

TUNING TIPS

IMPORTANT: THE FOLLOWING TIPS ARE TO BE USED IN CONJUNCTION WITH THE USER MANUALS AS THEY CONTAIN ADDITIONAL INFORMATION. CAUTIONS AND WARNINGS APPLY FROM THE USER MANUALS.

This guide will help you quickly identify your preferred settings. Remember, your perfect set-up may not be the same for someone else with the same bike and equal weight. Personal preferences and riding style influence suspension setup.

SAG

Suspension forks are designed to 'sag' when you are sitting on your bike. Sag is the compression of the fork caused by the rider's weight. Correct sag allows the front wheel to follow the contour of the terrain as you ride. Sag should be set between 10 and 25 percent of the total fork travel.

To measure sag, lift the left fork boot and install a zip tie on the upper tube flush against the dust seal. Next, sit gently on the bike in your normal riding position, with your elbow against a wall to aid balance. Carefully, step off the bike and measure the distance between the dust seal and the zip tie. This is your sag. (Fig. 1)



Fig. 1

Review the chart below to determine the appropriate sag setting. Keep in mind the following:

- More sag allows your front wheel to better follow the contours of the ground. Your fork will feel more active, and move more.
- Less sag minimizes bob while climbing and sprinting. Your fork will feel firmer, but front wheel traction may be compromised.

To Increase Sag

Air fork - Decrease air pressure in your fork. This lowers the spring rate of the fork, allowing your bodyweight to further compress the fork into the travel.

Coil fork - Reduce preload or install a lighter weight spring.

To Decrease Sag

Air fork - Increase the air pressure in your fork. This increases the spring rate of the fork, providing for more support for your body weight.

Coil fork - Increase preload or install a heavier weight spring.

Adjust your sag in accordance with your travel and riding style.

Travel	Sag - XC Race (Firm)	Sag - Enduro (Hush)
60mm	2- 5mm	-
63mm	6-11 mm	11- 16mm
80mm	8- 12mm	12- 20mm
100mm	10- 15mm	15- 25mm
125mm	13- 23mm	13- 31mm
151mm	-	30- 52mm
176mm	-	35- 60mm

COIL SPRING SETUP

Coil Spring and Setting Sag

To decrease sag, increase preload on the coil spring by either turning the preload adjuster clockwise (Metro, Judy models), or adding preload spacers into the main coil stack (Boxxer models, Fig. 2).

Boxxer Only: No more than eight preload spacers should be added to either side of the fork. More than eight spacers can cause the spring to be damaged. If you cannot achieve the proper preload, you may need to install firmer coil springs.

Preload adjustment is not a substitute for proper spring rate. If your sag measurement is lower than the optimum sag recommendations, you may need to install lighter weight springs. If your sag measurement is more than the optimum sag recommendations, you may need to install stiffer springs. For coil spring rate charts, see the owner's manual included with you fork or reference the RockShox Spare Parts Catalog (www.sram.com).

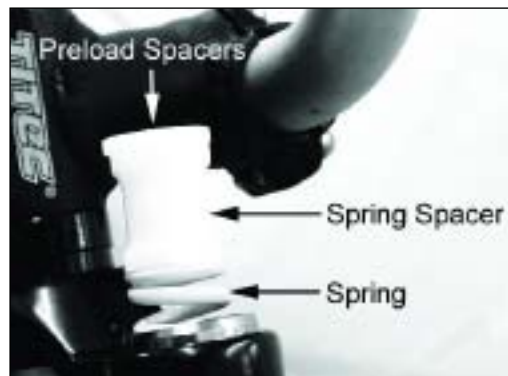


Fig. 2

NOTE: SPRING SETTINGS ARE MERELY SUGGESTIONS. PROPER SPRING RATE DEPENDS NOT ONLY ON RIDER WEIGHT, BUT RIDER POSITION, RIDING STYLE AND OVERALL "SPRUNG" WEIGHT OF THE BICYCLE.

Metro and Judy models only: For heavier riders, SRAM offers a tuning bumper Kit. For instruction on installing this kit, please refer to the Judy C/TT and Metro Service Guide.

