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INSTALL INSTRUCTIONS:

Steel Body Aftermarket Fox rear
shock tuning kit 2014-2019 2/4 seat
Polaris RZR XP 1000/Turbo with
Cognito long travel

PARTS LIST

QUANTITY	PART #	DESCRIPTION
2	6017	Longer shock shaft
2	FOX-SHIMSTACK-R-COMP22	Compression shim stack
2	FOX-SHIMSTACK-R-REB20	Rebound shim stack
1	Fox-Oil-8OZ	8 oz race oil for top off



WARNING

Please read this entire instruction sheet before beginning installation. Proper installation of these components requires a qualified mechanic and shock absorber technician. 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 vehicle damage may also result from improper installation.

TECH NOTES

- These instructions are not detailed in the tear down and re-assembly of the shocks, they are merely to summarize the installation of the included kit components.
- It is necessary to open the shocks up to gain access to the shock internals to install this kit, shock absorber is under nitrogen pressure. Do not attempt to open the shocks up nor install if you are not a qualified shock technician nor have the proper tools to work on these specific shocks.
- This application is only for the aftermarket steel body Fox 3.0" rear shocks for the Polaris RZR XP1000/turbo platform. These shocks were only made by Fox from 2014 through 2017.
- If shocks are thoroughly used, it is recommended to tear shocks completely apart and install rebuild kits and fresh shock oil, along with installing this kit. Rebuild kits and shock oil sold separately, as well as service labor to install this kit and rebuild kits.
- Comp flutter stack 1)1.8x10, 1).85x10, 2)1.8x15, 2)1.6x15, 1)1.42x20, 1)1.35x20, 1)1.25x15, 1)1.1x15, 1)1.05x15
- Rebound pyramid stack 1)1.6x15, 1)1.42x15, 1)1.35x12, 1)1.25x12, 1)1.1x12, 1).95x12

REQUIREMENTS

- Installation requires a qualified mechanic and shock absorber technician
- Shock absorber must be bled of air properly and recharged with nitrogen after re-assembly.
- Read instructions carefully and study the pictures before attempting installation.
- Check the parts and any hardware packages against the parts list to assure that your kit is complete.



Installation:

1. Remove the springs and spring hardware. Turn the DSC knobs counterclockwise till they stop to open them all the way up. Release the nitrogen from the reservoir.
2. After opening up the shock absorber, and removing the shaft assembly from the body, mark the piston top with a 'T'. Remove the piston from the shaft. Remove the seal head and cover from the shaft.
3. Remove the eyelet from the end of the shaft, a little heat might need to be applied. The new longer shaft is 1" longer than the OEM shaft. Clean the threads of the eyelet, and the new shaft making sure they are clean and dry. Install the eyelet on the new shaft with a small dab of thread locker.
4. Install the cover and the seal head, of course use a bullet tool to avoid damaging the seals when installing on the shaft.
5. Remove the OEM shim stacks from the piston and replace with the Cognito shim stacks. Be sure to install the rebound shim stack on the top of the piston, and the compression shim stack to the bottom of the piston. Refer to the tech notes above for the shim stack order, the compression stack may be a flutter stack so not a straight pyramid stack. Retain the large thick OEM backup washer between the shaft and the smallest compression shim.
6. Before installing the piston nut make sure the OEM washer is under the nut and that the nut will not run out of thread. If you can see the last thread above the washer, add another washer so the nut does not run out of thread which would prevent the nut from clamping the piston assembly to the shaft. Tighten the nut to 30 ft.lbs.
7. If you are also rebuilding the shocks and changing oil, you will need to follow the next sub-steps
 - a. Remove the reservoir end cap, push the floating piston down till it stops against the bridge. Measure from the floating piston to the end of the reservoir paying attention to where your measuring device is sitting on the piston, write down the measurement. Later when installing the floating piston, you will use this measurement subtract $\frac{1}{2}$ " to set the floating piston height.
 - b. Dump all the oil out of the shock body into a clean container to reuse the oil if intended.
 - c. Remove the reservoir body from the bridge.
 - d. Push the floating piston out of the reservoir, not past the threads, push it out the long way so it comes out where the end cap resides so the threads don't tear up the wear band and O-ring.
 - e. Change seals etc from rebuild kit, Re-install the reservoir body to the bridge.
 - f. Stand the shock upside down, fill the reservoir with oil then install the floating piston so there is no air in the reservoir on the oil side of the floating piston, you have to do this fast in order to avoid having air above the oil under the reservoir floating piston.
 - g. Take your measurement from step above, subtract $\frac{1}{2}$ " as mentioned in step above, this is going to be the height you set the floating piston at WITHOUT going past, if you go to far down with the piston, there may be no way to pull it up depending on what type of piston Fox installed. Now install the end caps.
8. Re-assemble the shock, use the top off oil provided.
9. Charge the shock with nitrogen to 200 PSI. Check your work, install new Cognito spring kit along with your newly tuned shocks.



