



# BOXER<sub>RACE</sub>

## Suspension Tuning Guide



# BOXXER RACE QUICK START TUNING GUIDE

## THANKS FOR CHOOSING ROCKSHOX!

We are excited, pleased, and honored that you have chosen RockShox for your bicycle suspension. You can feel confident that your suspension is the best in the market today because RockShox products are developed and engineered by people who love to ride and who are as passionate about performance as you.

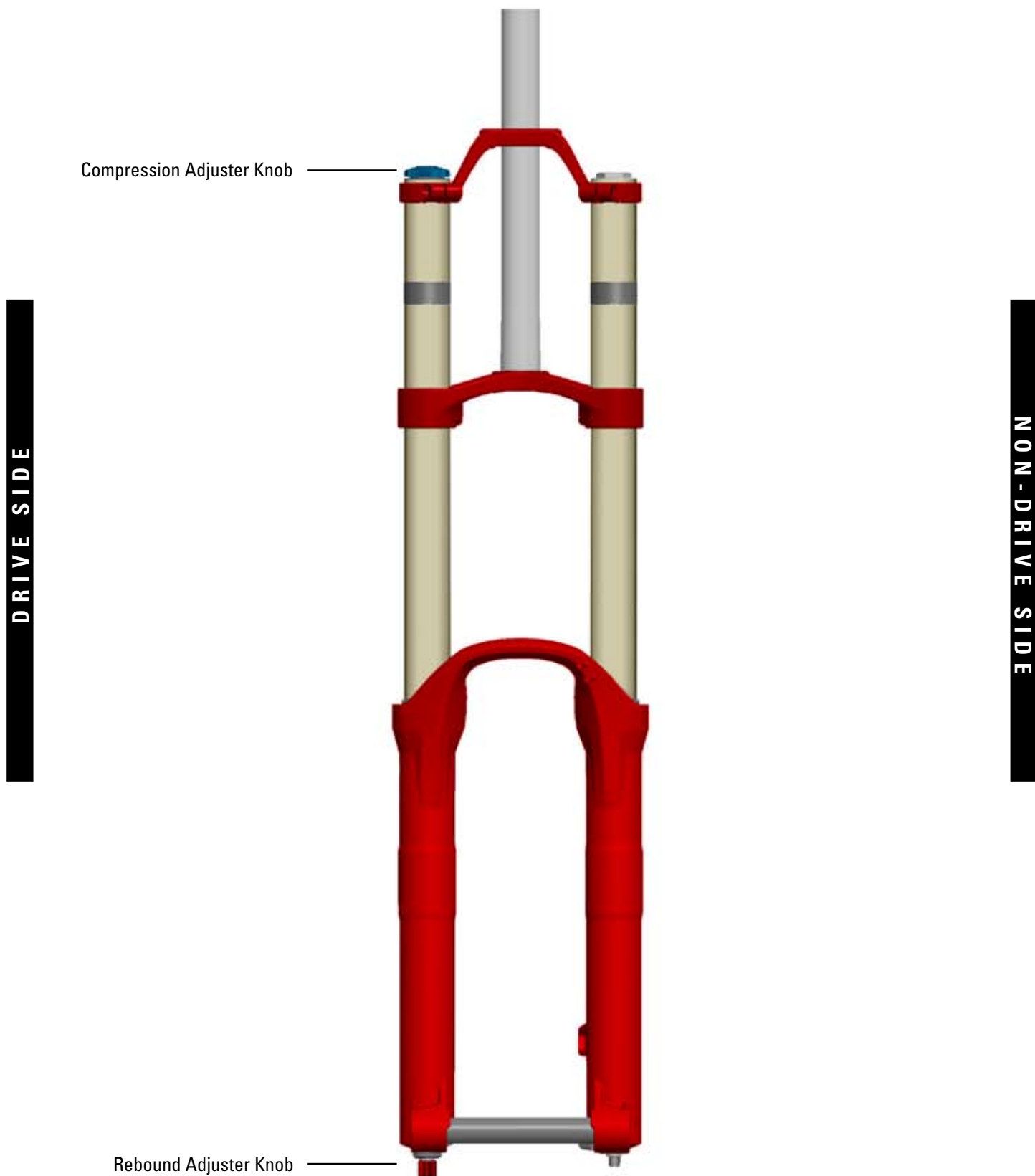
RockShox suspension can be performance tuned for your particular weight, riding style, and terrain. Our Tuning Guide contains quick start recommendations for performance tuning your BoXXer fork to get you out on the trail fast! In addition, it provides comprehensive tuning information that will allow you to maximize the performance of your suspension by customizing the feel and responsiveness of each available setting.

