



## **7016 – 2015-PRESENT, MERCEDES SPRINTER NCV3 4X4, REAR 2.0" LIFT KIT**

Version 1.1

### General Notes

- For the most up to date and current instructions, please visit our website at [www.vancompass.com](http://www.vancompass.com)
- Please read all instructions thoroughly before starting installing Van Compass products.
- This is a bolt on lift kit that can be installed with basic hand tools. Four, ¼" (6mm) diameter holes need to be drilled for attaching brackets to the vehicle. Two, 11/32" (9 mm) diameter holes will also need to be drilled to relocate the emergency brake cable brackets.
- Note: Many of the photos in these instructions are taken from a lift kit install on a 2013 2wd Sprinter Van. While there are differences in the chassis, the installation process is the same. 4x4 specific photos are added where needed.
- These instructions will outline the full lift kit installation along with the appropriate modifications required to clear a 315/75/16 tire on a factory steel wheel.
- With this lift kit, 315/75/16 (35") tires can be fitted with the following conditions met:
  - Minimum of a 9/16" (14mm) wheel spacer be installed. This is for tire clearance between the inside of the inner fender and tire when the vehicle's suspension is flexed out.
    - Note; this could be omitted with an additional 9/16" (14mm) offset and aftermarket wheels.
- This suspension kit can be completely removed, allowing the vehicle to be returned back to stock configuration if desired.

### Parts List

#### **3016 – 2007-2016, MERCEDES SPRINTER NCV3, REAR 5 LEAF ADD-A-LEAF PACK**

- (2) 301601 REAR 5 LEAF ADD-A-LEAF PACK
- (4) UB-750-2600 75MM DIAMETER X 260MM LONG, M14X1.50" THD, U-BOLT
- (8) NLM14-1.50 M14-1.50 LUG NUT

#### **3005 – 1994-PRESENT, MERCEDES SPRINTER, REAR BUMP STOP DROP BRACKET, 2.0" LIFT KIT**

- (2) 300501 REAR BUMP STOP DROP BRACKET, 2.0" LIFT
- (4) HT5-5-10 5/16-18 X 1" LONG, HEX HEAD THREAD CUTTING SCREW

#### **3007 – 2007-PRESENT, MERCEDES SPRINTER NCV3, REAR LOWER SHOCK MOUNT, 2.0" LIFT KIT**

- (2) 300701 REAR LOWER SHOCK MOUNT, 2.0" LIFT
- (2) 300702-01 REAR LOWER SHOCK MOUNT, 2.0" LIFT, SPACER BUNG

- (4) HM12-1.50-70-10.9      M12-1.50 X 70MM LONG, GR10.9, YELLOW ZINC HEX HEAD BOLT
- (4) NSM12-1.50              M12-1.50 STOVER NUT
- (8) WFM12                    M12 YELLOW ZINC FLAT WASHER
- (2) HM08-1.25-65-10.9      M8-1.25 X 65MM LONG, GR10.9, YELLOW ZINC HEX HEAD BOLT
- (2) NSM08-1.25              M8-1.25 STOVER NUT
- (4) WFM08                    M8 YELLOW ZINC FLAT WASHER

### **3015 – 2015-PRESENT, MERCEDES SPRINTER NCV3 4X4, REAR SWAY BAR LINK, 2.0" LIFT KIT**

- (2) 301501                    REAR SWAY BAR LINK, 2.0" LIFT

### **3014 – 2007-PRESENT, MERCEDES SPRINTER NCV3, REAR BRAKE PROPORTIONING EXTENSION BRACKET, 2.0" LIFT KIT**

- (1) 301402                    REAR BRAKE PROPORTIONING EXTENSION BRACKET

#### Tools Needed

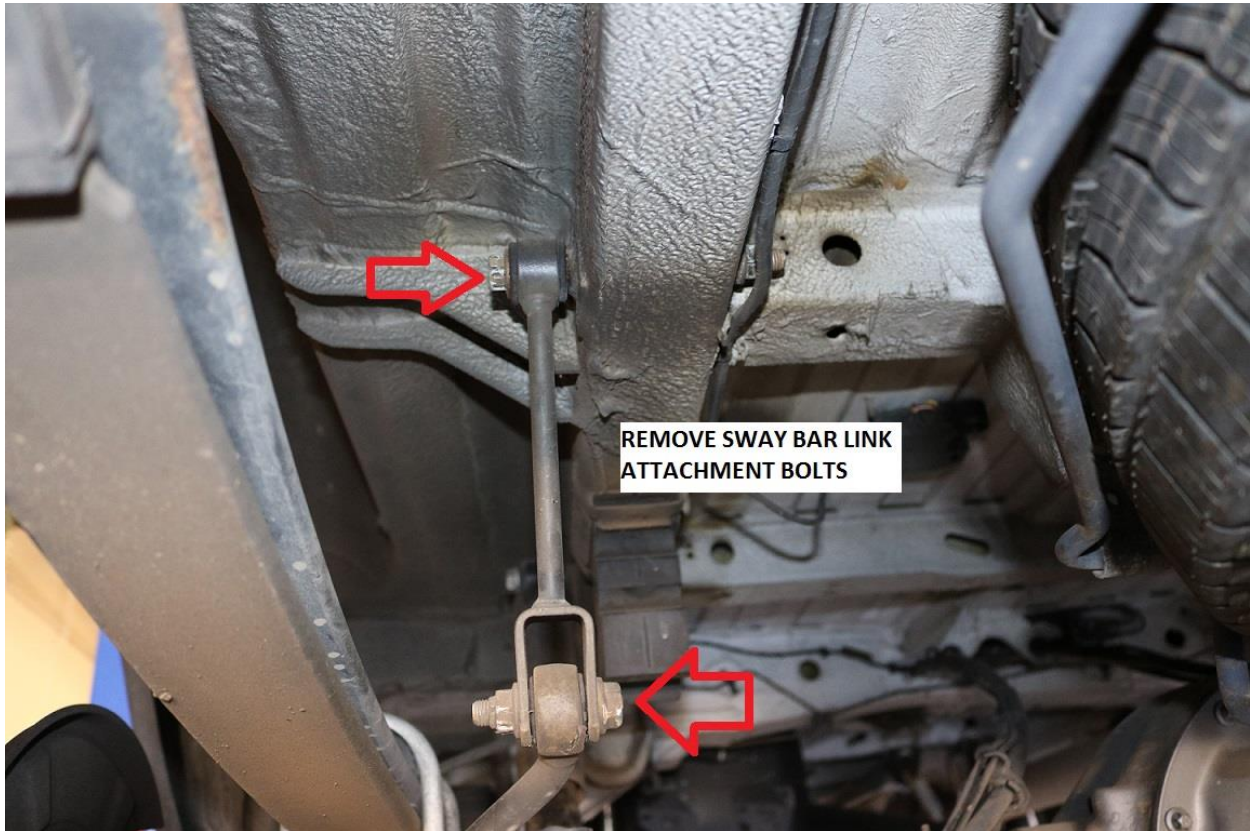
- Quality jacks and 2 jack stands.
  - Optional – Automobile lift and two screw jacks
- Simple hand tools:
  - Torque Wrench
  - Dykes or similar tool for cutting zip ties.
  - Basic wrench and socket set:
    - Metric sizes: 10mm, 13mm, 17-19mm, 21mm
    - SAE sizes: ½"
    - T55 Torx socket
- Drill with quality metal cutting 11/32" (9 mm) diameter drill bit. Step drill or unibit will also be needed.
- Nut driver or drill with ¼" socket bit attachment for installation of thread cutting hardware.
- Two C-Clamps – minimum of 6" throat

