced weight of the vehicle. Additionally, actual lift is subjective. All Jeeps come from the factory with different heights based on accessories and spring packages etc. General lift increases are made by an average and/or an understanding of what a 3" or 4" lift etc. should be. Therefore in order to achieve the desired height you are looking for, spring changes may be needed and are sold separate to our standard kit.

We have done extensive testing on these kits with many variables and know we have an excellent spring package straight out of the box, but your vehicle and/or needs may vary and therefore a spring change may be needed to accomplish your desired setup.

Once the desired right height is achieved, lower the 2 secondary coil rings (2 silver rings inside the top coil spring) so that there is a  $\frac{1}{2}$ " gap between the bottom of the secondary rings and coil slider. The 2 secondary coil rings can be moved by a tap with a flat head screw driver against the machined groove to break the 2 loose from each other. Once loose, thread them down paying attention that there is a rubber O-ring between that will need to be pushed/rolled down as well. Set the lower ring at about  $\frac{1}{2}$ "-1" distance from the coil slider, tighten the 2 secondary rings towards each other with flathead screw driver and tap of a hammer. This  $\frac{1}{2}$ "-1" is a rough dimension and can be adjusted to your liking and additional payload carrying requirements.





**After Install:**

- Tighten all bolts securing purchased parts to specified locations.
- After completing installation using provided instructions, go through all steps again to make sure nothing was missed, not tightened or improperly assembled.
- Some components may need to be purchased separately.
- Check turn signals, headlights, fog lights (if applicable), taillights, blinkers and windshield wipers.
- Adjust mirrors, speedometer and headlights if needed.
- Make sure all gauges are fully operational.
- Drive the vehicle slowly for a couple minutes, looking and listening for abnormal noises while driving. After modification of a vehicle there will be differences in driving experiences and capabilities, be mindful of that.
- Inspect and Retorque all Bolts after 500 miles of completed installation and regularly thereafter.
- Some modification may be required.

**Recommended Torque:**

Size	Grade 2		Grade 5		Grade 8		18-8 S/S	
	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine
<b>#4*</b>	-	-	-	-	-	-	5.2	-
<b>#6*</b>	-	-	-	-	-	-	9.6	-
<b>#8*</b>	-	-	-	-	-	-	19.8	-
<b>#10*</b>	-	-	-	-	-	-	22.8	31.7
<b>1/4</b>	4	4.7	6.3	7.3	9	10	6.3	7.8
<b>5/16</b>	8	9	13	14	18	20	11	11.8
<b>3/8</b>	15	17	23	26	33	37	20	22
<b>7/16</b>	24	27	37	41	52	58	31	33
<b>1/2</b>	37	41	57	64	80	90	43	45
<b>9/16</b>	53	59	82	91	115	129	57	63
<b>5/8</b>	73	83	112	128	159	180	93	104
<b>3/4</b>	125	138	200	223	282	315	128	124
<b>7/8</b>	129	144	322	355	454	501	194	193
<b>1+</b>	188	210	483	541	682	764	287	289