Suspension Information

Suspension can make a huge difference in how your bike handles. This guide breaks down the basics to help you better understand how certain changes affect performance. Tuning your suspension is personal—two riders with the same weight, skill, and speed might still want completely different setups. That's why dialing in the right sag, clickers, fork height, and tire pressure for your style is key.

Test Changes One at a Time

Always make only one change at a time. That way, you'll know exactly what adjustment caused what effect. Take it easy at first when testing. Usually, you'll end up using trial and error—make a change, ride, and evaluate. If it works, keep it or try more. If it makes things worse, reset or go in the other direction.

Make sure your sag, fork height, fork air pressure (if applicable), and tire pressure are at a standard setting before testing—bad base settings can throw everything off.

Keep Notes

Write down every change and what you felt. It's easy to lose track after a few tweaks, and all of a sudden, the bike feels completely off. Logging your changes keeps things manageable.

Clicker Basics

Turning compression and rebound clickers **in (clockwise)** makes the suspension stiffer and the rebound slower. **Out (Counterclockwise)** softens it and speeds up the rebound. Typically, compression is the top clicker and rebound is the bottom—but there are exceptions. If unsure, check with Jake.

On the shock:

- **High-speed compression** is adjusted in turns with a socket on the compression assembly.
- **Low-speed compression** is the flat-head screw in the center of the compression assembly.

When you hear "10 clicks out," that means 10 clicks counterclockwise from fully seated (tightened all the way in).

Setting Rider Sag

You'll need a sag tool (recommended), or a tape measure, marker, and a friend. If adjusting is needed, a hammer and punch are also necessary.

1. Measure Free Length

With the bike on a stand and the rear wheel off the ground, measure from the axle to a point straight up on the fender. Mark that fender point and either zero your sag tool or record the distance in mm.

2. Measure Sag with Rider On

Take the bike off the stand on level ground. Sit on it (toward the front of the seat where the seat bows), balance with all your weight on the bike, and have your friend measure from the axle to your marked dot again. It is also important to bounce on the bike to remove any stiction in the shock; or have your friend push down on the seat a few times when you're seated.

The difference, in mm, between this and the first measurement is your **rider sag**.

3. Adjust If Needed

Use a punch or spanner to loosen the locking ring or bolt.

- If your sag is **too low (big number, like 110mm)**, turn the collar clockwise to tighten the spring.
- If the sag is **too high (small number, like 90mm)**, loosen it by turning counterclockwise.

Recheck the measurement after each adjustment.

Rear Sag Guidelines

Proper sag helps with cornering, stability, and chassis balance. Different disciplines will have different sag windows.

- Too much sag (high number, like 120mm): Rear too low, poor front-end feel.
- Too little sag (low number, like 90mm): Rear high, twitchy or kicking shock.

General ranges:

- **Motocross/GP**: 103–107mm
- **Desert**: 105-110mm
- **Hard Enduro**: 105-120mm

Static Sag

After setting rider sag, check static sag (no rider, just the bike). If the static sag is:

- **Over 40 mm**: Spring might be too SOFT
- **Under 30mm**: Spring might be too STIFF

Ask Jake if you're unsure.

Fork Height in Triple Clamps

Fork height affects steering feel and stability:

- **Slide forks up** (lowers front): quicker turning but twitchier at speed.
- **Slide forks down** (raises front): more stable at speed but lazier in corners.

For sand or high-speed terrain, drop the forks (raise front) for stability.

Clicker Adjustments and Symptoms

Fork Compression

- **Clockwise** = Stiffer
- **Counter-clockwise** = Softer

The fork compression adjuster controls how quickly the forks compress under impact, with its main influence on **low-speed compression**. This refers to slower, larger movements—such as heavy braking or absorbing jump landings—rather than sharp, high-speed hits like square edges, where its effect is more related to internal hard parts or the fork valving.

Turning the adjuster **clockwise** increases compression damping, making the forks feel firmer. Turning it **counterclockwise** reduces damping for a softer feel. Make changes in small steps—**1 to 3 clicks at a time**—and test between adjustments for best results.