#### Approximate Installation Time

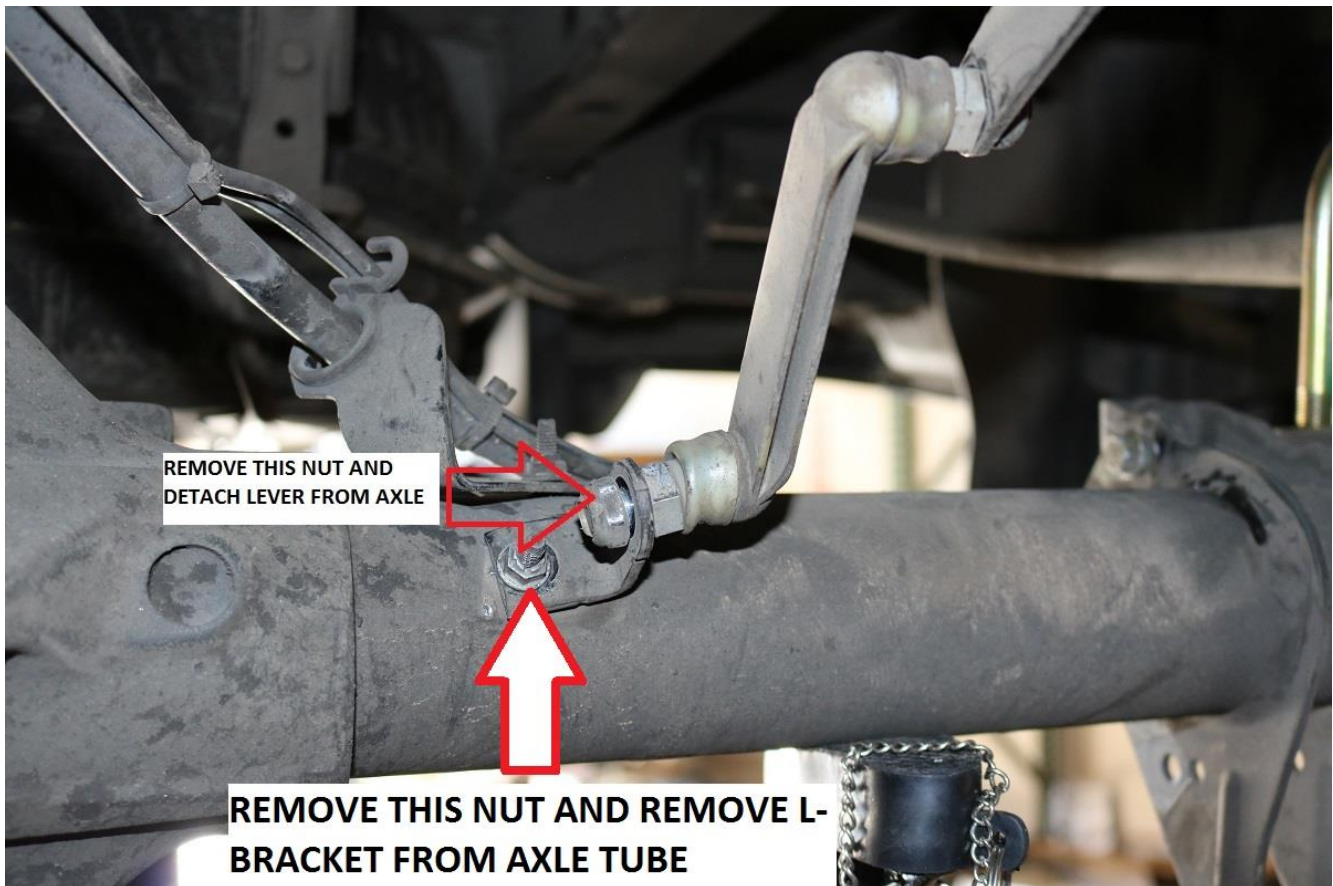
- Professional shop with automotive lift:      3-4 hours
- Driveway install with jack and jack stands:    4-5 hours

