

# SECOND GEN NISSAN FRONTIER (05-19) 2/4 DROP KIT INSTALLATION INSTRUCTIONS



## INSTALLATION INSTRUCTIONS

Rev - - Apr 2024

### **!!NOTICE!!**

LOJ CONVERSIONS CORP HAS PREPARED THESE INSTRUCTIONS TO MAKE YOUR PRODUCT INSTALLATION AS SIMPLE AND HASSLE-FREE AS POSSIBLE. INSTALLATION ISSUES EXPERIENCED AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS ARE THE SOLE RESPONSIBILITY OF THE USER.

### **!!WARNING!!**

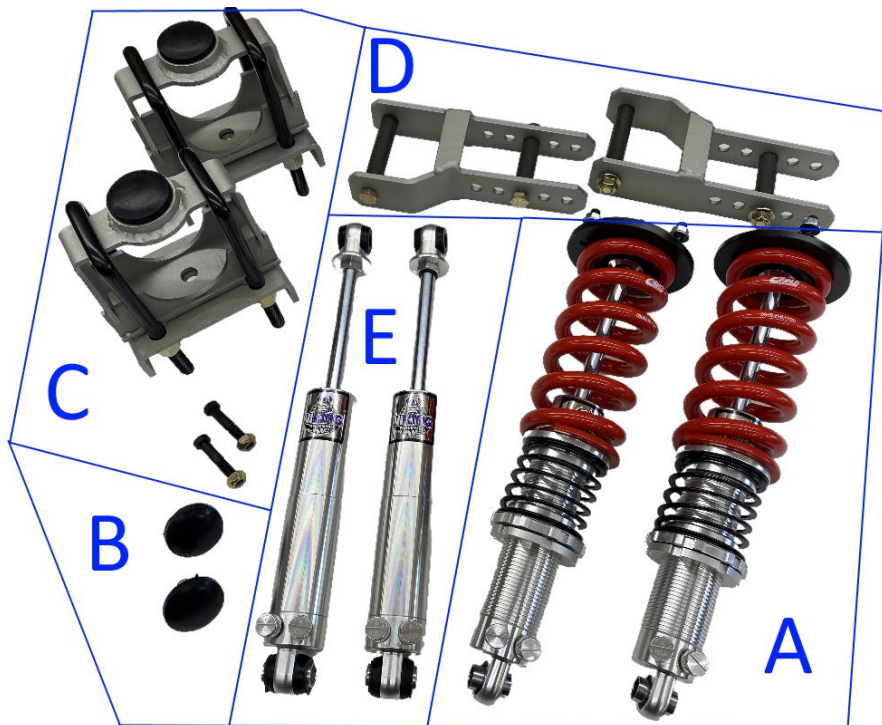
THE USER OF THIS PRODUCT ASSUMES ALL LIABILITY FOR ANY DAMAGES TO PERSONAL OR PUBLIC PROPERTY RESULTING FROM THE USE OR MISUSE OF THIS PRODUCT. ANY INJURIES SUSTAINED BY THE USER AND/OR ANY OTHER INDIVIDUALS ARE ALSO THE SOLE RESPONSIBILITY OF THE USER. MOTORSPORTS ACTIVITIES ARE INHERINTLY DANGEROUS AND LOJ CONVERSIONS CORP CAN NOT BE HELD RESPONSIBLE FOR ANY INCIDENTS RESULTING FROM THE USE OR MISUSE OF THIS PRODUCT.

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## BEFORE YOU BEGIN:

Please ensure that all of the components required for your installation have been included in your package. The 2/4 Drop Kit should include the following components:

- Front Coilover Assemblies (A), which include:
  - Viking Damper with Threaded Body
  - Eibach Coilover Main Spring (Check Spring Part Number to verify correct spring rate, 0800.250.XXXX, Where XXXX=0900 is a 900lb spring, XXXX=1100 is an 1100lb spring, etc)
  - Billet Coilover Top Plate with Studs and Nuts
  - Lower Coilover Mount Spacers
- Front Control Arm Low-Profile Bump Stops (B)
- Rear Axle Flip Kit Assemblies (C), which include:
  - Rear Axle Saddles (Will be marked with an “M” or “C”, M = M226, C = C200K, verify correct saddles were provided)
  - Rear Axle Saddle Cap with Bump-Stop Pre-Installed
  - Rear Axle Lower Spring Plate
  - Qty. 2 Rear Leaf Spring Pins and Nuts
  - Qty. 4 Rear Axle Saddle Cap Shims
  - Qty. 4 Rear Axle U-Bolt Assemblies
- Rear Lift Shackles with Hardware (D)
- Rear Shocks (E)



Ensure you are working on your truck in a safe manner. All work should be performed on a level stable surface, either concrete or asphalt, by a qualified automotive technician.

