

# INSTALLATION MANUAL:

Jeep Wrangler Long Arm Upgrade Kits  
All Lift Heights, (2007-2018, JK)



# DISCLAIMER:

## WARNING:

Suspension systems and their components are designed to enhance your vehicle's off-road performance. This may cause your vehicle to handle differently, on and off-road. Always wear your seatbelt and take extra care when driving a modified vehicle. Failure to do so can result in loss of control which may result in a rollover causing serious injury, or even death to the driver and/or passengers of the vehicle. Regular maintenance and consistent inspections are required to keep your modified vehicle safe and functioning properly. These suspension systems and any components should be installed by certified technicians only. Attempts to install these products without proper knowledge can lead to poor performance, or possible failure, which may jeopardize the safety of the vehicle and its passengers. The installer is responsible for proper installation ensuring a safe and properly functioning vehicle. Take extra care when operating a modified vehicle and thoroughly inspect your vehicle before and after every off-road use.

Read the instruction set in its entirety before attempting the installation.

## NOTE:

This product may require general welding, fabrication, and automotive mechanic skills. Welding should only be done by a competent welder. Clayton Off Road implies no guarantees or warranties and is not liable for improper installation. Some grinding and fitment may be required when installing this product. Every vehicle varies slightly, and some fabrication and/or modification may be required.

## ATTENTION:

It is the customer's responsibility to thoroughly inspect all received parts to ensure they are assembled correctly and fully welded. Please carefully examine all weld seams and verify that bolt-through holes are properly aligned. Some Clayton Off Road products are permanent, non-removable, weld-on solutions. **If a defect or issue is found after installation, especially with permanent weld-on components, it may be difficult or impossible to correct.** Inspecting the part(s) received beforehand helps prevent unnecessary and avoidable complications.

## ATTENTION: TORQUE SPECIFICATION

When working on any vehicle, it is good practice to torque suspension/weight-bearing components while the vehicle is resting under its load. This instruction set, as well as any other Clayton Off Road instruction set, assumes the installer will tighten any suspension-related components properly, to the recommended torque specification, when the vehicle is resting safely under its own weight.

# FRONT SUSPENSION COMPONENTS

\*\*\*Please review the part numbers you have purchased to familiarize yourself with the product(s)\*\*\*

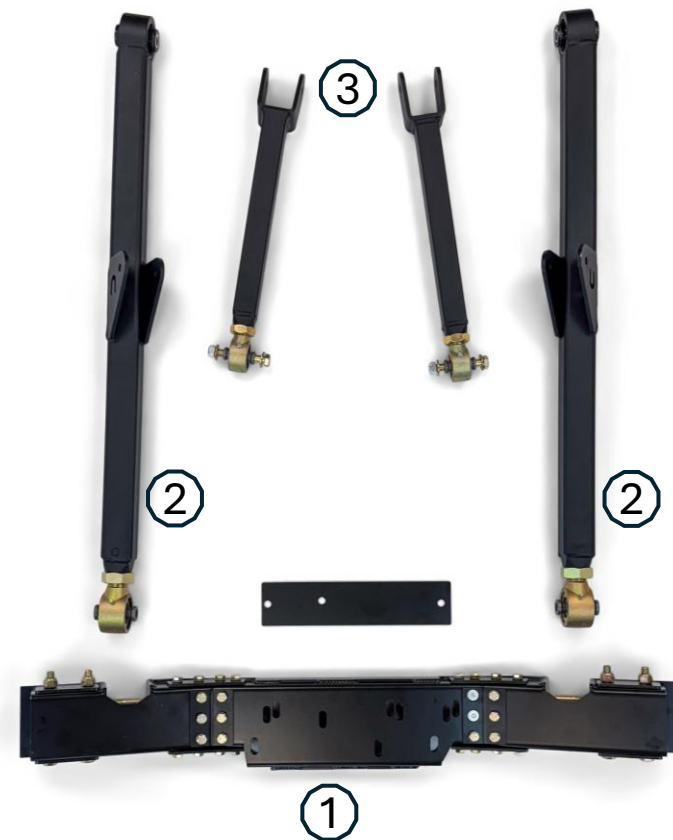


# 4808122 - INCLUDED ITEMS

4808122 Jeep Wrangler FRONT Long Arm Upgrade Kit (2007-2018, JK)					
QTY	Part Number	Description	Class/Grade	ID Number	
1	2108112	Jeep Wrangler Front 3 Piece Cross Member (2007-2018, JK)	N/A	1	
1	1908010	JK Long Front Lower Control Arms (2007-2018, JK)	N/A	2	
1	1908011	JK Front Upper Control Arm Kit (2007-2018, JK)	N/A	3	
26	15103	3/8"-16x3/4" Yellow Zinc Finish Hex Cap Screw	Grade 8	N/A	
4	15224	1/2"-13 x 5-1/2" Yellow Zinc Finish Hex Cap Screw	Grade 8	N/A	
2	18950	9/16"-18 x 3-3/4" Yellow Zinc Finish Hex Cap Screw	Grade 8	N/A	
26	33893	3/8" High Alloy Lock Washer	N/A	N/A	
4	37187	1/2"-13 Yellow Zinc Finish NE Nylon Insert Lock Nut	Grade 8	N/A	
2	37310	9/16"-18 Zinc Finish Top Lock Nut	Grade C	N/A	
8	94286	3/8"-16 x 1" Hex Drive Zinc Finish Flat Socket Cap Screw	Alloy Steel	N/A	
4	33818	9/16" Yellow Zinc Finish SAE Flat Washer	Thru-Hardened	N/A	

