

# CPI®

Control Products, Inc.

# SENSABILITY

PRECISION • EFFICIENCY • RELIABILITY • SAFETY

ISO 9000



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## A Note From CPI



### **Welcome to the best part of the year!**

I love the fall. If you're in the northeast, you've been enjoying the incredible colors. If you're in the south, it's been a welcome relief from the heat. And now we have Thanksgiving to look forward to - my favorite all-American holiday.

I hope you have a lot to be thankful for this year. CPI certainly does. With our baseline business holding strong, plus exciting new opportunities to solve problems for our customers, we have enjoyed healthy growth throughout 2006. Some might say manufacturers are simply enjoying a good economic cycle. But in CPI's case, it is no accident that we are able to expand production and add products without compromising service. From 35,000 feet you can see highly developed systems in place which ensure the company's ongoing success by providing the best-made, most reliable and uniquely customizable solutions. But come in for a landing and you'll find truly dedicated employees who are committed to supporting the company's goal of delivering the highest level of service to our customers. Indeed, this is something all of us at CPI are thankful for.

Our success always translates into delighted customers. With CPI

products, you're not just getting switches or sensors. You're getting real solutions to your equipment problems, and the peace of mind that comes from knowing that your equipment will perform as intended, even in the most challenging environments and conditions. CPI brings precision, efficiency, reliability and safety to your most mundane or your most demanding applications.

In this issue we'll cover the simple yet incredible safety solution found in our seat switches. From there we'll take off into Aerospace with two exciting new applications. Then we'll come down to earth-moving military maneuvers and a new product. We'll wrap it all up with upcoming tradeshow and our popular CPI spotlight, where we'll introduce two team members, one long-term and one new, who personify the same dedication to 100% quality that we see in all our employees.

I hope this issue of SensAbility finds you well. We wish you a wonderful Thanksgiving and success for the balance of the year.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mac', written in a cursive style.

**Mac Stuhler**  
**Vice President**  
**Control Products, Inc.**

## Feature Articles

### **Seat Switch Applications for Safety... Why World-Class Companies Turn to CPI!**

Whether we're providing an updated seat switch solution or working on a completely new design, three key elements keep engineers coming back to CPI:

- Application solution development
- Inherent product robustness
- Strong process ensuring quality and product support



Seat switches are a part of a simple yet effective safety feature called "operator presence" that's integrated into earth-moving equipment, cranes, forklifts and the like. This technology prevents the equipment from functioning if the operator is not properly seated. Applications involving safety require reliable components, as failure can be catastrophic. The harsh environment inherent in construction equipment applications, combined with the requirement for high reliability, makes a strong case for using CPI Waterproof switches. [E1 Series](#) limit switches provide a wide variety of sealed switch solutions typically used in operator presence applications and are the safe bet for engineers. Besides being submersible (not just splash proof), E-series limit switches use our standard sine blade snap-acting mechanism which ensures positive contact.

Seat switch applications tend to be tricky. Since every seat is unique, switch travel parameters can be a challenge to define. Mounting and overall form-factor requires flexible design capability, since the seat is often already designed and the switch is an afterthought that has to be made to fit. CPI has a huge arsenal of actuators and mounting brackets to draw from, and we can modify any product to ensure a perfect match.

Our seat switch production is supported by CPI's ISO 9001 quality system and a project management approach that 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.

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**[New Activity in Aerospace for CPI!](#)**

**Aero Vodochody**



The Czech AE-270 is a large cabin, single-engine turboprop aircraft designed to perform a wide range of missions. Aero Vodochody forecasts a production of 30 to 50 per year for the next 10 to 15 years. The CPI application is for an [AD Series](#) switch with a hermetic connector, with which we sense temperature in the

hydraulics. In this case, Aero Vodochody needed the wide differential afforded by the AD Series.

Integrating a single 850 SHP turboprop engine into a solidly designed aluminum airframe, the AE270 combines excellent economy, reliability and safety. The AE270's large cabin easily accommodates multiple configurations, ranging from executive transport in its spacious cabin to long distance delivery of cargo and oversized equipment.

Aero Vodochody's dedication to reliability and safety brought them to CPI, whose products deliver performance they can depend on. You can depend on CPI for reliability and safety as well.



