

Rebuild Batteries Better Than New

Primecell, a Bedford, Penn., company has been rebuilding rechargeable batteries for over 30 years.

"Many products are made to be disposed of after 3 to 5 years," says Joel Cunard, owner of Primecell. "People can't find a replacement for their battery, so they have to throw out the tool." The latest approach is to design rechargeable devices to use Li-Ion.

Li-Ion is smaller & weighs less. It also costs much more, and it's a short life - throw away. The necessity for safety circuits required with Li-Ion batteries makes rebuilding prohibitive. We are often asked if we can replace LiIon with NiCd or NiMh cells. We regret, we must answer no.

Recent developments have resulted in huge improvements in cell performance. NiCd storage capacity has increased by as much as 50 percent Rebuilding improves tool performance to state of the art technology.

Not only are rebuilds less expensive than a new replacement, most rebuilding results in improved run time and performance.

Many rechargeable NiCd products such as radios, scanners & engineering instruments, can be upgraded to NiMh cells. Primecell is often able to install circuits that allow the rebuilt batteries to be charged with original NiCd chargers, yet enjoy the greater NiMh cell capacity.

"Primecell works with orders of all sizes," says Cunard. He cites customers as diverse as Aerospace, Dental instruments, ham radio, municipal radio communication, surveying, and individual home handymen.

Visit Primecell's website for a long list of batteries that can be rebuilt or information on assessing your battery's health. Cunard suggests requesting an estimate before sending in a battery.



Primecell has developed a way to open batteries to replace the cells, then reseal them without damage.

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Reader Inquiry No. 44

“Waterless” Coolant Extends Engine Life, Saves Fuel

Forget about overheating your cooling systems if you use Evans waterless coolant. With a boiling point of 375 degrees F and a freezing point of -40 degrees, your engine operates more efficiently and reduces the cooling load on radiator and fan, says Mark Stone of Evans Cooling Systems, Inc.

"Water-based coolants run at or near their boiling point, while Evans waterless coolants, due to their high boiling point, have reserve cooling capabilities even on the hottest day of the year," says Stone. "Cooling system pressure is lowered substantially with the use of a waterless coolant. Stress on seals, gaskets, and hoses are reduced and the life expectancy of cooling system components is extended.

Stone points out that thousands of animals are killed each year by ethylene glycol in antifreeze and hundreds of children end up in the hospital each year as a result of ingesting toxic antifreeze. Evans is a safer alternative for children and for pets.

He adds that water-based cooling systems also contribute to pump and cylinder liner cavitation and corrosion, as well as hot spots that can damage engines. Severe liner cavitation alone can require an engine rebuilds which can be

very costly. When Southwest Research Institute (SWRI) tested Evans waterless coolant in the John Deere Cavitation Test, along with multiple water-based coolants, the results were impressive. The John Deere Engine Cavitation Test, a 250 hour dynamometer test, is highly predictive of real-world cavitation erosion of cylinder liners. When Evans Heavy Duty Coolant was tested, it proved superior to all other formulations and 70 percent better than the previously best water based coolant.

He points out that a high boiling point can be important in heavy-duty equipment running in dusty, dirty conditions. "Field conditions can clog a radiator which can reduce the air flow and cause a water-based cooling system to overheat," says Stone. With water-based coolant, the radiator can be cleaned out less frequently which can reduce maintenance downtime and associated cost.

Waterless coolants can safely operate at higher temperatures when compared to water-based coolants which increases engine efficiencies. Independent evaluations on heavy-duty trucks have shown fuel savings of as much as 8 percent due to reduced "fan-on" time. When the fan-on temperature is elevated, it reduces the overall fan operation time significantly. The fan consumes a lot of energy when it is operating, and consequent-

ly anytime you can keep the fan off, there is considerable amount of fuel that can be saved. Evans offers its Heavy Duty Waterless Coolant, a formulation with special additives for heavy-duty diesel engines. It is recommended for large tractors, combines and heavy trucks. It's currently priced at \$47.95/per gal. High Performance Coolant (formerly NPG+) is designed for light diesel and gas engines, such as cars, pickups and smaller tractors. It's priced at \$43.95 per gal.

"While the price for our waterless engine coolant may seem high at first, it quickly pays for itself in reduced engine wear and fuel saved, says Stone. "Plus, it's a lifetime coolant, if it doesn't become contaminated with water. Future replacement and disposal costs are eliminated. The coolant additives remain stable and in suspension during storage as well as use. Periodic supplemental additives (SCA's) are not required. It becomes the least expensive coolant you'll ever buy, because it's the last coolant you'll ever need."

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Reader Inquiry No.45