

kelderman air ride

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

Inside this manual:

2003 & Newer Dodge Front 5-6" Lift Kit

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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.

G3 Dodge

Tools Required for Installation of the Air Ride Unit

Tools and equipment required:

(2) Floor Jacks or Hydraulic Jacks

(2) Jack Stands

Wheel Chocks

1/4", 1/2" or 33/64" drill bit

Combination Wrench Set (up to 1 1/2")

Socket Set

Hammer

Torch or Grinder

welder

Pinion Angle Finder

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 rear wheels of the truck, to prevent it from rolling forward or rearward.

****NOTE: Measure pinion angle before beginning installation. (figure A)**



figure A



DANGER

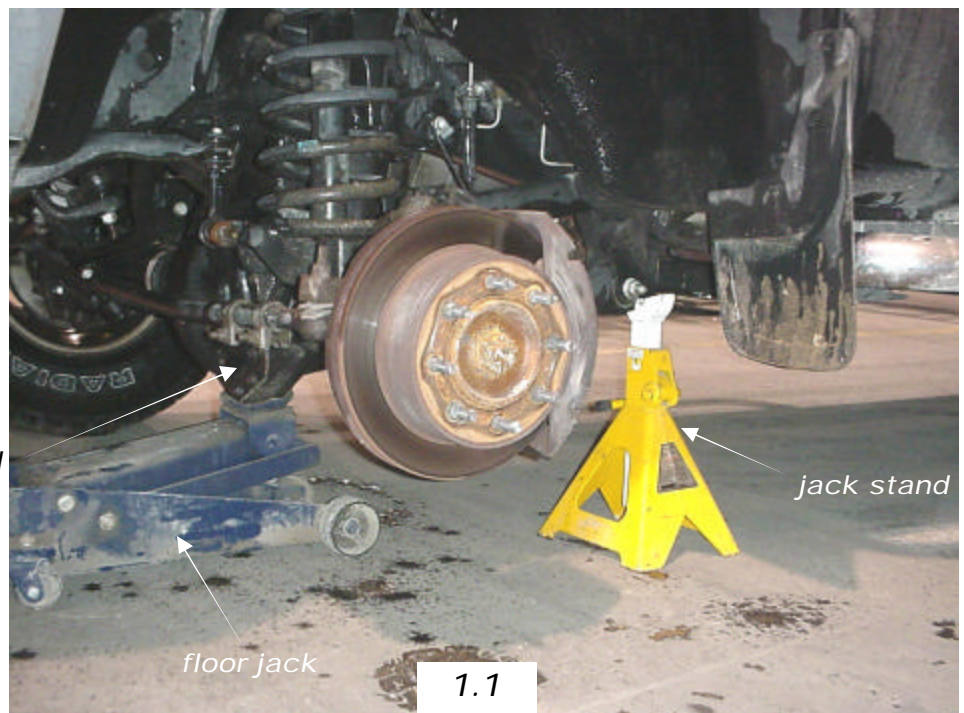
****When raising or lowering the truck, keep jack stands in place to prevent the truck from falling, which could cause severe personal injury or death****

Installing the Front Air Ride (Air Bag & Shock Installation)

Step 1. After measuring pinion angle (figure A), place a jack under driver's side differential and jack up until the tire is off the ground. Place a jack stand under the frame of the truck. (1.1)

Step 2. Remove tire.

