



THE SUSPENSION SPECIALIST

- ★ Professional Service and Suspension Set-up
- ★ Official Distributor of Fox Racing Shox
- ★ After Market Sales
- ★ Mobile Service Van
- ★ Consulting

Tel: +27 (0)83 4026049 Email: hilton@haywardsuspension.co.za



Oil Levels in Forks

The effects of raising or lowering oil level in front forks

Changing oil level in your forks can have a significant effect on fork action especially in the later stage of fork compression.

Before considering changing the oil level you should make sure that

1) you have the correct springs for your weight and

2) your suspension damping (internal valving) has been set correctly (e.g. enduro, motocross etc)

Once your set up is right changing the oil level can be used as a tool to fine tune the compression towards the end of the stroke e.g. bottoming problems.

Always check in your manual the minimum and maximum oil volume allowed in your specific fork. Too little oil can cause damping valves to not be covered by oil enough to work efficiently or bushes in the fork to not get enough lubrication. Too much oil will cause seal damage and the fork to become almost rigid at or near full compression.

Air has a progressive compression effect under pressure. The air gap in the forks therefore helps prevent the fork from being too soft and bottoming too easily. The smaller your air gap (the more oil you put in the fork) the harder the fork becomes towards the end of the stroke.

No matter what the oil level, the initial part of fork stroke differs very little. Normally the initial pressure in the fork is atmospheric at full extension regardless of the oil level. It is only when the fork compresses that the pressure build up differs substantially depending on the air volume and size of the air chamber.

Understanding the exact relationship between pressure and volume is complex. All you need to know is that the smaller you make the size of the air chamber when the fork is fully extended the more progressive (harder) your fork will become as it compresses.

Next month we will look a little deeper into the effects of oil levels.