

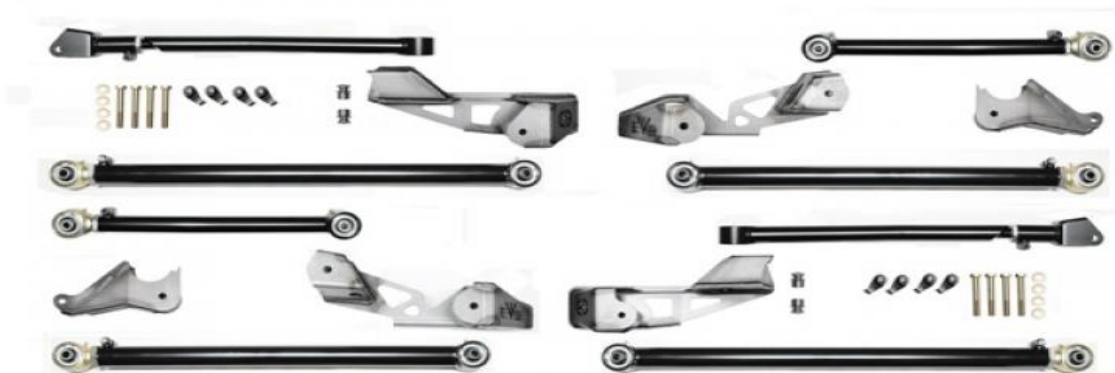


EVO Manufacturing

Jeep Wrangler JL Unlimited 2018+

High Clearance Long Arm Kit Instruction Manual

EVO-3010



**FOR 4 DOOR JLU MODELS ONLY**



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 is compatible with 4 Door JL Unlimited Models Only.**

**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.**

**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**

**Rough Starting lengths for all arms: Professional Alignment after installation recommend.**

<b>ARMS:</b>	<b>FRONT TRACKBAR:</b>	<b>REAR TRACKBAR:</b>
<b>Front Uppers: 26 3/8"</b>	<b>2.5" Lift: 34 1/8"</b>	<b>2.5" Lift: 37 3/4"</b>
<b>Front Lower: 34 1/2"</b>	<b>3.5" Lift: 33 7/8"</b>	<b>3.5" Lift: 37 5/8"</b>
<b>Rear Uppers: 20 1/2"</b>	<b>4.5" Lift: 33 9/16"</b>	<b>4.5" Lift: 37 11/16"</b>
<b>Rear Lower: 30 1/2"</b>		



**READ BEFORE INSTALL:**

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.

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.

