



VERSION 1.3

D4F4-3-X-13-6

**inspect contents of
kit prior to beginning
installation**

kelderman

AIR SUSPENSION SYSTEMS

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**2013-2018 RAM 3500
2014-2018 RAM 2500
Front 5-6" Lift Kit
Installation Instructions**

**1/2-20", 3/8-24", 5/16 x 18" taps are required for installation.
A welder is also needed.**



1. Jack the truck up at the front axle and place jack stands under the front of the frame just behind the radiator. Remove the wheels and remove the shocks. Lower the jack down so the tension is off the coil springs and remove the springs. Unfasten the steering arm from the pitman arm and unbolt the panhard bar from the panhard bar mount. ***Do not unhook the sway bar end links.***



2. Place a jack under the transfer case. Remove the three nuts from the transmission mount where it fastens to the crossmember and remove the four bolts that hold the transmission crossmember in place. Remove the crossmember. Remove the two bolts that fasten the control arms to the frame. Keep the nuts for the transmission mount. The other bolts will not be used.



3. Locate the crossmember (Part # 18291). It fastens into the factory crossmember holes with the four 5/8 x 6 1/2" bolts. Also use the M18 x 40 bolts to fasten the side of the crossmember into the original control arm mounts. Torque these bolts to 150 ft./lbs. Now locate the three factory transmission nuts and fasten them to the crossmember. Torque to 40 ft/lbs.



4. Fit the factory control arms into the new crossmember. Use the supplied M18x140 bolts. Insert them from the outside in and torque to 150ft/lbs.



5. Remove the ball joint from the steering linkage. The tab needs to be cut off so the ball joint can be turned 180 degrees over and installed into the new pitman arm that gets installed in the next step.

Cut this tab off at the end of the threads



6. Locate the dropped pitman arm (Part # 4011). Remove the factory pitman arm and replace with the dropped one. Torque the nut to 275 ft./lbs. Rotate the ball joint on the end of the steering arm 180 degrees as it will go into the pitman arm from the bottom up now. Insert the ball joint into the pitman arm and torque the steering arm nut on the ball joint to 100 ft./lbs. NOTE: The pitman arm needs to be re-torqued after 300 miles.

7. Locate the panhard bar drop (Part # 18288). It fastens into the factory panhard bar drop location. **THIS PART WILL BE WELDED.** Hold the part up in place and then mark where it gets welded so the paint in the area can be removed with a grinder or polishing wheel. Use the factory bolt to fasten into place. Before you tighten, use a clamp to clamp the back of the part in place tight against the crossmember. Torque the bolt to 125 ft./lbs. You will need to weld the back portion to the crossmember. Weld the part the full length. **NOTE: When welding be sure to use a battery saver or anti-zapper device to prevent damage to the electronics.**



Clamp PHB drop like this and weld here





Panhard bar drop bracket
(Part # 18288).

Shown fastened into the
factory panhard bar drop
location.

