

# digDIFFERENT

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Published nine times yearly by COLE Publishing, Inc.  
1720 Maple Lake Dam Rd., P.O. Box 220, Three Lakes, WI 54562

Call toll free 800-257-7222  
Outside of U.S. or Canada call 715-546-3346  
Mon.-Fri., 7:30 a.m.-5 p.m. CST

Website: digdifferent.com / Email: info@digdifferent.com / Fax: 715-546-3786

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**ADDRESS CHANGES:** Submit to Dig Different, P.O. Box 220, Three Lakes, WI 54562; call 800-257-7222 (715-546-3346); fax to 715-546-3786; or email nicole.maney@colepublishing.com. Include both old and new addresses.

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**EDITORIAL CORRESPONDENCE:** Address to Editor, Dig Different, P.O. Box 220, Three Lakes, WI 54562 or email editor@digdifferent.com.

**REPRINTS AND BACK ISSUES:** Visit digdifferent.com for options and pricing. To order reprints, call Jeff Lane at 800-257-7222 (715-546-3346) or email jeff.lane@colepublishing.com. To order back issues, call Nicole at 800-257-7222 (715-546-3346) or email nicole.maney@colepublishing.com.

**CIRCULATION:** 26,089 copies, nine times yearly.

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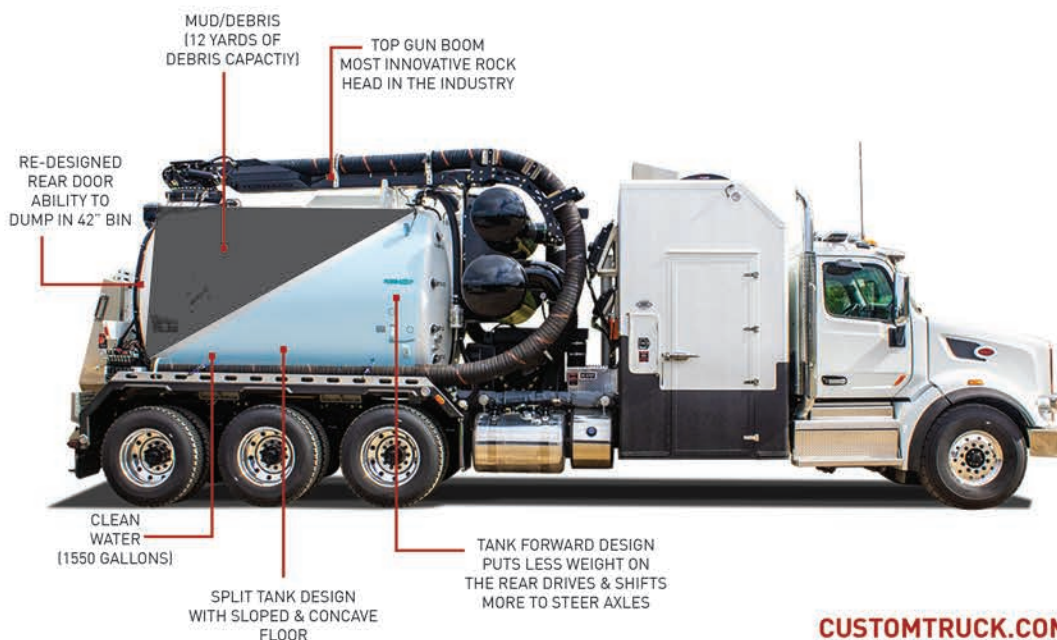




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## Buying, Education and Connecting, Oh My!

**THE INDUSTRY'S BIGGEST TRADE SHOW IS COMING UP FAST, AND IT'S THE PERFECT TIME TO IMPROVE YOUR COMPANY IN MANY WAYS**

BY CORY DELLENBACH

**A**re you ready for it? Yes, I'm talking about one of the biggest trade shows in the industry.

CONEXPO-CON/AGG kicks off Tuesday, March 10, and runs through Saturday, March 14, at the Las Vegas Convention Center in Las Vegas. This show is massive with more than 2,800 exhibitors showing off the latest in all sorts of construction equipment, from traditional excavation machinery to vacuum excavators, directional drills and everything in between.

The show, held every three years, brings contractors, dealers, distributors, service providers, engineers and producers together. Contractors account for about 67% of the attendees, according to the show's website.

This will mark my second time attending the show, so hopefully I won't be as wide-eyed as I was when I went in 2017. However, it's hard not to be with everything on the show floor and in the outdoor lots.

### TIME TO GO SHOPPING

The show comes at the perfect time. Many contractors in North America are still facing a slow time with the weather in late spring and are looking for something to keep them busy.

Some are considering what equipment needs to be replaced or what services they might want to add heading into the busy summer season.

Prior to arriving at the show, here are few things to keep in mind and be prepared for when you do get there:

1. **Know what you want.** Come with some clue as to what you are looking for. Don't just come to roam around the show floor (because you would never make it through the whole thing). Having an idea of what you are looking for — the manufacturer, model, type of work you're doing, etc. — will help you narrow down your search.
2. **Be open to changing your mind.** OK, so you have an idea of what you're looking for, but don't be surprised if you change your mind after you start looking at your options. There are lots of different pieces of equipment, options and features that you'll be seeing.

3. **Talk, talk and talk.** Yes, definitely go up to those sales and marketing folks in the booths and talk with them about what you're looking for. Those are the experts who will help you along the way.

4. **Have that credit card ready.** This may seem like a strange one, but definitely have it ready. Many manufacturers will have special "trade show" deals on the equipment. You don't want to miss out on any of those, do you?

### TAKE IN SOME EDUCATION

As with many other trade shows, there will be plenty of opportunities for education as well. It's a great time to learn something new and maybe even earn continuing education credits for it.

Bring a handful of your crew with you, and give them some of that training you've been wanting them to get but have been too busy to schedule.

That training will help your company grow and will also give you more confidence in what they can handle.

### CONNECT WITH OTHERS

If you aren't going to the trade show to buy something or attend educational sessions, the next best thing you can do is network.

You can connect with so many people in the industry and not just other contractors to share stories with.

**YOU CAN CONNECT WITH SO MANY PEOPLE IN THE INDUSTRY AND NOT JUST OTHER CONTRACTORS TO SHARE STORIES WITH.**

Connect face-to-face with manufacturers you work with — or with potential customers (another contractor could be looking for services he doesn't offer, but you do). Options are wide as to who you could bump into, and you never know where that relationship will lead.

I invite you to also connect with *Dig Different* at the show. Reach out to me at [editor@digdifferent.com](mailto:editor@digdifferent.com) or 715-350-8436. I would love to meet you at the show and learn about your company.

Enjoy this issue! ▼





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## PHOTO GALLERY

### Contractors at Work

When photographers accompany our featured contractors on job sites, far more photos are taken than are able to fit on the pages of the magazine. We put together another gallery of the best of all those extra photos of recently profiled companies. Check it out. [digdifferent.com/featured](http://digdifferent.com/featured)

## MOLDING LEADERS

### How to Develop Effective Managers In-House

When employees quit jobs, they more often leave because of bad managers rather than the company itself. That means developing great managers should be of prime importance to all organizations, but it's not always as simple as promoting your top employees. This online exclusive takes a look at how to best develop good leaders within your company. [digdifferent.com/featured](http://digdifferent.com/featured)



## OVERHEARD ONLINE

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*Why Your Business Plan Needs to Be Updated*  
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## EQUIPMENT LEASING

### Reduce Ownership Cost With the Right Leasing Structure

If you lease some of your equipment to meet your operational needs, a usage-based structure rather than a traditional fixed-term option could be a smart way to go. This online exclusive explains more. [digdifferent.com/featured](http://digdifferent.com/featured)

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# LEADING WITH THE HEART





Matthew Hubbard, Harts Services underground expert, cleans the head of a R2 pipe bursting machine (RODDIE) at the shop in Tacoma, Washington.