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## **Liebherr**



The TBM850 is the world's fastest single-engine turboprop aircraft. The six-seat TBM850 by EADS Socata offers a maximum cruising speed of 320 knots, combining the speed of a light jet with the more economical costs of a single-engine turboprop. CPI's M2 Series thermal switches are used in an environmental control system application. CPI has sold

literally tens of thousands of M2 Series switches for commercial aircraft ECS applications. In this instance, we are protecting the bleed air system from overheating. Environmental requirements were referenced per RTCA DO 160 (various revisions). Since [we have already qualified our M2 Series switches](#) for this specification, compliance to the customer specification was easy.

At 31,000 feet you don't want overheating problems. That's why Liebherr specified CPI's [M2 Series](#) for this application.

Do you have a critical switching application where failure is not an option?

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## **[BAE Systems - Military Application calls for CPI](#)**

**BAE Systems -- TERRIER Armored Combat Engineer Vehicle.**

**Two CPI switches are specified per vehicle: [M2146-503](#) (45C) & [M2146-504](#) (55C). In this application we are sensing water coolant temperature in the startup system.**



The TERRIER is a lightly armored, highly mobile, multi-purpose combat engineer support vehicle optimized for battlefield preparation in an indirect fire zone. It will provide mobility support (obstacle and route clearance), counter-mobility (digging of anti-tank ditches and other obstacles) and survivability (digging of trenches and Armored Fighting Vehicle slots), and is a perfect candidate for CPI technology as it is designed for operation

in the most extreme climatic conditions. A two-man crew operates the vehicle, either head out or closed down under armor.

The TERRIER is often deployed in places where failure would have dire consequences for the crew and for the mission. That's why BAE Systems called on CPI for absolute reliability to their mission-critical application.

You too can call on CPI to bring reliability to your most demanding applications.

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### **[CPI's Muscular New Plunger Switch](#)**

We are always looking for ways to expand our product offering based on customer-driven requirements. Our new D1040 plunger actuator features a heavy-duty .625-24 thread, and was developed to replace an inferior product that couldn't stand up to hard, sustained duty in utility trucks. These new, completely sealed switches are coupled with panel seals to provide a finished look, and are used for various manual actuation applications. The machines they reside in live and work outdoors all year long, so components are subject to rain, snow, ice, temperature extremes, dust, dirt and whatever else mother nature can throw at them. When D1040 plunger actuators are deployed they have important work to do, so all of the systems must function all of the time. Operators cannot tolerate costly downtime from job-stopping electrical component failures.



You don't have to tolerate electrical component failures either. Do you have an application that that has to withstand a barrage of extreme environments and heavy work demands? CPI's sealed switches are the solution. Call us today, we're here to help.

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**[Come see us at our Upcoming Events. Bring us your challenges](#)**



**The Work Truck Show 2007**  
**Indiana Convention Center & RCA Dome,**  
**Indianapolis, IN**  
**Convention: March 6-9, 2007**  
**Trade Show: March 7-9**  
[http://www.ntea.com/im/wts\\_default.asp](http://www.ntea.com/im/wts_default.asp)

With its wall-to-wall display of the brawniest trucks and toughest equipment, and vast offering of industry-specific training and real-world solutions, The Work Truck Show® is a must-attend event. Nothing parallels the resources and knowledge you'll gain to help beef up your business. The Work Truck Show is the largest event in North America dedicated to Class 1--8 vocational trucks and equipment. With aisle upon aisle of exhibits showcasing everything from toolboxes to full-size pickups, and from winches to Class 8 dumps, this is the place to find answers from industry leaders to your spec'ing and technical questions. [Learn more about this important show here.](#)

CPI will be featuring our [E Series](#) dump body detection switch. Know your dump truck height? Of course you do, but not if the dump body is up. And that's when the accidents occur - when an operator is unaware of the raised dump body and drives under a low bridge or other structure. Learn about our simple solution. We profiled our dump body detection switch in [SensAbility Volume 1, Number 6](#) (Requires Adobe Acrobat Reader).



Visit the SensAbility Archives at <http://www.cpi-nj.com>.



Also look for updates on the new SL720 sensor.