driver's side differential



floor jack

jack stand

1.1

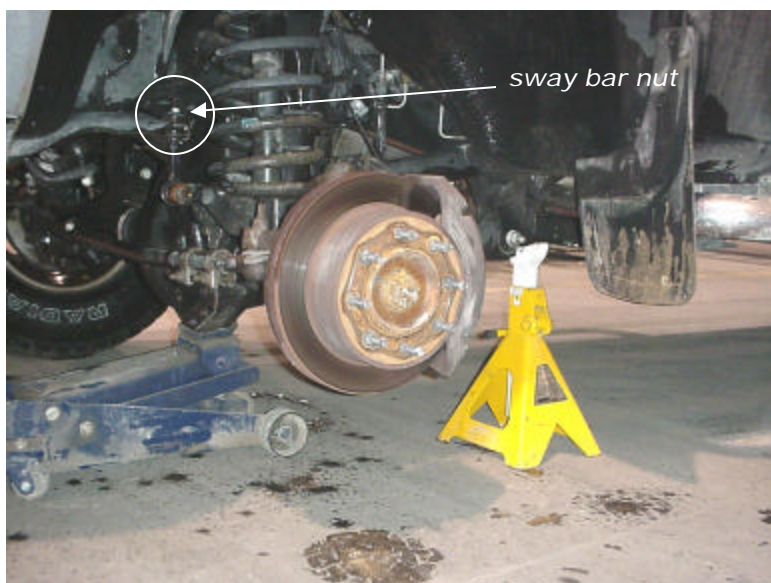
Installation Instructions (continued)

Before installation, measure coil height. Record this measurement for future use. This will gauge how much air pressure is needed in the bags when installation is complete. It is also acceptable to measure the distance between the bottom of the fender and the ground. Add the amount of inches of the lift kit to this number to arrive at the final truck height. (ie. If the original measurement is 13 1/4" and a 5" lift kit was purchased, the new height will be 18 1/4". (1.2)



1.2

Step 3. Remove top shock nut, bottom shock bolt, shock tower bolts and nut that holds sway bar.



1.3

Installing the Front Air Ride (Trailing Arm Installation)

Step 4. Remove coil springs (1.3) ****NOTE:** The shocks, shock tower and coil springs will not be reused. (1.8)

Step 5. . Locate the panhard bar relocation bracket. Use the 1/2" x 4 1/2" and 9/16" x 2 1/2" bolts provided to fasten in place and reuse factory bolt in the end of the pitman arm. Place a 2" long weld on the inside of the bracket where it fits along the engine cross member. Reattach the panhard bar to the relocation bracket utilizing the factory bolt. (1.7)

