

641-673-0468

www.kelderman.com

kelderman air ride

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

1999-2004 Ford Front System

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This Kelderman Air Suspension system is designed for 99-04 Super Duty's and 99-05 Excursions

There are several advantages to equipping your truck with air ride suspension:

- Improves the ride of the truck***
- Bolts into existing holes on truck frame***
- Keeps truck level with snowplow***
- Easy to install, maintenance free***



***1999-2004 Ford Front
1999-2005 Excursion****



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.



1999-2004 Ford

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 rear wheels of the truck, to prevent it from rolling forward or rearward. Place a jack on each side of frame behind the front wheels, in the vicinity of the front seat. (1.1)



****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 Suspension

Step 1. Lift up the truck until the tires come off the ground. Place a jack stand under the truck frame and remove the wheels.

Step 2. Remove the factory shock, shock mounts.

NOTE: If you are installing a lift kit with 3 leafs, remove the lower leaf. If it has 4 or 5 springs, remove the lower 2 leafs.



On a lifted truck remove the lower 2 springs (leave the top 3 alone)

1.1

Installation Instructions (continued)

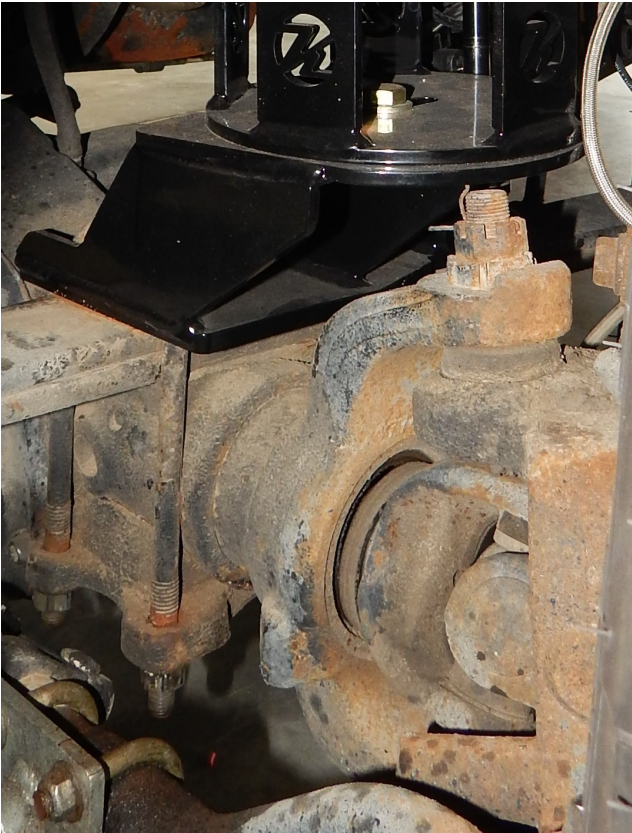
Step 3. Locate the bottom air bag axle mount and bolt it to the axle using the factory "U" bolts. The shock mount faces towards the rear of the truck. (1.4 & 1.5) The U-bolt goes over the welded arches and down through the axle mounts.



1.4 Front of truck



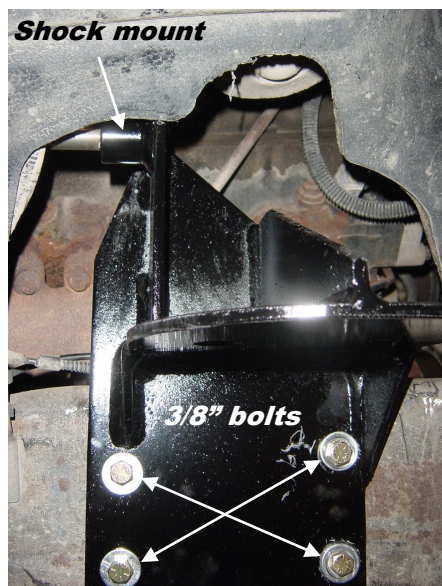
1.5 Rear of truck



**Recommended torque ratings on bolts:
3/8" grade 8 fine thread - 45 ft. lbs.
"U" bolts - 125 ft. lbs.
Shock studs 40ft.lbs**

Installation Instructions (continued)

Step 6. The top air bag mount is bolted in place with the (4) 3/8" grade 8 bolts and lock nuts provided in the kit (put a flat washer on each side). Torque to 45 lbs. (1.6 & 1.7)

