



7001 – 1994-2006, MERCEDES SPRINTER T1N, FRONT 2.0” LIFT KIT

Version 3.0

General Notes

- For the most up to date and current instructions, please visit our website at 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.
- Minor cutting of the factory sub frame alignment stud will be required to install the sub frame drop spacer.
- This suspension kit can be completely removed, allowing the vehicle to be returned back to stock configuration if desired.

Parts List

1001 – 1994-2006, MERCEDES SPRINTER T1N, FRONT STRUT SPACER, 2.0” LIFT KIT

- (2) 100101 FRONT STRUT SPACER
- (1) LTBL-02 BLUE LOCTITE, 2ML TUBE

1002 – 1994-2006, MERCEDES SPRINTER T1N, FRONT SUB FRAME DROP SPACER, 2.0” LIFT KIT

- (1) 100201-L FRONT SUBFRAME DROP SPACER, LH SIDE
- (1) 100201-R FRONT SUBFRAME DROP SPACER, RH SIDE
- (8) HM12-1.50-220-10.9 M12-1.5 X 220MM LONG, GR 10.9, YELLOW ZINC HEX HEAD BOLT
- (8) WFM12 M12 YELLOW ZINC FLAT WASHER

4005 – 1994-2006, MERCEDES SPRINTER T1N, MOTOR MOUNT LIFT BLOCK, 2.0” LIFT KIT

- (2) 400501 MOTOR MOUNT LIFT BLOCK
- (4) HM10-1.50-30-10.9 M10-1.5 X 30MM LONG, GR10.9, YELLOW ZINC HEX HEAD BOLT
- (4) WFM10 M10 YELLOW ZINC FLAT WASHER
- (4) WLM10 M10 YELLOW ZINC SPLIT LOCK WASHER

Tools Needed

- Quality Jack and 2 jack stands.
 - Optional – Automobile lift and two screw jacks.
- Simple hand tools:
 - Torque Wrench

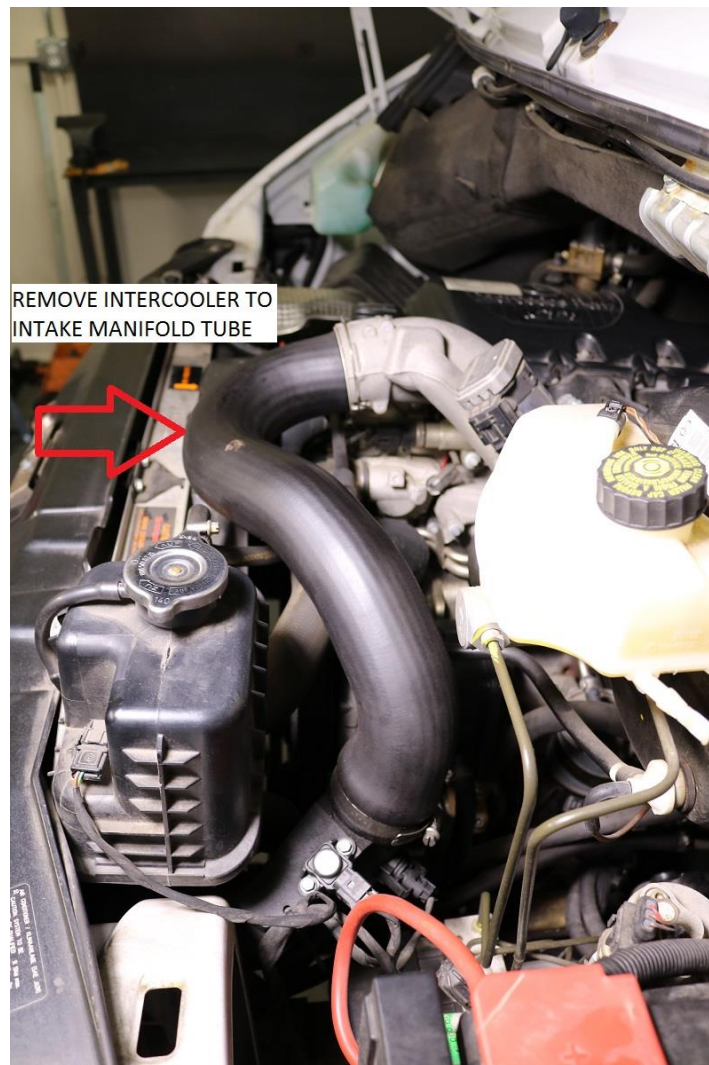
- Dykes or similar tool for cutting zip ties.
- Basic wrench and socket set:
 - Metric sizes: 10mm, 13mm, 17-19mm, 21mm, 24mm
 - T-45 torx
- 4-1/2" Angle grinder with metal cutting wheel or similar cutting tool to trim factory sub frame alignment stud.
- Vise with some form of non-marring soft jaws. Example of soft jaws: McMaster part number 5268A18

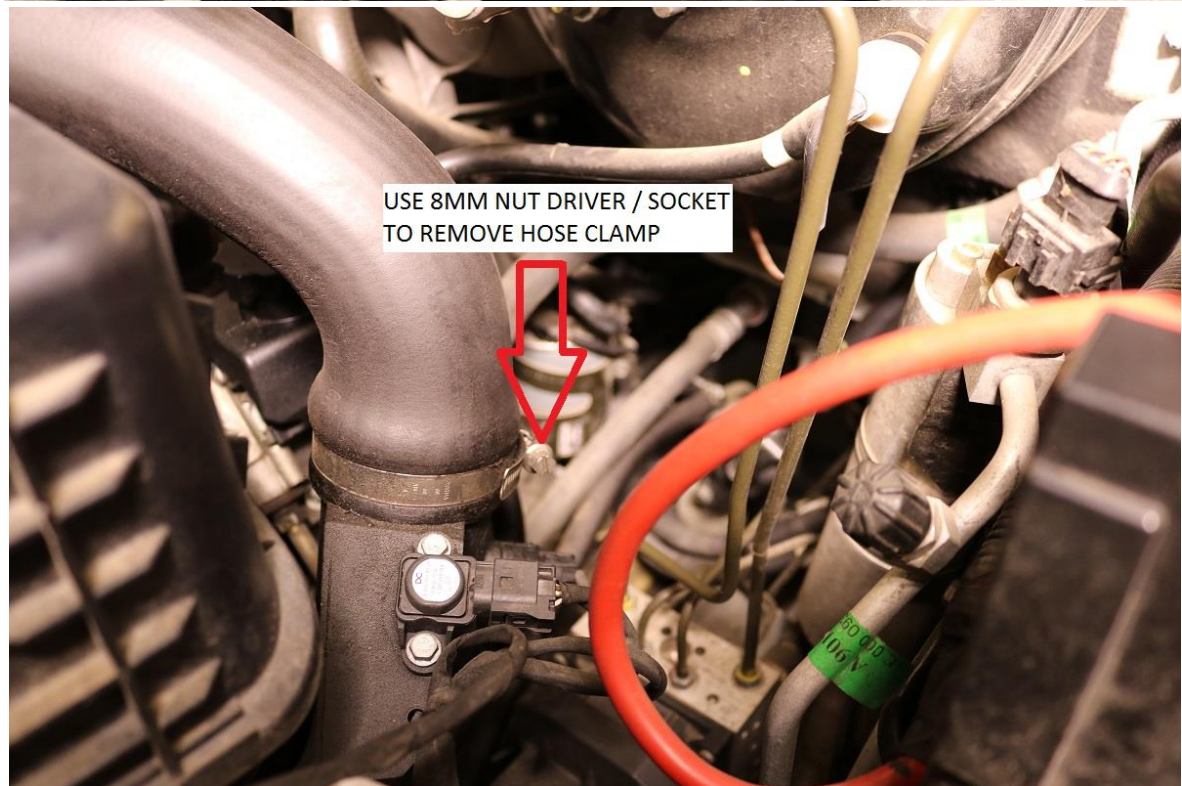
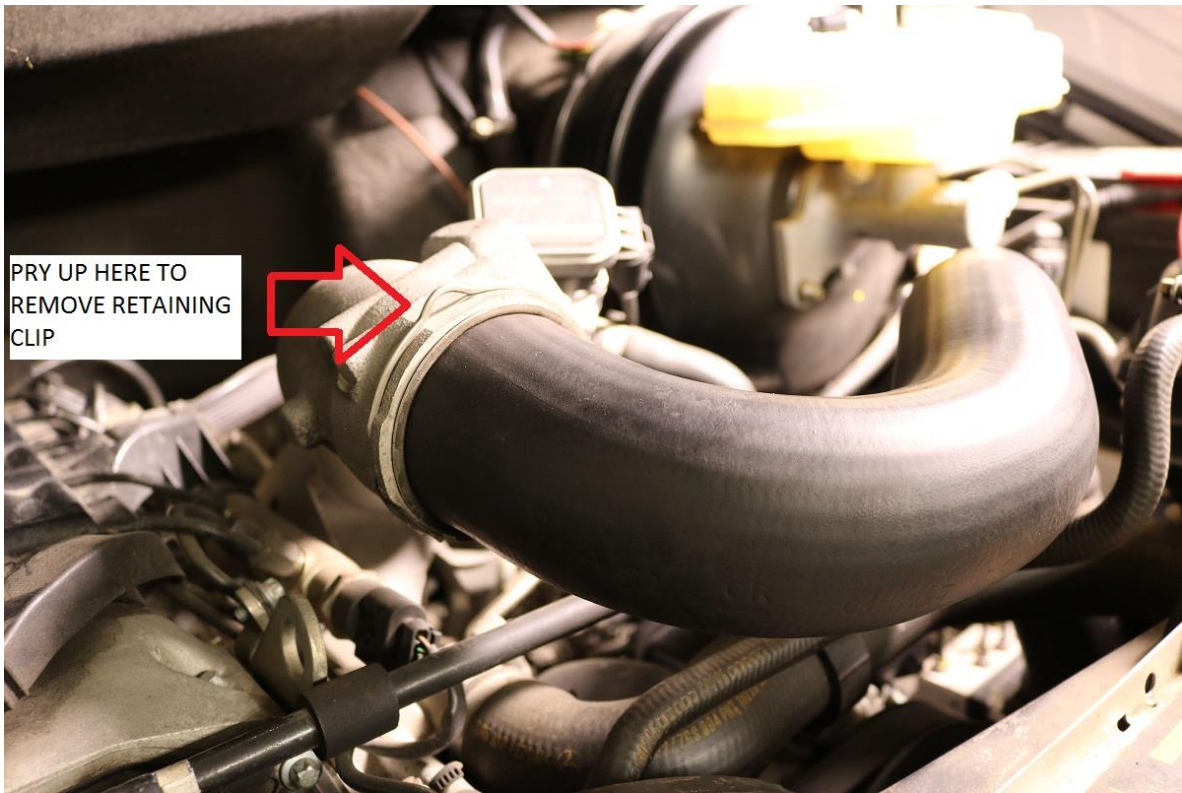
Approximate Installation Time