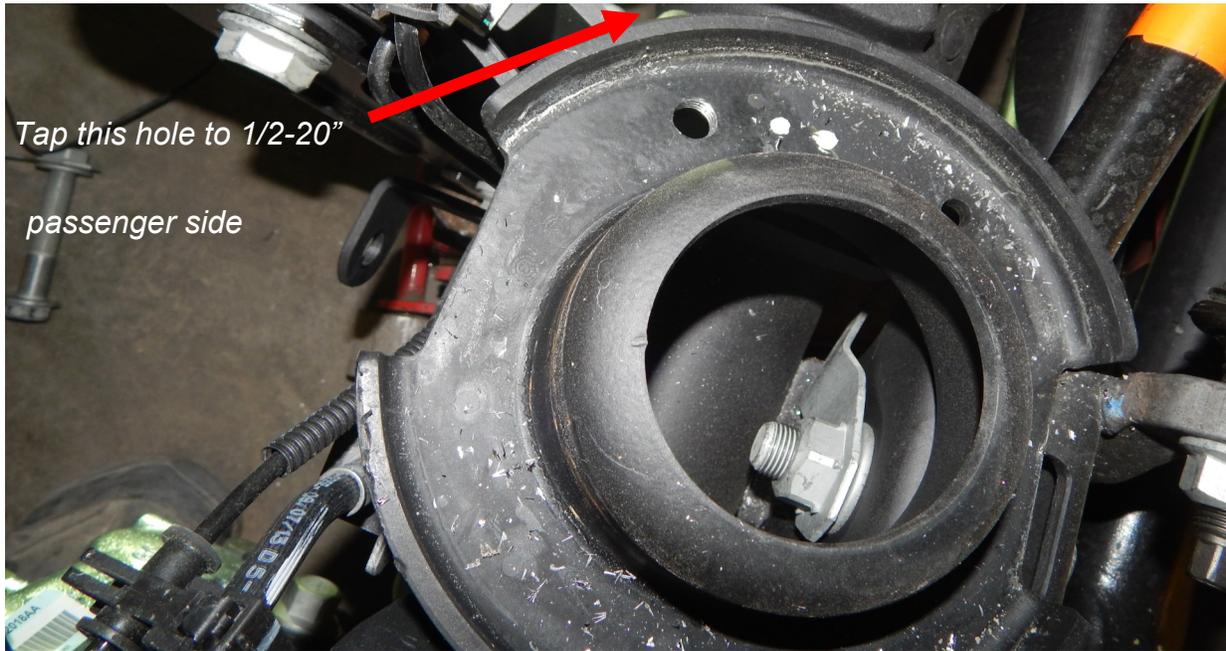
**THIS PART WILL BE
WELDED. SEE BELOW.**



Weld here

8. Locate lower bag mounts (Part # 18275 DS and 18286, -1 and -2 PS). Find the holes in the bottom of the spring bucket. The hole towards the rear of the truck will be tapped to 1/2-20". Once that hole is tapped, drop the lower bag mount in fasten with the 1/2 x 1" bolt. Drill two 13/32" holes into the raised center portion of the bucket. Once this is done insert the two 3/8 x 1 1/2" bolts and torque both bolts to 35 ft./lbs. Use a flat washer if there is a space between the bracket and raised center portion.

NOTE: There are 3 different axle styles used on G5 Dodge trucks, therefore, 3 different passenger side lower air bag mounts are provided. Place each lower mount on the passenger side axle perch and choose the one where the bottom of the air bag will set most parallel with the ground. The other 2 lower bag mounts will not be used.



Tap the passengers side rear hole and drivers side is front hole.



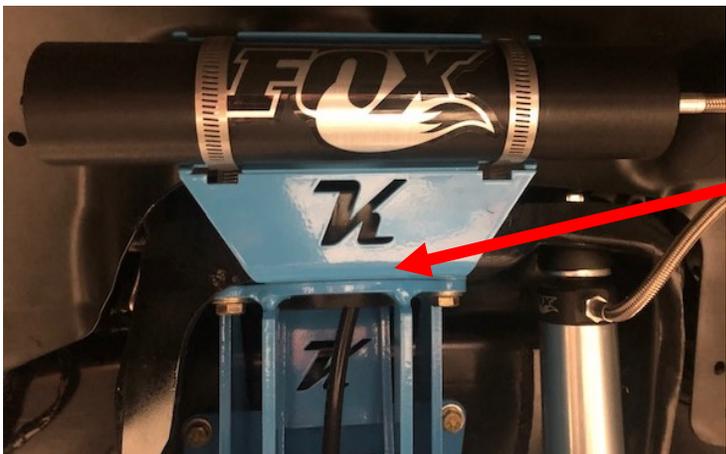
This plate needs to be parallel with the ground at ride height.

Drill two holes for the 3/8" bolts here. Use a flat washer between, if needed.

9. Locate the upper bag mounts (Part # 18920DS and 18921PS) and upper reservoir mounts (Part # 18469DS and 18470PS). If your truck is running monotube shocks you will not use the upper reservoir mounts. There are two holes in the upper coil spring bucket. The rear hole is big enough for a 3/8" bolt. Hold the upper bag mount in place, line up the rear hole and mark the other hole. Pull the upper bag mount, center punch the mark and drill to 13/32". There are also two holes that need to be drilled and tapped into the side of the frame. Use a 21/64" drill bit to drill into the side of the frame and tap the hole with a 3/8-24 tap. If using the reservoir mounts, slide them in between the upper spring bucket and upper air bag mount. Fasten the assembly in place with the two 3/8 x 1 1/2" bolts on top and two 3/8 x 1 1/2" in the frame. Torque the bolts to 35 ft./lbs.



