

Electric Auto



NEWS

Association

DECEMBER 1988

Vol. XX No. 12

Toronto ---

---LARGEST NUMBER OF EV GROUPS EVER REPRESENTED.

- * Electric Vehicle Association of Canada (EVAC) Sponser
- * Association Europeenne Des Vehicules Electriques Routiers (AVERE)
Representing 18 Countries.
- * Electric Vehicle Association of Great Britain (EVA)
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- * Australian Electric Vehicle Association (AEVA)
- * Electric Auto Association (EAA) USA
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- * Denver Electric Vehicle Council (DEVCO) USA
- * Electric Vehicle Association of Southern California (EVASC) USA
- * Vancouver Electric Vehicle Association (VEVA) Canada
- * Electric Vehicle Club of Ottawa (EVCO) Canada
- * PLUS: Sweden, China, Holland, Poland, Belgian, Germany, India, Korea
and Bulgaria.
- * ELECTRIC VEHICLE DEVELOPMENT CORPORATION (EVDC)

---94 excellent papers presented by the leading experts in their field.

---FIRST! Introduction of the Unique/Alcan Aluminum powered Vehicle.

---FIRST! T115 Chrysler Van running on Sodium Sulphur Batteries.

---15 operational Vehicles on the test track for ride and drive.

---A ride around Toronto in the Peugeot electric bus from Tours France.

---Memorandum of Understanding to form World EV Association signed by
representatives of 24 countries.

FOR SALE

1981 JET ELECTRICA 007

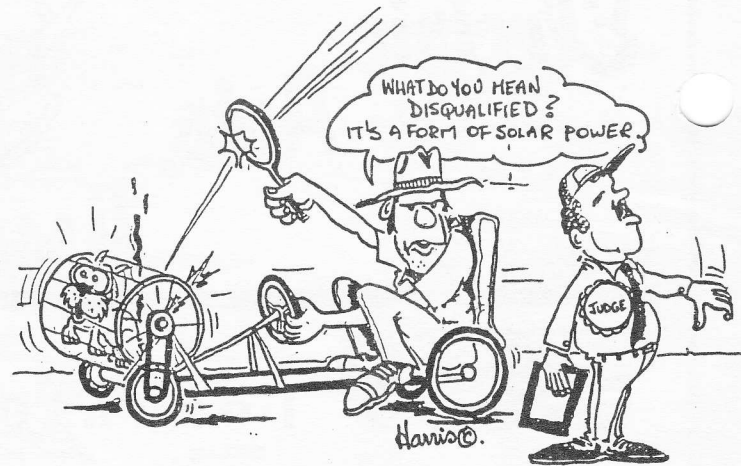
In excellant cond. but needs batteries.

- white hatchback/blue interior.
- all G.E. components.
- capable of 50+ mile range at 55mph

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speaker WALLY RIPPEL from Jet Propulsion Lab in Pasadena. As always, whenever Wally visits, this meeting is considered a "must attend" highlight of the year. This is particularly true this meeting when you consider the exciting nature of his exclusive newsbreak.

Wally's lecture and videotape presentation will be about his involvement with a major automobile manufacturer. The combined effort with megabuck backing is aimed at producing thousands of high-tech, high-performance electric cars for the American market. To preview just a few of the car's performance characteristics:

- *120 HP, 3Ø AC Induction Drive System with Integral Charger
- *320 V. Battery System with 50% recharge in 20 minutes
- *0 to 60 MPH in under 8 seconds
- *Up to 150 mile range at 60 MPH

FROM: EVC of SC NEWSLETTER

FROM: DEVC DENVER NEWSLETTER

The NUCCELL Battery invented by Paul Brown of Boise, Idaho, utilizes the energy given off by decaying radioactive material, converting it directly into a continuous a-c current. This power cell does not rely on a nuclear reaction or chemical process but captures the energy in the magnetic fields of the alpha and beta particles given off during radioactive decay. Brown's first prototype produced 100,000 times as much energy per gram of strontium-90 as a thermal-electric battery utilizing the heating effect of radioactive decay of the same amount of strontium-90.

The weight of the strontium-90 used in the 75-watt prototype cell is approximately that of 2 millimeters (0.08 inches) cut off a small paper clip. The 75-watt cell is approximately the size of a soup can. A fifty kilowatt cell would be the size of a small barrel.

Thin shielding, 0.03 inches of aluminum, is sufficient to make the cells safe. They may be able to power electric vehicles. Nuclear fuel is plentiful since nuclear waste is suitable. For more information contact Philip H. Talbert, Chairman, Chief Executive Officer, Peripheral Systems, Inc., 12007 N.E. Marx Street, P.O. Box 30179, Portland, Oregon 97230, telephone (503) 257-0912, out of state (800) 468-8215. Nucell is a subsidiary of Peripheral Systems. Information for the above obtained through the efforts of Dr. Malcom Dickerson.