Shock Set-up on vehicle:

Front

- Ride height in front is measured from the ground up to the flat gusset under the rear pivot of the lower control arm, with no one in the car. Roll the car forward and backward a few times to make sure it is settled out before measuring. Ride height is changed with the preload setting, the preload is adjusted via the preload adjusting ring at the top of the spring. It may have either a pinch bolt keeping it in place or a jam nut ring just above it. Be sure the crossover rings are up above the spring divider before measuring and adjusting ride height.
 - With Cognito Long Travel suspension,
 - if 2 people will occupy, this height should be $\frac{1}{2}$ of the measured diameter of the tire plus 1.5" For example, tire measures 28.5", so for 2 occupant ride height will be 15.3/4"
 - if 1 person will occupy, this height should be $\frac{1}{2}$ of the measured diameter of the tire plus 1" For example, tire measures 28.5", so for 1 occupant ride height will be 15.1/4"
- Crossover ring setting for the front shocks is determined by the gap in between the spring divider and the crossover ring. This distance should be 3/4" for the front shocks while at the ride height set above. This is a good starting point, and this can be fine-tuned for several different scenarios or types of riding or racing.
- Setting the toe adjustment will be done at the ride heights described above. The toe will be set outward slightly to accommodate for the change in ride height once the occupants are in the vehicle.
 - if 2 people will occupy, the toe should be set at 1/4" toe out
 - if 1 person will occupy, the toe should be set at 1/8" toe out
- Setting the clickers, for long travel and the FOX aftermarket IBP shocks with Cognito tuning, we like to back these out to full open on both knobs, and then take both knobs in 8 clicks. For the Fox XPTurbo OEM IBP shocks, try 8 clicks in from full soft on the stock adjuster, or if it has dual speed compression adjusters, start with 12 clicks in from full soft on both adjusters.



Rear

- Ride height is measured from the ground up to the flat surface at the very rear of the chassis under the stock tow hook, with no one in the car. Roll the car forward and backward a few times to make sure it is settled out before measuring. Ride height is changed with the preload setting, the preload is adjusted via the preload adjusting ring at the top of the spring. It may have either a pinch bolt keeping it in place or a jam nut ring just above it. Be sure the crossover rings are up above the spring divider before measuring and adjusting ride height.
 - With Cognito Long Travel suspension,
 - if 2 people will occupy, this height should be $\frac{1}{2}$ of the measured diameter of the tire plus 1.5" For example, tire measures 28.5", so for 2 occupant ride height will be 15.3/4"
 - if 1 person will occupy, this height should be $\frac{1}{2}$ of the measured diameter of the tire plus 1" For example, tire measures 28.5", so for 1 occupant ride height will be 15.1/4"
- Crossover ring setting for the rear shocks is determined by the gap in between the spring divider and the crossover ring. This distance should be 3" for the rear shocks while at the ride height set above. This is a good starting point, and this can be fine-tuned for several different scenarios or types of riding or racing.
- Setting the clickers, for long travel and the FOX aftermarket IBP shocks with Cognito tuning, we like to back these out to full open on both knobs, and then take both knobs in 3 clicks. For the Fox XPTurbo OEM IBP shocks, try 3 clicks in from full soft on the stock adjuster, or if it has dual speed compression adjusters, start with 4 clicks in from full soft on both adjusters.



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.

