

Q&A with a Powersports Brake Design Engineer – Jim Palminteri of Hayes

For the Brake Report

Jim Palminteri is a Design Engineer at Hayes Performance Systems. He specializes in powersports brake technology and has been the lead designer of Hayes' newest UTV brake family, the Sovren collection. An avid mountain snowmobiler, his passion for powersports bleeds into his weekends as well.

Tell me about Hayes Performance Systems.

As a company, Hayes Performance Systems is a global manufacturer of brakes, suspension systems, wheels, and components for bicycles, powersports, industrial, government, and specialty applications. We've been involved in powersports since the late 1960s and have a deep history with motorcycles. And, like most powersports enthusiasts, we're really excited about the UTV market. Its growth has been explosive and the demand for robust braking has been a cool challenge.

What is Sovren?

Sovren is a high-performance sliding brake caliper designed to fit the immediate future needs of the UTV market. The caliper is available in 28, 32, and 35mm dual pistons and, like its name implies, it was designed with supreme power in mind. Sovren has been validated by our internal testing team here at Hayes and we also had the opportunity to race validate Sovren in short course racing and King of the Hammers. Kyle Chaney and Elliot Burns of Scheuring Speed Sports as well as Rodney and Owen VanEperen will be running our Sovren system, be we anticipate a demand for Sovren from other racers this season.

You said Sovren fits the immediate future needs of the UTV market. Are you hinting there's something more in development?

All I will say now is that it's big. It's a caliper designed for the enormous strength and speed we expect to see in the UTV space.

What can you tell me about the inspiration for Sovren's development? Its design is reminiscent of automotive designs.

Sovren was inspired by automotive design that allows for a familiar method of brake pad changes and maintenance. Our product team at Hayes also identified the growing need for a brake caliper that can handle the increased torque demand without destroying rotors or other parts of the vehicle. With vehicles getting bigger and faster, calipers need to keep up in size, response, and brake structure. 200+ horsepower is a reality in the UTV space and historic brake packages can no longer keep up with the speed and power of these new vehicles.

So, with the SXS market growing rapidly, it sounds like new brake solutions were necessary. What differentiates Sovren from other options in the market?

Our Sovren collection is a great solution for small manufacturers because they can carry lower inventory. Our bi-directional design based on dual bleeders and dual direction torque-take-out bracket does not require a left-hand and right-hand bracket like our competition. In layman's terms, you can run



the same caliper on both sides of the vehicle. Sovren is also designed with a max operating pressure of 125 bar which allows for more freedom in sizing for applications.

The caliper also has just as much strength in the forward direction as it does the rear direction. This provides the end user the same brake feel in reverse as in forwards which increases their confidence, whether they're racing around trails with their buddies or doing some serious work. Vehicle operators in the utility market will find having that dual direction torque take out bracket is beneficial for heavy loads.

How can OEs or consumers that are currently running Hayes benefit from Sovren?

Another benefit of this new design is that OEs and consumers can easily upfit from mid-range performance Hayes caliper lines like Titan, Stinger, and Rampage. This benefits current customers as Sovren's mounting configuration and piston sizing match Titan, Stinger, and Rampage. This allows current customers to upgrade to Sovren without redesigning and re-tooling knuckle design on their end. Bottom line: this is a lower cost upgrade to OEMs that provides top-tier high performance.

And as of April 5, 2022, Sovren is also available directly to consumers, differentiating it from some competitors.

Speaking of consumers, Sovren is the first Hayes product to be available to consumers first. What can consumers expect?

Our Sovren Caliper Kit will be available for select vehicles for two primary vehicle brands ([Can-Am](#) and [Yamaha](#)) on April 5, 2022. These kits are designed for race, but trail consumers can also benefit from the added confidence that Sovren provides. The quiet strength Sovren gives you on a steep trail incline is incredible.

Sovren is also a drop-in replacement for Arctic Cat and John Deere UTV applications and we're currently developing brackets for Polaris applications. Look for updates on [HayesPowersports.com](#).

Any closing thoughts for our readers?

You want to be able to rely on the brake however you're using the vehicle. You want your brakes – a safety critical product – to be good to go no matter what the application. With Sovren you can rest easy that it will outperform your expectations.