- Professional shop with automotive lift: 6-8 hours
- Driveway install with jack and jack stands: 8-11 hours

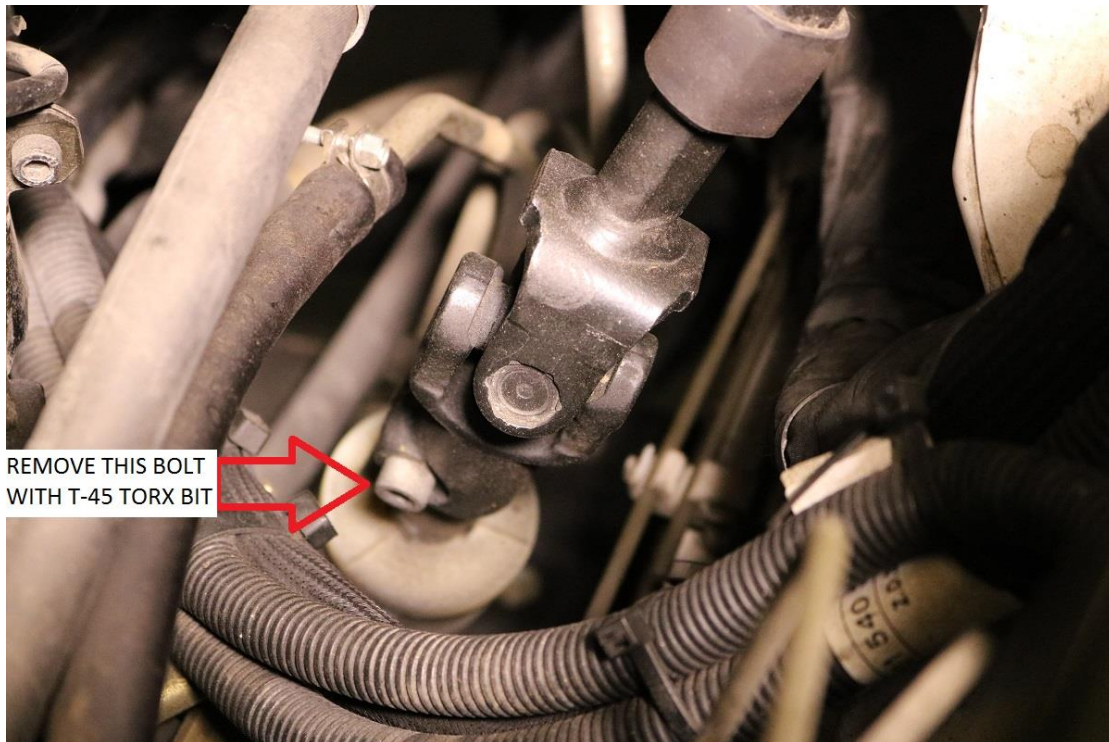
Installation

- 1) Before lifting the vehicle on a lift or placing it on jack stands, the steering shaft must be disconnected from the rack & pinion. Set the steering wheel straight and remove the key so the steering wheel locks into place for the duration of the install.
- 2) Disconnect ground cable from battery in engine bay.
- 3) Remove the intercooler to intake tube.





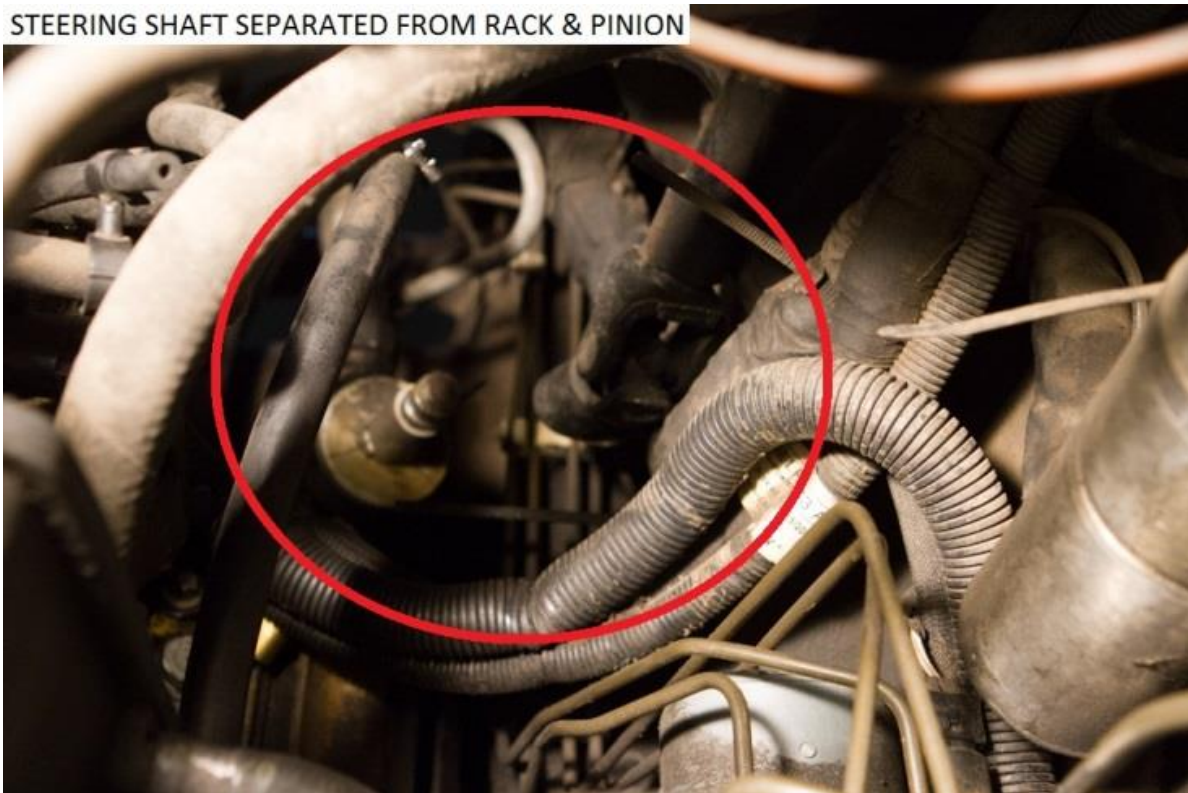
- 4) Locate the torx bolt which secures the steering shaft to the rack and pinion. Remove this bolt with a T45 torx bit.



REMOVE THIS BOLT
WITH T-45 TORX BIT

- 5) With the steering shaft bolt removed, remove the steering shaft from the rack and pinion splines.