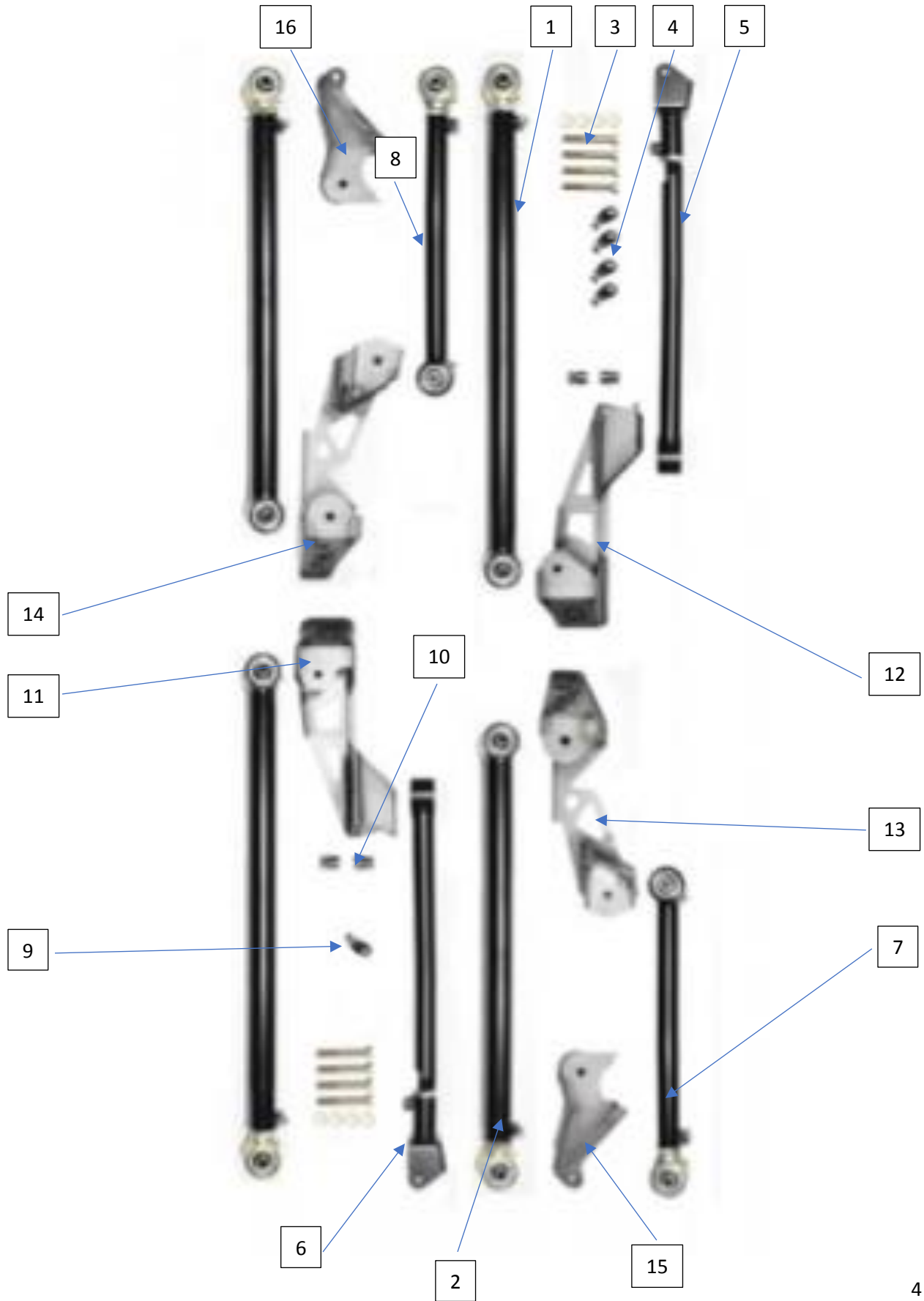
Professional alignment is recommended after install.

**After alignment is complete and no additional adjustments 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 control arms for proper torque/tightness. Failure to do so may cause premature wear of threads on arms and is not covered under warranties.**

**SOME PART ASSEMBLY MAY BE REQUIRED. FOLLOW THESE ASSEMBLY INSTRUCTIONS AT END OF THIS DOCUMENT.**

**Parts included: Table below shows black (painted) EVO MFG JLU Long Arm Pro.**

Description	#	Part #	Quantity
EVO JL Fr Lower Long Arm Pair	1	EVO-12324B	2
EVO JL Rr Lower Long Arm Pair	2	EVO-11061B	2
JL HC Long Arm Hardware	3	EVO-770076	1
9/16-18 Flag Nut Straight Tab 1.5"	4	EVO-12031	4
EVO JL Front Upper LA Driver	5	EVO-11037B	1
EVO JL Front Upper LA Passenger	6	EVO-11038B	1
EVO JL Rear Upper LA Driver	7	EVO-11035B	1
EVO JL Rear Upper LA Passenger	8	EVO-11036B	1
5/8-18 Flag Nut Straight Tab 1.5"	9	EVO-12330	1
Misalignment Spacer 1" Heim 1/16" Bolt 2.625"	10	EVO-100563263	4
EVO JL Fr Driver LA Bracket	11	EVO-12320	1
EVO JL Fr Passenger LA Bracket	12	EVO-12321	1
EVO JL Rr Driver LA Bracket	13	EVO-12322	1
EVO JL Rr Passenger LA Bracket	14	EVO-12323	1
JL Lower Rr Axle LA Mount Dr	15	Unassembled	1
JL Lower Rr Axle LA Mount Pass	16	Unassembled	1



**Recommended Tools:**

- Welder and materials
  - Drill/ Metal hole saw
  - Wrench/Impact with sockets
  - Grinder/Cutting tool
- 

**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**

1. Carefully lift vehicle by frame rails/crossmember extending the suspension until the tires leave the ground.
2. Securely place weight approved jack stands for vehicle under frame