U-TURN SETUP

U-Turn and Setting Sag

If your sag measurement is lower than the optimum sag recommendations, you may need to install lighter weight springs. If your sag measurement is more than the optimum sag recommendations, you may need to install stiffer springs. For coil spring rate charts, see the owner's manual included with you fork or reference the RockShox Spare Parts Catalog.

Adjusting Travel

Forks equipped with the U-Turn system can be externally adjusted for travel from their shortest travel setting to their longest travel setting and anywhere in between. To change travel, first stop riding. Locate the U-Turn knob at the top of the left fork leg (Fig 3). By turning this knob clockwise, you can reduce the travel of your fork. You may Increase travel by turning the knob counterclockwise.

When changing the travel of your fork, the spring rate automatically adjusts to the travel.

NOTE: FOR FORKS EQUIPPED WITH U-TURN AND PURE DAMPING, BEFORE ADJUSTING THE TRAVEL, BE SURE THE CLIMB-IT CONTROL KNOB IS NOT IN THE LOCKOUT POSITION.



Fig. 3

Changes in travel also affect the geometry of the bicycle. Increased travel decreases the head tube angle, resulting in more stable handling. Decreased travel increases the head tube, resulting in quicker handling.

Use these adjustments to your advantage on the trail. Before climbing, decrease the travel. This helps keep the front end of your bicycle on the ground and helps to maneuver through switchbacks. Prior to descending, increase the travel. Your fork feels softer and more stable at higher speeds.

AIR ASSIST SETUP

Forks equipped with an Air Assist system utilize a coil spring in the left fork leg, coupled with a low pressure air system. An air valve in the left top cap allows you to quickly fine tune the fork for your weight and riding style (For detailed instructions on inflation of the air chamber, see: HydraAir, Dual Air, Positive air pressure and setting sag).

NOTE: FOR AIR ASSIST FORKS EQUIPPED WITH THE FOOTBALL NEEDLE-STYLE VALVE, SRAM RECOMMENDS UPGRADING THE AIR TOPCAP TO THE NEWER SCHRADER-STYLE TOPCAP FOR IMPROVED PERFORMANCE AND EASE OF USE.

Hydra Air/Dual Air setup

PREPARATION (DUAL AIR ONLY)

At the bottom of the left fork leg, remove the air cap to expose the air valve. Gently depress the schrader valve stem to release all of the air from the negative air chamber. (Fig. 4)

NOTE: A SMALL AMOUNT OF LUBRICANT MAY DRAIN AS WELL. THIS IS NORMAL. BE SURE THAT THE LUBRICANT DOES NOT GET ON YOUR RIM, BRAKE DISC, OR ROTOR.

Positive Air Pressure and Setting Sag (Hydra Air/Dual Air)

Located at the top of the left fork leg is the positive air chamber. The positive air chamber controls the sag of the fork. To adjust sag, remove the air cap to expose the air valve. Thread the RockShox air pump into the air valve. (Fig. 5). When setting the positive air pressure, use the air pressure guidelines listed in the RockShox Spare Parts Catalog. Adjust the pressure to achieve the appropriate sag for your weight and riding style.

NOTE: FOR FORKS WITH TWO POSITIVE AIR CHAMBERS (2003 PILOT RACE AND OLDER SIDs), INFLATE BOTH AIR CHAMBERS TO EQUAL PRESSURES, EACH TO APPROXIMATELY HALF OF THAT RECOMMENDED FOR A SINGLE POSITIVE AIR CHAMBER SID FORK.

DUAL AIR

Using two separate air chambers (positive air and negative air), Dual Air forks feature a wide range of adjustability based on rider weight and riding style.

Negative Air Pressure

Your fork's negative air chamber adjusts the initial ride characteristics of your fork. More negative air pressure makes the fork more active, and improves the small bump ride. Less negative air pressure reduces bobbing. To aid in adjusting the negative air chamber, place the bike upside down. This makes fitting the pump easier and prevents oil from the fork from draining into the pump. (Fig. 6)

For Enduro-style riding, with softer initial movement, use negative air pressures between 80 and 100 percent of the positive air pressure. For more race-oriented riding, where firmer initial travel is required, use 40-70 percent of positive air pressure.

