

kelderman air ride

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

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2003 & Newer Dodge Rear 8-10" Lift Kit



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.



G3 Dodge

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

5/8" 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 6 to fasten the top trailing arm in place. Remove the u-bolts that hold the leaf springs in place. The leaf spring and shackle will not be reused.

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 8" 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 brackets

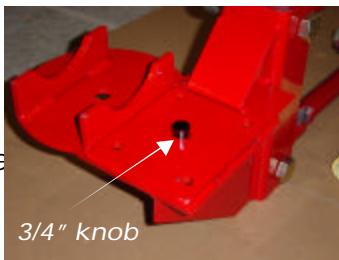


Driver's side (LH)

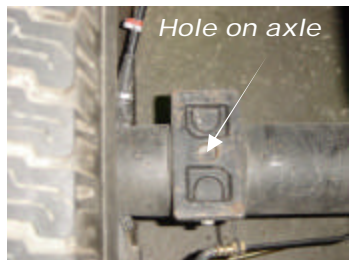


Passenger's side (RH)

Step 5. Locate driver's side (LH) lower trailing arm frame mount. On long bed trucks locate the 1" hole on side of the frame. Slide the frame mount on so that the plug on the backside slides into hole. Use the two u-bolts to fasten into place. Once the u-bolts are tight, weld the inside bottom of the bracket to the frame with a 2" weld. **(1.3)** On the passenger's side of short box trucks, use the tab sticking out of the frame and center it in the rear hole of the bracket. Install the drivers side bracket in the same place on the opposite rail.



3/4" knob



Hole on axle

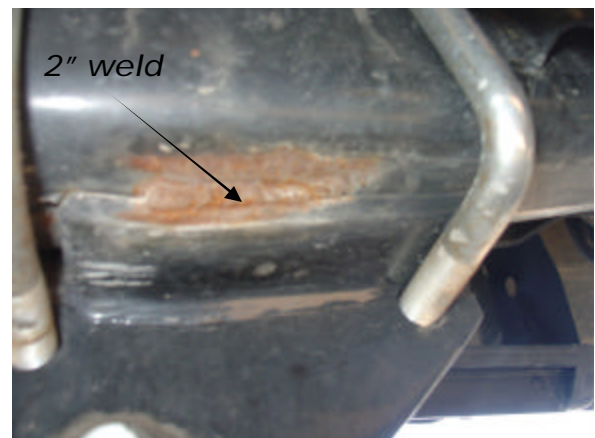
1.2



Driver's side (LH)



Passenger's side (RH)



2" weld

1.3

Step 6. Locate the upper trailing arms. The front of the arm gets the step bushing. The step bushing is mounted so the that the shoulder part of the bushing is toward the inside of the frame. 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. **(1.4)**

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 7 1/2" bolts. Use a flat washer on each side. The 3/4" spacer goes on the frame side of the bracket. The rear end of the trailing arm fastens in place using the 7/8" x 5" bolts. **(1.5)**



1.4



Trailing arm bushing and spacer



1.5



1.6



1.7



1.8

Step 8. Locate the upper cross member. This is the upper bag mount as well as the panhard bar anchor point. Slide into place and use the 6mm Allen head bolt to fasten the cross member into the bottom of the frame. Next locate the backing plate.. This bracket mounts on the driver's side frame rail. Use the cut out on the top side of the bracket to locate around the truck bed cross member. Use the 1/2" x 5" bolts and backing plate to hold into place. You will also use the 1/2" x 5" bolts on each side of the original bump stop mounts. **(1.6 & 1.7)**

Step 10. 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)**

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Step 11. Locate the passenger's side upper shock mount. Use the 5/8" x 4 1/2" to fasten into place. Locate the rear shocks and fasten into place. If the kit is using Bistein 7100 series shocks, use spacers provided to center the shock. Kits using Bilstein 5150s do not require spacers. Next, install the driver's side shock.

Step 12. 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)**



1.9

Step 13. If the truck has a 2-piece driveshaft, use the 2" x 3" spacer block and kicker plate to lower the center carrier bearing. The should drop the bearing about 3 1/4". At ride height, the driveshaft should be straight and the carrier bearing should be pitched so it is angled with the driveshaft.