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

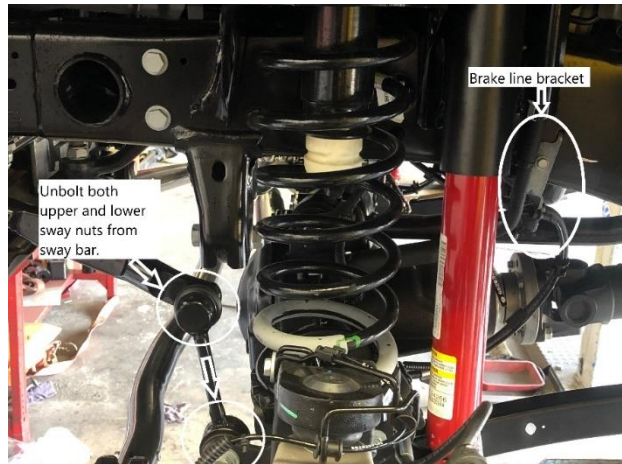




1. Remove both driver and passenger side swaybar links bolts at axle and swaybar removing swaybar links and rotate sway up and out of the way. Factory front links will not be reused.

**There is a 6mm allen key inside both driver and passenger side upper sway bar studs. Use allen head to allow nut to unscrew.**

3. Remove bolt on brake line bracket.



4. Disconnect push-in clip from front upper control arm mounts at axle holding wire. Un clip all other wires/hoses that are connected to axle.

**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.**



### **Support BOTH axles with jack stands**

5. **IF** you are **replacing shocks** and not using shock extensions remove upper bolt. Otherwise leave shock mounted at upper.
6. Lightly jack the front driver side axle tube slightly. With axle slightly supported remove front lower shock bolt from axle.
7. Repeat on passenger side.

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



8. Remove trackbar bolt at both axles.

**This will allow the axle to move side to side so be cautious about this from here on.**



9. Unbolt driveshaft from axle. Tie up and out of the way.



10. To lower the axle without any binding, we will remove the factory lower front control arms. Remove the driver side first, then remove the passenger side.

Repeat on rear arms.

**Be careful when removing control arms. Axle may rotate downward due to off centered weight, support pinion if necessary.**

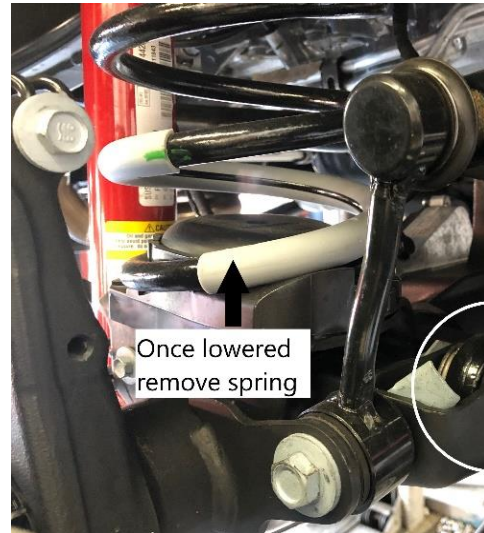




11. Lower both front and rear axles (one at a time) while checking wire and hose lengths until springs can be removed.

Adjust wire and hose connections as needed.

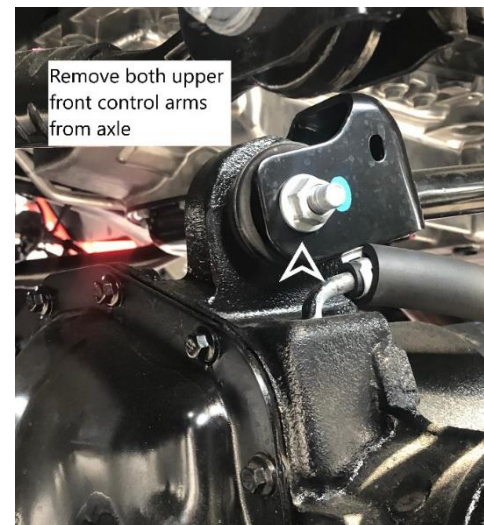
## 12. Remove springs



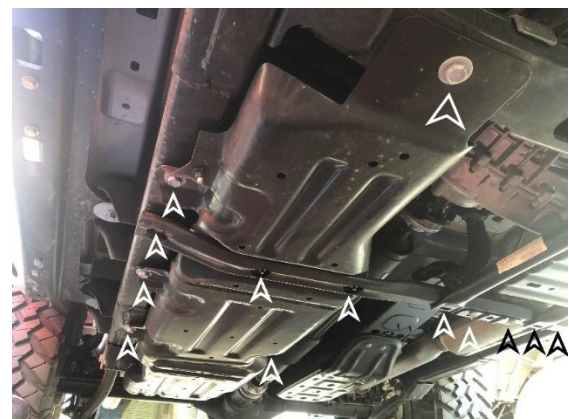
13. Remove upper control arms from frame and axle and set aside. Axle will be loose at this time use caution and appropriate support.