***We'll see you at The Work Truck Show!***

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# WASTE EXPO



**Waste Expo**  
**Georgia World Congress Center**  
**Atlanta, GA**  
**Conference: May 7 - 9, 2007**  
**Exhibits: May 8 - 10, 2007**  
<http://wasteexpo.com>

Not even a hurricane could stop last year's WasteExpo, the largest gathering of solid waste and recycling professionals in North America, from being a success. Due to the effects of Hurricane Katrina, WasteExpo 2006 relocated from New Orleans to Las Vegas in mid show. This did not keep 11,000 participants from seeing the latest equipment, learning what's new in the industry and enjoying the many networking opportunities. At WasteExpo 2007 you'll see the latest products, visit with suppliers, and learn the current techniques and industry trends. [You can learn more about Waste Expo 2007 here.](#)



CPI will be featuring our stainless steel waterproof switch panels, which we told you about in our last issue, Volume 3, Number 1. Visit the SensAbility Archives at [www.cpi-nj.com](http://www.cpi-nj.com) ([or read the story here](#)).



And look for updates on the new SL720 sensor.

## ***Come see us at Waste Expo!***

No matter what the application or environment, CPI can bring **Precision, Efficiency, Reliability and Safety** to your equipment.

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## Visit the SensAbility Archives



With every issue of SensAbility we bring you industry-related news, product announcements and real-world applications that have brought **Precision, Efficiency, Reliability and Safety** to our customers. We've archived each issue of SensAbility on our website, [www.cpi-nj.com](http://www.cpi-nj.com). You can go [right to the archive page here](#).

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### CPI Spotlight

## Neida Cales - 10 years of excellence and dedication

Neida Cales is a star assembler who's been with CPI for 10 years. She's involved in every stage of the assembly and inspection of CPI switches, for both the Waterproof and Thermal lines. In fact, the seat switches and dump body detection switches we told you about in this issue are all Neida's handiwork.

If ever there was someone who typifies CPI's dedication to 100% quality for our customers it is Neida. She'll be the first to tell you that it's all about commitment - both individually and as a team. It's about doing the best all the time, and testing and inspecting the work at every stage. You see, at CPI we don't just inspect random samples - we test and inspect every single switch we make.



Neida says the variety is what keeps her job interesting. She's doing something different all the time, and it keeps her day fresh and her work flawless. We asked Neida to tell us the one thing she'd want every CPI customer to know. She said she's proud of CPI's assembly team because they build such a high level of quality with so much care, and that it shows in each and every team member and in each and every product. She likes working at CPI so much she drives 50 miles from north Newark, NJ to get here!

When Neida is not at CPI she's having fun with her family. She has a daughter in college and a son in the eighth grade, and together they enjoy bike riding, vacations to see family in Puerto Rico as well as traveling to see the sights of the USA. She loves any type of dancing and is currently taking salsa classes. Neida is also very

active within her church.

We're proud to have Neida Cales on our team. Congratulations on 10 years of inspiration!

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## **Virgil Fuentes - a valuable new addition to CPI**



Virgil Fuentes, CPI's new tool machinist for our Waterproof and Thermal switch lines, is all about integral support. He's been with CPI for one year and has brought with him 16 years of solid machinist experience from naval yards, onboard ship, communications centers, CNC turning equipment and other government applications.

Virgil fit in very quickly at CPI. He's a top performer who is genuinely excited about his work. He's a 100% utility player - a key component of our system. In a nutshell, Virgil keeps everything working so our specialists can do what they do best. He likens it to "carrying the oil for the gears," and says the extreme variety of his work at CPI keeps him challenged and learning.

Virgil drives to CPI from Easton, PA - a 57 mile trip each way. He tells us he gladly makes the trek to get here, so we asked him why. We were filled with pride by what he said, so we need to share it in his own words: "I've never seen anything like CPI, and I've seen quite a bit. For over 20 years I've seen lots of switches, parts and assemblies for medical and government applications, and CPI is far and away the best, hands down. These people really care - they're masters at their craft, they know the finer details, and it's amazing to work with them. It's no wonder there's a CPI switch in almost every military vehicle out there."

When Virgil is not at CPI he's very active. He has a daughter in Penn State, a daughter in high school and a son in high school who keep him very busy in an exciting kind of way; mountain biking, snowboarding, skateboarding and anything else time allows. He's also gone mountain biking with our own Nick DeSalvia on occasion.

After just one year we wonder how we ever got along without Virgil Fuentes.

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### **What Do You Think?**

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