

# PulseTalk

Published Monthly by PulseTech Products Corporation, The World Leader In Battery Performance Technology • September 2005

## INDUSTRY SPOTLIGHT

### Emergency Rescue (ERV)

Having an emergency vehicle start every time is critical. Lives could depend on it. The problem is, these vehicles are potential "battery killers".

Imagine the power drain on emergency vehicle batteries. These vehicles use light bars, sirens, radar guns, radios, onboard computers and more. All that electronic equipment would tax any type of lead-acid battery. That's why every one of these vehicles needs *ReNew-IT Pulse Technology* products from PulseTech.

There are several models available for this industry, including **PowerPulse**, **Solargizer** and **RediPulse**. These scientifically-proven systems are ideal for emergency rescue vehicles and equipment. They improve performance by maximizing battery power and reliability while reducing downtime and maintenance. Plus, batteries last up to three times longer and perform stronger every day.



## TESTIMONIAL

"Before, we would go through about one set of batteries on each bed digger every year. But since we installed the Solargizers, we haven't had to replace a single battery."

Steve Armenta  
Maintenance Supervisor  
Basic Vegetable  
Hanford, California

## SUCCESS STORY

# Grocery Company Increases Forklift Run Time 300% with PowerPulse

Like other material handling companies, Industrial Distributors, a grocery distribution provider located in East Bernstadt, Kentucky, relies heavily on their forklifts to make sure their trucks are loaded and shipped on time. That's why they started using the PowerPulse Battery Maintenance System from PulseTech to maintain peak forklift battery performance.

**PROBLEM:** Industrial Distributors operates 89 battery-powered forklifts and other pieces of warehouse equipment that use batteries that cost between \$3,100 to \$4,800 each. Due to heavy sulfation buildup (lead-sulfates on the battery plates), the forklift batteries would only last a short time during a shift before they had to be recharged.

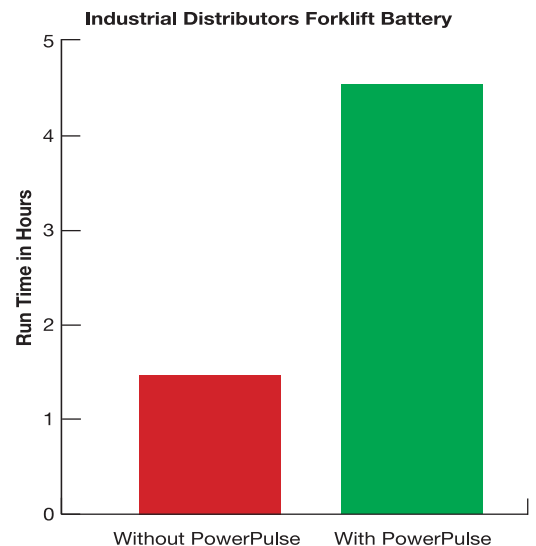
**SOLUTION:** They installed a 36-Volt PowerPulse on a forklift with a 36-volt battery. PowerPulse uses patented ReNew-IT Pulse Technology® to prevent the buildup of lead-sulfate deposits on the battery plates.

**RESULTS:** In just over a week and a half, the voltage had already risen to an average of 2.12 volts per cell, and the specific gravity was up to 1.275. The run time on the battery also increased from 1-1/2 to 4-1/2 hours (see chart at right). That's a 300% improvement.

"The battery runs in a freezer at zero to -15° temperatures," explained Melvin Winberry, fleet maintenance manager for Industrial Distributors. "Before we installed PowerPulse...we were about to junk this battery, and now it is performing better than



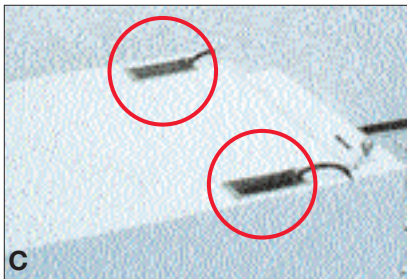
(Top) Industrial Distributors, a major grocery distribution company in East Bernstadt, Kentucky, used the PowerPulse® Battery Maintenance System to increase forklift battery run time from 1-1/2 to 4-1/2 hours. (Bottom) A 36-Volt PowerPulse installed on a forklift battery.



our new batteries that are only four months old. We are going to install a PowerPulse unit on every piece of equipment we have."

