G4F4-23-X-11-4
G4F4-23-X-11-7

Version 1.2

kelderman®

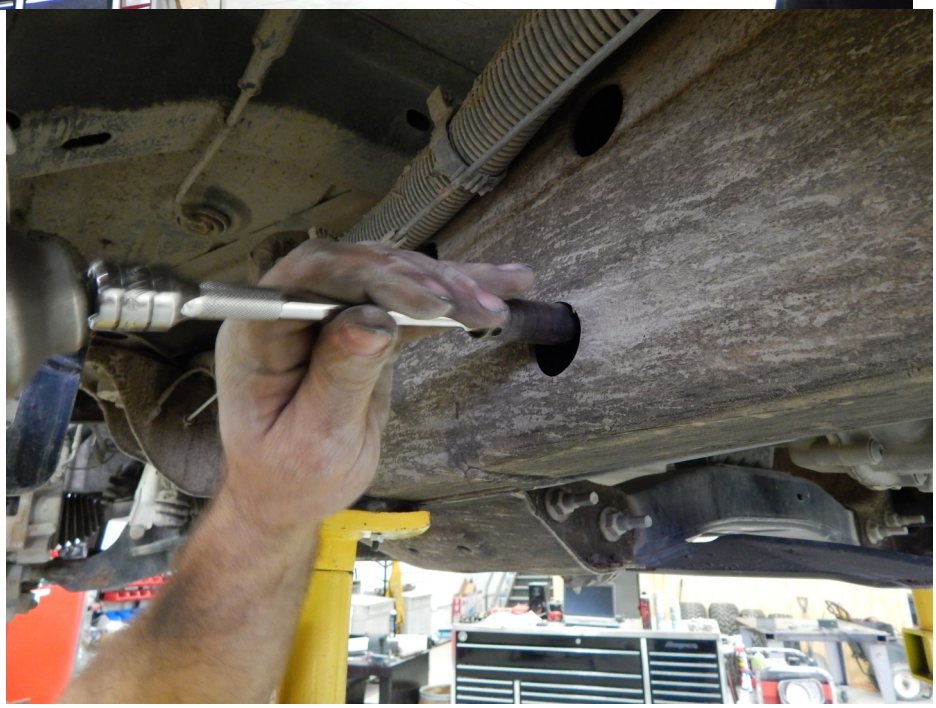
AIR SUSPENSION SYSTEMS

2686 Highway 92 - Oskaloosa, IA 52577
phone: 641.673.0468 email:info@kelderman.com
www.kelderman.com

2011+ GM 2500/3500 4-6” & 7-9” Front Lift Kit Install Instructions

1. Place the truck on a level concrete surface. Place wheel chocks in front and behind of the front wheels.
2. Measure the exposed threads of the torsion bar adjusting bolts and note the measurements here: _____

3. Designate which torsion bar is from the driver's side and which one is from the passen-ger side of the truck. Mark these bars to keep them from being mixed up with either a paint marker, parts tag, or similar.



4. Use a torsion bar removal tool to unload the tension from the factory torsion bars. Once the tension is relieved, remove the factory crossmember and torsion bars.

5.) Once the factory crossmember and torsion bars have been removed, unplug the ABS brake connection from the frame and factory control arm. Remove the brake hose bracket from the factory steering knuckle.

6.) Remove the nut retaining the outer tie rod to the steering knuckle. Disconnect the tie rod ends from the steering knuckle. This is done by hitting the knuckle with a hammer to break the tie rod end loose. If you are retaining the factory tie rod ends during installation. Use caution to not damage them.

7.) Remove the brake calipers. Use a piece of wire or something similar to make sure the full weight of the caliper is not hanging on the brake hoses to cause damage.

8.) Remove the brake rotors from the steering knuckles.

9.) Remove the axle nut, washer, and bolts on the backside of the knuckle to remove the hub assembly. Remove the O-Ring from the inside of the knuckle assembly.
DO NOT DISCARD THESE PARTS. THEY WILL BE RE-USED LATER ON.

10.) Disconnect the upper and lower ball joints from the knuckle by hitting the knuckle with a hammer. Remove both upper and lower ball joints and set them aside for re-installation later during the lift kit install. The factory steering knuckles will not be re-used on the new lift kit.

