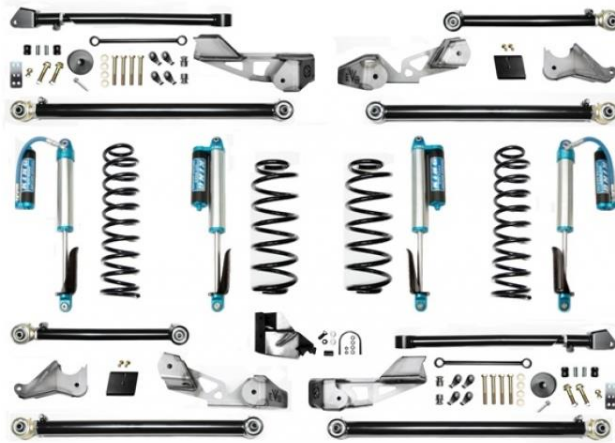




EVO Manufacturing

2.5"/3.5" Jeep Wrangler JLU 2018+

High Clearance Long Arm Instruction Manual



	2.5" Lift Coils	3.5" Lift Coils
Front Left Coil	600117	600113
Front Right Coil	600118	600114
Rear Left Coil	600119	600115
Rear Right Coil	600120	600116

READ BEFORE INSTALLATION: This kit is compatible with 4 Door JL Unlimited Models Only

This kit is recommended to be installed by a trained installer. It requires cutting and grinding of frame mounts and welding of new bracketry. Gas tank removal is required. This is easiest done when tank is low on fluid. Wheel spacers or aftermarket wheels with a smaller backspacing than factory are required for a complete installation. All Vehicles that spend time on salted roads. It is recommended that removal of control arm joint/collar (threaded end) on all control arms before installation of vehicle, apply a small amount of Anti Seize on threads and reassemble. ALWAYS wear safety glasses and other approved safety gear when working on a vehicle. All factory bolts should be tightened to factory specifications. All supplied bolts torqued according to chart at end of instruction. This instruction will give procedure of installing the long arm portion of the system first then return to install all other components after the vehicle has been long armed. **DISCONNECT ALL BATTERY TERMINALS BEFORE STARTING. REINSTALL AT FINAL END OF INSTALLATION.**

Starting Length for all Long Arm:

Front Uppers: 26 3/8"

Rear Uppers: 20 1/2"

Front Lower: 34 1/2"

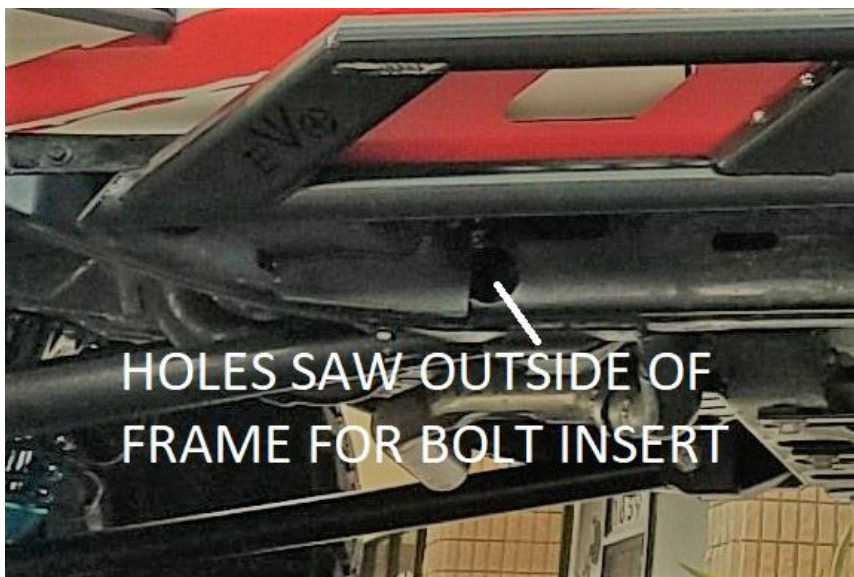
Rear Lower: 30 1/2"