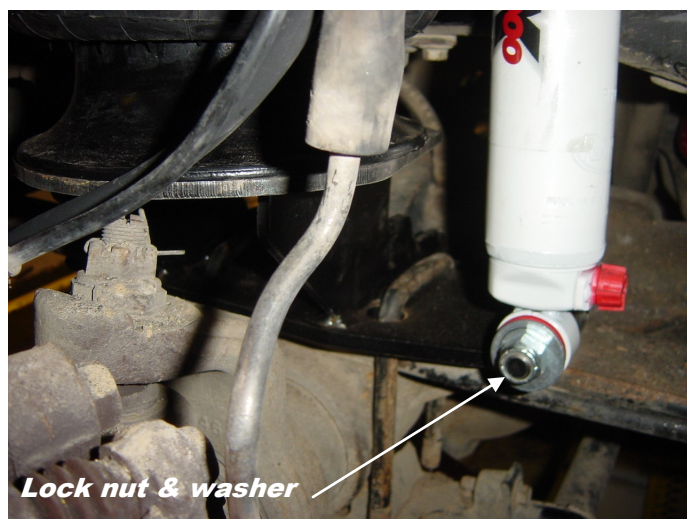


1.6



1.7

****NOTE: (1.8 & 1.9) You may want to cut part of the inner fender out right where the top of the shock sits. It will allow for easier tightening of the top shock nut.**



1.8



1.9

1999-2004 Newer

Step 7. Mount the air bag in between the top and bottom mount. IF the truck has a lift, make sure to put the lower spacer between the bottom of the bag and lower bag mount. Tighten the nuts on top of the bag and the bolt that goes into the bottom of the bag. To 30 ft./lbs. (2.0)

Step 8. Fasten the brass air line fitting in place. Route the air line into the engine compartment and put the Schrader valve on the end. You may want to "zip" tie the hose in a convenient location. Make sure the air line is away from any hot exhaust or moving engine parts. If installing a height control valve, look on next page.



2.0



Step 10. The factory brake lines need to be bent up and back to clear the air bag when turning. Use extreme caution when doing this. We recommend a brake tube bending pliers.

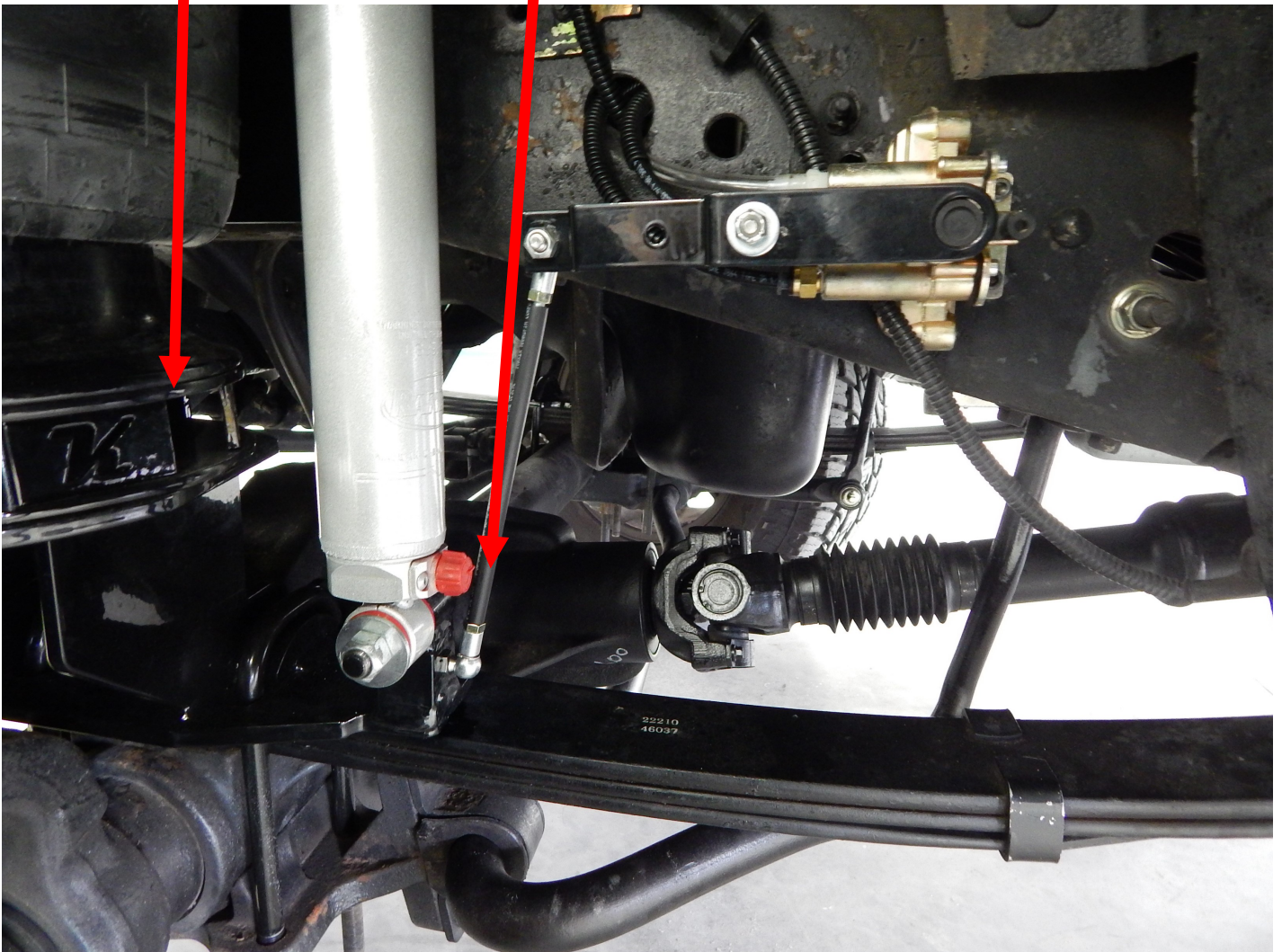
This will allow you to bend the brake line without kinking it. If the line kinks, replace it with a new line. (2.1)



2.1

The 3" kit has a 1.5" spacer that will go between the bottom of the air bag and lower air bag mount. The lower mount pictured is 1.5" taller than stock. Longer shocks are included for 3" kit (Rancho RS99118). Stock height uses a Rancho 99113.