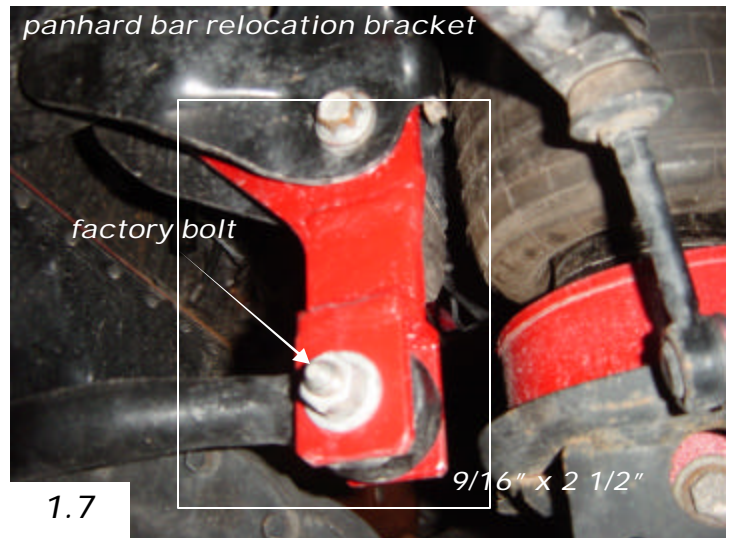
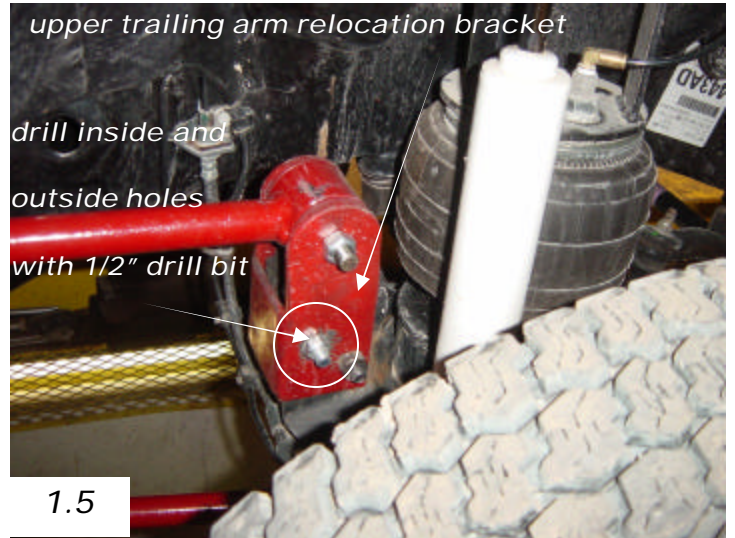
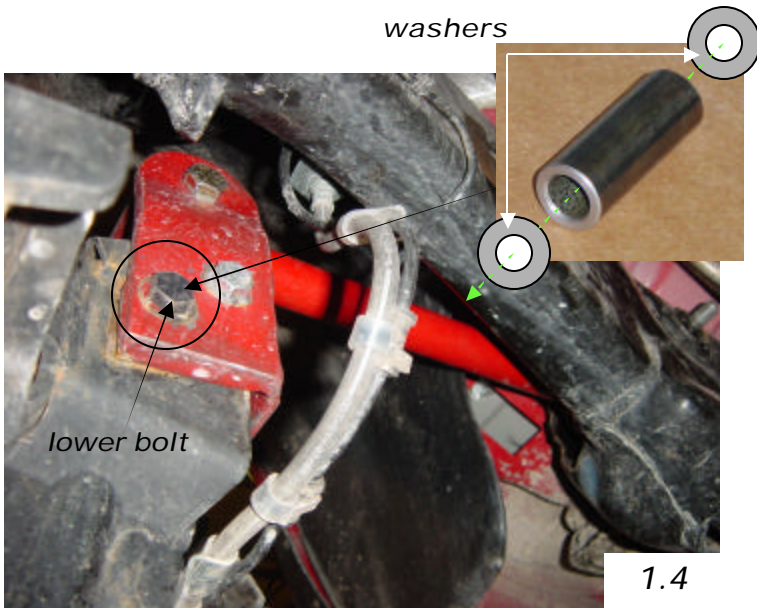
Step 6. Place a jack under the transmission/ transfer case. Remove the 14mm bolts that hold the factory transmission cross member in place, remove the nuts holding the transmission and take out the cross member. Locate the new cross member and fasten into place using the 9/16" x 7" bolts and flat washers. Use the factory bolts to fasten the transmission to the new cross member. (1.6)

Step 7. Remove the factory lower trailing arms. Locate the lower trailing arm and install using the front factory bolt and use the 5/8" x 4 1/2" bolts.

Step 8. Remove the factory upper trailing arms. Locate the upper trailing arm relocation bracket. Slide the relocation bracket over the original factory trailing arm bracket. Use a 9/16" x 5" bolt, to mount into place. Use the supplied spacer and flat washers to prevent the relocation bracket from crushing the original mount when tightening. Make sure the relocation bracket is straight with the axle and then use a 1/2" drill bit to drill into the original factory bracket. Use the 1/2x1 1/2" bolts to fasten in place. You can also weld this bracket to the axle if you want. (1.4, 1.5)

Step 9. Locate the upper trailing arm. One knuckle of the trailing arm is 3/8" narrower than the other knuckle. The narrow knuckle goes into the frame bracket. Mount in place using the factory bolt on the frame end and use the 5/8" x 4 1/2" bolt on the relocation bracket.

