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**AIR RIDE SUSPENSION SYSTEMS**

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# **2011 GM 2500-3500 HD 4-Link Rear Installation Instructions**



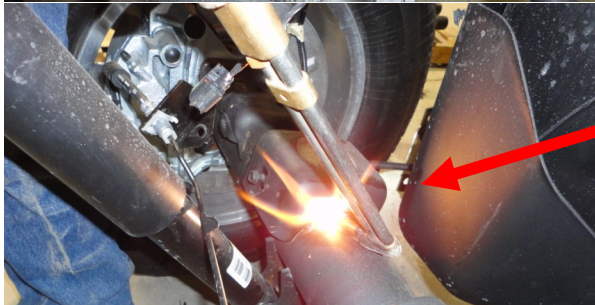
## Installation

1. Before doing anything, measure the pinion angle and write the angle down here \_\_\_\_\_. This is important because you will need to put the axle back to this measurement after the installation. Also, take a measurement from the front of the axle to a location on each side of the frame. Write these measurements here. Pinion angle \_\_\_\_\_. Right side \_\_\_\_\_ Left side \_\_\_\_\_ **NOTE: All the bolts in this kit use a flat washer on each side of the bolt.** It is recommended to remove the bed if possible.
2. Jack up the rear of the frame so that most of the tension is off the leaf springs. Place a set of jack stands under the frame, block the tires so the axle won't move and place a jack stand under the pinion so it doesn't rotate. Remove the leaf springs. Using the steps pictured below, cut off the bump stops off the axle and frame.



The brake lines are connected to the axle bump stops. Unbolt them and pull them out of the way when you cut. They will fasten to the lower air bag mount in step XX. If the truck has overload pads remove them from the side of the frame.

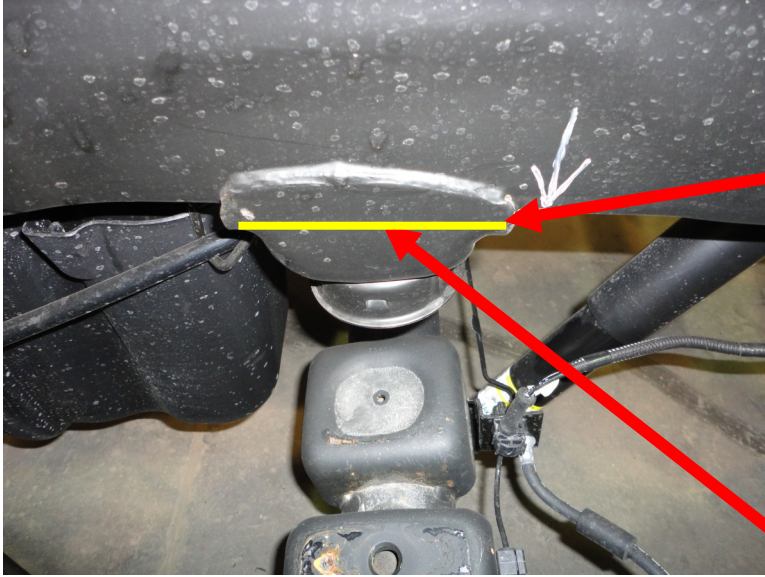
This block will be removed on each side of the axle.