11.) Remove the factory sway bar end links. The factory sway bar end links will be re-used so do not throw them away.

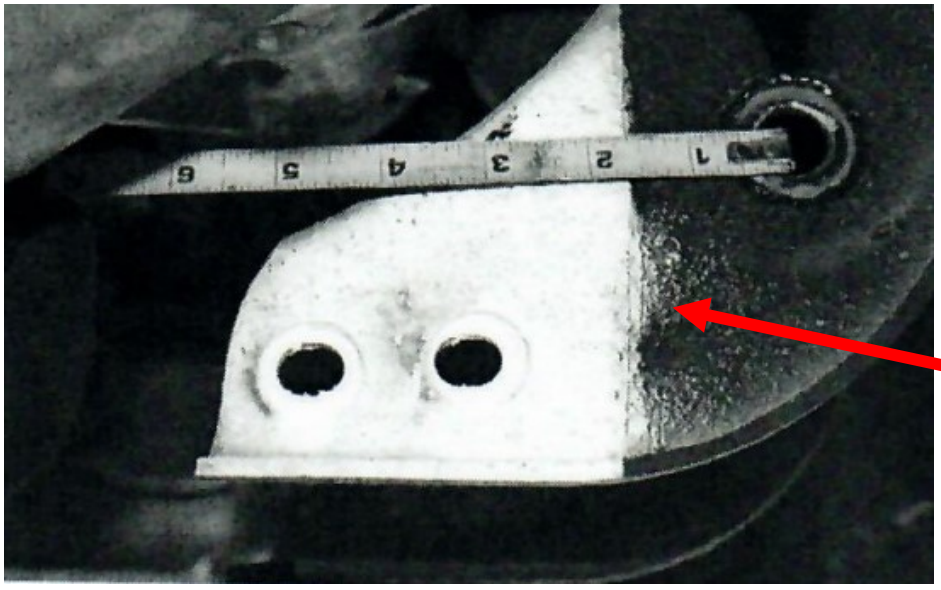
12.) Remove the front lower shock bolts and remove the retaining clips holding the wiring harnesses to the torsion bar crossmember.

13.) Remove the lower control arms and retain all the hardware. The hardware and arms will be re-used later in installation.

14.) Remove the lower bump stops from the frame along with the factory shocks, shock mounts, and hardware. Set them aside for re-installation later on as some of this hardware will be re--used.

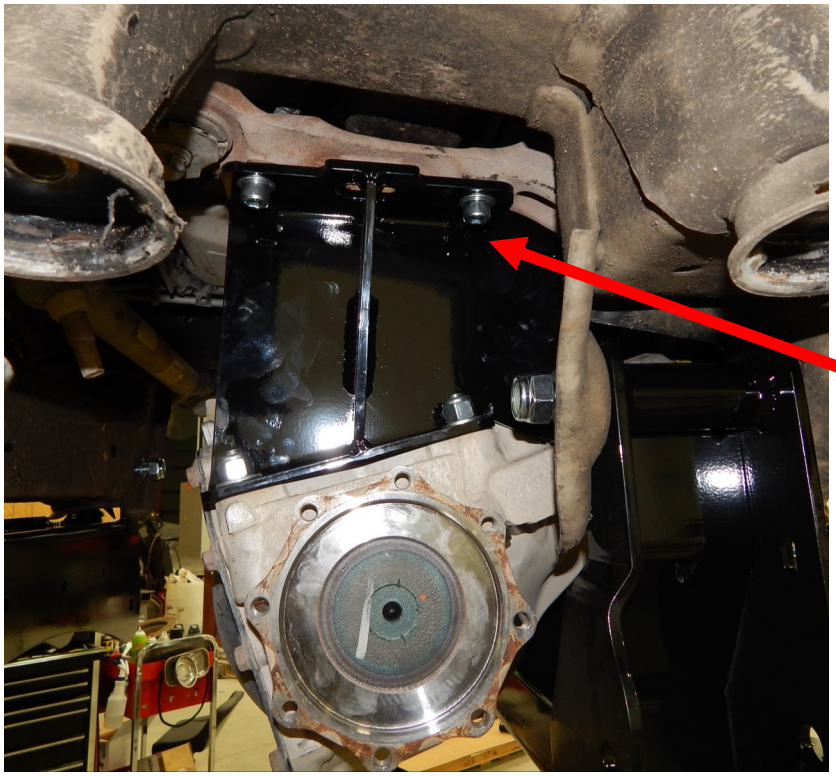
15.) Remove the CV axle and remove the driveshaft from the differential. Use a pry bar to carefully remove the driveshaft from the yoke. The electric connection on the differential actuator is removed using the plastic retainers of the top of the front diff. You will also need to remove the axle tube from the top side of the differential.