All settings are counted with the ↺ adjustment control starting in the full counter-clockwise position (Soft, -, ↺)

BoXXer Race	RIDER WEIGHT	SUGGESTED SPRING	COMPRESSION	REBOUND
	<140 lb (63 kg)	Silver	1 click	8 clicks
	140-160 lb (63-72 kg)	Yellow	2 clicks	10 clicks
	160-180 lb (72-81 kg)	Red (Stock)	2 clicks	12 clicks
	180-200 lb (81-90 kg)	Blue	3 clicks	14 clicks
	>200 lb (90 kg)	Black	4 clicks	16 clicks

My Favorite Settings	FAVORITE RIDES	SPRING SETTING	COMPRESSION	REBOUND

# BOXXER RACE



Compression Adjuster Knob

DRIVE SIDE

NON-DRIVE SIDE

Rebound Adjuster Knob

# BOXXER RACE TUNING GUIDE

## INTRODUCTION

There are three primary settings you can tune on your front suspension (fork). Keep in mind when tuning your fork to always tune these settings in the following order:

1. Sag - Spring Tuning
2. Rebound Damping
3. Compression Damping

## THINGS YOU WILL NEED FOR TUNING

Safety glasses	2.5 and 4 mm hex wrenches
Gloves	24 mm socket wrench
Riding gear	Grease brush
A friend	Grease

## SAG - SPRING TUNING

Sag is the amount the fork compresses when you are sitting on your bike while wearing your normal riding gear. It is important to tune the sag measurement of your fork because proper sag enhances the ability of the front wheel to follow the changing contours of the terrain as you ride. Sag on your BoXXer fork should measure between 20 and 30 percent of maximum travel and is indicated by the gradient marks on the drive side upper tube.

## MEASURING SAG

- 1** To measure sag, first adjust the compression damping features, located at the top of the drive side fork leg, to their lightest settings. To do this, turn each knob counter-clockwise (opposite the arrow that reads "Hard") until it stops.

**1**



- 2** Have a friend securely hold your bike upright while you sit on the bike, wearing your normal riding gear.

**2**



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- 3** Stand on the pedals and rock your body weight forward and rearward on the bike, activating the suspension, then stand still on the pedals. We suggest you engage the brakes during this process so you don't accidentally roll over or head-butt your friend.

**3**



- 4** Continue to stand still on the pedals and have your friend slide the indicator o-ring down against the wiper seal. This can be tricky, tell your friend to be quick!

**4**



- 5** Carefully step off the bike and compare the location of the travel indicator o-ring against the sag value gradients marked on the upper tube. This is your sag.

**5**



If you are unable to tune your fork to sag within the indicated range, you may need to change the fork's coil spring (coil spring tuning). Use the specific tuning information that follows to achieve proper sag.

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## COIL SPRING TUNING

BoXXer coil spring forks offer several coil spring options, each identified with a unique color, to allow riders of different weights to tune their forks with a proper sag measurement. Use the chart below as a guideline to determine the coil spring best suited for you. If the coil spring in the chart is a different color than the one you currently have, you will need to change the coil spring.