## DIVERSIFIED SERVICES AND AN EMPHASIS ON CLEAR COMMUNICATION WITH CUSTOMERS SPURS GROWTH FOR TACOMA CONTRACTOR

STORY: KEN WYSOCKY PHOTOS: STEPHEN BRASHEAR

Spending years in the plumbing industry allowed Richard Hart to collect good intel about what a good company should be — and shouldn't be.

In 2013, he morphed that vision into a reality when he established Harts Services in Tacoma, Washington, based on one key principle: Always communicate extensively with and care about customers.

"We've fulfilled our vision of being a company of master communicators," says Hart, who owns Harts Services with business partner Dan Hartsough. "We emphasize excellent communication. It starts when customers first call us to the time a dispatcher calls to tell them when a technician will actually arrive. And it continues when a technician listens to customers to get absolute clarity on the situation, then answers all their questions and provides options for solving the problem.

"I worked for three or four companies that didn't communicate well with customers, and that was a big reason why I didn't want to work there," he continues. "I didn't want to keep working with upset customers who were overpromised and underdelivered in terms of service. That's why we always strive to underpromise and overdeliver."

That philosophy, coupled with an emphasis on diversified services, investments in efficiency-enhancing equipment and advice from external professional groups, has served the company well. From humble beginnings, the company has doubled its gross sales nearly every year, culminating with more than \$4 million in 2018.

During the same time period, employment rose to 33 people and the company's initial emphasis on service and repair plumbing expanded into drain cleaning, jetting and inspecting sewer lines, trenchless pipeline rehabilitation and horizontal directional drilling.

### GOING THE EXTRA YARD

"When we first opened the company, we didn't envision growing this big, having this many employees or offering this many services," says Hart, 35. "But it all stems from a place of caring — always doing the right thing — which I feel serves our customers at the highest level. We always do everything we promise we're going to do, but we also make a point of doing a little bit above and beyond that, too."

For example, if technicians see a bad valve while replacing a water heater, they'll throw in a new valve at no charge to the customer. While that may make an accountant cringe, it makes perfect sense to Hart.

**"IT ALL STEMS FROM A PLACE OF CARING — ALWAYS DOING THE RIGHT THING — WHICH I FEEL SERVES OUR CUSTOMERS AT THE HIGHEST LEVEL."**

Richard Hart



### Harts Services Tacoma, Washington

**OWNERS:** Richard Hart and Dan Hartsough

**FOUNDED:** 2013


**EMPLOYEES:** 33

**SERVICES:** Residential and commercial plumbing service and repair, drain cleaning, sewer line cleaning and inspections, trenchless pipe rehab, horizontal directional drilling

**SERVICE AREA:** 30-mile radius around Tacoma

**WEBSITE:** [www.hartsservices.com](http://www.hartsservices.com)





Harts Services owners Dan Hartsough (left) and Richard Hart believe customer communication is key to the success of their business.

**“WE WORK OFF OF THE THREE-WIN RULE, WHERE THE COMPANY, THE EMPLOYEE AND THE CUSTOMER ALL HAVE TO WIN. IF JUST ONE LOSES, EVERYONE LOSES.”**

Richard Hart

“It only takes a few minutes to do and it’s the right thing to do,” he says. “If you do a little extra, you’ll always get a little more in return. It’s all about karma. Do the right thing and the return is golden — and you create customers for life.”

The approach seems to be working; as of mid-January, Harts Services had earned an average customer rating of 4.9 out of a possible five stars on Google reviews, based on 794 reviews.

“We work off of the three-win rule, where the company, the employee and the customer all have to win,” Hart explains. “If just one loses, everyone loses. We live off this. If a customer is upset, for example, then the employee didn’t make sure the customer won. Or if we don’t provide a great customer experience, our profitability isn’t as good, so the company doesn’t win. Sometimes we even give customers their money back.”

### A CULTURE OF CARING

The company’s slogan is “We care more,” which is emblazoned on its service vehicles. But this applies to more than just customers; the philosophy permeates the company. Hart says it is critical to attracting and retaining quality employees in an industry where it’s very difficult to do so. “Great people make a great company.”

As an example, consider a program the company calls No-Man-Left-Behind Fridays, which fosters a culture of teamwork. Here’s how it works: The first technician who returns to the shop on a Friday afternoon has to check in before leaving work to make sure everyone is going to get off work at a reasonable time.

“If not, we send the technician who’s finished working first to whatever job site needs support,” Hart says. “So a technician who gets back to the shop at 3 p.m., for example, might get dispatched to help a colleague who’s on a nightmare commercial job. Maybe three guys will end up going out there. In effect, nobody goes home until everyone goes home. They’re all like family, rooting each other on and helping out when things get tough.”

Creating that kind of family atmosphere helps to attract and retain employees. To build that kind of culture, Hart says he and Hartsough try to hire employees who are as highly motivated and enthusiastic as they are. “Not everyone works out, but our retention rate is pretty good.”

To thoroughly vet job candidates, as well as give them a good feel for the company’s culture, they go through a three-stage interview process. The steps include attending a companywide meeting held every Wednesday, where company officials talk about everything from sales and revenue goals to jobs that went well or off the rails, and going on a service ride-along with a veteran technician, Hart says.

The company also emphasizes employee accountability. For example, within five minutes after technicians leave a job, a customer service representative calls the customers and asks them to rate the technicians on a scale

from one to 10. If the customer rating is less than eight, the rep finds out why.

“And if the score is less than five, we turn the technician around and send him back there,” Hart says. “Our goal is to get all good reviews. But if we get a bad one, we talk about it at our next Wednesday meeting. We talk about the good ones, too, so all of us know how awesome we are. We all feed off each other.”

### TRADESMAN AT HEART

Hart entered the trades in 2000, when he was 18 years old. “I definitely wasn’t that kid who was going to college,” he says.

After working as a plumber in Hawaii for most of his career, Hart and his wife, Jordan, decided to move to Tacoma, where her family lives. Initially, things didn’t work out well; Hart worked for several different plumbing companies. In fact, he was even considering moving back to Hawaii when Hartsough, a longtime friend, suggested Hart open his own plumbing company.

“He came up from California to help me start it,” Hart says. “But then he realized how good we could do, so he stayed and we became 50-50 partners. Early on, he was developing processes and helping us get work while I was out in the field.”

As the company grew, so did its fleet of equipment and vehicles. The backbone of the company is its fleet of 11 bright-orange Mercedes-Benz Sprinters (all 2016 or newer models) and four installation trucks (one Ford box truck and three Dodge and Chevrolet utility-bed trucks). Hart invests in Sprinters because of their spacious cargo area, ample legroom for drivers and diesel engines that get 22 to 26 mpg. Plumbing technicians use eight of the Sprinters; the other three are dedicated to drain cleaning.

The Sprinters are equipped with Hackney storage systems that enable each truck to carry between \$7,000 and \$8,000 worth of inventory, including three different styles of popular faucets. “The trucks are so big that we can basically





Jeff Chong, left, underground lead, and David Burnett, warehouse lead, review truck stock inventory using ServiceTitan software.

invite customers into the back to show them different types of faucets and other items,” Hart says. “They’re like showrooms on wheels.

