



Cognito Long Travel Lower Radius Rod Kit for 2017-2022 RZR XP Turbo, 2017-2022 RZR XP 1000 & 2018-2022 RZR RS1

INSTALL INSTRUCTIONS:

Cognito Long Travel Lower Radius Rod Kit for 2017-2022 RZR XP Turbo, 2017-2022 RZR XP 1000 & 2018-2022 RZR RS1
SKU: 360-91167

PARTS LIST FOR SKU: 360-91167

QUANTITY	PART #	DESCRIPTION
6	5905	2017+ Polaris RZR XP Radius Rod Spacer, Thin & 12mm Bolt
2	5906	2017+ Polaris RZR XP Radius Rod Spacer, Thick & 12mm Bolt
2	8509	2014+ Polaris RZR XP Radius Rod, Fixed Lower



PARTS LIST FOR SKU: 8509

QTY	PART #	DESCRIPTION
2	HARDWARE-IRR-1-3/16"	1.187" Internal Retaining Ring
2	UNI-BALL-WSSX10T-F1	Uniball WSSX10T .625" w/ F-1 Fit & Teflon Liner.

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.

INTRODUCTION

The Cognito Long Travel Camber Adjustable Straight Radius Rod Kit is camber adjustable and designed to be used in conjunction with the Cognito Long Travel Trailing Arms and Long Travel Kit. These radius rods are constructed using chromoly tubing and rod ends. The Cognito radius rods drastically increase strength without adding any weight over the OE radius rods. The OEM Polaris radius rods under heavy duty use are prone to bending and wearing out the bearings in the ends which become sloppy. A bent or broken radius rod can cause damage sometimes breaking or bending rear axles, rear cv joints, trailing arms, rear shock shafts, and sway bar end links.

REQUIREMENTS

- **NOTICE:** Polaris made a mid-year design change to the radius rod bolts in 2017. The bolts transitioned from M10 bolts to M12 bolts. This kit is **strictly for the M12** (12mm diameter) bolt Polaris model. Grab a 18mm wrench and put it on the radius rod bolt head, if it fits correctly then this is your kit. If the 18mm socket does not fit correctly see SKU: 360-91165, the M10 bolt version.
- **Using the stock radius rod cage, trimming is required to clear these larger heavy duty radius rods.** The stock radius rod plate has bent edges that will need to be trimmed. 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 required. 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.
- Installation requires a qualified mechanic.
- Follow the OE specifications when replacing or re-installing OE fasteners, retainers, and hardware specified in the OEM manual.
- Always wear safety glasses when using power tools.
- When a lift is required to perform the installation of these products and always ensure the vehicle is properly supported before attempting installation or serious injury may occur.

TECH NOTES

- **All the rod ends are right hand thread**, that way if the jam nuts come loose, the length does not change and cause damage.
- Read instructions carefully and study the pictures (if included) before attempting installation.
- If this product was purchased as part of a kit each kit, and options to kits, are packaged separately. Therefore installation procedures are covered in separate instructions. Familiarize yourself with each specific set of instructions before beginning.
- Check the parts and hardware packages against the parts list to assure that your kit is complete before starting.



INSTALLATION

1. Rack the vehicle and lift it off the ground, or if no hoist is available then jack rear of the vehicle off the ground and support properly with jack stands. The rear suspension must fully droop out and the tires must be over an inch off the ground. Remove the rear tires and set them aside.
 - **NEVER WORK ON AN UNSUPPORTED VEHICLE.**
2. Remove the radius rods. Remove the fasteners holding the outer ends of the lower radius rods to the bearing carriers. Remove all fasteners holding the inner ends of the radius rods to the chassis and radius rod cage. Remove the lower radius rods and set them aside.
 - **NOTE:**
Retain all removed hardware for re-use when installing the Cognito long travel radius rod kit.
If the OE hardware is damaged contact the Cognito sales team for new hardware.
3. Install 1x **8509** on the vehicle. Locate 1x **8509**, fixed lower radius rod and 2x **5905**, thin spacers. Place one spacer on either side of one of the uni-balls. Mount the uni-ball with the spacers in the lower radius rod mounting location of the barring carrier.
Re-use the OE hardware and torque to **70ft-lbs**.
4. Repeat the step above to install the remaining **8509** on the other side of the vehicle.
5. Mount the radius rods to the chassis. Locate the remaining 2x **5905**, thin spacers and the 2x **5906**, thick spacers. The **5906**, thick spacers, must go between the chassis and the radius rods. The **5905**, thin spacers, will go between the radius rods and radius rod cage.
Re-use the OE hardware and torque to **70ft-lbs**.
 - **NOTE:**
The thick spacers **must** go between the chassis and Cognito radius rods to provide the proper clearances required when the suspension is fully compressed.
6. Check clearances to the new components. It is highly recommended to check the clearance between the new Cognito radius rods and all stock and aftermarket components once the radius rods have been installed. Support the trailing arm with a jack or jack stand, remove the two bolts holding the shock and sway bar link to the trailing arm. Move and secure the shock and sway bar link out of the way, be careful not damage any sensors attached to the top of the shock. Lift the rear suspension up by hand, mimicking suspension travel and check to see if any components bind or touch during movement. If any binding is felt, stop all movement, locate the source of the binding and clearance any touching components as needed until the full range of motion is achieved.
 - **NOTE:**
If using **stock components**, the stock radius rod cage has bent edges that will need to be trimmed and the stock trailing arm ears near the radius rods might need to be trimmed.
If using **Cognito products**, no trimming is required.
7. Re-install the sway bar end link into the trailing arm and attach the lower shock eyelet to the trailing arm.
Re-use the OE hardware and torque to **70ft-lbs**.
8. Re-install the rear wheels.
Torque the lug nuts to **120 ft-lbs**.



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.