Characteristics that may require stiffening fork compression:

- The forks bottom on impacts
- Front end dives too low under braking or in corners
- Forks are harsh under braking from riding too low in the stroke

Characteristics that may require softening fork compression:

- The front-end rides high and deflects
- Forks don't dive enough when cornering; need to track better

Fork Rebound

This clicker controls how quickly the forks extend after a hit. Faster rebound helps the front end recover over sharp chop, while slower rebound keeps it from springing back too quickly after big impacts.

- **Clockwise** = Slower Rebound
- **Counter-clockwise** = Faster Rebound

Adjust in **1–3 click** steps, then test and fine-tune on the track.

Characteristics that may require stiffening (slowing) fork rebound:

- The forks dance under acceleration
- Front end bounces up after the jump impact.
- The forks bounce up out of ruts

Characteristics that may require softening (speeding up) fork rebound

- Forks pack under braking; ride too low
- The front end feels dead
- The forks are harsh when braking over bumps
- Front end is harsh at high speeds

Shock High-Speed Compression

Shock High-Speed Compression – This adjuster controls how the shock handles quick, hard hits—like acceleration chop and sharp-edged bumps. Softer settings can improve traction and comfort, while stiffer settings add support. It also slightly affects rear ride height, helping the bike sit taller or squat more in corners.

Clockwise = Stiffer
Counterclockwise = Softer

Adjust in **¼–½ turn** steps, then test on track.

Characteristics that may require stiffening high-speed compression:

- Rear end feels low, especially under acceleration or cornering
- Shock bottoms on flat landings
- Shock wallows or feels vague when cornering
- The shock has a "short-travel" feel

Characteristics that may require softening high-speed compression:

- Rear end rides high; feels front end low, high rear
- Shock feels harsh over acceleration chop
- Rear end needs to squat and track better when cornering

Shock Low-Speed Compression

The low-speed compression adjuster influences how the shock absorbs longer-duration hits, squat under acceleration, and rolling bumps. In particular, it can make a difference if your shock wallows or feels soft over slower, rolling

whoops. The low speed compression is the flat head adjustment screw, on the compression adjuster, located at the top of the shock.

Turning the adjuster clockwise will stiffen the low-speed compression. Alternatively, turning the clicker counter-clockwise softens the low-speed. We recommend increments of 1-3 clicks at a time when making adjustments.

Characteristics that may require stiffening low-speed compression:

- Shock wallows under acceleration
- Rear end feels loose and soft
- Shock bottoms in g-outs or rolling jump faces

Characteristics that may require softening low-speed compression:

- Shock doesn't absorb rolling bumps or whoops
- Rear end won't settle, feels stiff on jump faces

Shock Rebound

The rebound adjuster controls how quickly the shock extends after the compression stroke. Faster rebound helps the rear track better over chop, while slower rebound keeps it from kicking up after big hits. With this in mind, the goal with the rebound adjuster is to have the shock come up fast enough to recover after each compression and not hit another bump while trying to extend - this will give you a harsh feel.

Turning the adjuster clockwise will stiffen the rebound, slowing it down. Alternatively, turning the clicker counter-clockwise softens, or speeds up the rebound. We recommend increments of 1-3 clicks at a time when making adjustments.

Characteristics that may require stiffening (slowing) shock rebound:

- The shock is too active and dances in successive bumps
- Shock lifts and dances under braking
- Rear end kicks up after the shock hits and absorbs a bump

Characteristics that may require softening (speeding up) shock rebound:

- The shock packs down under acceleration
- Rear end feels harsh under acceleration
- The rear end swaps in successive whoops.

Forks

1. Bottoms/Mushy

Questions: Where? G-outs, landings, faces of jumps, straight-aways?

a. Oil level low - raise oil level to increase the progressiveness of last ⅓ travel
b. Not enough low speed compression
c. Not enough high speed compression
d. Spring rate too soft
e. Not enough preload
f. Dirt in valving, broken shims/piston, bent/burr in shims
g. Compression valve o-ring failure.