## **BEFORE JACKING UP YOUR VEHICLE!!!**

Measure your current ride height at each corner to an easily identifiable reference point on the fender. We like to put a piece of painters tape on the fender with a sharp line to measure to. Record your measurements below.

<b>Measurements</b>		
	<b>Before</b>	<b>After</b>
<b>Front Left</b>		
<b>Front Right</b>		
<b>Rear Left</b>		
<b>Rear Right</b>		

*NOTE: Like many performance parts, aftermarket performance shocks may make more noise than factory shocks, due to the bearing mounts and/or poly bushings mounts as compared to factory rubber mounts. This is normal!*

**WARNING: Prior to installation, inspect the overall condition of the control arms. LOJ does NOT recommend mounting a coilover kit to a control arm that is compromised with rust or has other structural defects. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.**

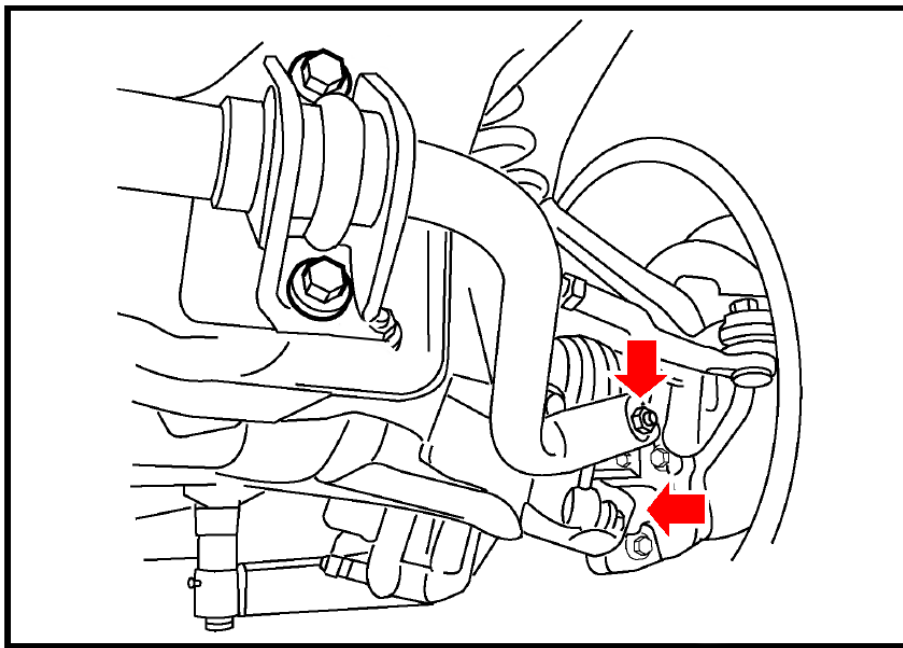
**WARNING: When removing suspension components from a vehicle, be sure to remove as much preload as possible. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH.**

*Products that are used, installed or modified in any way are not eligible for return.*

