

Checking Wheel Alignment

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OK, here's how to check wheel alignment on a motorcycle. We're going to measure the lateral alignment of the front to rear tire when both are parallel--going in the same direction.

Place the motorcycle on its centerstand and put the transmission in 1st gear. Tape the center of a 14 ft length of string to the rear tire tread, about 45 degrees or so up from the bottom of the tire and to the rear of the motorcycle. Draw each resultant 7 ft section of the string forward to the front tire so that the string is extending to the left and right of the front tire.

Stoop in front of the front tire and, while pulling each string forward to straighten it, adjust the string to where it just contacts the rear tire's shoulder on the forward section of the rear tire. Turn the front tire until its shoulders are parallel with the string you are pulling to either side of it. You now have a plane projected forward to the front tire on both sides allowing you to measure lateral alignment. Any misalignment is simply the dimensional difference from each string to the front tire shoulder. It's very important that your measurement not be influenced by the string touching anything else, such as mufflers, stands, etc.

If the right string is closer to the front wheel than the left, your rear wheel is aligned to the left of the front wheel. This will result in "pulling to the right". Why? Because the center of gravity is moved to the right with rear wheel misalignment to the left. The machine wants to fall to the right, and will have to be corrected with constant left handgrip pressure.

Now then, just because you measure some misalignment doesn't mean there's a problem! Joe Senner has 5mm left misalignment at the rear, and the bike tracks fine until the tires are gone. This is probably more of a function of road crown wear. Conversely, Howard Guenther, even with new tires, has a SERIOUS pull to the right. Something's wrong here, maybe the alignment, maybe not.

As I stated in another post, K-bike alignment may be adjusted by adding/deleting wheel hub shims. On older Rs it can also be done, but I'm not an authority on this. I do know you can fit a slightly larger tire to a /5 and space the hub out for swingarm clearance. Anyone know how to go the other way--move the wheel to the right? Howard may need to know how!

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