



# THUMPER FAB

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## **POLARIS Ranger XP1000** **Tie Rods**

SKU: TF011105, TF011106



### **Thumper Fab**

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Ver. 0822

# Polaris Ranger XP1000 Elite Billet Tie Rod Kit

SKU: TF011105, TF011106



## PARTS

REF	QTY	DESCRIPTION
1	2	Billet Tie Rod
2	2	Kryptonite Inner Tie Rod - M14x1.5
3	2	5/8"-18 Heim Left Hand Thread
4	2	5/8"-18 Jam Nut Left Hand Thread
5	2	Standoff A
6	2	Standoff B (Tapered)
7	2	1/2"-13 x 3" Flange Bolt
8	2	1/2"-13 Flange Lock Nut
9	2	Steering Boot
10	4	Zip Ties

## TOOLS

- 18mm Socket
- 3/4" Socket
- 3/4" Wrench
- Crescent Wrench
- Large Channel Locks
- Blue Locktite
- Snips
- Drill
- 1/2" Drill Bit



## BEFORE YOU BEGIN

If you do not feel comfortable installing your **Thumper Fab** Elite Billet Tie Rod Kit please see your nearest Polaris® Dealer for installation.

# INSTALLATION INSTRUCTIONS

## Removal of Factory Tie Rods

Place the vehicle in park and using a jack lift up the front end and remove the tires. Disconnect the outer tie rod from the knuckle using an 18mm socket (**FIG 1**).



**FIG 1 - Disconnect outer tie rod from knuckle using 18mm Socket**

Use snips to remove that clamp holding the steering rack boot to the steering rack. Slide the boot down the tie rod to gain access to the factory inner tie rod end. Using a crescent wrench or large channel locks loosen the inner tie rod from the worm gear and fully remove tie rod from unit (**FIG 2**).



**FIG 2 - Loosen inner tie rod using Crescent Wrench or Channel Locks and fully remove Tie Rod**

# INSTALLATION INSTRUCTIONS

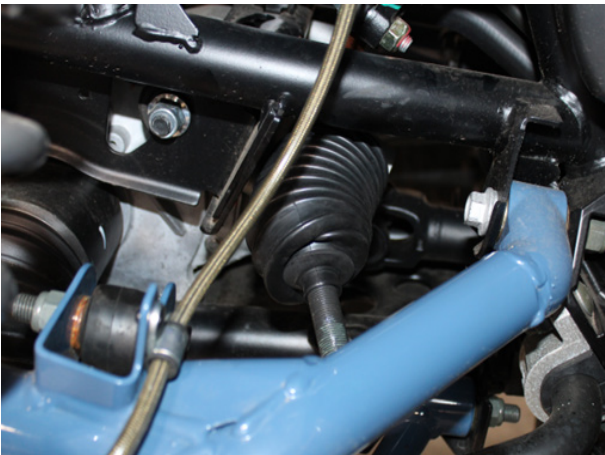
## Installation of Elite Billet Tie Rods

Prepare the Kryptonite inner tie rod (2) to be threaded into the worm gear by sliding the steering boot (8) over the long end of the inner tie rod (2) making sure to fully seat the boot. (FIG 3).



**FIG 3 - Slide the Steering Boot over the Kryptonite Inner Tie Rod End**

Apply a small amount of Blue Locktite to the thread on the inner tie rod (2) before threading the inner tie rod into the worm gear of the steering rack. Use a crescent wrench or channel locks to fully tighten (FIG 4). Use zip ties (9) to clamp steering boot (8) to the steering rack and inner tie rod (2).



**FIG 4 - Install Inner Tie Rod (2) onto Steering Rack and Clamp Steering Boot (8) using Zip Ties (9)**

## INSTALLATION INSTRUCTIONS

Thread jam nut onto inner tie rod before threading billet tie rod (1) onto the threads of the inner tie rod. Do not thread all the way to the steering boot to allow room for toe adjustment (FIG 5).



FIG 5 - Thread Jam Nut and Billet Tie Rod onto Inner Tie Rod

Thread 5/8"-18 jam nut left hand thread (4) onto the 5/8"-18 heim left hand thread (3) before threading both into the billet tie rod (1) (FIG 6).