## Product Notes and Features:

- Bolt-in, heavy-duty, 3-piece design cross member made of modular 3/16" steel and e-coated for a perfect, corrosion-resistant finish
- Utilizes the factory axle mounting points, no axle modification required
- Reduced suspension angles for a smoother, more controlled ride
- Longer arms to deliver greater articulation and climbing ability
  - GIIRO Joint bushings on the axle end and Johnny Joints at the adjusters for superior off-road articulation, maximum versatility, and long-lasting reliability
- Hardware included to assemble the 3-piece cross member
- Transmission spacer/shim included for use with certain JK production years



• Lower arm dimensions: MIN =  $36 \frac{3}{4}$ " , MAX =  $37 \frac{1}{2}$ "

• Straight upper arm dimensions: MIN =  $18 \frac{3}{16}$ " , MAX =  $21 \frac{3}{16}$ "

• Angled upper arm dimensions: MIN = 18" , MAX = 21"

# 2108112 - INCLUDED ITEMS

2108112 Jeep Wrangler Front 3 Piece Cross Member (2007-2018, JK)			
QTY	Part Number	Description	Class/Grade
1	2108112	Jeep Wrangler Front 3 Piece Cross Member (2007-2018, JK)	N/A
26	15103	3/8"-16x3/4" Yellow Zinc Finish Hex Cap Screw	Grade 8
4	15224	1/2"-13 x 5-1/2" Yellow Zinc Finish Hex Cap Screw	Grade 8
2	18950	9/16"-18 x 3-3/4" Yellow Zinc Finish Hex Cap Screw	Grade 8
26	33893	3/8" High Alloy Lock Washer	N/A
4	37187	1/2"-13 Yellow Zinc Finish NE Nylon Insert Lock Nut	Grade 8
2	37310	9/16"-18 Zinc Finish Top Lock Nut	Grade C
8	94286	3/8"-16 x 1" Hex Drive Zinc Finish Flat Socket Cap Screw	Alloy Steel
4	33818	9/16" Yellow Zinc Finish SAE Flat Washer	Thru-Hardened

## Product Notes and Features:

The Jeep Wrangler Front 3 Piece Cross Member is engineered for maximum clearance, strength, and serviceability. Designed to bolt into the factory cross member location, this "beefier-than-stock" component serves as the perfect foundation for your JK's long-arm suspension setup, all while providing easy drivetrain access when you need it.

- 3 Piece, modular construction with the center being completely removable for servicing the transmission
- formed using the latest CAD software and manufacturing techniques
- Complete hardware kit included with flat socket cap screws where its needed
- Optional, weld-in gussets to permanently secure the outer components to the frame
- Control arms not included



# 1908010 - INCLUDED ITEMS

1908010 Jeep Wrangler Long Front Lower Control Arms (2007-2018, JK)			
QTY	Part Number	Description	Class/Grade
1	1908010	JK Long Front Lower Control Arms (2007-2018, JK)	N/A
2	18950	9/16"-18 x 3-3/4" Yellow Zinc Finish Hex Cap Screw	Grade 8
4	33818	9/16" Yellow Zinc Finish SAE Flat Washer	Thru-Hardened
2	37310	9/16"-18 Zinc Finish Top Lock Nut	Grade C

## Product Notes and Features:

Achieve superior performance and durability with the **Ultimate Jeep Control Arms**, engineered for unmatched comfort and reliability. Designed with meticulous attention to detail, these control arms are built to handle the toughest terrains while delivering a smooth and quiet driving experience.

- Smooth and quiet performance that isolates road noise and vibration for a quieter ride
- Reliable, greaseable, and rebuildable joints with 40 degrees of misalignment
- Heavy-duty square tubing and DOM housings for maximum strength and durability
- Forged adjusters for precise alignment and adjustability
- Reduced suspension angles for a smoother, more controlled ride
  - Only tested and confirmed use in conjunction with COR-2108112, 3 Piece Cross Member
- Longer arms to deliver greater articulation and climbing ability
- Cross member pocket control arm hardware (9/16"-18 x 3-3/4" bolts, nuts, and washers) included
- **Arm dimensions: MIN = 36  $\frac{3}{4}$ " , MAX = 37  $\frac{1}{2}$ " ,**



# 1908011 - INCLUDED ITEMS

## 1908011 Jeep Front Upper Control Arm Kit (2007-2018, JK)

QTY	Part Number	Description	Class/Grade	ID Number
1	1908011	Jeep Front Upper Control Arm Kit (2007-2018, JK)	N/A	1

### Product Notes and Features:

Achieve superior performance and durability with the **Ultimate Jeep Control Arms**, engineered for unmatched comfort and reliability. Designed with meticulous attention to detail, these control arms are built to handle the toughest terrains while delivering a smooth and quiet driving experience.

