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INSTALL INSTRUCTIONS:

Cognito OE Replacement
Upper Control Arm Kit for
2018-2021 Polaris Turbo S

SKU: 360-91027



PARTS LIST FOR SKU: 360-91027

QUANTITY	PART #	DESCRIPTION
1	8793	Turbo S Hybrid UCA-Driver
1	8794	Turbo S Hybrid UCA-Passenger
1	HP9134	4PK Cushion Clamp Hardware Pack
2	HP9223	SPINDLE PIN KIT
2	HP9224	Front Control Arm Bushing Kit

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.

TECH NOTES

- Installation requires a qualified mechanic.
- Always wear safety glasses when using power tools. Some cutting is required.
- 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.
- Sanding of the spindle is required.

INSTALLATION

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 step 2. You may skip step 2 and Figures 1-2 completely if the mod has already been done.

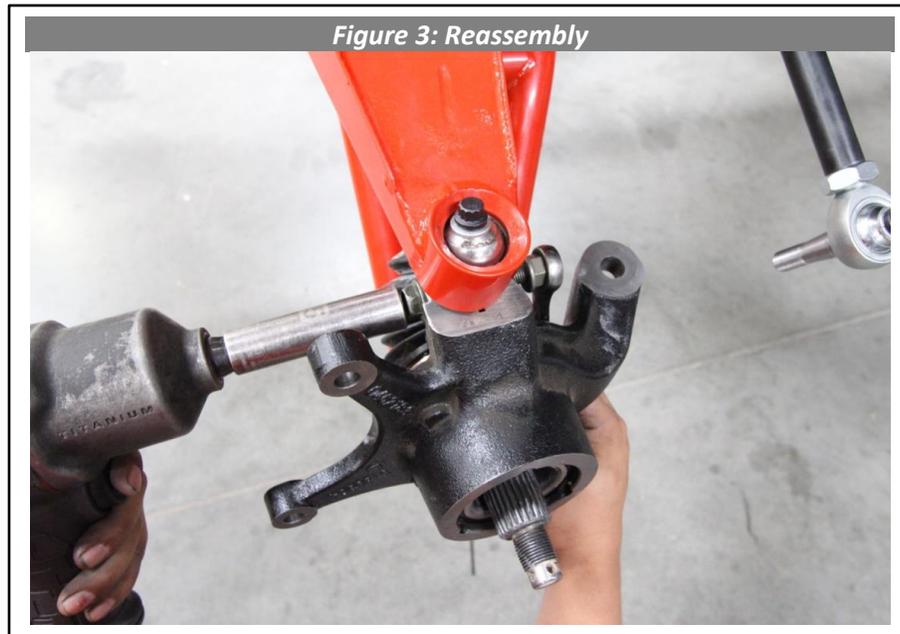


Figure 2: when done removing material this is what you will have, material removed right up to the flange of the bolt and nut.



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 obvious as the pivots are different widths front and back. Torque the pivot bolts to 70 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 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.
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 (54 Nm). Tighten axle nut and install cotter pin, Polaris service manual calls for 180 ft-lbs on the axle nut.



12. The Cognito upper arms will accommodate the stock brake line clamps. You will notice the stock brake lines have bonded in place cushion clamps with a little indexing pin on them. The Cognito arms have the hole to bolt on the stock clamps and the hole for the indexing pin. Simply bolt the brake line to the upper arms using the 10-32 fasteners provided in the cushion clamp kits, you will not need the provided cushion clamps though unless you are installing the aftermarket high performance brake lines Cognito offers sold separately.

Figure 4/5: if there is a large gap like in Figure 4, 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 70 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 (32") tires, it should be 16". 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 in, when occupants get in and car settles down the toe will end up about 0".

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.