

A photograph of a motorcycle rider in a red and yellow racing suit performing a wheelie on a paved surface. The rider is wearing a helmet with a star pattern. The motorcycle is tilted upwards, and a large flame is visible coming from the engine area. The background is a dark, textured surface.

Motorcycle Dynamics

Wheelbase

Wheelbase



The wheelbase also has an effect on the way the motorcycle handles.

- A longer wheelbase will give a more stable feeling, for example a sports tourer or a cruiser feel very stable in a straight line but around a circuit would be very slow through the turns.
- A shorter wheelbase will give a twitchier feeling in a straight line but will turn much faster.
- The wheelbase also has an effect on braking/accelerating stability, a longer wheelbase being more stable.
- It is important to find a good compromise depending on your application.

Wheelbase



- On production motorcycles the wheelbase is only changed by rear wheel position (the rake does alter the wheelbase but it is very minimal)
- On prototype motorcycles there is more adjustment, you can have the rear wheel position, the headstock position, triple clamp offset, rake angle, swingarm position (x-axis). An example of these is on the next page.
- Using some of the options above is not advisable if you wish to change just the wheelbase, as some of these options have a much bigger effect on areas previously discussed and overall it could be a negative step for the handling on the motorcycle.

Wheelbase