16.) With the differential bolts loose, you will need to mark where cuts will be made to the frame. The frame will be cut 1 1/2” over from the center of the lower control arm hole. Once the cut is made, clean up the area with a grinder to remove rough edges and treat the frame with paint and/or undercoating to prevent rust.



Use a Sawzall or other tool to make this cut.

17.) Using an 11/16” drill bit, drill out the holes on underneath where the factory bump stops were removed. Install the provided nut inserts. Use an impact to tighten the bolt until the nut has secured itself to the frame.



18.) Install the differential drops to the differential housing using 12mm x 25mm bolts and the 1/2 x 3 1/2” hardware shown. The PS drop will use the factory hardware.

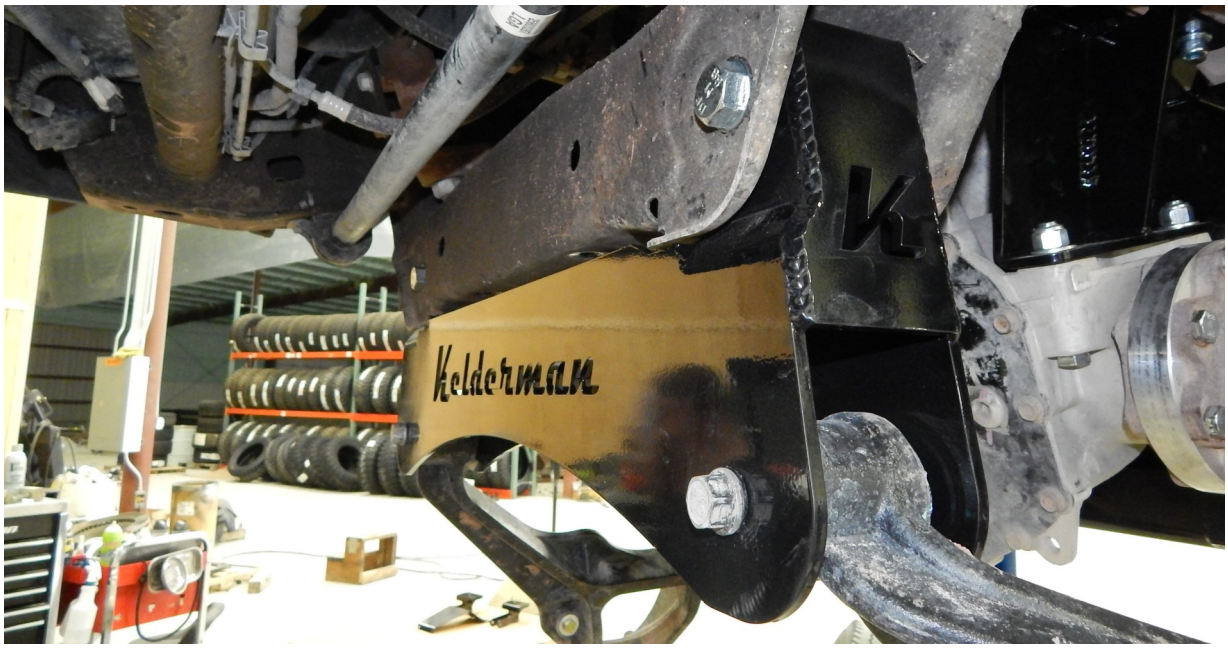
Driver’s Side Shown

Driver's Side Differential Drop Shown

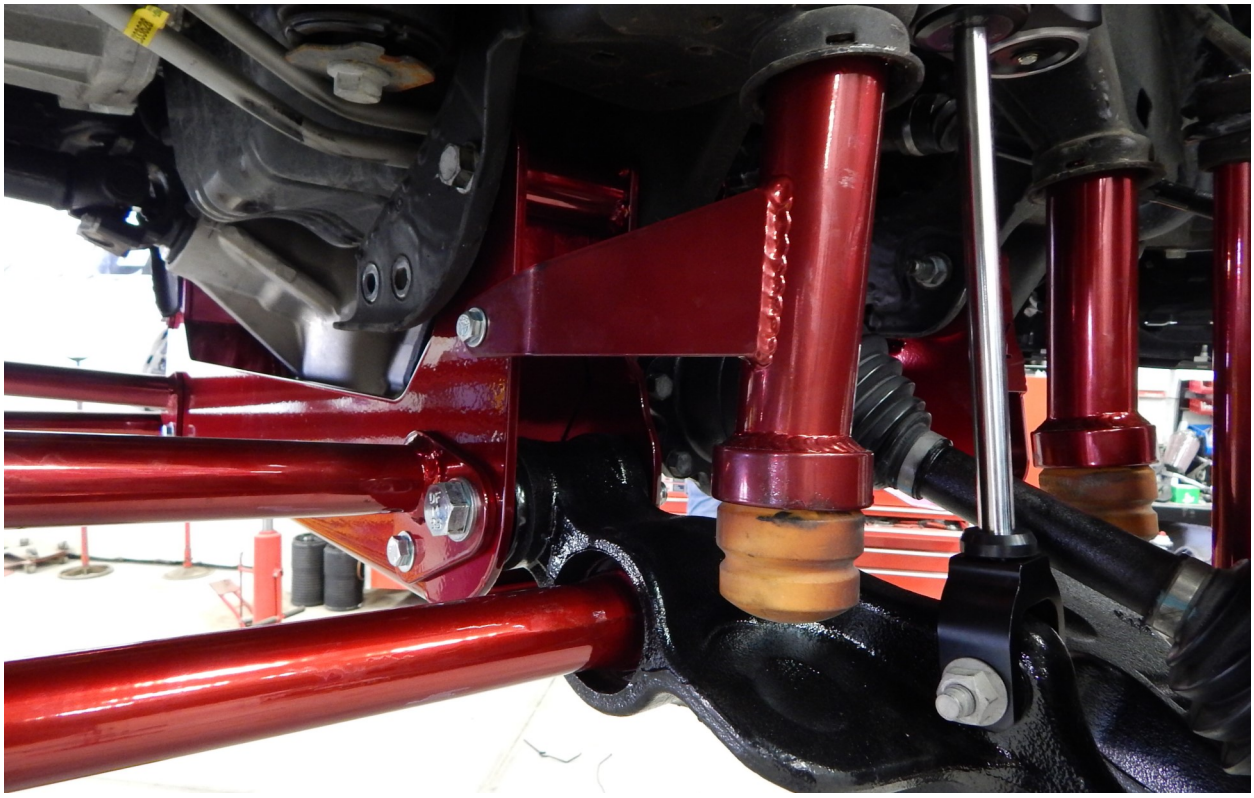
19.) Re-install the differential using 1/2 x 2" and 5/8" x 2 bolts. Re-install the breather tube and all electrical plugs.

20.) The rear crossmember will install into the lower control arm pocket with the hardware from the factory control arm. The bolts will be inserted from the rear of the truck forward. Install the (40 1/2" x 1 1/2" bolts through the frame and into the rear crossmember.

21.) Install the front crossmember into the front lower control arm pocket with the factory lower control arm hardware.



22.) Install the rear lower bump stop drop brackets into the factory lower bump stop bracket using the 1/2” x 1 1/2” bolts. These will fasten into the previously installed nut insert. Install 7/16” x 1 1/4” bolts into the bump stop support bracket to the rear crossmember.



23.) Install the lower control arms using the 18mm x 120mm bolts in the front of the control arm. The rear of the control arm will use 18mm x 150mm bolts.

DO NOT TIGTHEN THE BOLTS IN THIS STEP.

24.) With the bump stop drop brackets installed, re-install the rubber bump stops. They will push up into the drop brackets and go into the retaining lip. You may need to provide some lubrication for the rubber to finally get into place.

