



Tilley Electric Vehicle



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Editor: The advantages of electric vehicles were proved more than once. No fuel is required to set them in motion. Along with evident advantages of electric vehicles, such as their powerful characteristics and harmlessness for environment there is a side benefit, i.e. much less maintenance as compared with gasoline or diesel-fueled vehicles is required. Moreover it is easier to manufacture such vehicles.

In the previous issues of New Energy Technologies magazine we have already acquainted our readers with Tilley Electric Vehicle designed by Carl B. Tilley (USA). Below there is some up-to-date information and photos from the inventor. Besides we also publish an article devoted to the similar types of fuel-less motors.

After several years of personal accomplishments in the alternative energy industry, Carl B. Tilley was convinced that it was possible to build an electric car that could be powered without the help of external power to keep the battery charged.

The concept to produce a useful electric performance car that would last more than a few hours and would be economical to run, safe to drive around town or across the United States and never use a drop of fuel challenges the future of transportation as we know it today.

With the establishment of the Tilley Foundation, Inc., in the year 2001, Carl Tilley set out to prove it could be done. It was an ambitious project and it broke ground on the facility in Tennessee that would build the first self generating electric car.

...you have no need for fuel and you do not have to stop the vehicle to charge it after driving.

Construction of a 1,800 square foot building, that was powered with another recently developed electric device, began in the year 2002. Electricity from the building built the car from a different energy invention, that was void of any outside power supply. It is ironic that one alternative energy device actually built the invention to power and build the electric car.

From the selection of the proper car to be converted, to the advanced technology which is on board, the **Tilley Electric Vehicle TEV** performs comparably to gasoline powered vehicles. The difference is you have no need for fuel and you do not have to stop the vehicle to charge it after driving. There is no pollution and you can cruise the highways at the same speed as any other vehicle.

The rear mounted electric motor provides over 130 SAE net horsepower at 5,500 rpm. It offers a 3 speed automatic transmission that is smooth shifting and totally silent running. All this is combined with rack and pinion steering and a 35/65 rear weight bias that enables fast, sensitive handling and needs no power assistance.

...battery system will be fully charged at all times while in use.

It has 4 wheel disc braking for fast progressive, fade-free stopping. Counterbalanced gull-wing doors need only 14 inches of clearance. The rear sporty louvers are aerodynamic designed so that it almost eliminates any drag effect. All this with a stainless steel body makes for a great car.

Control center for the battery bank only allows what is needed to keep the batteries charged while in operation no matter what the speed or discharge from the battery bank. Your battery system will be fully charged at all times while in use. Simply get in, start the car and drive like any other vehicle.

A 1981 DeLorean was converted as the Tilley Electric Vehicle. Conversion of the car began in late June of 2002. State of the art metal fabrication to construct support for the electric motor, battery bank, control center and the TEV device was completed in July of 2002.

Several tests were made to validate the TEV technology. One of the last tests was made on September 7th, 2002. It has been demonstrated that after 17.3 miles driven on the Superspeedway at speeds ranging from 80MPH to 96MPH independent engineer certified batteries were full.

Assembly Pictures (see also the cover page)

Photos by Robert Gaither



Fig. 1
Removing Gas Motor



Fig. 4
Fitting Parts



Fig. 2
Fabrication



Fig. 5
Transmission Work

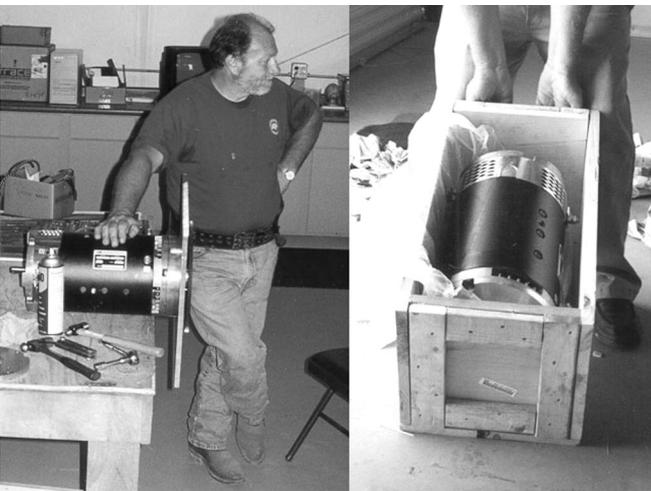


Fig. 3
Drive Motor



Fig. 6
Motor Mounted

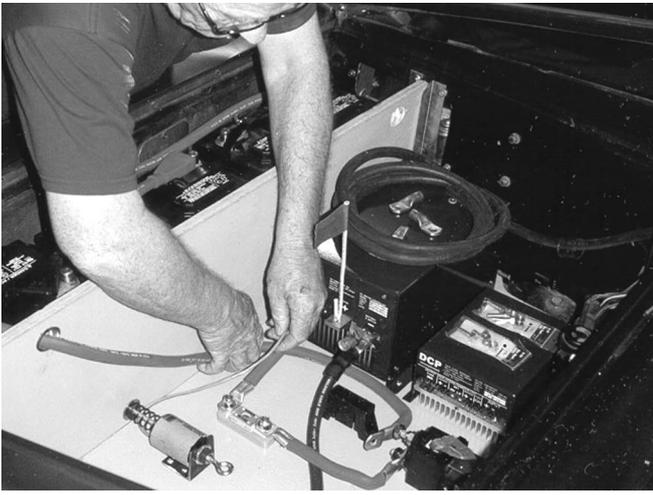


Fig. 7
Making Connections



Fig. 9
Special Wiring & Guages



Fig. 8
About Ready



Fig. 10
Car Unveiling

Trends in the Application of Motor-Generators

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If the Tilley generator-motor should enter into the world market, some curious consequences may result, the most important being the transition of the Honda and Toyota hybrid cars into full fledged electrics.

First of all, a comparison should be drawn between the Tilley and the two hybrid cars presently being sold, the Honda Civic and the Toyota Pirus should be made.

The Honda Civic and the Toyota Pirus both use charging systems with a gasoline motor for better milage. The Tilley motor-generator is a stand-alone electric vehicle. The Honda motor-generator is just

60mm thick and provides (10kW or 13hp). The Toyota Pirus has a 44hp unit (American Version) which feeds power into electric motors at the wheels. Both Honda and Toyota gasoline motors are off at 0 mph. Only the electric system is used until the power demand reaches 10 kW; then the gasoline motor automatically kicks in. The Pirus is able to get higher milage in city driving than in country driving from the fact that the ratio of the power from the electric part to power to the gasoline part of the motor is greater at lower than at higher speeds, that is, less power is needed to run the car in city driving than in country driving because of the lower speeds and air resistance.