



SETUP & TUNING - SKI DOO RENEGADE

Here are some simple installation instructions and our best practices on how we set our Renegade up for the way we ride it. You will find a tremendous amount of adjustability with these shocks with 20 positions of both compression as well as optional rebound adjustments to fit any riding style.

Installation:

- 1.) Remove rear suspension from the snowmobile. *[Note: suspension bolts may be difficult to remove for the first time due to the patch lock that they use at the factory you may need to use a butane torch to preheat bolts]*
- 2.) Once you have the suspension on your work bench remove the torsion block sliders that connect the torsion springs to the rails. *[Note: remove with caution, as the springs have a significant amount of preload on them]*
- 3.) Remove the stock rear track shock and install your new Raptor shock. The pre-installed shock bushings only allow the shocks to be installed one way. Mount the shock with the reservoir down.

Note: Leave the torsion springs unhooked. We find that it's much easier to re-install the suspension into the vehicle with the torsion springs left unhooked until the chassis bolts are installed.

- 4.) Before removing the stock front track shock from the suspension, measure and note the front limiter strap length. The limiter strap will be re-installed in the stock location after the new front track shock is installed.
- 5.) Remove the stock front track shock. Once you have it out of the suspension remove the stock spring and install it on your new Raptor shock. We prefer using the production dual rate spring for a more compliant ride. If you're a more aggressive rider, we've included our multi rate spring for this application. The front track shock mounting bushings are pre-installed allowing the shock to only be mounted in one direction. We prefer to install the shock with the reservoir on the clutch side of the vehicle.



- 6.) Once you have the shock back in the suspension re-install the limiter straps back to the stock location noted in step 4.
- 7.) Next, set the preload on the front track shock spring. If you're using our Raptor spring set it to an installed height of 8.0 inches.
- 8.) Reinstall the suspension back into the vehicle starting with the front torque arm bolts then the rear torque arm bolts. Torque the mounting bolts to factory specs.
- 9.) With the suspension mounted in the vehicle, re-install the torsion spring sliders that were removed in step 2. Torque to factory specs.
- 10.) Set the torsion spring preload to desired setting, we run ours typically on low but this is very much personal preference.
- 11.) This is a good time to check track tension and alignment prior to testing!

Suspension Setup & Fine Tuning:

As a general rule, 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.



COMPRESSION ADJUSTER:

All compression adjustments are from full soft (click one) (S) to full hard (click 20) (H). We typically set the compression clickers on click 5 depending on the application.



REBOUND ADJUSTER:

All rebound adjustments are from fully firm (clockwise) (+) being the stiffest to 20 clicks out (-) being the softest. Anytime you adjust your rebound clicker go full stiff (clockwise) and back them out. We typically set the clickers on 5-10 clicks out depending on the application.



Question & Answer:

Q.) Vehicle bottoms too easy on larger 2.5ft to 3.0 ft events.

A.) First always start with the clickers. If the impact is in your wrists stiffen up ski shocks two clicks at a time until acceptable. If it's in your heels then make changes to the front track shock again couple clicks at a time until acceptable. You can also add two turns on the front track spring to help this issue. If you feel it in your back or you can physically feel the rear arm bottom turn the rear track shock two clicks at a time until it goes away. Spring preload can also help this issue increase preload two turns at a time to help bottoming.

Q.) Vehicle is too firm over small events wants to dance-ricochet off of everything excessive feedback in the bars.

A.) This should tell you that you need to soften up all your settings. It's ok to open all four shocks and set them on position one, we do this frequently depending on how rough the trails are.

Q.) Vehicle feels like it wants to mule kick in the rear after going over an event.

A.) This is typically due to not enough rebound control. If your shocks have rebound adjustment turn the clicker clockwise (+) a couple of clicks to slow down the rebound. This can also be caused from too much rebound control causing the suspension to pack and not recover prior to the next event. Be sure to adjust your rebound settings both ways while testing.

Q.) Front suspension feels bouncy and has a fair bit of roll from side to side.

A.) This is typically from too little rebound control. If your shocks have rebound adjustment turn the clicker clockwise(+) a couple of clicks to slow down the rebound.



Q.) Sled has too much pitch (transfer-ski lift) and wants to pack the skis excessively.

A.) This can be a culmination of things but I would start here. Add preload to the rear torsion springs or tighten up your rear scissor stops to let the suspension couple sooner. This will not allow the rear arm to collapse as easy wanting to cause lift. When the suspension is made to couple sooner it will start to pull the front arm up also reducing lift. Add clicks (H) to the rear shock our shocks adjust at very low velocities and this will slow down the event. Reduce preload on the front track shock spring this will also help keep the front arm from pushing out. Next if you have to take it to this level tighten the limiter strap one hole location making sure to adjust spring preload after you tighten the strap (back it off).

Q.) Sled has excessive inside ski lift while cornering.

A.) This typically occurs when you have too much preload on the front track shock spring. You can also increase the preload on the ski shock springs this can help eliminate that as well.