- Maintenance-free, dual-durometer design isolates road noise and vibration for a quieter ride
- Self-centering with 26.6 degrees of total articulation, ensuring smooth suspension movement
- Heavy-duty DOM tubing for maximum strength and durability
- Forged adjusters for precise alignment and adjustability
- Bolt-in design resulting in an easy installation with no modifications required
- Radius arm hardware (1/2"-20 x 3-1/2" bolts, nuts and washers) included
- Angled arm meant to be used on the driver-side axle connection
- **Straight upper arm dimensions: MIN = 18  $\frac{3}{16}$ " , MAX = 21  $\frac{3}{16}$ "**
- **Angled upper arm dimensions: MIN = 18" , MAX = 21"**



# REAR SUSPENSION COMPONENTS

\*\*\*Please review the part numbers you have purchased to familiarize yourself with the product(s)\*\*\*



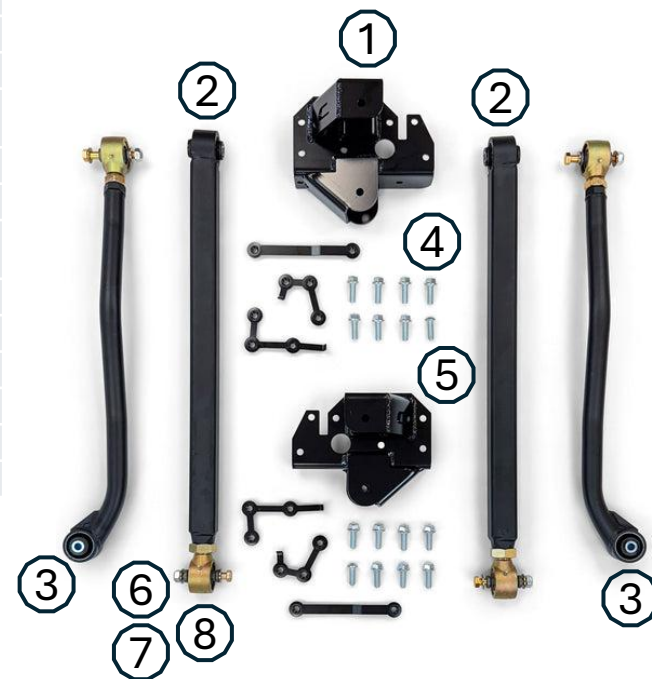
# 4808200 - INCLUDED ITEMS

## 4808200 Jeep Wrangler Rear Long Arm Upgrade Kit (2007-2018, JK)

QTY	Part Number	Description	Class/Grade	ID Number
1	2208100	Jeep Wrangler Rear Frame Brackets (2007-2018, JK)	N/A	1
1	1908020	Jeep Wrangler Long Rear Lower Control Arms (2007-2018, JK)	N/A	2
1	1908030	Jeep Wrangler Long Rear Upper Control Arms (2007-2018, JK)	N/A	3
14	19959	1/2"-13 x 1-1/2" Zinc Finish Hex Serrated Flange Bolt	Hardened	4
2	94111	1/2"-13 x 1-1/2" Hex Drive Button Socket Cap Screw	Alloy Steel	5
4	18951	9/16"-18 x 4" Yellow Zinc Finish Hex Cap Screw	Grade 8	6
8	33818	9/16" Yellow Zinc Finish SAE Flat Washer	Thru-Hardened	7
4	37310	9/16"-18 Zinc Finish Top Lock Nut	Grade C	8
1	2208100I	JK Rear Long Arm Inside Frame Bracket A (Left)	N/A	
1	2208100J	JK Rear Long Arm Inside Frame Bracket B (Left)	N/A	
2	2208100M	JK Rear Long Arm Inside Frame Bracket C	N/A	
1	2208100K	JK Rear Long Arm Inside Frame Bracket A (Right)	N/A	
1	2208100L	JK Rear Long Arm Inside Frame Bracket B (Right)	N/A	

### Product Notes and Features:

- Bolt-on, heavy-duty, internal PEM nut design allows for a secure, robust, and strong rear control arm mounting bracket
- Utilizes the factory axle mounting points, no axle modification required
- Reduced suspension angles for a smoother, more controlled ride
- Longer arms to deliver greater articulation and climbing ability
  - GIIRO Joint bushings on the axle end and Johnny Joints at the adjusters for superior off-road articulation, maximum versatility, and long-lasting reliability
  - Bracket mounting hardware, PEM flag nuts included, and frame-end hardware included



- Lower arm dimensions: MIN =  $32 \frac{9}{16}$ " , MAX =  $33 \frac{1}{4}$ "
- Upper arm dimensions: MIN =  $29 \frac{3}{4}$ " , MAX = 31"

# 2208100 - INCLUDED ITEMS

2208100 Jeep Wrangler Rear Frame Brackets (2007-2018, JK)				
QTY	Part Number	Description	Class/Grade	ID Number
1	2208100	Jeep Wrangler Rear Frame Brackets (2007-2018, JK)	N/A	1
14	19959	1/2"-13 x 1-1/2" Zinc Finish Hex Serrated Flange Bolt	Case Hardened	2
2	94111	1/2"-13 x 1-1/2" Hex Drive Button Socket Cap Screw	Alloy Steel	3
1	2208100I	JK Rear Long Arm Inside Frame Bracket A (Left)	N/A	4
1	2208100J	JK Rear Long Arm Inside Frame Bracket B (Left)	N/A	5
2	2208100M	JK Rear Long Arm Inside Frame Bracket C	N/A	6
1	2208100K	JK Rear Long Arm Inside Frame Bracket A (Right)	N/A	7
1	2208100L	JK Rear Long Arm Inside Frame Bracket B (Right)	N/A	8

## Product Notes and Features:

- Bolt-on, heavy-duty, internal PEM nut design allows for a secure, robust, and strong rear control arm mounting bracket
- Frame brackets made of 1/4" thick steel construction
- Formed using the latest CAD software and manufacturing techniques
- Utilizes the factory axle mounting points, no axle modification required
- Reduced suspension angles for a smoother, more controlled ride
- Longer arms to deliver greater articulation and climbing ability
- Bracket mounting hardware and PEM flag nuts included
- 1/2"-13 x 1-1/2" Case Hardened Hex = TORQUE SPEC = 110-120 FT/LBS



# 1908020 - INCLUDED ITEMS

1908020 Jeep Wrangler Long Rear Lower Control Arms (2007-2018, JK)			
QTY	Part Number	Description	Class/Grade
1	1908020	JK Long Rear Lower Control Arms (2007-2018, JK)	N/A
2	18951	9/16"-18 x 4" Yellow Zinc Finish Hex Cap Screw	Grade 8
4	33818	9/16" Yellow Zinc Finish SAE Flat Washer	Thru-Hardened
2	37310	9/16"-18 Zinc Finish Top Lock Nut	Grade C

## Product Notes and Features:

Achieve superior performance and durability with the **Ultimate Jeep Control Arms**, engineered for unmatched comfort and reliability. Designed with meticulous attention to detail, these control arms are built to handle the toughest terrains while delivering a smooth and quiet driving experience.

