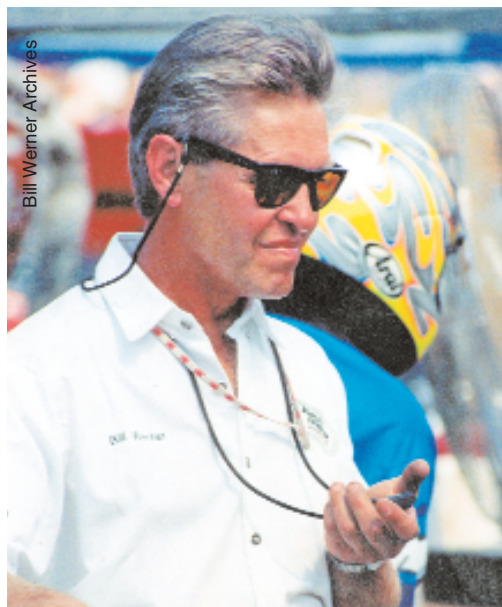


Legends of Motorcycling

The Game Changer



Bill Werner has over 130 AMA Grand National dirt-track wins and 9 series titles as a tuner.

FIVE YEARS AGO, the notion that Bill Werner would wrench on any brand of motorcycle other than a Harley-Davidson would've seemed preposterous. As a Harley-Davidson factory race mechanic from 1966 to 2004, Werner became dirt-track motorcycle racing's most decorated tuner, preparing racing machines for the likes of such legendary racers as Gary Scott, Jay Springsteen, Scott Parker and Rich King, achieving more than 130 AMA Grand National wins and a record 13 championship titles. In the process, he served as a custodian for Harley's venerable XR750 racing engine, pouring his heart and soul into the pushrod-actuated two-valve V-twin to keep it competitive against any interloper that threatened Harley's dominance.

The unintended result of Werner's success, however, is that the limited-production, racing-only, non-streetbike-based XR engine ultimately placed a virtual chokehold on the sport, effectively strangling any alternative brands, most of which are developed by privateer teams using serialized production-based engines. Worse yet, for the hand-to-mouth economy of dirt-track, the cost to purchase, build and maintain a competitive XR has become so prohibitive for all but the factory and a handful of well-financed privateer teams that participation at the Grand National level has dwindled dramatically; many of the sport's top amateurs usually switch to road racing rather than earn their GNC Twins license.

Like Saul on the road to Damascus, Werner has seen the light and chosen to accept a seemingly unfathomable challenge: to end the dominance of the XR—something that he was instrumental in creating—with a cheaper dirt-tracker, using a production-based Kawasaki Ninja 650R engine.

"I have gotten to see a different view other than my own internal view, and I can see how it [life with the XR] was great for me but it hurt the sport," Werner, 65, now says. It used to be that the kids couldn't wait to get through being a Novice and then a Junior to get to be an Expert as soon as they could. Now I know Harley dealers' kids who say, 'I just want to race 450s [singles] because I could never afford a Harley.' And even if they could afford a Harley, they don't have anyone who could work on one properly. What you end up with is the same handful of guys with the infrastructure in place to build and maintain XRs, and that

allows them to maintain their dominance. The last thing they want is a change that would encumber them with cheaper motorcycles that are competitive with the XRs and thus devalue them. Obviously, there has been resistance by the Harley people, because if we are successful, this could change the balance of power in the sport."

It's a strange epiphany for the Milwaukee-born Werner, who has played such a huge role in tilting that balance in favor of the Harley camp since the early 1970s. First inspired to race after witnessing the awesome talent of three-time AMA Grand National Champion Carroll Resweber firsthand, his true calling came after meeting Resweber's mechanic, Ralph Berndt, with whom Werner eventually became friends as Berndt mentored Werner in the fine art of preparing a Harley V-twin for the rigors of dirt-track racing.

"Ralph was an amazing guy," Werner says. "He did everything out of his garage, and he tuned a three-time National Champion. Resweber had to pay Ralph half his money, but when the factory tried to lure Resweber away, he said, 'I'd rather have half of something than all of nothing.' Ralph was that good."

In 1966, Werner answered a want ad in the Milwaukee Journal newspaper that changed his life. Harley-Davidson was looking to add another race mechanic to its factory team, and Werner got the nod, starting as a junior-level mechanic at about the same time that Harley was developing a new OHV racing engine to

replace its aging side-valve KR. Dubbed the XR, it was based on Harley's XL cast-iron Sportster engine, and it didn't take long for the race team to realize that the original version was a dud. The company tried everything to make it a winner, including changing internals and reconfiguring the heads to accept dual carburetors, to no avail.

"To run two carbs, we could take two front heads and get the intake ports in alignment, similar to what came out on the alloy XR in 1972," Werner says. "We just had to reconfigure the exhaust ports on the back head because the exhaust port came out on the right-hand side. We had to close off the exhaust port and then machine and braze in a spigot to recreate an exhaust port on the left side. Then we filled it in with brass, and on the intake side we had to weld in little stubs similar to the alloy XR. We also had to relocate the spark plugs to the center of the heads. It took the better part of the year just to make eight or 10 sets of heads."

And not under the healthiest of working conditions, as Werner recalls.

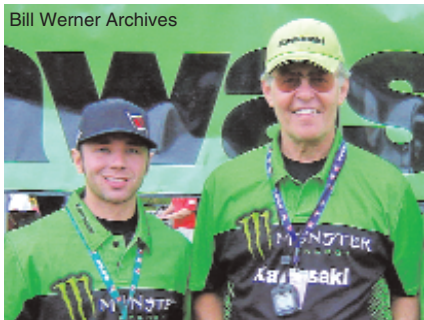
"We had to pack the head fins full of asbestos and then pack them in 55-gallon drums of asbestos to keep them from cracking when we welded on them," Werner says. "We literally had 55-gallon drums of the stuff. Hey, it was the '70s. There was no OSHA back then. Nobody knew [about the dangers of asbestos]."