ELECTRIC COMMERCIAL VEHICLES

For urban deliveries, especially of products that involve multi-stop operation such as milk and bread, the electric vehicle has no equal. Indeed four out of every five of the vehicles used in the retail dairy trade today are electrics. In fact it is possible that were it not for the absolute economy of the electric milk delivery vehicle we should a long time since have had to forgo the convenience of seven-days-a-week house-to-house delivery of those thirty-two million pints that make up our national daily consumption.

Now lively, modern, designs of vehicles, that are in themselves a good sales tool, have greater capacity and a longer range. Gross vehicle weight can go as high as 115 cwt with payloads of up to 3 tons. Longer range electrics can revolutionise milk distribution by enabling all deliveries to be made over a wide urban area and outlying districts from one central dairy instead of, as in the past, from local depots served by articulated bulk supply vehicles.

The British Post Office is experimenting with electric vans for parcel deliveries, as is the United States Postal Service, using an electric designed and built in Britain. It has a carrying capacity of 900 lb and 170 cubic feet, a range of 50 miles per battery charge, and a speed of up to 30 miles per hour. Its acceleration is fast yet silent with excellent hill climbing characteristics.

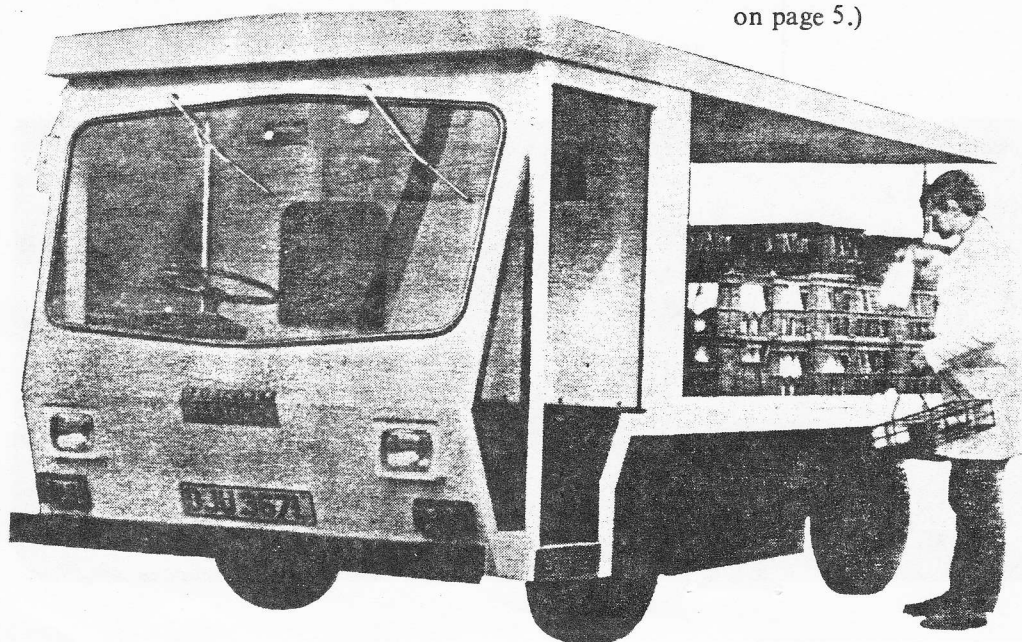
The 5/8 cwt electric city delivery van is already available with a comparable range and speed, and a larger 15/20 cwt 30 mph electric commercial vehicle is on the drawing board. For short haul deliveries, for the transport of television and domestic appliance engineers round urban areas it can reduce the cost of providing such a service and make a contribution to the preservation of the environment at the same time.

The considerable advantages of electric vehicles that make them so popular for house-to-house deliveries include: *economy*—although their initial cost is higher than equivalent petrol or diesel vehicles, this is more than offset by their cheaper fuel requirements and smaller maintenance costs; *longer life*—depreciation can be spread over fifteen years; *less wear and tear on stop-start operations*—when the vehicle stops the motor stops, there is no wear and tear at all, no wastage of fuel. (See table on page 5.)

