

**Kelderman Mfg., Inc.**

**Kelderman  
Air Ride Conversion System  
Dodge Two Bag Rear**

1993 and Before

**INSTALLATION  
INSTRUCTIONS**

# **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.**

# INSTALLATION INSTRUCTIONS

The Kelderman 2 bag, rear Air Ride is designed to allow the spare tire to be kept in its original location. The Air Ride frame bolts directly to the truck frame, in the same location as most aftermarket receiver hitches. Therefore a receiver hitch has been incorporated into the design of the unit. Vehicles with aftermarket bumpers that are too low to allow the Air Ride to be mounted properly to the frame should contact the factory, or authorized dealer for further instructions.

**Before installation of the Air Ride unit, prepare a smooth, flat, hard surface, and have all tools and equipment needed for the job.**

## **Tools and equipment required:**

- Cutting Torch, or Grinder**
- 2-Jacks**
- 2-Jack Stands**
- Wheel Chocks**
- Drill, and Drill Bits, (1/4" and 9/16")**
- Combination Wrench Set**
- Socket Set**
- Hammer**
- Center Punch**
- Alignment Punch**
- Side Cutters**
- 2-C clamps**
- Teflon Tape, or Sealer**

## **Preparing The Truck For Installation**

**Park the truck on a smooth, flat, hard surface. Chock the front wheels of the truck, to prevent it from rolling forward or rearward. Place a jack on each side of the truck frame ahead of the rear springs, front bolts.**

## Installing The Air Ride

### Caution

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

**NOTE:** A slight modification to your exhaust system is required which consists of the following: if your truck is a 1993 or earlier, your tailpipe will have to be brought forward 3" closer to the tire. If your truck is newer than 1993 your tailpipe will have to be brought forward 6" closer to the tire.

It is recommended to make this modification before starting the air ride installation procedure.

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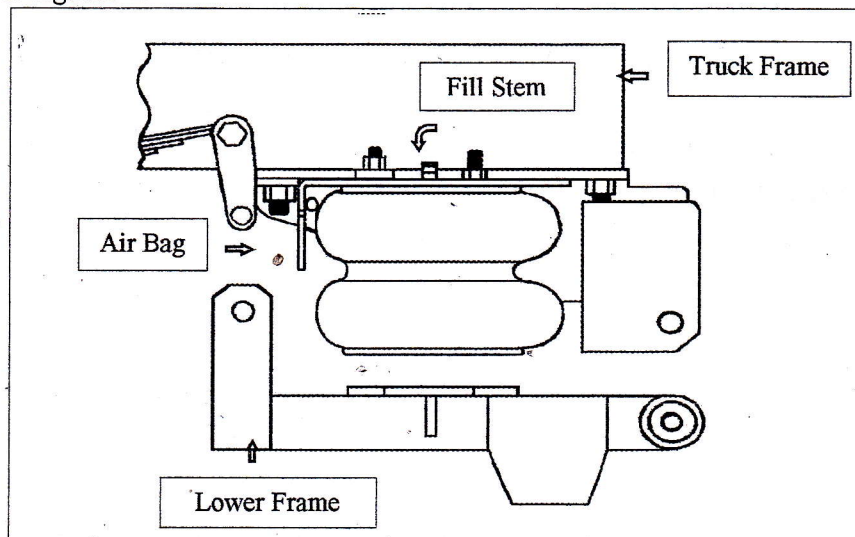
Step 1. Remove the spare tire and the carrier bracket from the truck. Remove the rear tail pipe hanger.

Step 2. Raise the truck up, enough to allow the rear spring lower shackle bolts to be removed. Remove the lower shackle bolt to separate the shackle from the mounting bracket. Repeat for opposite side of truck. Do not remove the spring shackles from the springs.

Step 3. Using care not to damage the wiring or lines inside the frame, cut or grind off the rivets on the spring mounting brackets at the rear of the springs, and remove the brackets. Repeat for opposite side of truck.

Step 4. To allow room for the Air Ride, 3 1/2" must be cut off of the spare tire carrier bracket on the end that is supported by the J bolt, and a new 9/16" hole drilled 1" from the end and centered in the cut end.

Diagram 1



Step 5. Install each bolt with the bolt head at the top and the nut on the bottom. In the rear holes using the two 5/8" x 1 1/2" bolts with a 5/8" flat washer on top, bolt the top section of the Air Ride to the truck frame with the receiver hitch toward the rear of the truck. Install the remaining 5/8" x 2" bolts in the remaining four holes and tighten.

