800 334-6150

www.keldermanairride.com

kelderman air ride

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

Inside this manual:

2003 & Newer Dodge Rear 5-6" Lift Kit

2003 Dodge with 35" tires and 18" wheels

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.

kelderman
AIR RIDE SUSPENSION SYSTEMS

Revised 4/11/06

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)

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

6 mm Allen Wrench

Pinion Angle Finder

figure A

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. <u>After measuring pinion angle (figure A)</u>, 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 will not be reused. **(1.2)**

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

1.2

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.

Step 5. Locate the upper bag bracket and fasten to the mounts where the factory rubber bumper was originally installed. **(1.3)**

Step 6. 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. **(1.4)** 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.
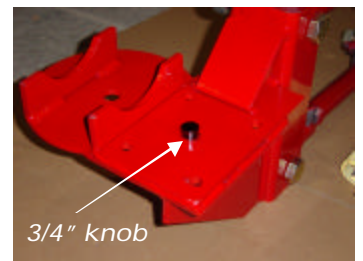
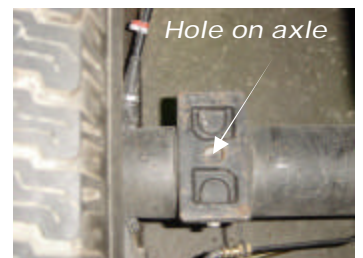Lower air bag brackets

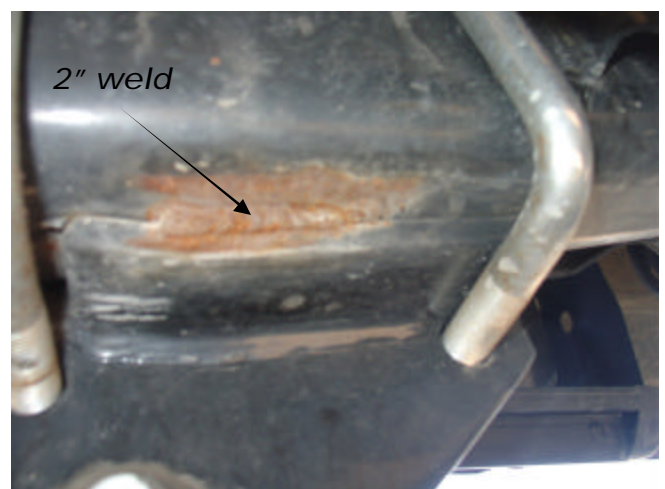Driver's side (LH) Passenger's side (RH)

1.3

3/4″ knob

Hole on axle

2″ weld

1.4

Driver's side (LH) Passenger's side (RH)

Step 7. 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. **(1.5)**

Step 8. 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. **(1.6 & 1.7)**
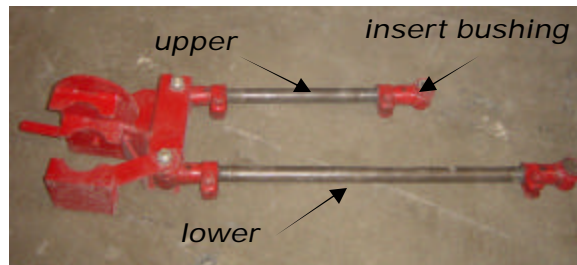

1.5

Trailing arm bushing and spacer

1.6

upper   insert bushing

lower

1.7

1.8

Step 9. Locate the 5770 air bags. Fasten into place using the 3/4″ lock washer and nut on the bottom and use the 1/2″ and 3/4″ lock washers and nuts on top. Next install the 1/2″ 90 degree airline fitting in the top of the air bag. **(1.8)**

Step 10. Locate the panhard bar bracket. This bracket mounts on the drivers 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. **(1.9-2.2)**

1.9

2.0

2.1

2.2

G3 Dodge

Step 11. Locate the panhard bar. Fasten the panhard bar in place using the 3/4″ x 4″ bolt in the panhard bar drop bracket. Use one spacer on each side of the heim end to center it up. On the passenger side, fasten into place with the 3/4″ x 3″ bolt. Again, use a spacer on each side of the end link. *(2.3)*

2.3

Step 12. Locate air bags and insert between top plate and axle mounted bracket. Tighten all nuts on top and bottom of air bag.

Step 13. Locate the accumulator tanks. The tanks locate with the rear leaf spring perch. Use the factory shackle bolts to hold into place. Go ahead and run the 1/2″ air line from the tank to the air bag.

Step 14. 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 2 1/4″. At ride height, the driveshaft should be straight.

