



Ford Bronco 21+ KIT300 Tie Rods (TR220x1 Drivers, TR221x1 Pass)

At Apex, customer safety is our top priority, and steering is a **CRITICAL** safety component.

****Be sure the installer has read and follows these instructions****

Failure to follow these instructions may result in loss of control of the vehicle, accident, and injury.

Failure to follow install instructions and use correct install tools may also void the warranty.

Install instructions should follow vehicle through entire install process, including lock-to-lock clearance, wheel alignment, which require safety-critical torque and processes to complete.

Installation Instructions:

****Fits HOSS 1.0 and HOSS 2.0, but HOSS 3.0 boot will need to be stretched over rack side.**

1. Start by measuring where the center of the ball stud connects to the knuckle then to end of the inner tie rod that connects to the rack. Write down this measurement for later use.
2. Disconnect the outer tie rod from the knuckle first and remove it.
3. Remove the clamp around inner tie rod and slide the bellows off to access the inner joint.
4. With an **Inner Tie Rod Removal Tool**, remove the inner tie rod from rack.
5. Disassemble the new APEX tie rod assembly by removing the outer tie rod and bellows (TR220 Driver's or TR221 Passenger). ****CRITICAL NOTE: Ranger Raptor application requires reverse placement – TR220 to Passenger side and TR221 to Driver's side.**
6. Thread the inner tie rod into the steering rack and tighten to **89 ft/lbs** using **Inner Tie Rod Removal Tool and Torque Wrench**.
7. With the inner joint tightened, slip bellows over the top of the steering rack and install with supplied clamp.
8. Thread the outer tie rod to inner tie rod and adjust to the measurement taken in Step 1.
9. Slide supplied clamp over boot to seal inner tie rod to steering rack
10. Before installing the ends, apply a light layer of grease to the top of the boot. This will create a lubricated surface between the boot and the joint, helping to reduce friction.
11. Install the outer tie rod end into the knuckle and tighten castle nut. Torque castle nut to **46ft/lbs** **NOTE:** The Apex Chassis logo should be facing right side up on outer tie rod.
12. Install cotter pins. If you cannot see through the castle nut and stud, continue tightening until the cotter key pin can pass through.
13. We recommend using medium-strength thread locker (blue Loctite 243 or blue Permatex 24206 or other preferred brand) under the jam nuts, then tighten jam nut (26mm) to **100 ft/lbs**.
14. Install the grease zerks. Apex tie rods are pre-greased; however, a small amount can be added if necessary. **DO NOT OVERGREASE.**
15. Repeat process on other side.
16. Be sure to test the steering lock-to-lock to check for any interference with wheels or other vehicle parts.
17. At this point we highly recommend engaging a professional to get the alignment set.
18. Check boots and jam nut torque at oil change intervals.

*****Over greasing can cause boot to rip or come apart which isn't covered under warranty**

If you have any questions or concerns, please don't hesitate to give us a call or email.

Thank You,
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