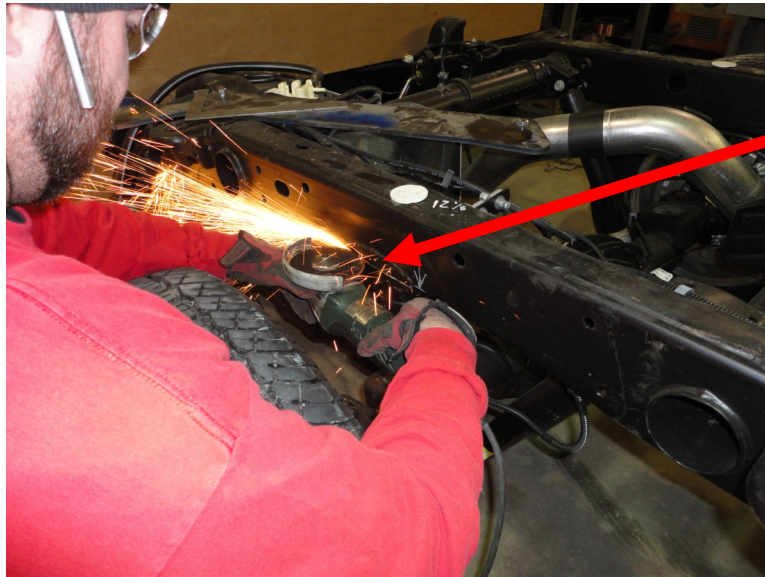
Use a torch or plasma cutter to remove the block. **DO NOT CUT INTO THE AXLE TUBING!**



Once the block is removed, grind the surface smooth. Spray with some undercoating or black paint.



The upper bump stops need to be removed from the frame.



Cut the bump stop so it is flush with the bottom of the frame. Only the remaining part of the bump stop on inside of the passengers side of the frame needs to be removed. Grind it flush with the frame. You will need to remove the bolts on the inside of the drivers side where the brake lines fasten and use a strap to pull the brake lines away from the frame to gain access to cut.



Bump stop removed

3. Locate the drivers side side plate. It fastens to the frame with the original forward leaf spring bolt, 3) m12-80 bolts and 2) 1 1/2x1/2" bolts. Torque the leaf spring bolt to 150 ft/lbs, the m12 bolts to 100 ft/lbs and the 1/2" bolts to 85 ft/lbs. Use the same torque specs on the passengers side. **If you have a 5th wheel hitch, you will have to remove the attachment plates on the side of the frame and weld the top plates to the side plates of the air suspension.**

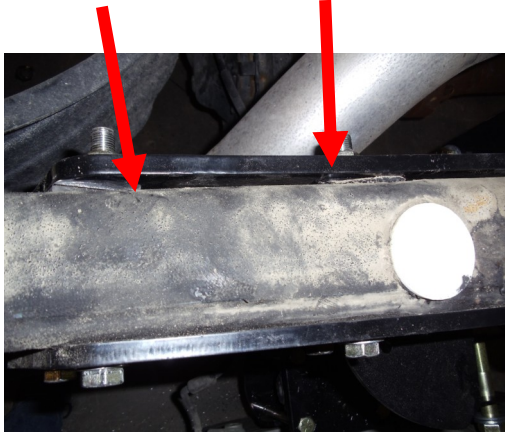
Factory shackle  
bolt

M12-80 bolts



4. Locate the passenger side side plate, 2 shims and pan hard bar mount. This assembly fastens to the frame with the original forward leaf spring bolt, 3) m12-80 bolts, and 8) 1/2x5" bolts. The shims go in the rear most set of holes. You will have to drill the six middle holes. Use the outer side plate as a drill template. Torque the 1/2" bolts to 85 ft/lbs and the m12 bolts to 100 ft/lbs.

Shims in the rear 4 bolts



Drill out these 6 holes for 1/2" bolts. You may have to die grind the inside holes out with a die grinder because its hard to drill straight through the frame.



5. Locate the lower air bag mounts and lower axle clamps. Place the air bag mounts over the leaf spring perches and fasten together with the 5/8x9" bolts. Torque the bolts to 150 ft/lbs. Next fasten the brake lines to the tab on the lower bag mounts with the 1/4x1" bolts.