Step 15. 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. *(2.4)*
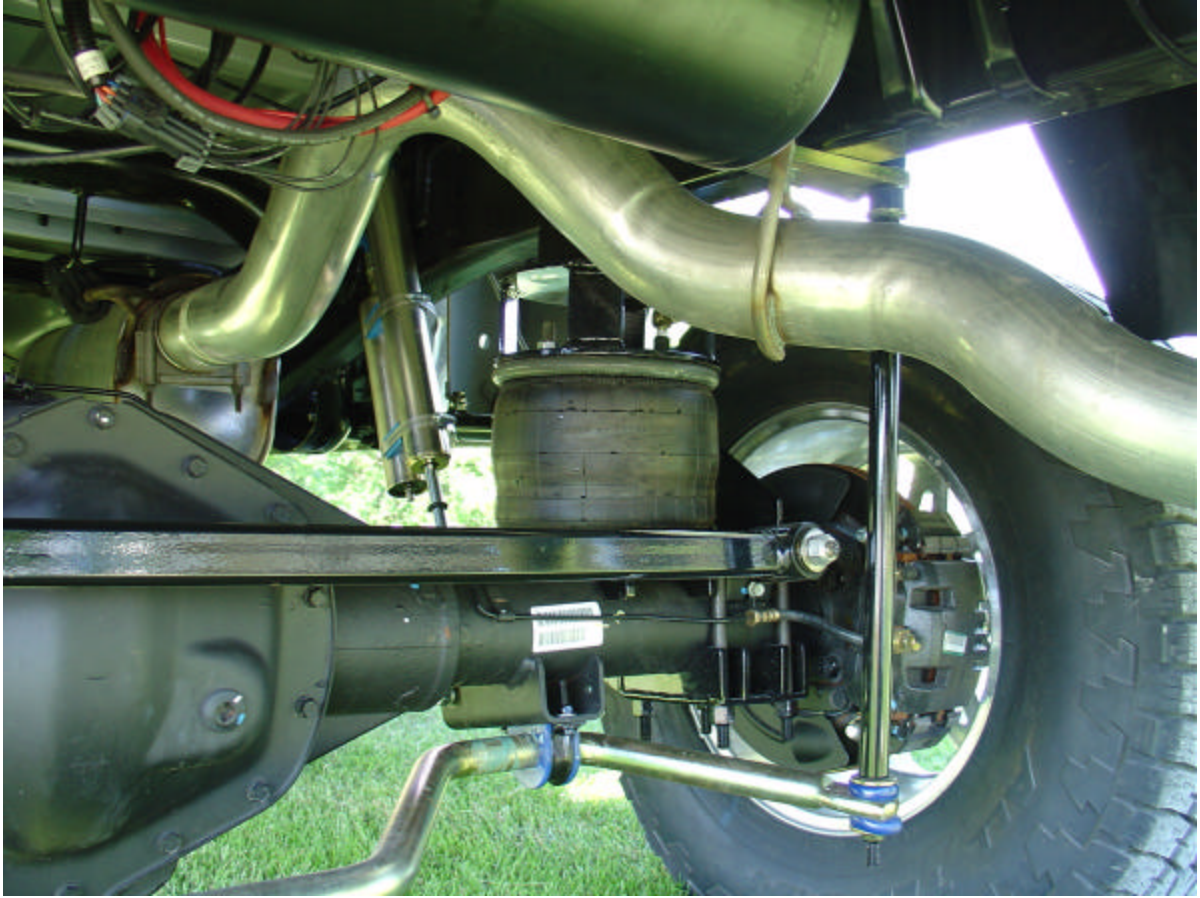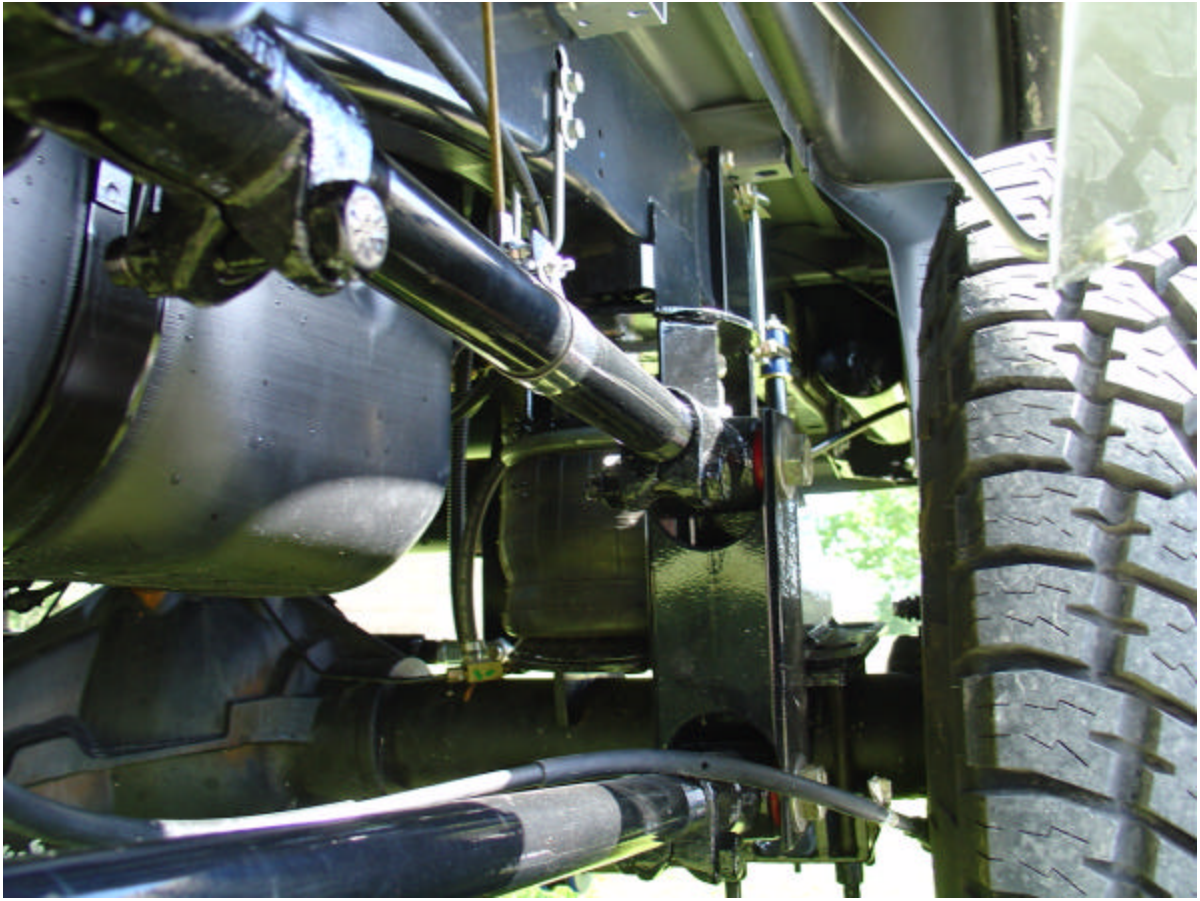