## INSTALLATION PROCEDURE:

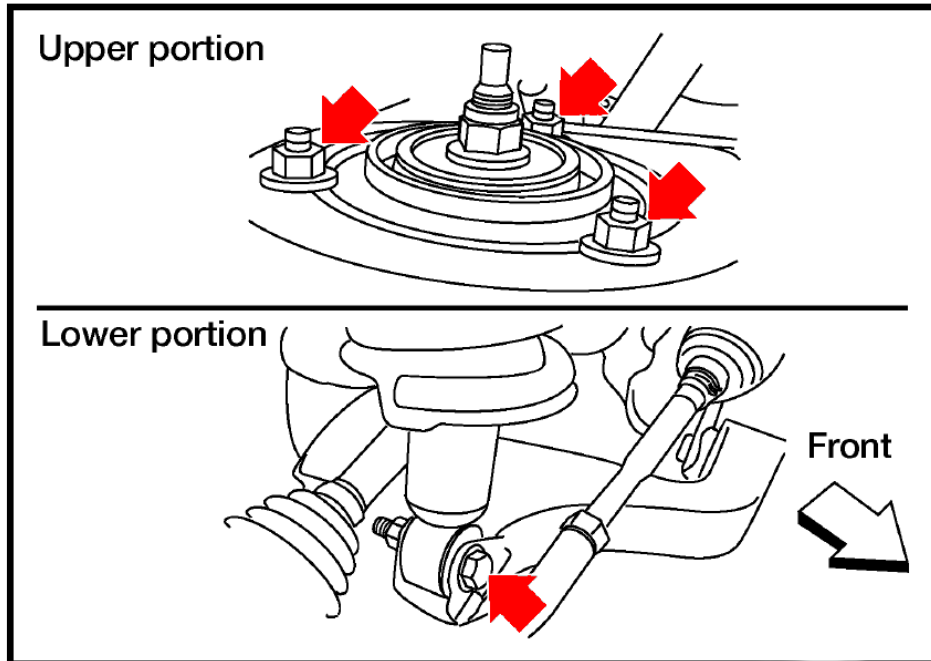
### Front Coilover Install

- 1) Jack up the vehicle and support it with Jack stands under the frame. Make sure there is enough clearance between the vehicle and the ground to allow the suspension to droop without the tires touching the ground. Rear jack stands should be just ahead of the rear leaf spring forward mount.
- 2) Remove all four wheels and tires and store them safely.
- 3) We will start with the front suspension.
- 4) Disconnect the front swaybar end links from each lower control arm. Once both sides are removed, the swaybar can be rotated downwards and out of the way.

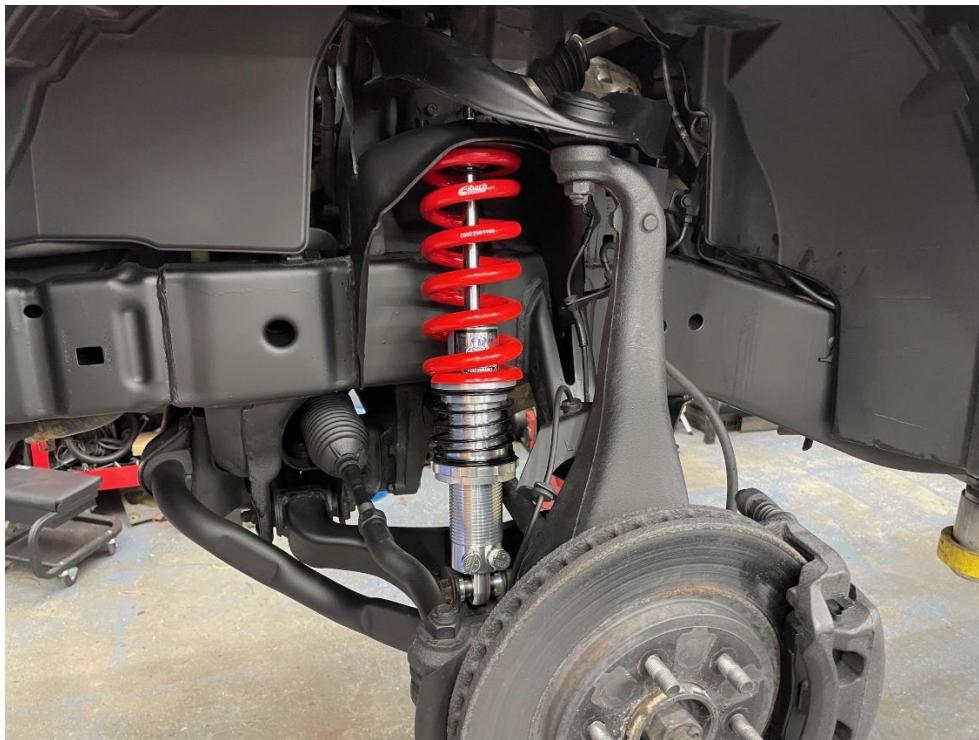


*The following steps pertain to one side of the vehicle, repeat the steps for the other side.*

