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# **RZR 4-Seat XP 1000 Turbo Full Spring Kit**

**Polaris RZR XP 1000 Turbo | 2010+**

**Part #: 5301184, 5301194**

**Rev. 082417**

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## **SAFETY WARNING**

RT Pro UTV recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known.

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## **WHY BUY RT PRO UTV**

Great off-road driving and racing comes with having the most rugged and durable machine in the pack.

RT Pro UTV performance enhancing products will make your off-road machine stronger, tougher and safer so you can have more fun and less breakdowns.

For over a decade, RT Pro UTV staff have been taking brand new UTVs and driving them to their breaking point. When they bend, break or falter, we take them back to shop and create a fix that stops the problem from happening again.

There is no other company in the industry that puts more thought, engineering and design innovation into their products than we do. Our team is made up of off-road racers, mechanical engineers and talented fabricators who live and breathe all things motorsport. Above all, we share a passion for innovation, quality construction and getting things right.

All of our products are designed for assembly by weekend warriors with normal garage tools and the occasional spot-weld. Assembly directions are complete and thorough.

Remember, when you buy a RT Pro UTV product for your UTV, all of the parts have been designed and manufactured in the United States with U.S. steel and other high quality American components.



<b>RTP5301184 - Medium</b>		
<b>Part #</b>	<b>Description</b>	<b>QTY</b>
30120325S	Front Coil Spring	2
30040600DS	Front Coil Spring	2
37100200S	Rear Coil Spring	2
37140300S	Rear Coil Spring	2
04063	Coil-over Ring	4
04064	Coil-over Ring	4

<b>RTP5301194 - Heavy</b>		
<b>Part #</b>	<b>Description</b>	<b>QTY</b>
30120350S	Front Coil Spring	2
30040600DS	Front Coil Spring	2
37100250S	Rear Coil Spring	2
37140300S	Rear Coil Spring	2
04063	Coil-over Ring	4
04064	Coil-over Ring	4

## FITMENT NOTES

N/A

## SPECIAL TOOLS

N/A

## INSTALLATION TIME

Approximately 1 hour  
Easy/Medium Difficulty

# INSTALLATION INSTRUCTIONS

## INSTALLING THE SPRINGS

1. Remove shocks from machine and back off Preload Adjuster Nuts until there is enough room to remove the Lower Retaining Rings from the shock assemblies.
2. Slide OEM springs off shock assembly and discard. Keep the Lower Retainer Rings for re-use.

3. Start by installing the adapter rings to the top spring retainer. These will adapt your shocks to use the new larger-sized springs provided in this kit.

*NOTE: Adapters are only used on the front shocks in this kit.*

4. The front springs are 2.5" I.D. and the rear are 3.0" I.D. the short springs go on first.
5. Slide the new springs on starting with the short springs. Next slide the supplied Spring Spacers on to the shock bodies. The short shoulder of the spacers should face the short spring and slide inside of it.

*NOTE: All short springs are the same rate so they can go on any shock in any order.*

*NOTE: You may reuse the OEM rear spring spacers mounted upside down for a firmer ride at an earlier point in the travel. Start with our then experiment later if needed.*

6. Finally, install the long springs and the Lower Retaining Rings. - Once the shocks are reassembled you are ready to move on to the initial setup.

*NOTE: While the shocks are off the machine be sure to lubricate the eyelets on the shocks with some grease or your preference of lubricant. Polaris is shipping the RZR's out with completely dry eyelets!*

## **SETTING UP THE SPRINGS**

Settings vary so much from vehicle to vehicle. It is impossible for us to give a universal answer to where you should start. Like with any coil-over shock, spring rates and preload take some fine tuning to achieve the best results. The good news is we have the rates figured out for 95% of users. As for the preload, we recommend using this formula:

7. With the machine jacked up off the ground; Spin the Preload Adjuster Nuts down until they touch off on the springs. This is Zero Preload.

*NOTE: A common misconception is that preload is to be measured from below the head of the shock (where it meets the threaded body) to the top of the Preload Adjuster Nuts. This is false. Zero preload is when the shock is fully extended and the Preload Adjuster Nut is just touching the spring stack enough to keep it from moving up and down inside its limits. The measurement from the head of the shock should only be used as a reference point to check total preload.*

8. From Zero Preload, tighten the Preload Adjuster Nuts down 1/4" on the front and 1 1/2" on the rear shocks. Use the exposed threaded bodies of the shocks as a reference point to know how far you're going.
9. Set the machine on the ground after setting both front and rear Initial Preload. Before measuring your ride height, take the vehicle for a quick ride around the driveway.

*NOTE: The suspension needs to "settle" and will only do so by driving it. Jumping up and down on the bumpers will not suffice.*

10. Once the suspension is settled, measure the front and rear ride height. At RT Pro we measure the rear at the bottom of chassis. On the front we measure at the front of the chassis base structure directly behind the lower arm rear-most mounting tab.
11. As a base recommendation, we set most of our racing vehicles at 13" front and 12" rear. The RZR seems to jump and handle better with the front end about 0.5-1" higher than the rear. For terrain with less ground clearance required we always prefer 13"F / 11"R. This is our preference so your mileage may vary. There is no real "wrong" way to set your vehicle up. It should always be whatever works best for you. Of course you can always add more preload to get a little extra ride height but will sacrifice ride quality.
12. In the initial stages of adjustment we recommend starting with 1/2" adjustment increments. Once you feel you're close, start making 1/4" adjustments and then 1/8" until you are personally satisfied with the height and ride of your machine for your applications. It's fine to run up to 1.5" of preload in front and 3" rear with these springs but if your ride requires more than this we recommend swapping to a stiffer main spring. The rear is designed to run more preload than the front with this kit, so don't be surprised if this is what you end up with.

## VALVING ADJUSTMENTS

We recommend initially setting the compression adjusters half way on this model. The softer these are set the less fluid friction is created and longer the shock fluid will resist overheating. However the XP1 can be extremely soft at the softest setting causing a lot of body roll. Once ride height is set you can start slowly turning these external compression adjusters in a little bit at a time until you achieve the desired firmness. If you can't get the firmness you desire back them off and add ¼" preload to the springs front and rear. Keep doing this until it meets your needs.

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## THANK YOU FOR YOUR BUSINESS!

For questions or additional information feel free to call and ask for tech support or email us through our website at: [rtproutv.com/contact](http://rtproutv.com/contact)



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Get a photo of your RT Pro UTV equipped vehicle and send them in for a chance to be featured in our customer gallery!