

The Sublime Seatpost

*It may not be glamorous,
but it's important*

By Sheldon Brown

The seatpost is one of the least glamorous parts of your bike, but one of the most significant when it comes to your riding comfort. The seatpost, after all, is the gadget that allows you to adjust your saddle, the most critical comfort adjustment on a bicycle.

There are three different adjustments on your seatpost, and by association, your saddle: height, front/back location, and front/back tilt. Let's take a look at each adjustment in turn.

Saddle height is adjusted by loosening the seatpost binder bolt on the frame. The frame's seat tube has a gap that clamps down on the seatpost when the binder bolt is tightened. When the binder bolt is loose, the seatpost can slide up and down in the seat tube.

The binder bolt may use a standard hex nut, an Allen bolt, or may be a

quick-release. If you have one type of bolt, it is not usually hard to convert to another. I particularly recommend the Allen bolt — it is secure, utilizes a small, light tool, and is lightweight. Quick releases, while common, are not desirable for most cyclists. They are less secure, and expose you to a higher risk of theft or vandalism.

It is important that the inside of the seat tube be liberally greased to prevent the seatpost from getting stuck. It is also a good idea to remove the seatpost and renew the grease every year or two. If you neglect this, your seatpost may get corroded in place, which can be a major hassle.

The tilt angle, and the front-back position, are both adjusted by the clamp on top of the seatpost. Modern seatposts, unlike older seatposts with their unwieldy seat clamps consisting of a U-shaped sheet metal stamping, a bunch of special washers, and a double-ended bolt, have the saddle clamping mechanism built into the head of the seatpost.

Thankfully, those older seatposts are typically found only on very low-end bikes these days.

Today's seatposts are commonly known as "microadjusting" posts, because they permit finer adjustment of the saddle angle than the older separate clamps. Microadjusting posts fall into two families, single-bolt and double-bolt.

Single-bolt ("La Prade" type) seatposts use a single vertical bolt to hold the saddle rails sandwiched between a pair of grooved blocks. The lower block will have a curved, usually serrated surface. This mates with a matching curved, serrated surface that is part of the seatpost. When the bolt is loose, the blocks may be tilted to adjust the saddle tilt, and the rails can slide back and forth to adjust the front/rear position of the saddle.

Two-bolt seatposts use a pair of bolts to hold the blocks of the saddle clamp. Loosening either one of these allows you to slide the saddle back and forth. Loosening one and tightening the other allows you to adjust the tilt, in very fine increments. (If one of the bolts is larger than the other, the larger one should be loosened before making any adjustment to the smaller one.) Two-bolt seatposts allows a finer level of control of the saddle tilt, because they don't rely on the meshing of teeth in serrated parts.

A variation on the two-bolt design utilizes clamping blocks with a half-cylindrical outer part, so that when placed together there's a basically cylindrical surface that the post clamps on to. With this type of post, loosening either bolt allows you to tilt the saddle, then you can clamp it back down.

A new style of seatpost from Salsa separates the rail clamping mechanism from the angle adjustment mechanism. One bolt clamps the saddle in the manner of a single-bolt post. The tilt is adjusted separately by a cam mechanism, then secured by a second bolt. This is probably the ultimate set-up for providing precise adjustment of the position of your saddle.

Saddles generally have a pair of rails that are gripped by the seatpost's clamp mechanism to adjust front-back position. The rails are long enough to permit the saddle to slide back and forth a fair amount, after the clamp is loosened.

Whatever type of saddle clamp you have, the bolts/nuts are highly stressed, and need to be tightened quite firmly. It is essential that the threads be lubricated with grease or oil. If you assemble these parts dry, you either won't be able to get them tight enough, or you'll strip the threads. Try to avoid getting oil or grease on the serrated mating surfaces that hold the tilt adjustment in place.

In selecting a seatpost, one important feature to check is the setback. The clamp mechanism on better seatposts is usually offset to the rear, to provide more room to adjust the saddle rearward. For typical touring positions, the ability to get the saddle well back is often quite important.

Seatposts with built-in spring suspension are becoming increasingly common. They are generally supplied on "comfort" bikes, but can also be used on touring machines. Suspension seatposts come in two basic styles: telescoping and linkage.

Telescoping seatposts have a moveable inner (upper) part and a stationary (lower) outer part. The lower section



PHOTO BY GREG SIPLE

Both single- and double-bolt microadjusting seatposts provide finer adjustments of saddle position than old-style seatposts, which are basically obsolete.

will contain a steel or elastomer spring. With a telescoping seatpost, the suspension travel is in line with the seat tube, toward the bottom bracket.

If you're considering buying a telescoping seatpost, you should know they have a number of drawbacks:

They are sometimes prone to loosen up, so that the saddle can rotate from side to side (the better models have an adjustment to take up the slack.)

The sliding contact between the inner and outer sections can tend to bind up over time.

To prevent bending loads on the sliding contact area, most telescoping seatposts have little or no setback in their saddle clamps, which is bad news for many riders.

The linkage type of seatpost has a parallelogram linkage that causes the saddle to move in an arc down and rearward with impacts. This is a better direction for the suspension action, since it is more in line with the source of the impact — the rear wheel.

Linkage-type seatposts have no sliding friction, just simple pivots at the four corners of the parallelogram. This makes them less likely to wear out and develop side play.

Many suspension seatposts have a "preload" adjustment. The idea of preload is to adjust the spring to be slightly stronger than required to support the rider's weight in normal conditions. This keeps the moveable part of the seatpost topped out against its limit, so the saddle won't bounce up and down in normal riding. When the bike hits a bump, it applies an extra impact load to the seatpost, and then the spring comes into action, taking the edge off the impact.

Bear in mind that if the preload adjustment is set too tight for your weight, the suspension won't work. If it's set too loose, you will tend to bounce up and down from normal pedaling forces.

If you're thinking of buying a suspension seatpost for an existing bike, make sure that you have enough room. Because the suspension mechanism takes up a certain amount of height, you can't get the saddle adjusted as low with a suspension post as you can with a plain post. If your frame is borderline large for you, you may not be able to get some suspension seatposts low enough. This is more often a problem with linkage type posts than with telescopic ones.

Seatposts come in a myriad of sizes, so if you are in the market to replace/upgrade your seatpost, you need to match the size used by your frame. They come in metric diameters 0.2 mm apart: 26.4, 26.6, 26.8 etc. Common sizes are in the 26.6 - 27.2 range, but many other sizes ranging from 22.2 to 31.8 are in use. Most seatposts have the size stamped into the post near the bottom. If yours doesn't, you will need to measure it with a caliper.

Suspension seatposts are usually only available in a few sizes, and rely on thin cylindrical shims to adapt a smaller-diameter seatpost to a larger seat tube. I have an on-line database listing many frame makes/models/years and the appropriate seatpost sizes at: http://sheldonbrown.com/seatpost_sizes.html

While department-store bikes use steel seatposts, virtually all decent modern bikes come with aluminum seatposts. Aluminum is generally the material of choice. Titanium is a great material for many things, but not generally good for seatposts. If you're a major "weight weenie" you might consider a carbon fiber seatpost, but this is not something I'd generally recommend for touring applications. ●

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