- 5) Remove the factory bump-stop on the lower control arm.
- 6) Using a 3/8" Drill Bit and Drill, drill out the bump stop mount hole. This will need to be done from under the control arm, so **WEAR PROPER EYE AND FACE PROTECTION!!**
- 7) Install the new low-profile bump stop. The bump stop includes a lock nut with a nylon insert, so you will need to hold the bump stop with a large pair of channel locks to prevent it from spinning while tightening the nut.
- 8) Remove the three nuts that hold the top of the strut into the spring bucket on the frame.
- 9) Remove the lower strut mount bolt and nut, you will need to **SAVE THIS BOLT AND NUT**, as they will be reused for installation of the new coilover.



- 10) Install the new coilover assembly. The top plate bolt pattern is not a perfect triangle and can only be installed one way. Tighten the supplied nuts to **22 ft-lb**.
- 11) Install the lower coilover mount into the control arm making sure to include the billet spacers for the lower mount. Install the lower mount bolt and nut and torque to **155 ft-lb**.

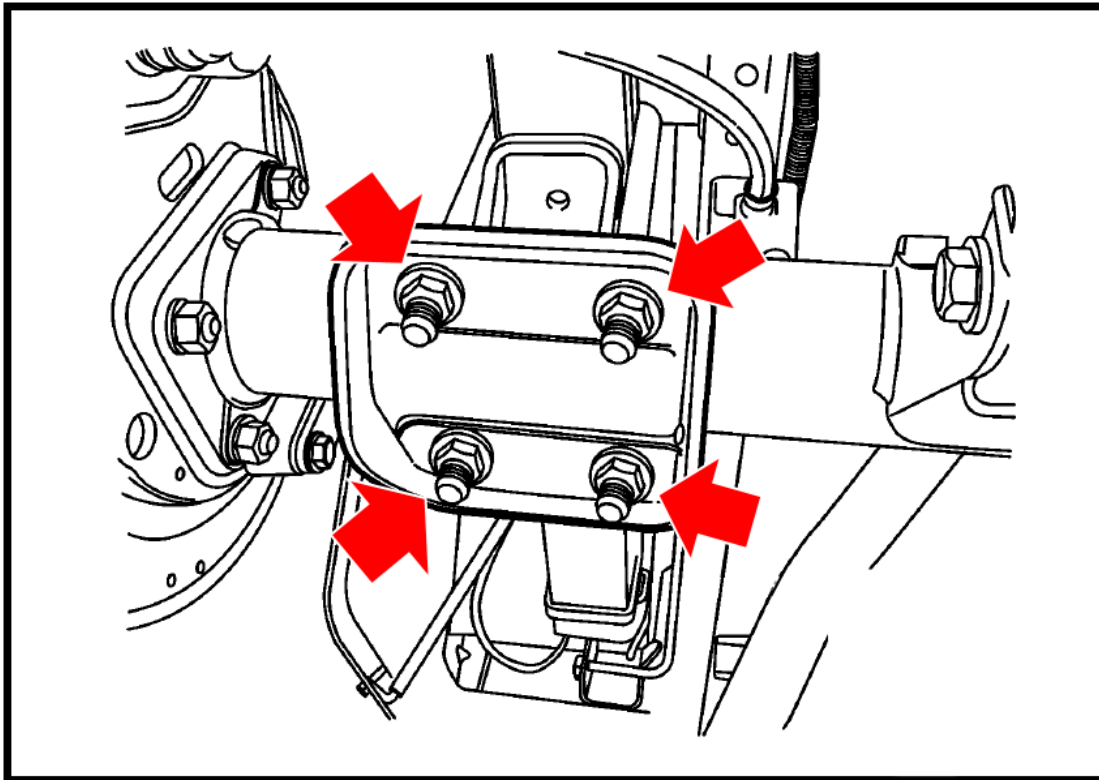


***Repeat steps 5-11 for the opposite side.***

- 12) Reinstall the front swaybar end links.
- 13) LOJ has set the front spring perches to an approximate setting to achieve 2" of drop in the front.  
This is an approximation and will vary based on vehicle configuration. This is why it was critical to record measurements before installation.
- 14) Adjustments to ride height will be discussed at the end of the installation.**

