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**INSTALL INSTRUCTIONS:**

Cognito Alloy Series Tie Rod Kit  
For 11-20 Silverado/Sierra  
2500HD/3500HD  
SKU: 110-90284

**PARTS LIST FOR SKU: 110-90284**

QUANTITY	PART #	DESCRIPTION
2	5558	Outer Tie Rod End
2	5570	Inner Ball and Socket Joint with Jam Nut

**TECH NOTES**

- Installation requires a qualified mechanic.
- Read instructions carefully and study the pictures (if included) before attempting installation.
- Check the parts and hardware packages against the parts list to assure that your kit is complete.
- Always wear safety glasses when using power tools.



**WARNING**

Please read this entire instruction sheet before beginning installation. Proper installation of these components requires a qualified mechanic. Always wear safety glasses when using power tools, and take appropriate precautions when working under a vehicle. If these instructions are not properly followed you may jeopardize your, and your passenger's safety, and severe frame, suspension or tire damage may also result from improper installation.

**INSTALLATION**

1. Remove the nut holding the outer factory tie rod to the spindle with a 19mm wrench. Using a hammer, tap on the spindle boss to dislodge the tie rod from the spindle
2. Unscrew the factory inner tie rod end assembly from the drag link at the inner joint, which is also the end of the drag link. Clean the grease and old thread locker out of these holes completely. Use contact cleaner and air dry.
3. Use thread locker on the threads of the new Cognito inner joint and thread it into the end of the center link. Use a 2" wrench or adjustable wrench to tighten the new tie rod on to the center link. Since there will be no easy way to torque this, tighten very tight with your wrench.

4. Thread the outer tie rod end onto the inner end. Make sure tapered hole in spindle is clean and insert the outer tie rod into the tapered spindle hole. **It is extremely important that the taper of the tie rod end is installed so it matches the direction of taper of the tie rod hole in the spindle.** Install new nut and torque to 80 ft-lb. Tighten jam nut against outer tie rod end to lock in the length of the tie rod assembly.
5. Grease both the inner and outer joints. Re-grease at every oil change/lube.
6. At wheel full droop, make sure the sway bar does not hit the Heavy-Duty tie rods since they are larger in diameter, all the way thru the turning cycle. Longer sway bar end links may be needed.
7. The toe settings of the vehicle will have to be adjusted to factory specs with a professional alignment.

## WARRANTY / RETURN POLICY / SAFETY

### **Cognito Limited Lifetime Warranty**

Cognito Motorsports, Inc. hereinafter "Cognito," warrants to the original retail purchaser, that its suspension products are free from workmanship and material defects for as long as the purchaser owns the vehicle on which the product(s) were originally installed. This warranty will be void if any modifications are made to the components, including alterations to the surface finish, i.e.; painting, powder coating, plating, and/or welding, or if they are improperly installed. Cognito truck suspension products are not designed nor intended to be installed on "competition" vehicles used in race applications, stunt or for exhibition purposes that are outside of the intended operating conditions specified by the manufacturer. Racing and competition are defined as any contests between two or more vehicles; or vehicles competing individually on off road circuits in timed events (whether or not such contests are for an award or prize).

This warranty does not include coverage for police, taxi, government or commercial vehicles, and the warranty does not cover Cognito products sold outside of the USA. Cognito's obligations under this warranty are specified and applied at its sole discretion, and warranty coverage is limited to repair or replacement of the defective product(s). Any and all costs of removal, installation or reinstallation; freight charges, incidental or consequential damages associated with the covered products are expressly excluded from this warranty.

The following items are exempt from Cognito limited warranty coverage: bushings, bump stops, tie-rod ends (Heim joints) and limiting straps. These parts are "consumables" and designed to wear as a normal part of their duty cycle, therefore they are not considered defective when worn. The aforementioned products are warranted separately against defects in workmanship, for 60 days from the date of purchase. As a condition of warranty validation, respective Cognito suspension components must be installed as a complete system (not combined with non-Cognito hardware or ancillary parts). Any substitutions or omission of required components will void the warranty. Some minor cosmetic wear and imperfections may occur to parts during shipping, which is not covered under this warranty. This limited warranty does not apply to any components that have been subjected to collision damage, negligence, alteration, abuse, or misuse, and coverage does not extend to products manufactured by third-party companies. Cognito reserves the right to supersede, discontinue, or change the design, finish, part number and/or application of its parts when deemed necessary, without notice.

### **Return Policy**

Product returns will not be accepted without prior written approval from an authorized Cognito representative. All products being returned must be shipped via trackable, prepaid freight. Returned products are subject to a 25% percent restocking fee. The eligible return period for products purchased directly from Cognito is 30 days from the verified date when the product(s) were originally received by the purchaser.

### **Product Safety Advisory**

The installation of Cognito steering and suspension components will modify your vehicle's original factory equipment and geometry, which may cause it to handle differently than a stock (unaltered) vehicle. Installation of these components is not intended to strengthen nor reinforce the vehicle's frame, nor are they designed to increase rollover protection. It is necessary to periodically inspect all suspension and drive train components for proper attachment, torque specifications, operation, and for any potential unusual wear or damage. Installation of these parts will modify the height of the vehicle and may raise the center of gravity. Modifying vehicle height combined with off road operation may increase your vehicle's susceptibility to rollover conditions, which may cause serious injury or death. Many states regulate allowable vehicle height modifications, and it is your responsibility to know and comply with the legal requirements specified by the laws where you reside. Modifications to your vehicle's ride height may also affect the ride quality, driver input response, trackability and handling, and wear to your vehicle's suspension components and tires.