

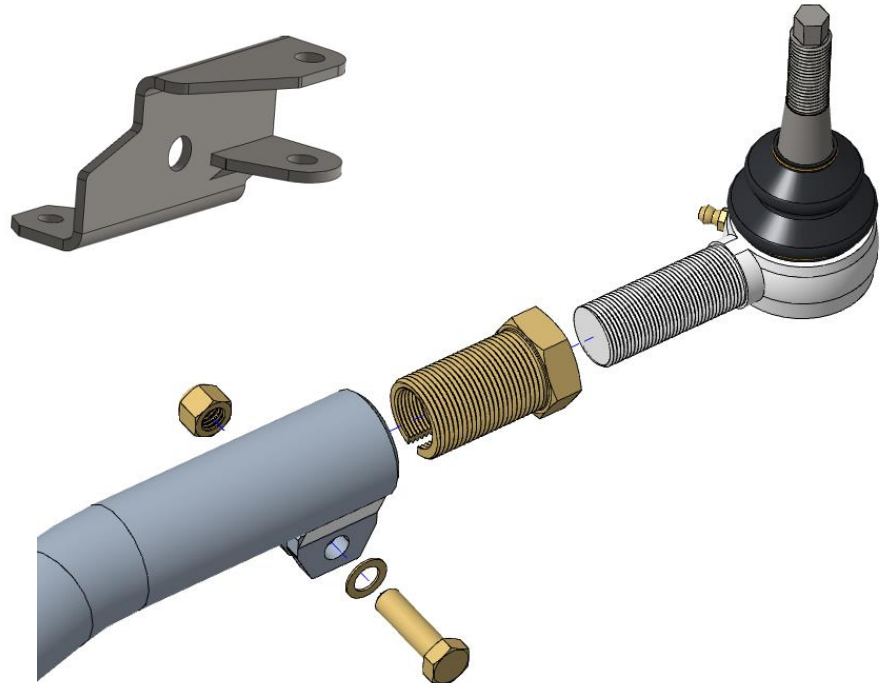
IRON ROCK OFF ROAD

1-877-919-JEEP www.ironrockoffroad.com

JL/JT Chromoly HD
Tie Rod Instructions

Parts Checklist:

- HD Tie Rod 77069 (1)
- High Angle Tie Rod End 95157 (1)
- Anti-Flop Tie Rod End 95158 (1)
- #186 - Clamping Hardware 13312 (2)**
 - 3/8-16 X 1-1/4 Hex bolt gr8 (2)
 - 3/8-16 Nylock flange nut gr8 (2)
 - 3/8 Mil spec washer (2)
- #291 - Double Adjuster & Grease Zerks (1)**
 - Double Adjuster 95137 (1)
 - Grease Zerk 95183 (2)
- Stab Relocation Bracket 77105 (1)
- #283 - JL/JT Stab Relocation Hardware 15446 (1)**
 - Spacer 77108 (1)
 - Tie Rod Clamp 92303 (1)
 - M14 x 80 Hex bolt
 - M14 Nylock flange nut (1)
 - 9/16 F436 washer (1)
 - M10 x 25 Hex bolt (1)
 - M10 Nylock flange nut (1)
 - 7/16 F436 washer (1)
 - M12 x 70 Hex bolt (1)
 - M12 x 110 Hex bolt (1)
 - M12 nylock nut (2)
 - 7/16 USS washer (4)



Before you begin:

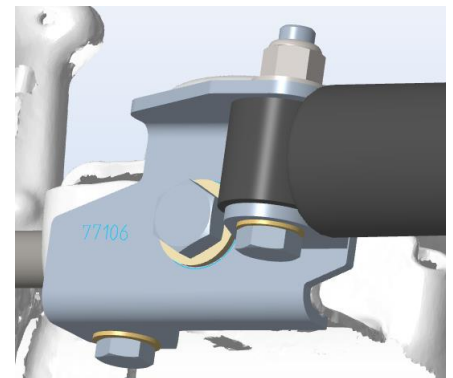
- ***Ensure that all parts are present and in good condition using shipping checklist. ***
- Read and understand all installation instructions.
- Tools required:
 - Sockets, wrenches, ratchet
 - Anti-seize
 - Grease gun w/ multi-purpose grease
 - Torque wrench

Tie Rod Installation:

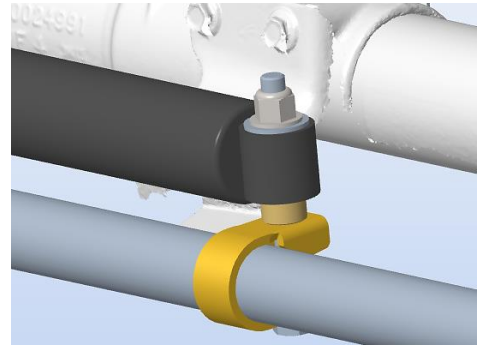
1. Measure center to center on existing tie rod.
2. Remove factory tie rod, stabilizer hardware, and stabilizer bracket from the axle.
3. Locate new tie rod and clamp from **HK #283**. Slip clamp onto tie rod then apply anti-seize to all threads.
4. Install double adjuster all the way into large threaded end of the tie rod. ***Reverse threads***
5. Thread tie rod end 95157 all the way into the double adjuster.
6. Thread tie rod end 95158 into the opposite end of the tie rod, leave 1/2" – 3/8" of threads exposed.
7. Install 3/8"x 1-1/4" bolt with thin washer into clamping tabs. Secure with nylock nut. Do not tighten at this time.
8. Install tie rod onto Jeep.
9. Install nuts onto tie rod ends.
10. Using an adjustable wrench spin double adjuster until the tie rod length matches your original length.
**If more than 1/2 inch of threads are exposed on double adjuster end disconnect passenger side and unthread the tie rod end 1/4 inch. **
11. Position the tie rod ends so they are in the middle of their travel and the tie rod is horizontal.
Torque the clamping bolts to 50 ft-lbs.
12. Torque tie rod end nuts to 50 ft-lbs.

Stabilizer Relocation Bracket Installation:

13. Locate stabilizer relocation bracket and hardware kit **HK #283**.
14. Remove track bar bolt from the axle side bracket and position track bar up, out of the way.
15. Install the relocation bracket on the track bar bracket with the M14 x 80 bolt. Do not over tighten the bolt, just make it snug.
16. Mark the location of the M10 bolt hole on the bottom of the track bar bracket.
17. Remove the relocation bracket and drill the hole with a 7/16" drill bit.



18. Reinstall the bracket and make sure the drilled hole aligns with the hole in the bracket. Secure with the new M10 bolt, F436 washer, and nut.
19. Install the track bar and bracket using the new M14 bolt and nylock nut.
20. Torque the M10 nut and bolt to 50 ft-lbs., torque the M14 bolt and nut to 100 ft-lbs.
21. Install the steering stabilizer into the new relocation bracket using M12 x 70 bolt, large USS washer, and nylock nut. The bolt should point up with the nut on top.
*Note: the bolt sleeve on one end of the OEM stabilizer is wider than the other. Install stabilizer into bracket with best fitment.
22. Install stabilizer onto the tie rod using the long M12 bolt, spacer, large USS washers and nylock nut.
23. Position the clamp on the back side of the tie rod with the bolt going vertical from the bottom.
*Do not tighten clamp at this time.



Steering stabilizer adjustment:

24. With the Toe-in adjusted and the Jeep at ride height, turn the steering wheel to the right until full lock is reached. This should be the point where the steering stabilizer would be fully collapsed: its shortest length.
25. Ensure the stabilizer is fully collapsed by compressing it by hand.
26. Note the location of the stabilizer clamp on the drag link.
27. Extend the stabilizer slightly (approx. 1/8") on the drag link and tighten the clamp. The clamp should point backward, the stabilizer should mount to the top side of the clamp, the nut should be on top.
28. The stabilizer should now be centered with the tires pointed straight ahead. Double check by cycling the steering both directions to ensure stabilizer does not limit your steering angle.
29. Torque the stabilizer clamp to 55 ft-lb and 65 ft-lb at the bracket.

Alignment Procedure:

30. **A professional alignment is recommended and will result in the safest handling and minimized tire wear.** As a temporary solution, with careful measurements you can set your toe-in fairly accurately using a tape measure.
31. Make sure the vehicle is on a level surface and the front tires are raised slightly off the ground with jack stands under the axle and the vehicles weight on the suspension.
32. Make a mark anywhere on the tread area of each front tire. The marks do not have to be in the same spot on each tire. This method ensures that your measurements are accurate regardless of rim and tire runout, even bent rims or untrue tires will not affect the measurement.
33. Measure from one mark to the other making sure your measurement is parallel to the axle housing and your marks are facing exactly forward. This is your front measurement.
34. Rotate tires so the marks are facing exactly backward. Measure from one mark to the other making sure your measurement is parallel to the front axle housing. This is your rear measurement.
For 29-32" tire diameter (measured): adjust your tie rod until the front measurement is 1/16" less than your rear measurement.
For 33-36" tire diameter (measured): adjust your tie rod until the front measurement is 1/8" less than your rear measurement.
35. Re-check your measurements.
36. Lower your vehicle from the jack stands.
37. Double check to ensure that all fasteners are tight.
38. Re-torque all fasteners frequently.

Final Safety Warning:

* Re-torque all fasteners after 100 miles, and frequently inspect all safety critical steering components. It is the responsibility of the installer to ensure all fasteners are properly tightened after installation and to ensure the owner knows his/her ongoing responsibility. It is the responsibility of the owner of the vehicle to be sure all safety critical components are inspected frequently, especially after off road or other demanding use.