

HIGH CLEARANCE

X-Treme Toyz installs a "High Steer" conversion on an '11 Jeep Wrangler JK

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Before anyone asks "Why do I need this? My JK works fine", let me say that the JK is one of the most capable "off the Showroom floor" vehicles I've ever encountered. I'm now on my 3rd one and since their introduction in 2007, I've found that there's a multitude of upgrades available that can make them *even better*.

In this article I'll concentrate on one upgrade that has made my life on the trail easier, a high steer conversion with heavy-duty components.

Why high steer? If you've ever bent your tie rod into some unrecognizable shape on a rock and had to make a trail repair, you'll get it. If not, let's just say clearance, clearance, clearance!

On our 2011 subject JK (*the conversion works on '07 – current models*) we're using a pair of Reid Racing HD Replacement Knuckles and a Chromoly Tie Rod and Heavy-Duty Drag Link from Synergy Suspension.

Let's start with the knuckles. Reid's knuckles are heavy-duty direct replacements made from ductile iron with added material and ribbing for superior strength. They raise the tie rod 1.5" and the drag link flip provides a full 3" gain. The new drag link position provides optimum steering angle without the additional brackets normally found with lift kits. The knuckles also feature dual steering stops, which eliminates the potential for a bent steering stop bolt, which can happen with the factory units.

The Synergy Heat Treated 4130 Chromoly Tie Rod is twice as strong as the factory unit and includes heavy-duty tie rod ends. The drag link is made from .250 wall DOM tubing for strength and features the same heavy-duty tie rod ends. Both pieces feature adjusting sleeves that allow adjustment without disconnecting. This system requires a factory pitman arm. If you have a dropped pitman arm, you'll need to replace it with a stock unit.

Reid Steering Knuckle Installation:

- 1) Remove the front wheels. Measure the center to center distance of the tie rod and drag link ends and note for reference.
- 2) Remove the factory tie rod, steering stabilizer and drag link to allow the knuckles to move freely. A few strikes with a dead blow hammer will easily release the tapered rod ends (photo 1).



Photo 1

- 3) Un-bolt brake caliper w/mounting bracket from knuckle and hang to prevent damaging ABS or brake lines (photo 2).



Photo 2

- 4) Remove rotor. Remove the allen bolt attaching ABS sensor to hub assembly (photo 3).



Photo 3

5) Remove 3 hub retaining bolts from backside of knuckle (photo 4).



Photo 4

6) Remove hub retaining nut and hub assembly (photo 5).



Photo 5

6) Remove cotter pins and loosen upper and lower ball joint bolts.

7) Use a dead blow hammer to release the ball joint tapers and remove the factory knuckle (if your ball joints are worn, now's the time to replace them) (photo 6).



Photo 6

8) Install the Reid Racing Knuckle using the factory ball joint nuts and new cotter pins (photo 7).



Photo 7

9) Re-install the hub assembly and brakes in reverse order of disassembly. Use loctite on the caliper and hub mounting bolts. (photo 10).



Photo 10

10) Repeat steps on opposite side of axle.

11) *While we were working on the axle, we used the opportunity to service the differential. After removing the cover to drain and inspect, we cleaned and re-installed the cover and filled the differential to spec with quality gear oil.*

Synergy Tie Rod & Drag Link Installation:

12) Synergy requires the track bar be raised 3" from the factory position at the axle with the high steer conversion to ensure proper geometry and eliminate the possibility of any bump steer. If your suspension system hasn't already done this, they make a weld-on (or bolt-on) unit to accomplish this. We removed the factory bracket and replaced it with the Synergy weld-on unit (photos 11, 12 & *13). (*Photo 13 has a stabilizer bracket for mock-up only).



Photo 11



Photo 12



Photo 13

13) Assemble new tie rod and drag link and adjust to lengths previously noted from factory units. Install with new nuts and cotter pins. Re-connect track bar and install steering stabilizer (photo 14).



Photo 14

14) Grease all the new tie rod ends (*Synergy Suspension Grease works great for this!*). Re-check that you've tightened all your components and test drive the vehicle. Your steering wheel can be adjusted back to center by loosening the adjusting sleeve on the drag link and rotating it the desired direction. Have your toe-in professionally adjusted by an alignment shop.

Now you have a heavy-duty steering system with the extra clearance you'll need to maneuver safely over obstacles. Check out the difference in the "Before" & "After" images!



Before



After

****Special thanks go out to Off Road Unlimited (ORU) for allowing us to use their Burbank, CA facility for this installation!***

For more product information, check out our "Vendor" section @ x-tremetoyz.com