1. Safely and securely park vehicle on level ground with parking brake applied.
2. Safely and securely lift vehicle on lift.
3. Remove Wheels and tires
4. Disconnect all wiring connections and hoses to axle.
5. Support axles and remove shocks
6. Remove bolt from driver and pass side brake line bracket at frame just behind front coils.
7. Remove both driver and passenger side swaybar links bolts at axle and swaybar removing swaybar links and rotate sway up and out of the way. Factory front links will not be reused.
8. Unbolt driveshaft from axle. Tie up and out of the way.
9. Lower axle while checking wire and hose lengths until springs can be removed. Adjust wire and hoses connections as needed
10. Remove springs
11. Remove control arms from frame and axle and set aside. Axle will be loose at this time use caution and appropriate support.
12. Carefully Support underside of gas tank. Remove all bolts holding it to chassis. Carefully lower tank (remember there is fuel BE CAREFUL) until you can reach connections on top of tank and disconnect. Set tank aside in a safe well vented space away from any flames/heat. It will be reinstalled later.
13. Remove exhaust crossover bar from chassis (small crossmember bar in front of exhaust crossover), Bar will not be reused. Keep hardware.
14. Using tools at your disposal, grinders, cut off wheels, torch, plasma cutter etc. Clearance all control arm mounts, front upper, lower and rear upper and lower clean to frame rail. All Factory control arm mounts removed.
15. At exhaust collector, remove bolt on frame side of the collector and re-install opposite way from front to back through existing exhaust flange nut, snug. On rear side install supplied M8 nut.





16. Once all control arm mounts are clearance clean to frame. Starting in the front install front driver long arm bracket to frame using the single bolt hole on the underside of the frame where exhaust bar once was bolted using original factory bolt. This will locate this bracket in the proper location. Slight clearance of edge/lip on exhaust collector may be required. Do so as needed.



17. Repeat previous step on passenger side (less exhaust note)

18. On driver side front only, lower arm mounting hole will need to be drilled through frame. Mark center using bracket as template and drill through both sides frame using a drill similar in size to you hole saw centering drill bit (~1/4" drill). Bracket may need

to be removed to drill. Be careful to keep drill as square and centered while drilling outside frame.

19. After center pilot hole is drilled on driver side through both sides of frame drill INSIDE HOLE ONLY with 5/8" drill
20. On outside of frame we need to make a relief hole to install nut and washer inside frame to newer lower control arm bolt. Using at 1" or larger hole saw and the previously drilled pilot hole make hole in OUTSIDE of frame ONLY.
21. On rear, we need to trim some of the rear body mount bracket on frame just rearward of the body mount itself on both sides. Use the EVO Long arm as a template and slowly trim and fit body mount bracket until bracket fits nicely against body mount bracket and lower hole on underside of frame line up to install bolt. Roughly the rear side of the body mount will need to be full trimmed and cleaned to frame ~1/2" back of body mount small bolt.



22. Once all brackets are fitted to frame and fitment is acceptable. Clamp brackets to frame where you can and weld all seams, connections and openings between EVO Brackets and Frame.
23. Onto rear axle lower control arm and shock mounts. On rear axle, cleanly cut and grind smooth to axle tube the entire driver and passenger side rear lower control/shock mounts.
24. Using the supplied EVO Rear Lower Control Arm mounts for the axle. Hold radius in bracket to axle tube. Knotted front edge of EVO Bracket should be located flush with outer edge of axle bumpstop pad. Shock tabs should angle toward middle vehicle. See photo.



25. Once positioned, tab in place. Verify correct location of left and right and weld all connections to axle. Both sides.

26. Paint all exposed metal surfaces.



27. After paint has dried. Install all control arms into their new mounting locations. Front upper arms will bend giving clearance around frame. Rear upper arms will bend giving clearance for tire. Install all control arms with adjustable end at axle. All arms zerk fittings and pinch bolts are recommend be on the up side during install. Arms fully threaded in will be just slightly stretched of factory placement. Some stretch can be done by lengthening the arm thread out. Do not exceed 1" total on all arms. Cycle suspension to check for any interferences. ALL CONTROL ARM STARTING LENGTHS ARE LISTED ON PAGE 2.