STEERING SHAFT SEPARATED FROM RACK & PINION

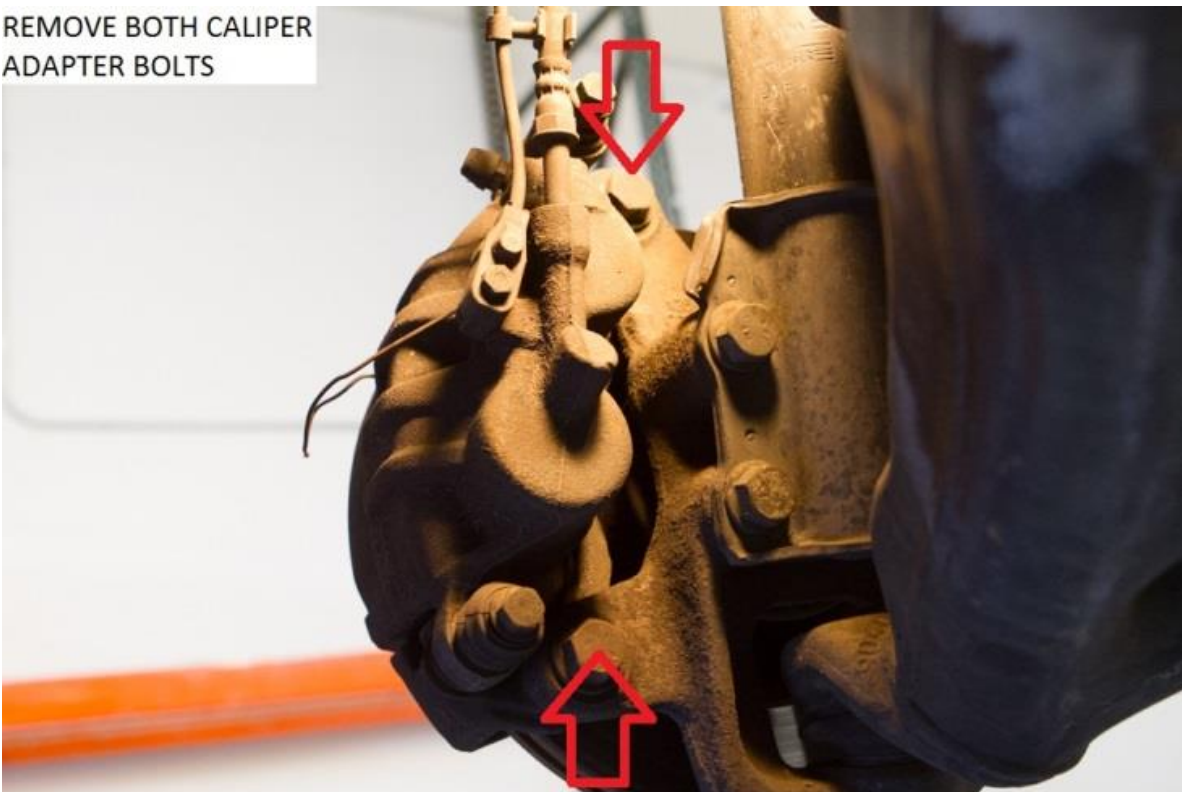


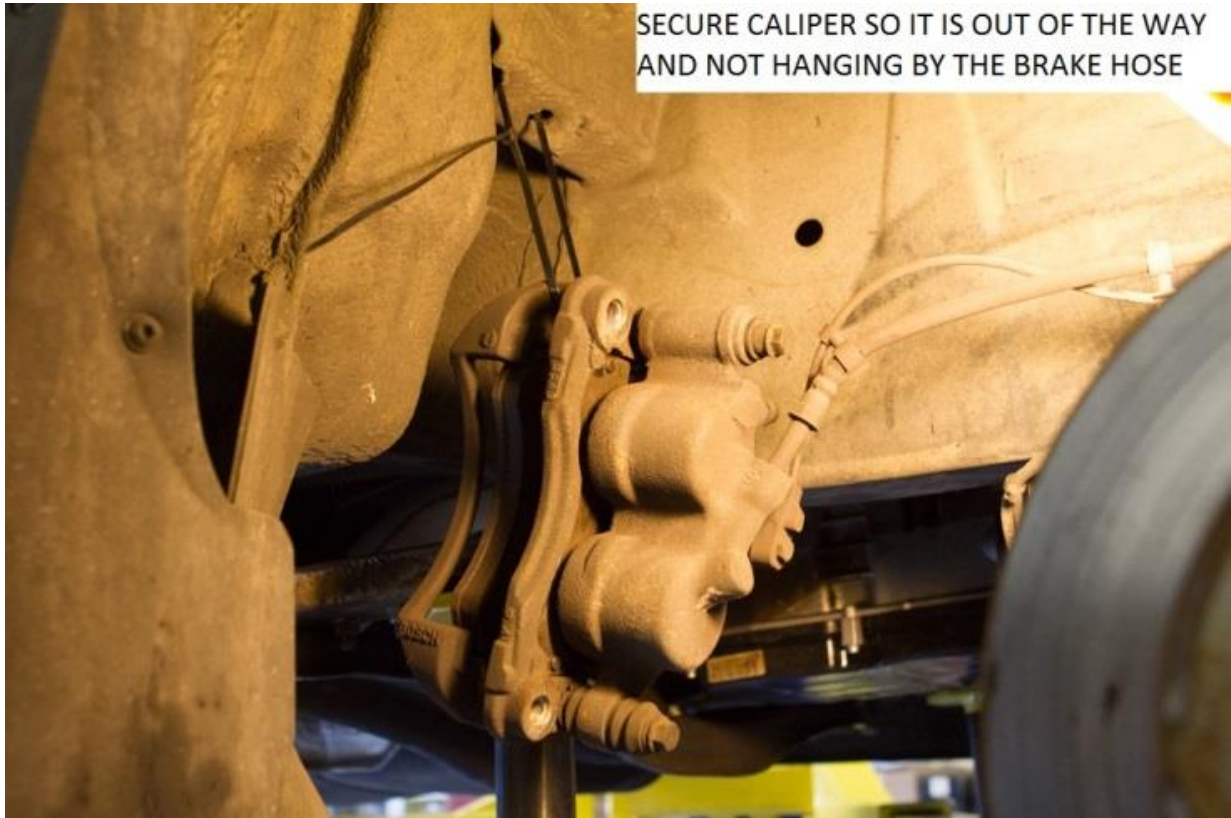
- 6) Lastly, before lifting the vehicle to work underneath, remove the driver side motor mount bolt with an 18mm socket / wrench.



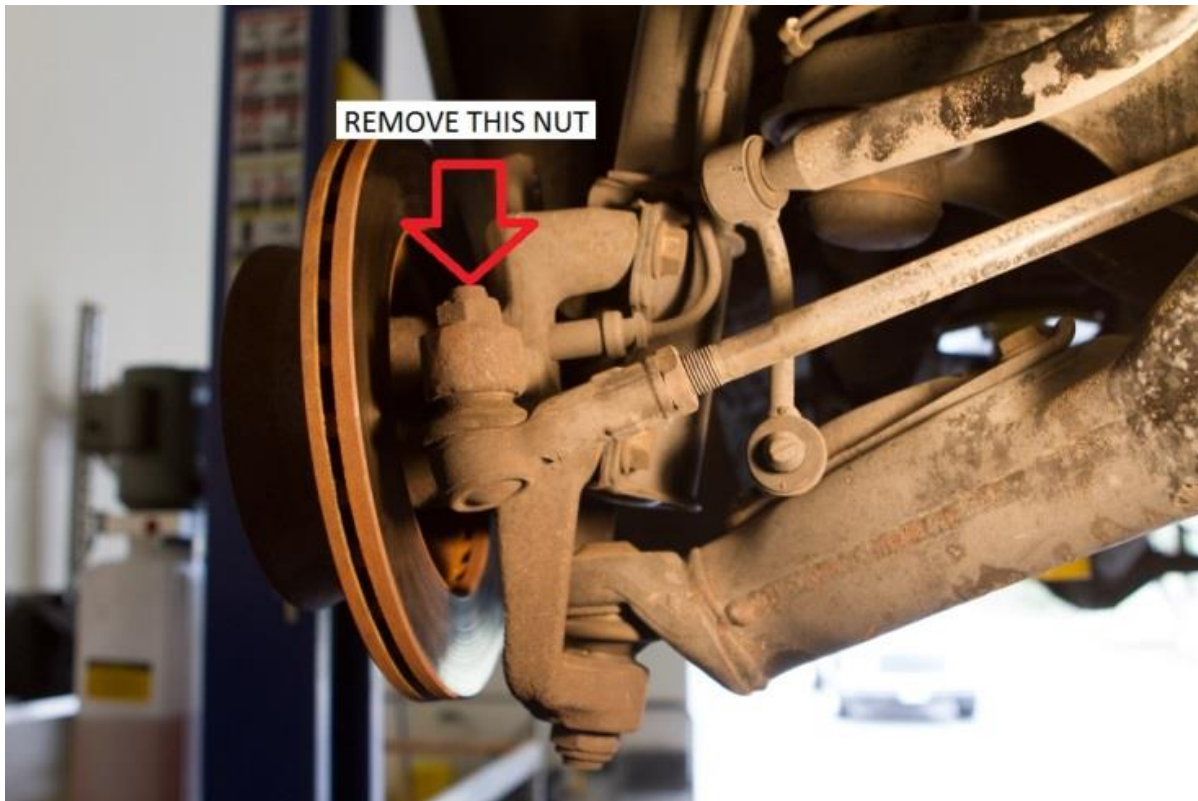
- 7) Safely support the vehicle so that the front suspension can hang free. This can be done with an automobile lift or a quality jack and a pair of jack stands.
- 8) With the front suspension hanging free, remove the front wheels / tires.
- 9) Note that installation of the front lift kit must be done simultaneously on both the left and right side of the vehicle. Complete steps on both sides of the vehicles unless otherwise specified.
- 10) Remove the front brake caliper adapter bolts and secure the caliper so it does not hang by the brake hose. Use a 19mm socket to remove the caliper from the steering knuckle.