“Customers can order other faucets if they don’t like the three we have on the trucks. But if they love one of the faucets we have, we’re ready to install it right then and there.”

### EFFICIENT INVENTORY CONTROL

The Sprinters’ size also minimizes time-killing trips to supply houses for repair parts. Unless it’s a specialty part, odds are that technicians have what-



Chong, right, uses a Husqvarna K 760 power cutter to carve through asphalt as Dylan Leshner, apprentice, applies water while replacing a sewer line.

## Networking sparks dramatic growth

Many businesses struggle to grow, despite their owner’s best intentions and efforts. Harts Services in Tacoma, Washington, which has roughly doubled its gross revenue every year since 2014 and posted more than \$4 million in sales in 2018, isn’t one of the them — but it very well could’ve been without the business coaching provided by the Nexstar Network and CEO Warrior organizations.

“They’ve been huge contributors to our growth,” says Richard Hart, company co-owner. “They help us push past that uncomfortable zone, where you don’t want to offer customers new services because you’ve never provided those services before, yet you know you need to in order to provide first-class service.

“I think that as human beings, we sometimes scare ourselves into doing nothing. But these groups open up our minds to things we otherwise wouldn’t be so willing to do. Without them, we’d probably still be trying to become a \$2 million-a-year company.”

A key benefit to membership in the organizations is the ability to pick the brains of other plumbing executives that provide critical insights into strategies that worked or didn’t work. It might be something as simple as learning how to roll out a new in-home, water-filtration product that Hart saw at a trade show. Or it might be something as large as developing an internal parts-warehousing system that increases profitability by virtually eliminating technicians’ trips to supply houses. (Membership fees for the two organizations vary; visit [www.nexstarnetwork.com](http://www.nexstarnetwork.com) and [www.ceowarrior.com](http://www.ceowarrior.com) for details.)

“Having access to other business owners is huge,” Hart says. “Take our inventory system, for example. We went to five or six different companies around the county, picked them apart and created our own parts-inventory system.

“Now our inventory system is world-class. And we couldn’t have done it without all of the networking — the open-door policy these groups provide. These other companies treated us like family and taught us so much.”





Harts Services believes great people make a great company.

## **“BY VIRTUALLY ELIMINATING SUPPLY-HOUSE TRIPS, I’D SAY WE CAN DO FIVE JOBS PER DAY, COMPARED TO THE THREE WE COULD DO BEFORE. WITH EIGHT SERVICE TRUCKS, THAT’S HUGE IN TERMS OF REVENUE.”**

Richard Hart

ever they need. This also increases customer service because they don’t have to wait as long to get their problems resolved. Furthermore, it ratchets up profitability because technicians can do more jobs than they otherwise could, Hart notes.

“Back when I worked as a tech, I went to a supply house every day — almost every time I needed a part,” he says. “By virtually eliminating supply-house trips, I’d say we can do five jobs per day, compared to the three we could do before. With eight service trucks, that’s huge in terms of revenue.”

Other equipment includes Milwaukee Tool corded power tools; five Quadra Plex portable drain cleaning machines; three truck-mounted waterjetting machines built by Jetters Northwest (3,000 psi at 12 gpm); a MaxLiner USA pipe lining system; three RIDGID SeeSnake Mini pipeline inspection cameras; an R2 pipe bursting machine and a Basement Buddy horizontal directional drilling machine, both made by RODDIE; two mini-excavators built by Takeuchi; a micro-excavator manufactured by IHI (now owned by KATO Works); and two 14-foot dump trailers from PJ Trailers.

To ensure trucks have adequate inventory, Harts Services uses ServiceTitan inventory replenishment software that works in tandem with The Home Depot PRO, a parts-supply company. When technicians use parts, they simply use an iPad to reorder them. “We’re completely paperless out in the field,” Hart says. Then the parts get delivered from a local Home Depot PRO warehouse to a small warehouse set up by The Home Depot PRO within the Harts Services facility.

The Home Depot PRO doesn’t charge any fees for this service; the only requirement, aside from passing a credit check, is that clients must purchase a minimum amount of parts and materials each month, Hart says.

“The warehouse occupies less than 2,000 square feet of our 8,000-square-foot building,” Hart says. “All the parts are inventoried on consignment. We don’t pay for them until we take them from the warehouse and put them on our trucks. It’s a pre-positioned inventory system run by one of our employees.”

The system pays for itself by eliminating trips to supply houses. “At the end of the day, we have a whole warehouse in our shop. From water heaters

and faucets to garbage disposals, fittings and pipes, almost everything you can name is in our shop — about \$80,000 worth in all.”

### **EXPECTING TO GROW**

The company’s success in its first six years has given Hart the confidence to set ambitious goals for future growth: \$20 million in gross revenue by 2025. That will require hiring more employees, buying more equipment and gaining more market share in the coming years. As Hart puts it, “We’re firm believers that what got us here isn’t going to get us there.”

To increase the brand recognition required to spur more growth, the company has embarked on a marketing campaign called Paint the Town Orange. It includes both billboard rentals and TV commercials that feature the company’s distinctive orange-with-black-trim Sprinters.

The company also entices customers to let Harts Services post yard signs on their lawns for three months at a time. How? By offering participants a chance to win \$100 in a monthly random drawing.

“The signs need to be there for a minimum of three months,” Hart says. “I deliver the check personally. We do a drive-by after we draw a name, just to be sure the sign still is there.”

The company typically has about 500 yard signs installed. Along with the TV commercials, trucks and billboards — plus technicians’ uniforms that feature the company’s orange logo — Hart aims to have Tacoma residents seeing orange everywhere they go.

“By the end of the year, we want everyone to know who we are,” he says. “It’s all about branding. When someone thinks about hiring a plumber, we want them to see orange in their head.” ▼

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# Forming the Right Geometry

## INTERNAL EQUIPMENT TRIANGLE METHOD COULD BE THE KEY TO A MORE SUCCESSFUL FLEET MANAGEMENT PROGRAM

BY SANDRA MASON

**W**hen a series of catastrophic equipment failures hit Schlouch in 2005, it prompted a change in the way the eastern Pennsylvania-based heavy civil construction firm managed its fleet.

Instead of relying on a traditional siloed approach to fleet management, where operations, fleet management and accounting are often at odds, the company chose to take a collaborative approach. Schlouch calls this method the Internal Equipment Triangle, and it's an extension of the idea behind the equipment triangle: that equipment end users, manufacturers and distributors all deserve respect and that transactions should be a win-win for all parties.

"At most construction firms, the fleet manager is responsible for all three areas. What we try to do is bring expertise from different areas to the decision," says Kevin Reimert, fleet coordinator for Schlouch. "We believe the best decision for the organization is one all parties agree on."

### A TEAM- AND RESOURCE-BASED APPROACH TO FLEET MANAGEMENT

Reimert is responsible for fleet operations, and his group reports to operations, led by Don Swasing, chief operating officer. The third member of the equipment triangle is Rich King, chief financial officer.

The team meets weekly to discuss pending decisions — each bringing their unique perspective and expertise to the process. King examines the financial impact of decisions, coordinates fuel hedging and financing along with analyzing and reporting fleet results. Reimert offers data on performance related to equipment maintenance, changing the preventive maintenance program, comparisons of fuel efficiency and maintenance costs, and analysis related to

### "PURCHASE DECISIONS AREN'T ALWAYS BASED ON LOWEST PRICE. WE WILL PAY MORE FOR TOP-PERFORMING EQUIPMENT."

Don Swasing

equipment disposal. Swasing is responsible for the overall vision for the fleet, as well as relationships with OEMs and dealers. He brings production data from the field and updates the group on their equipment needs. He also ensures Reimert has the resources he needs.