#### Installation

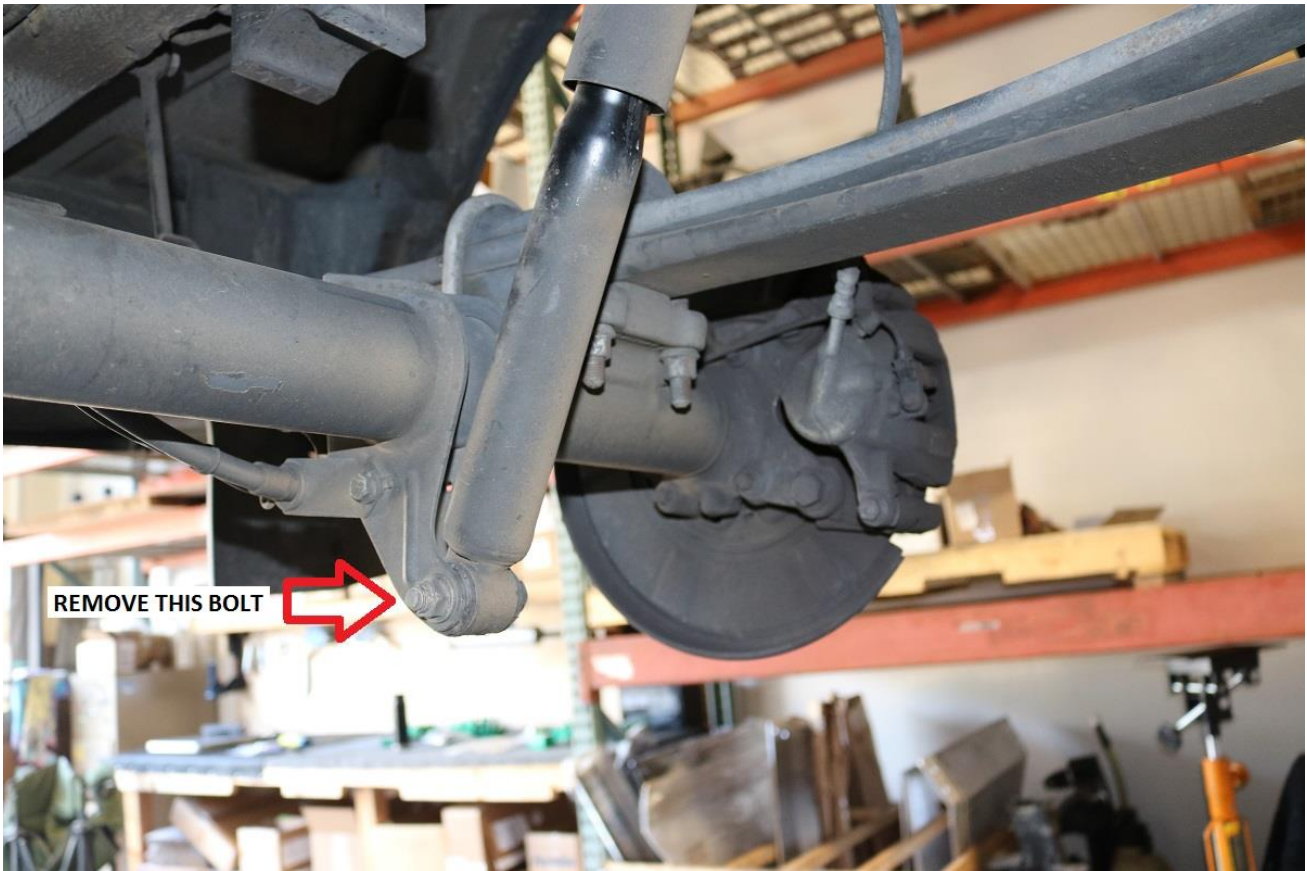
- 1) Begin by safely supporting the vehicle so that the rear suspension can hang free. This can be done with an automobile lift or a quality jack and a pair of jack stands.
- 2) With the rear suspension hanging free, remove the rear wheels / tires.
- 3) Remove the rear sway bar end links.
  - a. Begin by using an 18mm socket and wrench to remove both sway bar link attachment bolts.
  - b. Retain this hardware as it will be reused with the new, longer sway bar links included with the kit.



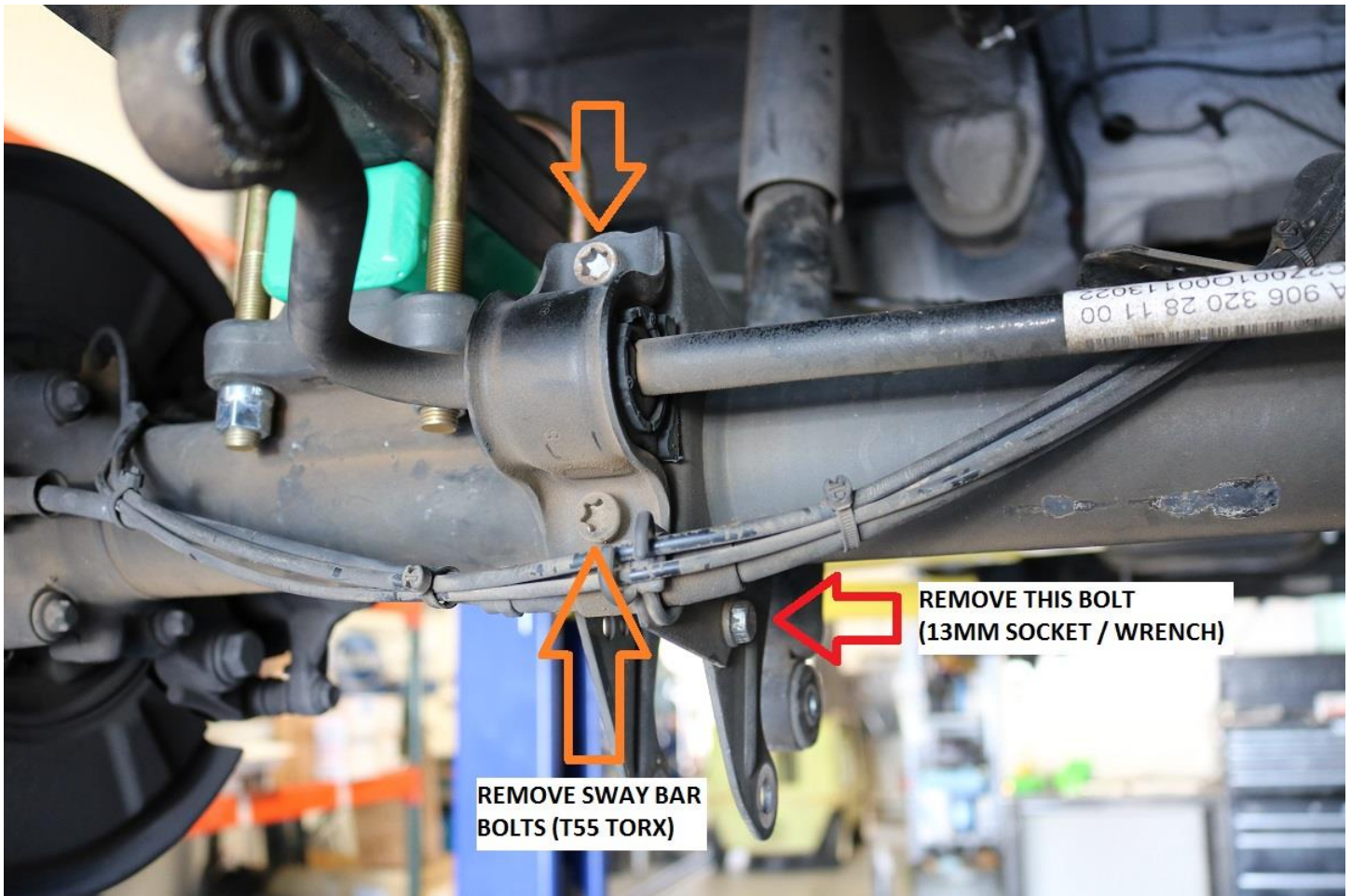
- 4) If equipped, disconnect the brake portioning lever. Retain the nut for future use.
- a. Completely remove the small L-bracket on the axle tube by removing the nut securing it to the axle. Use a 10mm socket / wrench for removal. Retain this nut.



