

EVO Manufacturing

Jeep Wrangler JK/JKU

JK/JKU Enforcer Suspension Kit

EVO-1063, 230





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

CAREFULLY READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL AND KEEP FOR FUTURE REFERENCE. IF YOU HAVE ANY QUESTIONS ABOUT THE PRODUCT CALL EVO MANUFACTURURING. 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.

### **READ BEFORE INSTALL:**

- All models will require wheels spacers or aftermarket wheels with 4.5" or smaller number backspacing.
- All factory bolts should be tightened to factory specifications.
- All supplied bolts torqued according to chart at end of instruction.
- o It is recommended all installation be performed by a trained professional.
- Some modification may have to be done in order to fit preferred tire or tire brand/size.
- o Loosely install all bracket hardware, do not tighten until all hardware is installed.
- o Cutting/grinding/clearance is required to complete installation.
- o After market CV drivelines are recommended.
- o Welding on rear trackbar bracket is recommended after installation.





### If installing EVO MFG Enforcer Control Arms:

#### FRONT UPPER CONTROL ARMS STARTING LENGTH CENTER TO CENTER

Starting length 3"/4" Lift: 18 3/4"

### FRONT LOWER CONTROL ARMS STATRING LENGTH

Starting Length 3" Lift: 23"
Starting Length 4" Lift: 23 1/8"

# **REAR UPPER CONTROL ARMS STATRING LENGTH**

Starting Length 3"/4" Lift: 18"

### REAR LOWER CONTROL ARMS STARTING LENGTH

Starting Length 3"/4" Lift: 19 34"

# IF INSTALLING ALL 8 CONTROL ARMS (STAGE 4) THEN ADD 1/4" TO ALL STARTING MEASUREMENTS

All Vehicles that spend time on salted roads. It is recommended that removal of control arm joint (threaded one) on all EVO control arms before installation of vehicle. Apply a small amount of Anti Seize on threads and reassemble.

After alignment is complete and no additional adjusts are to be made to control arms. Torque all 1" Jam Nuts to 250 ft/lbs and all 1-1/4" Jam Nuts torque to 300 ft/lbs. Regularly check all jam nuts and punch bolts on all Enforcer control arms for proper torque/tightness. Failure to do so may cause premature wear of threads on arms.

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

ALL measurements stated above are starting points only, every vehicle is different. Professional alignment is recommended.

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

Align to factory specifications. Recommended caster 5 Degrees +/- .5



# Parts included: Table below shows JK/JKU Enforcer Suspension Kits.

Description	#	Part #	Quantity
Box #1	1	EVO-760008	1
Evo Front Lower Driver Control	2	EVO-11022B	1
Arm			
<b>EVO Front Lower Pass Control</b>	3	EVO-11023B	1
Arm			
Rear Trackbar Bracket	4	EVO-10080B	1
Rear Trackbar Bracket Hardware	5	EVO-7700021	1
Pack			
3" Front Bumpstop Spacer	6	EVO-20005	2
Thread Cutting Tool	7	EVO-900333	2
Rear 3"/4" Bumpstop Bracket	8	EVO-10081B/10082B	2
HHCS 5/16-24 x 0.75	9	EVO-900281	4
SAE Washer 5/16"	10	EVO-900213	8
Stover Lock Nut 5/16"	11	EVO-900220	4
Brake Line Kit	12	EVO-600067	2
Swaybar Link	13	EVO-12029B	2
Bushing B/O C/O	14	EVO-600077	4
Swaybar Bushing Tube	15	EVO-20032	4
EVO Shock Mount Hardware	16	EVO-770008	1
Box #2	17	EVO-760015	1
3"/4" Front Plush Ride Spring	18	EVO-600075/600037	2
Box #3	19	EVO-760015	1
3"/4" Rear Plush Ride Springs	20	EVO-600076/600038	2





### **Recommended Tools:**

- o Allen set
- Wrenches (English/Metric)
- Vehicle Jack
- o WD40
- Rubber Mallet
- Thread Lock
- o Grinder
- Impact with standard sockets
- Sawzall/Cut off wheel or similar
- o Drill and ½" 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.
- o 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 warn 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**