Repeat on rear arms.

Be careful when removing control arms. Axle may rotate downward due to off centered weight, support pinion if necessary.



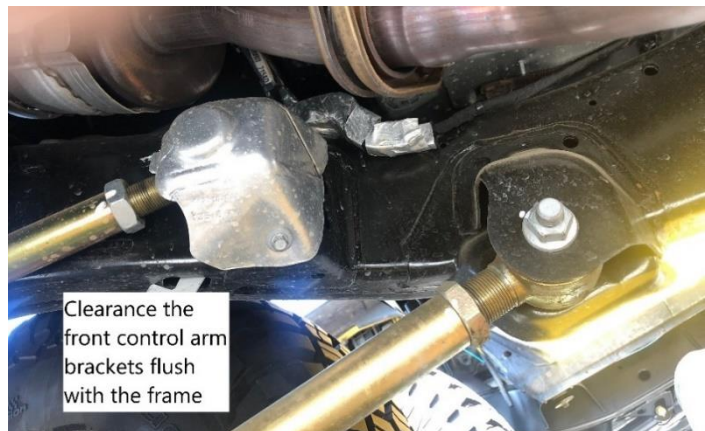
14. Carefully Support underside of gas tank. Remove all bolts holding it to chassis. Carefully lower tank (remember there is fuel BE CAREFUL) until you can reach connections on top of tank and disconnect. Set tank aside in a safe well vented space away from any flames/heat. It will be reinstalled later.



15. Remove exhaust crossover bar from chassis (small crossmember bar in front of exhaust crossover), Bar will not be reused. Keep hardware.
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16. 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 rails.
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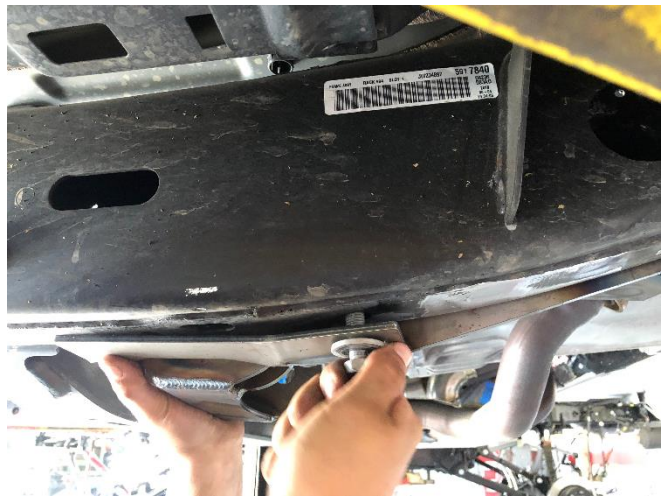




17. At exhaust collector, remove bolt on frame side of the collector and re-install opposite way (from front to back) through existing exhaust flange nut, tighten to snug. On rear side install supplied M8 nut.
- 



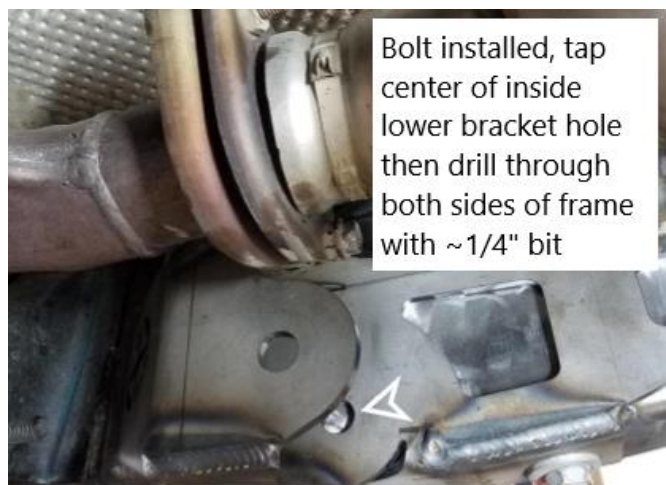
18. Once all control arm mounts are clearance clean to frame. Starting in the front install front driver long arm bracket to frame using the single bolt hole on the underside of the frame, where exhaust bar was once bolted, using original factory bolt. This will locate this bracket in the proper location.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