- 5) Support the axle and disconnect the lower shock bolt. Use an 18mm socket and wrench for removal. Once the shock is removed, allow the axle to hang freely again. Note that the springs will limit the downward travel with the shocks removed.



- 6) Remove the emergency brake cable brackets at the axle. Use a 13mm socket / wrench for removal. Retain this hardware as it will be reused. See image below

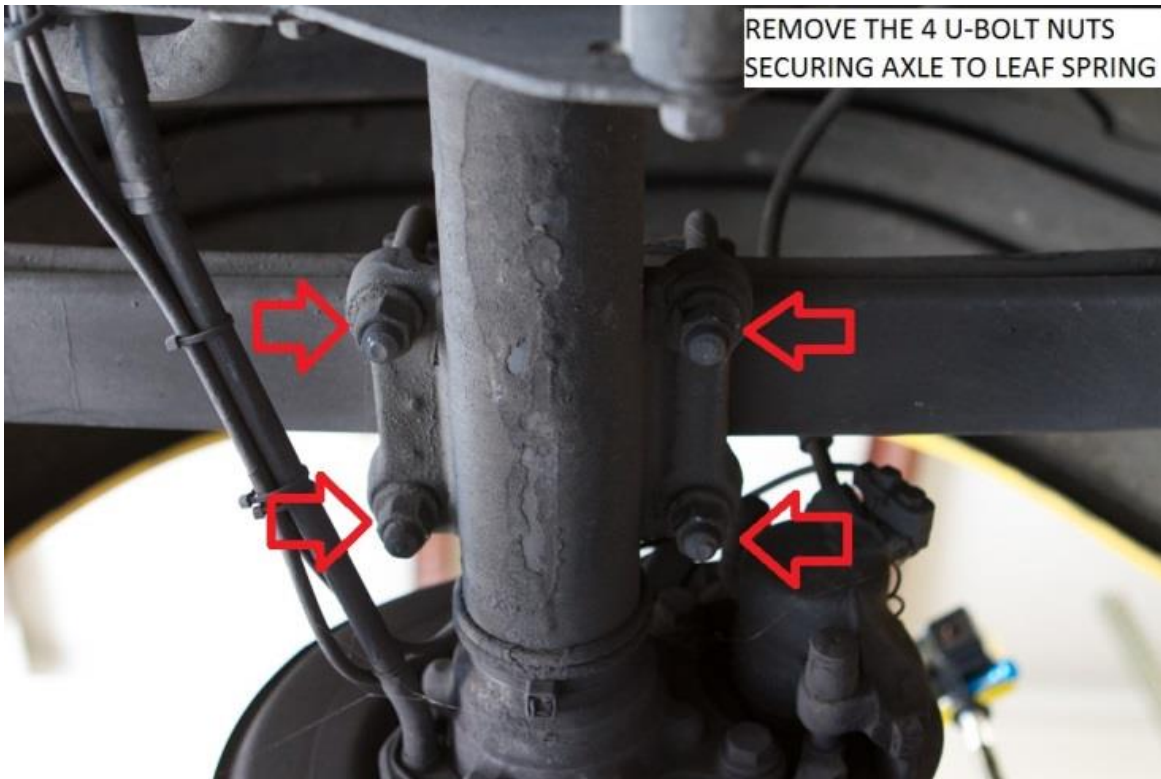


- 7) Reference the above image and remove the 4 Torx bolts securing the rear sway bar to the axle. Use a T55 Torx socket to remove the bolts. Remove the sway bar.
- 8) Remove the bump stops. Some Windex or similar glass cleaner to lubricate the rubber bump stops helps make removal easier.
  - a. Note – Bump stop designs vary by year and wheelbase options. However, they all attach to the chassis in the same manner. A pry bar can be useful in bump stop removal. See images below.

