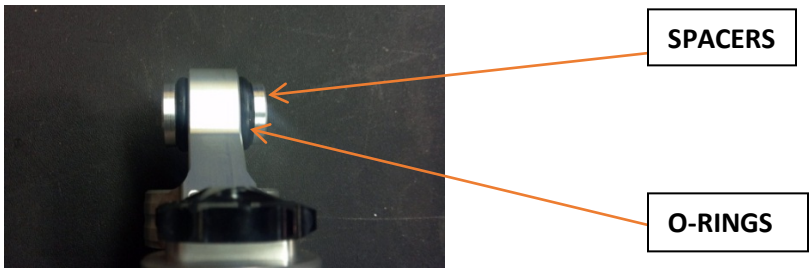
SKI SHOCK INSTALLATION

Our Polaris, Ski-doo and Yamaha, Cat shocks are a direct replacement for your stock shocks and require no modifications to the stock vehicle prior to running them (M-Cat see attach). Skidoo G-4 shocks are R.H- L.H. and need to be indexed with the reservoirs to the front of the sled. We do on occasion add extra length to our shocks depending on the vehicle and you should not be alarmed if your shocks show up and they are slightly longer than stock. Our triple rate springs allow us to run more ski travel and maintain the same ride height as your stock vehicle. There is simply no substitute for long travel, the more you have the better your sled will ride the key is controlling ride height.

Follow these simple installation instructions and again contact us with any questions.

1. Lift the front of your sled off the ground securing it properly not to fall.
2. Remove old shocks saving hardware for the installation process.
3. *Install your Raptor shocks using supplied spacers with an O-ring on each spacer.*
4. *Springs are set with ¼ inch of preload and clickers on pos. five.*



GENERAL SETUP AND TUNING

You will find these shocks are extremely adjustable and will just about fit anyone's riding style with external adjustments! We tune our shocks for a given vehicle with custom valve codes along with springs so every model is truly different from the other and not some generic setup that is a one size fits all (if it were only that easy). We do have rare occasions and unique circumstances where we need to go inside our shocks and change our codes to better suit someone's riding style. This generally happens on opposite ends of the scale where there is a 120 pound Gal that needs a more compliant ride or a large or aggressive rider that drops his sled from the lower stratosphere and needs something a little stiffer. Here are some of our best practices and general setups that will get you started.

All of our shocks leave here with ¼ inch of preload (unless specified) on the springs and position 5 on the clickers (unless specified). We recommend that if you need to make changes that you make ONE change at a time and make them in small increments to not tune yourself right out. If you are turning on the clickers turn them one to two clicks at a time they are very effective and if you turn them five clicks at a time it will likely have a profound effect. We have 20 positions to choose from and we recommend running them where you see fit and if 20 is where you like it run it there it will not hurt the shocks in any way. Here are a couple scenarios on why to adjust clickers.

1. Vehicle is dropping to far into the stroke on moderate to big bumps.
    a. Click the shocks firmer by two clicks at a time until you feel you have remedied the problem.
2. Vehicle feels like it is deflecting off of bumps and not absorbing them.
    a. More times than not your sled is trying to tell you it is too stiff and you need to back down on the compression again do this one or two clicks at a time.
3. Vehicle feels like it's bouncing in the front end and not very compliant.
    a. This should tell you that you want to add some compression if you are on very soft settings. Adding compression will act like stiffening rebound what it does is not let the shocks drop so far into the stroke and wind the springs up and then release all that stored energy. This will settle the front end down and give you a more controlled feel.
4. Vehicle has a noticeable amount of feedback in the handle bars.
    a. Setup is to stiff and needs to be loosened up. This can be a combination of too much compression and too much spring preload.

As far as adjusting the springs we set them with ¼ inch of preload from the factory an this is a great spot to start. If you feel that the vehicle needs more preload again we recommend working into this slowly with two turns of preload at a time and we do not recommend less than ¼ inch of preload or you could have issues keeping the spring retainer in place. One revolution on our spring adjuster equals 1/16 of an inch of preload. Here are a couple scenarios that may pertain to you.

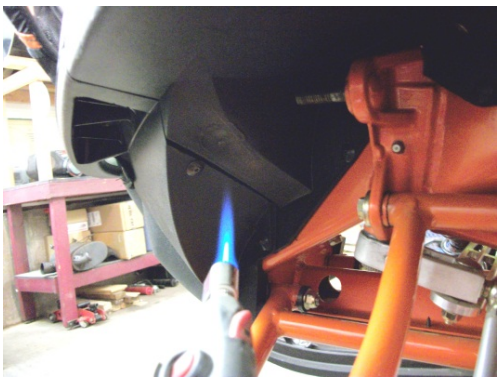
1. Sled wants to wallow around and not stay flat.
    a. This is not a bad thing depending on what you're doing (boon docking) but if you feel it a negative you can crank in two turns of preload at a time until you reach your goal. Some potential negatives with this is excessive ski pressure resulting in heavy steering.
    b. Our shocks adjust at very low shock velocities so adding compression will help slow down some of the excess wallowing.
2. Vehicle feels bouncy and wants to deflect off of bumps.
    a. Two much preload on the springs can cause this issue back off until acceptable also a couple clicks of compression can help settle this down.
3. Vehicle has heavy steering and wants to dart excessively on the trail.
    a. This has many culprits but as far as springs to much preload will cause excess weight on the skis and heavier steering.
4. Vehicle won't turn on the trail and wants to push in the corners.
    a. This also has many culprits but as far as springs the more preload you give the springs the more weight it will put on the skis and the better they will bite.

Ski Shock Installation – M Series

Due to the tight fit of the plastic in the upper shock tower area it is necessary to make a small indentation in the plastic for proper adjuster knob clearance at full jounce (bottom). Basic hand tools are needed and this modification should only take 5-10 minutes to perform.

1.) Lift the front of the vehicle off the ground securing it properly for not to fall.
2.) Remove old shocks saving hardware for the installation process.
3.) Loosely install your new Raptor shock to mark the area that needs to be relieved for proper adjuster knob clearance a Sharpie works well for this. After you have clearly marked the area remove the shock.

4.)Take a butane torch and heat the area hot enough to soften the plastic once the plastic is malleable enough take a hammer handle or screwdriver handle and push the area up about a ¼ to 3/8 of an inch for about 30 seconds or so until the plastic cools (blowing compressed air on the area works well). This will give the knob adequate enough clearance when the shocks are fully bottomed out.



5.) Reinstall your Raptor shocks using supplied spacers and O-rings with an O-ring on each spacer on the uppers only. These O-rings go between the spacer and the spherical bearing and will keep the shocks from pivoting axially and keep them rotating with zero friction.

Ski Shock Installation – 1100 Turbo

The cover over the turbo inlet must be relieved for clearance for the clicker knob on the piggyback reservoir.

1. Take cover off and heat the area shown with a butane torch or heat gun until the plastic is soft enough to manipulate. Use a hammer handle to press a 1'' diameter relief about a ¼ inch deep in the cover shown in the attached pic. Use compressed air to help cool the plastic.