



2007

Mystery Designs Tiltster

This trike ain't tilting at windmills

YOU DON'T NEED TO TELL ME. I'M WELL AWARE that most dedicated *AIM* readers have lost sleep wondering when, oh when, will Sam Whitehead weigh in on the glory of life aboard a three-wheeler? After all, Editor Chris and other assorted *AIM* yahoos, such as Adam Williams and Terry O'Brien, shouldn't be the only ones triking it up. And besides, my friends often call me the third wheel — in a good way, I think. And so, at long last, it was decreed that I would wield my powers as a pundit and test out Mystery Designs' much-awaited Tiltster while banging around Sturgis this past August. I could not have been handed a greater honor.

Actually, Buzz was set to ride the Tiltster, but since he couldn't make the rally, the task fell to me. The crown jewel of Mystery Designs' engineering efforts, the Tiltster, as its name implies, allows trike riders to literally tilt their machines into corners — a revolutionary first in the three-wheeled world.

Anyone familiar with Mystery and company owner Lawayne Matthies, knows that the company's been in the game a long time, and he consistently seems to be at the forefront of trike design — it's all Lawayne and his team do. A few years ago, he collaborated with a NASCAR engineer and came up with a remarkable torsion-bar-free independent suspension system that focused on the specific geometry needed for correct roll-centers during high-speed cornering. That design was, and still is, extremely potent, allowing you to rip through twisties with great confidence. The Tiltster, however, ups the ante big time.

As one can see from the pictures, the Tiltster isn't exactly a simple suspension system: There's an awful lot going on. I might be better equipped to explain it all to you if I were a rocket scientist, but since that ship sailed years ago, you'll have to settle for my layman's dissection. It also doesn't help that Lawayne himself is a little guarded when discussing his baby, hence Mystery Designs.

PHOTOS BY BOB FEATHER

What I got out of him was this: Basically, the Tiltster's magic involves a linear actuator (or electric screw motor) that runs off a computer. Several sensors tell the actuator how to react in curves, in other words, when and how severely to tilt the trike's rear wheels. To make this complicated design as bulletproof as possible, Lawayne enlisted the help of engineers who work with flight control systems in the helicopter industry. "Mechanical failure is really not an option for those guys," Lawayne explains.

Although my time on the Tiltster was short, it certainly was sweet. As such, while I can't report on the long-range durability of the machine, I can state that it works smoothly and definitely lives up to its name. Some might call me crazy for saying that the Mystery men may have created the world's first true canyon-carving three-wheeler, but then those people didn't see me tearing through those legendary canyons in the Black Hills. Seriously, the more you push the Tiltster, the more it eats up the curves. I won't go so far as to claim that it felt like a two-wheeler, but I must admit the Tiltster seemed more aggressive and nimble than any other trike I've ever ridden. Mission accomplished.



If the fact that my ride was based around an '07 H-D FLHT Standard doesn't grab you, have no fear; Mystery Design's crew can make any motorcycle you choose into a Tiltster. You read that right — any and all belt- or chain-driven bikes. Or you can purchase the kit from Mystery and do it yourself; but you'd better be a pretty decent wrench or you might wind up in a ditch. The company has many custom-design options to choose from, including three different styles of cool American Racing wheels made to be wrapped with 300 tires. And Mystery can set you up without setting you back too brutally. For instance, the FLHT I rode checks in at just under \$40K, including the cost of the new bike. Not bad at all.

I came, I saw, I tilted, and I do believe I'm a better man for it. Now it's time for me to get back on my bike. **AIM**

SOURCES

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