All hardware is reused at axle connection of control arms. Supplied hardware is used at frame connections. Install supplied 3/8" x 2" bolts on all 8 control arm pinch bolts.

*Front Lower will use 5/8" bolt washers and nut on driver side through drilled/hole sawed holes. 5/8" Bolt washer and large flag nut on Front Lower passenger side.

*Front upper will use supplied 4" x 9/16" bolt, washers and nut on both driver and passenger side frame.

*Rear Lower will use supplied 4" x 9/16" bolt, washers and small flag nut on both driver and passenger side frame.

*Rear Upper will use supplied 3.5" x 9/16" bolt, washer and small flag nut on both driver and passenger side frame.

28. Reinstall new arms at axle locations using factory or upgraded hardware.

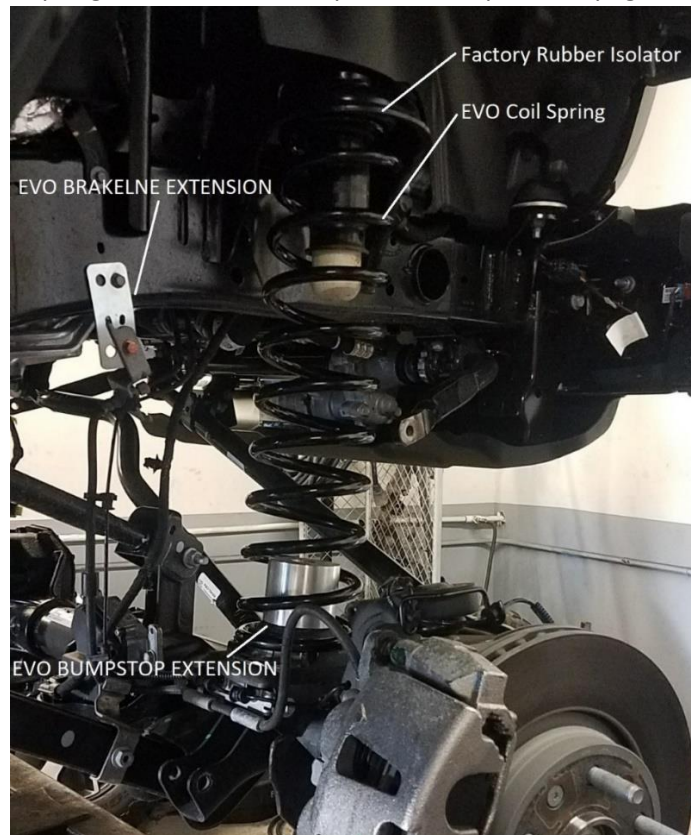
29. Reinstall gas tank (Carefully)

Front Coil and Components Install:

30. 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 in next steps.

31. Remove trackbar bolt at axle. This will allow the axle to move side to side so be cautious about this from here on.

32. Insert supplied 3/8 x 2" bolt into front bumpstop extension. Place bumpstop with bolt inside (bore side up) EVO Front Coil spring and install coil spring with rubber isolator on top of coil into its original location on both the frame and axle. Axle may need to be lowered to install. Verify correct part number spring in correct location per table on previous page.



33. With spring in place and bumpstop extension sitting on axle pad and bolt inserted into bumpstop extension. Install supplied 3/8" nut from under spring pad to bolt inserted inside bumpstop extension and tighten.



34. Install front EVO brake line extension bracket at original brake line mounting location on frame with factory bolt.

DRILL BRAKELINE BRACKET HOLE TO 1/2". INSTALL AFTER TIGHTENING SHOCK BOLT WITH SUPPLIED M12 NUT ON END



35. Install factory brake line to the new lower location on the EVO brake line extension bracket. **Be very careful moving line into new location. The factory hardline will need to be slightly manipulated to be relocated. Do not use tools or pinch/crack the line.**

36. Carefully enlarge/drill brake line bracket mounting hole that once attached to factory lower arm to 1/2" and install on shock bolt after shock bolts have been torqued. Use M12 nut supplied.

37. Reinstall shock at axle per factory specifications. If you are installing shock extensions. Do so at this time. Follow instructions for that kit. If you are installing new shocks, install shocks at both upper and lower mounting locations. Torque to factory specifications.

