

HYDROGEN "MIRACLE" SPUTTERS

Water-Powered Car Flunks Iowa Test

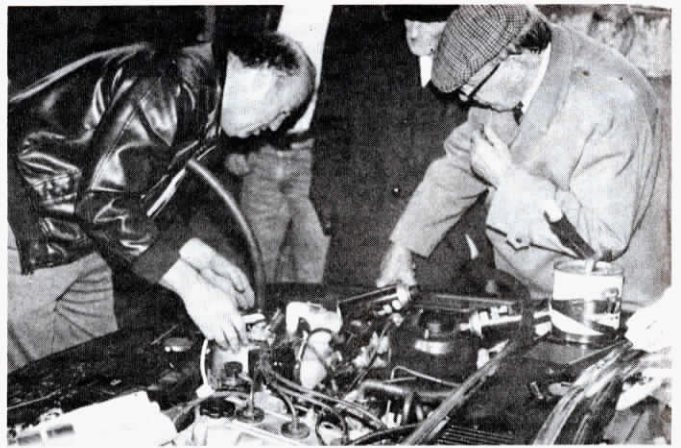
Forty or so farmers from across the U.S. and Canada gathered two weeks ago in a garage behind a small manufacturing plant in Bettendorf, Iowa to watch New Zealand inventor Archie Blue fire up what was to be the world's first water-powered car.

Blue, who traveled more than 8,000 miles to meet with the farmers, has patented his hydrogen-making kit for cars that turns water into hydrogen "on the go", using electricity off an ordinary automotive alternator. The kit is billed as a successful version of a hydrogen "fuel cell" worked on by Iowa inventors John Lorenzen and Kenny Green (featured in FARM SHOW's Vol. 3, No. 4 1979 issue). Both were on hand as Blue installed his kit in a conventional 1980 Toyota Corolla. And both were disappointed nine hours later when the car still had not run.

"There was breakdown in communications and poor preparation. That's why it didn't work," says Green, who organized the get-together, contacting hydrogen power enthusiasts from as far away as Maryland, Virginia, Texas, California, Idaho and Manitoba.

Most of the observers were aware that the device challenges accepted rules of physics that say it cannot work. Electricity runs through a series of stainless steel plates submerged in water, splitting it into hydrogen and oxygen. Producing hydrogen through electrolysis is not a miracle, but in claiming to power a car, Blue is saying the device produces more energy than it takes to produce the gas. That, say the experts, classifies it as a perpetual motion machine.

The explanation given by Blue, and



Archie Blue, center, and Ross Woods, right, install their hydrogen power kit in a 1980 Toyota with the help of Kenny Green, left.

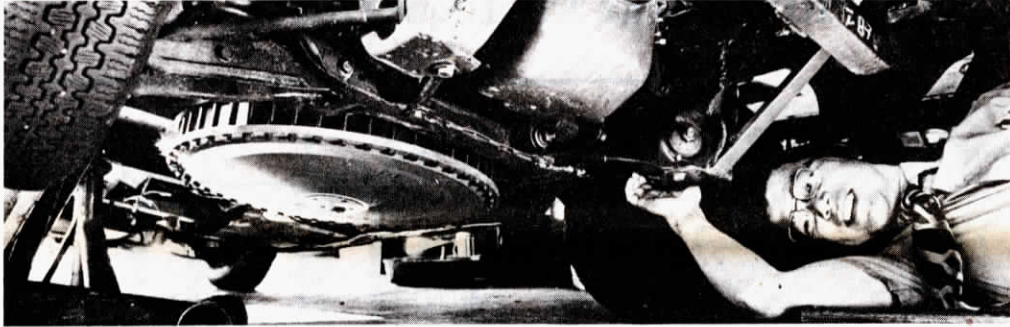
his business manager Ross Wood from England for the failure, was that several key parts for the system were lost with luggage coming into the country through customs. Replacement parts, built overnight, were inadequate, Wood explains. Also, in New Zealand they'd used a Morris Mini-Minor with a small 856 cc. en-

gine. The Toyota Corolla used in Bettendorf had a larger 1800 cc. engine.

Green and Blue were asked again and again by farmers in attendance: Why weren't proper preparations made well in advance of the demonstration date? Wasn't it suspicious that certain key parts should be lost enroute to the first North American test drive demonstration?

Max Hooker of Grand Island, Neb., was the only one of the group who'd been to New Zealand to see Blue's water-powered car. "I saw it run and there's no question in my mind it ran solely on water," he told FARM SHOW. His explanation for its failure during the Iowa test was that its electric systems are precise and slight variations can cause them to fail.

As this issue went to press, Green told FARM SHOW that he plans another test-run with Blue in the near future, and promised "better preparation and better results."



Frictionless flywheel, enclosed in vacuum-sealed circular housing, helps power experimental Pinto with "waste" energy.

STORES WASTED ENERGY IN A HEAVY, STEEL FLYWHEEL

"Flywheel" Car Runs On Wasted Energy

The energy wasted in a car or truck as it decelerates, idles or brakes has become, with the energy crisis, an automotive engineer's oil field. At the University of Wisconsin, a research engineer who began digging into the subject several years ago, now claims to have "struck it rich" with a car partially powered off that waste energy.

Andrew Frank's flywheel car — a Ford Pinto outfitted with a 200-lb. steel flywheel spinning in a vacuum-sealed chamber beneath the engine — has achieved more than a 50% increase in fuel economy. Acting somewhat like a brake, the flywheel is spun into action by deceleration and braking, as well as the car's engine. Once the flywheel reaches a certain velocity, the car's engine shuts off automatically and the flywheel, tied into the Pinto's drive train, alone powers the car. At idle, the frictionless flywheel, burning no fuel, may be the car's only moving part.

"The flywheel design lets you run the car at one speed for the highest efficiency. Once the flywheel reaches a certain velocity, the engine shuts off," Frank, an associate professor of engineering, told FARM SHOW.

"We did well with this prototype, but with top-flight components, we expect to be able to achieve a 100% increase in miles per gallon," says Frank. He has received a grant to build an improved flywheel model and notes that at least one car manufacturer, Volvo of Sweden, is already working on the concept.

"We had three goals to achieve with the flywheel design. First, to eliminate all idling and engine deceleration, since they use gasoline for no useful purpose. Secondly, to only operate the engine at its most efficient speed. And thirdly, to recover the energy used for braking," Frank explained.

The flywheel energy storing concept — not a new idea, as anyone familiar with early farm engines re-

members — is especially suited to stop-and-go urban driving, but Frank says it's also promising as a power booster. "For farm machinery, once you get the flywheel spinning on a big-engined machine, it would take little power to keep it spinning. Yet when needed — in muddy fields, for example — it could be engaged for an

extra burst of power," he explained.

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Flywheel increased fuel economy about 50%, says Frank who is now working on an improved model.