REMOVE BOTH CALIPER
ADAPTER BOLTS



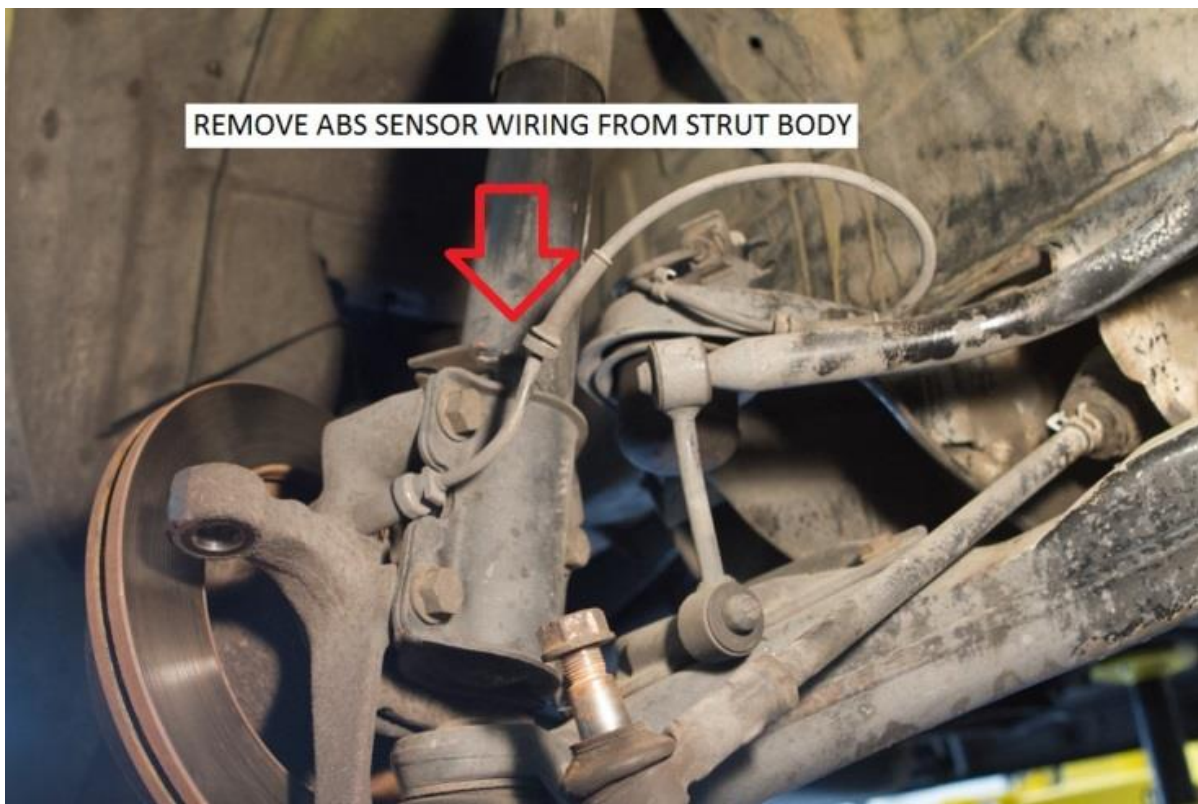


11) Remove the tie rod end at the steering knuckle. Use a 24mm socket or wrench. A tie rod end puller or pickle fork may be used to separate the tie rod end from the steering knuckle. Alternatively, a couple firm blows with a 5lb sledge to the steering knuckle will often easily break the taper free.





- 12) Disconnect the ABS sensor cable from the strut body and remove the sensor from the steering knuckle. The sensor is a press fit into the knuckle. Pull out by hand or gently use some pliers to wiggle the sensor out of the steering knuckle.





- 13) Raise the lower control arm about $\frac{3}{8}$ " (10mm) to remove tension from the strut. Use a 19mm socket to remove the 4 bolts securing the strut to the steering knuckle.
- With the strut disconnected from the steering knuckle, allow the lower control arm to hang free again.



- 14) Finish removing the strut by removing the nut securing it to the chassis.
- On the driver side, pull up the rubber floor covering near the pedals to access the nut.
 - On the passenger side, remove the tool access cover and factory jack to access the nut.

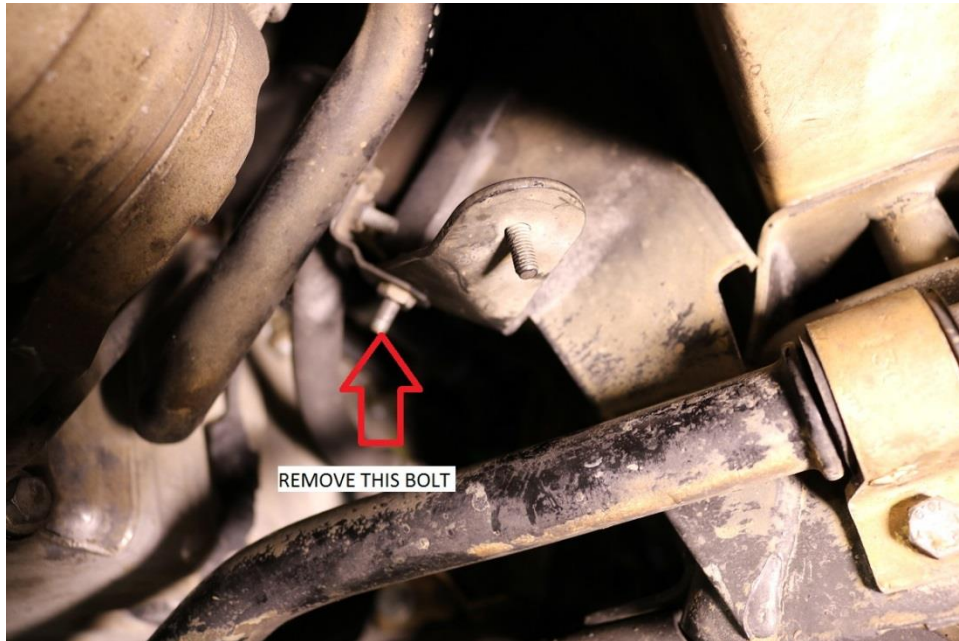
- c. Remove the nut with a 24mm socket.
- d. Keep track of which side of the vehicle each strut came from.



