

## Cognito Hybrid Long Travel Front Upper Control Arm Kit For 14-21 Polaris RZR XP 1000 / XP Turbo

**INSTALL INSTRUCTIONS:**

**Cognito Hybrid Long Travel Front Upper Control Arm Kit  
For 14-21 Polaris RZR XP 1000 / XP Turbo  
SKU: 360-91060**

**PARTS LIST FOR SKU: 360-91060**

QTY	PART #	DESCRIPTION
1	80002	Left Upper Control Arm
1	80003	Right Upper Control Arm
2	HP9134	Cushion Clamp Hardware Pack

**PARTS LIST FOR SKU: 80002**

QTY	PART #	DESCRIPTION
1	8795	Left Upper Control Arm
1	91127	Uniball Pin Kit
1	HARDWARE-10743-03367	Internal Retaining Ring
1	HP9314	Front Arm Bushing, 1.375" Pivot Tubes

**PARTS LIST FOR SKU: 80003**

QTY	PART #	DESCRIPTION
1	8796	Right Upper Control Arm
1	91127	Uniball Pin Kit
1	HARDWARE-10743-03367	Internal Retaining Ring
1	HP9314	Front Arm Bushing, 1.375" Pivot Tubes

**PARTS LIST FOR SKU: HP9314**

QTY	PART #	DESCRIPTION
1	5039	Short Crush Sleeve
1	5548	Long Crush Sleeve
2	POLY-BUSH-1.25X.120X.625	Short Poly Bushing
2	POLY-BUSHING-91802	Long Poly Bushing


**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.

Modification of vehicle suspension can interfere with ride-height sensors, active suspension, lane departure features, semi-autonomous, and autonomous driving features. It is the responsibility of the mechanic to determine feature compatibility prior to installation. Recalibration of sensors may be required in the event of any modification.

Part Lists Continued on Next Page

**PARTS LIST FOR SKU: HP9134**

QTY	PART #	DESCRIPTION
4	HARDWARE-0708753	Wire/Tube P Clamp W/Vinyl Cushion
4	HARDWARE-10-32X5/8-SHCS	Socket Head Cap Screw
4	HARDWARE-10-32-LOCKNUT	Thread Nylock Nut
8	HARDWARE-10-32-SS-FW	Flat Washer

**PARTS LIST FOR SKU: 91127**

QTY	PART #	DESCRIPTION
1	UNI-BALL-WSSX14T-F1	Uni Ball
1	6299	Spindle Pin
1	6300	Spherical Washer
1	HARDWARE-0161339	Flange Screw
1	HARDWARE-33622	Lock Washer



## INTRODUCTION

Thank you for purchasing the Long Travel Control Arm Kit

The Cognito Long Travel Front Control Arm Kit for the Polaris RZR is the starting point for putting together any serious long travel suspension setup.

This OEM Polaris control arms are lightweight and suffice for light to moderate operation. Under more aggressive use, OEM bushings, ball joints, and even the arms themselves can fail. Cognito control arms use larger bushings, uni-ball spherical bearings, and hardened stainless steel spindle pins designed to handle abuse. The upper arms have a robust boxed sheet metal and tube design which increases strength while keeping weight to a minimum.

## TECH NOTES

- Read instructions carefully and study the pictures (if included) before attempting installation.
- If this product was purchased as part of a bundle/package. Familiarize yourself with each set of instructions included with the bundle/package before beginning.
- Check the parts and hardware packages against the parts list to assure that your kit is complete before starting.

## REQUIREMENTS

- 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.
- Some trimming of the stock spindles is required using an air sander.

## INSTALLATION

1. Raise the front of the RZR up by the frame so that the suspension droops out and tires are off the ground. Remove front wheels. Remove front body so that the front upper arm pivot bolts can be removed.
2. Unbolt the brake caliper from the spindle, the axle nut from the spindle, and the control arms from the spindle. Then remove the spindle and let the lower arm, caliper, and axle hang.
3. The front sway bar and end links will be retained, so leave those in place and just unbolt them from the upper control arms.
4. Stock spindles have a little extra metal that needs to be removed. This trimming has no effect on structural integrity, this is an outside corner that has nothing to do with the strength of the spindle. See **Figures 1 and 2** which shows a stock **2015** spindle and notes on the corners that will be trimmed. **Figure 2** shown with the pinch bolt in place, note the extra meat that will need to be sanded off.