- Smooth and quiet performance that isolates road noise and vibration for a quieter ride
- Reliable, greaseable, and rebuildable joints with 40 degrees of misalignment
- Heavy-duty square tubing and DOM housings for maximum strength and durability
- Forged adjusters for precise alignment and adjustability
- Reduced suspension angles for a smoother, more controlled ride
  - Only tested and confirmed use in conjunction with COR-2108100, Long Arm Frame Brackets
- Longer arms to deliver greater articulation and climbing ability
- Lower arm frame bracket hardware (9/16"-18 x 4" bolts, nuts, and washers) included
- **Arm dimensions: MIN =  $32 \frac{9}{16}$ " , MAX =  $33 \frac{1}{4}$ "**



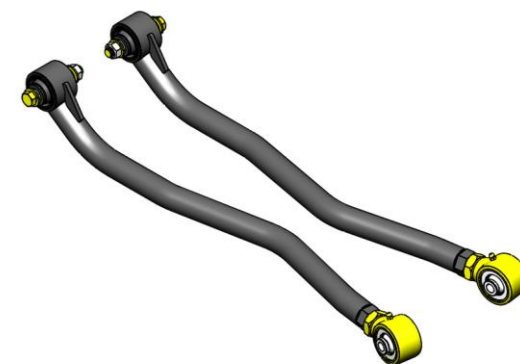
# 1908030 - INCLUDED ITEMS

1908030 Jeep Wrangler Long Rear Upper Control Arms (2007-2018, JK)			
QTY	Part Number	Description	Class/Grade
1	1908030	Jeep Long Rear Upper Control Arms	N/A
2	18951	9/16"-18 x 4" Yellow Zinc Finish Hex Cap Screw	Grade 8
4	33818	9/16" Yellow Zinc Finish SAE Flat Washer	Thru-Hardened
2	37310	9/16"-18 Zinc Finish Top Lock Nut	Grade C

## Product Notes and Features:

Achieve superior performance and durability with the **Ultimate Jeep Control Arms**, engineered for unmatched comfort and reliability. Designed with meticulous attention to detail, these control arms are built to handle the toughest terrains while delivering a smooth and quiet driving experience.

- Smooth and quiet performance that isolates road noise and vibration for a quieter ride
- Reliable, greaseable, and rebuildable joints with 40 degrees of misalignment
- Heavy-duty DOM tubing and housings for maximum strength and durability
- Forged adjusters for precise alignment and adjustability
- Reduced suspension angles for a smoother, more controlled ride
  - Only tested and confirmed use in conjunction with COR-2108100, Long Arm Frame Brackets
- Longer arms to deliver greater articulation and climbing ability
- Lower arm frame bracket hardware (9/16"-18 x 4" bolts, nuts, and washers) included
- **Arm dimensions: MIN = 29  $\frac{3}{4}$ " , MAX = 31"**



# INSTALLATION INSTRUCTIONS

**\*\*\*Take this product to a licensed professional if you are hesitant about the installation process!\*\*\***

**The following instructions are applicable to the listed components below:**

- 4808112
- 2108112
- 1908010
- 1908011

## **The following instructions provide a complete guide for installing a full front upgrade kit, compatible with 2007-2018 Jeep JK**

**\*\*\*The following steps apply to both 3.8L and 3.6L JK vehicles, unless noted otherwise\*\*\***

**If you purchased single-arm sets, individual brackets, or an incomplete kit, your installation process may vary.**

We strongly recommend having basic mechanic's hand tools, sockets, wrenches, vehicle jacks and stands, and other common tools readily available. Installing an aftermarket lift kit is a detailed process, and having the right tools on hand will ensure a smoother installation.

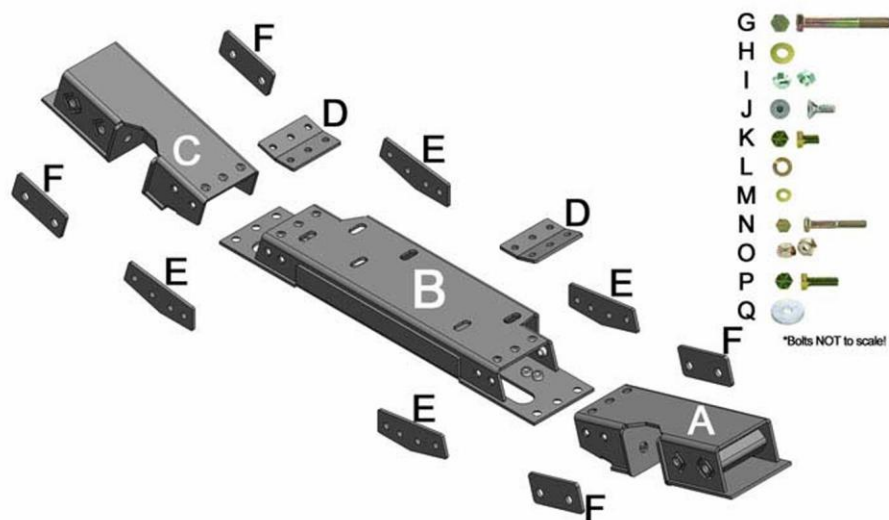
**As always, feel free to contact us at any point during your installation - you can count on us to help!**