Drill and tap these two holes in the side of the frame



The remote reservoir shock mount fastens in between the upper coil bucket and upper bag mount

10. Locate the air bags (Part # 80012-5323). Fasten them into the upper and lower air bag mounts. Use the 3/4" and 1/2" nuts and lock washers on the top and the 1/2 x 3 1/2" bolt on the bottom (with flat washer and lock washer). Tighten all the nuts and bolts to 35 ft./lbs. Locate the air fitting and install into the air port on top of the bag. Tighten finger tight then one complete turn after that.

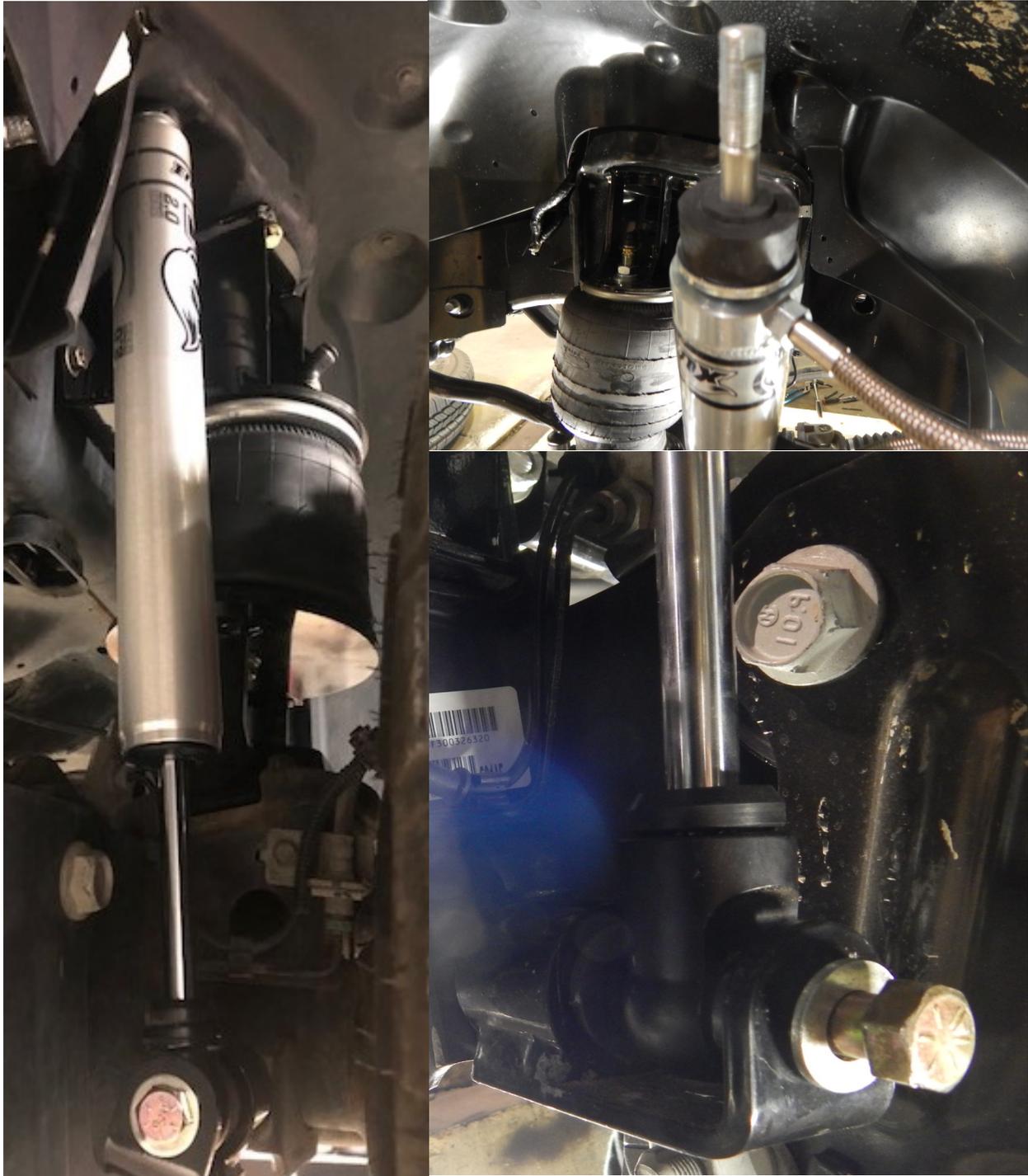


NOTE: The passenger side upper spring bucket has a gusset welded on from the factory. The drivers side doesn't have this bracket. A weld in bracket is supplied for the drivers side. Once you have the air bag installed, wrap up the air bag and mounts and weld the gusset in place. Do not place the gusset too close to the air bag or it will rub on it. Once you have this mount welded in, paint it black to match the chassis.



Weld here

11. Locate the shocks (Part # 980-24-637) and lower shock mounts (Part # 18378). Fasten the lower end of the shock into the shock mount with the 9/16 x 5 1/2" bolt and slide the round end of the mount in the factory shock location on the axle. Torque this bolt to 125 ft./lbs. Locate the rubber bushings and steel cups. Place a cup (dish side up) on the shock and then slide a bushing (large ring up) over the shock and slide into the factory shock mount.