25.) The 4-6” Lift Kit does not use a CV Axle Spacer. The 7-9” kit does require it to be installed to the driver’s side at this step. Torque the machined spacer until the bolts are tight with an impact.

Install the CV axle spacer for use with the 7-9” Front Lift Kit. It is not required or provided on the 4-6” Lift Kit.

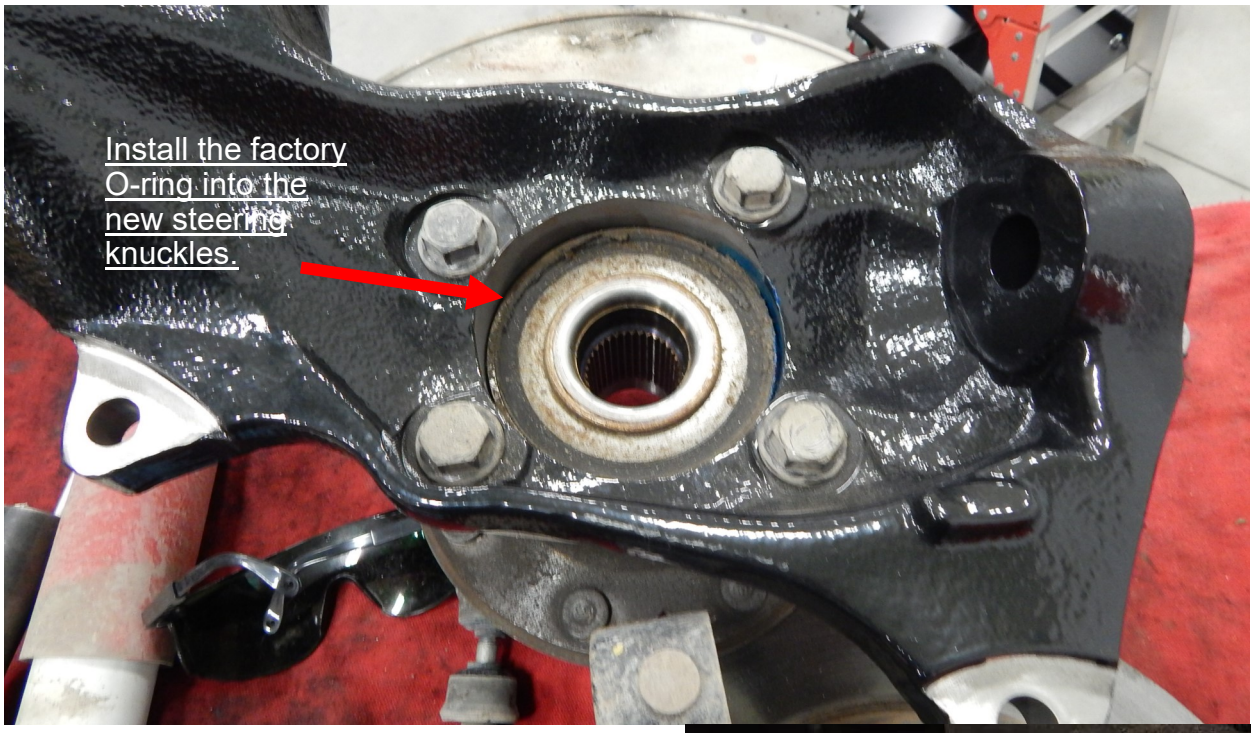
26.) Locate the provided steering knuckles. These will differ in design from passenger side to driver side. Install the knuckle onto the upper and lower control arms by fastening the knuckle with the original nuts from the upper & lower ball joints.

Torque the upper ball joint nut to 60 ft./lbs. and the lower ball joint nut to 100 ft./lbs. Using Loctite on the threads is recommended. Re-torque the lower control arm bushing to 200 ft./lbs.