### **Rear Axle Flip Kit**

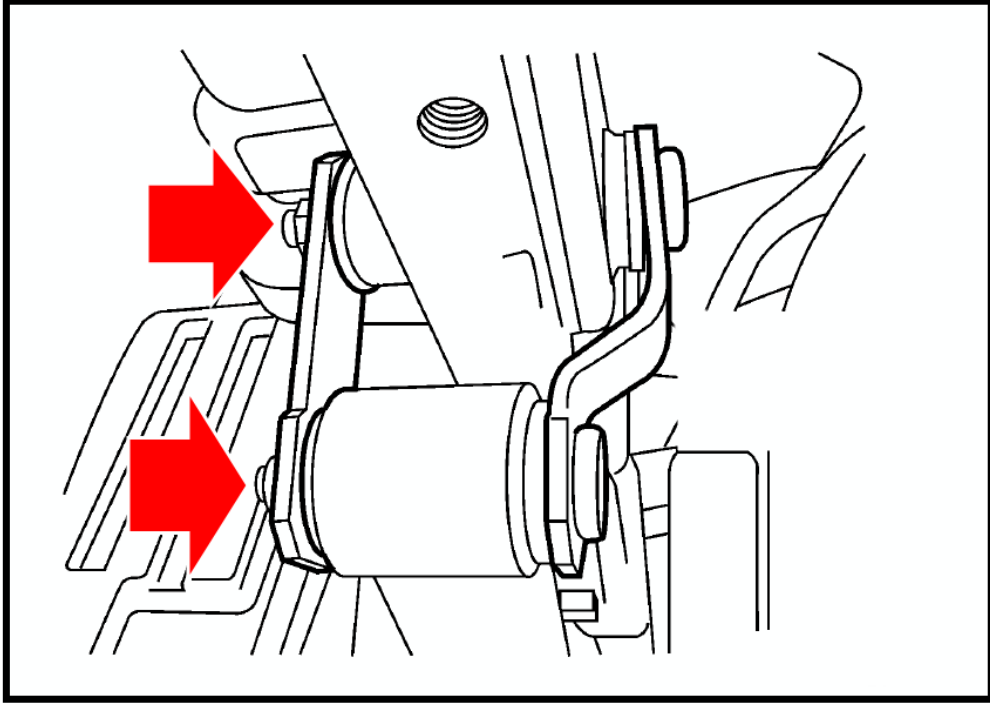
- 15) With the frame supported on jack stands and the axle at full droop, support the axle under the center differential with a floor jack.
- 16) Loosen all U-Bolts holding the axle to the leaf springs, but do not remove completely. The U-bolts should be loose enough to allow the axle to rotate slightly.
- 17) Remove both rear shocks.



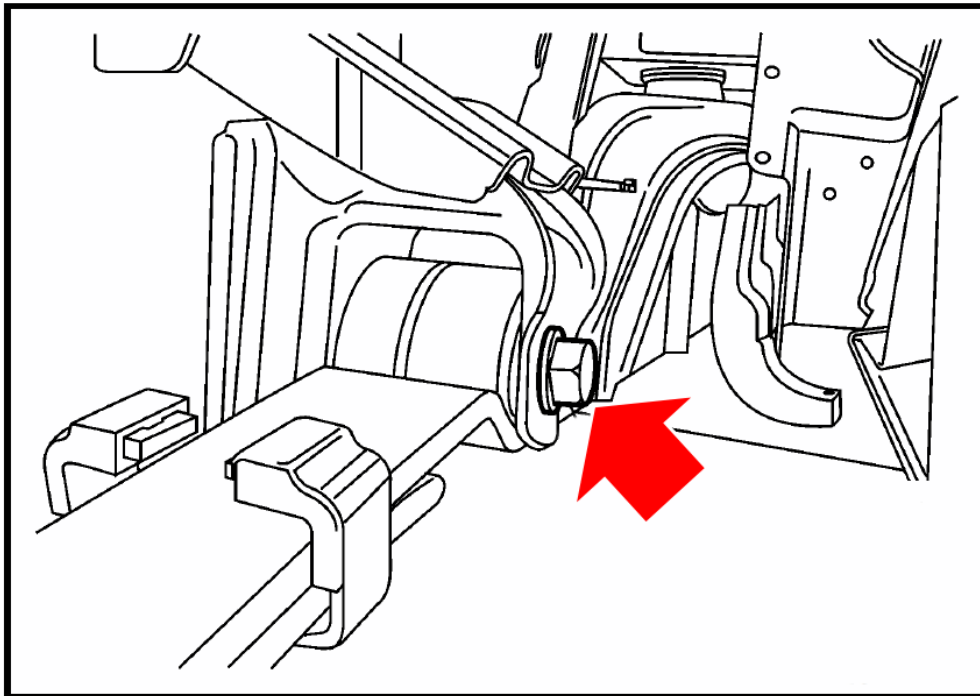
***The following steps pertain to one side of the vehicle, repeat steps for the other side.***

