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Only 10 Days 'til MINExpo 2004!

Dear Subscriber,



Are you coming to the show? We'll be there. In fact our shipment is already on its way. We're very excited about MINExpo and are looking forward to seeing you there.

Today's subject is **Reliability**. As it relates to machinery and equipment, Reliability is the ability of a piece of machinery or equipment to perform its intended function without failure for a specified period of time under stated conditions. CPI works with our customers to incorporate Reliability into their products, no matter how demanding the applications or harsh the environment.

Reliability is paramount to your business. Your company's reputation depends on it - the more reliable your product is, the more likely you are to have a positive reputation. High reliability is mandatory for customer satisfaction - nothing destroys customer satisfaction quicker than an unreliable piece of equipment. **Reliability** affects warranty costs - if a product breaks down within the warranty period, the replacement and repair costs will eat away at your profits, as well as gain unwanted negative attention. **Reliability** fosters repeat business - a reliable product enables the end-user to do their job effectively

and efficiently, and that translates into happy customers. Want repeat business? Make reliable equipment.

Reliability also affects cost analysis - combine Reliability data with other cost information to show the cost-effectiveness of your product. Even if the initial cost of your product might be higher, the overall lifetime cost is lower than your competitor's because your product requires fewer repairs or less maintenance. And finally, **Reliability** has a tremendous impact on your company's competitive advantage - get a solid reputation for Reliability and watch your sales soar.

We hope to see you at MINExpo 2004. We want to help you ensure the **Reliability** of your product. Bring us your challenges and let us help.

And, if there's anything you'd like to talk about before MINExpo, just give us a call, 973 887-9400, or [send an e-mail](#). We're here to help.

Sincerely,

Mac Stuhler
Vice President
Control Products, Inc.

RELIABILITY Solutions at MINExpo

Reliability in Military Vehicles is not an option



CPI thermal and waterproof switches have been used on combat vehicles for over 40 years with an outstanding record of meeting the most demanding requirements. These are truly mission-critical applications, where proper operation of the switch must be a given. Reliability is key over the long haul. Vehicles remain at the ready for

many months, and absolutely must perform when called on - lives may depend on it.

For this reason, truly sealed switches are specified, as contacts remain clean regardless of storage environment and duration. Some of the more interesting applications include:



- Diesel Engine Kick-down Switch - when the accelerator is fully depressed, the switch is actuated, diverting all engine power to the drive wheels
- Cold-Start Ether Injector - momentary panel mount pushbutton which controls the ether injection pump for quick, cold starts
- Brake light switch - control of brake lights
- Gun Firing Handle Switch - nest mounted A2 Series into actual gun firing control
- Engine Overtemp Warning - engine coolant sensing
- Temperature Control for Smoke Generator - controls processing temperature for smoke screen generator mounted on various vehicles



Want Reliability? Put CPI's 40 years of experience to work for you.

Come see us at MINExpo, booth 1761, North Hall, or [drop us a line](#), call us at 973-887-9400, or visit us on the web at <http://www.cpi-nj.com>

Walker Mower – a Family Business Keen on Reliability



Walker takes a great deal of pride in providing high-value products to their customers, with over 70,000 machines produced. In response to complaints from the field, top management contacted CPI to see if we could help with switch failures. Problems were related to water entering the switches,

particularly with export customers, where equipment receives a thorough washdown regularly. Walker customers have no time for failed electrical components - whether the machine doesn't start due to a failed seat switch or neutral safety switch, or the PTO doesn't work because of a faulty switch, the result is the same - customer dissatisfaction.

While electrical components are often the first to fall prey to the operating conditions of turf equipment, the CPI waterproof switch thrives in this environment. We are in our fifth year of supplying E1 Series limit switches to Walker, and look forward to being a part of Walker's continued success.