**Important:** When changing your coil spring we recommend you wear safety glasses and gloves.

RIDER WEIGHT	SPRING COLOR
<140 lb (63 kg)	Silver
140-160 lb (63-72 kg)	Yellow
160-180 lb (72-81 kg)	Red (Stock)
180-200 lb (81-90 kg)	Blue
>200 (99 kg)	Black

## CHANGING THE COIL SPRING

**1** Use a 4 mm hex to loosen the upper crown bolt located on the non-drive side fork leg. Do not remove the bolt.

**1**



**2** Use a 24 mm socket wrench to loosen and remove the top cap located on the non-drive side fork leg. Be careful not to damage the top cap o-ring upon removal. If the top cap o-ring is damaged during removal, you must replace it with a new o-ring.

**2**



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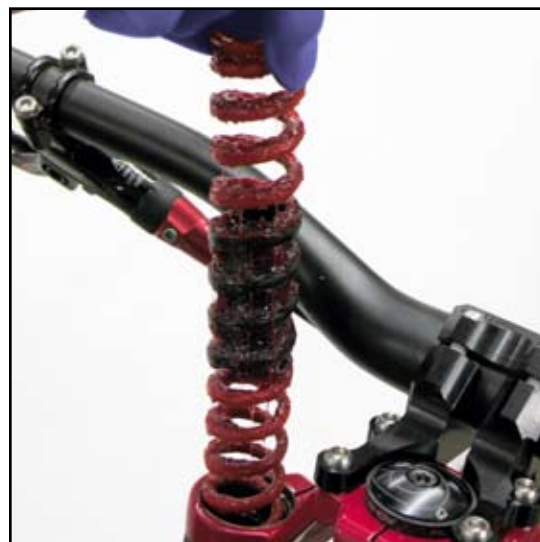
**3** Compress the fork slightly to access the preload spacers that rest on top of the coil spring and remove the preload spacers by hand.

**3**



**4** Compress the fork slightly again to access the coil spring and remove it by hand.

**4**



**5** Identify the tightly wound end of the new coil spring. Use a grease brush and apply a generous amount of grease to the entire length of the new coil spring. Install the coil spring, with the tightly wound end first, into the upper tube.

**5**

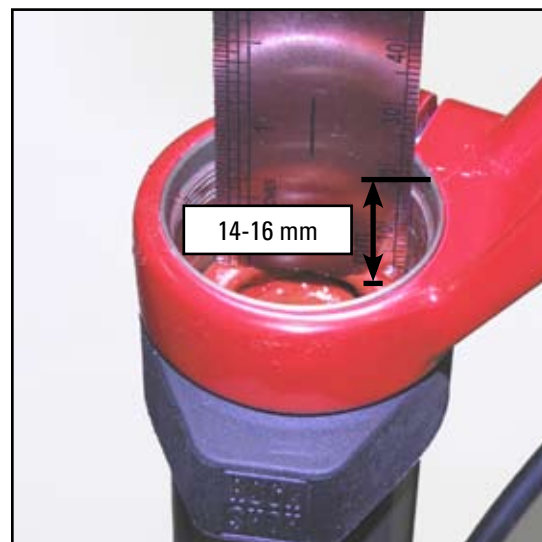


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- 6** Use a ruler to measure the distance from the top of the coil spring to the top of the upper tube. This distance should be at least 14 mm but not more than 16 mm. If the measurement is greater than 16 mm, add preload spacers until the measurement falls between 14-16 mm (each preload spacer is 2 mm thick).

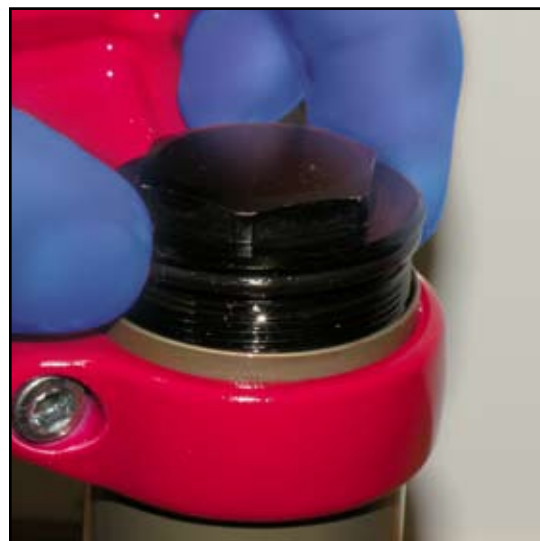
**Note:** If the distance measures greater than 16 mm and is not corrected, the coil spring will experience up/down play in the upper tube and the fork will make a 'knocking' noise. If the distance is less than 14 mm, the coil spring will bind in the upper tube which can lead to damage of the coil spring.