Step 14. Sway bar installation. Locate the sway bar and the sway bar mounting system. The sway bar bolts to the bottom of the shock absorber mounts and faces towards the rear of the truck. Use the 3/8" x 1 1/2" bolts to fasten in place using the blue poly bushing and the sway bar clamps. Locate the upper mounting kit. This kit clamps around the frame. The bottom part of the clamp is the one with the angle gusset welded to it. Clamp over the frame with the 1/2" x 8" bolts. Use the thick flat washers on the end links with the red bushings to fasten the end links to the bracket. Use a thick flat washer on the bottom 1/2" x 3" bolt and lock nut. **(2.0)**



2.0

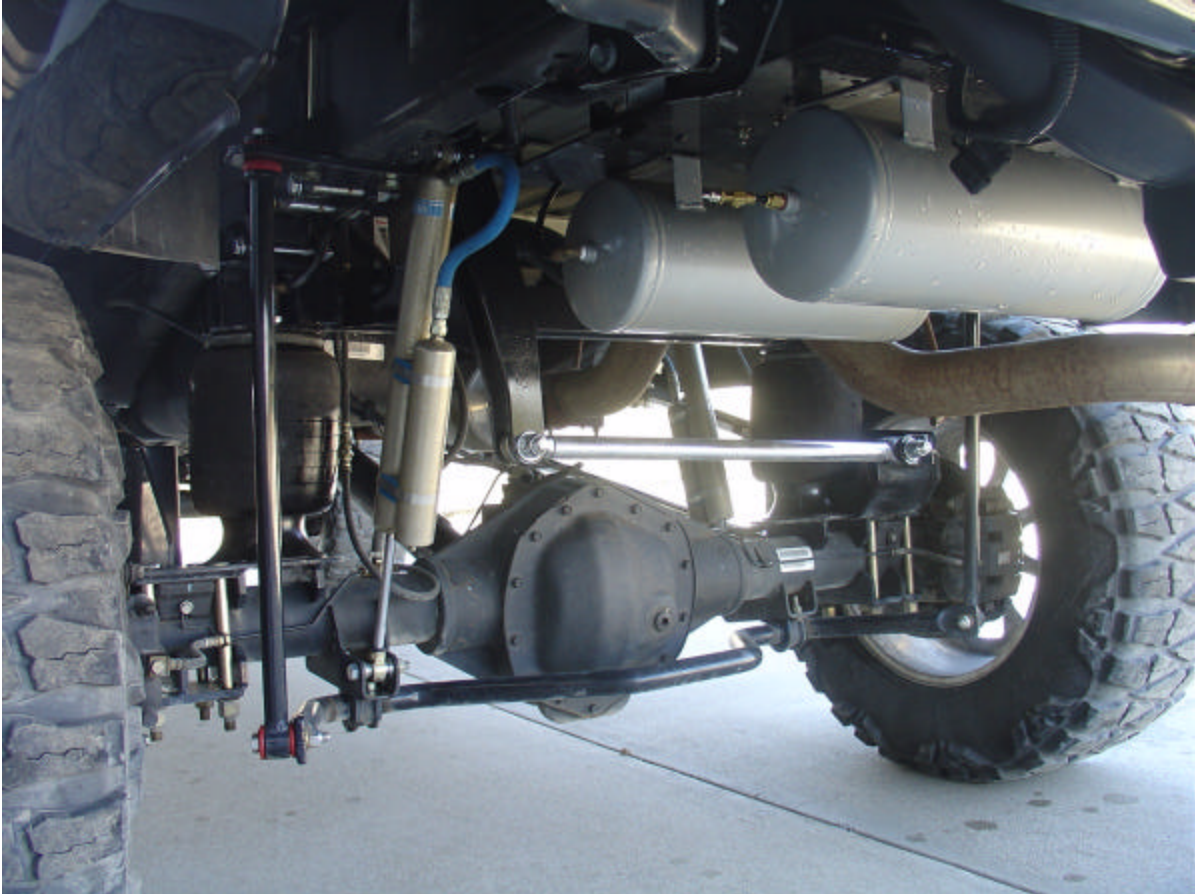


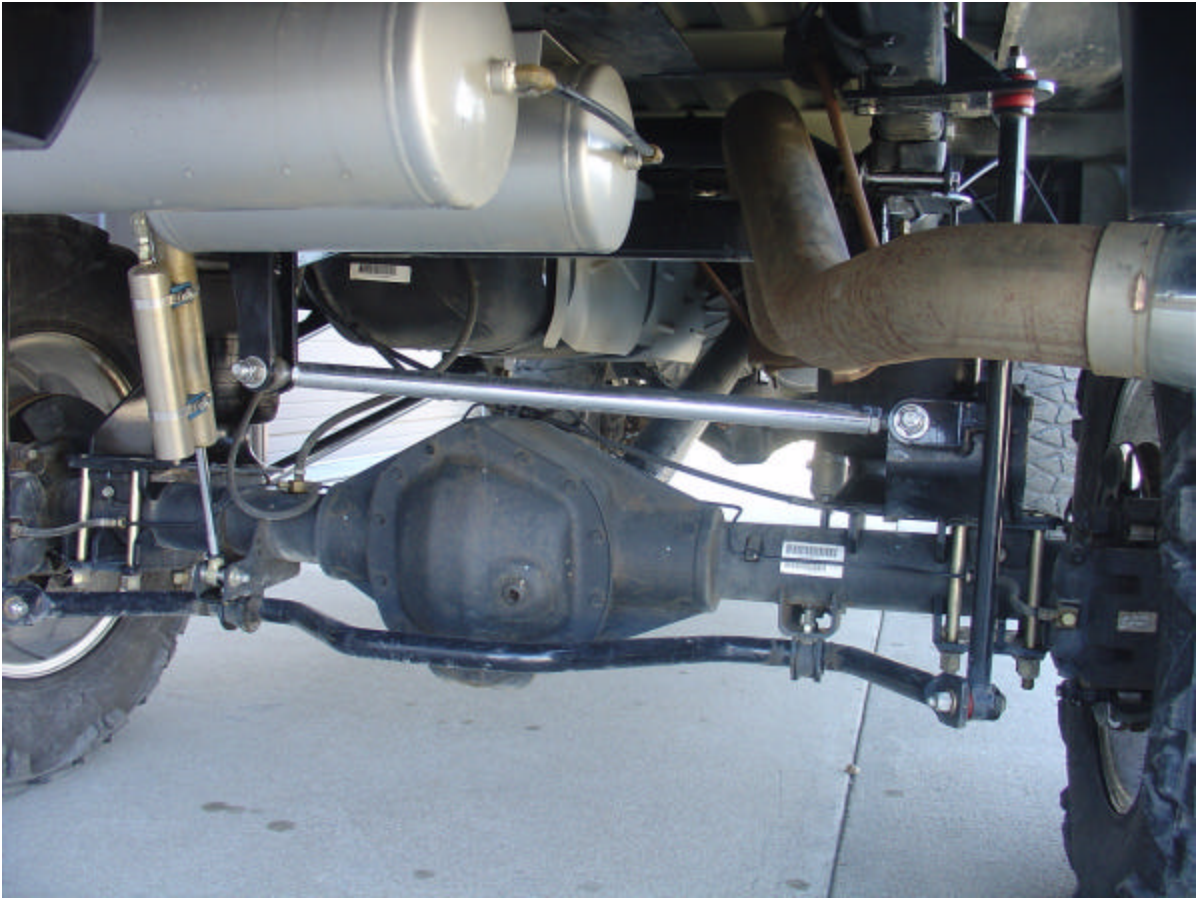
Step 15. Air supply system. Use the installation instructions for whichever air system you are using.



Step 16. 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 17. 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 shudders 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.





Parts List

A) (2) Bottom trailing arm frame clamps (long box w/ plug, short box w/o plug)

(4) U-bolts (9" center) / flat washers / extended nuts

(2) 1 3/4" i.d. spacers part # 11160

(2) 7/8" x 7" grade 8 bolts / lock nuts

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