**Tighten all fasteners installed to this point**

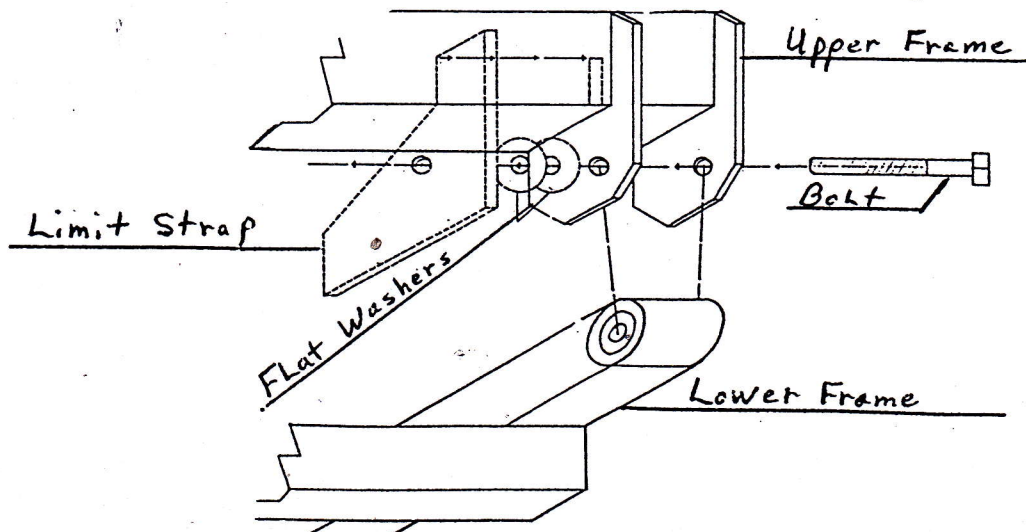
Step 6. With the fill hole to the outside of the truck fasten the air bags to the top frame of the air ride using a lock washer, and nut on each of the four air bag studs. (see diagram 1)

Step 7. Using the 5/8" x 5" bolts attach the lower section of the Air Ride to the rear pivot brackets on the top frame. Remove the limit brackets from the kit and insert the 5/8" x 5" bolt through the bracket then through the top frame plates and lower frame bushing. This bolt uses the 5/8" lock nut included in the kit. (see diagram 1)

Step 8. Swing the lower section up to the air bags and install the 3/8" x 1" bolts with lock washer through the lower section air bag mounting plate and into the holes in the bottom of each air bag and tighten.

Step 9. Raise the truck frame high enough so that the spring shackles can be bolted to the front arms of the lower Air Ride section. (Use the original shackle bot and nut that was removed in step 2). **Tighten all fasteners installed up to this point.**

Step 10. You will need to decide on a location for the fill valve, (the only factor for determining this location is convenience. Normally it is installed on the left side of the rear bumper near the license plate). Drill a 9/16" hole in the desired location using caution not to damage wiring or other components of the truck. Insert the fill valve with Teflon tape or sealer, thorough the hole with a 1/2" flat washer on the outside and the 1/4" coupler on the inside and tighten.



Step 11. Remove the 3 1/4" pipe thread to 1/4" Air Line fittings from kit and tighten one 1/4" fitting into each air bag. Cut one 6" piece of air line and insert into fill valve. Insert the other end into air line tee. From the remaining two open ends on the tee run a section of air line to each bag and assemble in the same manner as on the fill valve. Tighten all air line fittings. Check the routing of the air lines to be sure they are not exposed to anything which could burn, cut or otherwise damage them. Be sure the air lines are properly secured.

Step 12. If your vehicle is a 1993 or earlier Dodge with the Cummins engine, you will have to do some modification to your exhaust pipe in order to provide sufficient clearance between it and the air ride frame.

Step 13. Carefully remove the jacks and the jackstands. Inflate the air bags to approximately 25-30 PSI and use soapy water or a leak detector to check all air line fittings for leaks.

Step 14. Check all fasteners to be sure they are tightened properly.

Step 15. Replace the spare tire and the carrier bracket.

Step 16. Check the air bags to be sure they are not exposed to any sharp object of other components which could cause wear and/or damage.

