

Review on the Tilley Electric Car Recharger Promotion

Update on Carl Tilley's Device

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"Free Energy" Car Suffers Mechanical Breakdown

The potential record-breaking event by an electric vehicle at the Nashville SuperSpeedway this Saturday morning (9/7/02) disappointed Tennessee inventor Carl Tilley, his associates, and about a hundred other people attending the admission-free gathering, when a wheel bearing failed. See www.tilleyfoundation.com for the company's promotional material and information. The Tilley Foundation had rented the new SuperSpeedway for an expected all-day run to crush, with a margin of hundreds of miles, the world record for an EV of 220 miles. The group had rented the SuperSpeedway at a reported rental cost of about \$5,000.

Tilley claims to have invented a device that re-charges batteries on-the-fly in automobiles and in fixed installations, using no evident fuel or power source (except whatever energy may be accessible from the space vacuum). Photos of this device that are circulating show what looks like a very small electric motor with its output shaft penetrating an approximately one cubic foot metal box. Independent observers who have been to Tilley's lab say that this is the device that Tilley claims is also powering his building.

Tilley's 1981 DeLorean, retrofit with a conventional electric motor and controller (purchased, we confirmed, from EV America of Wolfboro, New Hampshire), had to stop its planned multi-hundred mile demonstration after only about 18 miles of high speed driving (moving in the 70-90 mph range, estimated by observers). Its left rear wheel bearing failed, making the car inoperable for any more laps. An independent engineer from New York, who had driven to Nashville in HIS unconverted DeLorean, confirmed to the attendees that DeLorean vehicles are particularly prone to such bearing failures his own vehicle had had several such bearing failures in the past.

Our colleague, engineer Jan Roos, who witnessed Saturday's demonstration relates that Tilley and his associates promise another public demonstration soon, which will involve TWO vehicles the DeLorean with new bearing replacements on all wheels, and a retrofit SUV of some kind. By doing this they hope to insure a successful demonstration. They have privately promised also a public demonstration of an electric-powered single-engine piloted aircraft, to be flown from Florida to somewhere in New England! Prior to the mechanical failure Saturday, the airplane flight was to have occurred before the end of October. Douglas

Littlefield of Vermont, Tilley's spokesman, told me that they have obtained FAA approval for such a test flight.

Jan Roos told me this evening that he inspected the vehicle as closely as possible, with the various compartments open, and there was no evidence of any kind of auxiliary batteries or another concealed engine. It is an electric vehicle, period. Two of the compact Tilley devices, with drive belts attached, appeared to be near the engine, Roos said. In the rush to start the early morning, all-day run on Saturday, Roos was not able to measure the initial 12, 12-Volt Wal-Mart battery pack voltage. However, the voltage reading immediately after the car stopped was 137 V, measured by Roos' DVM. The pack recovered to 144.8V within about 20 minutes after this. Chemical recovery of storage battery potential is a known phenomenon, of course. Tilley understands this, but noted to Roos that his device continues*some* of its recharge functioning after vehicle motor shut down. It is not clear what the average voltage of the battery pack would be during high-speed travel — assuming the recharging claims are valid.

Tilley and his associates claimed to Roos and others that the DeLorean had been driven 202 miles on a drive to Kentucky in the few weeks preceding the 9/7 public test, which if true would be remarkable. (The world record for a capable EV was by a Geo-Metro that went 220 miles.) Despite these dramatic claims, at this time it is not possible to draw conclusions about any anomalous performance of the vehicle. This must await further public demonstrations. It is noteworthy, however, that despite the embarrassing mechanical failure, there seemed to be no reluctance by the inventor and his business associates (many evidently from Vermont) to promise further demonstrations soon. This is a positive development.

Prior to the 9/7/02 test, I had called Bob Batson, who runs EV America in Wolfboro, NH. I asked him how far a 3,000 lb DeLorean equipped with 12, 12-Volt (130-A-hr) batteries would be expected to travel, at say 60 mph, before stopping due to battery exhaustion. He ran his calculation and said that at 60 mph the car would travel at maximum 52 miles, but the average stopping distance would be 37 miles. This should put past and future claims by Carl Tilley and his associates in proper perspective.

Roos said he learned that the Tilley Foundation's plan is to sell the rights to the technology as soon as possible. There have been many interested parties, it is said. One non-negotiable requirement, Roos learned, is that the purchasing entity must agree to put the technology into the marketplace within three years, or the rights revert back to the Tilley Foundation.

In closing let me note the location of a few reports by others, before and after the Sept. 7th event:

http://www.greatherthings.com/news/tilley/press_releases/020908_demo_report.htm

http://www.tennessean.com/business/archives/02/09/22041880.shtml?Element_ID=22041880



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HEAT GENERATORS "NTK"

The generators can be applied for the heating and hot water supply of apartment houses and production areas. "NTK" units work without firing and they are environmentally appropriate. Effectiveness of the unit is not less than 100%.

The principle of operation of these units is based on the heat energy recovery from the moving liquid using the developments and discoveries of Russian scientists. The unmanned cantilever pumps of KM type with end seals are used in these units.

Technical characteristics of heat generators "NTK" ("YUSMAR" type)

Russian Certificate of State standard # ROSS RU.MX03.A00237 from 19.01.2001

"NTK" ("YUSMAR" type)	11 (1)	22 (2)	37 (3)	55 (4)	75 (*)
Nominal power of the unit (kWt)	7,5-11	22	37	55	75
Power consumption of the unit (kWt)	7,5	17	32	54	75
Frequency of rotation of the electric motor (rpm)	2900	2900	2900	2900	2900
Voltage of the circuit (V)	380	380	380	380	380
Heating volume (cubic meters)	Up to 350	Up to 700	Up to 1500	Up to 2500	Up to 3500
Temperature of the heat carrier (C)	Up to 115	Up to 115	Up to 115	Up to 115	Up to 115
Heat productivity (kcal per hour)	7600	17000	35000	55700	72000
Mass of the unit (kg)	Up to 130	250	400	550	700
Overall dimensions: length (m)	1,3	1,3	1,5	1,8	2,0
width (m)	0,5	0,8	0,8	0,8	0,9
height (m)	1,3	1,8	1,9	1,7	1,8
Operating mode	Automat	Automat	Automat	Automat	Automat

(*) Model is under development, term of production is up to 4 months.

Set of delivery includes automatics, which provide:

- Regulation of the heat mode of the unit;
- Protection of electric motor from all kinds of overload.