2. Too Stiff

Questions: Where? Square edges or everywhere?
(Just square edges, go to B+C)

a. Too much compression - high or low speed clickers
b. Too much compression dampening - out on high speed first, then low speed
c. Spring rate too stiff
d. Too much low speed rebound (too slow) - packing
e. Oil level too high

3. Poor Traction

a. Poor tire type/compound
b. Too much tire pressure
c. Tire pressure way too low
d. Too much/little low speed rebound
e. Too much/little low speed compression
f. Bike overall setup needs looked over (Lever position, bar angle, chain length, etc)

4. Oversteer

Front end is too short compared to rear

a. Front end too low - slide forks down
b. Loosen sag (need higher sag number)
c. Fork spring rate too soft
d. Not enough fork spring preload
e. Too much low speed rebound (too slow) - packing
f. Not enough low speed compression
g. Go to single stage valving stack instead of two
h. Fork seals blown

5. Understeer

Front end is too tall compared to rear

a. Front end too high - slide forks up
b. Tighten sag (need lower sag number)
c. Fork spring rate too stiff
d. Too much fork spring preload
e. Too much low speed compression damping
f. Bars too narrow/tall

6. Dives Under Braking

On braking, the total dive is controlled by spring forces only (Rate, preload) not dampening

a. Too little sag (rear end riding too tall)
b. Spring rate too soft
c. Not enough preload

7. Headshake

a. Not enough rebound (low speed)
b. Too much high speed compression
c. Tire pressure too high/low (poor tire condition also)
d. Wheel out of balance/true
e. Headshake during braking - bent rotor
f. Steering stem too loose

8. Bounces off ground on jump landings

a. Severe bottoming - increase compression/spring rate
b. Not enough high/low speed rebound damping (too fast rebound)

9. Deflects

Deflecting on square edges, roots, rocks, etc

a. Too much high-speed compression (valving or piston orifice/design restriction)
b. Spring rate too stiff
c. Too much preload
d. Too much low speed compression and rebound
e. Way too soft and bottoms then deflects (reverse of #d)

Shock

1. Kicking

Too stiff

a. Too much high speed compression
b. Spring rate too stiff
c. Too much low speed compression
d. Too much rebound dampening
e. Linkage bearings need replaced
f. Too high tire pressure
g. Too much preload

Too soft

a. Severe bottoming - spring rate too soft

2. Bottoms

a. Not enough low/high speed compression
b. Spring rate too soft
c. Sag number too high (rider/static)
d. Shock needs serviced (Oil needs replaced because it fades as it heats up due to low viscosity index)
e. Shaft seal blown
f. Not enough nitrogen pressure, cavitation occurring
g. Blown bladder
h. Bent valve shims

3. Swaps

a. Feels harsh/deflects? - Too stiff
b. Bottoming easily? - Too soft
c. Swapping on one bump or series of rollers?
- Series of rollers: Rebound problem (too slow rebound - packing) or too little high speed rebound, uncontrolled rebound
d. Too much high speed compression - deflecting, not bottoming
e. Not enough low/high speed rebound (Too slow)
f. Spring rate too soft/stiff
g. Bottoming severely

4. Poor Traction

a. Too much low speed rebound/compression
b. Not enough low speed rebound (way too little)
c. Not enough low speed compression
d. Tire pressure high or bad tire condition
e. Spring rate too stiff
f. Too much preload
g. Rear ride height is too tall (Too little sag)

5. Squatting

a. Spring rate too soft
b. Not enough preload (sag number too high)
c. Countershaft sprocket too big (not enough anti-squat)
d. Rear sprocket too small (not enough anti-squat)
e. Compression dampening too soft - changes rate of squat, not final amount of squat

6. Not Tracking

a. Too much little low speed rebound
b. Too much high speed compression - deflecting on square edges
c. Too little high speed compression - packing then deflecting
d. Too much low speed compression - skating, poor traction