12. Place a bushing over the shock shaft so the large ring is down. Install the washer dish down. Thread on the lock nut until it bottoms out. Fasten the remote reservoirs to mounts. If using Fox brand shocks, use the hose clamps. If using the Kelderman shocks, use the billet clamps.



Large ring goes into factory shock mounting hole



Small ring goes towards the steel dished washer

13. Locate the steering stabilizer kit. Locate the center K bracket (Part # 18393) and spacer (Part # 18399). Remove the center two bolts off the differential cover. Also remove the OEM factory steering shock and stabilizer bracket off the bottom of the axle. Only the bolts will be reused. Place the center K bracket on the front of the axle. Use the M10 and M8 bolts to attach the top of the bracket to the axle and over the diff cover. If using the stock diff cover, make sure to place the spacer between the diff cover and bracket. Locate the OEM bolts that held the factory steering shock in place and use those bolts to attach the K bracket to the bottom of the axle. Torque all the bolts to 20 ft./lbs.

M10 x1.25 x 40

M8 x1.25 x 40



14. Locate the center plate (Part # 20227), shocks (Part # Fox 985-24-068) and outer shock mounts (Part # 1840PS and 18389/18409DS). The driver side outer shock mounts fasten to the tie rod with the OEM bolt and the 1/2 x 2 1/2" bolt.



The passenger side outer shock mount attaches to the tie rod with the OEM bolts that held the OEM shock bracket in place.



Locate the shocks and tie plate. Use the 1/2 x 2 1/2" bolts to fasten the body end of the shocks to the K bracket. The tie plate goes on top. The shaft end of the shocks attach to the outer shock mounts with the 1/2 x 2 1/2" shocks.

See pictures on the next page for completed assembly.