18) Remove the factory U-bolts that hold the axle to the leaf spring.

19) Remove the rear leaf spring shackle from for the spring and the frame.

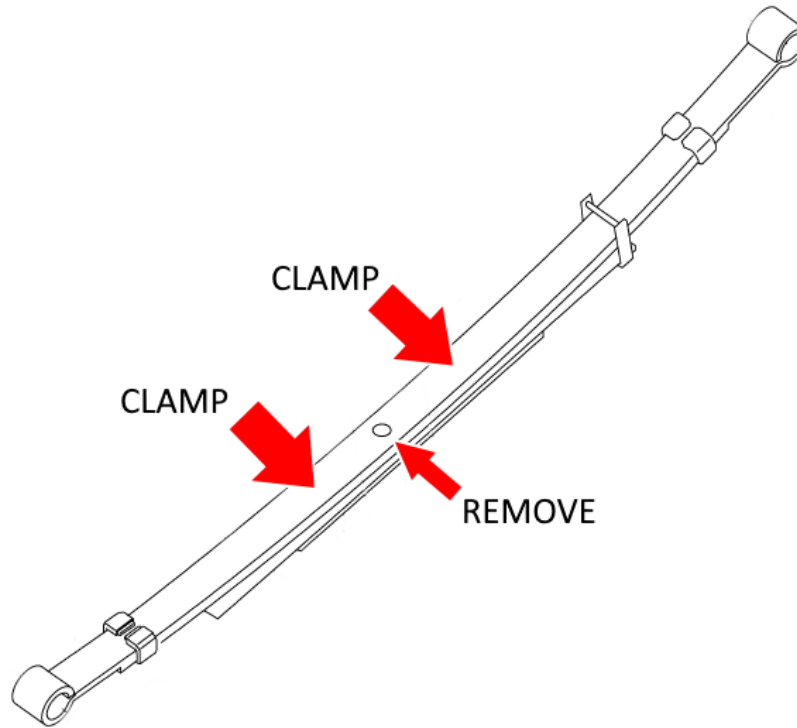


20) Remove the forward leaf spring mount bolt.