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19. EVO-3010 3.6L GAS Models Only.  
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 your 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 outer frame material. **EVO-3010D: DIESEL/392 KIT Will OMIT THIS STEP.**
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**20. EVO-3010 3.6L GAS Models Only.**

After center pilot hole is drilled on driver side through both sides of frame DRILL INSIDE HOLE ONLY with 5/8" drill

**EVO-3010D: DIESEL/392 KIT Will OMIT THIS STEP**



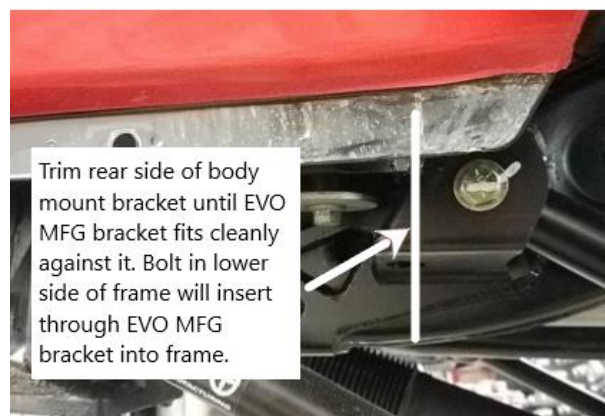
**21. EVO-3010 3.6L GAS Models Only.**

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.

**EVO-3010D: DIESEL/392 KIT Will OMIT THIS STEP.**



22. On rear, we need to trim some of the rear body mount bracket on frame just rearward of the body mount itself on driver/passenger 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" rearward of body mount small bolt.



Weld front Brackets as shown. (not all areas are shown, **weld all points of connection between frame and brackets, top and bottom, front and back**)

Driverside: Red Lines for Reference



Passenger Side: Red lines for Reference

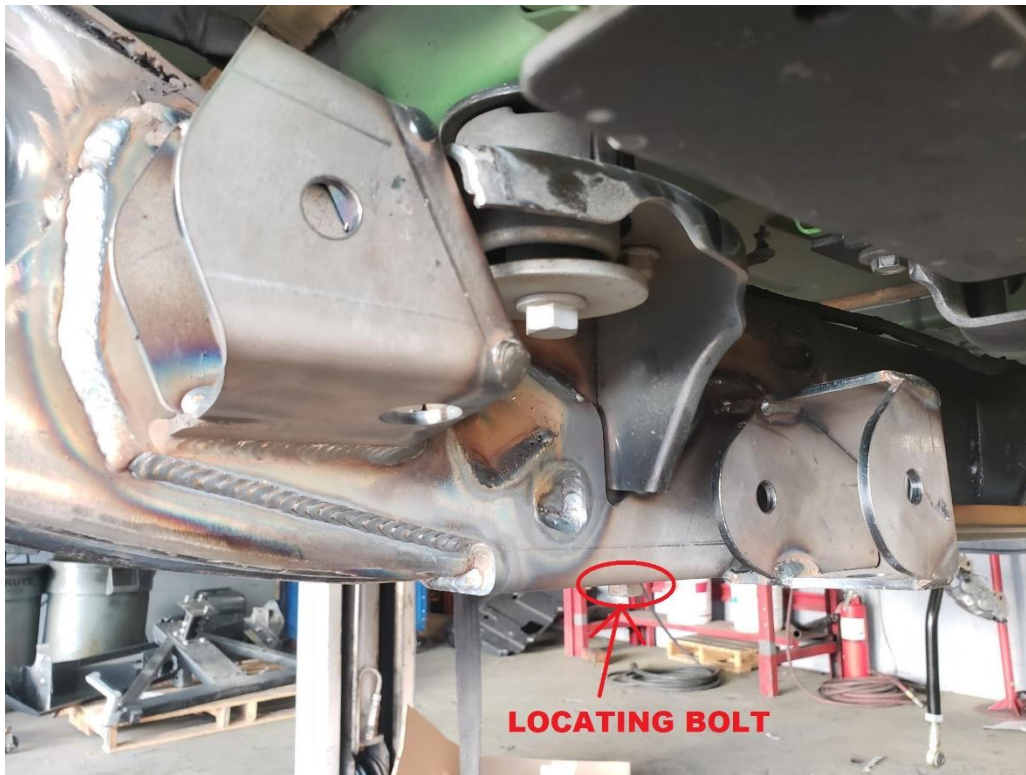




23. Remove small body mount nut that is located in front of both rear tires. Keep hardware, will be reinstalling body mount.
- 



24. Fit bracket to frame on left and right of vehicle using the single factory bolt on lower side of frame. This bolt is the bracket locator on both left and right sides.