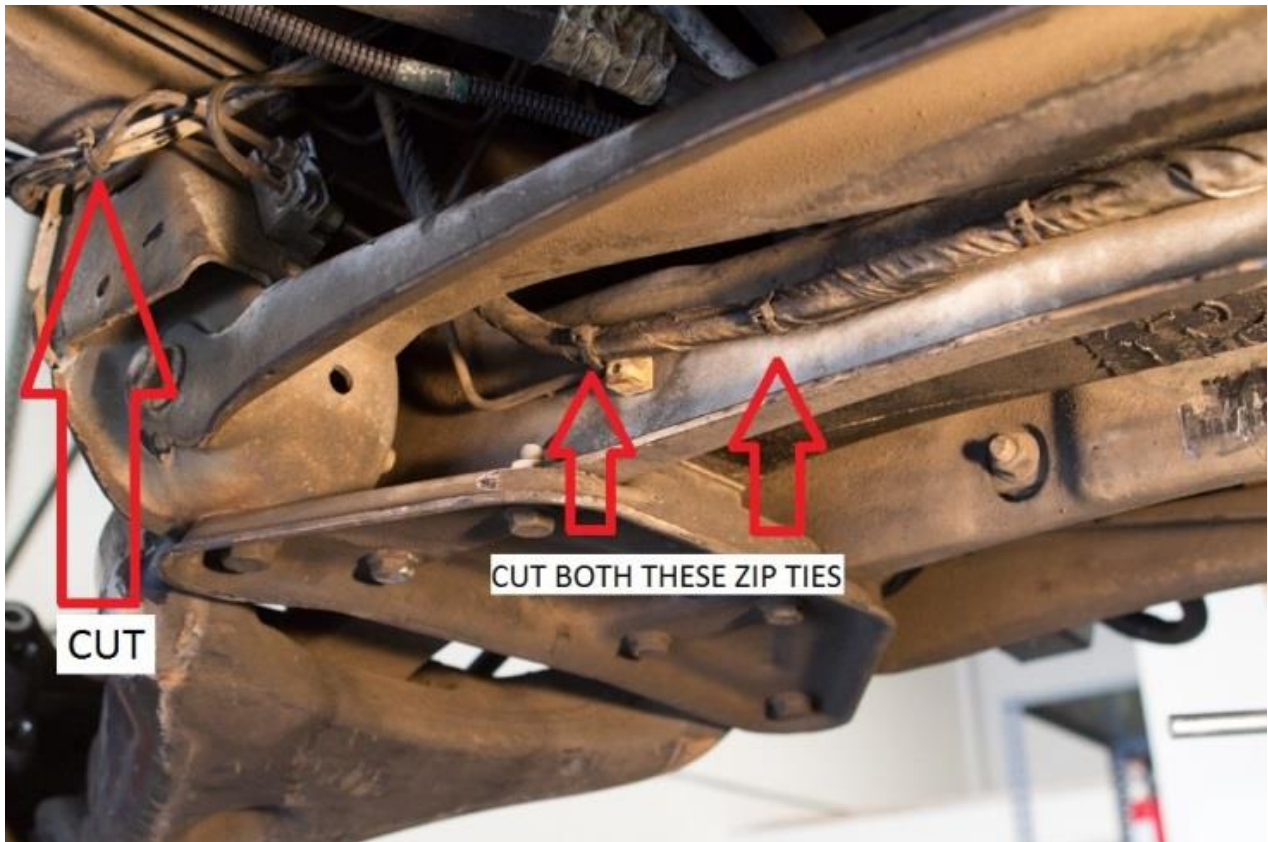


- 15) Disconnect the clamps securing the high pressure power steering hose to the front suspension sub frame. Use a 10mm socket / wrench for removal.

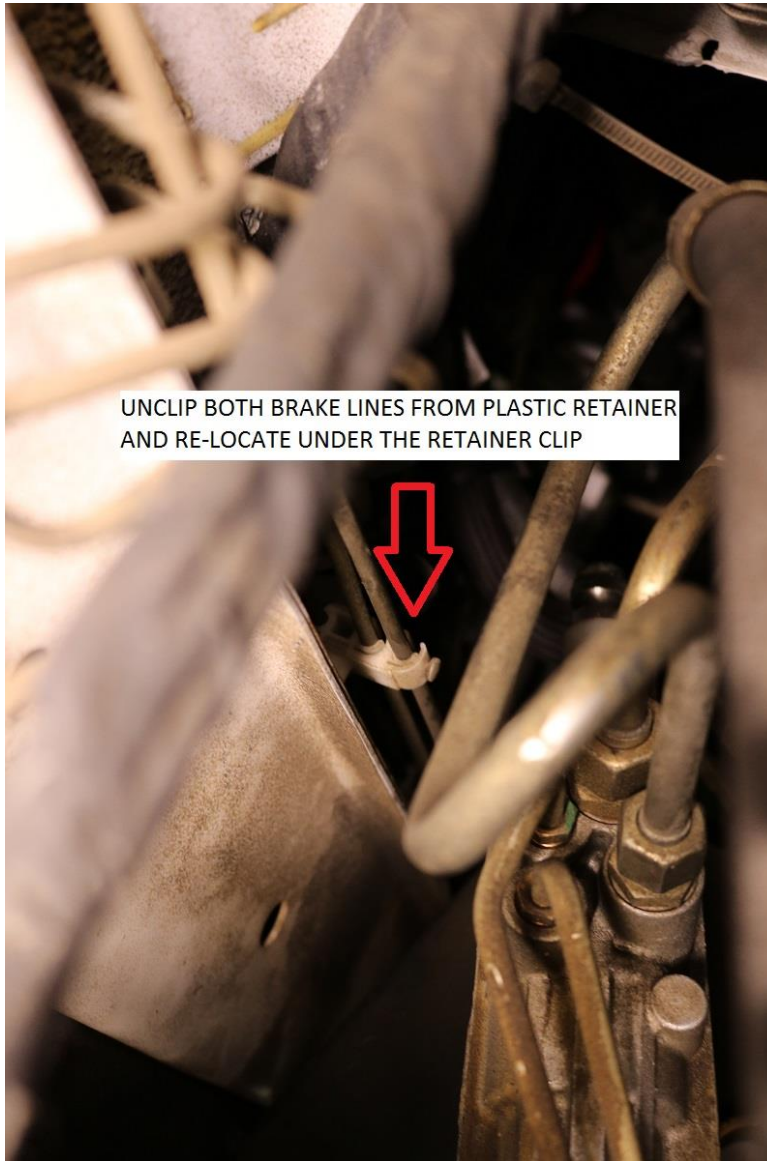




- 16) On the back of the front suspension sub frame, cut the first two zip ties securing the ABS wiring to the front brake hard line nearest to the left side of the vehicle where the hard line makes the turn up to the chassis.
- Additionally, cut the zip tie nearest the hard line junction spot on the left side of the vehicle. See image below.



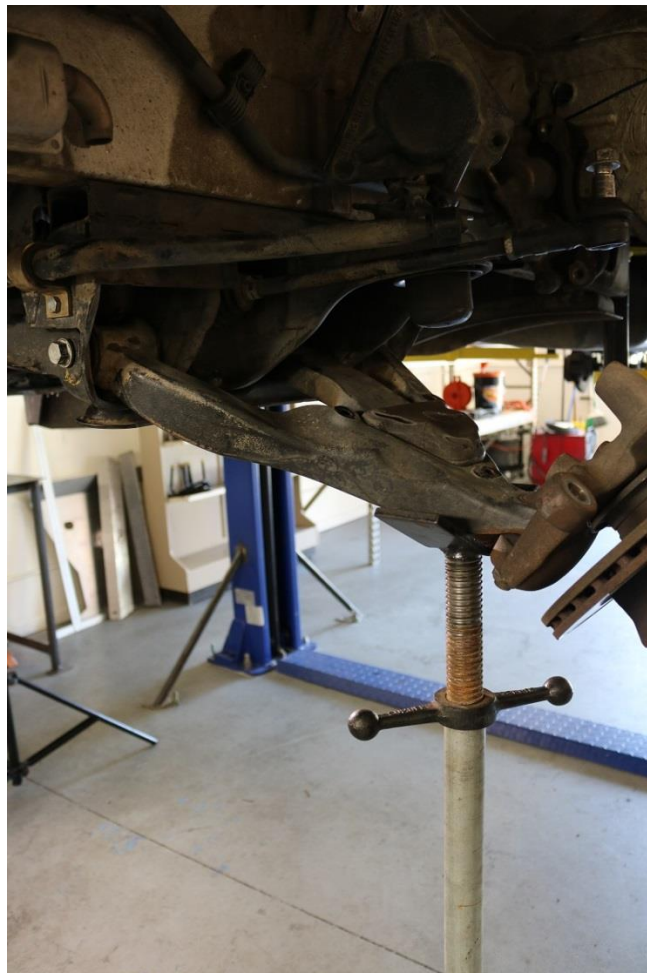
- 17) Before the front brake hard lines join up at the suspension sub frame, there is a front brake hard line plastic retainer which the hard lines must be disconnected from.



18) Remove the upper spring stop plate from the lower control arm. Use a 16mm socket or wrench to remove the 3 bolts securing the top plate to the lower control arm.



- 19) Support the lower control arm. Using a 19mm socket for the bolt head and a 21mm wrench for the nut, remove the front and rear lower control arm bolts and remove the lower control arm complete with the steering knuckle and rotor still attached.



