



EVO Manufacturing

Jeep Wrangler JK/JKU

JK/JKU Rear Bolt On Coilover Kit

EVO- 1109B





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

This kit requires drilling and cutting of both metal and plastic.

Wheel backspacing adjustments may be required.

Cutting and Grinding required

EVO MFG recommends install by a trained professional.

***At a minimum the JK should be equipped with front adjustable lower control arms to adjust castor. Full control arm packages or long arm upgrade kits and steering upgrades are recommended.**

Aftermarket driveline may be necessary.

2012+ may require exhaust spacers, relocation, and /or custom to install.

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

**** IF INSTALLING COMPRESSION ADJUSTABLE SHOCKS. TRIMMING OF REAR EVO BRACKETS AND FACTORY SHOCK MOUNT WILL BE NEEDED AROUND ADJUSTMENT KNOB ON TOP OF SHOCK RESERVOIR. INSTALLER TRIM AS NEEDED ****

READ BEFORE INSTALL:

***Re-torque all bolts after first 100 miles. *Re-torque all bolts every 3000 miles and after every off road use.**

It is generally a good idea to apply Loctite 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 JK/JKU Bolt-On Coilover.

Description	#	Part #	Quantity
Rear Driver Mount Coilover	1	EVO-12025B	1
Rear Passenger Mount Coilover	2	EVO-12026B	1
Driver Rockstar Skid	3	EVO-10041B	1
Passenger Rockstar Skid	4	EVO-10040B	1
RCC Trackbar Bracket	5	EVO-12028B	1
RCC Trackbar Bracket Hardware	6	EVO-7700021	1
Brakeline Pack	7	EVO-600067	1





Recommended Tools:

- Allen set
 - Impact with standard sockets
 - Sawzall/Cut off wheel or similar
 - Drill and ½" bit
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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.
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REAR INSTALL

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

1. Carefully lift rear of vehicle with jack by frame until tires leave the ground by a few inches minimum.
2. 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.



Remove Rear wheels/tires

3. 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.
 4. 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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5. Support axle with jacks and remove rear sway bar end links from vehicle. (upper stud end on sway bar link has hex key on end of the stud to prevent rotation while removing nut).
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6. Remove both driver and passenger side shocks.
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7. Lower axle until springs can be removed. Remove rear springs and upper/lower coil isolators.
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8. Remove parking brake cable.



9. Using 15mm wrench, loosen small nuts on body mounts of JK from the middle of the JK to the rear. 2007-2011 JKs will have 3 sets of body mounts on both sides of frame. 2012+ will have 2 sets.



10. On driver side. Remove bolt between frame and body that holds gas filler tub to the body.



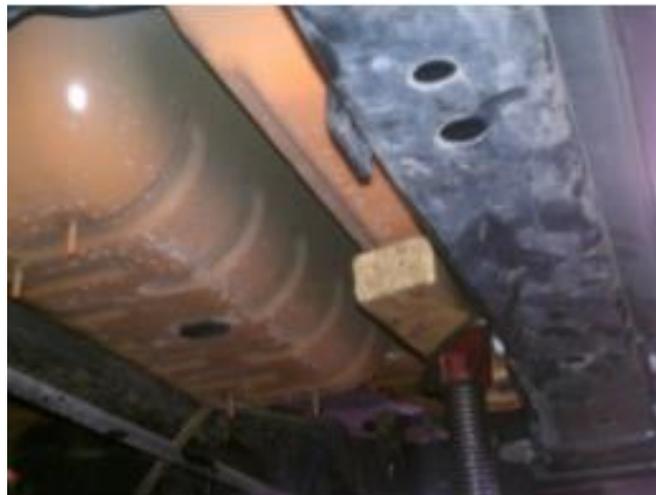
11. Remove muffler from vehicle. Loosen clamp just in front of axle on the exhaust. Spray lubricant on rubber hangers, pry hangers from frame.