38. Reinstall wheel and torque to factory specifications.

39. Carefully lift vehicle by frame, remove jack stands and lower to ground. When lowering be mindful of the front trackbar at axle this is not bolted in. It will need to be guided into its bracket at the axle while lowering the vehicle. When on the ground carefully turn steering without ending running and in park with parking

brake on and wheels chalked until trackbar lines up with hole in trackbar bracket. Insert factory bolt and loosely tighten bolt.

40. Torque all control arm bolts, uppers, lowers at frame and axle. Torque all shock bolts at frame and axle. Torque front trackbar bolt. Check and torque all other bolts. Use chart below for supplied hardware. Use factory specifications for factory hardware.

41. Front swaybar links should be left uninstalled at this time. We will install factory rear swaybar links on the front later in the process.

Rear Coil and Components Install:



42. Safely and securely park vehicle on level ground with parking brake applied.

43. Use wheel chokes to block front tires from rolling

44. While safely parked on ground. Loosen all rear control arm and trackbar bolts at both axle and frame. **DO NOT REMOVE** (unless installing EVO Enforcer Arms). Just loosen a few turns to remove bolt compression on control arm bushings. If installing EVO Enforcer arms. Do so at this time. Remove and replace one arm at a time. Keep bolts loose (installed but un-torqued) as described above.

45. Carefully lift rear of vehicle by frame rails/crossmember extending suspension until tires leave the ground.

46. Securely place weight approved jack stands for vehicle under frame

47. With vehicle rear tires now suspended and frame securely supported on stands, remove rear tires from vehicle.

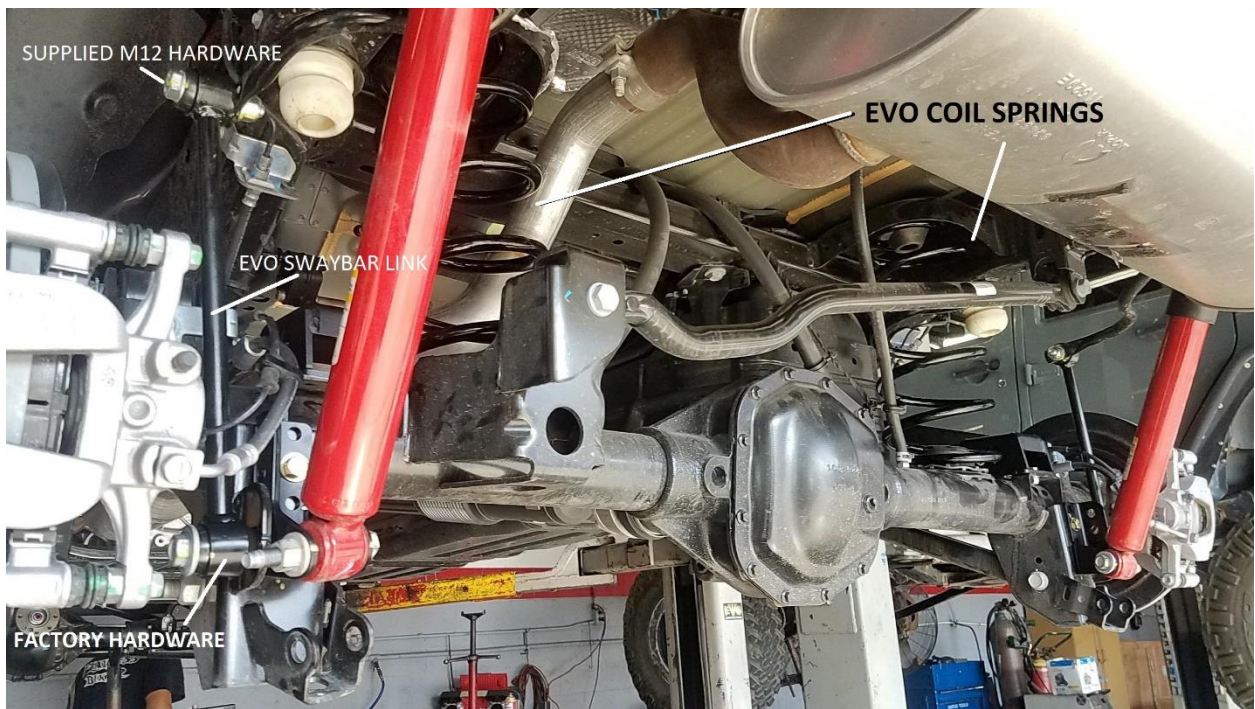
48. Remove both driver and passenger side swaybar links bolts at axle and swaybar removing swaybar links and rotate sway up and out of the way.

