Fueling Champions: How Science is Reshaping Racing Fuel Performance

At the crossroads of cutting-edge science and motorsports grit, Hot Shot's Secret is redefining the future of racing fuel—starting in the lab and proving it on the track. In a recent EPARTRADE tech webinar titled *"Fueling Champions: The Future of Racing Fuel Starts in the Lab,"* Kyle Fischer, Director of Field Marketing & Partnerships at Hot Shot's Secret, joined forces with Lavon Miller, Owner of Firepunk Diesel, to unveil the science, story, and success behind their performance fuel and lubricant innovations.

From humble beginnings in diesel problem-solving, Hot Shot's Secret has evolved into a powerhouse of performance products—now boasting over 80 unique formulations. "We don't chase markets. We solve problems," said Fischer. "That principle has carried us from over-the-road trucking into high-stakes motorsports."

Firepunk Diesel, a respected leader in high-performance diesel tuning and fabrication, was a natural partner. Miller recounted how their collaboration began with skepticism—Hot Shot's Secret offered to pay to test their product on Firepunk's dyno, using Firepunk's own vehicles. The result? Verified horsepower gains and significantly reduced engine wear. "They weren't trying to sell snake oil—they let the data do the talking," said Miller.

Science-Backed Innovation in Racing Lubricants

Central to the discussion was FR3, Hot Shot's friction-reducing oil additive, and its evolution into the company's high-performance racing oils. Utilizing a Group IV polyalphaolefin base oil—recognized for its unmatched shear stability—Hot Shot's Adrenaline Racing Oils are engineered to withstand extreme stress from 3,500+ horsepower race engines. According to Miller, "We ran 100 passes on a set of main bearings, and they still had the profilometer marks visible. That's unheard of."

Diesel Fuel Reimagined: R82+ and Outlaw R100+

In diesel racing, fuel lubricity is often overlooked—yet it's critical in high-pressure systems reaching up to 40,000 PSI. With traditional race diesel fuels running dangerously dry, Hot Shot's Secret introduced two groundbreaking solutions:

- **R82+ Diesel Fuel Additive**: Converts pump fuel into high-performance diesel with improved cetane and lubricity. "You're treating 4 gallons with one bottle—it's concentrated race chemistry," Fischer noted.
- **Outlaw R100+ Racing Fuel**: Their newest full-blown race fuel offers 100+ cetane and high lubricity, solving the dry-fuel dilemma that historically damaged injectors

and fuel pumps. It's now PPL and TPA legal and already proven with UCC Champion Josh McCormick pushing over 3,000 hp.

Real-World Testing, Real-World Results

Hot Shot's Secret doesn't just develop in the lab—they test in the trenches. From the Ultimate Callout Challenge to drag strips and sled pulls, their products are pushed to the edge. "These events are brutal—drag, dyno, then sled pull. It's the ultimate torture test for lubricants and fuel," said Fischer.

Miller echoed the sentiment: "If it survives 2000+ horsepower and those conditions, imagine what it does for your daily driver or tow rig."

A Feedback Loop That Drives Innovation

By collaborating closely with race teams and tuners like Firepunk Diesel, Hot Shot's Secret refines its products continuously. Features like faster turbo spool, reduced EGTs, shorter ignition delay, and more complete combustion aren't just theoretical—they're verified on dynos and tracks across the country.

"It's not just about making power. It's about protecting parts and delivering consistency," said Miller. "And with racing fuel, consistency is everything when you're tuning right to the edge."

Trust Earned, Not Marketed

"We give away our product at events because we believe in it," Fischer said. "Try it, test it, come back and tell us what you found."

With a lab-first philosophy and a race-proven product line, Hot Shot's Secret is winning over skeptics and delivering serious performance gains in one of the most demanding motorsports environments on the planet.

For more information, **watch the full webinar here.**