G3 Dodge





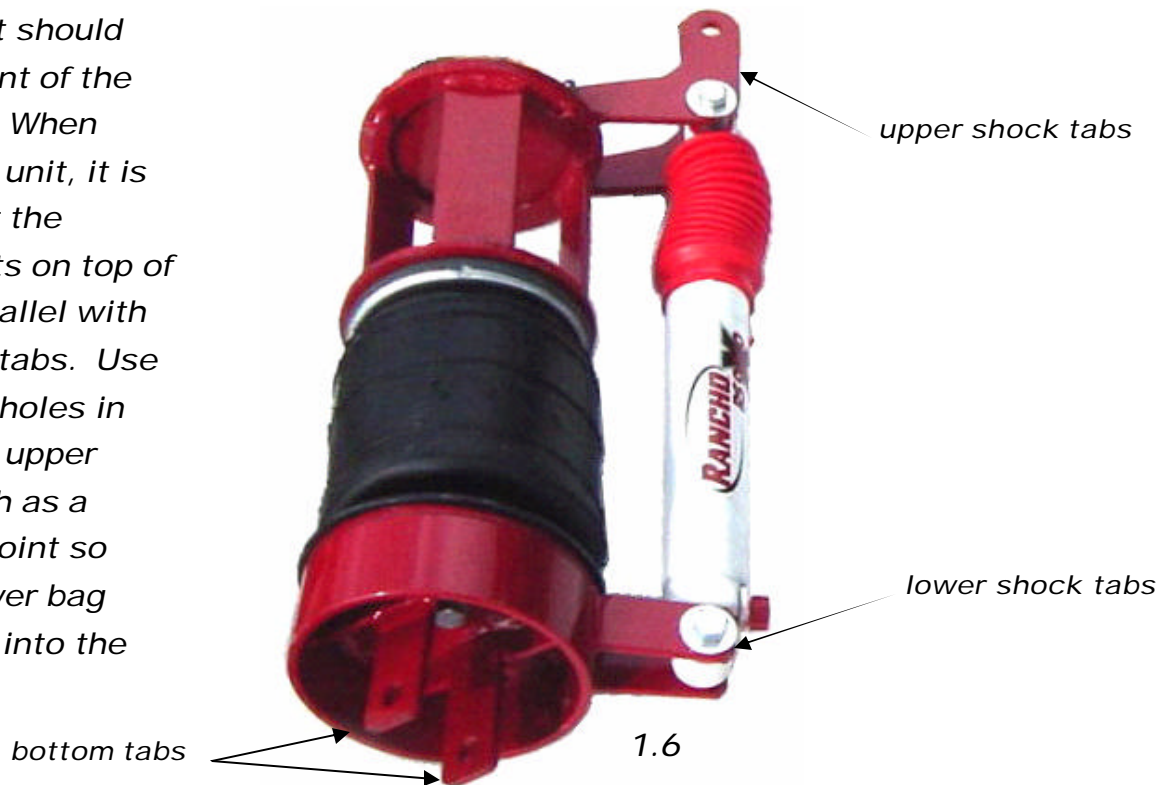
1.8



1.9

Step 10. Locate the 8979 airbag, lower air bag mount and upper bag spacer (6" tall). Fasten the upper bag spacer to the top of the airbag using the 1/2" and 3/4" lock washers and nuts. Fasten the lower air bag mount to the airbag using the 1/2" x 4 1/2" bolt and lock washer.

The air inlet should face the front of the truck. (1.9) When assembling unit, it is critical that the outside bolts on top of unit are parallel with the bottom tabs. Use the factory holes in the original upper spring perch as a reference point so that the lower bag tabs will fit into the axle.



G3 Dodge

Step 11. Put assembly into position and tighten bottom mount with the factory lower shock bolt. Raise jack so upper shock bracket lines up properly over the 3/8" bolts. Fasten in place. Make sure top and bottom shock tabs line up correctly, Insert shock into proper position and tighten bolts. **(2.0 & 2.1)**



2.0

Step 12. Remove the sway bar. Locate the sway bar drops. Fasten in place using the factory bolts into the frame and use the 3/8" x 1 1/2" bolts to fasten the sway bar to the blocks. **(2.1)**

Step 13. Remove the stock pitman arm. Install the new dropped arm. Torque to 250 lb/ft. It will be required to rotate the ball joint 180 degrees to fit into the bottom of the pitman arm. Once the truck is test driven, re-torque the pitman arm. Now take a torch or grinder and cut about 1/4-3/8" of material off the bottom of the passenger side sway bar mount. This will give needed clearance for the steering arm to operate. **(2.2)**