49. **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.**

50. Lightly jack front driver side axle tube slightly. With axle slightly supported

remove lower shock bolt from axle. Varying axle jack tension to the right amount will alleviate load on the bolt and allow it to freely slide out. If you are replacing shocks and not using shock extensions remove upper bolt and remove shock. Otherwise leave shock mounted at upper. Support driver side axle with jack stand and repeat this step on passenger side.

51. Lower jack under axle giving room and remove rear springs. Keep note of which spring is driver and passenger.
52. 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.
53. Install EVO Rear Coil spring and with factory rubber isolator on top of coil into the factory coil springs locations. Axle may need to be lowered to install. Verify correct part number spring in correct location per table page 2.
54. Repeat on passenger side



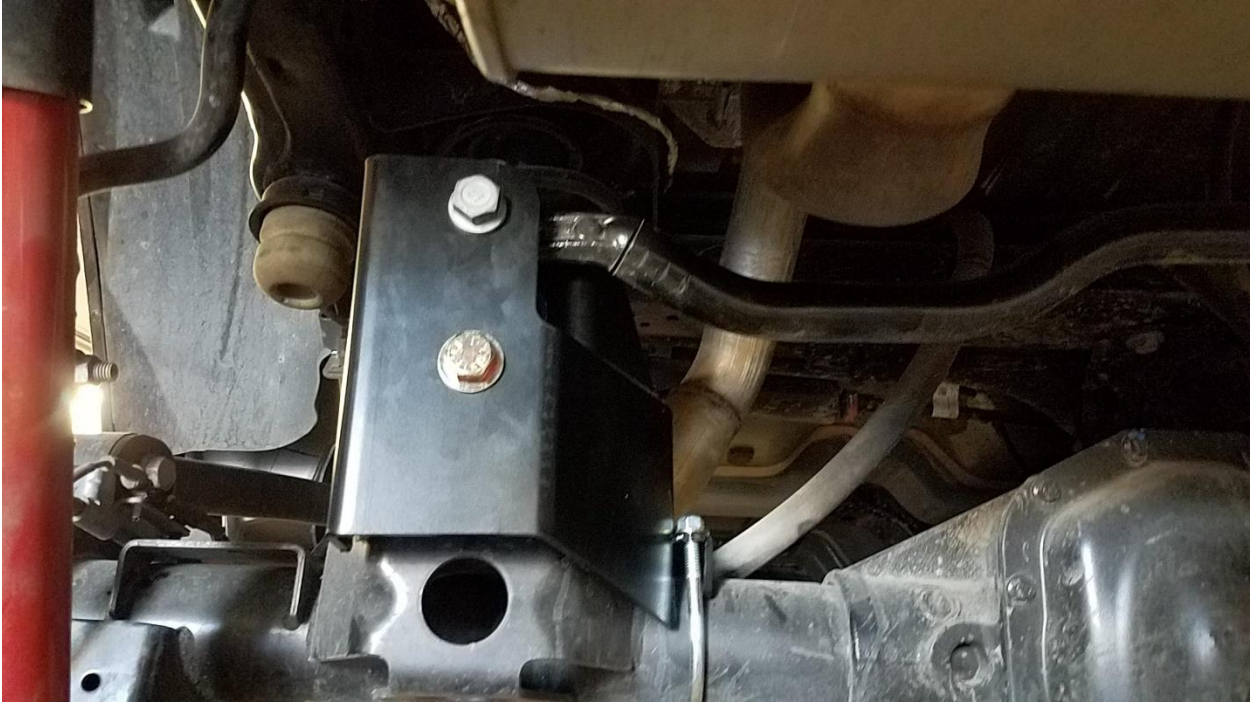
55. Assemble supplied rear swaybar links. Using light oil such as WD 40. Lubricate inner surface of link loops. Tap or vice in supplied rubber bushings. Lubricate inner surface of rubber bushings. Tap or vice in supplied swaybar tube sleeves.
56. With rear spring installed. Jack axle up until shock bolts line up with axle mounting holes. **Be very aware that vehicle does not lift off chassis/frame jack stands.** If you are installing new shocks or shock extensions, do so at this time. Follow factory torque specs for shock bolts.
57. Using 2 factory swaybar bolts and 2 supplied M12 x 60 bolts washers and nuts install assembled EVO swaybar links to axle on outside of swaybar tab and outside of swaybar itself (outside outside). Factory bolt at axle, supplied bolt at swaybar. Upper swaybar link bolt must be installed with bolt head at tire side and thread side at frame.
58. Install Shocks