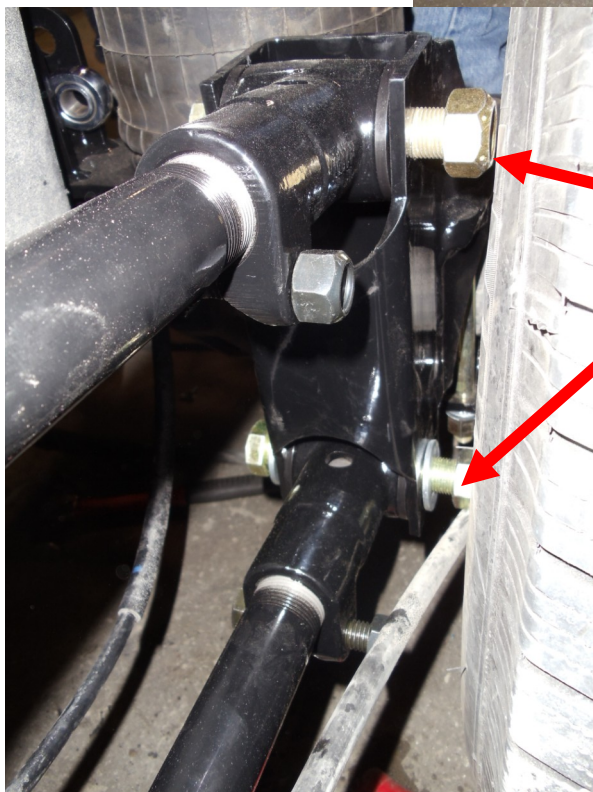
Production models have a tab welded here to fasten brake lines to.



6. Locate the air bags. Insert the 90° 3/4" fitting in the air port. The air inlet needs to be facing towards the rear of the truck. Fasten the bottom of the air bags to the lower air bag mounts with the 3/4" nut and lock washer. Do not tighten yet.

7. Locate the 4 trailing arms. Set the upper bars at 8 1/8" between the knuckles and the lower bars at 8 9/16" between the bottom knuckles. Insert them into the front mounts and rear lower bag mounts. Use the 7/8x 5 1/2" bolts on the forward mounts. Insert so the nut is on the frame side. On the rear, use the 7/8x4 1/2" on the top and the 7/8x 5" on the bottom. DO NOT use a flat washer on the outside of the 4 1/2" bolt. Make sure on these bolts the nuts face the tire. If the nuts face the frame the bolts will rub on the frame when the unit is in the dumped position.

5 1/2" bolts used in the forward trailing arm mounts. Insert so the nuts are on the