12. On passenger side rear exhaust hanger at frame. Bend hanger upwards about $\frac{3}{4}$ " with pry bar.



13. Using a jack, carefully apply pressure to rear tub lifting rear of body from frame. There needs to be about a $\frac{1}{2}$ " gap between body and frame.



14. With rear body lifted from frame. On both driver and passenger side, insert rear upper strengthening bracket above original shock mount. If difficult to insert. Raise body more. On 2007-2011 JKs the front section of the bracket (2 slotted holes) needs to be inserted under the body mount flange. OR remove these two body mounts.



15. After strengthening bracket is inserted. Lower Jack, tighten all body mount bolts.



16. Remove driver rear lower control arm bolt at axle.
17. With a paint pen, mark 1.5" down from center of lower control arm hole in the factory axle bracket
18. Carefully, with a Cutoff Wheel/Reciprocating Saw, cut along line, all the way around the control arm pocket and factory swaybar tab.
19. Sand remaining shock tabs, swaybar tab, and cut surface smooth



Paint all exposed metal surfaces

20. Install driver side Rock Star as seen in the photo
 21. Install the 3/8" bolts, washers on both sides and lock nuts into the rear two holes on the driver side control arm bracket. The lower 3/8" bolt should be inserted from front to rear. The upper 3/8" should be inserted from the rear to the front.
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22. Reinsert lower control arm into the axle mounting brackets
23. Using the factory bolt, reinsert into factory hole with Rock Star brackets in place through control arm

Tighten 3/8" hardware to 40 ft-lbs

Repeat previous Rockstar steps on passenger side



24. Remove rear trackbar bolt at axle, leave trackbar bolt at frame installed
 25. Cut factory rear trackbar bracket at axle as shown. **Only remove the rear most part of the bracket.**
 26. Sand all cuts smooth with flat mounting plate.
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27. Install rear trackbar bracket as shown with supplied 9/16 bolt and u-bolts.

Recommended: Weld on rear trackbar bracket to axle where ever possible.

28. Reinstall trackbar into new higher location with factory bolt. **(torque to factory specifications once vehicle is on ground and at ride height.)**



29. Install bumpstop extension to axle. Angle of pad should be faced to forward of axle. Use supplied 5/16" hardware.



30. Using supplied socket head bolts, thread two mounting bolts into stock threaded frame bolts. This needs to be done in iterations. Walk the bracket up by threading one bolt a few turns then the other and continue until fully seated. Bolts need to go through 2 holes in the EVO upper strengthening brackets.



31. Install the supplied M10 nuts and washers to the shock bolts above the EVO strengthening plate.

Using bracket as locator.

32. On frame side, just below exhaust hangers, drill hole through frame with 1/2" drill bit.

33. Install supplied 1/2" bolt

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34. Install lower shock mounts to EVO Rockstars using supplied (from hardware bag) larger spacers, one on each side of shock. Do not use small spacers that may be attached to the lower end of the shocks. Use supplied M12 bolt.
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35. Remove Factory Swaybar from frame. Two bolts each side.
36. Install EVO MFG Rear Swaybar Relocation Spacers which relocates the OE swaybar back approximately 1". Use the 20MM Black Hex bolts included in the hardware pack to mount the relocation spacers through the larger unthreaded hole and into the OE swaybar mounting location. Use the shorter hex bolts w/ washer to thread swaybar to relocation holes.

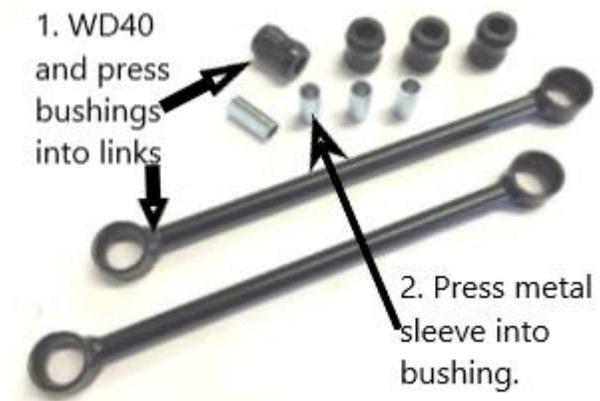
Repeat this for driver and passenger sides. (Note the last hole closest to the rear of the vehicle should be threaded).



