

HELL BENT STEEL, INC - INSTALLATION INSTRUCTIONS

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

PRE-INSTALLATION WARNINGS:

Before installing this product on your vehicle, thoroughly read and understand these instructions and the associated warnings. Failure to properly follow all instructions and heed all warnings may result in major property damage and/or serious bodily injury or death. Test drive the vehicle to verify that it does not exhibit any uncommon sounds or vibrations.

Inspect this product and all its associated parts. Compare the parts to those listed on the included packing slip. If any parts are missing or damaged, promptly call and notify us at 877.731.7911. Do not substitute any part or fastener from any other source.

Installation & Maintenance Warnings:

WARNING: ONLY A CERTIFIED MECHANIC SHOULD INSTALL THIS PRODUCT.

The OEM manual should be used at all times as a reference guide. It is your responsibility to re-torque and/or inspect the integrity of the thread lock (where applicable) of all mounting fasteners after the first 100 miles, every 3000 miles thereafter, or after heavy use.

Failure to follow these steps could allow fasteners to come loose and cause serious damage, bodily injury, or death.

Have your vehicle's alignment checked every 6 months. It is the responsibility of the customer or the mechanic to wear safety glasses and any other personal protection items needed at all times during installation and when working with air tools.

Use Warnings:

DRIVE SAFELY! Avoid abrupt maneuvers such as sudden sharp turns which could cause a rollover, resulting in serious injury or death.

You are solely responsible for any and all misuse, abuse, improper installation, and/or improper maintenance of this product and your vehicle.

After installing this product, drive with extreme caution, particularly until you become familiar with how the vehicle handles. Slower speeds may be required to maintain control. Do not engage in any conduct that would void your vehicle's factory warranty, such as jumping the vehicle, driving in excess of payload towing restrictions, off-road racing, rock crawling, etc. Always wear a seat belt.

It is highly recommended that before installation you disconnect the battery as specified in the OEM manual. This will protect the Electronic Power Assist Steering (EPAS) module and any electronic components.

Torque Specifications:

Upper strut mounting studs.....	28-35 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

Use Loctite® on all bolts associated with this installation.

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

NOTE: IF YOU ARE INSTALLING A HELL BENT STEEL LEVELING KIT ON A 2014 OR NEWER FORD F-150 TRUCK, PLEASE REFER TO PAGE "220-200-001-AL" OF THESE INSTRUCTIONS.

(Depending on your truck's year and model, some items may appear different in photos than they do on the vehicle.)

Front End Installation:

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. Disconnect battery.



2. Remove the upper strut mount nuts with a 15mm 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 18mm deep socket.



4. Disconnect the tie rod end with a 21mm 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 tierod 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.



HELL BENT STEEL, INC - INSTALLATION INSTRUCTIONS (cont.)

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

6. Remove the upper ball joint nut with a 21mm 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 strut's lower bolt. Using a 27 mm wrench, hold the nut and remove the bolt with a 30 mm socket.

8. Remove the strut assembly.



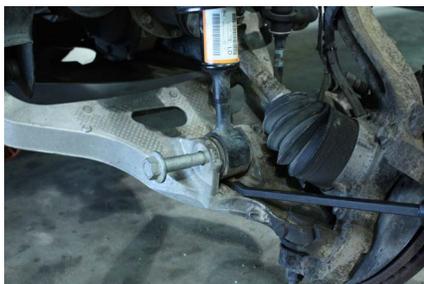
9. Place the Hell Bent Steel strut extension on the top of the strut.
NOTE: Because of the design of the Hell Bent Steel spacer the strut will be rotated 180° when reinstalled.
Caution: Use the factory nuts with the factory studs.

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



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

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



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.

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. Reconnect battery per OEM manual.

19. Align the vehicle. It is recommended that a certified alignment technician who is experienced with lifted vehicles 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" kit measures 1-1/4", and 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