**LEARN MORE:** See your local PulseTech dealer to see how our products can help increase your battery reliability. For a dealer near you, call 1-800-580-7554. Or visit [www.pulsetech.net](http://www.pulsetech.net).

## SAMPLE INSTALLS



Installing PulseTech products is easy and well worth the time. Shown above are examples of actual customer installations:

- A. Maintenance personnel installing a 24-Volt Solargizer (735X150) on grader.
- B. 12-Volt PowerPulse (735X012) units on an over-the-road truck in British Columbia.
- C. Solar panels for two 12-Volt Solargizer (735X130) units mounted on ground support equipment for a major airline in Dallas, Texas.
- D. A passenger van using a 12-Volt PowerPulse (735X012) to maintain battery reliability.

## TECHTALK FAQ

Presenting a series of frequently-asked questions regarding the benefits of PulseTech products and how they can help your customers:

### How much longer will the battery last with ReNew-IT Pulse Technology?

It's difficult to determine an exact length of time because service life of a battery varies depending on usage. By using ReNew-IT Pulse Technology, though, the life of your batteries will be extended dramatically.

Keep in mind that there is actually enough reactive material in a battery to perform the energy transfer process for many, many years, but sulfation buildup has always prevented that from happening. Now, by preventing, and even removing, sulfation buildup, PulseTech products enable batteries to fulfill their true potential in performance and life cycle.

Our products have been evaluated by several sources, including NASA, Stennis Space Center, Management Equipment Evaluation Program (U.S. Air Force) and the Army Research Lab. The answer from all is the same—"This product does exactly what you say it does!" One source even stated that "we estimate (Solargizer) will add at least eight to ten years of life".

### Will PulseTech products benefit other electrical components on my vehicle?


Yes. By maintaining your batteries in peak condition, your alternator does not have to work as hard at recharging your vehicle.

The battery will accept a charge more readily and faster so alternator life should be extended. Plus, by maintaining available cranking amps, there will be more available energy going to your starter. The engine will turn over faster, so your starter should last longer, as well.

### What are other common causes of battery failure that PulseTech can help?

It's interesting to note that other common causes of battery failure (buckled plates, shedding, overcharging, mousing, etc.) are directly related to sulfation buildup. For example, according to a leading battery service manual buckled plates may be caused by "being overcharged while sulfated or stored in a deeply discharged state." Sulfate buildup weakens the plates to a point where batteries must be overcharged to accept energy. This will then overheat and warp, or "buckle", the plates.

This service manual also relates shedding of the plates to sulfation buildup. It states that "if material has shed from the plates in small chunks, high charging rates on sulfated plates can be the cause."

All in all, each of these and other common causes can be avoided in most cases through the use of ReNew-IT Pulse Technology products. 

## Scientifically-Proven Technology

Independent studies by researchers at Oakland University and Ohio State University recently confirmed that ReNew-It Pulse Technology increases battery efficiency and battery life dramatically. These two-year studies showed that our technology allowed a more even distribution of lead-sulfate crystals over the surface area of the battery plates. It also revealed a significant reduction in the size of crystals. These changes greatly improve a battery's ability to store and provide energy.

Our technology also prevents sulfate-induced corrosion that is the primary cause of shedding of active material on the plates. As a result, the life span of the battery is increased dramatically.



(Left) A battery plate covered in heavy sulfation buildup which reduces the battery's ability to accept, store and release energy. (Right) ReNew-It Pulse Technology™ cleans these lead-sulfate deposits off the plates and converts them to active electrolyte. This process exposes the active material on the battery plates which means batteries are stronger so you get up to three times longer life and maximum performance.



Visit this local PulseTech dealer today: