

## RIDER SPRING SAG (PRELOAD)

**Spring sag** is the amount the springs (front forks or rear shock) sag or drop from having no weight on them, to having the rider on the bike, with his feet on the pegs, hands on the bars, but not on the side stand or center stand. This is also called “rider sag” or just “sag.” It is set for the rider that will be riding the bike.

### SETTING THE SAG, FRONT FORKS:

You will need 2 friends, a tape measure, and whatever wrenches it takes to set the sag on your bike.

On most modern sport bikes it takes an open end wrench that fits the preload adjuster on the top of the fork.

1. Take out all rebound damping, by putting on the softest setting. On most bikes this is the brass knob on the top of the forks. It is usually marked, but typically turning clockwise adds more rebound, counter clock takes it out.
2. Have your friends either pick the front end up, one on each handle bar, or balance it on the side stand. With all the weight off the front measure the total distance of exposed fork tube.
3. Have your friends balance the bike with you sitting on the seat, feet on pegs, hands on bars. Bounce on the bike a few times and then let the bike settle and sit on the seat. Measure the exposed fork tube. Subtract that number from the number gotten in #2 above and you have the sag.
4. Adjust the sag by screwing in or out the preload adjuster. The rebound damping knob sits on top of the preload adjusters that protrude from the top of the forks. They have horizontal lines and you adjust each fork the same amount. 25-35 mm of sag recommended on the front.
5. When the sag is set, return the rebound damping setting to where it was before, or you will have changed 2 things at once.

Keep Notes! Starting a suspension notebook with what you do and your comments after riding it would be a good plan

\*Some bikes, especially older ones, do not have preload adjusters. In that case to set the sag requires taking the forks apart and using different spacer, or different springs. You might want to consult a suspension specialist (like Fox) before you do that.

## SETTING THE SAG, REAR SHOCK:

1. Take out all rebound damping, by putting on the softest setting. On most bikes this is the knob on the bottom of the shock, not the knob on the reservoir—that is the compression damping knob. Typically turning clockwise adds more rebound, counter clock takes it out.
2. Have your friend(s) pick the rear end up, however they can, or balance it on the side stand. With all the weight off the rear, measure the total distance from the top of the swingarm, right at the axle, to a fixed point on the body directly up from the axle.

On some bikes this can be a little difficult due to curved bodywork and graphics. In that case using a piece of tape works as a good reference mark—just make sure it doesn't get moved.

3. Have your friends balance the bike with you sitting on the seat, feet on pegs, hands on bars. Bounce on the bike a few times and then let the bike settle and sit on the seat.  
Measure the distance the same as #2 above. Subtract that number from the number gotten in #2 above and you have the sag.
4. Adjust the sag by screwing in or out the preload collar on the shock. On many Shocks this takes a special wrench. A drift and a hammer can be used, but this will mark up the shock.  
25-35 mm of sag is the norm.
5. When the sag is set, return the rebound damping setting to where it was before.

If the preload collar is screwed in or almost all the way in and there is still too much sag, a heavier spring might be needed.

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