

kelderman air ride

"The difference in the ride is like night and day"

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2001 & Newer Chevy / GM 2500 Rear 10-12" Lift



Warranty Disclaimer Notice Read Before Beginning Installation

Some Kelderman Air Ride kits contain both fine thread and course thread fasteners, fittings and air bag mountings. Before attempting to tighten

any threaded portion of the Air Ride, check to be sure the threads are the same size and thread count before attempting to tighten. Damaged or cross-

threaded fasteners, fittings and air bags caused by improper size. Thread count or misalignment are not covered by warranty.



Chevy / GMC 2500 HD

Tools Required for Installation of the Air Ride Unit

Before installation of the Air Ride unit, prepare a smooth, flat, hard surface and have all tools and equipment needed for the job. Chock the front wheels of the truck, to prevent it from rolling forward or rearward. Place a jack on each side of frame ahead of the rear springs, front bolts. (1.1)



figure A

Tools and equipment required:

Welder

(2) Jacks

(2) Jack Stands

Wheel Chocks

Combination Wrench Set (up to 1 5/16")

Socket Set (up to 1 5/16")

Hammer

Side Cutters

9/16 drill bit

Pinion Angle Finder



1.1



DANGER

****When raising or lowering the truck, keep jack stands in place to prevent the truck from falling, which could cause severe personal injury or death****

Installing the Air Ride

Step 1. After measuring pinion angle (figure A), place jack under driver side frame rail (behind cab) and lift frame so that there is little tension on the leaf spring (1.1) Place a motorcycle strap under the pinion to keep the axle in place while installing the kit.

Step 2. Raise the truck, enough to remove the leaf spring. Remove the bolts that hold the front leaf spring and rear shackle in place. Set these bolts aside, as they will be used in Step 7 to fasten the front trailing arm in place. Remove the U-bolts that hold the leaf springs in

place. The leaf spring and the shackle removed.

Step 3. Remove the two bolts holding the rubber bumper in place.

Installation Instructions (continued)

Step 4. Locate the lower bag brackets. Fasten into place with the lower axle clamp and the 5/8" x 9" bolts. Make sure the bolts go from the top down. Use the extended nuts and thick washers. Torque to 150 lb/ft. Make sure that the shock mounts on the lower axle clamps are mounted towards the inside of the frame. **(1.2)**



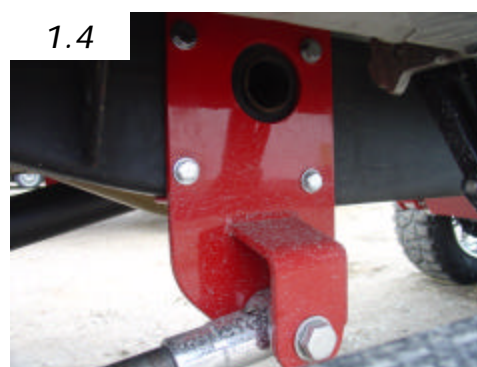
Lower air bag bracket



Step 5. Locate driver's side (LH) lower trailing arm frame mount. **(1.3)** Locate the factory tube that connects the frame rails together. Hold the trailing arm bracket in place and mark the 6 holes. Take the bracket off and drill the holes with a 9/16" drill bolt. Once the holes are drilled, attach the bracket with the 6) 1/2" x 1 1/2" bolts. Next, mount the passengers side (RH) lower trailing arm on the right frame rail. **(1.4)**



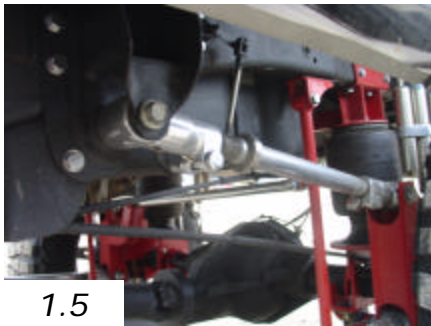
Driver's side (LH)



Passenger's side (RH)