NOTE: WHEN DEFLATING THE FORK, ALWAYS DEFLATE THE NEGATIVE AIR PRESSURE AND INFLATE THE POSITIVE AIR FIRST. DO NOT EXCEED THE POSITIVE AIR PRESSURE WITH THE NEGATIVE BY MORE THAN A FEW PSI. ADDING SIGNIFICANTLY MORE NEGATIVE PRESSURE THAN POSITIVE WILL CAUSE THE FORK TO COMPRESS ITSELF, RESULTING IN LESS TRAVEL.



Fig. 4



Fig. 5



Fig. 6

HYDRAAIR/ HYDRAcoil/ HYDRAcoil 2 DAMPING SETUP

Oil Tuning

Changing the oil in your fork will alter it's rebound characteristics (the compression can also be affected, but in most cases, this is negligible). Rebound is the extension or return of your fork. To slow the rebound of your fork, replace the stock oil in your fork with a heavier weight oil. To speed the rebound of your fork, replace the stock oil with a lighter weight oil. For information on stock oil weights and recommended oil levels, use the oil charts listed in the RockShox Spare Parts Catalog.

NOTE: USE ONLY ROCKSHOX APPROVED FORK OIL. USE OF INCORRECT OIL CAN CAUSE PERFORMANCE LOSS AND/OR DAMAGE TO THE FORK.

External Rebound Adjustment

Forks with external rebound adjusters can be tuned without having to change oil weights. Located at the bottom of the right fork leg is the rebound adjuster (Fig. 7).

NOTE: THE ADJUSTER ONLY HAS 90 DEGREES OF ADJUSTMENT FROM MAXIMUM TO MINIMUM.

As a starting point, gently turn the rebound adjuster clockwise until it stops. This is the slowest rebound setting. Then, turn the adjuster counterclockwise approximately 15 degrees. From this point you can begin to fine-tune the fork. If you feel the fork is too fast in rebound, turn the adjuster clockwise. If it's too slow, turn the adjuster counterclockwise. Make small adjustments until the fork feels right.



Fig. 7

NOTE: FOR BOXER EQUIPPED WITH HYDRAcoil 2, REMOVE THE REBOUND ADJUSTER BY PULLING DOWNWARD TO PREVENT LOSS UNDER EXTREME RIDING CONDITIONS.

PURE DAMPING SETUP

The Pure damping system has two adjustments, compression and rebound. Compression damping offers resistance to the compression stroke of the fork. Rebound damping controls the speed at which the fork returns to its full extension following compression.

Rebound Adjustment

To start, gently turn the rebound adjuster clockwise until it stops. This is the slowest rebound setting. Then, turn the adjuster counterclockwise approximately one full turn. From this point you can begin to fine-tune your fork. If you feel the fork is too fast in rebound, turn the adjuster clockwise. If it's too slow, turn the adjuster counterclockwise. Make small adjustments until the fork feels right. (Fig. 8)



Fig. 8

Climb-It Control® Compression Adjustment

Located at the top of the right fork leg is the Climb-It Control adjuster knob. Turn the Climb-It control knob full counterclockwise, this is the open position. To lockout or increase compression, turn the knob clockwise until lockout.

NOTE: COMPRESSION DAMPING IS NOT A SUBSTITUTE FOR PROPER SPRING RATE. IF YOUR SAG MEASUREMENT IS MORE OR LESS THAN THE OPTIMUM SAG RECOMMENDATIONS, YOU MAY NEED TO ADJUST YOUR SPRING RATE BY CHANGING AIR PRESSURE OR INSTALLING A DIFFERENT SPRING.

Remote Control Compression Adjustment

Located on the left side (rider's perspective) is the gray Remote Control Compression adjustment. The remote control is actuated from the handlebar mounted remote control lever. The lever offers incremental increases in compression adjustment until lock-out. Located in the center of the remote control lever is the "instant off" button. This button, when pressed, returns the compression damping to the full-open position.

The locked position can be used to aid climbing and sprinting. In this position the fork is protected by an automatic blow-off for those unexpected big hits. The fork also gradually compresses if you maintain a high force on the handlebars.

PURE DELITE DAMPING ADJUSTMENT

Pure Delite is a lightweight, low friction variation of the RockShox Pure damping system. This system replaces the compression adjustments found in the Pure system with an independent floating piston (IFP) and air charge. The Pure DeLite system has a rebound damping adjustment and threshold adjustment.

