

CRAFTING THE PERFECT SIDECAR RIG

By Wes Fleming, Secret K Bike Club Status REDACTED

SOME MIGHT USE THE WORD BLAS-phemy to describe an instance of hanging a sidecar off a K 1200 RS. Others might use the word utilitarian, and others still might call it genius. I definitely lean towards the latter.

I picked up my K 12 RS on the cheap from a guy moving to China. He was desperate, and I didn't much care what my sidecar tug was going to be. I considered hanging a tub off my 1995 R 1100 GS, but I wasn't sure that old gal had enough oomph left in her to be a good base for a rig I imagined using to cross the vast expanse of the USA.

The Hannigan Classic tub I picked up used from a family friend. Claude Stanley of Freedom Sidecars in Middleburg, Pennsylvania, did the assembly, using a mixture

of stock Hannigan parts and parts he custom-made in his shop. I was able to start driving the rig in February 2011, and after my first sidecar training class, I felt confident enough to start using it for distance and to carry around my daughter, who tended to fall asleep 20 minutes into any ride.

The greatest appeal of the K 12 RS-based rig is its highway worthiness. Compared to a typical Ural sidecar rig, this thing isn't even in the same game. The 1998 K 1200 RS left the factory with 130 horsepower and 86 foot-pounds of torque, more than enough to propel its wet weight of 630 pounds down the road at mind-bending speeds. Hanging a 300-pound sidecar on the side pushed the total weight of the rig towards a half ton, and when you add me, a passenger

and all our gear, we're easily pushing 1,500 pounds.

When we talk about motorcycles, we spend a lot of time talking about top speeds and horsepower, but when you talk about sidecar rigs, you want to start with torque, because that's the characteristic that gets you going from a dead stop and powers you out of turns. Without a solid amount of torque, a 1,000-pound sidecar rig is never going to make you happy.

I noticed very quickly the large amount of drag the sidecar put on the motorcycle from a dead stop. It felt like there was a lot of flex in the mounting system, flex that created an ambiguous, squishy feel to starting off the line. I discussed the matter with my mechanic, and he determined that the squishy feeling came from the



undercarriage of the mounting system, which used just a few steel tubes bolted to the mounting points for the center stand. He declared the setup flimsy, and we contracted with a local machinist to craft a custom plate to replace the side and center stand setup. This cured the squishy feeling immediately, giving the rig a solid, planted feel at all speeds and under every road condition.

Once the squishy feeling was controlled, I had to focus on starting and stopping, because those things were obviously suffering under the more rigid setup. I decided stopping was more important because I wanted to be able to get out of trouble faster than I got into it, especially in a decreasing-radius right curve, where the sidecar coming up off the ground is a real danger.

Replacing the front end was financially implausible, but rebuilding the front brake calipers and equipping them with sintered pads improved both stopping distance and brake feel at the lever. The final piece of the front brake puzzle was installing brake lines with steel braided covers. Instead of ordering a custom-made set, we used a standard set's lower lines and the upper line from the rear of an R 1150 GS kit, all from Spiegel.

The rear was a different story. Neither a rebuilt caliper nor upgraded pads made a significant difference, so my mechanic tinkered with the proportioning valve—the device that divides brake power between the bike's rear brake and the brake on the sidecar wheel—and got me 75 percent satisfied. There still wasn't enough power at the rear brake. The solution was to adapt and install the rear master cylinder from a K 1300 S, which bolted up without too much trouble and provided the rear braking power I wanted. Further tinkering with the proportioning valve made it so I could go from 60 to zero in about 40 percent more distance than I could on the K 12 RS before it had a sidecar on it, stopping in a straight line without too much handlebar input.

With stability and braking under control, it was time to address acceleration. It only took about 10,000 miles for me to destroy the clutch in my RS. This situation wasn't helped by the fact that the shop that replaced the original clutch neglected to replace the rear main seal, but my inexperience with sidecars contributed greatly to the deterioration of the clutch.

My mechanic recommended a radical

departure from standard K 1200 RS clutch replacement. He wanted to do all the standard things like replacing the slave cylinder (a necessity this time) and all the accessible seals, but his idea was to use parts from the K 1200 LT clutch assembly to improve not just clutch operation, but longevity as well. Using the heavier-duty components from the LT would benefit my RS-based sidecar rig, and they fit perfectly. The renewed clutch allowed all of that torque to get to the rear wheel, and off-the-line power improved noticeably.

Stability, braking and acceleration controlled, it was time to take on ergonomics. Sidecar rigs don't lean, so ground clearance isn't an issue, and I put on a foot peg lowering kit to ease the angles of my hips and knees for improved long-distance comfort. We toyed with different types of bar risers, but while they enabled a more upright seating position, they didn't address the core difficulty of leverage when it came to turning the rig.

The installation of a rake-reducing kit helped a little by pushing the front wheel out about an inch. This reduced the effort required to turn the rig, but it still remained that the RS handlebars are quite close together, as is standard for a sport-touring bike of that nature. I compared the turning effort to a friend's R 1200 GS-based rig, noting that turning his sidecar rig with no steering head modifications was far easier. Leverage is what it came down to; the GS handlebar is simply wider than the RS one, allowing the rider to gain more leverage over turning operations.

Helibars were probably the best solution, but they were beyond my budget. Instead, I watched various BMW motorcycle classified sections on a number of websites. My patience was rewarded when a rider parted out a wrecked K 1200 GT. I snapped up his handlebar assemblies from the triple clamp up.

Installing the GT handlebars on my RS in conjunction with my existing bar risers eased turning effort by about a third, certainly enough to justify the expense and effort. Putting the GT bars on the bike required using GT throttle cables as well, and we had to move some of the other cables and brake mounting parts around as well to ensure safe, clean operation from full lock left to full lock right. Increasing the width between the handlebars gave me

more leverage in turning, thus easing the process, and the taller GT setup allowed an even more upright seating position, improving long distance comfort.

The last of the changes to the rig was a combination of stability, control, comfort and economics. Because sidecar rigs don't lean, they do not wear tires evenly, and because of the increased weight, especially on the rear end, they simply destroy rear motorcycle tires no matter how hard the compound. I was going through a rear tire in under 5,000 miles; that got expensive in a hurry.

After trying a low-profile sports car tire that was an absolute bear to get onto the stock 17 x 5 RS rear wheel, I discovered that the rear wheel from an R 1200 CL would bolt right up to my final drive. With the addition of the wheel spacer from a K 12 LT, there was enough room for a 165/65 R15 car tire popular with vintage VW Bug drivers in there. The 17" tire caused some problems; not only was the ride harsh, but it caused the speedometer and odometer to operate improperly. The 15" car tire solved all those problems, bringing the gauges back into spec and adding just enough flex in the rear end to make the ride pleasant. Plus nobody complains about getting 30,000 miles out of a tire on a motorcycle!

All in all, putting together this sidecar rig has been an expensive and complicated labor of love. The last money I spent on it was to get the black sidecar painted to match the bike and have the side panels of the bike (damaged and poorly repaired by the previous owner) refurbished. It has been worth it though, and not just because I've got a sidecar rig that can run at 80 plus miles an hour on the open freeway all day long, even loaded down with 500 pounds of rider, passenger and gear. This rig has enabled me to take my wife and daughter on long motorcycle trips in comfort. It introduced them to a new aspect of motorcycling that expanded their horizons beyond 200 miles from our home in Virginia. It's not unusual to see car passengers whipping their phones out to take photos of my wife knitting in the sidecar or my daughter reading a book. I no longer worry about my daughter falling asleep when I ride, and five years later she still falls fast asleep about 20 minutes after we leave home. ☺