

99-04 Ford 12-15" Lift Kit Instructions

Front Kit

Step 1. Before you remove anything off the truck, measure the pinion on the front and rear axle differential. Make sure to record this measurement as we will want to put each axle back to this angle after the suspension lift kit is installed. This is especially important for the front axle. Putting the front axle back to the same measurement will keep the stock camber and caster.

Step 2. Jack up the truck and place a jack stand under the frame on each side of the truck. Jack the truck up enough so that the front tires are just barely off the ground. Take a motorcycle strap and wrap the strap around the differential and to the frame. This will help keep the axle in the general proximity while the factory suspension is removed and the 4 link is installed.

Step 3. Remove the front shock absorbers, leaf springs, and sway bar.

Step 4. Locate the Donahoe crossover steering kit and install according the instructions provided. Also install the Kelderman dropped trac bar/panhard bar bracket at the same time.

Step 5. Locate upper bag mount and drill out the four 3/8" rivet holes in side of the frame to 1/2" Bolt the brackets to the side of frame using the four 1/2" grade 8 bolts. Make sure to check the back side of the frame for brake lines, fuel lines and on the Excursion, heater lines.

Step 6. Locate rear trailing arm bracket and fasten to the frame using the 1/2" bolts provided. You will first have to remove the factory transmission crossmember. It will be required to drill the (4) holes in the bottom of the frame as well as several in the side of the frame. Be careful not to drill into any fuel lines. After you fasten the two brackets to the frame, install the new crossmember. Fasten into place using the 5/8" bolts. Fasten the transmission into place using the factory nuts.

Step 7. Locate the lower air bag mounts and the lower trailing arm mounts. The lower passenger side trailing arm bracket is the one with the sway bar relocation mount welded to it. Position the lower air bag mount on top of the axle along with the lower trailing arm mount on the bottom of the axle. Use the 9/16 x 8" bolts to fasten the two parts together. Torque the bolts to 135lb/ft. Locate the crossmember that connects the two bag mounts in place. Fasten using the 1/2" x 1 1/2" bolts.

Step 8. Locate the upper and lower trailing arms. Install the arms so that the upper arms are the same length and the lower arms are the same length. Try and install so the pinion angle is close to original.

Step 9. Locate the adjustable panhard bar. Leave the jam nuts loose so you can use it to center up the truck after the bags are installed.

Step 10. Locate the airbags and install. Locate the shocks and install. If you are using the Bilstein 7100's put one spacer on each side. If you are using the 5150's, you don't need any spacers. Use Loctite on the bolts or the bolts may vibrate out while you are driving.

Step 11. Locate the cast iron factory sway bar mounts. They are bolted on the inside of the frame with two bolts. Flip the mounts upside down so they hang on the bottom of the frame. The factory endlinks will need to be extended. To find out how much, let all the air out of the bags and make sure you have about ½” between the sway bar and lower trailing arm. Make sure the bolts are not sticking out where they can rub on the trailing arms.

Step 14. Alignment. You can do this after you do the rear system or after the front is installed. Inflate the bags to 12”. This will set the kit at around 12-13”. Depending on what tires you are running, you can adjust it up or down. The maximum recommended bag height is 14”. You will now need the pinion angle measurement you took before the front end was disassembled. Measure out the front so the axle is centered in the wheel well. Put the pinion angle back to stock. Pick a point on the frame to make sure the axle is centered. You will need to also adjust the steering wheel. This is usually done after the first test drive.

Rear Kit

Step 1. Measure the rear pinion angle. Record this angle as you will need it to align the rear axle after the kit is installed.

Step 2. Jack up the rear of the truck so the rear wheels are just barely off the ground. Put a motorcycle strap over the differential to the frame. Remove the rear leaf springs, shocks, sway bar and the rubber bump stops located on the bottom of the frame. You can also remove the rear brake line as it needs to be extended the same amount as you plan to lift the truck.

Step 3. Using a torch or grinder, remove the rivet heads that hold the rubber bump stop in place. Knock out rivets with a punch and hammer. The rubber bump stop is no longer used.

