

Race Tech brake arcing and Pecard leather care

Race Tech brake arcing service

After reading my vent a few issues back about the poor front brake performance on my 1973 BMW R75/5, vintage suspension specialist Matt Wiley at Race Tech (racetech.com) contacted me, asking if I knew about Race Tech's brake arcing service for drum brakes. Briefly, brake arcing involves machining the brake drum so that it's perfectly round, then matching the brake shoes to the drum for optimum contact. Back when drum brakes were the norm, brake arcing was common, but with the advent of disc brakes it's become an increasingly rare and specialized service. After talking with Matt, I decided to test the concept.

Before sending my wheel off for service, I checked it against Race Tech's requirements. First up was inspecting for any loose spokes; they must be properly tensioned and the wheel must run straight and true. Re-tensioning the wheel after machining runs the risk of pulling the drum out of shape, negating any improvements. Next was thoroughly cleaning the brake backing plate before installing new shoes (you can use your old ones if they're good, but why would you?) and making sure the brake cams were properly lubed. Following that I inspected both wheel bearings (if they're old or suspect, replace them), then I confirmed the wheel axle was straight before shipping the wheel — complete with brake backing plate and axle — to Race Tech in Corona, California.

Getting true

At Race Tech, the wheel is set in a work stand supported by its axle. The inside face of the drum is then marked with black squiggly lines. Next, a specially made cutting tool designed by Race Tech founder Paul Thede is centered on the wheel axle. An air-powered rotary cutting head attached to the tool is adjusted to just touch the drum face. As the cutting head spins, the tool slowly revolves around the drum,



Race Tech's proprietary tool in place to machine the 1973 BMW R75/5 front drum.

the cutter removing metal as it does. The black squiggles act as a guide, showing high spots as material is removed; wherever black still shows, the drum hasn't been cut. This is done in multiple passes, the cutter removing as little material as possible with each pass until a clean surface remains.

The shoes are cut next. In this step, the shoes — complete with backing plate — are held in place while another rotary cutter, set up to exactly duplicate the arc

and diameter of the cut on the drum, matches the cut to the shoes, ensuring the shoes are exactly concentric to the drum. Simple in concept, it takes the right tools and skill to do it correctly.

Ten days after sending it out, my wheel was back and ready for installation, but not before draining the forks and refilling them with fresh 15 weight fork oil. Finally, I slipped new fork gaiters in place before reinstalling the forks and bolting the wheel back up.

I knew when I started that the original brake cable was stretched almost to the limit, so I turned to Barnett Clutches & Cables (barnettclutches.com) for a replacement. Barnett can custom make cables for just about any application, and less than a week after relaying the necessary specs to Ivan at Barnett a new cable showed up in the mail.

With the new cable installed, it was time to adjust the brakes. A twin-leading-shoe design, the BMW setup needs to be



Black lines act as cutting guide; when they're gone, the drum's done.

properly adjusted to work well. First, the brake arms need to be correctly oriented: If you remove them, mark them first to make sure they go back in their original position. Next, tension the brake cable until the rear shoe just touches the drum. Pull the brake lever; the rear shoe should touch the drum first, followed almost immediately by the front. The front shoe is adjusted with the brake shoe stop, located just behind the forward brake arm on the brake backing plate. To adjust tighter, hold the brake stop with a 5mm Allen wrench and loosen the 13mm lock nut. Pull lightly on the brake lever and turn the stop with the Allen wrench until you can feel it hitting against the brake inside the backing plate. Turn it back slightly, lock it in place, then check the pull of both arms



Brake backing plate with shoes jugged up on Race Tech's brake arcing tool to cut and match the profile of the shoes to the drum.

when squeezing the lever. It takes a bit of fiddling, moving the stop in and out, but what you're looking for is an even pull between the front and rear arms, with the rear making initial contact, followed immediately by the front.

Brakes away

With everything back together I made several runs up and down a low-traffic road, running up to speed before hitting the brakes hard to heat them up, followed by a rest to let them cool, repeating this several times to bed the new brake shoes

to the freshly machined drum. The result? Wow. The new cable and proper adjustment were a big help, no question, but the front brakes, previously feeble at best, now bite with authority, pulling the BMW down from speed with confidence. The pull on the lever is firm, and the small amount of "chatter" I used to get with a really firm tug on the lever is completely gone.

So what price performance? Race Tech charges \$200-\$225 for the service, with shipping extra. New Ferodo shoes set me back \$77. Add \$34.60 for the cable and the total was around \$335. Given the return — properly working brakes I can count on — if you're actually riding your classic, I'd call this one of the smartest performance upgrades you can make. More info: racetech.com — *Richard Backus*

Pecard leather dressing

The mark of a favorite piece of gear around here is when it gets used year after year, even with newer options around. I've had this Joe Rocket Sonic 2.0 perforated leather jacket since August 2006, and it immediately turned into a favorite, becoming my go-to jacket anytime temperatures were above 65 F or so, which means I've been wearing it for the bulk of my yearly riding.

I haven't given this jacket much care: It's been wiped down with a wet cloth five or six times in its life, but that's it. The Sonic 2.0 is made from drum-dyed cowhide, and while the finish on the leather held up and looked sharp for five years or so, after 11 years it was beyond due for some attention.

My jacket had some wear spots on the leather, a brown shade showing underneath. To restore it, I started with Pecard's Motorcycle Black Weatherproof Dressing, which, they say, "contains a small amount of black

tint" to cover up abrasions. After lightly cleaning the leather with a damp cloth, I applied the dressing using a soft, dry cloth, working it into the leather. The dressing did wonders. Not only did it re-dye the rough edges and worn cuffs, it restored the sun-faded jacket to an even coloring again. As a further bonus, it also moisturized the leather, making it softer and suppler.

After letting the jacket "dry," the dressing soaked in nicely. I figured it could use one more coat, so for round two I used Pecard's standard Motorcycle Leather Dressing, applying it outside and in the sun on a 65 F day, letting the leather warm up and really soak in the dressing. I put on a heavy coating, and then hung it inside to soak in for a few more days. As the photos show, the difference between "before" (left) and "after" (right) is night and day, with my favorite jacket returned to its former glory — only better. \$7 each (4 oz). More info: pecard.com — *Landon Hall*