If installing a height control valve, you will need to drill two 1/4" holes in the side of the frame and bolt the valve to the frame. The steel block on the bottom of the shock needs to be drilled and tapped for the ball stud. With the air bag inflated to around 8.5" you will now cut the linkage rod to length so the height control arm is straight out.



The height control valve can be mounted on either the frame by drilling two 19/32" holes in the side of the frame and bolting the height control valve to the frame (previous page). The other option is to weld a mounting tab to the frame like the picture below.



4" lift pictured with stock lower bag mount



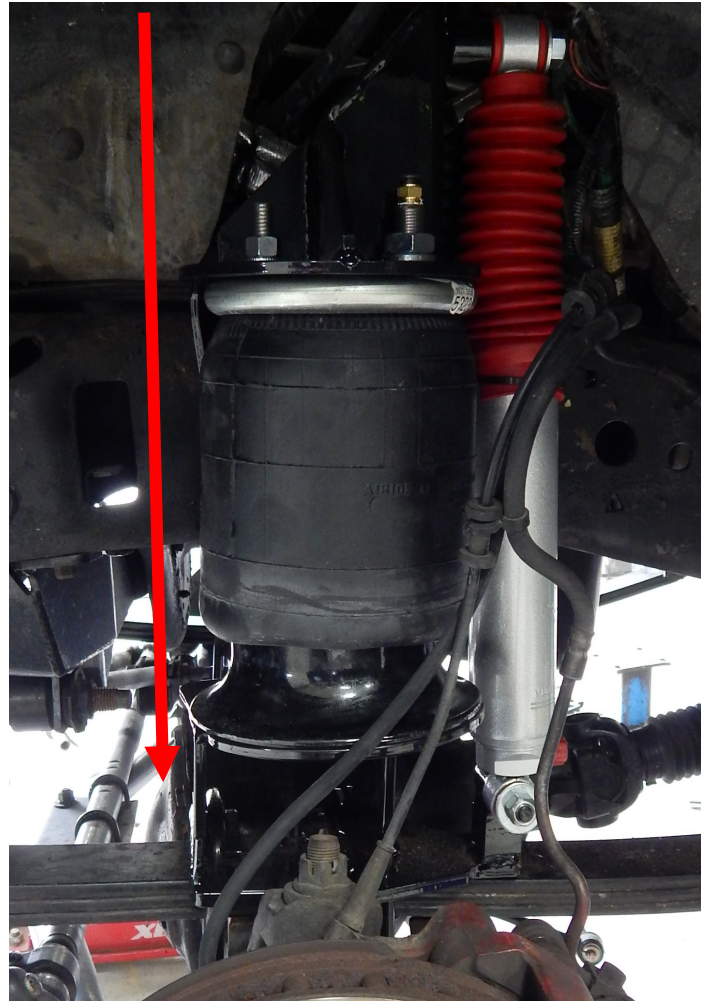
3" lift pictured

1.5" spacer with 1.5" taller lower mount

3.2

1.5" lift pictured. Bottom air bag plate is taller than stock option

3.1



Installation Instructions (continued)

Step 12. Once you have bent the brake line, turn the steering wheel without the tire on it to check for clearance. Once you have clearance, put the tire on and make sure the brake lines will not rub on the tire. See pictures on previous page.

Step 13. Use large zip ties to fasten the anti-lock wires to the brake line.

*****NOTE: It is very important that the brake lines and the anti-lock brake wires do not rub on the air bag or tire. Failure to check for this could cause serious personal injury or death.***

Step 14. Repeat all steps on opposite side of truck.

Step 15. Add air to the air bags. The air bags are designed to ride best between 7.5-8.5". Start at 8" and then check the desired ride height. If doing a manual fill, record the pressure on each side and use as future reference. If doing a height control valve refer to page 6 and follow the instructions.

Step 16. If your kit has adjustable shocks, set them on setting 3. The higher the number, the stiffer the setting. 9 is the stiffest. (2.2)



Shock Adjustment Knob

2.2

There is no magic number for air pressure requirements. All you have to do is go by the truck ride height. Apply air to the system until the vehicle is at the stock ride height. Do not be surprised if the pressure is different between sides. If the kit you purchased has adjustable shocks, start at setting 3 and adjust the settings until you discover the best ride for you and your truck.

Contact Information

Kelderman Air Suspension 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: 641-673-0468

Email: info@kelderman.com

www.kelderman.com