According to Swasing, the collaborative process to equipment management eliminates decision-making based on gut judgments or good old boy connections rather than quantitative methods.

If the team members don't agree, they won't move forward. It also eliminates some of the finger-pointing between operations and maintenance that happened before the change. Their overall equipment philosophy has changed as well.

"Purchase decisions aren't always based on lowest price," Swasing says. "We will pay more for top-performing equipment."



A crew from Schlouch installs pipe during a project near Blandon, Pennsylvania. Instead of relying on a traditional approach to fleet management, the company takes a collaborative approach.

### MEASURING THE BENEFITS

The success of the approach has been proven over time, as evidenced in improved uptime, gains on the sale of equipment or at trade-in, and scheduled versus unscheduled repairs. The team from Schlouch was awarded with the Association of Equipment Management Professionals' Fleet Masters Award in 2016.

The move toward a more collaborative approach had the full support of top management including CEO Barry Schlouch, which made it possible to get through a challenging transitional period.

Top management also pursued Certified Equipment Manager accreditation from AEMP.

"Once implemented, the rest of the organization saw the benefits — that the equipment was more reliable and uptime was there," King says. "When maintenance said they would do something, it happened."

### LEARN FROM THE EXPERTS AT CONEXPO-CON/AGG 2020

To learn how the Internal Equipment Triangle might benefit your operations, attend an educational session on the topic at CONEXPO-CON/AGG 2020 in Las Vegas on March 10-14.

At the session, the equipment management team from Schlouch will provide examples of how the process works in the real world. In addition, they will discuss the key results they have been able to achieve including improved reliability, lower operating costs and improved operator satisfaction. ▼



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# Bad Habits Could Kill You

## REMEMBER THESE SIMPLE BUT OFTEN OVERLOOKED KEYS TO SAFE HYDROEXCAVATION

BY GILES LAMBERTSON

**D**uring the last decade, Gary Toothe has traveled a million miles — literally — promoting safe operation of high-pressure water and vacuum machinery in excavation and cleaning work. Some longtime operators may think they don't need safety courses anymore, but what Toothe teaches are important reminders that are helpful for anyone working in hydroexcavation.

His work in the industry began 35 years ago as a rookie tech on the working end of an industrial vacuum hose. He moved into middle management and eventually got into safety training “after I began getting too many accident reports. I decided I would be the guardrail and start teaching people how to work safely.”

Toothe became a certified OSHA expert and for the last 10 years has been training manager at Federal Signal. From his experience in the industry, he has crafted effective safety presentations that he gives all across the country. “Having worked on the vacuum hose years ago is kind of my hook. Yes, I have been there and done that, I tell an audience. Pretty soon I have them listening.”

His early days blasting and cleaning industrial sites predated hydroexcavators, “but we were using air compression and pressurized water and vacuums,” he says. The dangers to bodies of operators were the same in 1984 as today. Then and now, limbs are sucked into hoses with disastrous results and fingers and other body parts are assaulted by water with shotgun force.

What Toothe talks about, however, is not principally about staying out of the way of all that suction and blasting power. Operators are well aware of the deadly forces they wield to accomplish a task. What they don't know, he says — or, rather, need to be reminded about — is the constant need to avoid bad habits when handling the powerful tools.

### “PROBLEMS HAPPEN WHEN SHORTCUTS BECOME INGRAINED IN WORKING CULTURE. THEY BECOME INTERNALIZED.”

Gary Toothe

#### BAD HABITS

His top recommendation for safe and effective hydroexcavation might surprise you: Don't use too much water. “That's the biggie. That's what I try to push the most. OSHA requires that you use the minimal amount of water possible. Anything more is not acceptable. But some operators use way too much water and end up dumping chocolate soup.”

The extra water sometimes happens because an operator affixes the wrong kind of nozzle to the end of his wand and ends up loosening dirt by washing



it away rather than cutting it away. “Each nozzle has its own purpose. I recommend a straight nozzle. A rotating nozzle is used way too much. It is supposed to be used to clean out and expose utilities. It liquifies the dirt. The rule against using too much water is consistently ignored.”

More to the point, the extra water permeates the ground, softening it and weakening the walls of an excavation. That leads to Toothe's second reminder: Don't stand too close to the edge without a physical restraint. It seems rudimentary, “but operators literally put their toes out over the hole. I see people just hanging out over the hole. If that ground gives way, bad things happen. If it caves in, good luck trying to hold on to the remote and shut down the machinery.”

Toothe distinguishes between a fall “restraint” and fall protection. He recommends using a harness tied off to a truck that will prevent an operator from falling rather than relying on systems that might mitigate the effects of a fall. “If someone falls into a hole or trench he is digging, he's exposed to the vacuum suction or high-pressure water. You want to avoid falling even 2 or 3 feet because you are exposed. I would rather eliminate the fall altogether by tying off to the truck.”

#### WORK TOGETHER

“The last thing I would recommend, to give just two or three rules, would be to never work by yourself. If something happens to an operator and no one else is there to shut down the truck ...” Toothe says, leaving the consequences unstated. “I just got back from talking to hydroexcavator crews working for the oil industry. Sometimes they're in the field and no one is around for miles and miles, not till the end of a shift. If something happens to a lone operator in those circumstances ...”

Mark Allen agrees. The general manager of Diversified Underground, based in Aurora, Colorado, says he normally sends out two-person teams on his hydroexcavation jobs. “I can't say there isn't a time when they work alone, maybe if they are excavating a shallow trench, but if we are locating utilities, I always send a two-man crew.”

Safety aside, some would argue it's more efficient to send out two operators in two trucks to do two jobs rather than double up on one. Allen doesn't believe it. “I find that's not the case. When we are doing a pothole, a single operator has to set out equipment, unpack hoses, get water by himself and dig by himself, holding the dig rod and manhandling a 6- or 8-inch hose — to me that's a lot slower. Plus, the guy gets tired but still has to backfill by himself and then do the paperwork. You might save a little on labor by sending out one guy, but it isn't as productive.”

Toothe completely concurs. “That's what I hear all the time: That it's more efficient with one person. Well, I did studies. If you have two people working on a job for 12 hours, productivity might be a little less, but it is still about



85% of the optimum. With one guy by the end of the 12 hours, he is working at 30% of optimum. He's burned out. You save on labor, but you don't increase efficiency."

Toothe is agnostic about which is the more dangerous component on a hydro rig — the high-suction vacuum or the high-pressure water. "If you have a dead-man trigger, the water stops in an emergency. It didn't used to be that way. We used to have 'suicide nozzles' that lacked a shut-off. We have eliminated most of them, so high-pressured water is not so much an issue. However, vacuum doesn't stop unless you hit the remote. If you have two men on a job, everybody should be fine in an emergency."

#### CONTINUED TRAINING

Wade Glasscock of Smith Industrial Services in Mobile, Alabama, is a longtime advocate of safety training. Today he oversees the trainer, but he used to do the training himself. All 300 people in the company who work with high-pressure equipment are safety trained, from new hires to veterans.

"In some companies, they put new hires out there without the training," he says. "They'll hire temporary labor and let them do the tunnels. Our training includes training the attendants. They have to know enough to take care of everything in an emergency. As for the old hires, we have a tailgate meeting before every task is started, a job safety meeting before every job. Every day. You have to stay on top of that."

A two-person buddy system is an absolute operating procedure at Smith Industrial Services, as is wearing protective clothing. "We use Kevlar on everything. Anything under 4,000 psi we consider power washing, but operators still need to wear face shields and hard hats. Over 4,000 psi, they wear safety boots and pressure-resistant gloves. Depending on the job, we go up on our expectations of what they should wear," Glasscock says.