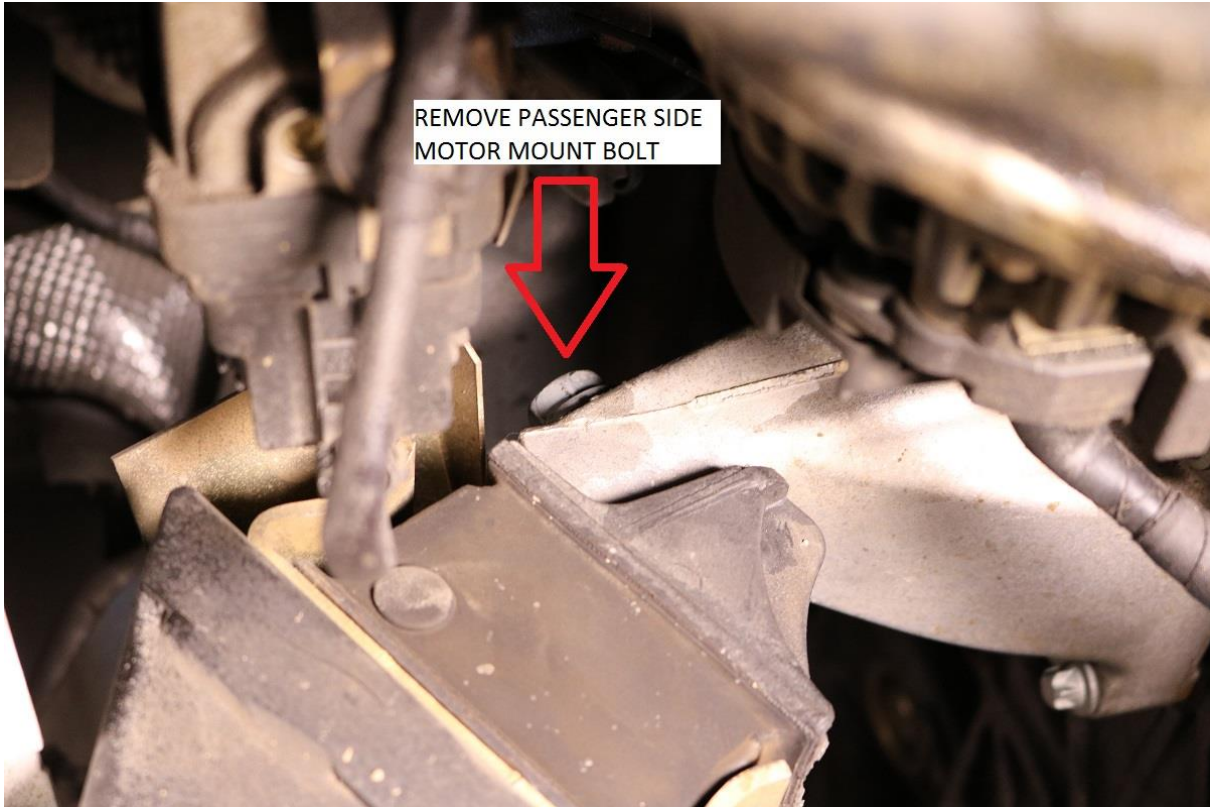


1002 Front Sub Frame Drop Spacer Installation

20) Support the motor with a jack underneath the oil pan.

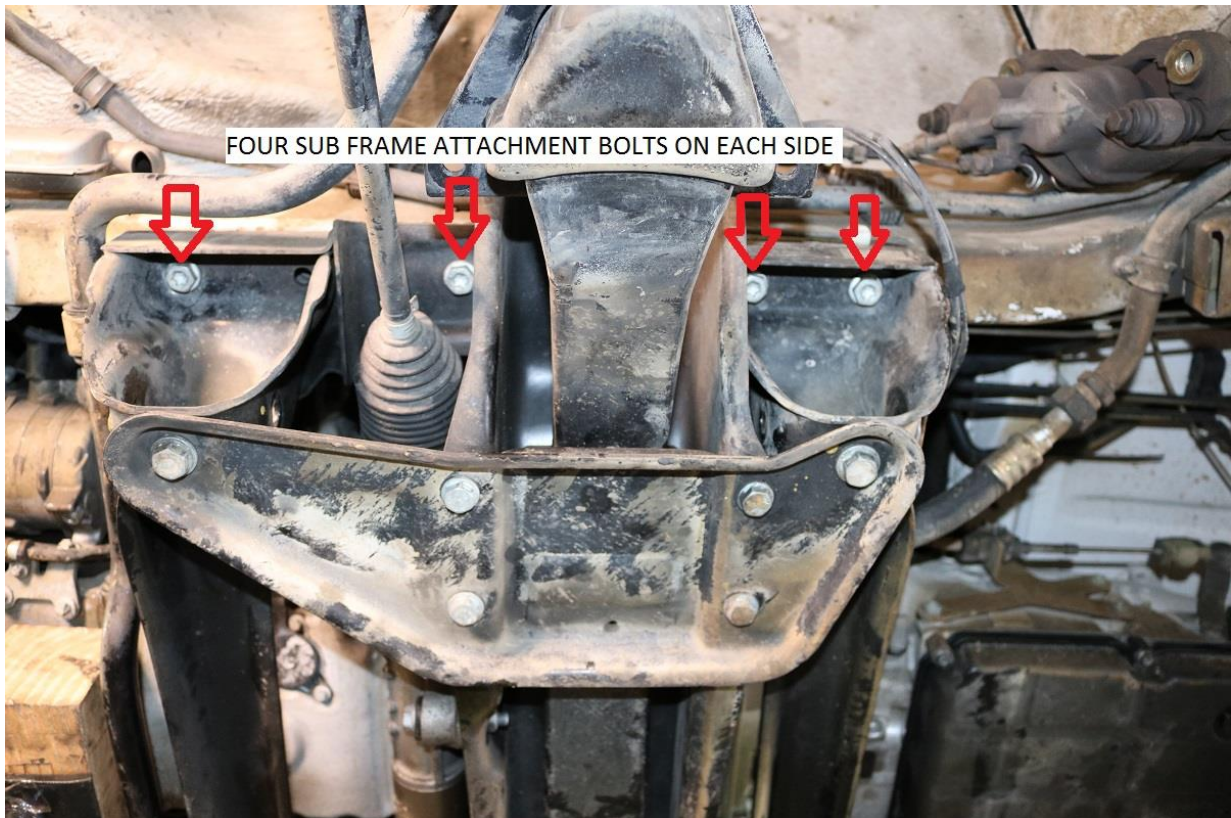


21) Remove the M12 motor mount bolt on both the passenger side of the vehicle. Use an 18mm socket or wrench.



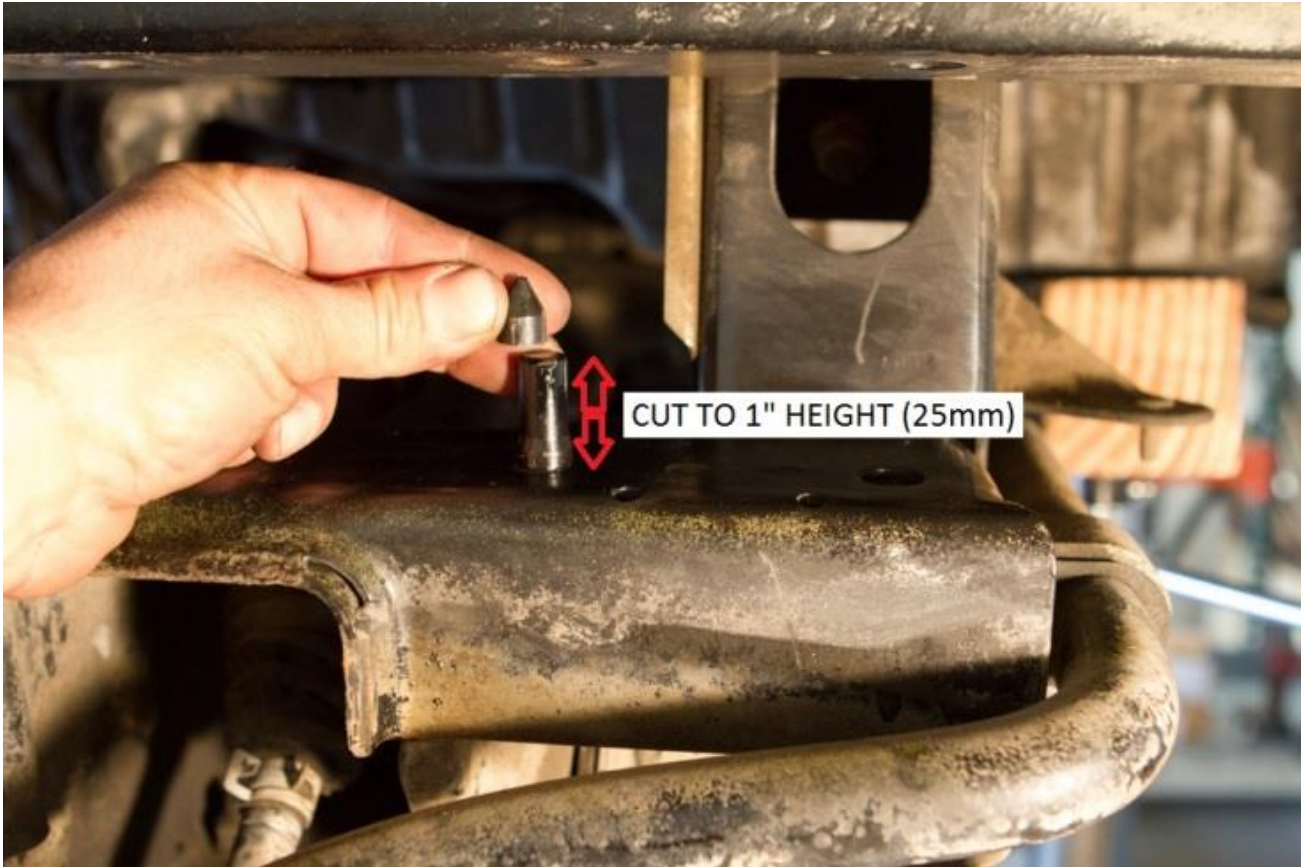
22) Place a jack under the passenger side of the sub frame and remove the four attachment bolts using an 18mm socket.

a. Loosen, but do not remove, the four sub frame attachment bolts on the driver side.