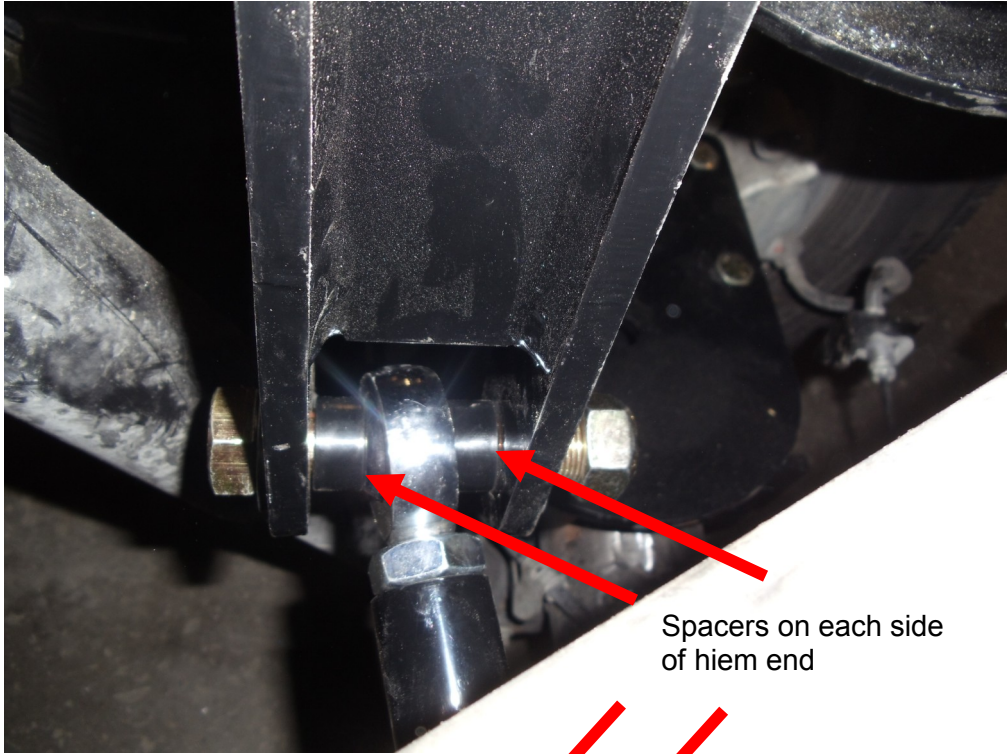


Top bolt is 4 1/2" Do not use washer on the nut side

Bottom bolt is 5"

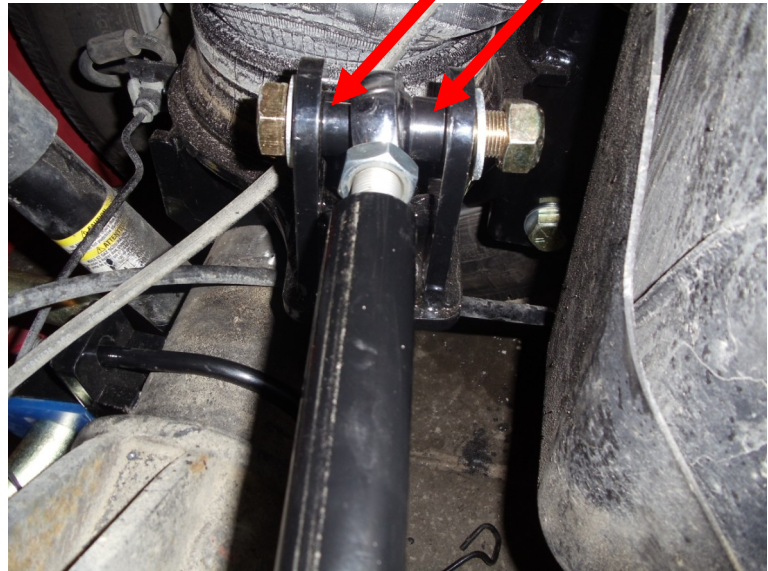
Make sure nut side of the bolts are against the tire.

8. Locate panhard bar. Connect one end to the passenger side upper pan hard mount with the 3/4x4" bolt. Use the supplied spacers to center the hiem end. The other side of the pan hard bar connects to the drivers side lower air bag mount. Use the 3/4x4" bolt to fasten. Use the supplied spacers to center the hiem end. Torque the 3/4" bolts to 150 ft/lbs.



Pass side

Spacers on each side of hiem end



Drivers side



9. Connect the top of the air bag to the upper air bag mounts with the 3/8x1" bolts. You can tighten the bottom of the bag now.



10. Locate the accumulator tanks. They mount to the rear shackle leaf spring perches with the original factory bolt. Make sure the large port is facing the front of the truck. Torque this bolt to 100 ft/lbs.



11. Locate the 3/4" air line. Run an air line between the bags and the accumulator tanks. This air line is very stiff and not flexible. Make sure to cut it 3" longer than what you think so you can shorten if needed.



