

HELL BENT STEEL, INC - INSTALLATION INSTRUCTIONS

FRONT LEVELING SYSTEM FOR DODGE RAM 1500 2008.5-2010 4X4

www.hellbentsteel.com

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 Loctite® on all bolts associated with this installation.

Torque Specifications:

Shock Absorber-to-Lower Arm Nut and Bolt.....	155 ft-lbs
Stabilizer Bar-to-Link Nut	75 ft-lbs
Tie-Rod End Nut	45 ft-lbs
Upper Ball Joint Nut	50 ft-lbs
Upper Strut Mounting Nuts	45 ft-lbs
Wheel Lug Nut	120-150 ft-lbs

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

WARNING: 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.

BEFORE BEGINNING, Please read all of 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:

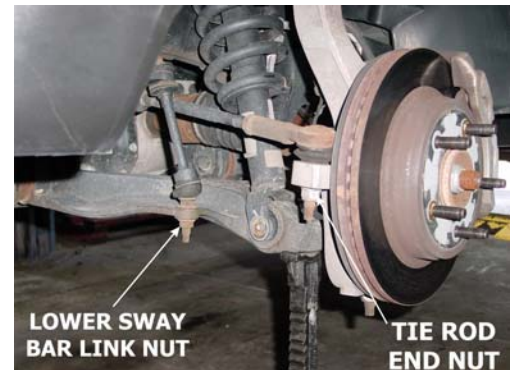
1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle so that the front wheels are off the ground. Support the frame with jack stands. Place jack stands on both the driver and the passenger sides of the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



2. Break loose the 3 upper strut mount nuts with a 15-mm wrench or socket. Remove the back two nuts completely. Loosen but do not remove the front nut.



3. Remove the lower sway bar link from the bottom of the control arm with an 18 mm deep socket. Disconnect the tie rod end nut 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.



4. Remove the upper ball joint nut with a 21 mm socket. Use a hammer to strike the side of the steering knuckle until the upper control arm pops out.



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. Next remove the struts lower bolt. Using a 24 mm wrench, hold the nut and remove the bolt with a 21 mm socket. Now remove the third nut from the upper strut mount.



7. Pulling outward on the strut assembly, you should be able to clear the upper strut tower and remove the strut assembly.

8. Place the Hell Bent Steel strut extension on the top of the strut, hold the part up to start the factory nuts onto the factory studs.

*** NOTE: Use the factory nuts with the factory studs***

****Please see additional instruction sheet here****

9. Run down the factory nuts snug with 15 mm end wrench. Torque to OEM specs.

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

*****Because of the shape of the HBS spacer, you will need to rotate the strut assembly 180° *****

11. Use a pry bar and/or floor jack to position the lower control arm and the strut assembly to reinstall the lower mounting bolt. Torque to OEM specs.

12. 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. Reattach the tie rod end and torque to OEM specs.



13. Repeat procedure on opposite side.

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

15. Reattach the front wheels. Torque to OEM specs

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

17. HAVE THE VEHICLE ALIGNED. A certified alignment technician that is experienced with lifted vehicles is recommended to perform the alignment. Realignment is necessary to allow the suspension to settle to its desired ride height (the wheels will be toed-in which will cause excessive wear on your tires and the nose will sit higher than it should.) ****Adjust your head lights if necessary.****

PLEASE NOTE:

The 1-3/8" thick spacer gives you a total lift of 2.5". This is due to the fact that when you extend the strut by 1-3/8" 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".

These instructions are available in full color on our website

www.hellbentsteel.com

*****PLEASE NOTICE*****

In March of 2008 Dodge made a change to the strut of the Dodge Ram 1500 4X4 strut cap. Dodge decided to omit a 1/8" plate that was there in the earlier models. See photos below.

Shown in **Figures 1 and 2**, is the 2006-Feb 2008 strut cap design.



FIG 1



FIG 2

Figure 3 shows the post March 2008 strut cap.



FIG 3

****Notice the absence of the plate over the bushing.****

Depending on when your 2008 truck was manufactured, you may have a strut with the plate or without. Please notice this upon install. If your truck does **NOT** have the plate attached, use the 1/8" thick plate provided with the HBS spacers. Place the plate on the strut cap **BEFORE** you fasten the spacer to the cap as shown in **Figures 4, 5 and 6**. This must be done in order to secure the rubber bushing in the strut cap.



FIG 4



FIG 5



FIG 6

If you have any questions please call our Tech Support toll free at 1.877.731.7911