Completed Stabilizer Assembly Shown

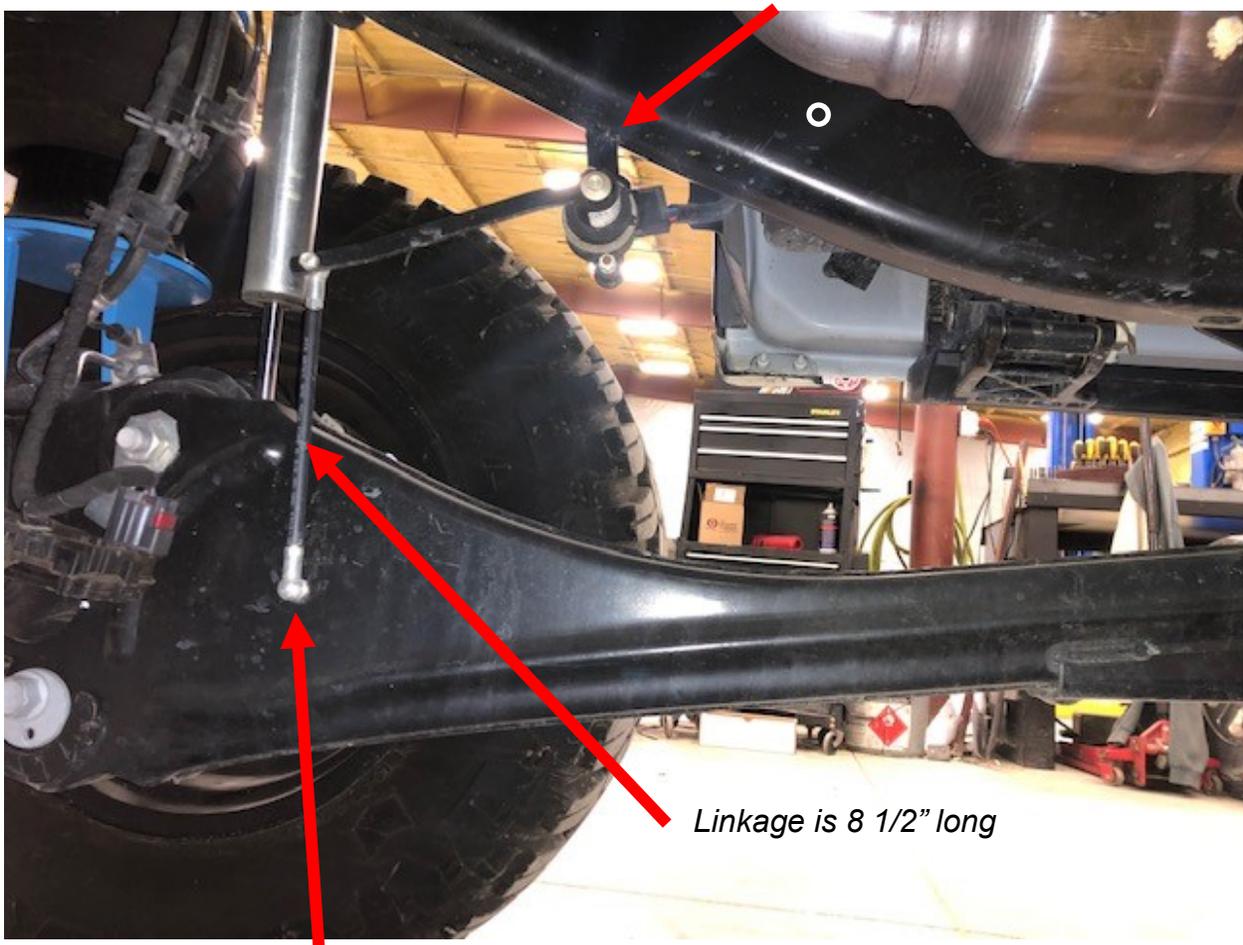


15. Locate the sway bar drops (Part # 18336DS and 18314PS). Fasten in place with the factory bolts on the top and fasten the sway bar to the sway bar drop with the 7/16 x 1 1/2" bolts. Torque to 50 ft./lbs.



15. Locate the ride height sensor, sensor mounting bracket, ball stud and linkage. Use the information in the picture below to determine where to weld the sensor bracket to the inside of the frame and where to drill and tap the control arm for the ball stud. The sensor bolts to the sensor mount with the 1/4-20" bolts. The sensor arm should straight out from the sensor body when the air bag is at ride height (typically 8" tall). You can use the slot in the top of the sensor mount to rotate the sensor. By having the sensor arm coming out of the sensor body 90 degrees at ride height, that will put the sensor reading right in the middle where the up travel and down travel is nearly the same.

Edge of sensor mount to edge of hole 8"



