

# EEVC NEWSLETTER

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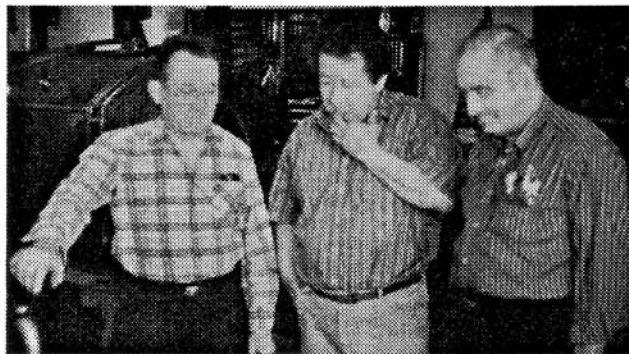
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## RAY CARR'S ADVENTURE

Early on the morning of April 29 we accompanied Guy Davis to the New Morgan industrial park where Ray Carr's 1912 Baker was being prepared for its trip across the country. Ray wasn't in, but after a short wait Mike Wyka, Ray's crew chief, showed up with Joseph Kielbamia, a



*(left to right): Mechanic Joseph Kielbamia, crew chief Mike Wyka, and Guy Davis confer at Ray Carr's New Morgan facility during the preparation of the Baker for its trip.*

racing mechanic recently arrived from his native Poland. Guy stayed busy during our visit giving advice on operation to Mike and replacing a meter shunt.

The Baker, with its wheel spokes newly tightened up, was there, wearing a brand-new set of 580 x 120 Michelin tires, made in France and imported from a dealer in England. The car looked pretty well stock, except for a small add-on instrument panel for the Curtis PMC controller that was tucked under the seat. Also hidden under the seat was a modern 12-V fan to keep the controller cool, controlled by a miniature

switch and a tiny green LED indicator discreetly tucked away at the corner of the seat.

The Baker's original controller was still in place. It's very nicely made, with a good-looking cast-aluminum cover.

The floors of the under-seat compartment and the battery boxes had been

changed from the original wood to 3/8-in. aluminum plate drilled with lots of holes. The one in the controller compartment had been put in because with the original wood floor in place the Curtis controller tended to get too hot. It needed a heat sink. The battery compartment ones were put in because Ovonic's Ni-MH batteries require a ventilated compartment. As it turned out, Carr went on to use a dozen 6 V Exide batteries, but the improved ventilation and cooling certainly can't hurt—especially since he anticipates some pretty rapid charging and consequent battery heating.

While the motor has been replaced, Guy voiced some concern for the chain. It's the original, and while it looks good, there's no spare. What's worse, it's a nonstandard pitch, which means it would be tough to replace in a hurry. We can only hope that it holds up.

#### **Old World craftsmanship**

Also in the shop was a 1926 Pierce Arrow, in pieces. Joseph is working on the restoration, and he's done some remarkable things. Probably the most impressive thing he had done so far was on the engine. Ray had taken it to a company that specializes in antique vehicle restoration, and they had told him that the engine would take three months to restore. At the end of that time the work had not been done, and the company informed Ray that the engine could not be salvaged.

Joseph decided to have a go at it, and in two weeks of part-time work he had it purring like a kitten. He started it up for us and after it had been running for an hour it showed about 30 psi oil pressure at idle. Not bad for an unrepairable engine.

Joseph is a pretty easy-going guy, and very proud of his work. He was, before coming to this country, the chief mechanic on racing team, and travelled to races all over Europe. He hasn't been in this country very long, and speaks very little English, but Mike Wyka is there to translate.

#### **Travel schedule**

Ray is scheduled to depart from Astoria, OR on May 28, and arrive in Atlantic City on July 4 after 3100 miles of travel. He's planning to cover between 60 and 80 miles a day, and average about 18 mph (the Baker, with it's new motor, can hit a bit over 30 mph).