23) Lower the sub frame on the passenger side 4.00" (100mm) to allow for the drop spacer to be fitted.

24) Before fitting the drop spacer, cut the factory sub frame alignment stud to a height of 1" (25mm). Use a 4-1/2" angle grinder with a cut off wheel or similar metal cutting tool.



25) Install the sub frame drop spacer. The sub frame drop spacers come assembled with alignment pins installed. They are left and right specific and will only go on one way.



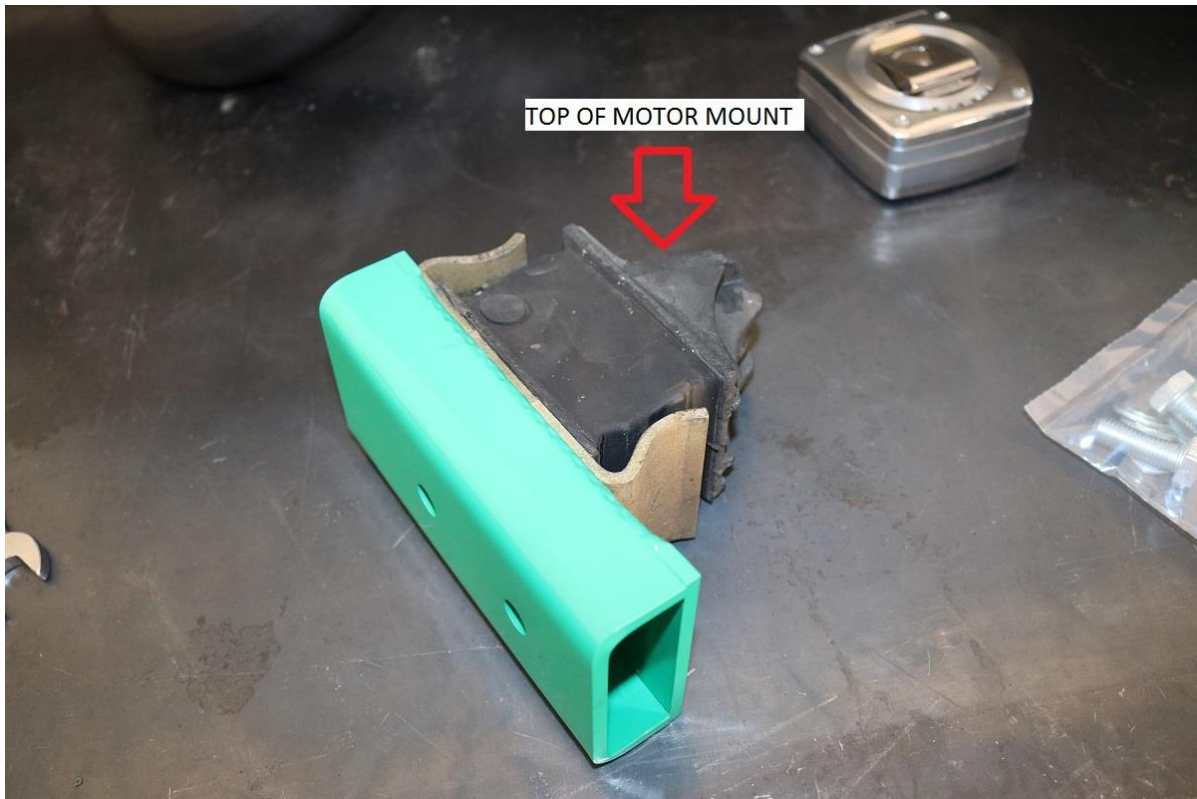
26) Install the drop spacer and jack up the sub frame until the drop spacer contacts the chassis as shown.



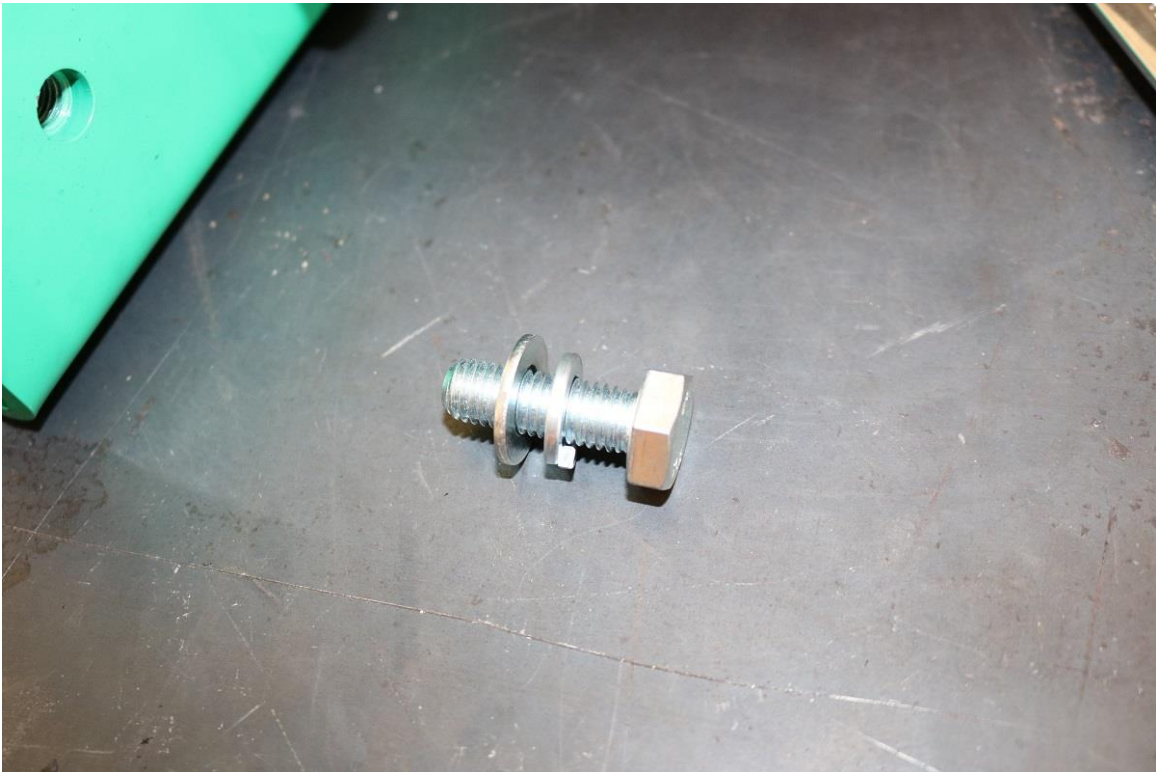
- 27) Use the M12-1.5 x 220mm long bolts provided in the kit with a washer under the bolt head to secure the sub frame to the chassis. Use a dab of blue Loctite on the threads of the bolts prior to installing.
 - a. Simply snug the bolts with a 19mm socket. Do not fully tighten at this time.
- 28) Repeat steps 26-30 on the driver side.
 - a. Note on the driver side, when lowering the suspension sub frame, the long hard metal brake lines which were disconnected from their plastic retaining clips in step 17 will bend down into place as the sub frame is lowered. Take note of these lines and make sure they are not overly strained as the sub frame is lowered.
 - b. Take note of any power steering or brake lines that may be restricting the sub frame from being lowered.
- 29) Once the driver side sub frame drop bracket is installed and all 8 bolts have been snugged. Torque the bolts to 60 ft-lbs (95 N.m)
- 30) Make sure the brake lines on the driver side are not rubbing the frame once the sub frame drop spacers are fully installed. Re-connect the brake lines into their plastic retaining clips if possible. See step 17 for reference photo.

4005 Motor Mount Lift Block Installation

- 31) Un-bolt the motor mounts from the suspension sub frame using a 16mm socket or wrench.
 - a. Note on the passenger side, there is a motor mount heat shield that needs to be removed. The motor mount heat shield can be re-installed by drilling holes in the factory suspension sub frame. We have found the shield to be redundant and not needed after the lift is installed.
 - b. Remove the heat shield with a 10mm socket or wrench.
- 32) Install the mount onto the lift block as shown below. Use the factory nuts to attach the motor mount to the lift block. Tighten to approximately 33 ft-lbs (45 N.m)



- 33) Install motor mount / lift block assembly into vehicle. Install one side at a time. Start on the driver side as there is less room to work in and it is easier to position in place with passenger side free.
- 34) Start the M10-1.5 x 30mm long bolts included with the kit. Use a lock washer under the bolt head, followed by a flat washer as shown below.