59. Depending on shock length you may need to disconnect parking brake cable from axle and route them below the frame crossmember. If the cables are limiting you down travel or are tight at full droop, route below crossmember and reconnect at axle.

For Long Arm 3.5" Kits ONLY. If installing 2.5" kit continue to next # step

Remove rear trackbar bolt at axle. Move trackbar down under/out of factory bracket. Swing trackbar above axle bracket. Slide square tap with single hole of EVO MFG Bracket INTO factory location of axle trackbar bracket while at same time inserting trackbar into the new higher location/pocket on the EVO Bracket. At lower original bolt mounting location, insert supplied crush sleeve into bracket and loosely install factory bolt at this location. Loosely Install supplied bolt at new trackbar location. Loosely install supplied U Bolt at axle tube. On driver side of bracket with bracket loosely installed, drill 15/32" hole through factory bracket. Install supplied 7/16" hardware. Torque all bracket bolts. Do not torque trackbar bolt at this time. This should be done one ground at ride height later.





60. Reconnect all disconnected hoses, wires etc.
61. Reinstall rear wheels
62. Carefully jack vehicle by frame and remove jack stands.
63. Lower vehicle to ground.
64. Install **FACTORY REAR swaybar links** onto the **front axle and front swaybar**. Rubber bushing side on factory link goes inside the two tabs on the front passenger side axle and stud mount to outside of swaybar. Bend in link should jog upwards moving studded end toward tire.
65. **With vehicle park securely on level ground at ride height. Torque all control arm bolts, uppers, lowers at frame and axle. Torque all shock bolts at frame and axle. Torque front and rear trackbar bolts. Torque wheels. Check and torque all other bolts. Use chart below for supplied hardware. Use factory specifications for factory hardware. Double check everything is tight at this time.**
66. All 8 control arm pinch bolts should be tightened 40 lb/ft after alignment and before the vehicle is driven.

RECENTER STEERING WHEEL by Adjusting Turn buckle on Draglink. Make sure to turn the correct way to center (do not do a full rotation of steering wheel, closest direction to straight, watch wheel while turning) and tighten draglink pinch once straight. You may need to do this more than once after a drive to get it straight to your liking. Test brakes and verify no leakage in lines before driving. Recheck often. Removal or trimming of factory plastic inner fender liner may be required to clear combinations of larger tire sizes and wheel back spacings. Check for acceptable clearance. Alignment should be performed after installation by a trained professional with proper alignment equipment. Bring vehicle alignment specs to within factory recommendations. Retorque all bolts after 500 miles

Size	Recommended Torque					
	Grade 2		Grade 5		Grade 8	
	Coarse	Fine	Coarse	Fine	Coarse	Fine
#4*	-	-	-	-	-	-
#6*	-	-	-	-	-	-
#8*	-	-	-	-	-	-
#10*	-	-	-	-	-	-
1/4	4	4.7	6.3	7.3	9	10
5/16	8	9	13	14	18	20
3/8	15	17	23	26	33	37
7/16	24	27	37	41	52	58
1/2	37	41	57	64	80	90
9/16	53	59	82	91	115	129
5/8	73	83	112	128	159	180
3/4	125	138	200	223	282	315
7/8	129	144	322	355	454	501
1†	188	210	483	541	682	764