*Figure 1: Notes show the 2 areas that will need trimming.*



*Figure 2: More detailed note of the trimming, which must be done to both areas shown in Figure 1.*



5. Use an air sander and remove the corner material as shown in **Figure 3**, take it down to where the edge of the flange bolt and nut would be.
6. **Figure 4** shows what the finished edge should look like with the flange bolt there.
7. This trimming should be done on both the upper end of the spindle and the lower end, to provide clearance for the Cognito upper and lower control arms.





8. Since you also must install the Cognito long travel lower control arms (sold separately), go ahead and unbolt the lower arm from the car and remove, instructions for the lower control arms are found in the lower arm kit. Unbolt the shock from the upper arm, and the upper arm from the car and remove.
9. If you have not replaced or recalibrated the shocks yet (needed to work with long travel), the shocks will need to be replaced or recalibrated anyway, so go ahead and remove them from the RZR now.
10. Locate the Cognito lower control arms. Refer to their instructions for any assembly if not fully assembled from our factory.
11. Mount the lower control arms in place per the lower arm instructions, with the factory pivot bolts, Torque the pivot bolts to **40 ft/lbs**.
12. Locate the Cognito upper control arms, they may be factory assembled, if not then follow this step. They may already have the spherical bearing and retaining clip installed, please verify at this time. If the poly bushings and steel crush sleeves are not factory installed, then (USING NO GREASE) press a long poly bushing into each end of the long (front) frame pivot tube. Each upper arm gets **2** long poly bushings. Press a short poly bushing into each end of the short (rear) frame pivot tube. Each upper arm gets **2** short poly bushings.
13. Now lubricate the inside of the poly bushings with grease, and then push the included steel crush sleeves into the greased holes of the poly bushings in the Cognito upper control arms.
14. Mount the upper control arms in place with the factory pivot bolts. See the parts list above and the part # stamped on each arm to determine proper placement. Torque the pivot bolts to **40 ft/lbs**.
15. If not factory pre-assembled, locate the included spindle studs, spherical washers, lock washers, and **12-point** bolts. Clean the threaded holes of the spindle studs with brake cleaner and then blow the threads dry with compressed air, to ensure the thread locker will do its job. Use a small amount of anti-seize and thinly coat the hole of the spherical bearing, do not get any in the threaded hole of the spindle stud. Install the studs in the spherical bearings of the upper arms now, the upper arms have the stud pointing down. Use a drop of red thread locker on the threads at the end of the bolt (farthest from the bolt head) to ensure the thread locker covers the threads which engage with the spindle pin. Fasten the stud to the spherical bearings with a stainless spherical washer cap, then a lock washer, then the **12-point** bolt. Use a boxed end wrench on the end of the stud and a torque wrench on the **12-point bolt** and torque to **35 ft-lbs**.



16. With the long travel front axle in place, install the control arms to the spindles just like stock, torque pinch bolts to **40 ft.lbs** as shown in **Figure 5**. Route the brake line like shown in **Figure 6 and 7**, then mount the caliper to the spindle and torque to **40 ft. lbs**. Tighten axle nut and install cotter pin.
17. Use the cushion clamp kit provided and fasten the brake lines to the upper arms as shown in **Figure 6 and 7**.

*Figure 5: Tighten stud and pinch bolt.*



*Figure 6: Brake Line Routing.*



*Figure 7: Fasten brake line with cushion clamps.*



18. Bolt the shock in place with stock hardware, tighten to **40 ft/lbs**.
19. Using the stock hardware, bolt the sway bar end link to the Cognito upper control arms, tighten to **40 ft.lbs** in **Figure 8**.



20. To help brake line clearance with the wheel, see the figures below. In **Figure 9**, you can see the brake line fitting bolted to the caliper and how far it is from the bleeder. Barely break loose the brake line bolt just enough to rotate the fitting toward the bleeder like shown in **Figure 10**, then retighten the bolt.







21. Install wheels, make sure everything is tightened appropriately, cycle the steering at ride height and full droop to be sure there are no issues with brake lines.
22. Set ride height, with no passengers and stock height (**29"**) tires, it should be **13.5"** for stock travel kit, and **15.5"-16"** for long travel kit. Measure from the ground to the frame gusset underneath the lower control arm rear frame pivot. For larger diameter tires, ride height goes up by the radius change. Must roll the car forward and back ward to get it to settle before measuring.
23. At proper ride height, check front wheel toe measurement, should be **0-1/8"** toe in.



## 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 warrantied 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.