

kelderman air ride

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

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Leaf Spring Trailer System

Kelderman Air Ride offers a leaf spring suspension system in a line of quality air ride suspension systems. This system was developed to improve the ride of leaf spring suspension rv trailers. There are many advantages to equipping your trailer with air ride suspension:

- Dramatically improves the ride of the trailer
- Reduces shock and fatigue on both trailer and riders
- Trailer pulls easier, with less cracking on welds
- Automatic leveling kits available
- Maintenance free



Leaf Spring

- Will not affect load ratings of the axles
- Automatic leveling is available
- Adds 3" of pure air suspension

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.

Leaf Spring

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. While there is still weight on the axle, it is critical to measure 2" behind the front axle and place a mark on the bottom frame rail of the trailer. (red lines, 1.2 & 1.3) Next, measure the distance between the mark and the front leaf spring ear. (green arrow, 1.2) Keep this measurement for future reference. The original mark will be the location of the pivot point when installing the air ride.

Tools and equipment required:

Cutting Torch, or Grinder (only needed for 2" drop model)

(4) Jacks

(4) Jack Stands

Wheel Chocks

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

Socket Set
(1 5/16" torque wrench)

Hammer

Side Cutters

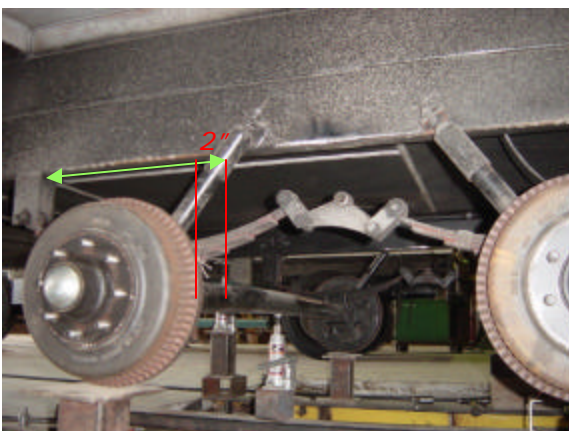
6 mm Allen Wrench



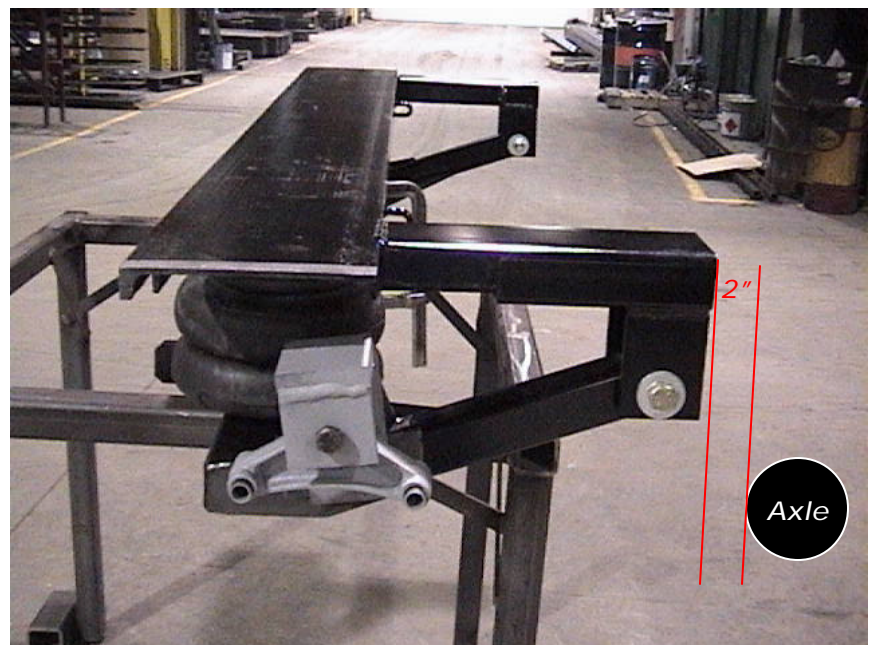
1.1



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



1.2



1.3

Installing the Air Ride

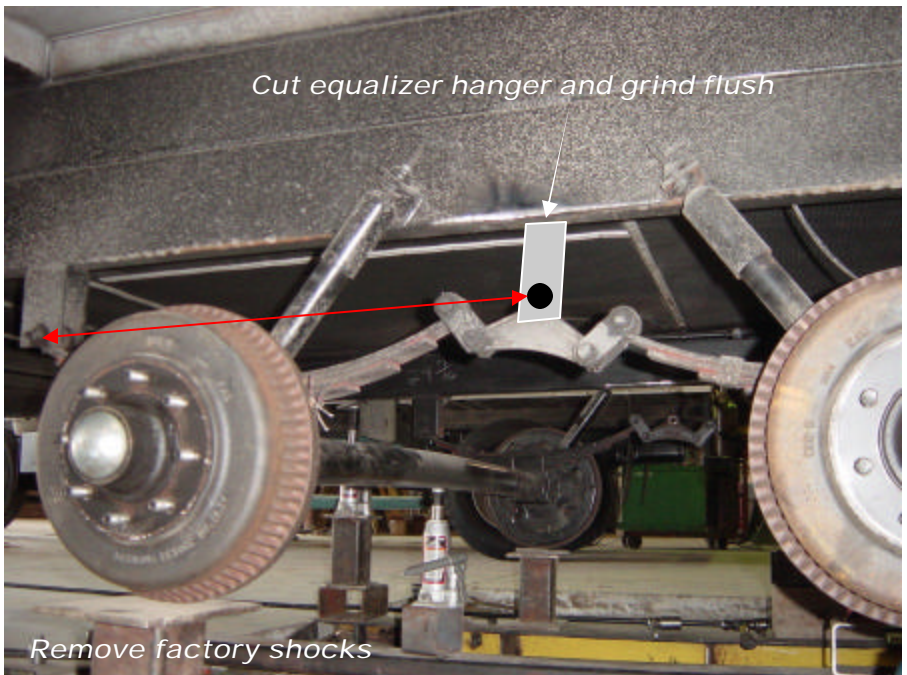
****NOTE:** Jack up the trailer high enough so you are able to remove the tires. Make sure to use jack stands for safety, because it is required to be under the trailer during this installation.

Step 1. Once the tires are removed, you must place a jack under each axle. This will prevent the axles from falling once the equalizer hanger is removed. (1.1)

****NOTE:** Before cutting hangers, measure from center to center of bolts. (1.4 red arrow).

Step 2. Take a torch or grinder and cut the equalizer hanger off flush with the frame. (1.2)

****NOTE:** The leaf spring equalizer linkage should remain in the "up" position. It is important to do this in order for the air ride assembly to line up correctly. (1.5)



1.4

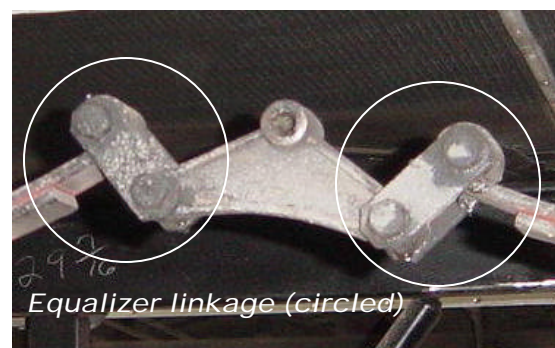
Recommended torque ratings on bolts:

1/2" - 55 ft. lbs

3/4" - 200 ft. lbs

factory shackle bolts - 170 ft. lbs.

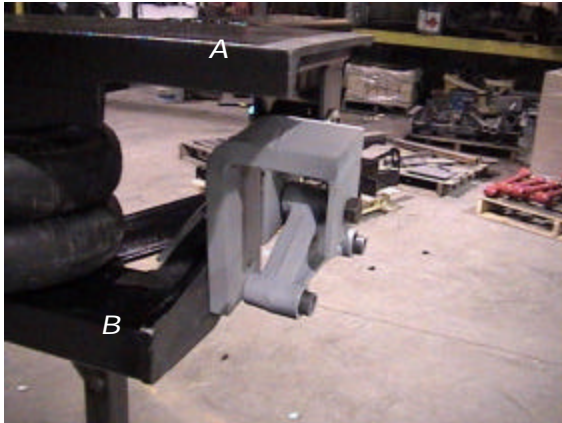
7/8" - 460 ft. lbs



1.5

Installation Instructions

The air ride assembly consists of two frameworks. The top framework, (A) and the bottom framework, (B) as shown. (1.6 & 1.7)

