

HELL BENT STEEL, INC - INSTALLATION INSTRUCTIONS

2", 2.5", AND 3" FRONT LEVELING SYSTEM FOR FORD F150 - PN: 220-200-001-AL, 220-250-001-AL, & 220-300-001-AL

IMPORTANT NOTES:

Please read before beginning installation. OEM Manual should be used as a reference.

It is highly recommended that a certified mechanic perform this installation. Read and understand all the instructions before beginning installation.

Use Locktite® on all bolts associated with this installation.

Torque Specifications:

Upper strut mounting studs	47 ft-lbs
Shock Absorber-to-Lower Arm Nut and Bolt.....	351 ft-lbs
Stabilizer Bar Link -to-Lower Arm Nut	66 ft-lbs
Tie-Rod End Nut	111 ft-lbs
Upper Ball Joint Nut	85 ft-lbs
Wheel Lug Nuts	150 ft-lbs

If you desire to return the vehicle to stock, make sure to save all the stock components.

NOTE: IT IS HIGHLY RECOMMENDED THAT A CERTIFIED MECHANIC PERFORM THIS INSTALLATION.

IMPORTANT CUSTOMER INFORMATION:

This vehicle's reaction and handling characteristics may differ from that of standard cars and/or trucks. Modifications to improve off road performance may raise the vehicle's intended center of gravity. Extreme caution must be utilized when encountering driving conditions that may cause vehicle imbalance or loss of control. **DRIVE SAFELY!** Avoid abrupt maneuvers, such as sharp turns, which could cause a roll over, resulting in serious injury or death.

It is the customer's responsibility to make sure a re-torque is performed on all hardware associated with this suspension system after the first 100 miles. It is also the customer's responsibility to do a complete re-torque after every 1000 miles or after every off road use.

After the original installation, it is recommended to have the alignment checked by a certified alignment technician that is experienced with lifted vehicles. Also the alignment should be checked every 6 months to ensure proper tracking, proper wear on tires and front-end components. The responsibility for abuse, improper installation, or improper suspension maintenance is solely that of the customer.

NOTICE:

It is the responsibility of the customer or the mechanic to wear safety glasses at all times when working with air tools.

Please follow all the instructions carefully.

Before installation begins, drive the vehicle and inspect it to make sure that there are not any uncommon sounds or frame damage.

Front End Installation:

1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle and support the frame with jack stands. Place jack stands on both the driver and the passenger sides of the vehicle. Next remove the wheels from both sides.



2. Remove the upper strut mount nuts with a 15-mm wrench or socket. You will need a socket to remove the far strut mount.

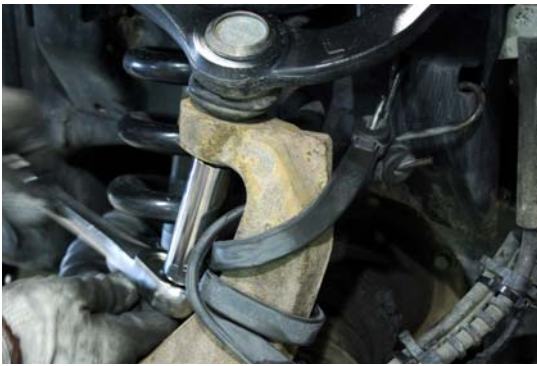
3. Remove the sway bar lower link pin bolt from the bottom of the control arm with an 18 mm deep socket.



4. Disconnect the tie rod end with a 21 mm socket. Using a ball peen hammer or impact tool, hit the steering knuckle (not the tie rod) until the tie rod pops out.

If you use a tie-rod pickle fork, be careful not to cut the tie rod boot. A severed tie rod boot will allow dirt and moisture to damage the tie rod end.





5. Support the knuckle with a bungee cord or safety wire so not to overextend the CV axle or stretch the brake hydraulic hose.

12. Use a pry bar to position the lower control arm and the strut mount to reinstall the mounting bolt. Torque to OEM specs.



6. Remove the upper ball joint nut with a 21 mm socket. Use an impact tool or ball peen hammer and hit the steering knuckle until the upper control arm pops out.



7. Next remove the struts lower bolt. Using a 27 mm wrench, hold the nut and remove the bolt with a 30 mm socket.



13. Place a jack under the lower control arm. Raise the lower control arm to reattach the ball joint. A pry bar may be used to hold the upper control arm into position. Torque the ball joint nut to OEM specs.

8. Remove the strut assembly.

9. Place the Hell Bent Steel strut extension on the top of the strut.

NOTE: Because of the design of the Hell Bent Steel spacer the strut will be rotated 180° when reinstalled.

Caution: Use the factory nuts with the factory studs.

10. Run down the OEM nuts snug with 15-mm socket. Torque to OEM specs.



14. Reattach the tie rod end. Torque to OEM specs.

15. Reattach the sway bar. Torque to OEM specs.

16. Reattach the wheel. Torque to OEM specs.

17. Repeat on opposite side.

18. Lower vehicle to ground and torque strut mounts to OEM specs.

19. Align the vehicle. A certified alignment technician that is experienced with lifted vehicles is recommended to perform the alignment.

PLEASE NOTE:

The 1-3/4" thick spacer gives you a total lift of 3". This is due to the fact that when you extend the strut by 1-3/4" the strut will be rotated to a slightly steeper angle.

It is the combination of extending the strut and the change in angle that gives the total lift. For the same reason, the spacer in the 2-1/2" kit measures 1-5/8".

These instructions are available in full color on our website www.hellbentsteel.com



11. Place strut back into upper strut mount. Tighten provided nuts snug with wrench or ratchet (after install, you will torque to OEM specs).