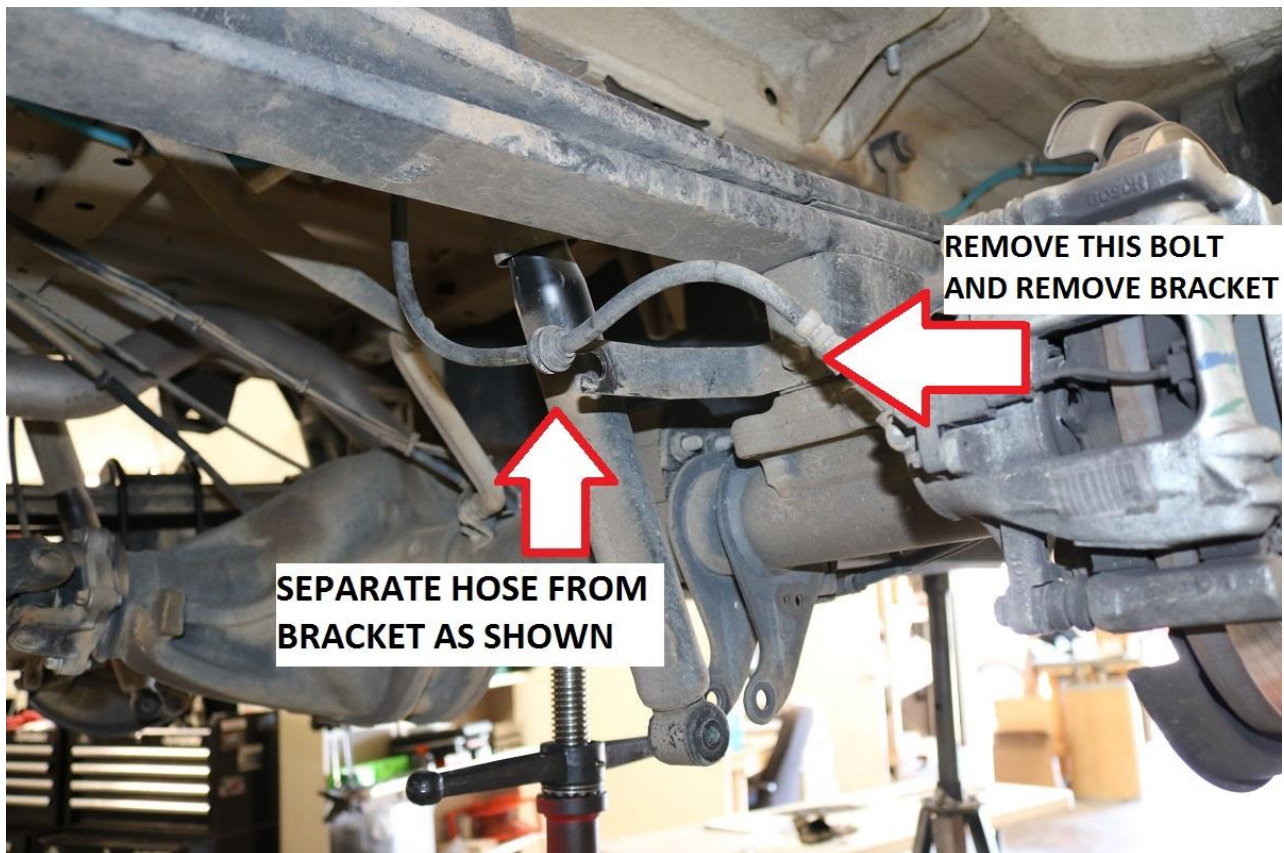


### 3016 Rear Add-a-Leaf Pack Installation

- 9) Install the rear leaf packs one side at a time.
  - a. Remove the U-bolt nuts. Use a 19mm socket / wrench for removal. Remove the U-bolts. See image below.



- 10) Remove the brake hose from the factory lift block. And remove the brake hose bracket from the lift block. Use a 13mm socket / wrench for removal. See image below.



11) Next, lower the axle to the point where the factory lift block can be removed. Remove the factory lift block and set it aside to be re-installed later.

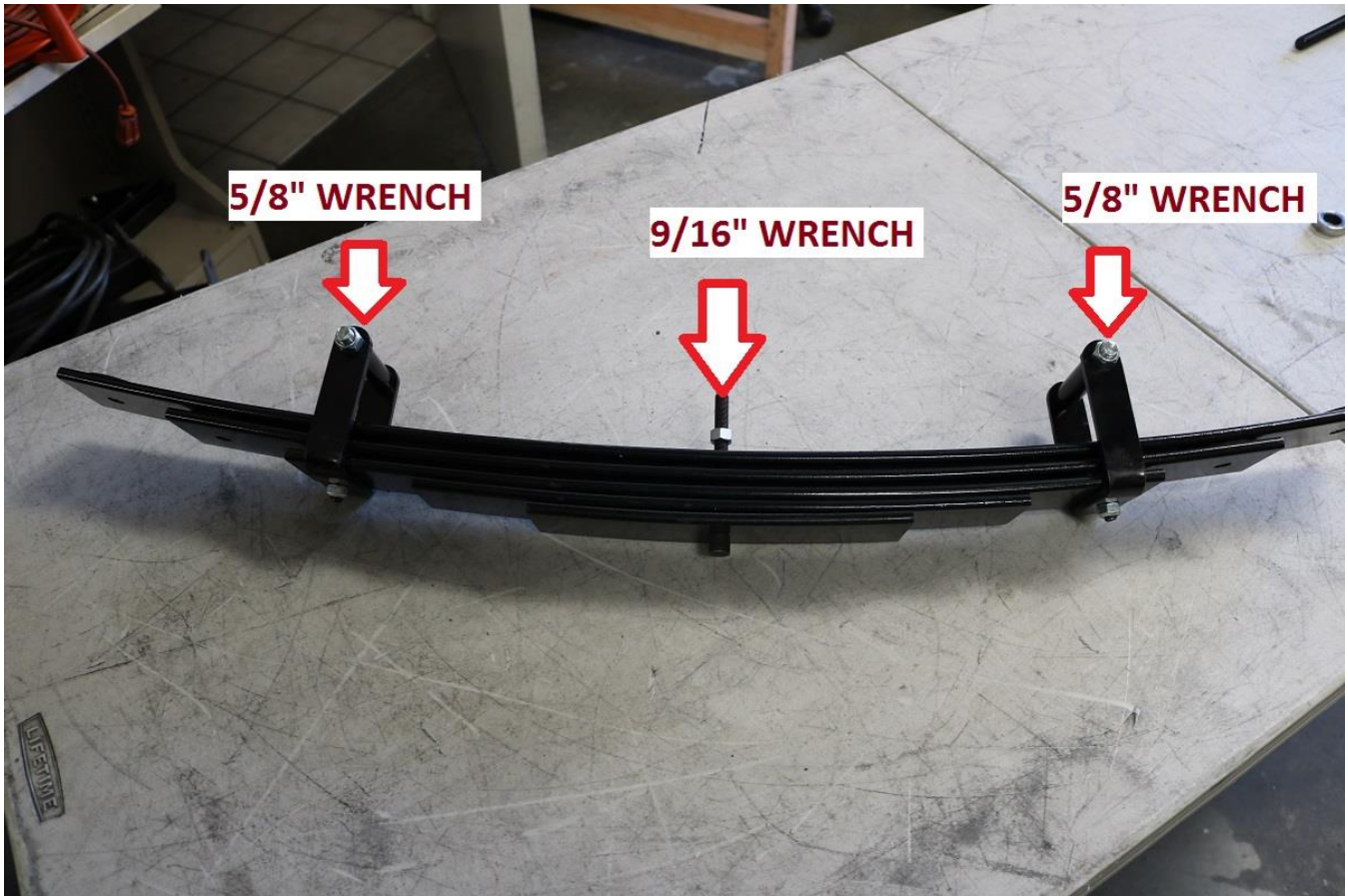


12) Remove the leaf spring center pin. Use a 16mm socket / wrench to remove the nut securing the center pin. Note; in some instances the center pin may need to be held with a pair of vise-grips as shown below.





- 13) Support the bottom leaf using some c-clamps so it does not fall and damage any other suspension components during center pin removal.
- 14) Remove the bottom leaf from the vehicle and set aside on a work bench.
- 15) Next disassemble the add-a-leaf pack by using a 9/16" socket / wrench to remove the leaf spring center pin nut and a 5/8" socket / wrench for the spring clamps. Retain all hardware.



- 16) Assemble the leaf pack as shown below. Note, a 3 leaf installation is shown here. For the full lift kit installation, install all 5 leaf springs.



