2018-2019 Polaris RZR RS1
Stock Replacement Front Upper Control Arm Kit
Installation Instructions

SKU# 360-90469

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 control arms are lightweight and will suffice for light to moderate operating use. Under aggressive use and racing, there are a few areas that become problematic such as bushings getting loose, upper arms bending, and broken ball joints or ball joints pulling thru the arm. The Cognito control arm kit uses larger bushings, spherical bearings (uni-balls) and hardened stainless steel spindle pins rather than the stock ball joint. The construction is of stronger material, slightly thicker, and a stronger design to handle abuse.
- The spindle needs a modification in order to provide clearance for a heavy-duty control arm with uni-balls like the Cognito control arms. The instructions will take you through this modification as well as installation. We will modify the upper and lower end of the spindle in case you are also going to install the Cognito lower control arm kit at some time.

Parts List – 360-90469

- 8573 Driver upper arm
- 8574 Passenger upper arm
- (2x) ¾" spherical bearing (uni-ball), pre-installed in control arms
- (2x) internal retaining ring, pre-installed in control arms
- HP9216 Bushing and Crush Sleeves
- (2x) HP9187 Spindle pin kit
  - 5580 spindle pin
  - 5395 spherical washer
  - 3/8-24x3/4" 12 point flange bolt
  - 3/8" lock washer
- HP9170 Brake Line P-Clamp Kit

Installation Instructions

1. Raise the front of the vehicle up by the frame so that the suspension droops out and tires are off the ground. Remove front wheels.
2. If you have already installed the Cognito lower arm kit, you should have already modified your spindles to clear the uni-ball end of the new control arms. If you have not, those instructions for modifying the spindles are listed here in these sub steps of step 2. You may skip step 2 and Figures 1-4 completely if the mod has already been done.
   a. Unbolt the brake caliper from the spindle, the axle nut from the spindle, and the upper and lower control arms from the spindle. Then remove the spindle and let the lower arm, caliper, and axle hang.
   b. The spindle needs a modification in order to provide clearance for a heavy-duty control arm with uni-balls like the Cognito control arms. Stock spindles have a little extra meat 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 Figure 1 which shows a stock spindle and notes on the corners that will be trimmed. Then see Figure 2 shown with the pinch bolt in place. Note the extra meat that will need to be sanded off.
   c. 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.
   d. Figure 4 shows what the finished edge should look like with the flange bolt there.

Figure 1: the 2 corners noted need to be trimmed, see next figures.

Figure 2: more detail shown of the area that needs to be removed, which must be done in both locations shown in Figure 1.

Figure 3: Sanding the corners off

Figure 4: when done removing material this is what you will have, material removed right up to the flange of the bolt and nut.

3. Pick a side to start on. Unbolt the shock from the upper arm. The shock can stay bolted in at the top, and use a bungee cord or strap to prop it up out of the way. If you are also having shock work done that of course you can go ahead and remove them from the vehicle now.
4. Unbolt the upper arm from the chassis, retain the hardware for re-use.
5. Locate the Cognito upper control arms. They should already have the spherical bearing and retaining clip installed, please verify at this time. If you ordered your control arms raw, then the bearings might

not come pressed into place. Verify the retaining clip is set all the way in the retaining clip groove to hold the bearing in place.

6. Do not use any grease in this step as the bushing are supposed to stay fixed with the arm. Press a poly/plastic bushing into each end of the long (front) frame pivot tube. Each upper arm gets 2 poly/plastic bushings. Press a poly/plastic bushing into each end of the short (rear) frame pivot tube.
7. Now lubricate the inside of the bushings with grease, filling the cavity in between the bushings and also the grease flutes on the inside diameter of the bushings. Now push the appropriate crush sleeves into the greased holes of the bushings.
8. 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 but it is pretty obvious as the pivots are different widths front and back. Torque the pivot bolts to 40 ft-lb.
9. Repeat for the process for the opposite side.
10. Locate the included spindle studs, spherical washers, lock washers, and 12 point bolts. Install the studs in the spherical bearings of the arms now, the upper arms have the stud pointing down. Fasten the stud to the spherical bearings with a stainless spherical washer, then a lock washer, then the 12 point bolt and torque to 35 ft-lb. Use a drop of red threadlocker on the threads at the end of the bolt (farthest from the bolt head) to ensure the threadlocker covers the threads which engage with the spindle pin.
11. With the axle in place, install the control arms to the spindles just like stock, torque pinch bolts to 40 ft-lb as shown in Figure 5. Then mount the caliper to the spindle and torque to 40 ft-lb. Tighten axle nut and install cotter pin, Polaris service manual calls for 180 ft-lbs on the axle nut.

Figure 5: Re-assembly

12. Use the cushion clamp kit provided and fasten the brake lines to the upper arms.

Figure 6: look at the distance from the line to the bleeder screw, this kicks the brake line up closer to the wheel, this is stock on some cars.

Figure 7: if there is a large gap like in Figure 6, crack the banjo bolt loose and turn and re-tighten like this Figure. Gives more room so the line does not rub wheel.

13. Bolt the shock in place with stock hardware, tighten to 40 ft-lb.

14. 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.
15. Set ride height, with no passengers and stock height (29”) tires, it should be 13”. 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 backward to get it to settle before measuring.
16. At proper ride height, check front wheel toe measurement, should be 1/8” toe out, when occupants get in and car settles down the toe will end up about 1/8” in.

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Product Consumer Safety and Warning

The installation of this kit will modify the suspension of your vehicle and may cause it to handle significantly different than a factory equipped vehicle. Installing larger tires with modified suspension and increased ground clearance will significantly alter the handling characteristics of the vehicle, and may result in increased braking distances as well as changes in vehicle maneuverability and handling compared to the factory equipped vehicle. As with any vehicle, extreme caution and care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers. Always wear seat belts and drive safely, recognizing the reduced speeds and specialized driving techniques is required.

This suspension system will not strengthen nor reinforce the stock frame of the vehicle, nor will it increase rollover protection. It is necessary to periodically inspect all suspension and drive train components for tightness of fit or any damage. Installation of these parts will modify the height of the vehicle and will raise the center of gravity. Altered height modifications and off-road operation may increase your vehicle's susceptibility to roll over conditions and may cause serious injury or death. Many states regulate the height modification to each vehicle. Check the laws in your state for exact specifications. Height modifications may affect the reaction, ride, handling, and wear factor of your vehicle's components.

Failure to drive this vehicle safely may result in injury or death! Do not drive this vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Some modifications and combinations of modifications are not recommended, unsafe, and may not be permitted in your state. Consult your vehicle owner's manual, the instructions accompanying this product, and your state laws before undertaking these modifications. The owner of the modified vehicle and the qualified mechanic required to install this product are responsible for the legality and safety of the vehicle being modified.