

# Teach Me Suspension (Part 10): Finding Your Setup

We're quite far along in this suspension series now, but I have to say up to this point things have been pretty simple.

*"SIMPLE???"* I hear you say?

What I mean is that each aspect of the suspension and geometry of a motorcycle has been tackled separately and we have learned about what they physically do and what that means to you as a rider.

The thing is, finding a good setup isn't as simple as making one change to one component. More than likely you will have to make changes to multiple components in order to find a good setup (not all at the same time, though).

However, as I alluded to in part 9 on squat, a setting change made to one component has the potential to throw out a setting made to another.

Meaning that sometimes finding a good setup can become a juggling act between many different settings.

That's what I mean when I say things become less simple.

## Stock Component's Biggest Job

Although you may like to believe it, when the manufacturer of your bike was putting the machine together they weren't thinking of you specifically.

Stock components are very much aimed right down the middle to accommodate the largest variety of riders.

If not right down the middle, then a little on the softer side as most machines will spend their lives on the road where ultra-sharp performance isn't needed.

The good thing is that stock components, especially in more recent times CAN be used to find a decent setup for a life on the track.

But because stock components are designed to cater for a very wide variety of riders and riding environments, the two extremes of each component's settings can be very different.

This means that even just a few clicks either way has the potential to make quite a dramatic difference to your bike's riding manner (read; make it crappier).

## **Don't Be Afraid to Ask for Help**

While we have spent the last few parts learning all about suspension tuning so that you may work to find the perfect setting for you, that doesn't necessarily mean you need to throw yourself right in at the deep end.

At any given track day, if you don't have a suspension technician on hand to help you with finding a base setting, there will be one or a number of riders of a similar size and with a similar bike that can guide you closer to a starting point.

Don't think that asking someone for help or getting a suspension tech to help you out is being lazy.

What you're really doing is paying for the convenience for someone to show you a good place to start.

That being said, if you feel you want to get your hands dirty, then do jump straight in.

As long as you're methodical and keep track of where you currently are and where you're going, at the very worst you can just go back to your original starting point and work from there again.

Don't be afraid to get things wrong. If you get it wrong all you've done is learned how NOT to do it. It's a lesson learned.

This also goes for those who feel their current settings are perfectly fine.

Don't be afraid to make changes for the fear of making things worse. If you don't make changes, how will you ever know if you could have made them better?

Also consider that a good setting at one track and on one set of tyres may not be the best for another track or set of rubber.

The idea of a 'perfect' setup doesn't really exist because if you want to, you can be experimenting to make things better at any given track.

Even up to the highest level, specifically in World Superbike where they (used to) have two races in a day. Even after a rider has won the race, you'd still often hear them say afterwards that they are looking to make changes for race two.

And this is with a team of guys working tirelessly on setup!

Do you not think if a perfect setup existed, these guy would have been able to find it by now?

The truth is, there could always be something better.

## **Keeping a Record of Suspension Changes**

How you track your changes is entirely up to you.

All that's important is that you note the changes you make and what effect you felt, but put it into a format that lets you easily go back and find a previous setting so you know where you went wrong (or right).

It can be as elaborate or simple as you wish. As long as YOU know where you are.

Some riders like the simple form of a continuous diary where they note the session, the change and the feeling.

Others may like a more intricate table format where you note every setting for the bike and what result it brought (in the way of feeling and lap time).

It can be one page per setting, or one page per day. It's totally up to you.

# Having a Goal

Just like when working on your riding, having a goal will definitely make progress more plentiful.

When you don't know what you're aiming for, how will you know what to change or what to focus on?

Have one area in mind that you want to tackle. This can be an issue you're having that you want to rectify i.e. poor rear grip, or the bike running wide in the turns.

Or it can be an area you simply think can be improved. For example, you may feel your bike would be better if it could turn a bit quicker.

Once you have a goal you can work in small steps to move in that direction based on the knowledge you now have on suspension tuning.

As you make more and more changes, you'll begin to anticipate what feeling that change will bring, meaning that it will become easier to achieve the setup you want or to rectify a problem.

You may even start making multiple changes at once because you have the confidence to do so.

If you're starting completely fresh, there's little need to immediately make a tonne of changes because you simply won't know if that has made the bike better or worse.

I would even suggest leaving sag alone for the first ride and just to take an initial measurement.

Feeling the before and after of sag settings will be another string to your bow and another page in your knowledge book.

Don't lose any opportunity to learn something.

From that point on it's literally a case of upping your pace gradually until you feel something isn't quite right in the handling of your bike.

Don't over-complicate things. Identify an area that could be improved, then choose a potential solution.

Feeling for certain symptoms will certainly help, and in the next part I will be providing you with a troubleshooting table to help give you a clearer idea of what you can expect.

## Initial Suspension Changes

The first changes you're likely to make from your baseline setting are ride height and preload.

The goal of changing these two aspects is to find a good balance between quick, confident steering and stability.

You want the bike to steer quickly but to not be twitching all over the place when gunning it down the straights.

That means adjusting preload to sit within the desired rider sag range (5-10mm for the rear, more than 25mm for the front) and to alter the rake and trail by dropping or raising the triple clamps on the fork tubes.

They'll be times when things aren't quite so simple though.

For example if your bike is too twitchy because there's too much weight on the front end, you can't raise the triple clamps up the fork tubes if they're already flush with the top of them.

In which case you will need to look to lower the rear ride height, either by adjusting preload or lengthening the shock. Increasing preload will help with this too.

I'm sure that reading all this is starting to sound a bit too overwhelming, and I don't blame you if it is.

However, a tradesmen didn't learn his craft in a day. It took time and effort before things that once seemed difficult became simple.

With practice and patience, there's no reason why you can't become a serious suspension guru if you just put the time in to learn.

Juggling all the settings over time to find the best setting won't be a piece of cake, but once you've done it once, you can jump into making changes to your next and future bikes brimming with confidence.

If you want to learn, the only way is to get stuck in!

Just remember, you only need to take it slow. Try a setting and ask – Did it make it better or worse?

Better – continue in the same direction and see if you can make it even better.

Worse – Go back to the previous setting and try something else.

Simple trial and error. The fun (and sometimes headaches) start when you improve in one area, but get worse in another as a result.

But it will always be a compromise, and it's up to you to decide which area should be a priority to better achieve what you want out there on track.