17) Install the leaf pack back into the vehicle. Align the center pin with the main leaf spring and use some C-clamps to preload the springs into place. Do not use the center pin nut itself to suck the leaf springs into place as the threads can be easily strip in that situation..



18) Once the springs are aligned and clamped all the way into position, install the 3/8" center pin nut removed in step 14 and tighten with a 9/16" socket / wrench. Torque to 20 ft-lbs (27 N.m)

19) Re-install the 7/16" spring clamp hardware and spacers also removed in step 14. Use a 5/8" socket / wrench and torque to 40 ft-lbs (54 N.m).

20) Re-install the factory lift block and install the new U-bolts and nuts provided in the kit. Torque U-bolt nuts to 125 ft-lbs (169 N.m)

### 3005 Rear Bump Stop Drop Bracket Installation

21) Installation of the bump stop drop brackets can be done on both sides of the vehicle simultaneously.

22) Position the rear bump stop drop bracket in place as shown and mark the two mounting holes with a sharpie or transfer punch.



23) Since there is groove where the mounting holes land, a step drill will need to be used for drilling. Center punch the hole locations and drill with a step drill bit to a diameter of ¼" (7mm).



24) With both holes drilled, position the bump stop drop bracket in place and secure it to the chassis using the 5/16-18 x 1" long thread cutting screws included with the kit. Use a nut driver or drill with a ¼" bit adapter and a ½" socket to install the screw. Try to keep the drill / driver as straight as possible when cutting the threads.



25) Use drill / driver to snug bolts into place. Do not fully tighten using drill / driver. Torque bolts to 13 ft-lbs (17 N.m).

26) With drop brackets installed and hardware torqued to spec, thoroughly coat the rubber bump stops with Windex or a similar glass cleaner.



27) Install bump stop into the drop bracket. Install one edge at a time. Bend the bump stop in the middle to get the second side started. Installation can be tricky as the bump stops fit very tightly both in the factory location and in the drop brackets.



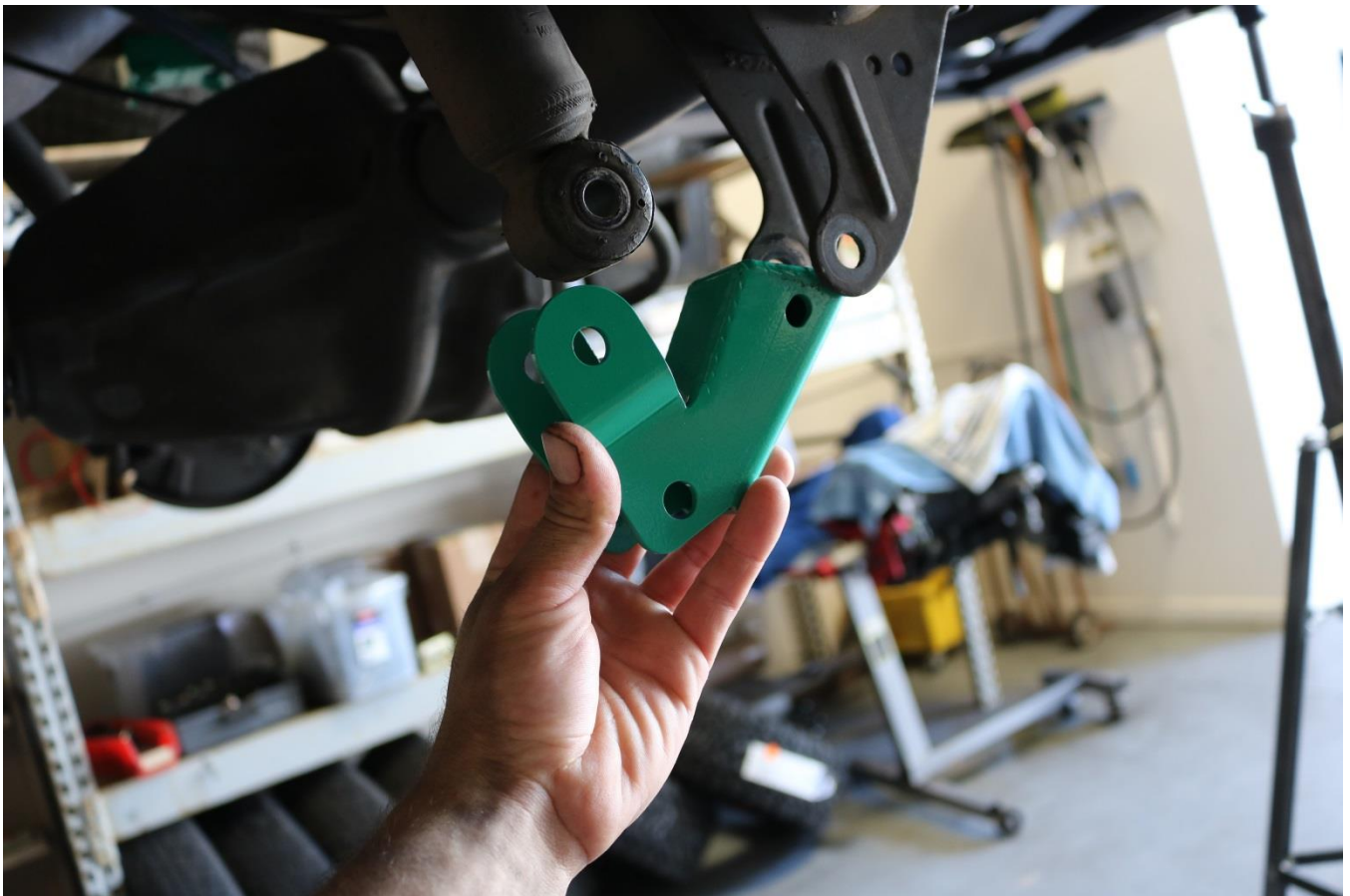
28) Once the second side is started, a screw driver, some wiggling and some additional lubricant will be needed to get the bump stop fully seated in the bracket.



### 3007 Rear Lower Shock Mount Installation

29) Installation of the rear lower shock mounts can be done on both sides of the vehicle simultaneously.

30) Fit the rear lower shock mount as shown below.



31) Install M8-1.25 x 65mm long bolt provided as shown above to locate bracket in place. Use a washer under the bolt head.

- a. Install the 300702-01 spacer bung as shown with the M12-1.50 x 70mm long bolt to finalize the bracket's location. Again use a washer under the bolt head.
- b. Install the corresponding Stover nuts on the bolts along with washers.
- c. Fit the shock into place and snug all hardware. Use a 19mm socket / wrench for the M12 bolts. Use a 13mm socket / wrench for the M8 bolts.