# INSTALLATION INSTRUCTIONS

## TOOLS REQUIRED FOR INSTALLATION

- Basic hand tools
- Metric wrench/socket set
- Standard wrench/socket set
- Electric drill and drill bits and 3/8"-16 tap
- 1-1/2" hole saw
- Cut-off wheel and welder
- Large box wrenches, (1-7/16", 1-7/8")
- Four large jack stands, ramps, or a 4-post drive-on lift

1. Support drivetrain and remove OEM cross member and the OEM skid plates if equipped. Retain all OEM hardware as some may be reused.
2. Assemble your new 3-piece cross member. Below is a parts list and an exploded view of the cross member and where each part goes. Make sure the center section (B) is facing the correct way. Double check by making sure you can install the 9/16s bolts (G) into their mounting location.



Item #	PN	Description
A	JKCML	JK cross member left ( Driver )
B	JKCMC12	2012+ JK cross member center (Auto&Man)
C	JKCMR	JK cross member right ( Passenger )
D	JKCM06	Top mounting plate
E	JKCM0512	2012 JK side mounting plate
F	JKCM11	Outside mounting plate
G	18950	9/16"-18 x 3-3/4" Yellow Zinc Hex Cap Screw
H	514071	9/16" SAE Hard Washer
I	368168	9/16"-18 IFI GR C ZNCWX All MTL Lock Nut
J	94286	3/8"-16x1" Flat Head Socket Cap Screw
K	15103	3/8"-16 x 3/4" Yellow Zinc Cap Screw
L	33893	3/8" High Alloy Lock Washer
M	33815	3/8" SAE Flat Washer Yellow Zinc
N	15224	1/2"-13 x 5-1/2" Yellow Zinc Hex Cap Screw
O	37187	1/2"-13 Yellow Zinc Nylon Insert Lock Nut
P	15107	3/8"-16 x 1-1/4" Yellow Zinc Grade 8 Hex Cap Screw
Q	11103739	3/8" x 1.250" x 0.125" Thick Fender Washer

# INSTALLATION INSTRUCTIONS

- All the brackets will be used to assemble the cross member except for the outside mounting plates (F). These are used as reinforcement spacers to properly clamp the cross member back into the OEM location.
- Once you have assembled the cross member, it should look as pictured below. Do NOT install the front (J) Allen head bolts yet. They will be in the way of installing the (G) 9/16" Johnny Joint bolts. Install these once all arms are installed. See image below.



- Install the cross member into your JK. You may find it is easier to install the Johnny Joints with the cross member out of the vehicle, as seen in the photos below. The joints will come with anti-seize on the threads; however, adding more can't hurt if you have it.



# INSTALLATION INSTRUCTIONS

6. This pocket design allows for maximum clearance; however, lining up the washers and bolts may be tricky at first. Installing just the Johnny Joint makes it easier to hold everything in place while you line up the washer, bolt, and nut on the other side.

Once everything is installed, an open-ended wrench will fit on the outside to hold the nut. On the inside, a 13/16" socket with 3/8" drive socket with an extension will fit (**A 1/2" drive and socket will NOT fit**). In the previous picture, we used a 3/8" socket, with a 3/8" to 1/2" adapter to tighten the 9/16" Grade 8 bolts down.

7. This cross member has been designed as a bolt-in and can be used without welding. For our customers who are more abusive with their driving style, we recommend welding in this cross member for maximum strength. The outside flanges will almost touch the bottom of the frame. If you choose to weld in the cross member, this is the time to prep the frame and the cross member. Because this is a 3-piece cross member, if you need to service the transmission in the future, the center section can still be removed.

8. Install the cross member into your Jeep JK and make sure it is centered left to right. Reinstall the OEM transmission bolts. Use the new (N) 1/2"-13 bolts with the outside spacer plates (F) on each side to clamp the cross member into the factory bracket.

**NOTE: Do NOT weld anything into the vehicle until you are sure that everything fits and is installed correctly.**

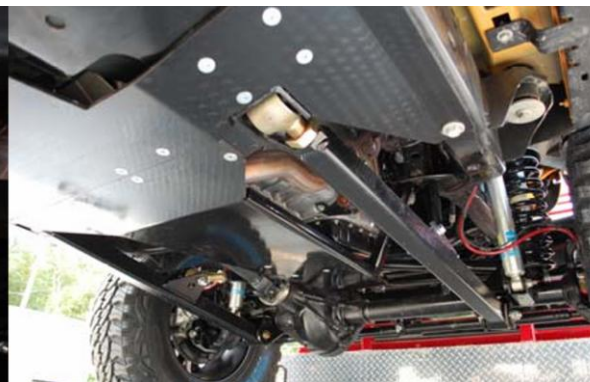


# INSTALLATION INSTRUCTIONS

9. If you purchased our skid plates, you may skip to Step 10. If you are reusing the stock skid plates, you will need to trim the stock gas tank skid to allow clearance for the new passenger side control arm mount. use hardware (K) 3/8" bolt, and washer (M) to reattach the OE skid plate to the new cross member.



10. When using our main skid plate, you will need to trim the OEM gas tank skid to clear the cross member, and drill new holes and bolt it together using the hardware sent with the skid plate.