25. Once all brackets are fitted to frame and fitment is acceptable. Use clamps brackets to firmly hold brackets to frame before welding.

Tack then weld **ALL SEAMS, CONNECTIONS AND OPENINGS BETWEEN EVO BRACKETS AND FRAME.**

26. Reinstall body mount using factory hardware.

Avoid welding near transmission crossmember on front passenger bracket. Use picture as reference.

Pictured: Front passenger x2  
Rear driver x2





**IMPORTANT STEP:  
DO NOT MIS THIS STEP  
BOTH SIDES OF VEHICLE REAR FRAME  
BRACKETS**

With EVO MFG rear long arm bracket located at frame, install upper control arm gusset welding to body mount lip and upper control arm bracket corner. Reference red line when welding.

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27. On rear axle, cleanly cut and grind smooth to axle tube the entire driver and passenger side rear lower control/shock mounts. Upper control arm mounts on axle will stay unmodified.
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\*\*\* SEE BRACKET ASSEMBLY INSTRUCTIONS AT END OF THIS DOCUMENT. \*\*\*

28. Using the supplied EVO Rear Lower Control Arm mounts for the axle. Hold radius in bracket to axle tube. Notched front edge of EVO Bracket should be located flush with outer edge of axle bump stop pad. Shock tabs of each left and right side mount should be on the inside (not tire side). See photo. Trimming of bracket may be needed for parking brake cable clearance. Clearance as needed.
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Once positioned, tack in place. Verify correct location of left and right and weld all connections to axle. Both sides.

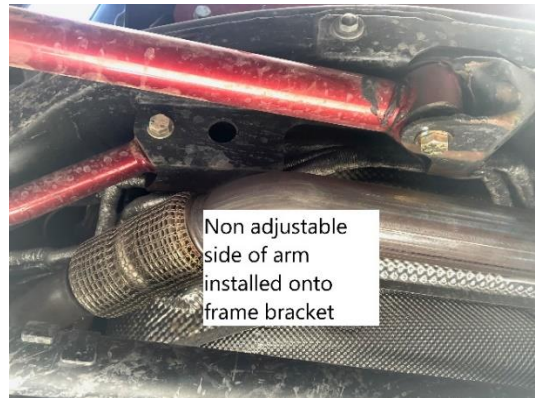
Paint all bare surfaces.



29. 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.
30. Install all control arms with adjustable end at axle. All arms zerc fittings and pinch bolts are recommend be on the up side during install.
31. 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 AT THE BEGINNING OF THIS DOCUMENT.

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Install supplied 3/8-24 bolts and washer nuts on all arms at pinch locations



32. 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.
- 



33. 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.
- 





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

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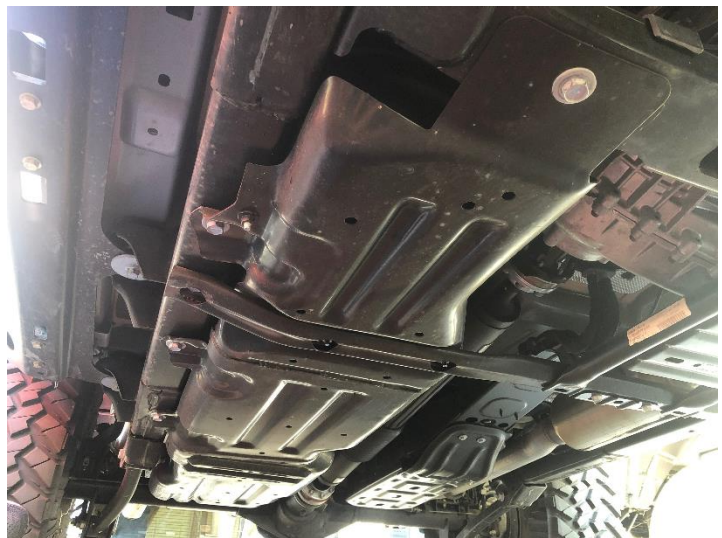
Verify all wiring and hoses are connected and have enough freedom for suspension motion.