FROM:

ELECTRIC VEHICLES
THE CLEAN MACHINES

ELECTRIC VEHICLE ASSO. OF GREAT BRITAIN



Dairy delivery vehicle 4-wheeler

COMPARATIVE OPERATING COSTS

4

OF 20/25cwt (1016/1270kg)

ELECTRIC, PETROL AND DIESEL VEHICLES
ON RETAIL DELIVERY WORK

	Electric	Petrol	Diesel
Capital Costs	£ p	£ p	£ p
Vehicle less tyres	1332.50	913.50	1018.50
Tyres (4)	59.00	69.50	69.50
Battery	448.00	—	—
Charger	164.00	—	—
	2003.50	983.00	1088.00
Standing Charges—per annum			
Depreciation of vehicle	78.53	182.70	203.70
Depreciation of battery	89.60	—	—
Depreciation of charger	10.93	—	—
Licence	32.50	49.50	49.50
Insurance	22.50	30.00	30.00
Interest on capital cost	90.14	43.69	48.89
	324.20	305.89	332.09
Running Cost—per mile			
Electricity at 0.40p per unit	.45	—	—
Fuel	—	2.83	2.09
Tyres	.39	.46	.46
Maintenance	.55	1.13	1.02
	1.39	4.42	3.57
Total Operating Costs—per week			
Standing Charges	6.23	5.88	6.38
Running Costs	2.08	6.63	5.36
	8.31	12.51	11.74
COST PER MILE	5.54 pence	8.34 pence	7.83 pence
COMPARISON INDEX	100	150	141

1 • Establishment Charges

Drivers wages etc., being common to all types, are excluded from these comparisons.

2 Capital Costs

Full Recommended Retail Prices.

3 Depreciation

(a) Electric vehicles and charger depreciation based upon a life of 15 years only despite the fact that their usual life is very much more.

(b) Battery is depreciated over 5 years although the average life is longer.

(c) Petrol/Diesel vehicle is depreciated over 5 years on this type of daily constant stop/start duty.

4 Licence

Electric vehicle taxation weight class 20/25 cwt Petrol and Diesel 25/30 cwt class.

5 Insurance

Average relative rates shown.

6 Interest

Average annual cost based upon the reducing capital value at 8% per annum.

7 Fuel

Electricity 0.40p per kWh; petrol 34p per gallon; Diesel 35.5p per gallon. (As at 31st December, 1972.)

8 Consumption

'Electric' 1 unit/per mile; Petrol 12 m.p.g. Diesel 17 m.p.g.

9 Tyres

Based on 15,000 mile life (no spare).

10 Mileage

Based on 150 miles weekly.

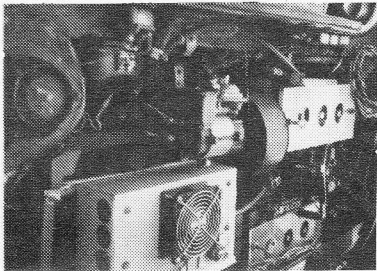
EV Marketplace



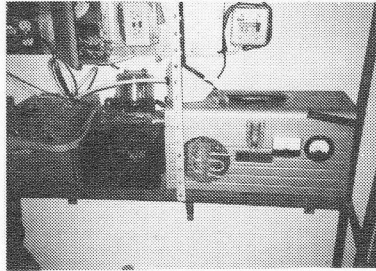
1973 Honda CVCC Electric--\$1700



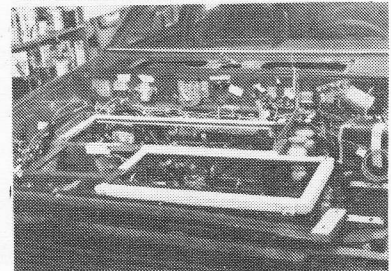
1980 Datsun 310 Electric--\$1800



Honda Electric
Engine layout



Honda Charger



Datsun Engine
No Batts. or Control

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CALENDAR

DEC. 3: Peninsula Christmas Party, 8 San Juan Ave. Daly City, CA, CALL: Mae (415) 992-5453.

DEC. 10: DEVC (Denver) Holiday Party, CALL: Ron (303) 452-3748.

DEC. 11-12: International Electron Devices Meeting, San Francisco Hilton, CALL: (202) 347-5900.

DEC. 13-15: Winter Design Engineering Show & Conference, Anaheim Convention Center-Anaheim, CA-ASME-CALL: 1-800-255-7798.

DEC. 14: VEVA-Vancouver-B.C. Hydro Kitchener St., 7:30 p.m. Report on EVS-9 by Bill Glazier & George McGrae, CALL: (604) 987-6188.

EVS-10 HONG KONG 1990

The International Committee, meeting during EVS-9 accepted Dr. C.C. Chan's invitation to hold EVS-10 in Hong Kong in 1990. Dr. Chan is Executive Director of the International Research Center for Electric Vehicles and Professor of Electrical Engineering at the University of Hong Kong.

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NEWS

Association

DECEMBER 1988

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