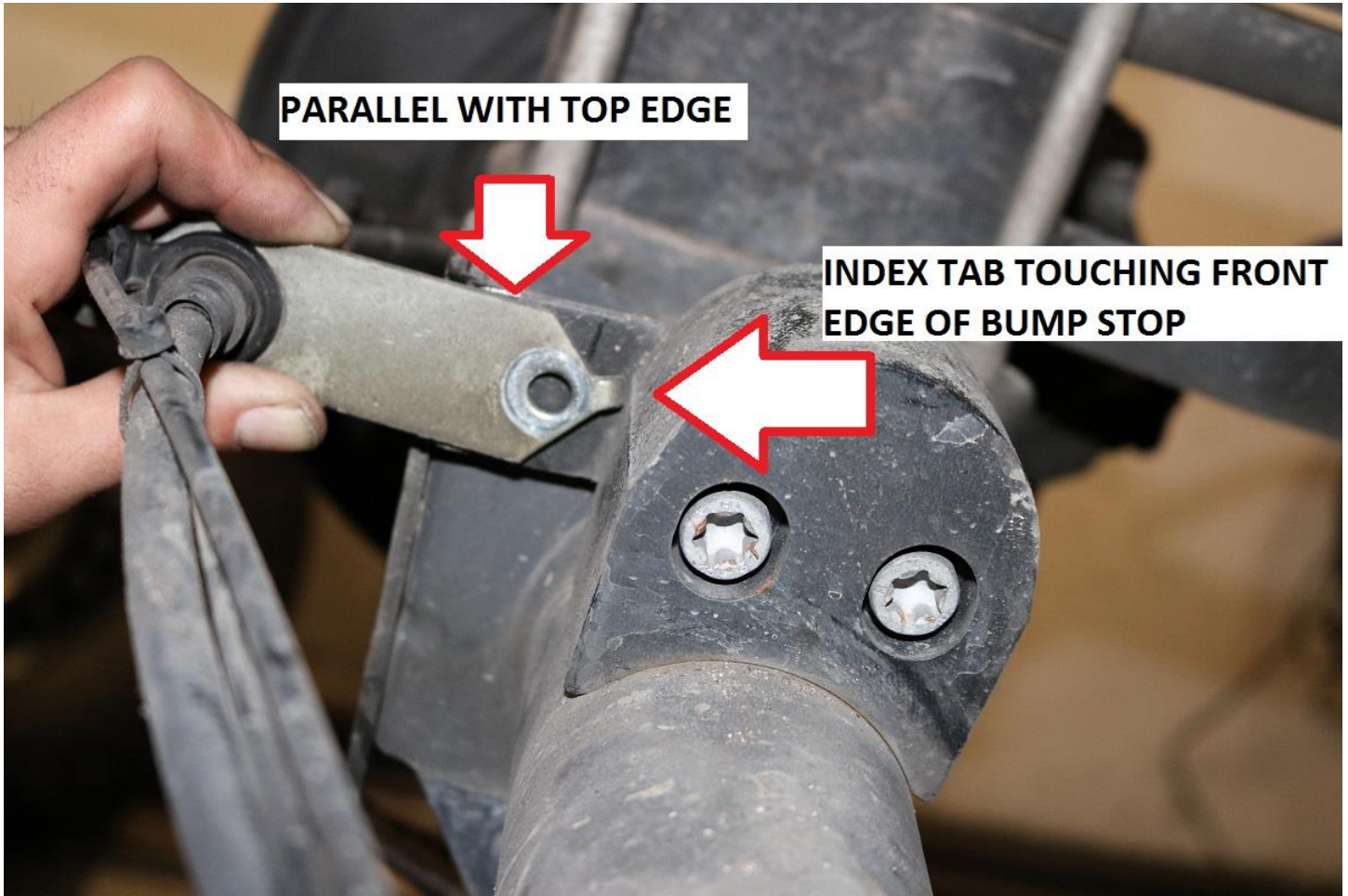


- 32) Torque hardware in the following order.
- d. M12-1.50 torque to 52 ft-lbs. (70 N.m)
  - e. M8-1.25 torque to 15 ft-lbs (20 N.m)

### **3006 Rear Sway Bar Link Installation**

- 33) The E-brake / ABS cable bracket needs to be relocated above the sway bar as shown below. Note that the small indexing tab on the E-brake / ABS cable bracket will flatten out when the attachment bolts are torqued to spec.
- 34) Position the E-brake / ABS cable bracket as shown below. Mark and drill the mounting hole using an 11/32" (9mm) drill bit.