Step 6. Locate the upper trailing arms. The front of the arm gets the bushing that will allow the original leaf spring bolt to be used. Use the factory leaf spring bolt and tab nut to fasten into place. The other end of the trailing arm mounts in the top hole of the lower air bag bracket. Fasten into place using the 7/8" x 5" bolts. Use a flat washer on each side. (1.5)

Step 7. Locate the lower trailing arms. The front of the trailing arm mounts in the lower trailing arm bracket with the 7/8" x 5" bolts. Use a flat washer on each side. The rear end of the trailing arm also fastens in place using the 7/8" x 5" bolts. (1.6)



1.5



Trailing arm bushing



1.6



1.7



1.8



1.9

Step 8. Locate the upper cross member. This is the upper bag mount as well as the panhard bar anchor point. Lift into place and use a center punch to mark where to drill the holes needed to attach the cross member into the bottom and side of the frame. Use a 9/16" drill bit to drill out the 8 holes then use the 1/2" x 1 1/2" bolts to fasten the cross member in place. (1.7)

Step 9. Locate the 8979 airbags. Use the 1/2" and 3/4" lock washes and nuts to fasten the top of the airbag to the cross member. Use the 1/2" x 4 1/2" bolts, flat washer and lock washer to fasten the bottom of the air bag to the bottom air bag mount. (1.8)

Step 10. Locate the panhard bar. The bar gets fastened into the panhard bar drop on the drivers side with the 3/4" x 4" bolt with flat washer and lock nut. Use the supplied spacers to center the heim ends in the bracket. On the passenger side, fasten to the lower air bag mount with the 3/4" x 4" bolt. Again, use the spacers to center the heim end. (1.9)

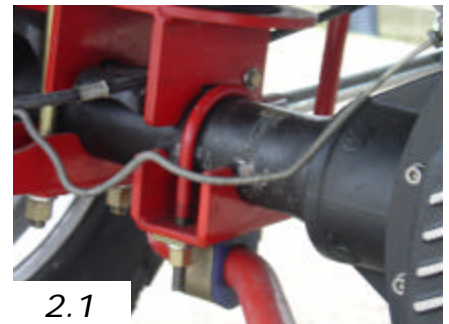
Chevy / GMC 2500 HD

Step 11. Sway bar installation. Locate the sway bar and the sway bar mounting system. The sway bar mount to the axle brackets utilizing the u-bolt. Locate the hole in the sway bar mounting brackets. Line up this hole with the hole in the bottom air bag mount and fasten into place with the 3/8" x 2" bolt, flat washers and lock nut. Locate the upper sway bar end link brackets. They mount to the bottom of the frame. The bracket mounts so the holes are forward, and the rear of the bracket sets flush with the part of the frame that is welded. Use a center punch and locate the holes and drill them out to 9/16". Fasten the brackets to the frame with the 1/2" x 1 1/2" bolts, flat washers and lock nuts. Fasten the end links to the sway bar with the 1/2" x 3" bolts (put thick washer between the head of the bolt and the bushing). Use the 1/2" x 2 1/2" bolts to fasten the upper sway bar end link to the frame. (2.0, 2.1, 2.2)

Step 12. Locate the upper shock mounts and shocks. Fasten the bottom eyelet of the shock into the bottom axle clamp/lower shock mount using the 1/2" x 3 1/2" bolts, flat washers and lock nut. With the airbags at ride height, (around 12-13"), position the shock straight up and down and hold the upper shock mount against the frame. Use a center punch to mark where to drill the holes and drill them out to 9/16" Use the 1/2" x 1 1/2" bolts, flat washers and lock nuts to fasten the bracket to the frame. Use the 1/2" x 3 1/2" bolts, flat washers and lock nuts to mount the shock to the upper shock mount. (2.3, 2.4, 2.5)



