

## WHEELSPIN

# Roar of the Engines? It's a Hum at This Race

By KRISTEN HALL-GEISLER

PORTLAND, Ore. MICHAEL KADIE pressed the accelerator of his electric-powered Cobra replica and took off down the quarter-mile at Portland International Raceway, pulling away from his opponent, a gas-powered Subaru WRX. As he braked, red numbers blinked on in the board that stretched over both lanes: 13.69 seconds at 94 miles an hour. Not bad for a first-ever run in an electric car he built himself.

The run took place at the 10th Anniversary National Electric Drag Racing Association Nationals in August. About 40 people from the West Coast gathered here to watch and participate. Racers competed against each other's times, though it was usually a gas-powered car in the next lane. (Electric vehicles don't usually race in the same heat because the silence drains some of the excitement for the spectators.) They were also at the track to swap tips and talk shop about a true 21st-century sport.

The association was founded in 1997 by John Wayland, a forklift mechanic from Portland, and Roderick Wilde, who runs a company in Port Townsend, Wash., that supplies parts for electric vehicles. They formed the group after making their own electric racers from forklift motors and realizing that there were plenty of people like themselves who were committed to the technology. They wanted to show that these types of cars could be raced.

After attending an electric vehicle, or E.V., event near Phoenix with Mr. Wayland's 1972 Datsun 1200, which he calls the White Zombie, and Mr. Wilde's 1979 RX-7, called the Maniac Mazda, they went to a nearby sports bar. Over beers, they dreamed up their organization and even gave it an important-sounding name: the National Electric Drag Racing Association. It now has about 50 members.

In 1999, the National Hot Rod Association accepted the National Electric Drag Racing Association into its organization. "Before that, tracks wouldn't let E.V.'s run," mostly because of safety issues, Mr. Wayland said. So he, Mr. Wilde and Bill Dube, an association member, crafted rules and guidelines for racing. E.V.'s are now allowed at most tracks that hold National Hot Rod Association events.

According to Jerry Archambeault, the N.H.R.A. vice president of communica-

**WHITE ZOMBIE**

Right, the joined forklift motors that power John Wayland's 1972 Datsun 1200, far right.



JOHN WAYLAND



DAVID D. NELSON

**BATTERIES INCLUDED** Above and right, Michael Kadie's Cobra replica.

tions, it has long been the mission of the association to get interested drag racers into organized track events. Creating the rules and regulations ensures a level playing field.

"If people want to race electric cars, we'll find a way for them to race on a track," Mr. Archambeault said.

At the Portland track, 240-volt outlets are provided that can charge 10 racers at a time.

The most common batteries are deep-cycle lead-acid batteries, which are

## Batteries, forklift motors and speeds around 100 miles an hour.

much cheaper than lithium-ion batteries. Otmar Ebenhoeh, who races electric cars and is a longtime association member, uses lead-acid batteries in the California Poppy, his orange Porsche 914 conversion, which goes 30 miles on every charge if he drives carefully (not likely on a drag strip). Mr. Ebenhoeh said the lithium-ion batteries can deliver four to six times the distance for each charge.

Mr. Ebenhoeh owns Cafe Electric, a company in Corvallis, Ore., that builds the controller, called the Zilla, used in



DENNIS J. PESTKA, ABOVE, AND KEITH VANSICKLE, BELOW



many E.V. racers, including Mr. Kadie's fiberglass replica of a 1965 Daytona Cobra coupe, called the 2SSIC. Mr. Ebenhoeh described the controller as "a very large dimmer switch." It connects to the accelerator and regulates how much power goes from the batteries to the motor.

This is where Jim Husted, a forklift motor repairman from Redmond, Ore., comes in. "I call myself the motor dog," said Mr. Husted, who built the power plant in the White Zombie. "Electric vehicles are the way of the future. I'm helping to get the world off the record player."

Three years ago, Mr. Wayland, the association's co-founder, showed Mr. Husted, who serviced the motors at Mr. Wayland's workplace, the two mated eight-inch forklift motors under the White Zombie's hood. The system worked, but it caused severe vibration at high speeds.

Mr. Husted tinkered with the design for six months, until he'd figured how to better mate the two motors to eliminate the vibration. His solution shaved seven inches and 25 pounds from the previous version. Mr. Wayland had the new power plant painted vivid violet and attached a plaque commemorating Mr. Husted's innovation. Mr. Husted is now working on a dragster project involving four motors.

Mr. Kadie, a software consultant from San Diego, uses 960 lithium-ion batteries, which can produce 2,000 amps, to power his car. The energy stored in the batteries runs through the Zilla controller, which transfers the power to the motor and delivers 429 horsepower. According to Mr. Wilde, volts are like r.p.m.'s, amps are like torque and watts are like horsepower.

For Mr. Kadie's first run in August, he had the car set at 800 amps, but he let it out to 1,100 amps for his next two runs. His time fell to 13.18 seconds in the final race. This earned the 2SSIC the record in its class on its first night at the track. The next step was attaching wheelie bars to the back of the car to keep its nearly empty nose compartment from rising up and slamming down when he hit the accelerator at full power.

Many of the members and spectators gathered late Saturday morning, the day after the race, at Mr. Wayland's home garage for a day of tinkering, tweaking, and major changes — only to be rained off the track that night. Mr. Kadie had to cancel plans to take on the White Zombie.

"Despite not getting to race White Zombie, I found those 40 hours driving from San Diego to Portland and back to be worth it," he said.

His employer, Northwest Handling Systems in Portland, allows Mr. Wayland to take the company truck — filled with E.V. gear — to the track. It also gave him \$500 for future prize money.

"Before, I would have said E.V.'s were a fad that would die out," Mr. Wayland said. "This time around it's different. There's an interest in getting off foreign oil, there's global warming, there's oil prices and health issues. But most important, we have a battery."

Mr. Wilde said the new technology was important. "I never thought I'd live long enough to see a battery like these lithiums," he said. "Their power density plus their energy density will definitely impact the auto industry."

## Monte Carlo Off the Track

THE powerful Chevrolet Monte Carlo SS stock car is leaving Nascar's top series and will be replaced next year in all 36 races by Chevy's version of the Car of Tomorrow, which will have the Impala SS nameplate splashed across its front bumper. General Motors dropped the Monte Carlo after 2007.

Impala drivers could be just as successful as Monte Carlo drivers because they are pretty much the same group (with the exception of Tony Stewart, who will race a Toyota in 2008). But the Monte Carlo era will be tough to top.

Monte Carlo drivers in Nascar's top series — which will be changed from the Nextel Cup to the Sprint Cup in 2008 — won 396 races and 16 championships since the racing model was introduced in 1971.

Jimmie Johnson, the 2006 and 2007 champ, drove a Monte Carlo.

So did Jeff Gordon, who won all four of his series championships in Monte Carlos, and the late Dale Earnhardt Sr., who won three of his seven championships in Monte Carlos. (The four others were in a Lumina.)

Earnhardt won what was probably his most memorable race, the 1998 Daytona 500, in a Monte Carlo. He was driving one when he died in a crash on the last lap of the 2001 Daytona 500.

In all, the Monte Carlo has won eight championships since 1995.

"This car has been a lot of fun to drive," Mr. Gordon said of the Monte Carlo before the final race of the 2007 season. "The evolution of this car and how much it's changed in the 15 years I've been in this series has been amazing. It's a real race car."

DAVE CALDWELL



JONATHAN FERREY/GETTY IMAGES

Jeff Gordon's Monte Carlo.

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