

# Classic Bug Gets a Charge

*Quiet on the road, electric VW may someday make noise in the market*

By Sarah Garmire

They were designed as fuel-efficient vehicles for the masses. No matter what they are called—VWs, Bugs, Beetles—for many years Volkswagen Beetles were prevalent on the streets.

Now Brian Steel, chief executive officer of New Leaf EV in Tacoma, is propelling these classic cars into the future by removing the fuel tank. EV stands for electric vehicle.

Brian had an “ah-ha” moment when he saw the film, “Who Killed the Electric Car?” a couple of years ago. The documentary, written and directed by Chris Paine, is subtitled “Someone pulled the plug.” The 2006 movie was marketed with Al Gore’s film, “An Inconvenient Truth,” and may be credited with an awareness of available EV technologies.

It certainly affected Brian.

“I watched the movie and saw that with gas prices going up, the future of cars was electric,” he says. “If you don’t learn new things, all of a sudden technology has passed you by. You’ve got to stay ahead and keep an open mind.”

Brian has 34 years in the Volkswagen repair business from his Small Car Performance shop on South Tacoma Way.

“Mostly performance work,” he says. “There are fewer Beetles around, so we work on other kinds now.”

Another of Brian’s enterprises is putting Subaru engines in Volkswagen Vanagons. He does a lot of these conversions and sells parts internationally.

Brian is obsessive about his



**Brian Steel shows the wire and the control box for his electric vehicle.**

innovations.

“I research upside down and backwards,” he says. “Either we’re getting into electric cars or we’re going to disappear.”

Does he mean his business specifically or people in general?

“Well, at least automotive service as we know it” he says. “I decided these older Beetles are the perfect candidates for conversion. There’s no power steering, no air conditioning. They’re pretty simple, without all the fancy equipment.”

How does it drive? Put the key in the ignition and turn it on. There is nothing but a faint ticking sound. Press the accelerator. The silent forward motion seems eerie at first. Steer into traffic and keep pace. Stop at the light. There is that eerie silence again. No VW roar. No gassy smell.

Brian’s 1963 Beetle is a prototype with lead batteries. He isn’t completely satisfied with it.

“It needs to feel more like a real car,”

he says. “The next one’s going to have lithium batteries. They have half the weight and twice the power, but they’re four times more expensive. They’ll go 100 miles on one charge. This one goes 40 miles.

“My business belief is if you build the best product, people will buy it. We use a sophisticated control unit and motor system and state-of-the-art regenerative braking. I’ve learned a lot building and driving this. Internal combustion is terribly inefficient.”

Brian explains how his car works.

“When you drive uphill, you use power,” he says. “When you drive back down hill, you get potential energy back. My next project after Beetles will be a hybrid that gets that energy back when you slow down; the energy you lose now. That’s down the road a bit.”

Classic Beetles still turn heads. When Brian’s prototype glides by silently, it startles some.

“I’m a perfectionist,” Brian says. “These are classic cars. When we convert them, no holes are drilled or panels cut into. We take out the fuel tank and engine. We can reconvert it back to gas in 24 hours.”

The federal government is investing in infrastructure for electric vehicles.

“The Department of Energy just contracted with a company to put in about 2,000 charging stations in the Puget Sound area,” says Brian. “I pulled into REI and they had a power hookup right in front of the building. It costs them just a few cents a day to offer that.”

Maintaining an electric car is easy, says Keith Newton, service writer at Small Car Performance, on the same property with New Leaf EV.

“They’re quiet and clean,” he says. “You don’t change oil, they can’t leak and it drives like a real car.”



**Brian with his prototype 1963 Volkswagen Beetle electric car. The plug in back says it all.**

Keith says nothing needs tuning. Drivers should keep an eye on the brakes and wheel bearings, and add transmission oil when necessary.

“The batteries don’t like to be mistreated,” Brian warns. That means not letting the charge run completely down.

Battery life for lead batteries is four to seven years. Lithium batteries are five to 15.

Brian charges \$9,975 to convert a customer’s Beetle. Batteries are priced separately: lead costs \$2,000, lithium \$8,000. With lead batteries, the Bug weighs 350 pounds more than a gas version. With the lithium batteries, it is about the same as stock.

The Internal Revenue Service is offering a tax credit for 10 percent of the conversion cost, not to exceed \$4,000, on qualified plug-in electric vehicle conversions through December 31, 2011. Washington state has waived the sales

tax, too.

“I know the batteries will get cheaper and more efficient with technology breakthroughs that are bound to happen in five to 10 years,” Brian says.

New Leaf EV can convert a standard Beetle (1950s to 1974) in a week.

“We can work on Super Beetles, too,” says Brian. “They just need a different battery box. Early Porsche cars can also be converted, up to 1970 or so.”

Brian expects he eventually will sell do-it-yourself kits, but now he wants to keep it in-house.

If industries supported by the internal combustion engine are indeed trying to kill the electric car, Brian is battling them one converted Bug at a time. ■

*For more information, see [www.newleafev.com](http://www.newleafev.com) or contact Brian Steel at Small Car Performance, 4720 South Tacoma Way, Tacoma, WA 98409, (253) 473-2474.*