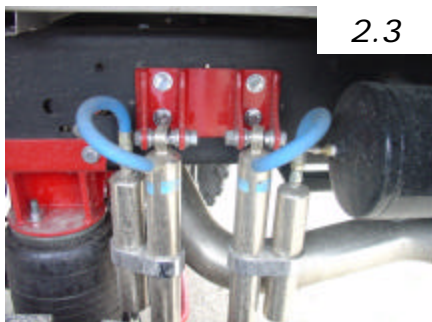
2.0



2.1



2.2



2.3



2.4



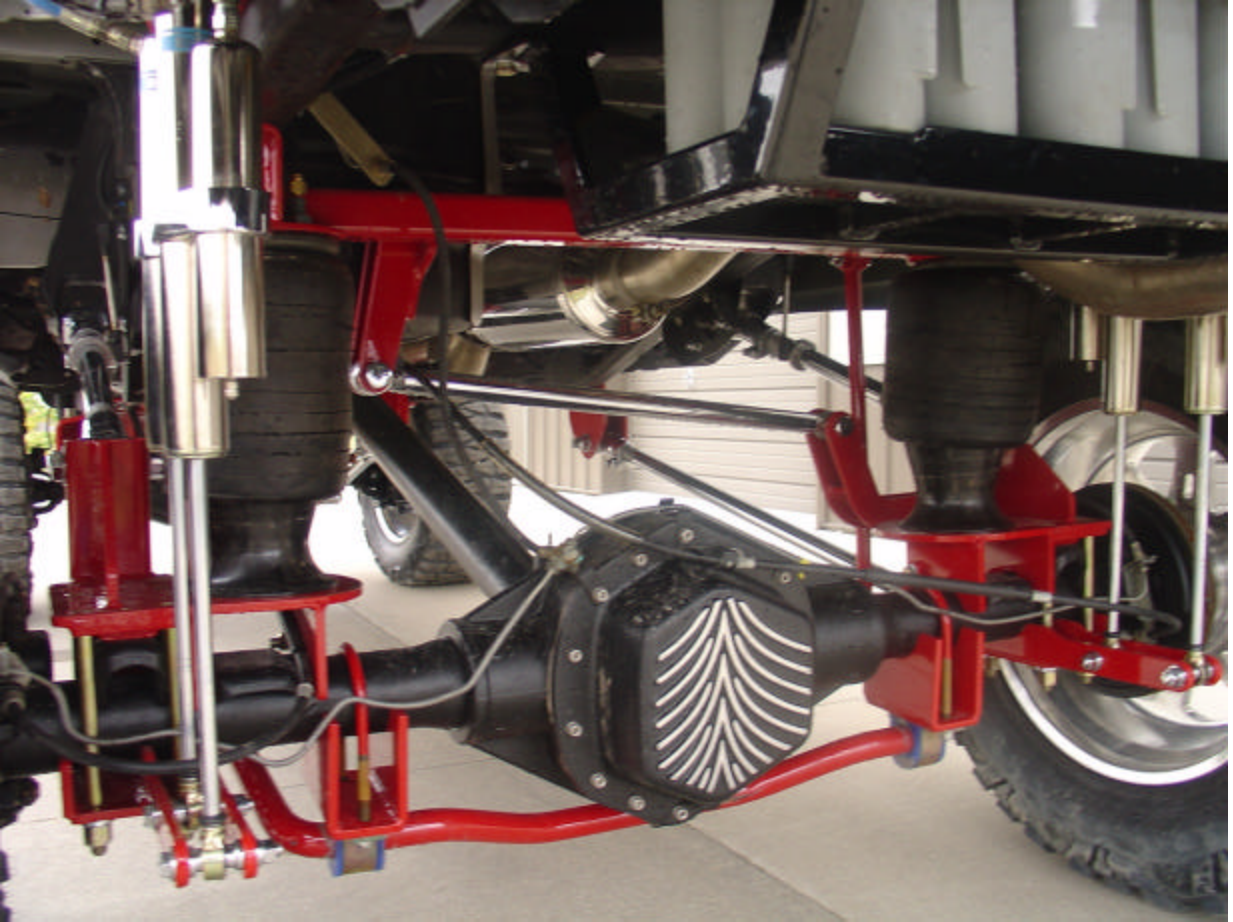
2.5

Installation Instructions (continued)