Allen says the rocky dirt of Colorado impacts his operators' decisions. "Excavating in Colorado soil can be pretty brutal. Our operators are trying to do everything correctly, but a contractor can be standing there saying he wants to get this job done and sometimes my guys will turn up water pressures to get more cutting action. They do sometimes cut corners, but they *never* do when it comes to safety." Allen says he would counsel new hydroexcavator operators to "never cut a safety corner and put yourself and a utility in jeopardy."

Toothe believes all operators should start out by reading safety and operation manuals. Revisiting the manuals is almost as important. "Problems happen when shortcuts become ingrained in working culture. They become internalized." That is, bad habits and rationalizations take root. "There is one chance in a hundred that this or that will happen if you take a shortcut." People say that sort of thing. But then they do it a hundred times."

Toothe wishes every operator would take an OSHA competent person trenching class "so he will understand soil dynamics and recognize the signs of imminent collapse of a trench wall. If I could wave a magic wand, every hydroexcavation job would have a competent person there." He notes that every operator who has created a hole or trench that someone else will be

entering is legally liable in the event of a collapse. The creator of the hole is as liable as the project owner ordering it, the contractor whose people are entering the hole or trench, and the contractor responsible for shoring it properly.

Of course, not every hazard can be foreseen and prevented. In fact, Glasscock says the biggest danger for his hydroexcavation crews has nothing to do with the equipment or the operator — it's the surrounding traffic. "There are so many people moving around in public places, so many distractions. We can have a 40-foot-long truck with its lights flashing and some girl texting while she's driving runs into us. Our guys don't back off trucks into holes. They don't cut off their feet with high-pressure water. None of that. It's traffic that's the big hazard."

There will always be dangers in hydroexcavation work, but breaking bad habits will go a long way toward keeping you safe on the job. ▼

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# Leveling the Playing Field

## USING TECHNOLOGY RESOURCES CAN LEAD TO CONTRACTORS BECOMING MORE COMPETITIVE, EVEN WITH LARGER COMPANIES

BY SANDRA MASON

**M**oving from where you are as a contractor to where you want to be takes more than “what worked before” thinking. Past successes may no longer be reliable because the game is changing. The little guy can compete in a way never thought of before.

Contractors can use their human and technology resources to move from status quo to innovation, from being disrupted by other companies to becoming the disrupter.

### THE EQUALIZER

“Technology is the great equalizer,” says James Benham, CEO and founder of JBKnowledge, a technology solutions company serving the construction and insurance industries. “It’s far cheaper, faster and better than years ago.”

Benham has seen small contractors successfully compete with much larger companies, and enterprise-level companies become more productive and efficient by embracing change. He is aware that eight out of 10 contractors struggle with technology.

“They may have adopted a technology 15 years ago and are still hanging their hat on that,” Benham says. “They may not realize there is a subset of companies that have upset the game.”

Such tech-savvy companies are winning projects, while others are being disqualified because they lack the technical capabilities to successfully bid on a job.

Common technical capabilities currently in use include building information modeling (BIM) and productivity trackers. BIM is a strategy tool that can be used during bidding, preconstruction, active construction and facility management.

“It offers massive gains and significant reduction in preventable mistakes,” Benham says.

### “TECHNOLOGY IS THE GREAT EQUALIZER. IT’S FAR CHEAPER, FASTER AND BETTER THAN YEARS AGO.”

James Benham

Another important strategy tool focuses on productivity tracking. “We’re in the labor business in construction,” he says. “Tracking and improving productivity eliminates waste and improves efficiency.”

An electrical subcontractor that Benham worked with reached an on-site productivity level above 68%, significantly higher than the construction industry average of 40%.

### GIVE THE RIGHT PEOPLE THE RIGHT TOOLS

Technology won’t put you in a winning position without people who can implement it in a smart way.

If you want to innovate, give the improvisers, the tinkerers and those will-

**“IF YOU DON’T MEASURE, YOU CAN’T SEE THE IMPACT. DOCUMENTING AN EXISTING STATE AND A FUTURE STATE IS CRITICAL. PEOPLE ARE QUICK TO FORGET THINGS.”**

James Benham



James Benham

ing to experiment a forum to express their ideas. Along with the right tools, they can move the company forward.

How can innovators be supported through funding, as well as verbal and emotional support?

“These are questions contractors may not have thought to ask, but they are important to becoming an innovative company,” Benham says.

### MITIGATE RISK

Change involves risk. Many construction companies are hesitant to adapt and innovate. Such caution is understandable. It is wise to start small, build up profit margin and not get distracted by options. Focus on processes and methods.

“Technology enforces and institutes processes that benefit the bottom line,” Benham says.

Methods mean nothing if they can’t be measured. Learn best practices for measuring results of innovation.

“If you don’t measure, you can’t see the impact,” he says. “Documenting an existing state and a future state is critical. People are quick to forget things.”

With many people retiring from the construction industry, vast knowledge and experience could be lost. Curious, innovative thinkers can find solutions that will retain and build upon that knowledge. Documenting existing processes will help the next person avoid confusion. They will have a playbook.

### LOOK TO THE FUTURE

It is necessary to stay informed about current innovations in technology, how best practices change and what lies ahead. There are a multitude of blogs, industry magazines, videos and podcasts to choose from. Know where you can find the top choices for construction software and mobile apps.

As an adjunct professor in construction science at Texas A&M University, Benham is closely connected to the next generation entering the construction industry.

“My students are passionate about building,” he says. “They want to work with technology they use every day — phones, tablets, virtual reality. They insist it be in their work environment as well.” ▼



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# 7 Reasons to Put Golden Handcuffs on Your Best Employees

**CREATE A SOLID PLAN TO ENCOURAGE YOUR TOP EMPLOYEES TO STICK AROUND; BUT TREAD LIGHTLY WHEN IT COMES TO GIVING UP EQUITY IN THE COMPANY**

BY PATRICK UNGASHICK

**H**igh-performing employees are often the most valuable assets in a company. Customers, products, technology, inventory and many other assets come and go. A company that cannot hold on to its best employees, however, likely cannot grow.

Yet few companies take any formal steps to minimize the risk of losing top employees. Sure, you pay your best employees well and presumably have a great culture and work environment. But your competitors can offer the same incentives. To truly hold on to your best people, consider tying them to your company with golden handcuffs.

“Golden handcuffs” is a generic term describing a wide range of programs that share one core purpose: to incentivize top employees to stay with your company for the long term. There are many types of programs: incentive compensation plans, stock options, phantom stock, stock appreciation rights, synthetic equity programs, share bonus plans and more.

Making things even more confusing, each of these types of programs has variations in its design and operation. This complexity makes it difficult to approach these programs and select a plan design that best fits the situation. However, learning about golden handcuffs programs is worth the effort. They offer a unique combination of advantages and benefits that can help your company reduce risk, propel growth and maximize value at exit.

Companies that design and implement effective golden handcuff plans can accomplish the following seven important outcomes:

## **1. REDUCE THE RISK OF TOP EMPLOYEES LEAVING PREMATURELY OR UNEXPECTEDLY.**

Golden handcuff plans offer a future compensation payout that’s partially or completely forfeited if the employee terminates employment prior to an agreed-upon date (such as retirement age) or an event (such as the sale of the company). To create the desired impact, the potential compensation amount must be significant — typically several times the employee’s current annual income or more.

