



Cognito Motorsports Inc.

2017-2020 Polaris RZR XP Turbo 2/4 Seat

2017-2020 Polaris RZR XP 1000 2/4 Seat

2018-2020 Polaris RZR RS1

Cognito Long Travel Radius Rod Kit #s: 360-90382 & 360-90056

Introduction

- 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.
- The OEM Polaris radius rods under heavy duty use are prone to bending and wearing out the bearings in the ends which become very sloppy. A bent or broken radius rod can cause much more damage sometimes breaking or bending rear axles, rear cv joints, trailing arms, rear shock shafts, and sway bar end links.
- All the rod ends are right hand thread, so that if jam nuts come loose, the length does not change and cause damage.
- Please note, there is slight trimming needed to clear these larger heavy duty radius rods. The stock radius rod plate has bent edges that will need to be trimmed slightly. It is highly recommended to use the Cognito Radius Rod Cage in place of the stock radius rod plate. With the Cognito Radius Rod cage, there is no trimming needed. There is also tight clearance on the trailing arm end of the radius rods, slight trimming may be needed of the ears on the stock trailing arm hanging out near the radius rods. If using Cognito trailing arms, no trimming will be needed.

***Polaris has made a mid-year design change as far as the radius rod bolts. In 2017, the bolts transitioned from 10mm diameter bolts to 12mm diameter bolts. This kit is strictly for the 10mm diameter bolt Polaris model. Grab a 15mm wrench and put it on the radius rod bolt head, if it fits correctly then this is your kit.**



Parts List: 360-90056

- (2) 8376 lower radius rod
- (2) 8377 upper radius rod
- (8) Rod end JMX10T
- (8) 5/8-18 jam nut
- (12) 5905, thin stainless steel spacer bushing
- (4) 5906, thick stainless steel spacer bushing

Parts List: 360-90382

- (2) 8509 lower radius rod
- (2) 8377 upper radius rod
- (8) Rod end JMX10T
- (8) 5/8-18 jam nut
- (12) 5905, thin stainless steel spacer bushing
- (4) 5906, thick stainless steel spacer bushing

Installation Instructions

1. All hardware will be re-used, so retain all removed hardware for re-use.
2. Raise the rear of your RZR up and support by the frame so that the suspension droops out and tires are off the ground by at least an inch. Remove rear tires.
3. Remove the fasteners holding the outer ends of the stock radius rods to the spindle bearing carriers, and the inner ends from the chassis and sandwich plate.
4. Locate the included rod ends and jam nuts. Thread the jam nuts all the way onto the rod ends, finger tight. Now lubricate the threads of the radius rod bars, then thread in the rod ends into all the ends of the radius rod bars, thread them all the way in.
5. The 2 longer bars are the lowers, tighten the jam nut on one end, then clock the rod end on the other end to be even with the first end, then tighten that jam nut. It is difficult to tighten these jam nuts when installed on the car, and we don't want the length to change of the lower radius rods, therefore we are tightening the jam nuts on the bench/vise prior to installing on the car.
 - a. **If you bought the fixed radius rod no adjustments to jam nuts will be required.**
6. Now locate the 2 upper bars. Tighten the jam nut on one end. Then for zero camber, back the other rod end out one full turn for the stock replacement kit, or 2.5 turns for the long travel kit, clocking the rod end with the other end, and now tighten the jam nut.
7. Now install one end of the radius rod assemblies to the spindle bearing carriers, the outer ends will get one thin spacer bushing on each side of each rod end. Tighten to 70 ft-lbs.
8. Now there will be 4 thin spacers left, and 4 thick ones. The thick ones go on the side of the rod end that will mate up to the chassis. The thin spacer will go on the rear followed by the stock sandwich plate. The thick spacers go against the chassis to slightly space the larger diameter Cognito radius rod tubes away from the chassis since there is tight clearance at full shock compression. Tighten these bolts to 70 ft-lbs.
9. Install rear wheels and tighten lug nuts to OEM spec which is in the service manual as 120 ft-lbs although we feel this is high and we like to use 90 ft-lbs. Choose at your own discretion.

Instruction Set # 8119
360-90004, 360-90045, 360-90351

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.