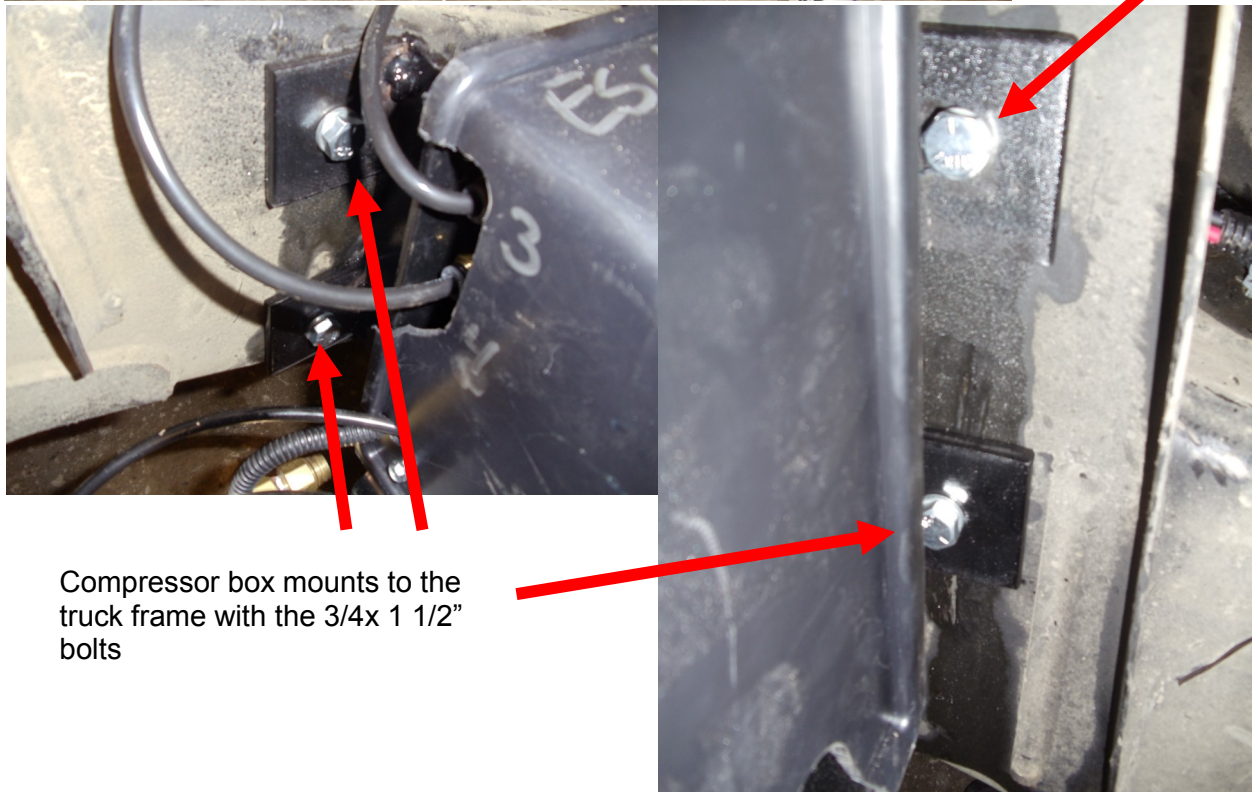
13. Locate the roadmaster sway bar kit. Use the instructions supplied with the kit to install the rear sway bar kit.

14. Place a jack under the rear hitch and jack the frame up so the distance between the air bag mounting brackets is 7 1/2-8". Check your measurements from step one, making sure your pinion angle is correct and your wheelbase is as originally from the factory. Now torque the eight 7/8" bolts to 300 ft/lbs.

15. Locate your compressor box. If you have a long box truck, it will mount on the passenger side behind the cab. You will have to drill 4 holes for the 3/8" bolts that will hold the compressor box to the chassis. The forward upper hole will be drilled in the front box mount. The other 3 holes go in the frame.