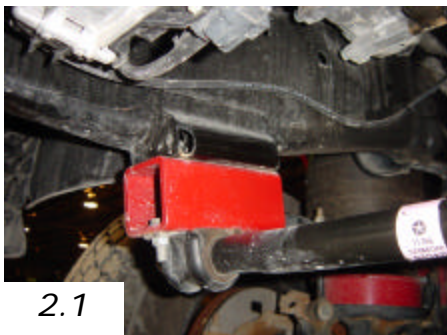
Step 14. Locate the shocks. Most kits are dual front shocks. Use the 1/2" x 4 1/2" bolts on the upper bracket with the supplied washers to center up the shock in the bracket. Use the 1/2" x 3" bolts on the bottom shock mounts. Just like the top, use the supplied spacers to center the shock in the bottom mounts. **It will be necessary to grind the factory coil bracket just behind the front shock. Make sure you have about 1/4" between the shock body and the frame.**

Step 15. Indexing ring installation. When lifting the G3 Dodge trucks it is required to index the transfer case. Failure to do so will result in premature driveshaft failure and driveline vibration. (The Dodge front driveshaft turns all the time). Use the supplied instructions for the indexing ring.



Step 16. Alignment. Inflate the bags to 12". Measure the bag from between the air bag mounting brackets. Go back to step 2 and compare this to your measurement. You should be around 18-19" of overall height in between the factory spring buckets. Once you are at ride height, place a jack stand under the front frame rails. Let all the air out of the bags. Go back to step one and find your original pinion angle. Keep this angle in mind while adjusting the upper and lower trailing arms. Center up the axle in the wheel well. Once you think the axle is centered, take a measurement from the front axle to the rear axle. This measurement should be within 1/8". If you set the pinion angle back to original and the axles are parallel with each other, you will not have to take the truck to an alignment shop. Double check to make sure all the bolts are tight. Loosen the steering wheel adjustment lock on the steering arm coming off the pitman arm. Try and get the steering wheel straight. It will have to be fine tuned after a test drive. You will also need to check the tow in on the tires.

Step 17. Test Drive. Take the truck out on a test drive. Try and find a smooth road with no ruts and minimal wind. You should be able to take your hands off the wheel at 60-70 mph and the truck should drive straight. If the truck pulls to one side, you will want to lengthen the front bars on the side that pulls. When you adjust, just do 1/4 turn at a time.