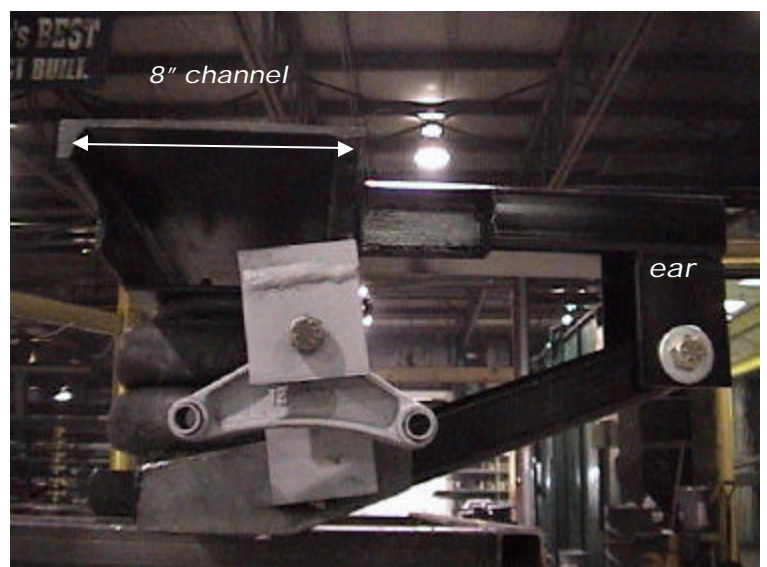


1.6



1.7

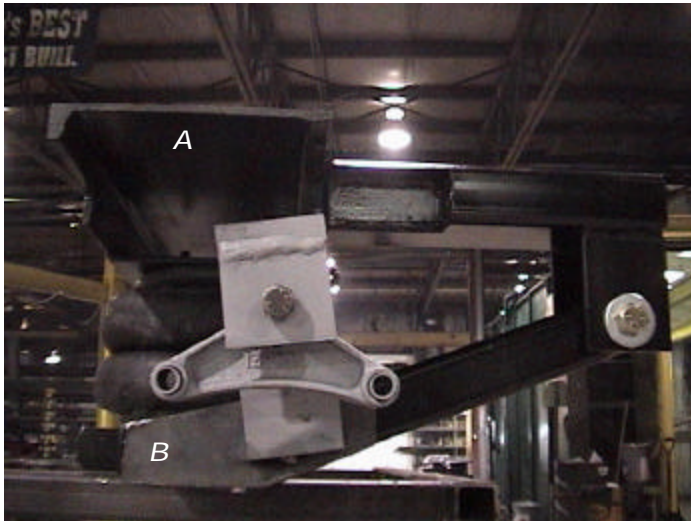
Step 3. Mount the top air ride framework (A). The front of the framework has ears that come down for the bottom framework to connect to. The rear of the framework has the 8" channel. (1.8) Locate the top framework so that it is centered under the trailer (side to side). Locate the front ears so that they are two inches away from the front axle. (1.2 & 1.3) If the frame is located any closer, you will run the risk of the front axle hitting the air ride framework when the suspension bottoms out. Put a couple of tack welds on the frame so that it will stay in place while you hook up the bottom frame.



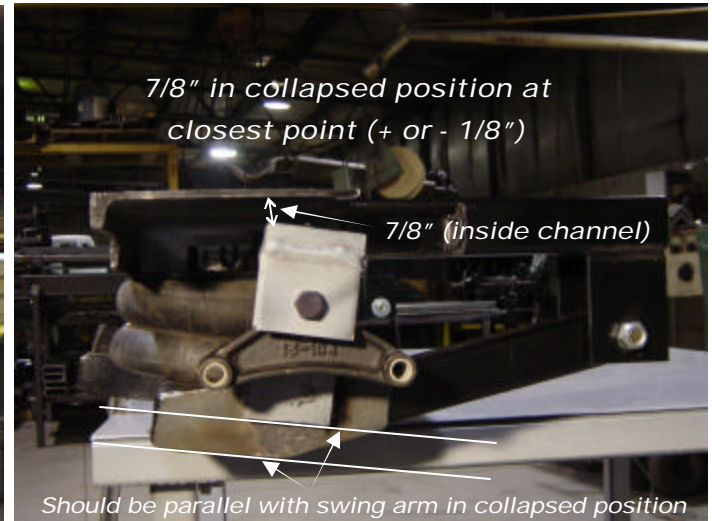
1.8

Leaf Spring

Step 4. Mount the bottom air ride framework (B). Framework (B) is what the shackle hanger is welded to. This is also referred to as the swing arm. Slide the swing arm up into place and fasten it with the 5/8" grade 8 bolt. Next, fasten the top of the air bags to framework (A). (It is easier to put the air fitting in the top of the bag before you attach the top framework.) After the air bags are fastened in place at the top, fasten the bottom of the bags with the provided 3/8" x 3" bolts. **(1.9)**



1.9



2.0

Step 5. Next, squeeze the top frames together so that the air bags are bottomed out (large slide-clamp works best.) We are doing this in able to determine where the equalizer hanger will be located and welded to the bottom swing arm. (Each air bag has a rubber bumper inside it so if it would ever lose air, the bag will not be damaged.) The hanger is welded to the swing arm so when the air bag is bottomed out, the equalizer bar has 7/8" to the bottom of the frame. **(2.0)** This will keep the ride height around the same as it previously was. If the ride height needs to be raised, move the hanger down the desired amount.



Installation Instructions (continued)



2.1

Step 6. *Once the equalizer bar is welded into place it is required to weld a gusset in place behind the equalizer bar. (2.1)*

Air Supply

When cutting the air line make sure the cut is clean and straight. If air line is cut at an angle, it will not seat and may leak. When pushing the air line into the fittings, push firmly and pull back. This will seat the o-ring inside the fitting on the air line.



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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