- 1. Park vehicle on level ground.
- 2. Elevate front of vehicle securely and safely until tires leave ground.
- 3. Safely and securely support front frame of vehicle on adjustable jack stands
- 4. Remove front wheels/tires
- 5. Remove front swaybar links from vehicle
- 6. Remove brakeline mounting bolt at frame on both driver and passenger side. **Do not disassemble brakeline itself.**
- 7. Remove front shocks
- 8. Remove front springs
- 9. Working on the driver side first, remove factory lower front control arm



 Install Supplied EVO Front control arms on driver side with zerk fitting on both ends facing upwards.

The lower arms should bend towards the center of the vehicle. The bend points upwards on upper arms.

11. Torque both bolts to factory specifications. Repeat previous steps on passenger side.

Note: Do not remove more than one control arm at a time, uninstall 1 control arm and replace it with EVO arm, then move on to next arm.



- 12. On both driver and passenger side, drill a 5/16" hole in the center of the spring mount on axle.
- 13. Using supplied self threading bolt, place the bumpstop extensions over the drilled hole on the axle and thread through the center the self threading bolt on both driver and passenger sides
- 14. Install front coil springs on both driver and passenger sides, smaller pigtail end of spring should be at the frame side (top) with the factory coil spring rubber isolator retained at the top. Make sure lower mount is placed properly into the coil retaining location on the axle





- 15. Install front shocks top end first (studded end) with one rubber part on the top and one rubber part on the underside of the frame mount.
- 16. Slowly and carefully raise the axle until the driver side shock mount is line up with the factory axle hole. Install bolt and torque to factory specifications
- 17. Repeat previous step on passenger side
- 18. Install supplied brakelines. Cut the thin support tie holding your brake line and ABS line together, separate the main plastic coupling holding your brake line and ABS lines together, Using an 11mm wrench, separate the hard line from the bracket/hose, using a 10mm socket, remove the bolt securing the bracket/hose to the frame rail and set aside the bolt for later use, Use a 10mm socket to secure your new stainless steel brake line mounting bracket to the frame rails using the factory bolt, using a 15mm socket, remove the banjo bolt securing your brake line to it and set it aside, Slip your new stainless steel brake line up through the new mounting bracket and then fasten the hard line to it using a 12mm and 17mm wrench, slip one of the new copper crush washers on to the factory banjo bolt, Insert the factory banjo bolt with copper crush washer on through the new stainless steel brake line and then slip on another copper crush washer, Using a 15mm socket, secure your new stainless steel break line to the break caliper, tighten the banjo bolt to 276 in. lbs. of torque (hard line elbow extends out and back).
- 19. Secure your new stainless steel brake line to the mounting bracket using the retaining clip, attach your new stainless steel brake line and ABS wiring together using the factory main plastic coupler, zip-tie your new stainless steel brake line and ABS together as they were before, check the fluid level in your master cylinder.
- 20. Install new wheels, torque lug nuts to factory specifications
- 21. Turn wheels full left and full right making sure all wires, brakelines and hoses are free from contact on any component.
- 22. Carefully lower front of vehicle onto ground



# **REAR INSTALL**

- 23. Elevate rear of vehicle securely and safely until tires leave ground.
- 24. Safely and securely support rear frame of vehicle on adjustable jack stands
- 25. Remove rear wheels/tires
- 26. Remove rear swaybar links from vehicle, these will be installed on the front lateron.
- 27. Remove brakeline mounting bolt at frame on both driver and passenger side.
- 28. Remove rear shocks
- 29. Remove rear springs
- 30. Remove rear parking brake cables from mounting bracket on floorboard of vehicle.
- 31. Remove rear trackbar bolt at axle, leave trackbar bolt at frame installed
- 32. Install Supplied EVO rear control arms on driver side with zerk fitting on both ends facing upwards.

