

# Level 2-4 Spring Kit

## XP Turbo S

Thank you for purchasing the Shock Therapy Level 4 spring kit. Included in the kit: four “silent” cross over rings with hardware and four O-rings, 8 new springs. Other than basic hand tools you will need a jack, spring compressor (optional) and preferably a bench vice.

Step one: Remove the front shocks from your RZR. This is best done by jacking the up the front of your RZR until the tires are barely off the ground. Do one shock at a time as they are different from side to side and you can’t mix them up. Remove the front shocks first. Using 18 mm tools, remove the bottom and top bolts holding the shock to the chassis. If you lift up a bit on the tire while you remove the bolts it will be very easy. Once the shock is off the RZR, remove the mounting spacers and O-rings on each end of the shock so they are not lost.

Spring part numbers and locations

XP Turbo S Level 2	Level 3	Level 4
Front upper N/A	Front upper xxx38	Front Upper xxx38
Front lower N/A	Front lower N/A	Front Lower xxx321
Rear upper xxx55321	Rear upper xxx55321	RU xxx55321
Rear lower N/A	Rear lower N/A	RL xxx55341
Front Pre load N/A	Front Pre load 1”	Front Pre Load 2”
Front X over N/A	Front X over 2”	Front X Over 6”
Rear Pre load 2”	Rear Pre load 5”	Rear Pre Load 5 ¼”
Rear X over 8 ½”	Rear X over 8 ½”	Rear X Over 11 ¼”

Step two: Remove the factory springs. Place the shock upside down in a vice so it is tight in the vertical position. Next, spin pre-load collars (two black tooth rings on the top spring) toward the top of the shock loosening the tension on the springs. Remember, the shock is upside down in your vise. After a few inches the springs will become loose. Next, push the bump stop inside the lower spring retainer down the shock shaft and out of the way of the spring retainer. With the springs loose, remove the lower spring retainer from the bottom shock mount. You can now remove the springs and the plastic spring divider from the shock.

Step three: Install the “silent” cross over ring. (Dynamix uses two, single piece cross over rings per shock) Grab a tape measure to locate the pre load and “silent” cross over ring locations. All measurements are taken from the point where the round, threaded shock body ends and the top, billet cap starts. Refer to the picture to the right.



From this point measure down and make a mark for the location of the “silent” cross over nut. Refer to page 1 for measurements as they will vary based on spring kit level. Now, thread the new silent cross over rings on your shock starting from the bottom of the shock body where the chrome shaft extends out. The bottom of the cross over ring has a recessed groove in it for the O-ring to sit. The top of the ring is flat. Thread the top ring on the shock with the recess groove facing the top of the shock. Thread the second ring on shock with the flat surface facing the top



ring and the recess groove facing the bottom of the shock. Both rings will tighten against each other with their flat surfaces almost touching each other and the recess grooves facing up and down. Now, slide the O-ring on the shock and roll it all the way to the “silent” cross over ring. Install the new upper spring (Level 3 and 4 kits only). Make sure the plastic divider has the long portion facing the bottom of the shock. Also, there are 2 arrows on the plastic divider. This is where the end of each spring should sit.

The top spring ends on one arrow and the bottom spring on the other arrow. Refer to the picture above. If you do not have the orientation correct, the plastic divider will be very noisy as it slides up and down the shock body. This is where you need to use your spring compressor to compress the spring package. Install the lower spring retainer and spin the pre load collar tighter to re-establish your pre load on the springs. Pre load should be measured from the billet top cap to the top of the upper spring (or bottom of the pre load nut). Again, refer to page 1 for measurements. Install the mounting spacers and O-rings again. You may want to use a little grease on the O-rings because if they get dry they will squeak when you are driving.

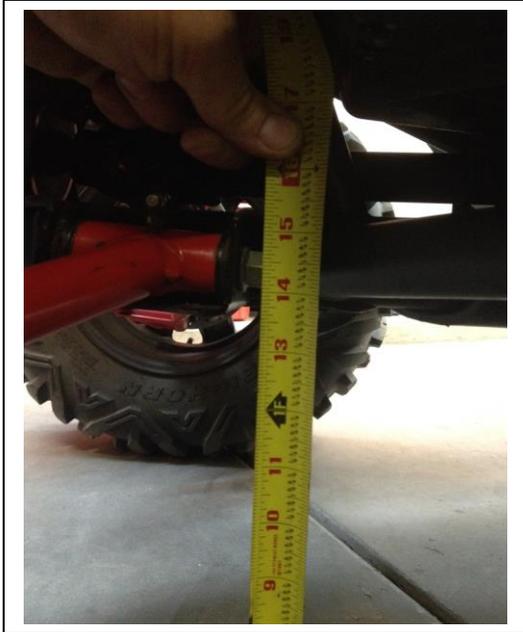
Step four: Install the shock on the RZR lifting the tire slightly to get the bolts started. Go back to step one and repeat the steps on the second shock. Once both shocks are back on the RZR let the jack down and jack up the rear.