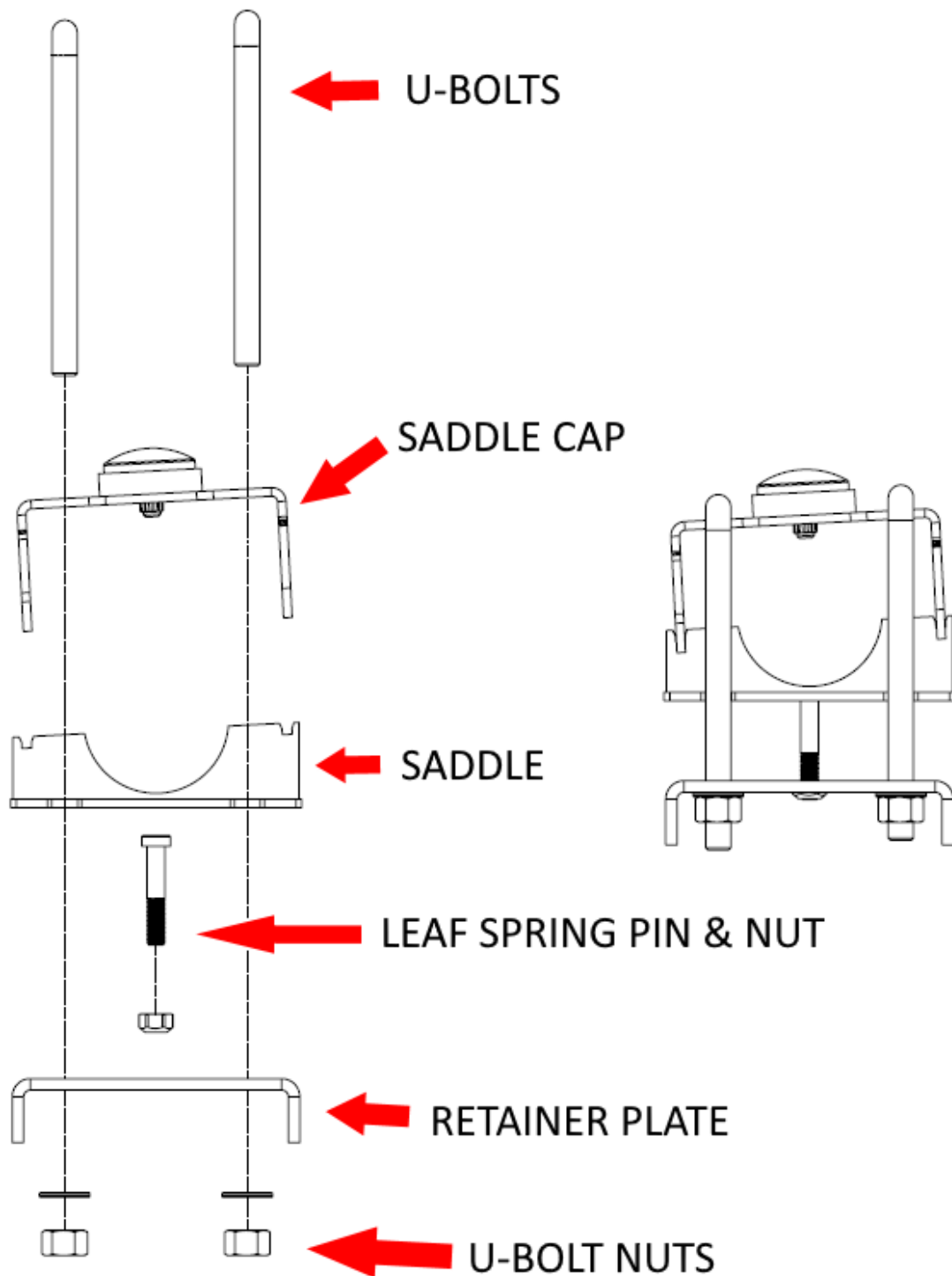




- 21) Remove the leaf spring from the vehicle. The factory bump stop will come out with the spring pack and can be discarded.
- 22) Using clamps in two places on the leaf spring (in front of and behind the middle of the spring), clamp the leaf spring pack together.
- 23) Remove the factory pin and nut in the center of the leaf spring pack. Depending on age or corrosion, this may need to be cut out.



- 24) Install the supplied low-profile socket head shoulder bolt and nut into the leaf spring in the opposite direction from the pin and nut that were removed. The head of the bolt should be on top of the spring pack and the nut should be on the bottom. Tighten this bolt to **55 ft-lb**.
- 25) On the front of the factory leaf spring perch on the axle, there is a small bracket holding the ABS wheel speed sensor cable. Remove the cable from the bracket and cut the bracket off of the axle spring perch.
- 26) Jack up the axle to raise the side you're working on 4-5 inches.
- 27) Reinstall the leaf spring under the axle with only the front mount bolt. Leave this bolt loose.
- 28) See flip kit Exploded View on the following page as a reference for the following steps.**



29) Place the axle flip kit saddle on top of the leaf spring. There is a small V-shaped cut on the base of the saddle, this should be facing forwards. The center of the saddle will locate itself on the pin you installed into the leaf spring pack.