He'll be carrying a silver flask of water from the Pacific, and plans to ceremoniously pour it into the Atlantic upon arrival. This little ritual has a rich history, as other automotive pioneers making cross-country treks had done it in early years. Since this will be the first coast-to-coast trip in a factory-built electric, and the first by an antique electric, Ray thought it would be appropriate.

Carr plans to follow a circuitous route across the country, avoiding severe grades; Mike Wyka will follow behind in a pickup

truck, both to carry support equipment and to warn other drivers of a slow-moving vehicle ahead. Behind the pickup will be a trailer with a 10 kW generator on board.

The plan is to run for a couple of hours, then stop and do a one-hour charge, drive for about 80% of the distance driven before, then repeat the whole thing. At night the batteries will get topped up at a lower rate for the next day's run. Carr doesn't expect to get much life out of the batteries this way, but then again he says he won't have to—just enough to reach Atlantic City.

The rapid charging during the day will be done with a Norvik rapid charger, and at night with a more conventional Lester unit.

It would seem appropriate for the Club to have a presence at the arrival point, and we'll discuss it at the next meeting.

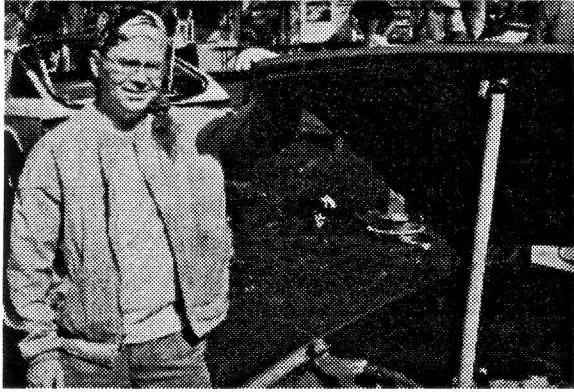
## **EARTH DAY**



*A spectator checks out Reading-Muhlenburg Vo-Tech's converted Fiero in the display area of sponsor Met Ed/GPU.*

Earth Day 1995 was held at Reading Community Park April 23, with pleasant weather Ed Kreibick, Guy Davis, Dan Carlin, and your editor showed up to represent the club. EVs on display included the 1915 CT bus and the 1919 Detroit Electric from the Boyertown museum, and Ed's Ford Escort. Also shown, from Reading-Muhlenburg Vo-Tech, was the Golden Gear Special, a converted Fiero that had run in the 1993 Tour de Sol and the topic of the talk at the May Dinner Meeting. Met Ed brought a TEVan and a CNG car with a home refueling station.

On display in another area was the Porsche that Jim Crater bought from Ed Kreibick some while ago and converted. Jim used the popular book *Convert It* as his



Jim Crater with his converted Porsche. The car has a 96 V system and a 9-in. Advanced DC series-wound motor with a Curtis PMC controller.

bible, and the car looks pretty good. It has a 96 V system and a 9-in. Advanced DC series-wound motor with a Curtis PMC controller. Jim reports that he is presently getting a range of only 30-35 miles, well below the 150 miles per charge he's hoping for. He's had some problems with his batteries, and has discovered that this model Porsche tends to suffer from dragging from brakes. He's working on fixing the brake problem, and is looking into a new set of batteries and a regenerative braking package (regen is not automatic because of the series-wound motor). Jim is also planning to add some solar panels to help keep the accessory battery charged.

### **MORE THAN 100% EFFICIENCY?**

We have received a brief letter from Leonard Czerniak, of Toledo, OH, who claims to have invented a motor that produces 25 times more power output than the input fed to it.

Mr. Czerniak says in his letter that he has sent information on his motor to more than a dozen manufacturers and to Hampshire College, but that every one had turned him down. He sent us a copy of the letter he sent, a sketch, and a drawing from U.S. Patent 3,935,487, for a "permanent magnet motor," issued to him in 1976. Here's the text of his letter:

"I invented a new electric motor design that makes the present laws of physics obsolete. The power output of

this motor is over 25 times more powerful than the power input. (Drawing enclosed.) Tests indicate that if this motor would be built in a large enough size to drive an electric car, motorcycle, boats, etc., the batteries will never run down. This means that a car could be driven continuously and use no fuel and be pollution-free.