2.4

Step 16. Air supply system. Use the installation instructions for whichever air system you are using.

Step 17. Alignment. Inflate the bags to 7-8". 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 18. Recheck all bolts for tightness. If you are 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:

2686 Highway 92

Oskaloosa, Iowa 52577

Phone: 800 334-6150

Fax: (641) 673-4168

Email: info@keldermanairride.com

www.keldermanairride.com

kelderman

AIR RIDE SUSPENSION SYSTEMS

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

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

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

B) (2) Air bag top plate

    (4) 10mm tapered allen head bolts and nuts

C) (2) Upper trailing arms (approx. 26 1/2″ centers)

    (2) "Step" bushing (7/8″ - 9/16″)

D) (2) Lower trailing arms

    *(Long-box - aprrox. 41 1/2″ centers /36″ center shaft)

    *(Short-box - aprrox. 43 1/4″ centers / 39″ center shaft)

E) (2) 5770 air bags (cut the bottom 2 threads off)

    (2) 3/4″ nuts (bottom of air bag)

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

    (2) 1/2″ nuts / lock washers

    (2) 90 degree 1/2″ air line fittings

F) (1) Panhard bar

    (1) Panhard bar with heim ends 26.5″ blank

    (1) Panhard bar drop-bracket

    (1) Panhard bar drop-bracket backing plate

    (4) 1/2″ x 5″ grade 8 bolts / lock washer / nuts

    (1) 3/4″ x 4″ bolt / lock nut/ 2 flat washers

    (4) 1/4″ spacers (3/4″ i.d.)

Parts List (continued)

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

(1) 3/4 x 2 1/2" bolt with 2 small PHB

(2) Axle-mount clamps

(8) 5/8x8" grade 8 bolts / thick washers / extended nuts

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

(1) brake hose extension

H) **Accumulator tanks**

(2) Accumulator tanks w/ 1/2" fitting and 1/4" fitting

12' of 1/2" air line

J) **Sway bar kit**

(1) sway bar with blue bushings and axle mounts

(4) 3/8x1 1/2" bolts and lock nuts

(2) 1/2x3" bolts with 2 thick washers and lock nuts

(2) sway bar 19" endlinks 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) 1/2x8" bolts with lock nuts and flat washers

K) **2x3 Carrier drop bracket and kicker plate (long box and mega cab only)**

(2) 3/8x3" bolts, flat washers, and lock nuts