Having problems with Reliability? Let us know about it, we'd like to help. [Drop us a line](#), call us at 973-887-9400, or visit us on the web at <http://www.cpi-nj.com>

Reliable CPI Thermal Switches Used in Fuel Cells



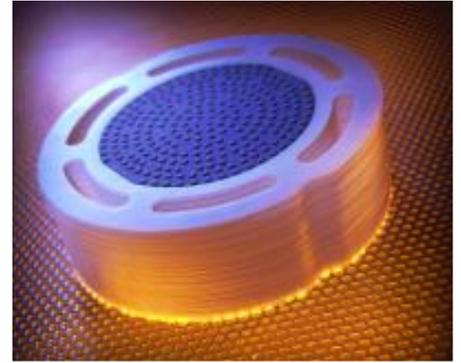
Fossil fuels such as gasoline, diesel, and coal all produce airborne pollutants. Even methanol and natural gas create noxious fumes. Some of the major pollutants created from these fossil fuels are carbon dioxide, carbon monoxide, nitrogen oxide, and methane; all of which contribute to smog, acid rain and global warming.

A solution? Fuel cells. Hydrogen fuel cells are actually hydrogen batteries that generate electricity. The hydrogen in fuel cells is a cleaner and renewable alternative to fossil fuels. Hydrogen can be made from water, and when burned, turns back into water! The advantages of utilizing hydrogen fuel cells are many:

- Reduced oil spills
- Reduced dependency on the Middle East for oil
- Reduced pollution
- Reduced burden to the U.S. economy

Additionally, changing to a hydrogen-based economy would create thousands of new industrial and scientific jobs.

Working from the start with major fuel cell manufacturers, CPI has provided many thermal switching solutions for a wide variety of fuel cells. Our thermal switches can be found on automotive development units, bus power plants, as well as stationary fuel cells. The need for fuel cell Reliability is extremely important especially in remote underground locations such as mines where a loss of power would halt operations indefinitely until replacement power could be delivered (fuel cells are ideally suited to the mining industry as they provide safe, clean power in closed underground places). Potential Reliability issues became apparent early in our fuel cell programs through extensive component evaluation and qualification test programs. Hermetically sealed switches are required due to the gases present in the process, to maintain switch contacts contamination-free and absolutely reliable.



Applications range in set point from 45°F to over 1000°F, with overshoot requirements to 2000°F. In some cases, five switches are used per system, where any one failure could result in loss of power. With such a wide range of thermal switching parameters, fuel cell manufactures have come to rely on

CPI for reliable thermal switching solutions.

Our customers rely on us to solve their Reliability issues. We can do the same for you. www.cpi-nj.com

Your Partner in Reliability - the CPI Project Manager

As an equipment manufacturer, you want to bring the best-designed machinery to your customers. Your reputation depends on it. And as your Partner in Reliability, we manufacture limit switches, thermal switches, and position sensors to bring the highest level of reliability to your applications. Our reputation depends on it. Our approach is very straightforward - through dedicated Regional Project Managers, CPI pulls together all the requirements of your application and equipment design and translates them into a project plan which yields the optimum component utilization. Our goal is to enable you to produce the best performing, most reliable equipment. Let CPI Project Managers work with you to create your Reliability solution.



An Invitation from Control Products

Come See Us at MINExpo INTERNATIONAL® 2004



We'll be at Booth 1761, North Hall, and we'd love to see you there. Take a look at our line of smart cylinders, cylinder sensors, waterproof switches, plus ultra high temp and low temp thermal switches. Bring Us Your Challenges! Talk with us about your special needs and applications. And remember to pick up your free copy of the CPI Thermal Switches CD-ROM.

Sign Up for SensAbility - CPI's free e-mail newsletter

SensAbility was created for design engineers, production engineers, product managers, and anyone working with electrical switching and control applications. You're looking at the third of four special pre-Expo issues. If you would like to be a regular subscriber to SensAbility, please [click here](#).



We're looking forward to seeing you at MINExpo 2004!

Control Products, Incorporated
280 Ridgedale Avenue
East Hanover, New Jersey 07936-2394
973 887-9400
www.cpi-nj.com