



Skidoo XP-XM Rear

Congratulations you just purchased one of the lightest most technologically advanced shock packages on the market! You will find a tremendous amount of adjustability with these shocks from 20 positions of compression to endless amounts of preload adjustments. As you know there are different strokes for different folks and you will need to tune on this package to tailor it for your style at any time you have questions or concerns contact us that's what we're here for and we want you to dig our products. Here are some simple installation instructions and our best practices on how we set our XP up for the way we ride them and remember you will have to dial these in for how you ride.

- 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 stock shocks.
- 3.) Install your new shocks and springs into the suspension keeping the reservoirs on the left hand side of the vehicle with the front reservoirs mounted to the lower shock mounting shaft. Note: XM rear shocks have an offset shaft eyelet and it needs to be indexed

with the UP arrow pointing upwards toward track or sever damage will occur. XP rear shock reservoirs mount off to the side and require you to remove the bogie wheel next to the shock. XM rear shock reservoir sits under the shock body allowing clearance for the bogie wheels but it is much easier to adjust the shock with the bogie wheels removed. NOTE: Torque all fasteners to manufacturers spec.

- 4.) Next install the limiter strap to OEM specs after you have the straps installed set the preload on the front track shock spring to $8\frac{1}{4}$ inches and start here.
 - 5.) Install the suspension back in the sled starting with the front bolts first and then the rears. Torque these to manufacturers spec.
 - 6.) After you have the suspension back in the sled lift the backend off the ground this is a good time to check track tension and alignment and now you're ready to start testing!
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- 1.) For adjusting spring preload on the rear arm turn the sled onto its clutch side and set the rear torsion springs to your desired spring preload we start with ours on position 2 this is a good starting point. If you feel that the rear skid is stiff adjust the spring lighter until you feel it is adequate. If the skid feels soft and bottoms too easy add more preload. It is good practice to adjust your torsion springs from full stiff to full soft just to understand the effect this has on ride quality. These changes should be made in conjunction with clicker settings (two clicks at a time) and NEVER make more than ONE change at a time... If you get to the point that you're out of adjustment on the torsion springs you may want to order the next size heavier in rate contact your dealer for specs.

- 2.) As far as clickers we set the front track at 4 clicks and the rear track at XP 4 clicks XM 10 clicks and again you will have to set them to your liking. There are two full rotations of adjustment on the knob and it can be difficult to feel the clicks in the field so what we do is turn the knob in quarter turn increments. So one full turn equals 10 clicks and so on, again this will be helpful in the field when you are tuning.

Questions and answer:

Knowing what to do in given situations and conditions will help you school your buddies on a day to day basis. This is totally up to you with your setup and the more you mess the more you learn. Here are some basics.

Q.) Sled 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 to help bottoming.

Q.) Sled 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 one I personally do this

every time I ride and it's usually when I'm headed back to the truck and I'm shot from digging my Polaris loving buddies out all day!

Q.) Sled has too much pitch (transfer-ski lift) and wants to trench after the skis get three feet in the air or you simply can't drive it straight up a hill side.

A.) This can be a culmination of things but I would start here. Add preload to the rear shock this will not allow the rear arm to collapse as easy wanting to cause lift. Add clicks to the rear shock our shocks adjust at very low velocities and this will slow down the event. Soften front track shock springs all the way off 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).

We hope that this helps you adjust for the most common events and of course I could write a novel here but this should help if you have more questions with setup e-mail me and I can talk you through it.

Thanks again for choosing Raptor shocks! Jake