35. Reinstall gas tank (Carefully)

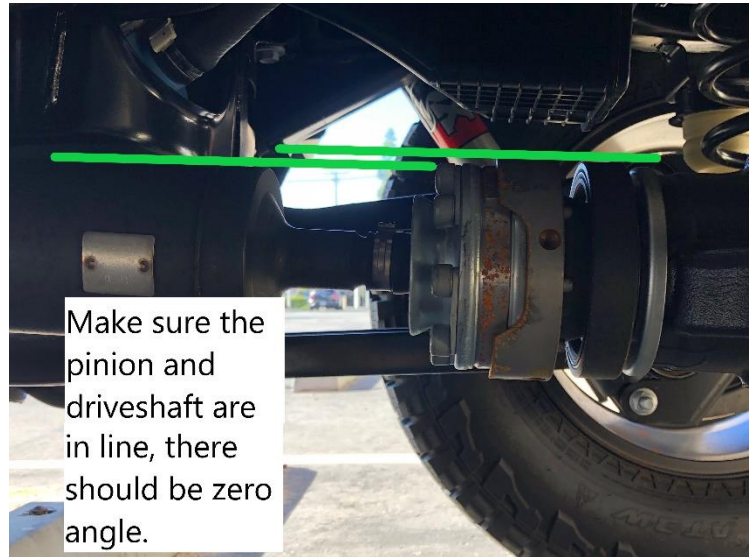
Make sure all hoses and wires are properly connected, make sure there are no leaking fluids. Check and make sure all gauges read properly.

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**Reinstall wheels and tires, lower to ground.**

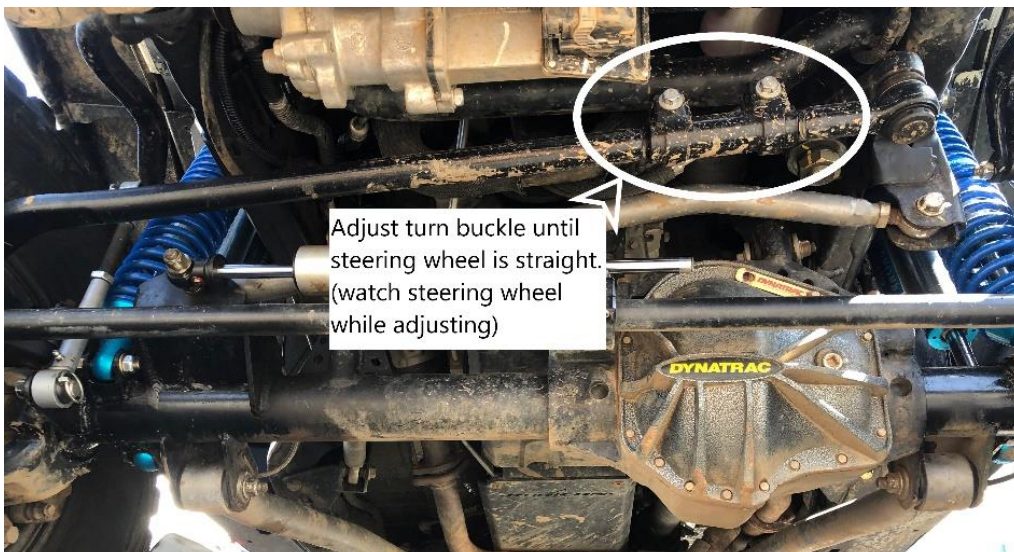
Once vehicle is on the ground, set pinion angle on vehicle so that the driveshaft and the pinion are inline with the axle at an approximate ride height and centered to vehicle.



Make sure the pinion and driveshaft are in line, there should be zero angle.

**RECENTER STEERINGWHEEL/FUNCTION CHECKS:**

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 pinch nuts 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. Retorque all bolts after 500 miles.



Adjust turn buckle until steering wheel is straight. (watch steering wheel while adjusting)



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.
- Test brakes and verify no leakage in lines before driving.