Step 4. Locate the lower air bag mount and the lower axle clamps. The bottom axle clamps are also the lower shock mounts. Place the lower axle clamps on the top of the axle leaf spring perches. Use the 5/8 x 8.5” bolts to fasten components into place. Make sure to run the bolts in from the top down (nuts on the bottom). The bottom shock mounts should be mounted so the ears are toward the inside of the frame.

Step 5. Locate the front trailing arm mounts. They bolt against the side of the frame. It will be necessary to drill out the holes in the frame to accommodate for the ¾” bolts as well as the ½” bolts on the bottom of the frame. Be careful to not drill holes into the brake or fuel lines. Before you tighten up the trailing arm mounts, locate the cross brace that bolts between the two mounts. Use the ½ x 1 ½” bolts to fasten in place. After the brace in place, tighten all the bolts.

Step 6. Locate the trailing arms. Use the 7/8” x 5” bolt to fasten into the bottom air bag axle mount. Use the 7/8” by 8” bolts on the front trailing arm mount. The spacers go in between the knuckle inside of the mount closest to the truck frame. Try and keep the top arms close to the same length as well as the bottom arms similar in length.

Step 7. Locate the top air bag mount/panhard bar anchor. Hold up the bracket and drill out the rivet holes with a ½” drill. Fasten the (6) ½” x 2” bolts into the holes where the rubber bump stop was located.

Step 8. Locate the airbags. Fasten the bottom of the bag into place using the flat washer, lock washer and nut and fasten the top into place using the ¾” fine thread nut and lock washer on top. Insert the air fittings into the bags.

Step 9. Locate the panhard bar. Use the ¾” bolts to fasten into place. Put a spacer on each side of the heim end in order to center the panhard bar.

Step 10. In order to align the rear axle, it will be necessary to put the truck at ride height. Inflate the bags to 14-17 inches depending on the ride height needed to achieve the desired ride height. Once the bags are inflated, set the upper arms so they are the same length. Now set the bottom bars to the same length. Find a hole on the frame that the same on each side. Use that as a reference point as you are squaring up the axle. Also try to keep the pinion angle close to the original measurement. It is easier to adjust the trailing arms by turning each one ½ a turn and then going to the opposite arm and turning it ½ a turn. If you get to point where an arm will not turn, take a jack stand and place it under the rear hitch. Let the air out of the bags. Keep the truck and ride height. This should relieve some of pressure and make the adjusting easier. Once you get the ride height established, axle squared up, and pinion angle set, adjust the panhard bar side to side. After everything is lined up, go over and retorque all the bolts.

Step 11. Now that the rear axle is square, you will want to make sure the front axle is square with the rear axle. Take a tape measure and have a helper hold the end of the tape on the front side of the rear axle. Measure forward to the kingpin on top of the front axle. Record this measurement. Measure the other side. Try and get this measurement within 1/8”. You should have the front airbags setting pretty square when all is done. Be sure to recheck the front panhard bar to make sure the front axle is square.

Step 12. The next suspension install is the rear sway bar. If you are using the factory sway bar, it will be required to lengthen the endlinks. With the truck at ride height, set the sway bar so it is level with the ground. Cut the endlinks and lengthen them. Make sure there are not any bolts sticking out that could rub on the trailing arms.

Step 13. The carrier bearing on the driveshaft will need to be spaced down. Use the supplied spacer to move the carrier bearing down. Use a string to make sure the driveshaft is straight.

Step 14. Once the installation is complete and the air controls are plumbed up, its time for a test drive. Pay close attention when you accelerate from a dead stop. If you feel a vibration between 0-15 mph, then the pinion angle needs adjusted. This can be a tedious task, but just adjust it one degree at a time until it goes away. If you have a driveline vibration at highway speeds, chances are that it is the carrier bearing needing raised or lowered. The driveshaft needs to be fairly straight. You should be able to adjust the air pressure in the bags to get the driveline fairly straight.