Rebound adjustment

For detailed instructions on how to adjust Pure Delite rebound, see: Pure damping setup/ Rebound adjustment.

Threshold adjustment

NOTE: CHANGES TO PRESSURE IN YOUR PURE DELITE SYSTEM ARE CONSIDERED "FINE TUNING" THE OVERALL FEEL OF YOUR FORK.

Pure DeLite offers a wide range of rebound damping adjustment. In addition, adjusting the air pressure in this chamber (right fork leg) helps fine-tune the small bump ride (threshold or break-away) of the fork. This chamber should be inflated to a minimum of 10 psi and a maximum of 60 psi. Less air pressure will make the fork feel softer and helps absorb smaller bumps, while more air pressure will make the fork feel stiffer.

We recommend adjusting the positive and negative air pressures before you adjust the air pressure in the Pure Delite chamber (right side, rider's perspective).

NOTE: AIR PRESSURE IN THE PURE DELITE SYSTEM SHOULD NOT BE USED TO TUNE THE SPRING RATE OR BOTTOM OUT FORCE REQUIRED FOR THE FORK.

LOW SPEED COMPRESSION ADJUSTMENT

(2002 AND OLDER BOXXER, 2003 BOXXER WORLD CUP AND TEAM)

Low speed compression damping controls bob, brake dive and fork sensitivity. The adjuster is located in the lower left leg and is accessible with a 3mm hex wrench inserted through the hollow shaft bolt. Begin by turning the adjuster counterclockwise until it stops (Fig. 9). This setting has minimal amount of low-speed compression damping. Now turn the adjuster two turns clockwise. This will set your fork with the maximum amount of low-speed compression damping adjustment. From this point, you can fine-tune your fork. To decrease pedal bob, turn the adjuster clockwise. For more sensitivity to small bumps, turn the adjuster counterclockwise.

Proper compression damping depends on rider style, course, weight, preference and setup. Compression damping should be adjusted any time springs, preload or oil has been changed.



Fig. 5

HIGH SPEED COMPRESSION ADJUSTMENT

(2002 AND OLDER BOXXER, 2003 BOXXER WORLD CUP AND TEAM)

In addition to rebound and low speed compression damping, your fork also features high-speed compression adjustment. This adjustment requires disassembly of your fork. For further instructions on this adjustment, consult the service guide and your owner's manual (available at www.sram.com).

REAR SHOCK TUNING (BAR and SID)

Using two separate air chambers (positive and negative air), SID rear shocks feature infinite adjustability based on rider weight and riding style.

Positive air pressure and setting sag

Positive air pressure controls the sag of the shock. To determine the correct sag settings, you must first establish the maximum stroke of your shock. If the body o-ring is missing, you will need to install a small zip tie around the shock body (part that cycles in and out of the air can).

Remove the valve caps and release all of the positive air (Fig. 10). If the negative air chamber has air in it, the shock should collapse upon itself. If this does not happen, add air to the negative chamber until the shock collapses (Fig. 11). You may need to let more air out of the positive chamber for it to collapse completely. Once the shock is fully collapsed, remove the pump from the negative valve and release all of the negative air. Pressurize the positive chamber until the shock fully extends again (Fig. 12). The shock body o-ring or zip tie should stay in the same spot. To determine the maximum stroke of your shock (Fig. 13), measure the distance between the o-ring/zip tie and the dust seal on the air can. Make note of this measurement. The stroke should be 31, 38 or 50mm.

To set sag, pressurize the positive air. Setting the positive air pressure equal to your body weight. Check the sag by gently sitting on the bike (support yourself by leaning against a wall) until all of your weight is on the bike. Carefully get off the bike and measure the distance between the o-ring/zip tie and the dust seal. For XC riding (firm), sag should be set to 10-20 percent of the total stroke of the shock. For Enduro riding (plush), set the sag to 20-30 percent.



Fig. 10



Fig. 11

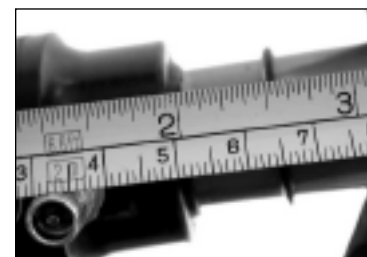


Fig. 12



Fig. 13

NOTE: DO NOT USE AIR PRESSURE OUTSIDE THE 100 TO 250 PSI RANGE.