## **2. INCENT TOP EMPLOYEES TO HELP CREATE LONG-TERM, SUSTAINED COMPANY GROWTH.**

The potential for a future compensation payout orients the employee toward achieving the company’s business goals, especially if the payout amount is tied to long-term company growth.

## **3. CREATE INCENTIVES FOR TOP JOB CANDIDATES TO JOIN YOUR COMPANY.**

A golden handcuffs program offered to a desired recruit — in addition to

competitive pay and compelling career opportunities — can be the tipping point that convinces an important hire to join your business.

## **4. PROTECT THE COMPANY AGAINST THE RISK OF LOSING CUSTOMERS, OTHER EMPLOYEES OR TRADE SECRETS SHOULD AN EMPLOYEE WHO HAS THOSE RELATIONSHIPS AND INFORMATION LEAVE.**

Golden handcuff plans should include a legal agreement that commonly includes provisions such as noncompete, nonsolicitation and nondisclosure language wherever possible.

## **5. PROVIDE A WAY FOR BUSINESS OWNERS TO CREATE ALIGNMENT WITH NONOWNER TOP EMPLOYEES AROUND CREATING BUSINESS VALUE PRIOR TO EXIT.**

Many business owners are understandably concerned about discussing their future exit plans with their top employees who don’t have an equity stake in the company. In those situations, the owner’s future exit is a potential wealth-building event for him or her, but it presents career uncertainty and risk to the nonowner employee. Golden handcuff plans build a bridge between owner and nonowner top employees by including those employees in a wealth creation opportunity at exit and providing for their career stability.

## **6. ENHANCE BUSINESS VALUE AT COMPANY EXIT, PARTICULARLY UPON THE SALE OF THE BUSINESS.**

Your future business buyer will often see greater value in your company if a golden handcuffs plan has been effectively implemented, particularly when the plan includes “stay bonuses” that incent top employees to stay with the company after a sale, typically for one to two years.

## **7. THANK TOP EMPLOYEES FOR THEIR SERVICE WITH THE COMPANY.**

Most business owners want to thank high-performing employees after they have given years of effective service to the organization. While golden handcuffs plans are primarily intended to incent and reward top employees, they can perform double duty by providing lucrative compensation awards in the future to the very same people you likely will want to acknowledge.

Many business owners and advisors assume a golden handcuffs plan requires sharing actual ownership interest with the employees who will be included in the plan. This is not always true. Some programs such as stock



Patrick Ungashick



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## GOLDEN HANDCUFF PLANS BUILD A BRIDGE BETWEEN OWNER AND NON- OWNER TOP EMPLOYEES BY INCLUDING THOSE EMPLOYEES IN A WEALTH CREATION OPPORTUNITY AT EXIT AND PROVIDING FOR THEIR CAREER STABILITY.

option plans include the potential for actual ownership sharing. Other plan types such as phantom stock or executive bonus plans involve compensation and do not share actual equity. Sharing ownership with employees presents significant risks and downsides. Whenever possible, consider a golden handcuffs plan that pays out compensation to the employee rather than shares actual company equity.

Business owners and leaders need effective tools to motivate top employees, retain them for the long term and drive company growth. Few tools have the potential to address all of these needs simultaneously like a well-designed golden handcuffs program. A little research here can go a long way to securing a bright future for your employees and your company.

### ABOUT THE AUTHOR

Patrick Ungashick is the CEO of NAVIX Consultants and author of A Tale of Two Owners: Achieving Exit Success Between Business Co-Owners. For more information, visit [www.navixconsultants.com](http://www.navixconsultants.com). ▼



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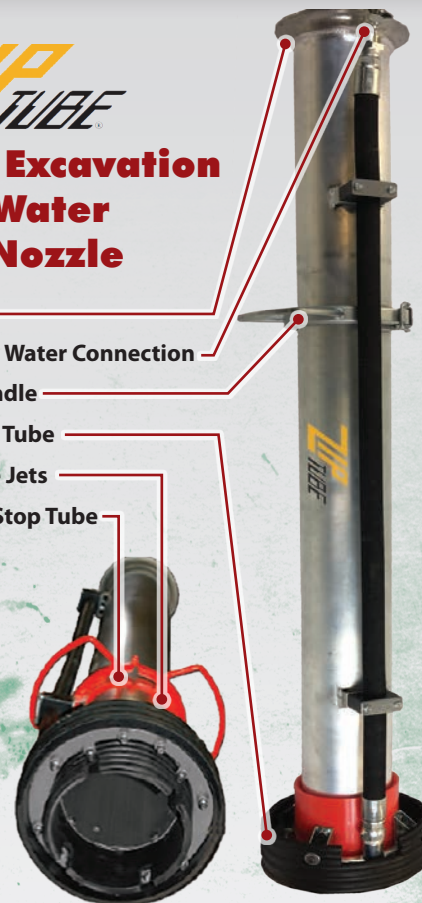
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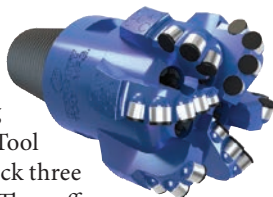
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### ProAction Fluids ProVis XP

ProVis XP from ProAction Fluids can help improve viscosity, gel strength or filtration control of a ProAction or bentonite-based mix, using a 100% silica-free, biopolymer blend. Compatible with all major brands of bentonite, in most cases



just 5 pounds of the product will increase gel strength by 60% (when added to 100 pounds of a 2% bentonite mix). This lowered plastic viscosity means easier flow while maintaining carrying capacity. While bentonite loads exceeding 200 pounds can be effective in certain high-density soil conditions, this high percentage of bentonite along with increased viscosity can have several negative effects, including increased likelihood of frac out due to increased annular pressures, decreased mud pump efficiency and increased rotational and pull back pressures. The product modifies gel strength and filtration control with minimal increase in overall fluid system viscosity. It can be poured directly into a tank or through the hopper.

318-865-8568; [www.proactionfluids.com](http://www.proactionfluids.com)

### Wyo-Ben UNI-DRILL

UNI-DRILL from Wyo-Ben is a fast-mixing, liquid polyanionic cellulose polymer designed for all types of water-based drilling fluids. It is nonfermenting and works well with even the most difficult water quality. While its primary function is fluid loss control, it offers suitable shale inhibition and lubricity, making it a true total mud conditioner. It has seen use in all types of drilling applications where changing soil conditions present challenges to drilling contractors. Its properties coupled with simple mixing instructions allow for minimizing or the elimination of other additive inventories. Since it is highly concentrated, users can always do more with less, saving money in the long run.

800-548-7055; [www.wyoben.com](http://www.wyoben.com)



## HDD

### Akkerman 1525B/D

The 1525B/D hydraulically driven high-pressure pump from Akkerman is used for effective pilot tube and other pipe jacking operations particularly on larger-diameter bores. The large, 525-gallon tank offers in-tank agitation for continuous mixing, independent agitation, or agitate and pump to maintain optimal mud viscosity. It displaces a Marsh Funnel viscosity as high as 50 seconds with pump flow up to 10 gpm at 2,500 psi. It is powered by a 20.7 hp diesel engine with an 8-gallon fuel tank. Like its 325-gallon counterparts, it is simple, safe and reliable. There are few moving parts, no belts and a shrouded agitator. The stepped platform makes it easy for operators to access and fill the tank.