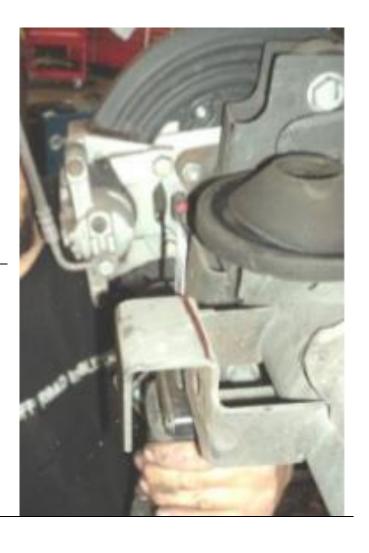
The upper arms should bend towards the center of the vehicle.

33. Torque both bolts to factory specifications. Repeat previous steps on passenger side.

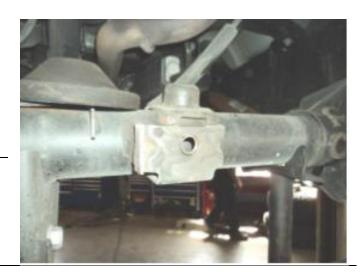
Note: Do not remove more than one control arm at a time, uninstall 1 control arm and replace it with EVO arm, then move on to next arm.



34. Cut factory rear trackbar as shown.
Only remove the rear most part of the bracket.



35. Sand all cuts smooth with flat mounting plate.





- 36. Install rear trackbar bracket as shown with supplied 9/16 bolt and ubolts.
- 37. Weld on rear trackbar bracket to axle where ever possible, see photo



- 38. Reinstall trackbar into new higher location with factory bolt. (torque to factory specifications once vehicle is on ground and at ride height.)
- 39. Install shocks in upper mounts with supplied bracketry and hardware





- 40. Install springs into lower axle mount, smaller end of spring should be mounted on the axle side. Larger end of spring goes up while retaining the factory rubber coil spring isolator
- 41. Slowly and carefully raise axle until lower shock mounts line up with axle mounting bolt holes. Make sure upper coil springs and isolators are properly centered in coil spring perches on top and bottom
- 42. Install shocks bolts at axle



- 41. Install rear brakelines Using a 15mm socket remove the banjo bolt from caliper, Remove the banjo bolt from the brake hose, remove the copper washers and keep them aside you will need to reuse them. Using an 11mm wrench, separate the hard line from the bracket/hose, using a 10mm socket, remove the bolt securing the bracket/hose to the frame rail and set aside the bolt for later use. Install new copper crush washers on to the factory banjo bolt, Insert the factory banjo bolt with copper crush washer on through the new stainless steel brake line, then slip another copper crush washer on. Using a 15mm socket, secure your new stainless steel break line to the break caliper, tighten the banjo bolt to 276 in. lbs. of torque (hard line elbow extends out and back).
- 42. Use a 10mm socket to secure your new stainless steel brake line mounting brackets to the frame rails using the factory bolts, Slip your new stainless steel brake line up through the new mounting bracket, fasten the factory hard line to it using a 12mm and 17mm wrench, Secure your new stainless steel brake line to the mounting bracket using the retaining clip, Check the fluid level in your master cylinder. Bleed brakes following factory procedure.



43. Install Swaybar bushings into supplied swaybar links, use of a lubricant and a small hammer will assist in this process, install swaybar endlink tubes into swaybar bushings. Install supplied EVO Endlinks into swaybar and axle mounts on both driver and passenger side rear.



- 44. Install rear bumpstop extensions on axle with supplied 5/16" hardware
- 45. Install new wheels and carefully lower vehicle onto ground.
- 46. Install the factory rear swaybar endlinks on the front of the vehicles swaybar.
- 47. Torque lug nuts to factory specifications
- 48. Torque all bolts to factory specifications
- 49. Retorque all hardware after 500 miles and every off road trip.

After install, set pinion angle on vehicle so that the driveshaft and the pinion are inline within 3 degrees with the axle at an approximate ride height and centered to vehicle.





## 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.
- o Check turn signals, headlights, fog lights (if applicable), taillights, blinkers and windshield wipers.
- o 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.
- o Inspect and Retorque all Bolts after 500 miles of competed 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
<b>1</b> †	188	210	483	541	682	764	287	289