Negative air pressure (SID only)

With the positive air pressure set, inflate the negative air chamber to match your riding style (Fig. 11). Adjusting your shock's negative pressure changes the initial travel characteristics (first 10-20 percent of available travel). More negative air pressure makes the shock more active over small bumps. Less negative air pressure reduces bobbing. For XC riding, where firm initial travel is desired, use 50-80 percent of the positive pressure. For Enduro-style riding, with soft initial movement, use a pressure 90 to 110 percent of the positive pressure.

Rebound damping adjustment

Some SID rear shocks include a red rebound damping adjustment knob (Fig. 14). Rebound is the extension or return stroke of the shock. Rebound damping adjustment allows you to control the rate at which the shock extends after it is compressed. The shock's rebound is quickest when the adjustment knob is in the full counterclockwise position. Rebound is slowest when the adjustment knob is in the full clockwise position.

For setting rebound, a good starting point is the "curb" test. Be sure this is done after you set up your sag. Set your rebound adjuster fully counterclockwise. Ride the bike off a curb sitting in the saddle and count the number of times the shock bounces before returning to normal sag. You want to achieve one bounce. Turn the rebound adjuster a quarter turn clockwise and ride off the curb again. Continue to do this until one bounce is achieved. Record the number of turns from the fully closed (full counterclockwise) position.

Lockout

Some SID rear shocks include a blue lockout lever. To lock out the shock, rotate the blue lever so that it is in line with the shock (parallel).

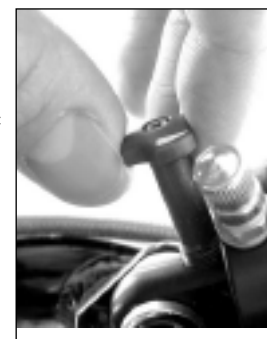


Fig. 14

Mounting

Torque mounting bolts to 60 in-lb. Over-torqued mounting bolts will cause the shock to bind and malfunction. Under-torqued mounting bolts will damage frame, hardware and shock.

FINE TUNING

With your spring and damping adjusted, it is time to fine tune your fork. Go to your favorite trail and try repeating sections. Ride various obstacles to experience how your fork feels. Be sure to change only one setting at a time and make a note of the changes.

Helpful hints

AIR PRESSURE

If your fork does not seem active over small bumps, increase your negative air pressure. This makes the initial stroke of the fork easier. If your fork seems too active and bobs excessively while climbing, decrease the air pressure in the negative chamber.

REBOUND DAMPING

Excessive rebound causes the fork to "pack up" over successive bumps, reducing travel and causing the fork to bottom out. Conversely, too little rebound damping causes your fork to mimic a pogo stick, bouncing off obstacles on the trail. Try setting your fork to rebound as fast as possible without topping out or kicking back. This allows your fork to follow the contours of the trail, maximizing stability, traction and control.

COMPRESSION DAMPING

Don't think of compression damping as "on or off lockout". Experiment with the entire range of adjustment. In slow speed technical sections, set your compression damping to the middle of the range. In high speed situations, run the compression adjustment wide open. This helps the fork react to sharp square edge hits.

USING A SHOCK/FORK PUMP

You can damage the pump by threading it in too far. As soon as the gauge registers pressure, thread ½ turn more and pump to the desired pressure.

When removing the pump, you'll hear a small "hiss" of air. This air is from the pump, not the fork! Likewise, when you attach the pump, the opposite happens and air from the fork fills the pump, reducing the pressure. This is all perfectly normal, you do not need to change your desired pressure.

QUICK MAINTENANCE

Keep your fork clean. Clean and dry the exterior of the fork. Avoid direct water pressure on the upper tube/dust seal junction. Before or after every ride put some drops of Teflon-based lubricant or fork oil on the dust seal. Push the fork up and down before wiping off the excess oil. This keeps the seals soft and lubricated, and helps do an even better job of keeping the dirt out! (Fig. 15)

For detailed information on all maintenance procedures and how to adjust the travel please consult the owner's manual or visit our website at WWW.SRAM.COM.



Fig. 15