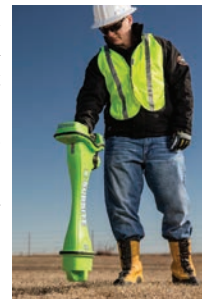
800-533-0386; [www.akkerman.com](http://www.akkerman.com)



### Subsite Electronics TK RECON Series

The TK RECON Series HDD guidance system from Subsite Electronics offers all the benefits of the original TK Series built on an advanced-technology base that allows the company to incorporate several performance-enhancing features now and to accept upgraded features in the future. With more battery choices than the competition and improved radio performance with increased interference immunity and faster information transfer, the series is designed to enable operators to be more productive and efficient on every job site.

800-846-2713; [www.subsite.com](http://www.subsite.com)



## Hydroexcavation Equipment

### Ditch Witch HX30G

The HX30G vacuum excavator from Ditch Witch boasts high-profile power in a low-profile design that eases navigation in congested and height-restricted areas. It is powered by a 31 hp Vanguard





gas engine for optimal suction power and water pressure. To boost efficiency on any job, it comes with a powerful 542 cfm blower, 3,000 psi water pressure and 4.2 gpm water flow. It is offered with the choice of a 500- or 800-gallon tank for a variety of job requirements. The machine is available in a variety of trailer configurations, including the VT9 trailer that, when equipped with the 500-gallon tank, does not require a CDL to transport.

**800-654-6481; [www.ditchwitch.com](http://www.ditchwitch.com)**

### Dynablast Pratissoli HY-PACK KF28ASPF-P84CC

The Pratissoli HY-PACK KF28ASPF-P84CC water pump package from Dynablast offers 24 gpm at 2,900 psi at 1,000 rpm. It has a T14 female spline shaft input and SAE C 2/4 bolt flange with Interpump 84CC FOX piston hydraulic motor. It comes with a 420 forged stainless steel nickel-coated manifold, stainless steel valve cages for increased valve life, a self-lubricating design with no oiler kit or weekly oiling required, symmetrical crankcase with easy-to-reverse shaft, internal fins on the aluminum crankcase that provide cooling to lower oil temperature, a tapered roller bearing for improved lateral loading, two-bore ceramic plungers, and a thicker ceramic on the water end to prevent thermal shock.

**905-867-4642; [www.dynablast.ca](http://www.dynablast.ca)**



### Easy Kleen Pressure Systems Wildcat Heaters

Wildcat Heaters high-pressure, oil-fired hot-water/steam heaters and hydraulic pump systems from Easy Kleen Pressure Systems are designed for reliability and efficiency and are installation-ready for vacuum trucks and hydroexcavators. A full range of heater options includes dry steam, redundancy packages, Schedule 80 and 160 stainless steel or A53 boiler pipe, fine-tuned temperature and flow-control systems. All coils are manufactured in-house, with CRN boiler-approved coils now available. Heaters can be designed for mounting in a cabinet or supplied as a completed cabinet unit. They are CSA and ETL approved. Hydraulic pumping systems are available.

**800-315-5533; [www.easycleen.com](http://www.easycleen.com)**



### GapVax HV33

Designed to safely transport water and debris in urban areas, the GapVax HV33 is shorter, smaller and more compact than its predecessor. It is 30 feet long overall on a medium-duty chassis and includes a 600-gallon water tank, 6-cubic-yard debris body, 6- or 8-inch top-mounted telescoping boom with a 14- to 17.5-foot reach, 4,000 cfm power and an inverted, full-opening tailgate.

**888-442-7829; [www.gapvax.com](http://www.gapvax.com)**



### HotJet USA

#### Vac 'n Jet Series

The HotJet USA Vac 'n Jet Series of vacuum trailer jetters are rugged and compact; are engineered to haul equipment and spoils loads; can clean valve boxes and storm drains; and can hydroexcavate and/or clean drainlines and sewer lines. They offer hot- and/or cold-water operation with a choice of engine options ranging from 13 to 66 hp and gas or diesel operation. They are equipped with premium triplex pumps, a 500-gallon spoils tank, 200-gallon water tank, Gardner Denver vac/blowers, 4-ton hydraulic dump and centri-clean filter system. They can also be custom-engineered and designed to meet specifications.

**800-624-8186; [www.hotjetusa.com](http://www.hotjetusa.com)**



### Hydra-Flex Machete

The Machete hydroexcavating nozzle from Hydra-Flex channels water in an oscillating motion, creating a smaller spray angle. This in turn provides a direct stream with a more forceful impact. This premium penetration will allow faster digging and more precise trenching capabilities. Its durable, replaceable cover allows for instant changeability while increasing the overall nozzle's life span. It is available in three sizes, with operating pressure ranges from 1,000 to 3,200 psi with a heat rating of 180 degrees F. Generating more power, it will last in excess of 500 hours, improving digging times and replacement costs.

**952-808-3640; [www.hydraflexinc.com](http://www.hydraflexinc.com)**



### Rival Hydrovac T7 Tandem

The T7 Tandem hydrovac from Rival Hydrovac was designed primarily to be loaded with debris and driven within legislated road limits with most types of debris on board. The unit comes standard with a scale that reads real-time weights both in the cab and on the wireless remote to confirm weights prior to travel. It is operator-friendly, and the operating system is engaged through one PTO switch. The remainder of the operation occurs from the rear panel or the wireless remote. The components are high performance, and the unit will dig at levels competitive to large units, according to the maker.

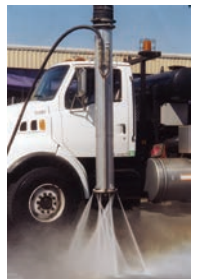
**403-550-7997; [www.rivalhydrovac.com](http://www.rivalhydrovac.com)**



### Soil Surgeon hydroexcavating tool

The Soil Surgeon hydroexcavating tool fits any sewer combination truck equipped with a telescoping 6- or 8-inch boom. The tool has a 1-inch water connection. The operator controls water pressure and power through truck controls. It has a 6-foot Tuff Tube with handles to guide the unit down for potholing or side to side for trenching. Six jets boring inward cut the soil, while six boring outward bring the tube down.

**949-363-1401; [www.soilsurgeoninc.com](http://www.soilsurgeoninc.com)**



### Super Products Mud Dog

The Mud Dog hydroexcavator from Super Products is designed for operator convenience and consistent performance in the harshest environments. It is available with an air excavation option, which allows the operator to always choose the best application, water or air, for the job. It is available with 12- or 16-yard debris capacity. Each model comes standard with tilt ejection unloading, which provides a safe dumping solution, and is equipped with a rear-mounted boom that can reach 27 feet and has 335-degree rotation.

**800-837-9711; [www.superproductsllc.com](http://www.superproductsllc.com)**



### Tornado Global Hydrovacs F4 ECOLITE

The F4 ECOLITE from Tornado Global Hydrovacs has a 12-cubic-yard mud tank and holds 1,550 gallons of freshwater. The unit is more than 7,000 pounds lighter than the company's older models and offers more than double the payload. The boom has a 342-degree rotation and a 26-foot reach. The smaller F3 ECOLITE is a 10-cubic-yard, 1,250-gallon tandem-axle unit that more than doubles older payload capacities. It features an 8-inch boom and 3,800 cfm blower.

**877-340-8141; [www.tornadotrucks.com](http://www.tornadotrucks.com)**



(continued)



## Transway Systems Terra-Vex HV38

The Transway Systems Terra-Vex HV38 has a 12-yard debris tank with onboard scales for efficient hauling and off-loading, complete with a 26-foot-by-8-inch telescopic boom. It has a one-touch-operated hydraulic half-door with a 3,800 cfm at 27 inches Hg hydraulically driven blower. Water pressure is achieved with a hydraulically driven triplex pump, delivering 10 gpm at 3,600 psi from a 1,000-gallon HDPE baffled water tank. The water is heated with a 420,000 Btu diesel-fired burner for cold-weather operation.