Linkage is 8 1/2" long

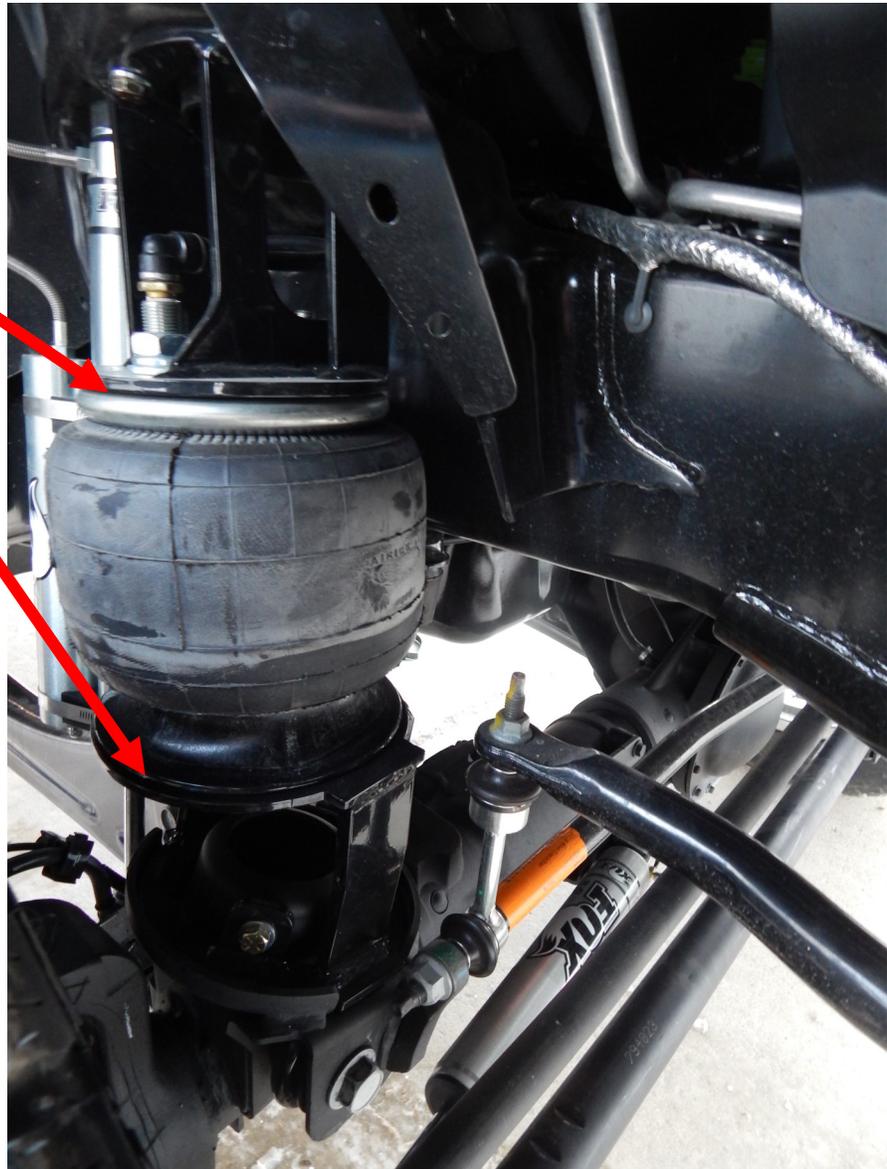
Center of ball stud to trailing arm pivot bolt=30.5"

16. When programing the control system, the front air bag needs to run at a ride height of 7 1/2-8 1/2." When measuring the air bag measure between the mounting brackets.

17. Move the truck in and out of the shop in order to get an idea of adjustment required for straightening the steering wheel. Use the adjustment on the drag link to set the wheel straight and conduct a test drive. If the truck pulls to one side or the other, a caster adjustment should be made. Take the truck to an alignment shop and get an alignment.

18. Once the suspension has 300 miles on it, re-torque all the bolts. Check the bolts at regular service (oil change) intervals after that.

*Ride height of air bag
is between 7 1/2-8
1/2."
Measure here*





Commercial Product Warranty, Disclaimers and Warnings
Kelderman techs are available at 641-673-0468 M-F 7:00-4:00 CST

Kelderman Air Suspension Systems offer a 3 year/ 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 or mechanical air ride control systems are covered for 1 year/ 50,000 miles for parts and labor. In cases where ride control systems manufactured by The Air Lift Company or Hadley Products are provided, the ride control warranty in this document will not apply. Instead, the warranty will be that of Hadley and Air Lift.

Kelderman Air Suspension Systems 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 Air Suspension System 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 manufacturer's production changes and/or inconsistencies by the vehicle manufacture, Kelderman cannot be responsible for 100% fitment.

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 run at the recommended ride heights provided by Kelderman. All warranties will become void if Kelderman systems are run 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 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 responsibility to review all these warranties, warnings and disclaimers with the consumer prior to installation.

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