Werner continued to work his way up the ladder, and when Harley-Davidson added 1972 AMA Grand National Rookie of the Year Gary Scott to the team in 1974, Werner was selected to be Scott's traveling mechanic. The duo finished second to Team Yamaha's Kenny Roberts in '74 but rebounded to earn the AMA Grand National Championship in '75. When Scott abruptly left before the start of the 1976 season, Werner picked up right where he and Scott left off, earning three consecutive championships with Michigan-born motorcycle racing prodigy Jay Springsteen in 1976, '77 and '78.

"It was something I never thought would happen," Werner says. "It felt like I was living the life of my mentor, Ralph Berndt, all over again."

Those were still the glory years of Harley factory dirt-track racing, but by the mid-1980s, dwindling sales had brought Harley-Davidson to its knees. On the verge of going under in 1985, the company disbanded its in-house factory racing team and elected to retain the services of just one rider, young Michigan star Scott Parker, who was in turn responsible for hiring—and paying for—his own

Bill Werner Archives



For 2010, Werner (left) has teamed with former Harley-Davidson factory rider Bryan Smith (right) of Michigan.

mechanic to prepare his motorcycles outside the factory walls. Werner, meanwhile, ended up being the last Harley employee in the race shop, retained merely to fill parts orders and offer technical support to XR owners. Despite his incredible success, his days as a racing mechanic appeared to be over.

"I was already looking at a second career," Werner says. "I was actually taking robotics classes at the local community college because I was going to learn how to repair robotics. I had managed to be the last guy in the Racing Department, but I thought I was going to be done."

But then Parker had the bright idea to hire Werner. Oddly, the plan met with resistance by the factory, and but for some minor legal arm twisting on Parker's part, it might not have ever happened. The factory ultimately relented, though it forbade Werner from preparing Parker's bikes on company time. Instead, he prepped them at home.

"We were right back to square one," Werner says. "I was working in my basement and driving to all the races. I remember having to have my wife hold the throttle while I timed the motors. And we were the *factory team*."

But the rest, as they say, is history. Parker and Werner remain dirt-track's definitive rider/tuner duo to this day. Parker became the winningest rider in AMA dirt-track history, smashing every record in the book as he garnered an incredible nine Grand National Championship crowns and amassed over 90 race victories from 1988 through 2001. With Werner dialing-in his motorcycles, Parker won four consecutive titles from 1988-1991, and then broke his own record by winning an additional five-straight from 1994-1998.

And yet, with all that history, with his name practically tattooed all over Harley's factory racing effort, Werner is now back

in his basement, working as a privateer mechanic once again—on a Kawasaki, no less. The move has generated a lot of buzz in the sport, as some pundits, both inside and outside of Harley-Davidson, consider him to be the ultimate traitor. Werner responds by saying that those people truly don't understand what's at stake here. Not unlike the argument against America's dependence on foreign oil, the sport itself will be driven down further unless there are viable and less-expensive alternatives to the XR, and soon.

Today, a single Harley XR750 engine costs around \$10,000. Its various assemblies arrive in boxes, and the complete engine has to be assembled by an experienced mechanic, usually at an additional cost of around \$3000. A top-shelf XR motor will have to be rebuilt several times per season in order to maintain its competitive edge. Werner has found that extracting XR power levels from a Kawasaki takes far less of a toll come rebuild time.

Bill Werner Archives



Werner's Ninja 650R-based racer displaces 737cc to take advantage of AMA rules that allow production-based engines under 750cc to compete without intake restrictors and with no vehicle weight limit.

"All four of the Kawasaki engines that I have in service this year, I bought for less than \$1000 apiece," he says. "One of the engines that I built last year just came off the dyno, and it's making within a half a horsepower of what it made when I built it. I haven't even had a spark plug out of it. I've never adjusted the valves. All I've done is change the oil. The XRs have to come apart after every race because you have to change the valve springs—or if you don't, you're going to wish you did. Every four races, you have to put in a new crankpin. And the parts are so damn expensive. A rod bearing assembly for a Kawasaki is \$28, and the same setup for the XR is \$1100. I can get eight valves for the Kawasaki for less than the price of one



As a Harley factory mechanic, Werner earned championships with Gary Scott, Jay Springsteen and Scott Parker.

XR valve. And I can change the heads, cylinders, rods and transmission in the Kawasaki without taking the cases out of the chassis. Try that with an XR."

Werner has added an important new piece to his program for 2010—a top-level rider. Former Harley factory racer Bryan Smith, who was dumped in 2009 as the once again-struggling H-D attempted to cut its own costs, will race on Werner-built Kawasakis for the entire AMA Grand National Championship series.

"He's obviously a great racer, but what I really admire is his work ethic," Werner says. "He's a real thinker, he has the skills to be good enough to win a championship, and he's willing to work at it."

The sport of dirt-track racing now finds itself at a time that seems right for *someone* to topple Harley, which has won 134 consecutive Grand National twins main events. Before joining the factory Harley squad, King was the last non-Harley-Davidson rider to win a GNC twins main event, riding a Honda RS750 to victory at the Joliet, Illinois, half-mile on August 8, 1998! Competing is one thing, winning quite another. Werner knows it will take a lot more work, but he has confidence it can be done.

"Winning is sweet, but even sweeter than that will be if we can show all of these young kids who come up in the sport as amateurs and then drop off that there is a viable low-cost alternative," Werner says. "There's no question that winning is the most fun, but that's not what I'm doing this for. I'm doing this because it's the right thing to do, and I think I'm the right person to do it." —Scott Rousseau