# INSTALLATION INSTRUCTIONS

11. Now is the time to modify your exhaust. Most aftermarket loop-delete kits will do fine; however, we recommend the AFE Exhaust Loop Delete Kit. Follow their instructions to install their product. In addition to their pipe, we use a BDS exhaust spacer kit on the passenger side to push the exhaust closer to the cross member, allowing for more clearance between the crossover pipe and driveshaft. Even with this extra room, we recommend a CV-style driveshaft.



# INSTALLATION INSTRUCTIONS

12. At this time, the front long arms can be installed. **Chock the wheels and remove only the driver-side arms at this time.** Cut off the OEM frame mounts on **this side only, for now.** This is best accomplished with a cutoff wheel or a plasma cutter. Always wear eye protection when using a grinder. **Use caution when cutting off the brackets, and move any cables, wires, or lines out of the way.**



13. Measure and make sure both lower arms are the same length. We recommend 36-1/2", 36-3/4", and 37.00" for our 2.5", 3.5", and 4.5" lift height options, respectively. **These are simply recommendations, and additional fine-tuning will be required, just like any properly designed lift kit.**

14. If you are upgrading from our short arm kit, you will install the driver upper arm next. The straight arms will fit on stock housings. Our long arm upgrade kit comes with 1 straight arm and 1 angled arm. This angled arm is designed to be used on the driver side to help with clearance on larger aftermarket axles.

**NOTE:** If you find you do need this angled upper arm, it is available for purchase with part number COR-1808006. Otherwise, you can cut a 17-degree angle into the arm, reweld it, and you will have the same effect.

# INSTALLATION INSTRUCTIONS

15. The driver side upper arm will simply hold the pinion, so you can proceed to the passenger side. Final adjustments will be made once all arms are installed and the vehicle is at ride height. Remove the passenger side arms and install the passenger side lower long arm. Remove the OEM brackets.

16. Set the vehicle at ride height and set your caster angle to about 4.5 degrees. On our 4.5" lifted JK, our upper arms are approximately 18.75 inches long. Upper arms do NOT have to be the same length. Install the other upper arm and adjust the end as necessary.

**NOTE:** The OEM front skid plate will not work with the long arms or a lifted JK due to clearance issues with the driveshaft and arms. Remove the OEM skid plate at this time.

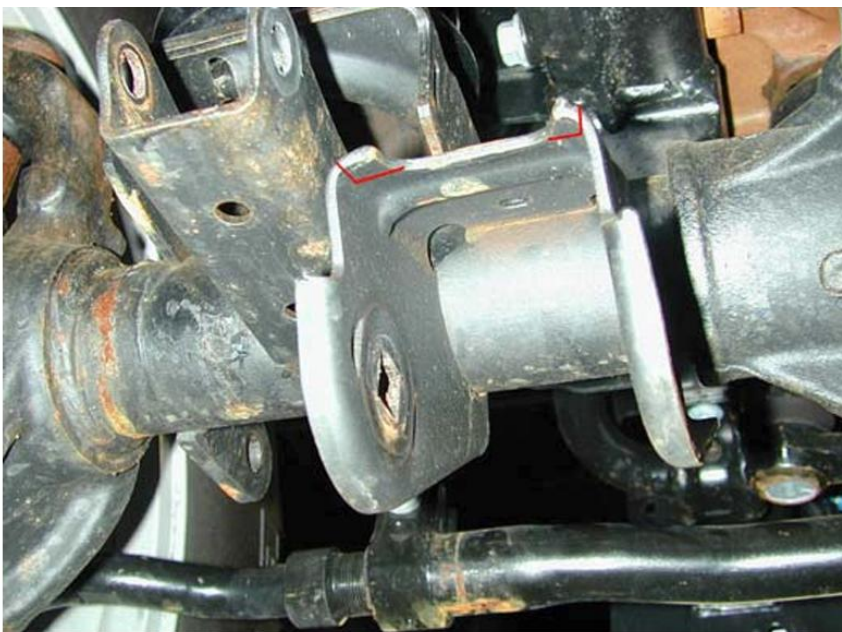
17. Return the vehicle to ride height and tighten all suspension bolts and any other bolts you may have removed during the installation.

18. OE-style transmission skid plate can NOT be reused. The transfer case and engine skid plates can be reinstalled with some minor trimming and aftermarket hardware. Use the large (Q) fender washer with (P) 3/8"-16 x 1-1/4 cap head screw to reinstall the transfer case skid. See pictures below.



# INSTALLATION INSTRUCTIONS

19. To allow clearance for the new long arms, you might need to grind away the corners of the lower OEM frame brackets. We simply took a grinding disk and ground down the corner. See the photos below for where to grind to provide clearance.



**\*\*\*Always wear eye and ear protection when using a cut-off wheel\*\*\***

# INSTALLATION INSTRUCTIONS

20. Torque all hardware. Refer to the table below for helpful torque specifications. It is recommended to retorque all bolts after the first 500 miles of driving.

Table 1: COR FRONT Long Arm Torque Specifications

Bolt Location	Wrench Size	Torque (ft-lbs)
Upper Control Arm Radius Link Bolt (1/2"-20 x 3-1/2")	3/4"	90
Upper Control Arm Axle Bolt (Factory Size)	18mm	75
Lower Control Arm Cross Member Bolt (9/16"-18 x 3-3/4")	13/16"	130
Lower Control Arm Axle Bolt (Factory Size)	21mm	125

# INSTALLATION INSTRUCTIONS

21. Tighten down the jam nuts on the upper and lower control arms. Use a 1-7/8" wrench for the lower control arm jam nuts, and a 1-7/16" wrench for the upper control arm jam nuts. Use a breaker bar to gain additional leverage. Tighten all jam nuts down as tight as humanly possible.