- 35) Install motor mount / lift block assembly on the passenger side. Again, just start the M10-1.5 x 30mm long bolts. Once both motor mount lift block assemblies are loosely bolted in place, lower the motor

back down onto the motor mounts. The motor should self-locate on the motor mounts since they are dished to easily sit in place.

36) Once aligned, re-install the passenger side M12 motor mount bolt removed in step 20. Again, use an 18mm socket or wrench.

37) Use a 17mm socket or wrench to tighten the M10-1.5 x 30mm long bolts securing the lift block to the suspension sub frame. Torque to 33 ft-lbs (45 N.m). Torque the M12 motor mount bolt to 61 ft-lbs (83 N.m)



38) Wait to re-install the driver side motor mount bolt until the van is back on the ground as it is easier to install this bolt from above.

1001 Front Strut Spacer Installation

39) Clamp the strut shaft tightly into a vise using a set of non-marring aluminum soft jaws.

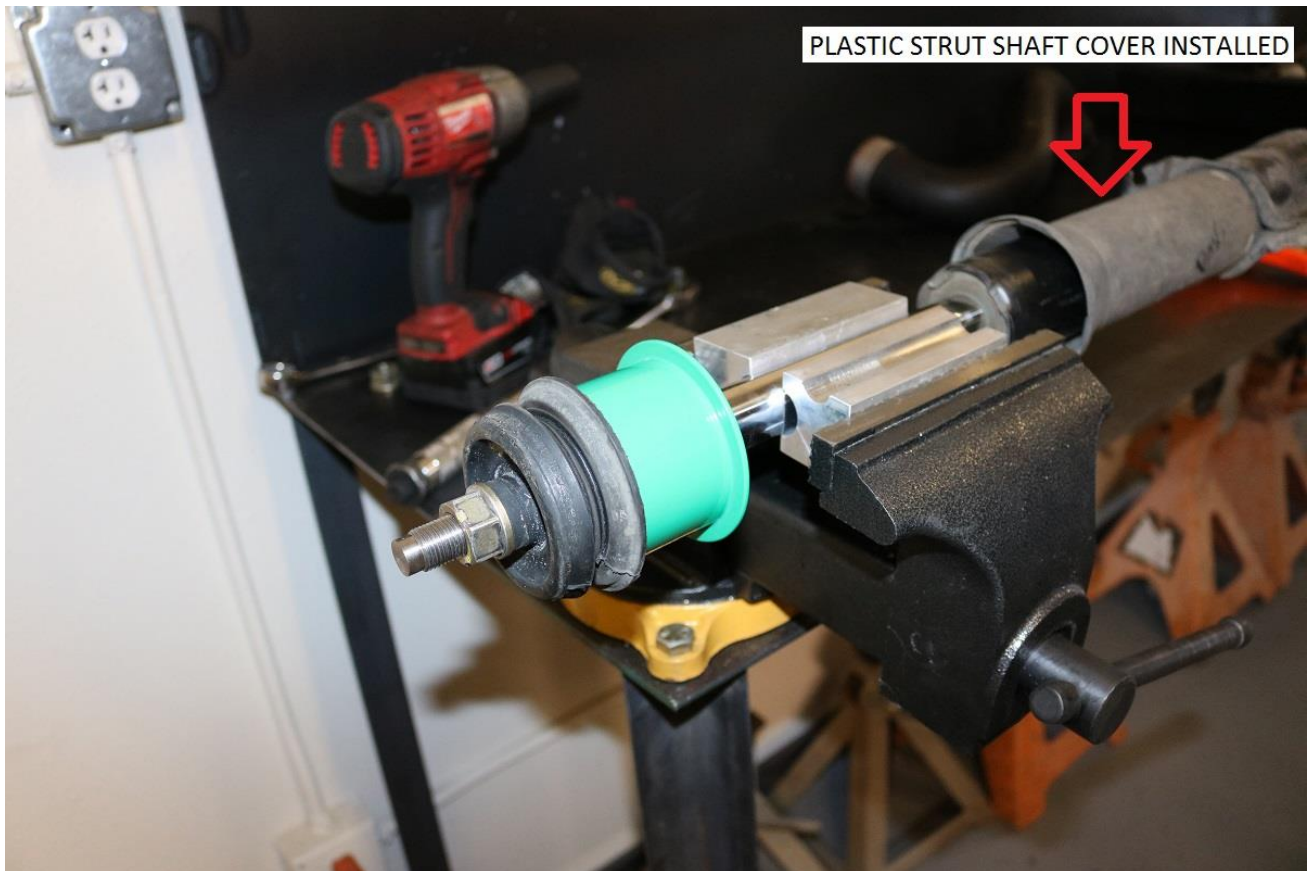
- a. Make sure the plastic strut shaft cover is installed on the strut as it will not be able to put on after the strut spacer is installed.

40) Put a dab of red Loctite on the threads of the strut.



41) Thread the strut spacer onto the strut. Thread the spacer on as far as it will go.

42) Install the lower part of the strut bushing onto the strut spacer and install the mounting nut. Bottom the nut on the strut spacer bushing and torque to 74 ft-lbs (100 N.m).



43) Once the spacer is torqued, remove the nut and bushing.

44) Begin re-assembly of front suspension by first re-installing the lower control arms on both sides. Re-install the lower control arm bolts removed in step 18.

- a. Start the nuts but do not fully tighten. The control arm bolts need to be torqued on the ground with the suspension sitting at ride height to not put the factory bushings into a bind.

45) Position the control arm back into place by raising it so the leaf spring falls back into place in the control arm pocket.

- a. Note, some lubricant is useful to aide in locating. We recommend using Windex or a similar glass cleaner to aide in installation.



46) With leaf spring seated in the pocket, re-install the upper spring stop plate removed in step 17. Tighten the bolts / nuts with a 16mm socket / wrench. Torque to 44 ft-lbs (66 N.m).



47) Position the strut in place with the lower half of the top bushing installed as shown. Secure the strut to the steering knuckle with the four bolts removed in step 12. Tighten using a 19mm socket and torque to 136 ft-lbs (185 N.m).



48) Install tie rod end back onto steering knuckle. Use a 24mm socket to torque to 96 ft-lbs (130 N.m).



- 49) At this time, re-install ABS sensor into the steering knuckle. Bottom out the sensor on the tone ring. It will self-adjust to the correct spacing after driving the vehicle.
- Hook the ABS wiring back into place in the same locations it was removed from on the strut body. See image above for reference.
- 50) Install caliper back onto the rotor. Tighten bolts with a 19mm socket and torque to 125 ft-lbs (170 N.m).
- 51) Bolt the high pressure power steering line clamps back in place. These are the clamps we removed in step 14.
- Note, in some instances, only the front clamp will be able to be re-attached to the sub-frame.
- 52) Re-zip tie the ABS wiring as shown in the image below.



- 53) At this point, have the front wheels pointed straight and raise the lower control arm slightly so the top of the strut locates into the hole in the chassis. Center the strut the best you can and install the second half of the top strut bushing. Torque nut to 74 ft-lbs (100 N.m).
- 54) 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)
- 55) With the vehicle on the ground, the last remaining under-hood components can be hooked back up.
- 56) Re-install the driver side motor mount bolt from above with an 18mm socket / wrench and torque to 61 ft-lbs (83 N.m).
- 57) The steering shaft should be approximately close to lining up with the plastic indexing tab on the rack and pinion splines. Put the key in the ignition to unlock the steering wheel and rotate the steering shaft as needed to line up the plastic tab on the splined rack & pinion. Re-install the T-45 torx head bolt removed in step 3 and torque to 18 ft-lbs (24 N.m).

- a. At this time, the steering wheel should look straight with the wheels pointed straight. A short test drive after completing the installation will reveal any issues.
- 58) Re-install intercooler to intake manifold tube removed in step 2.
 - 59) Roll the vehicle forwards and backwards a few feet and rock it firmly from side to side. This will settle the suspension. Torque the lower control arm bolts using a 19mm socket for the bolt head and a 21mm wrench for the nut. Torque to 110 ft-lbs (150 N.m)
 - 60) Re-connect battery ground cable onto battery.
 - 61) Take vehicle to alignment shop for a proper alignment to be done.
 - 62) Note, in some instances, a 1 or 2 degree camber shim will be needed to correct the positive camber induced from the lift. We recommend using the following Moog part number(s) which can be sourced from most auto part stores or Rockauto.com
 - a. 1 degree: K80757
 - b. 2 degree: K80758
 - 63) Re-check all bolt torques 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.