Step five: Remove the rear shocks. They require 18 mm tools. Remove the mounting spacers and O-rings. Put the shock, upside down in the vice.

You can either spin the pre load collar in order to remove the springs or you can use a spring compressor to remove the springs and spin the collar when it had no load on it. Spring compressors are usually free to borrow at your local auto parts store.

Step 6: Now that you have the springs removed, spin the pre load collar up the appropriate location for your kit. Measure down from the bottom of the reservoir bridge and make a mark for the “silent” cross over ring. Just as with the front shocks, refer to page 1 for measurements Install the “silent” cross over ring and O-ring making sure you have the grooved side facing the bottom of the shock. Install the O-ring. Install the new upper spring. Install the plastic divider and the lower spring with the springs clocked 180 degrees apart where they touch the divider. Compress the springs and install the lower spring perch and install the lower spring perch and mud guards.

Step 7: Install the rear shocks. Install the shocks by lifting the rear tire slightly to help get the bolts started. Set the RZR on the ground. Now you need to set your ride height. This is very important because if your car is too high it will ride rougher. If it is too low it will feel soft and may bottom out too easy. You must drive it 100 yds or so to get the springs and suspension to settle properly for an accurate measurement EACH time you make a ride height change. Stop the RZR slowly without using much brake on a level spot. The FRONT ride height should be 16.5” WITH THE DRIVER IN THE RZR. This measurement is taken from the bottom of the frame where the lower control arm bolts to the chassis to the ground. See the pictures on the next page. If you are low or high jack up the RZR and adjust the pre load collar up to lower the RZR or down to raise it. Pre load collar adjustments are about half of what you need in ride height. Example, if you need



$\frac{1}{2}$ " more ride height you should lower the collar about  $\frac{1}{4}$ ". The rear should be about  $\frac{1}{2}$ " lower than the front or 16" of ground clearance. This is measured in the rear, center of the RZR, from the bottom of the chassis to the ground just below the rear tow hook. Always drive the RZR between adjustments. You are done!

The "silent" cross over ring is designed to bring the higher spring rate of the lower spring into play as you compress the suspension. The combined spring rate of both the upper and lower springs together is considerably lighter than the lower spring rate. This means that the higher up the shock you place the "silent" cross over ring (later engagement) the longer, through compression, the system will be soft and plush. The lower on the shock you run the "silent" cross over ring the sooner the stiffer lower spring will come into play, firming up the ride. Since the RZR's are under sprung in the front from the factory they react well with the "silent" cross over ring lower and fairly close to the spring divider in front. With one person in the car you are good with  $\frac{1}{2}$ " to 1" of space between the divider and the bottom of the cross over ring. Another thing to consider is that the lower you run the cross over the sooner the bottom spring comes in which will limit front end dive under braking and front end roll in turns. Feel free to adjust the "silent" cross over rings and find out what you prefer. Our starting point is an all-around good place to be for most drivers. In the rear, you need a little more space between the cross over nut and the spring divider so that the rear stays plush and softer for longer. This keeps the rear settled down in the whoops as well as less kicking and lower when jumping.:

The cross over rings are designed to be rubbed by the coil springs. As the spring compresses it vibrates side to side and can rub the cross over ring. This is NORMAL. Sometimes the factory lower spring isn't very flat on top and can cause the upper spring to bow. You will notice this by looking at the plastic spring divider when the car is on the

ground. If it is fairly straight with the shock body your good to go. But if it is sitting sideways a bit then your lower spring is causing this. Jack the car up and clock the upper and lower springs 90 degrees apart from each other by twisting them by hand instead of 180 degrees apart like the arrows on the divider want them to be. This may get the divider to sit straighter and allow the upper spring to rub the cross over ring less.

Now don't think about it anymore. Go drive it!