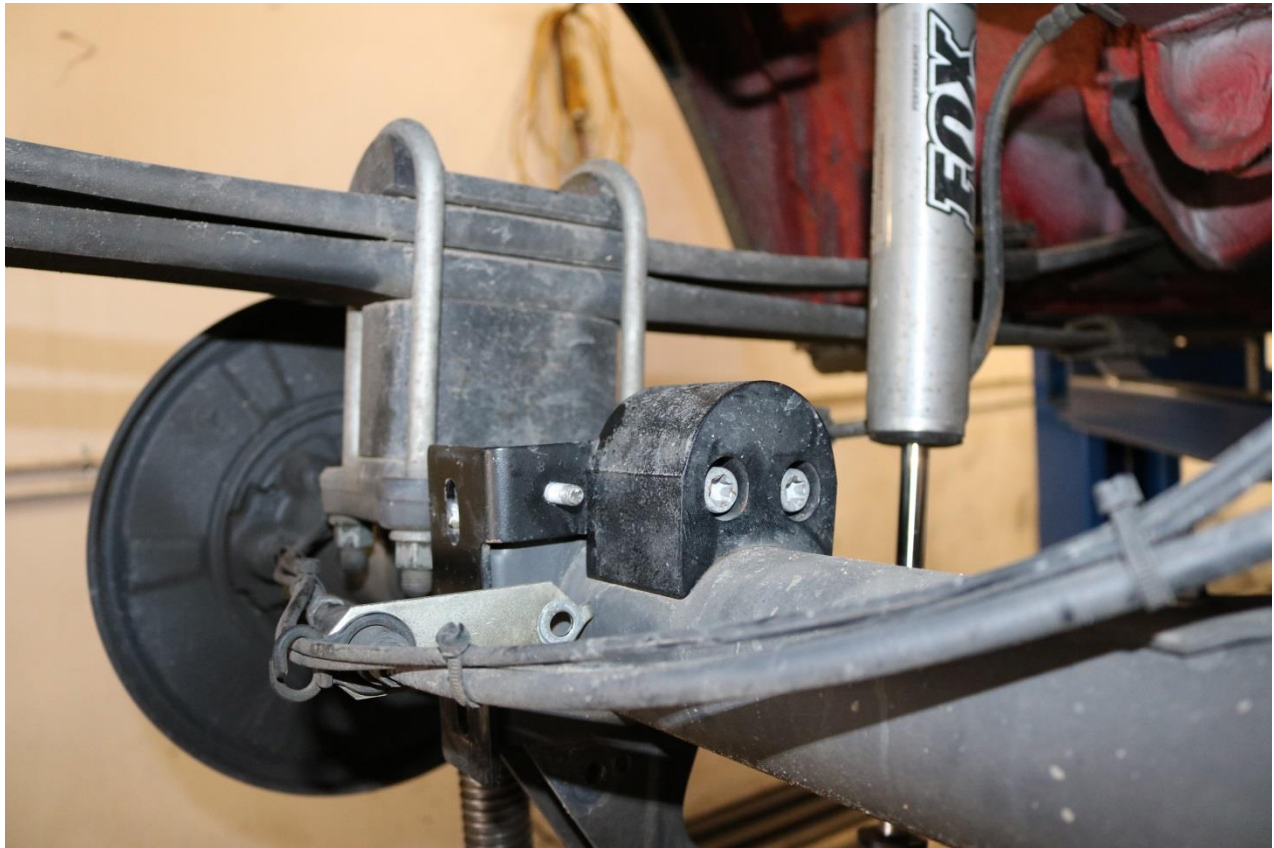




35) We have found it easiest to take the bump stop bracket to a work table or drill press to drill the hole.



36) Install the OEM bolt from behind as shown below.



37) Re-install the rear sway bar onto the axle. Use the four T55 Torx bolts removed in step 6. Torque to 52 ft-lbs (70 N.m).

38) Secure the E-brake / ABS cable bracket to the axle using the OEM hardware. Tighten the bolt using a 13mm socket / wrench. Torque to 21 ft-lbs (29 N.m)



39) Install the 301501 rear sway bar links using the OEM sway bar link hardware removed in step 3. Torque the sway bar link bolts to 78 ft-lbs. (106 N.m).



### 3014 Rear brake proportioning extension bracket installation

- 40) Install the new brake proportioning wind assist bracket as pictured below. Reuse the factory nut to secure the bracket to the stud on the axle tube. Use a 10mm socket / wrench and snug the bracket down. Reuse the factory nut to attach the lever arm to the extension bracket. Torque the nut to 15 ft-lbs (20 N.m)



- 41) Re-install wheels / tires and lower van to ground. OEM torque spec for wheel studs is as follows:
- 2500 SRW: 177-187 ft-lbs (240-250 N.m)
  - 3500 DRW: 140-150 ft-lbs (190-200 N.m)
- 42) Double check all torque specs after 100 miles of driving.

Installation is Complete

### RELEASE OF LIABILITY

I, the customer, do hereby release and forever discharge Van Compass LLC, of 8778 Plata Ln. STE B. Atascadero, Ca 93422 their agents, employees, successors and assigns, and their respective heirs, personal representatives, affiliates, successors and assigns, and any and all persons, firms or corporations liable or who might be claimed to be liable, whether or not herein named, from any and all claims, demands, damages, actions, causes of action or suits of any kind or nature whatsoever, whether known or unknown, fixed or contingent, which I now have or may hereafter have or claim to have, as a result of or in any way relating to the following: Parts sold & installed by Van Compass LLC or parts sold & installed by end-user; any parts sold online, any parts sold online or installed by a re-seller, any parts installed by an installation shop.

It is understood and agreed that this payment is made and received in full and complete settlement and satisfaction of the aforesaid actions, causes of action, claims and demands; that this Release contains the entire agreement between the parties; and that the terms of this Agreement are contractual and not merely a recital. Furthermore, this Release shall be binding upon the undersigned, and his respective heirs, executors, administrators, personal representatives, successors and assigns. This Release shall be subject to and governed by the laws of the State of California.

#### PRODUCT SAFETY WARNING:

Van Compass LLC strongly recommends the installation of products be done by a certified mechanic. If this does not occur, be certain the person(s) installing the product read, understand and follow all instructions and warnings pertaining to the application before installation. Do not add, alter, or fabricate any factory or aftermarket parts to increase vehicle height over the intended height of the Van Compass LLC product purchased. Mixing component brands is not recommended.

Installation of suspension lift kits or any other lifting kits or devices will raise the center of gravity. For this reason, Van Compass LLC urges that extreme caution be used when encountering driving conditions which may cause vehicle imbalance. Furthermore, the driver's field of vision and judgment will not be as good due to the height of the vehicle. Due to the installation of larger tires, the speedometer will read slower than the actual speed being traveled and more distance will be required to stop the vehicle. It is the owner's responsibility to caution and warn any potential driver of the vehicle about these driving and handling conditions. Van Compass LLC will not be held liable or responsible for damages or personal injuries resulting from the use of lifting devices and or related products. The tires and rims should be changed to sufficiently increase the vehicle's total overall width and stability to help accommodate lifting devices.

Van Compass LLC aftermarket suspension products and accessories modify a vehicle for uses which exceed conditions anticipated by the vehicle manufacturer. The uses include the high performance demands required during off-road. These conditions vary in the degree of extremity and cannot be controlled by the vehicle or product manufacturer. If the components within the suspension system or accessories become worn due to frequent and/or extreme use, the safety and reliability of the vehicle is at risk. The maintenance of aftermarket equipment to ensure the vehicle occupants safety is entirely your responsibility. Do not purchase Van Compass LLC products unless you are willing to accept this responsibility. Do not install any Van Compass LLC suspension products or accessories unless you feel competent at installing the product without causing present or future injury to yourself or other vehicle occupants; seek an authorized installation center.

Most states have some type of law limiting vehicle height. The amount of lift allowed, and how the lift can be achieved, varies greatly. Several states offer exemptions for farm and commercial registered vehicles. It is the vehicle owner's responsibility to check state and local laws to ensure that their vehicle will be in compliance. Van Compass LLC reserves the right to make changes in design, materials and specifications as deemed necessary without prior notice and without assuming obligation to modify any product previously manufactured. Obligation or liabilities will not be assumed with respect to similar products previously advertised.

This Release of Liability and Product Safety Warning has been read and fully understood by the undersigned and has been explained to me.