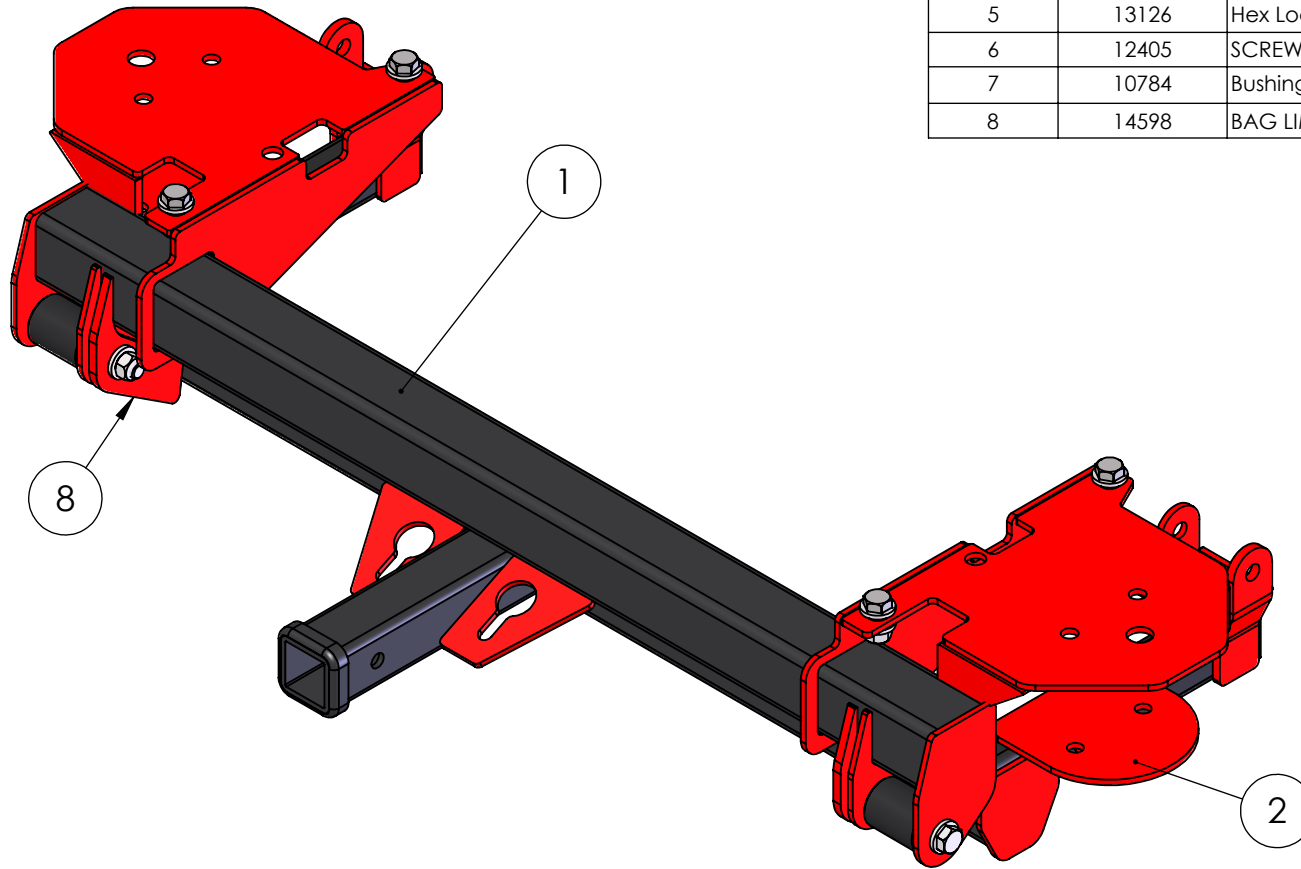
Step 17. Run bottom of Air Ride/Air Bag reasonably level with ground at all times.

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If you have any questions regarding the installation please call your authorized dealer or the factory at 1-800-334-6150.

1-01

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	11376	Top Frame	1
2	11377	Swing Arm	1
3	13006	5/8" Flat STRL Washer	12
4	12437	Bolt - 5/8"-18 x 4" Gr.8	2
5	13126	Hex Lock Nut - 5/8"-18 - Gr.8	6
6	12405	SCREW-HCS-.63-18X1.50-GR8-YZ	4
7	10784	Bushing - Spacer	2
8	14598	BAG LIMITER (DODGE STD)	2



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/32"$ ANGULAR: MACH $\pm 1$ BEND $\pm 1$ TWO PLACE DECIMAL $\pm .030$ THREE PLACE DECIMAL $\pm .010$	<b>Design By:</b>	Zach Beltz 2014	<b>Project:</b> 1989-1993 Dodge G1 2-Bag Rear	
	<b>Shelf # / Qty</b>			
	<b>Inventory</b>		<b>Description:</b> Kit	
	<b>Run Qty:</b>			
<b>MATERIAL</b>	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF KELDERMAN MFG. INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF KELDERMAN MFG. INC. IS PROHIBITED.		<b>SIZE</b>	<b>DWG. NO.</b>
<b>FINISH</b>			<b>A</b>	<b>11375</b>
<b>WEIGHT</b> 121.2352			<b>SCALE: 1:16</b>	DO NOT SCALE DRAWING