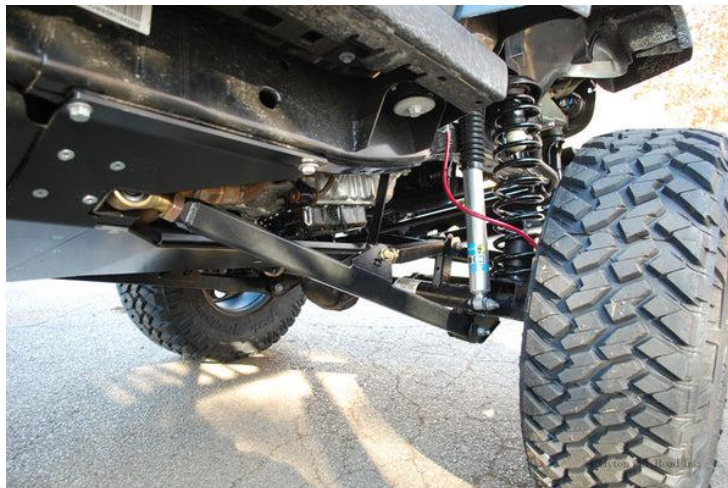
Please note that not all wrenches are created with the same tolerances. If your wrenches are too loose around the jam nut, Clayton Off Road offers tight, wrap-around wrenches for purchase. Please search for the wrenches using the SKUs below.



COR Wrench-ends for control arm jam nuts (COR-2500125, COR-2500100)

# INSTALLATION INSTRUCTIONS

22. The front-end components are now installed. Please follow the post-installation checklist to complete the installation. As always, feel free to contact us with any questions you may have about the installation.



## **POST-INSTALLATION CHECKLIST:**

- Cross member is properly installed into the frame
- Exhaust is re-routed with a loop delete and/or exhaust spacer
- All hardware is torqued to specification (see Step 20)
- Control arm jam nuts are as tight as possible
- Lug nuts are torqued to the manufacturer's specification
- A licensed shop has professionally aligned the vehicle
- Retorque all hardware after 500 miles of driving



# INSTALLATION INSTRUCTIONS

\*\*\*Take this product to a licensed professional if you are hesitant about the installation process!\*\*\*

The following instructions are applicable to the listed components below:

- 4808200
- 2108100
- 1908020
- 1908030

**The following instructions provide a complete guide for installing a full rear upgrade kit, compatible with 2007-2018 Jeep JK**

\*\*\*The following steps apply to both 3.8L and 3.6L JK vehicles, unless noted otherwise\*\*\*

If you purchased single-arm sets, individual brackets, or an incomplete kit, your installation process may vary.

We strongly recommend having basic mechanic's hand tools, sockets, wrenches, vehicle jacks and stands, and other common tools readily available. Installing an aftermarket lift kit is a detailed process, and having the right tools on hand will ensure a smoother installation.

**As always, feel free to contact us at any point during your installation - you can count on us to help!**

# INSTALLATION INSTRUCTIONS

## TOOLS REQUIRED FOR INSTALLATION

- *Basic hand tools*
- *Metric wrench/socket set*
- *Standard wrench/socket set*
- *Electric drill and drill bits and 3/8"-16 tap*
- *1-1/2" hole saw*
- *Cut-off wheel and welder*
- *Large box wrenches, (1-7/16", 1-7/8")*
- *Four large jack stands, ramps, or a 4-post drive-on lift*

23. Position the vehicle either on the ground or on a lift. For this installation, it is recommended that the vehicle be supported by the frame. Support the rear axle with an additional jack stand. Remove the rear tires for more clearance.



# INSTALLATION INSTRUCTIONS

24. You will now begin the rear long arm installation. The JK rear long arm brackets are designed with the ability to be installed without removing the gas tank. However, you will need to cut and grind brackets very close to the gas tank. Therefore, we highly recommend that you remove the gas tank for safety reasons.
25. The JK Rubicon rocker panels, and most likely any other rocker panels, will need to be removed to properly install the rear brackets. Some rocker panels may need to be modified to be reinstalled.
26. Start by removing the passenger side gas tank nut-insert. Unscrew the bolt about halfway down, then hit it with a 5 lb. sledgehammer until the bolt forces the nut insert out. It is slightly welded on the inside of the frame and needs to be removed to properly install our rear frame brackets. See the picture on the left.
27. You will also need to trim the OEM tab, which is a part of the gas tank skid plate. See the photo to the right.



# INSTALLATION INSTRUCTIONS

28. Next, you will need to trim the rear OEM body mounts. Measure 2" from the bottom up and notch the mounts (both sides of the mount). Do this for the driver and passenger side.



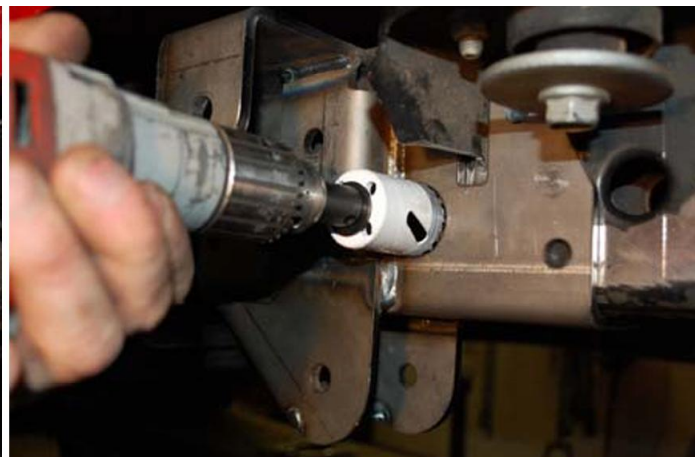
29. Once you have trimmed the rear body mounts, remove the lower control arm mount and the rear upper mount **on the driver side only, for now**. Take a grinder to the bottom and front of the frame and make sure the frame is clean where the new bracket will be clamped. Make sure to smooth down the section of the frame where they are welded together. This will be the alignment point for the front of the new frame bracket.