37. Re-Install OE Swaybar to EVO MFG Swaybar Relocation Spacers using 2x 16MM Black Hex Bolts and a washer on each bolt. Repeat on opposite side of vehicle.



38. Assemble rear swaybar endlinks. Apply WD40 into endlink tube. Tap hourglass into endlink ends with mallet. Insert sleeve into center of hourglasses.





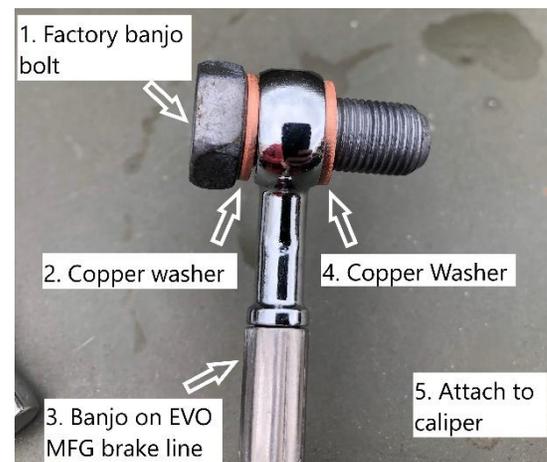
39. Moving swiftly/carefully separate the hard line from the bracket/hose on frame by holding hardline with a wrench and unscrewing the rubber hose.

40. Use a 12mm wrench to hold hardline and a 19mm wrench to secure your new stainless steel brake line to mounting bracket.

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.



41. 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.



42. Using a 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 rear of vehicle and angled up as much as possible.)





Check the fluid level in your master cylinder. Bleed brakes following factory procedures.

Install wheels/tires.

Carefully cycle suspension to make sure you have appropriate clearances.

Follow factory procedures on bleeding brakes.

Reinstall exhaust.

Turn spanner nut on top of coil spring all the way to the top. This is a starting point. This will vary on a lot of factors (added weight). Screw down if you want more lift. Added vehicle weight will make this vary.

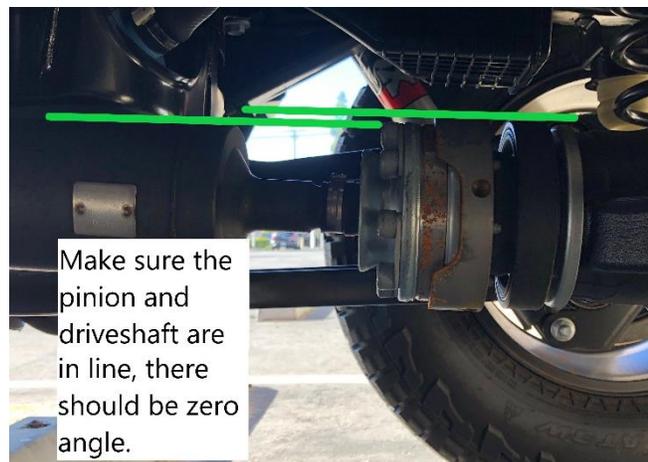
Set vehicle onto ground. Move vehicle forward and backwards a few feet each way while turning wheel to right and left to settle vehicle.

Verify desired ride height. If ride height is undesirable, carefully lift front or rear of vehicle by frame until wheels are off the ground. Turn spanner up to lower ride height, down to raise ride height.

Repeat previous steps until desired ride height is achieved, tighten spanner clamping bolt on coilover after desired right height is set (all 4 coilovers).



Once vehicle is on the ground, if you have the EVO MFG upper control arms then adjust them out until pinion is facing the transfer case. The angle of your driveshaft and angle of your pinion should have zero degrees difference between the two. **The driveshaft face and pinion face should be parallel with each other.**





**Clean and verify no fluid leaks from brake lines after brake application.
Torque all bonded rubber control arm and trackbar bushing while vehicle is
sitting on its weight.**

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 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.