**PAINT MARK ALL TORQUED BOLTS. REGULARLY CHECK ALL BOLTS INCLUDING JAM NUT/PINCH BOLTS**

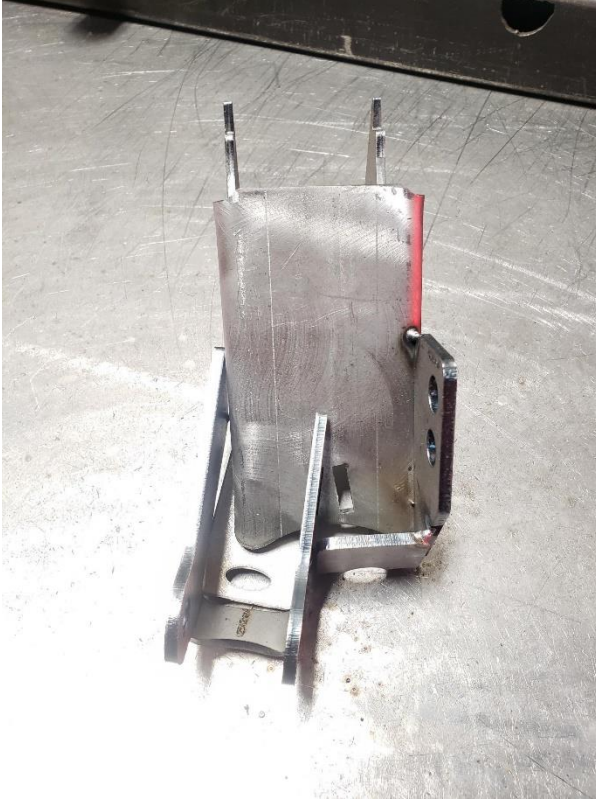
REAR LOWER AXLE CONTROL ARM/SHOCK MOUNT ASSEMBLY INSTRUCTIONS:

Assembly/tack/welding of the rear lower axle control bracket may be required. Follow the pictures below. First TACK in multiple locations on each component of each LEFT AND RIGHT Complete Assemblies.

VERIFY Control Arm Joints and Shock End will fit in each pocket.

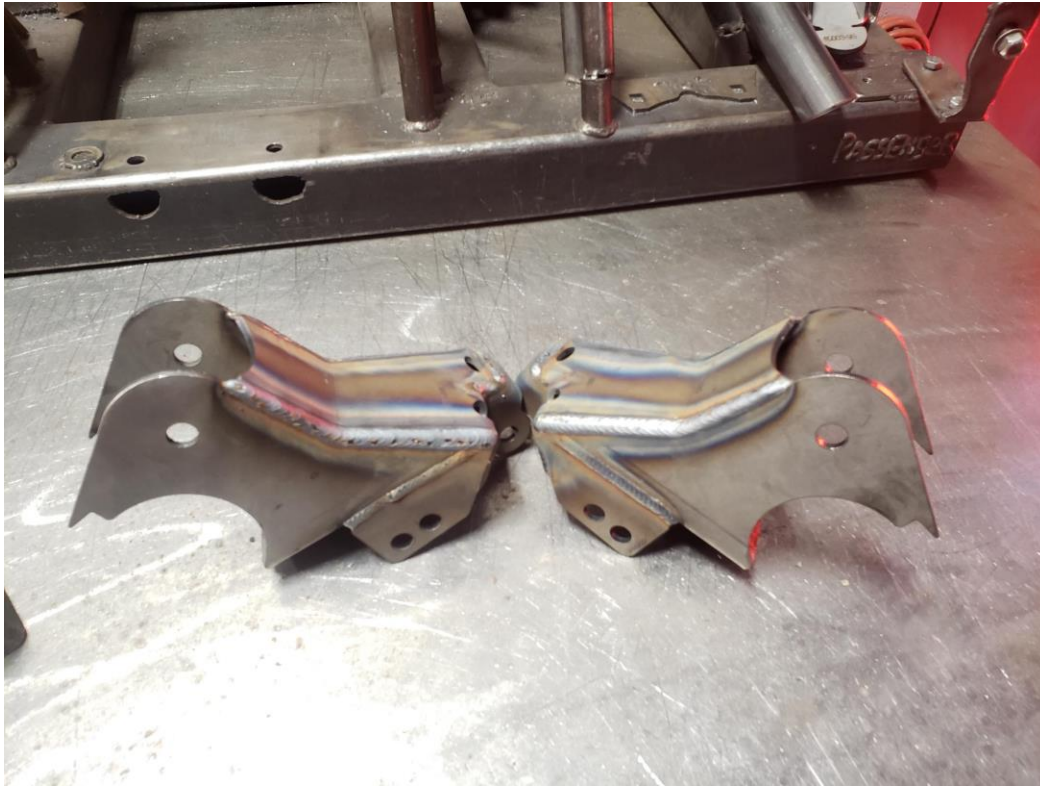








Final weld all seams as shown.







Proceed back to above instruction on how to install on Factory Axle Housing



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