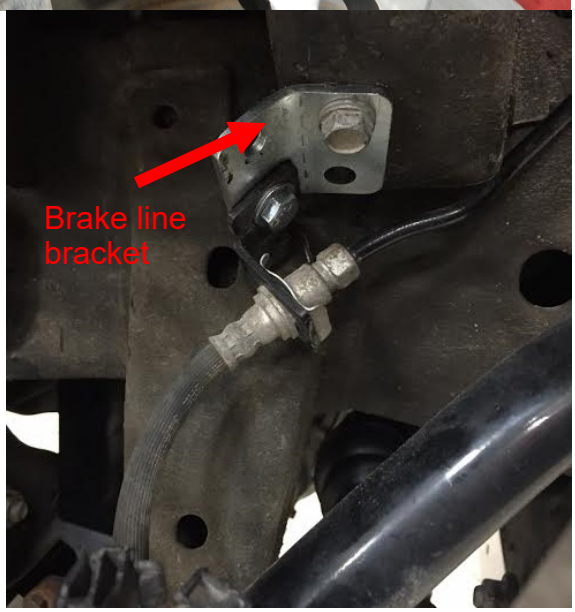
27.) Re-install the factory O-ring into the groove of the steering knuckle.

28.) The factory hub assembly and dust shields will then be re-installed to the knuckle. Run the ABS line from the top of the hub and route it behind the dust shield. The hub will fasten to the knuckle using the factory bolts. Using Loctite on the threads is recommended. Once Loctite is applied, torque the bolts to 185 ft./lbs.

29.) Install the 36mm axle nut and torque the nut to 160 ft./lbs. Use Loctite.



30.) Route the ABS line around the front of the steering knuckle and up to the wire connector found on the frame. Reconnect the wire and re-attach it the factory location.



31.) Install the brake line bracket using factory hardware and the 5/16” x 1” hardware shown to the right. Once installed, check to see that the full movement of the knuckle does not interfere with the ABS lines, brake lines, or other components.

32.) Re-install the rotors and calipers using the factory hardware. Torque these bolts to 225 ft./lbs. Use Loctite on the threads.

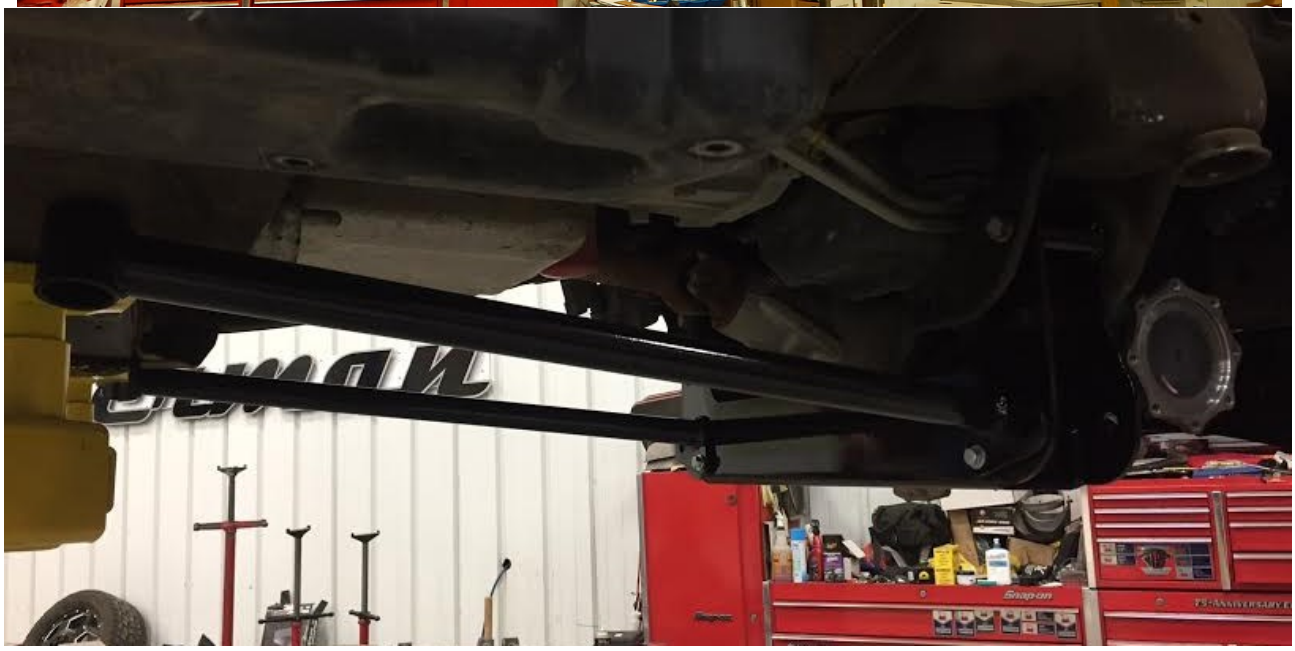
33.) Install the sway bar end links provided. These use the factory rubber bushings along with the 7/16” large washers provided. These will install using the supplied 7/16” x 2 3/4” bolts to fasten in place. Use Loctite.