# INSTALLATION INSTRUCTIONS

30. The rear frame bracket should be aligned with the front of the double edge of the frame. Use a few C-clamps and make sure the bracket is properly positioned before you start drilling holes. We used a bottle jack and a block to press the bracket tight against the bottom of the frame rail, and 2 C-clamps to hold the bracket against the frame.

31. On the passenger side, the frame has a square access hole which will allow you to install the PEM fasteners that clamp the bracket to the frame. On the driver side, you will need to drill a 1-½" hole using a hole saw. Make sure your bracket is properly positioned and c-clamped while you drill this access hole.



32. Next, you will need to drill eight, ½" holes in the frame and then insert the PEM fasteners through the access holes and start each bolt. Line up the driver side and passenger side brackets and the appropriate PEM fastener brackets. We recommend starting with the lower 2 holes, drilling them, and bolting the bracket in. With the bracket bolted and c-clamped to the frame, drill the next set of 3 holes. Bolt in those 3, then move on to the last set. This will make it less likely that something moves and should make it easier to align all the bolts with the PEM fastener brackets.

# INSTALLATION INSTRUCTIONS

33. Feed the lower straight bracket in through a hole in the bottom of the frame with the longer side feeding first. There is a step in the frame, and this is to allow for a proper fit. Do not force the bolts into the PEM fastener brackets as they may bend, and you may not be able to line up the bolt and PEM. If this does happen, remove the PEM bracket, straighten it, and try again.



34. Use the 7 hex-head bolts in the frame bracket and the 1 Allen head in the front. This is strictly for clearance against rocks. Once all bolts are started, **torque each to 80-110 lb-ft.**

35. Reinstall the gas tank and skid plate (if removed).

**Complete the bracket installation on both sides of the vehicle.**

**NOTE: When reinstalling the gas tank and skid, you may need to bend-in, or roll the gas tank skid in order to allow for the 9/16" bolt and nut to fit.**

# INSTALLATION INSTRUCTIONS

36. Now you are ready to install the rear long arms. The lower arms have a certain angle to properly line up with the OEM axle brackets. Make sure to keep both lower arms the same length. **On a 4-door model, set the lower arm length to 32-1/4", 32-1/2", and 32-3/4" for our 2.5", 3.5", and 4.5" lift height options, respectively.** Final adjustments may need to be made depending on actual tire size, vehicle weight, and bumpers used.
37. When installing the **long rear uppers on a 2-door model, we recommend 31-3/4", and 30-1/2" on a 4-door.** These are only starting measurements, and final measurements should be made depending on your driveshaft type and angles.
38. **The rear upper arms also have a driver and passenger side to allow for a tire clearance bend.** Set your desired pinion angle and then adjust the adjuster so the bolt slides in easily. The rear uppers do NOT have to be the same length. Make sure when you tighten the jam nuts that the Johnny Joints are centered in the bracket to allow for even articulation. A completed install should look like the pictures below.



# INSTALLATION INSTRUCTIONS

39. Torque all hardware. Refer to the table below for helpful torque specifications. It is recommended to retorque all bolts after the first 500 miles of driving.

Table 2: COR REAR Long Arm Torque Specifications

Bolt Location	Wrench Size	Torque (ft-lbs)
Upper Control Arm Frame Bracket (9/16"-18 x 4")	13/16" and 7/8"	170
Upper Control Arm Axle Bolt (Factory Size)	21mm	125
Lower Control Arm Frame Bracket (9/16"-18 x 4")	13/16" and 7/8"	170
Lower Control Arm Axle bolt (Factory Size)	21mm	125

# INSTALLATION INSTRUCTIONS

40. Tighten down the jam nuts on the upper and lower control arms. Use a 1-7/8" wrench for the lower control arm jam nuts, and a 1-7/16" wrench for the upper control arm jam nuts. Use a breaker bar to gain additional leverage. Tighten all jam nuts down as tight as humanly possible.

Please note that not all wrenches are created with the same tolerances. If your wrenches are too loose around the jam nut, Clayton Off Road offers tight, wrap-around wrenches for purchase. Please search for the wrenches using the SKUs below.



COR Wrench-ends for control arm jam nuts (COR-2500125, COR-2500100)

# INSTALLATION INSTRUCTIONS

41. The rear-end long arm lift kit installation is now complete. Please see the post-installation checklist and confirm you have completed all of the steps before driving your vehicle.



## POST-INSTALLATION CHECKLIST:

- Tighten all suspension nuts (See Table 2 from Step 39)
- Hex-head frame bracket bolts torqued to 80-100 lb-ft
- Check tire clearance on the rear body panel. Trimming may be required depending on tire size and lift height
- Control arm jam nuts are as tight as possible
- Lug nuts are torqued to the manufacturer's specification
- Retorque all hardware after 500 miles of driving
- Test drive with the ESP manually disengaged. We highly recommend that this system be updated to properly function with your new lift height and larger tires. A proper alignment is a critical part of having the ESP function properly.

