Revolutionizing High-Performance Racing with Advanced Battery Technology
Lithium Pros and XS Power Batteries Unveil Insights in Webinar

In an exciting and highly technical webinar titled *"Advanced Batteries for High-Performance Racing,"* Kevin Bennett, President of Lithium Pros, and Jed Emert, Performance Sales Manager at XS Power Batteries, shared the latest advancements in battery technology for racing applications. They focused on groundbreaking solutions that will redefine the future of high-performance vehicles, particularly in racing.

During the webinar, the two experts outlined the differences between various types of advanced batteries, including AGM (Absorbed Glass Mat) lead-acid batteries, Lithium Titanate Oxide (LTO), Lithium Iron Phosphate (LFP), and Sodium-Ion batteries. They emphasized the critical role these technologies play in supporting the needs of racers for both pulse power and energy storage.

Pioneering Battery Solutions for Racing

XS Power and Lithium Pros have been leaders in racing battery solutions for over a decade, winning industry recognition, including the *Best New Racing Product Award* in 2009. Bennett and Emert shared insights on the long-term advantages of lithium batteries in racing, including superior charging speeds, higher energy density, and lower weight compared to traditional lead-acid batteries.

Bennett emphasized, “The advanced batteries we are discussing today are all designed for low-voltage applications, specifically targeting internal combustion engine-powered vehicles rather than electric vehicles (EVs). These are solutions for racers looking for performance boosts without the constraints of high voltage.” He also highlighted that Lithium Pros and XS Power have been working on sodium-ion battery technology, which is poised to deliver significant breakthroughs in energy storage.

Key Technological Highlights

The webinar featured a comprehensive discussion on several battery technologies:

- **AGM Batteries**: Traditional lead-acid batteries, well known for reliability but with limitations in charge acceptance and cycle life.
- **LTO (Lithium Titanate Oxide)**: Known for exceptional safety, extreme temperature tolerance, and fast charging capabilities (up to 10C), LTO batteries are ideal for demanding environments such as hybrid racing.

- **LFP (Lithium Iron Phosphate)**: A well-rounded chemistry that balances power and energy density, LFP has been a top choice for racing applications, offering fast recharge times and long cycle life.
- **Sodium-Ion Batteries**: A new entrant in the market, sodium-ion technology offers a promising alternative with good safety, fast charging, and the ability to discharge to zero safely, making it highly resilient.

Jed Emert added, “When it comes to racing, every pound matters, and battery weight can be a critical factor in performance. Choosing the right battery solution, whether it’s LFP for energy density or LTO for quick charge capabilities, can make the difference between winning and losing on the track.”

Tailored Solutions for Racers

One of the key takeaways from the webinar was the importance of tailoring battery solutions to specific racing needs. “There’s no one-size-fits-all when it comes to batteries in racing,” Bennett remarked. “Racers need to match the right product with their vehicle’s energy or power demands.”

The webinar also highlighted the growing use of battery management systems (BMS) in lithium batteries, which ensure optimal performance and safety. Bennett stressed that while a BMS is critical for some battery chemistries, racers without one must be vigilant in monitoring battery performance to avoid failures.

Looking Forward

With Lithium Pros now part of Systematic Power Solutions, the combined expertise of Lithium Pros and XS Power Batteries promises to push the boundaries of battery technology even further. "We’re excited about the potential of sodium-ion technology and look forward to its continued evolution in the racing industry," Bennett said.

For more information on advanced battery technologies for racing and other high-performance applications, **watch the full webinar here.**