**6**



- 7** Insert the top cap into the crown and hand thread it into the upper tube. Be careful not to damage the top cap o-ring upon installation.

**7**



- 8** Use a 24 mm socket wrench and tighten the top cap to 7.3 N·m (65 in-lb).

**8**





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- 9** Use a 4 mm hex and tighten the upper crown bolt to 5.1 - 9.0 N-m (45-80 in-lb).

**9**



- 10** Once you have changed your coil spring, re-measure your sag according to the previous instructions to ensure your sag is now within the indicated range.

**You have completed the coil spring tuning of your BoXXer Race front suspension. You are now ready to move on to Rebound Damping.**

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## REBOUND DAMPING

Rebound damping controls the speed at which the fork returns to full extension following compression. To adjust rebound damping, use the rebound adjuster knob, located on the bottom of the drive side fork leg. When tuning rebound, remember that real world trail inputs vary significantly from parking lot riding. The best way to fine tune rebound is to compare adjustments on a familiar section of trail.

We suggest you begin your tuning session by 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. Make small adjustments from there until you find a setting that works for your riding style. Keep in mind, if rebound damping is set too slowly the fork will “pack up” over successive bumps; essentially reducing travel and causing the fork to bottom out.

To adjust your rebound damping, refer to the guidelines that follow.

## REBOUND ADJUSTMENT

**1** Turn the red adjuster knob in the direction of the “rabbit” indicated on the rebound speed decal to make the fork return to full extension faster. Turn the red adjuster knob in the direction of the “turtle” to make the fork return to full extension slower. A total of 18 clicks of adjustment are available.

**1**



**You have completed the rebound tuning of your BoXXer Race front suspension. You are now ready to move on to Compression Damping.**

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## COMPRESSION DAMPING

Compression damping controls the speed at which the fork compresses. The more compression damping the fork has, the slower it will respond and the more resistance it will have to trail inputs, making the fork feel "hard". The less compression damping the fork has, the faster it will respond and the less resistance it will have to trail inputs, making the fork feel "soft". The compression damping adjustment can be used to help combat the effects of hard braking (brake dive) or hard g-force cornering (squatting).

### COMPRESSION ADJUSTMENT - MOTION CONTROL IS

**1** To add more compression damping, rotate the blue adjuster knob, located on the drive side of the fork crown, clockwise towards the '+' sign. Find the adjuster knob setting that best suits your desired level of compression damping. A total of 10 clicks of adjustment are available.

**Note:** The compression damping setting does not affect your fork's performance when it encounters an impact that creates high shaft speed.

**Important:** When storing a bicycle or fork upside-down or on its side, oil sealed in the upper tube can collect above the compression damper assembly. Upon returning the bicycle/fork to a normal riding position, initial performance of the compression damper system may be less than optimal. To return optimal performance simply compress your fork 10-20 times.

**You have completed the tuning of your BoXXer Race front suspension. Congratulations, it's time to ride!**

**1**



## CONCLUSION

We would like to thank you again for choosing RockShox for your bicycle suspension. RockShox is committed to the quality of your ride experience. We hope that this tuning guide has helped you explore the full tuning capability of your BoXXer front suspension and opened your world to greater performance possibilities; so **you** can have a better, more controlled ride.

Please check back to [www.rockshox.com](http://www.rockshox.com) frequently for more quick tips, tuning, and service information.