(4) 10mm tapered allen head bolts and nuts

(8) 1/2" x 5" 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 (approx. 26 1/2" centers)

(2) "Step" bushing (7/8" - 9/16") part # 10178

D) (2) Lower trailing arms

*(Long-box - approx. 41 1/2" centers / 36" center shaft)

*(Short-box - approx. 43 1/4" centers / 39" center shaft)

(2) bushings part # 11160

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

Parts List (continued)

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

- (1) 3/4" x 4" bolt with 2 small PHB
- (2) Axle-mount clamps
- (8) 5/8" x 8" grade 8 bolts / thick washers / extended nuts
- (4) 7/8" x 5" grade 8 bolts / lock nuts
- (1) brake hose extension

H) (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

I) Sway bar kit

- (1) sway bar with blue bushings and axle mounts
 - (4) 3/8" x 1 1/2" bolts and lock nuts
 - (2) 1/2" x 3" bolts with 2 thick washers and lock nuts
- (2) sway bar 23" end links and 1/2" lock nuts
 - (4) thick washers
 - (4) red bushings
- (2) sway bar frame mounting bracket kit
 - (2) upper mounts
 - (2) lower mounts
 - (4) 1/2" x 8" bolts with lock nuts and flat washers

J) 2" x 3" Carrier drop bracket and kicker plate (long box and mega cab only)

- (2) 3/8" x 4" bolts, flat washers, and lock nuts

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