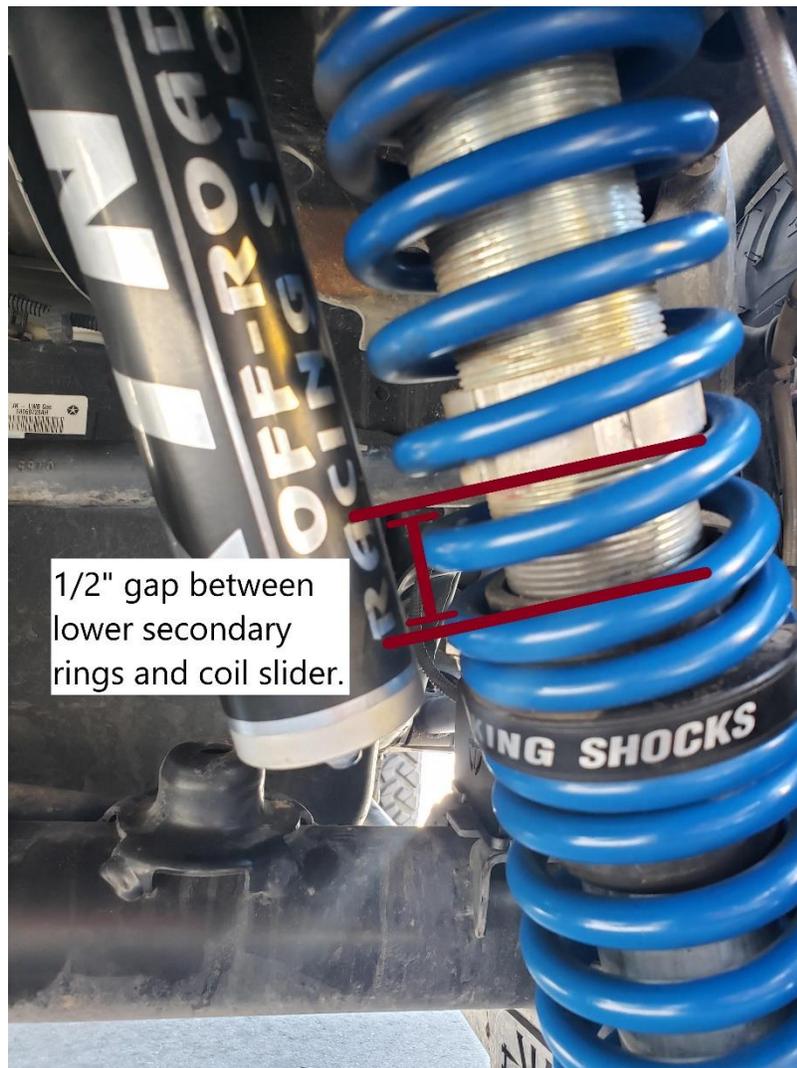
Spring compression applied with the coil nut on top of the springs will VARY between all vehicles and may be different at all 4 corners. This is due to added and or removed weight to the vehicle. The fact that all 4 corners have different weights from the factory, added accessories and or removing factory 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
#4*	-	-	-	-	-	-	5.2	-
#6*	-	-	-	-	-	-	9.6	-
#8*	-	-	-	-	-	-	19.8	-
#10*	-	-	-	-	-	-	22.8	31.7
1/4	4	4.7	6.3	7.3	9	10	6.3	7.8
5/16	8	9	13	14	18	20	11	11.8
3/8	15	17	23	26	33	37	20	22
7/16	24	27	37	41	52	58	31	33
1/2	37	41	57	64	80	90	43	45
9/16	53	59	82	91	115	129	57	63
5/8	73	83	112	128	159	180	93	104
3/4	125	138	200	223	282	315	128	124
7/8	129	144	322	355	454	501	194	193
1+	188	210	483	541	682	764	287	289