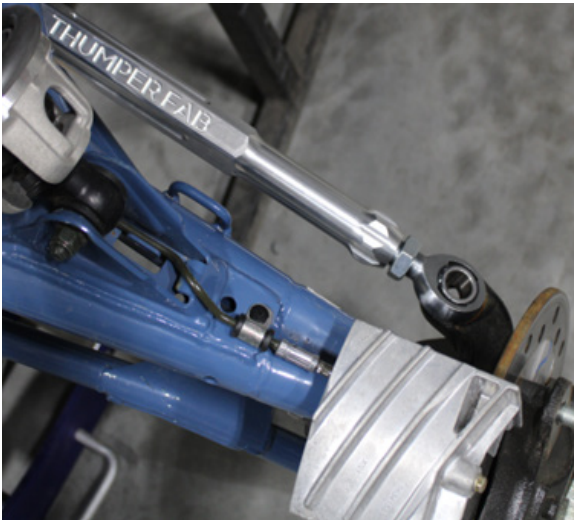


FIG 6 - Thread Jam Nut (4) onto Heim (3) and thread into Billet Tie Rod (1)

## INSTALLATION INSTRUCTIONS

Use the drill and 1/2" drill bit to slightly enlarge the bottom of the tapered hole on the knuckle that the tie rod is fastened to. Slide Standoff B (Tapered) (6) into the knuckle (FIG 6). Slide heim (3) over the straight portion of Standoff B (6) (FIG 7).



FIG 6 - Install Standoff B (6)



FIG 7 - Slide Heim over Standoff B (6)

Install Standoff A (5) on top side of heim (3). Slide 1/2"-13 x 3" flange bolt (7) through standoffs, heim, and knuckle with 1/2"-13 flange lock nut (8) on the bottom. Use a 3/4" socket and 3/4" wrench to tighten flange bolt and lock nut (FIG 8).



FIG 8 - Tighten Heim (3) to knuckle using 3/4" Socket and 3/4" Wrench

## INSTALLATION INSTRUCTIONS

Reinstall the front tires and lower the vehicle down to the ground. Adjust the toe as needed and tighten the jam nuts using a crescent wrench (**FIG 9**). Enjoy your Thumper Fab Billet Tie Rods!!



**FIG 9 - Adjust Toe as needed and tighten Jam Nuts using a Crescent Wrench**

The installation of products sold or manufactured by Thumper Fab including, but not limited to suspension components such as lift kits, control arms, frame stiffener kits, roofs, roll cages, and tires that exceed the original specifications for the vehicle, may change the vehicle's center of gravity and handling characteristics both on- and off-road. You are aware that the installation of tires that are larger than original vehicle specifications may reduce the effectiveness of the braking system. Use of these products may place added stress to the original factory vehicle components which could cause them to weaken or possibly fail.

Products sold or manufactured by Thumper Fab are intended for off-road use only. Operation of a vehicle modified with these products on a road could result in serious bodily injury or death, and such operation may violate the laws of your state or municipality. You agree to operate your vehicle exclusively in the manner intended by the vehicle manufacturer. You agree that failure to safely and reasonably operate your vehicle could result in serious bodily injury or death, and that, as a result of installation of this product(s) to your vehicle, extreme care must be taken to prevent vehicle rollover or loss of control, which may be more likely to occur as a result of said modifications. You will avoid unsafe maneuvers, including sudden sharp turns or other abrupt maneuvers, which could make a vehicular accident more likely. You understand that Thumper Fab is not responsible or liable for any damages or any injuries to yourself or your passengers that could occur upon possible accidents due to driver error, incorrect installations, bad judgment, incompatibility with other aftermarket accessories or natural disasters to the fullest extent allowable by law. You will have all vehicle occupants fasten seatbelts, if equipped, and wear proper safety equipment, such as DOT approved helmet and eye protection prior to operating the vehicle. You understand and acknowledge that failure to wear proper safety equipment may increase the risk of serious bodily injury or death to yourself and any passengers.



Proper installation of products sold or manufactured by Thumper Fab requires knowledge of the factory recommended procedures for removal and installation of original equipment components. Installation of these products without proper knowledge and experience may affect the performance of these components and the safety of the vehicle and cause serious bodily injury or death. It is strongly recommended that a certified mechanic familiar with the installation of similar components perform the product(s) installation.

Prior to installing any products sold or manufactured by Thumper Fab, you will perform or cause to be performed an inspection of their vehicle to confirm its condition is suitable for the installation of these products. A proper inspection of the vehicle includes confirmation that the vehicle has not been in a collision and is free of corrosion. If the vehicle is suspected to have been in a collision or misused, or is otherwise unsuitable for modification, you will not install the product(s). You will continue to inspect the vehicle prior to each use to confirm its condition is suitable for its intended use, and you acknowledge that the failure to do so may result in serious bodily injury or death, as well as damage to the vehicle itself.

You will install any warning labels provided with the product so it may be prominently seen by yourself and all passengers. You will notify all passengers of the modifications performed to your vehicle prior to operation.

Insurance companies may handle coverage of a modified vehicle differently. Please check with your insurance carrier prior to modifying the vehicle to ensure your coverage remains sufficient.

Installation of this product(s) may void your vehicle warranty. If this is a concern, please check with the manufacturer or dealer before purchase or installation of this product(s).



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