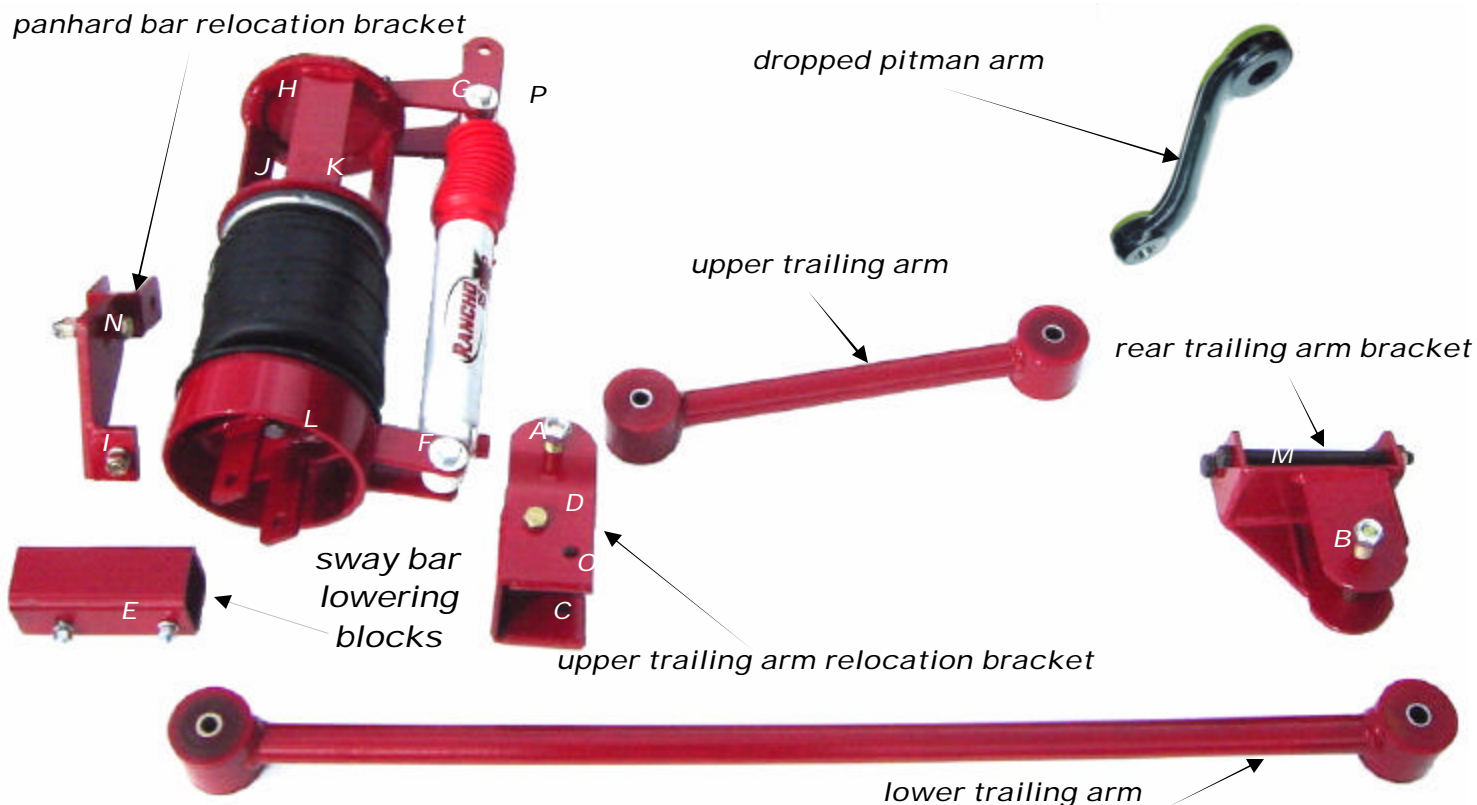


2.1



2.2

Parts List



- A) (2) - 5/8" x 4 1/2" fine thread grade 8 bolts / ft lock nuts
- B) (2) - 5/8" x 4 1/2" fine thread grade 8 bolts / ft lock nuts / flat washers
- C) (2) - 9/16" bushings with 2 9/16 flat washers
- D) (4) - 1/2" X 1 1/2" grade 8 bolts / lock nuts
- E) (4) - 3/8" x 1 1/2" fine thread grade 8 bolts / lock nuts
- F) (4) - 1/2" x 3" bolts / lock nuts
- G) (4) - 1/2" x 4 1/2" bolts / lock nuts
- H) (6) - 3/8" nuts / lock washers
- I) (1) - 1/2" x 5" bolt / lock nut
- J) (2) - 1/2" nut / lock washer

Parts List (Continued)

K) (2) - 3/4" jam nuts / lock washers

L) (2) - 1/2" x 4 1/2" bolts / lock washers (8979 air bag)

M) (4) - 9/16" x 7" bolts / lock nuts

N) (1) - 9/16" x 3 1/2" bolt / lock nut / flat washers

O) (2) - 9/16" x 5" fine thread bolts / lock nuts

P) (4) - Upper shock spacers (1 1/16" wide)

R) (2) - 1/2" x 3 1/2" bolt / flat washers / lock washers / nuts

(1) - Dropped pitman arm

(4) - Trailing arms; 2 upper (short) / 2 lower (long)

(2) - Upper trailing arm relocation bracket

(1) - Cross member

(1) - Panhard bar relocation bracket and flat tab

(2) - Sway bar lowering blocks

(2) - 8979 air bags with air line fittings

(2) - Schrader valves

20' Air line