Step 13. *Air supply system. Use the installation instructions for whichever air system you are using.*

Step 14. *Alignment. Inflate the bags to 11-12". When measuring the bags, measure between the mounting brackets to calculate the ride height. Refer back to the original pinion angle measurement from step one. Center the axle in the wheel well, use the panhard bar to center the axle side to side and recheck the pinion angle when finished. The 4-link bars should turn by hand. If they don't, place a jack stand under the rear hitch and let the air out of the bags. This will take the weight off the axle and allow the arms to turn easier. Also try to keep the top arm within an 1/8" of each other as well as the bottom arms close to each other. The most accurate way of setting the axle square in the wheel well is to measure from the front of the rear axle housing to the front axle kingpin. This will ensure that the axles are perfectly parallel. Once the alignment is complete, tighten the pinch bolts on the trailing arms and tighten the jam nuts on the panhard bar.*

Step 15. *Recheck all bolts for tightness. If you have not installed the front system, go ahead and do the front before test driving. If the front is already installed, the truck should be ready for a test drive. If the truck shutters upon take-off, then the pinion angle is off. If the truck has a driveline howl, then the carrier bearing is not correct or the pinion angle is off.*





Contact Information

Kelderman Air Ride appreciates your business. We strive to meet the needs of our customers by providing the highest quality products. If you have any questions concerning this system, please call or email us at the following:

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"The difference in the ride is like night and day"

Parts List

A) (2) Bottom trailing arm frame clamps (L and R)

(6) 1/2" x 1 1/2" bolts with flat washers and lock nuts

(2) 7/8" x 5" bolts with flat washer and lock nuts

B) (1) Upper cross member / air bag mount / panhard bar anchor

(8) 1/2" x 1 1/2" bolts with flat washers and lock nuts

(1) 3/4" x 4" bolt with flat washers and lock nut

(2) medium spacers part # 11161

C) (2) Upper trailing arms (20" blank)

(2) bushing (7/8" - 9/16") part #

D) (2) Lower trailing arms

*(Long-box - 44-46 blank)

*(Short-box 44-46" blank)

E) (2) 8979 air bags

(2) 1/2" x 4 1/2" bolts with flat washers and lock washers (bottom of air bag)

(2) 7/8" jam nuts / lock washers (top of air bag)

(2) 1/2" nuts / lock washers

(2) 1/4" or 3/8" air line fitting

F) (1) Panhard bar

(1) Panhard bar with heim ends and jam nuts 26.5" blank

G) (2) Bottom axle clamps / shock mounts

(2) 1/2" x 3 1/2" bolts with flat washers and lock nuts (double if dual shock)

Parts List (continued)

H) Upper shock mounts

(4) 1/2" x 1 1/2" bolts with flat washers and lock nut (double if dual shock)

(2) 1/2" x 3 1/2" bolts with flat washer and lock nuts (double if dual shock)

I) (2) Axle-mount brackets (RH - passenger's side w/ panhard bar mount LH - driver's side)

(1) 3/4" x 4" bolt with 2 medium PHB part # 11161

(8) 5/8" x 9" grade 8 bolts / thick washers / extended nuts

(4) 7/8" x 5" grade 8 bolts / lock nuts

(1) brake hose extension

J) (1) Right hand upper shock mount

(1) 5/8" x 4 1/2" bolt with flat washers and lock nut

(1) 1/2" x 3" bolt with flat washers and lock nut

(4) 7100 shock spacers part # 10197

K) Sway bar kit

(1) sway bar with blue bushings, clamps, and axle mounts

(2) sway bar axle mount clamps with U bolts

(2) 3/8" x 1 1/2" bolts and lock nuts

(2) 1/2" x 3" bolts with 2 thick washers and lock nuts

(2) upper sway bar mounts

(2) 1/2" x 1 1/2" bolts, flat washers and lock nuts

(2) sway bar 20 1/2" end links with red bushings and sleeve

(2) 1/2" x 2 1/2" bolts with large flat washer, flat washer and lock nut

(2) 1/2" x 3" bolts with large flat washer, flat washer and lock nut