"Due to the high cost of a patent, the motor is not as yet patented, but can be demonstrated in a closed container. If more information is needed, please contact me .."

What's puzzling is that the letter states that his invention is unpatented, yet he encloses a page from a patent. The relationship between his motor and the patent is not given. He also says that the invention can be demonstrated in a closed container. Most people tend to be a little skeptical of things whose workings can't be seen.

If this is all the documentation he sent to the manufacturers and the college, we're not surprised that nobody responded.

At this point we're more than a little skeptical—possibly due to having a degree in physics, graduate work in electrical engineering, and quiet a few years working as an engineer in industry. But we'd like to know more. Please, Mr. Czerniak, send us some more information.

### **FRIENDLY PRESS COVERAGE**

We had a welcome visitor at the April club meeting. In response to notices circulated before the meeting (whose subject was the first installment on a series of talks entitled "Basics of Electric Vehicles"), Carl Rotenberg of the Norristown *Times Herald* showed up to take notes and do a story on the club. The story, which was published on Monday, May 15, was quite favorable to the club, and to EVs in general.

Rotenberg's article quoted Guy Davis refuting a recent report from the National Science Foundation claiming that the manufacture of batteries for an EV would cause the emission of six times more lead than a small car burning leaded gasoline. The article quotes Guy as saying that, since the vast

majority of lead-acid batteries are recycled, lead emissions are nowhere near as severe as the report makes out, and that dust from smelting is recaptured and returned to the manufacturing process.

The article also had nice things to say about other club members cars, including (besides Guy) your editor, club treasurer Tullio Falini, Dan Carlin, Tom Moore, and Dave Paterson.

Now if we could get favorable publicity like that more often. Maybe our incoming president would like to take on the job of press liaison...

## NEW BOOKS AND LITERATURE

*Car Suspension and Handling, third Edition*, by Donald Bastow and Geoffry Howard; 378 pp; illustrated; price: \$55 (members), \$69 (nonmembers). Society of Automotive Engineers, Inc., 400 Commonwealth Dr., Warrendale, PA 15096-0001, (412) 776-4841; order # R-133.

This new edition of the familiar book look at the design of vehicle suspension systems from a theoretic viewpoint, and describes springing systems and damping functions in detail. It analyzes the layout and concepts of several different types of front and rear suspension, the function of the wheel and tire, and the dynamic behavior of steering systems.

Chapter headings include: disturbances and sensitivity; suspension systems and their effects; dampers; front suspensions; rear suspensions; the wheel and tire; steering; active, reactive and adaptive systems; drive layout and its effects; computer aids and design techniques; suspension calculations and worked examples; steering calculations and worked examples; and discomfort factors analyzed.

While the reader may not be in the business of designing vehicle suspension systems from the ground up, this book will be a valuable reference for anyone who wants to understand existing systems, their characteristics, and ways in which they may be modified.

## COMING EVENTS

### International Solar Energy Conference 1995 Cleveland Electric Formula Classic

July 21-23. Contact Kevon Makell, (216) 447-3552

### Formula Lightning race

August 16-18, Indianapolis, IN. Included will be two Formula Lightning races, an electric education and motorsports conference, and the championship awards dinner. Contact the Solar & Electric Educational Foundation, (602) 953-7715.

### Electroexpo 95

Sept 12-14, Richmond, VA. For information write to P.O. Box 26666, Richmond, VA 23261

## MEETING SCHEDULE

Meetings will be held the second Wednesday of each month. All meetings at PECo Energy's West Conshohocken gas plant on River Road, beginning at 7:00 p.m.

June 14

Guy Davis will present part 2 of "Basics of Electric Vehicles," speaking about batteries.

July 12

August 9

September 13

October 11

November 8

December 13