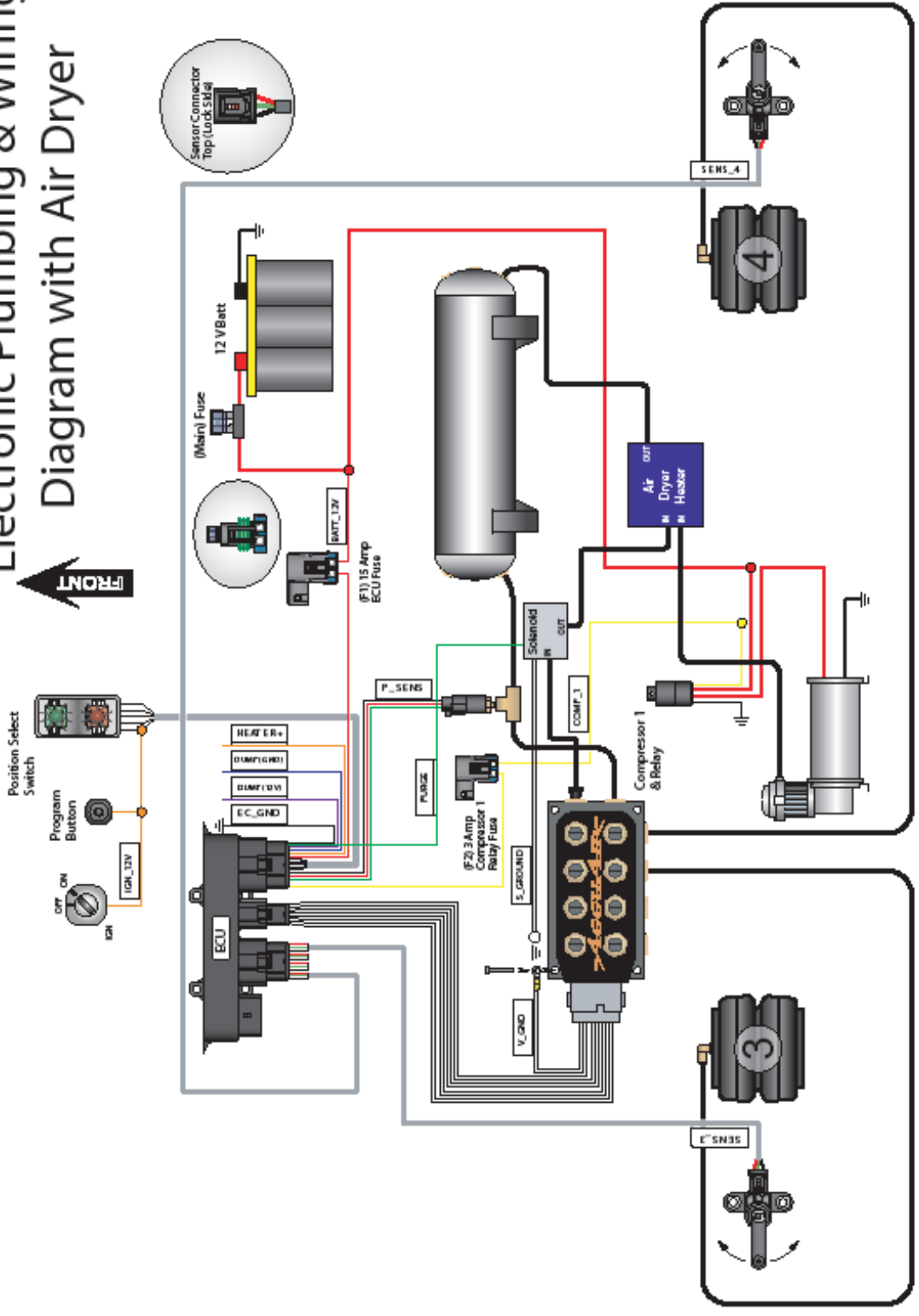
Upper forward mount fastens to the box mount closest to the cab on long box



Compressor box mounts to the truck frame with the 3/4x 1 1/2" bolts



# Electronic Plumbing & Wiring Diagram with Air Dryer



# Compressor Box Self-Leveling Kit Wiring Diagram (ambulance prep package)