- 30) Raise the leaf spring up to meet the bottom of the axle.
- 31) Place the saddle cap on top of the axle. The angle of the cap will not perfectly match the axle leaf spring perch, this is because the lower saddle is designed to correct the pinion angle change resulting from flipping the axle and relocating the rear leaf spring mount with the supplied lift shackles.
- 32) Install the lower leaf spring retainer plate and Axle U-Bolts but do not tighten.

***Repeat steps 17-30 on the other side of the vehicle.***

- 33) Install the Lift Shackles. Re-Use the factory shackle bushings. LOJ recommends starting with the middle hole on the lift shackle for connecting to the leaf spring. You can leave the leaf spring bolt loose until you've set the vehicle on the ground and confirmed ride heights.
- 34) Now that the axle has been flipped to the top of the leaf springs, the leaf springs are back in place, and the axle is properly supported, we can finalize the installation of the saddle/cap assembly on the axle flip kit.
- 35) Rotate the axle in the lower saddle to allow the cap assembly to fully seat into the saddle and be parallel with the axle spring perch. You should end up with a small gap between the cap assembly and the spring perch on the axle. Use the supplied shims to check and set this gap. The appropriate gap will be less than the thickness of two shims. Add shims until the gap is less than two shims thick. **YOU SHOULD HAVE A GAP, THIS IS NORMAL.**
- 36) If the gap is abnormally large, check to make sure the keys on the cap and aligned and seated with the receiver grooves on the saddle. These parts were shipped assembled and are designed to seat together. If you can't get them to seat together over the axle, or you have no gap at all between the cap and the axle spring perch, you may have the wrong saddle for your axle. The M226 and C200K have different axle tube diameters and the saddle is different for each axle type.
- 37) Once you have established the proper gap, tighten the U-Bolt nuts in a crisscross pattern. This will cause the cap assembly to deform/crush and the gap to close between the cap assembly and the axle spring perch. Torque the U-Bolt nuts to **93 ft-lb. RETORQUE AFTER TEST DRIVE AND AFTER 100 MILES OF DRIVING**
- 38) Torque the Front Leaf Spring Mount Bolt to **93 ft-lb.**
- 39) Torque the Upper Shackle Mount Bolt to **100 ft-lb.**
- 40) Install the LOJ/Viking Rear Shocks. The Shock BODY is UP, and the Shock SHAFT is DOWN. This is the OPPOSITE of how the factory shocks are oriented.



- 41) Torque upper shock mount nuts to **33** ft-lb.
- 42) Torque lower shock mount bolt/nut to **148** ft-lb.

### **Setting Ride Height, Finalizing Install**

- 43) Lower the vehicle to the ground. Once on the ground, roll forward and back 2-3 feet 2-3 times to settle front suspension and remove bind.
- 44) Remeasure to your reference points established before you began.
- 45) The front suspension has an approximate two to one motion ratio. Meaning adjustments at the coilover will be one half of what you want to achieve at the tire. Example: You need to raise the front end 0.5", to achieve this, thread the coilover adjustment sleeve up 0.25". **DO NOT ADJUST WHILE WEIGHT IS ON WHEELS!! THE SHOCK WARRANTY IS VOID AND DOES NOT COVER DAMAGE TO THE SHOCK BY MAKING RIDE HEIGHT ADJUSTMENTS WITHOUT THE TIRES OFF THE GROUND.** Jack up the vehicle, make your adjustments, the lower it, roll, and recheck. Rinse and repeat until desired height is set, 2" lower than stock.
- 46) The rear is easier to adjust. Each hole in the shackle roughly translates to 0.5" of suspension movement. If you need to raise the rear 0.5", move the spring down one hole. If you need to move the vehicle down 0.5", move up one hole. Get as close to 4" drop from stock height measured. Once ride height is set, torque the Lower Shackle Mount Bolt to **100** ft-lb.

## **Shock Settings**

There is a Shock Setting paper from Viking included with these instructions. LOJ recommends starting with the higher end of the “Handling” settings or the lower end of the “AutoX” settings to start. If the truck feels too stiff, come down... too soft, move up.

## **Test Drive**

Take the truck for a short test drive and then recheck all fasteners for proper torque. After 100 miles of driving, recheck torque a second time.

***Your installation is complete, enjoy!!!***