This Voltz-Wagen-based kit car has plenty of juice

THE ELECTRIC WOMBAT

story and photos by Joe Greeves

Andrew Schler is a computer engineer working for General Electric in Melbourne, Florida. In addition to being a conservationist and concerned about the environment, he also wanted to reduce his fuel bill, (and that was back when it was less than two dollars a gallon). Although it was only a 25-mile commute to his office, his full-size Ford pickup burned quite a bit of gas and he knew there had to be a better way. An expert in energy management systems, Andrew began investigating electric-powered vehicles.

Thanks to his father's mentoring, Andrew was particularly well suited for the task. He tells the story of rebuilding his first Volkswagen engine at the tender age of eight. He wanted to make sure he knew exactly how everything worked by the time he was 15 so he could get his license! Although he's owned half a dozen different cars in the past 20 years, it is interesting that he's come full circle with a VW.

Like most one-of-a-kind projects, this one began with a pencil, paper, and lots of research. Andrew had to source the rolling chassis, the electrical powerplant, and a body to join the two. He chose Electro Automotive, a company that has been providing automotive electric conversions since 1979. They offer a package that includes the electric motor, speed controller, circuit breakers, fusible links, gauges, charger and more, plus an adapter to connect the electric motor to the Volkswagen transaxle. Motor choices come in three varieties; 96 volts, 120 volts, and 144 volts. Choosing the middle ground, Andrew calculated that the 120-volt motor (about 80 horsepower) would be enough to propel the car and the weight of the batteries. The 120-volt motor required twenty six-volt batteries as a power source.

The next step was finding the running gear and the body. The Hummbug (since renamed Wombat) appeared to be the perfect choice with its full-length VW floorpan, steel subframe, Coremat-reinforced fiberglass body, and enough interior space to house the bulky collection of batteries. The front storage compartment, area behind the driver and passenger seat, and the rear compartment where the engine used to reside, could all be pressed into service.

Andrew purchased a $200 Bug rolling chassis from a salvage yard and began the reconditioning process. A new VW front end and a set of four coilovers, from the JC Whitney catalog, was the first step. The original front drum brakes were replaced with discs and the stock 22mm rear torsion bars gave way to off-road, 30mm versions. Andrew retained the VW transmission but uses only first and second gear. After bolting the electric motor to the transaxle, Andrew fabricated the component mounts along with a sliding rack mechanism that holds the five rear-mounted batteries. Next he created racks and boxes for the ten batteries inside as well as the final five batteries located in the forward storage compartment. All were wired in series to produce the necessary 120 volts. The VW gas pedal was connected to a potentiom-