34.) Trim the inner tie rod ends 1/2”. Once the outer portion of the inner tie rod end has been cut, re-install it into the steering knuckle and torque to 60 ft./lbs.

35.) Install the compression strut to the rear of the lower control arm drop using the lower control arm bolt and the provided 7/16” x 1 1/2” bolts on the front and 7/16” x 1 1/4” bolts at the rear to fasten the strut to the transmission crossmember mount.

36.) Install the torsion bar crossmember drop brackets using the 9/16” x 4” bolts provided. The brackets are offset to move the torsion bar crossmember forward when installed. The crossmember will install to the drop brackets shown using the provided 3/8” bolts.

37.) Re-install the factory torsion bars in their original position. Do not mix-up the passenger side and driver side bars. Load the torsion bars to the original factory height .



38. This concludes the installation of the front kit. Please see the Install Instructions provided for the Kelderman Rear Air Suspension Lift Kit for further instructions.


Kelderman


kelderman

Kelderman Manufacturing, Inc. offer a 3 year or 100,000 mile Limited Warranty, parts and labor, to the original retail purchaser who owns the vehicle on which the unit was installed, for defects in materials and workmanship related to the fabricated parts. Non fabricated parts such as air bags, air compressors, gauges, solenoid kits, and electronic air ride control systems are covered for 1 year or 50,000 miles for parts and 1 year or 25,000 miles for labor.

Kelderman Manufacturing, Inc. must be contacted for warranty authorization before any diagnostic work or repairs are performed. At that time, Kelderman will provide diagnostic assistance and authorization for the repairs if warrantable. Any unauthorized diagnostic work performed before contacting Kelderman will not be covered under the warranty program if deemed unreasonable.

Kelderman Manufacturing, Inc. does not warrant any product for finish, alterations, modifications and/or installation different from Kelderman's instructions. Alterations / modifications to the final product include, but are not limited to powder coating, plating, and/or welding which will void the warranty. Some damage may occur to the finish of the parts during shipping. This is considered normal and is not covered under warranty.

Kelderman tries to ensure that the suspension parts fit the vehicles they were designed for, but due to unknown vehicle manufacturers' production changes and/or inconsistencies by the vehicle manufacture, Kelderman cannot be responsible for 100% fitment.

Installation of the Kelderman Air Suspension System may void the vehicles factory warranty. It is the consumer's responsibility to check with their local vehicle's dealer for warranty position before the installation of the system.

Kelderman's obligation under this warranty is limited to the replacement of the defective parts only. Freight charges, incidental or consequential damages are expressly excluded from this warranty. Kelderman is not responsible for damages and/or warranty of other vehicle parts related or non-related to the installed Kelderman Air Suspension System. This warranty is expressly in lieu of all other warranties expressed or implied. This warranty shall not apply to any product that has been subject to accident, negligence, alteration, abuse or misuse as determined by Kelderman.

Kelderman Air Suspension Systems are designed to be installed, and ran at the recommended ride heights provided by Kelderman. All warranties will become void if Kelderman systems are ran outside the recommended ride heights, or if the systems are combined/substituted with other suspension kits. Combination and/or substitution of other components may cause premature wear and inhibit the Kelderman Air Suspension System from operating as designed, which may cause severe injury or death. Kelderman does not warrant parts not manufactured by Kelderman.

It is the installer and sellers reasonability to review all these warranties, warnings and disclaimers with the consumer prior to installation.

Kelderman reserves the right to supercede, discontinue, change designs, finishes, part numbers and/or applications of parts deemed necessary without written notice. Kelderman is not responsible for misprints, or typographical errors within the catalog or price sheets.