**800-263-4508; [www.transwaysystems.com](http://www.transwaysystems.com)**



## TRUVAC by Vector Paradigm

Designed for utility, municipal and contractor customers involved in the installation, maintenance and repair of underground water, sewer, gas, electric and telecommunications lines, the Paradigm sub-compact vacuum excavator from TRUVAC by Vector can dig holes with water or air; vacuum, contain and dispose of drill mud; power pneumatic, hydraulic or electrical tools; and provide transport and storage of replacement parts, equipment and tools. The truck's Park-n-Dig design minimizes time between job site arrival and excavation, including the ability to dig up to 6 feet without additional pipe and hose. The air compressor powers utility tools such as jackhammers and tampers. The truck offers tool storage space, including a long-handle toolbox. The truck can tow up to 20,000 pounds.

**800-627-3171; [www.truvac.com](http://www.truvac.com)**



## Vac-Con X-Cavator

The X-Cavator from Vac-Con is designed to be powerful, durable, efficient and easy to operate. It features a hydrostatic drive using the chassis engine for vacuum, eliminating the need for PTO, clutch and gearbox operation. It is available with water systems up to 4,000 psi and a mobile, wireless remote-control system for chassis engine revolutions per minute, boom, automatic vacuum breaker, dump controls and hydraulic door locks from up to a half-mile away. The boom rotates 270 degrees.

**904-284-4200; [www.vac-con.com](http://www.vac-con.com)**



## Westech Vac Systems Wolf

The Wolf noncode hydrovac truck from Westech Vac Systems is suitable for oil and gas customers working in extreme conditions. The debris body is positioned on the optimal chassis location to ensure the payload is proportionately distributed across all axles, maximizing legal payload for customers and improving operational efficiency. The side-mounted water tanks reduce the weight by more than 40%, lowering the overall cost of the truck. The 1,500-gallon capacity ensures ample water for large or remote jobs. A top-mounted, no-touch water fill system is easily accessible from the passenger side of the vehicle. The debris body is lifted using a telescoping, dual-acting hydraulic cylinder capable of 36,000 pounds of force. When fully extended,



the debris body exceeds a 45-degree dump angle for fast and efficient off-loading. To help the off-loading process, a heavy-duty, hydraulically powered tank vibrator is mounted to the belly of the debris body.

**780-955-3030; [www.westechvac.com](http://www.westechvac.com)**

## Mud/Slurry Pump

### Gorman-Rupp engine-driven pump

Engine-driven pumps from Gorman-Rupp can be used to supply large quantities of water for hydraulic fracturing operations and centrifugal pumps used on blending and hydration rigs. Solids-handling self-priming trash pumps can be used for drilling rig cellar pumpout, transferring drilling mud slurries, frac tank and reserve pit water transfer, tank loading, and closed-loop recirculation.

**419-755-1011; [www.grpumps.com](http://www.grpumps.com)**



## Pipe Bursting

### HammerHead Trenchless HydroBurst 100XT

Pipe bursting contractors can have 99 tons of pulling force for their sewer line, waterline and gas line replacement jobs from the powerful, compact HydroBurst 100XT static pipe bursting system from HammerHead Trenchless. Offering a tethered remote control, the streamlined unit pays out rod quickly due to its automated rod spinning assembly and the design of its hydraulic cylinders. The unit weighs just 3,200 pounds and is only 39 inches high by 30 inches wide.

**800-331-6653; [www.hammerheadtrenchless.com](http://www.hammerheadtrenchless.com)**



### Pow-R Mole Trenchless Solutions PD-33M

The PD-33M pipe bursting machine from Pow-R Mole Trenchless Solutions is designed to replace existing underground pipes 2 to 6 inches in diameter. Its nonslip, cylinder-activated jaws prevent cable damage while providing 60,000 pounds of pulling force. It offers a cost-effective alternative to open-cut excavation, reducing customer disruption and increasing company profits. The process replaces the existing pipe with a fused HDPE pipe, which eliminates all joints, and allows the operator to pull through bends such as 45-degree fittings. This system is modular and can be easily disassembled and reassembled for man-hole and basement applications. With a compact design and very small footprint of only 20 by 20 inches, this unit can be used in tight locations.

**800-344-6653; [www.powrmole.com](http://www.powrmole.com)**



### Spartan Tool UnderTaker

With 30 tons of lateral pulling force, the UnderTaker pipe bursting system from Spartan Tool employs a hydraulically powered cylinder that pulls a bursting head through the existing line while simultaneously replacing it with seamless, high-flow, code-approved HDPE pipe. With a small hole at each end of the run, the user can pull pipe from the building to the main, accommodate bends in the pipe, increase diameter and lay new line at a rate of up to 5 feet per minute. The system allows replacement of 2- to 6-inch pipe with up to three 45-degree bends in the pipe. It can also upsize from 4- to 6-inch pipes. When assembled, the unit weighs 210 pounds, but it disassembles into four separate components for easy transport, with no part weighing more than 70 pounds.

**800-435-3866; [www.spartantool.com](http://www.spartantool.com)** ▼





## THE LATEST:

# News

### Signature Equipment joins Vac-Con distributor network

Vac-Con announced that Signature Equipment in Salt Lake City has joined its distribution network. Signature Equipment has been in operation since 1994 when founder Reed Prows opened its doors to serve the Utah markets. In 2017, the company relocated to a larger facility to accommodate the growing demand on its workforce and staff. The Vac-Con product line will be the first vacuum truck portfolio that Signature Equipment has carried. Its other product offerings include refuse collectors, utility bodies, snowplows, salt spreaders and more.

### Applied Felts acquires FerraTex Services

Applied Felts entered into binding agreements to acquire the business and assets of New Jersey-based FerraTex Services. The acquisition includes the complete transfer of all property, equipment, intellectual property and expertise.

According to a release from Applied Felts, Alex Johnson, president, says, "FerraTex Services has built a very successful preimpreg-

nated CIPP liner business by leveraging its extensive experience in CIPP logistics and installation. Our close collaboration since 2016 has enabled us to witness firsthand FerraTex's expertise and commitment to operational excellence. While 'business as usual' will be our operational guiding principle for FerraTex going forward, we are excited about what the future holds for this partnership, particularly our ability to enhance the offering to customers through the group's manufacturing, R&D and global experience as the CIPP industry continues to expand."

### Kohler Power Systems expands distribution to Kinsley Power Systems

Kohler Power Systems announced that it is awarding distribution rights in New York City, Long Island, New Jersey and metro Philadelphia to Kinsley Power Systems. The 55-year-old distributorship has serviced and rented power systems in this area for years and will now immediately begin selling Kohler products. The company will continue to provide Kohler sales, service and rentals in New England and upstate New York. ▼

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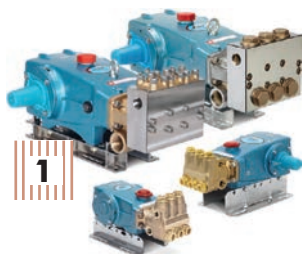
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# THE LATEST: Products



1



2



3

## 1. Cat Pumps hydroexcavating pumps

For over 50 years, Cat Pumps has been manufacturing long-lasting and low-maintenance triplex pumps. With dedication to zero-defect manufacturing, ease of service and availability from stock, Cat Pumps designs and builds high-pressure pumps and systems to the highest quality standards for the hydroexcavation industry. Popular models include the Model 3560 with 25 gpm, 3,000 psi or 20 gpm, 4,000 psi; Model 3570 with 30 gpm, 3,000 psi; Model 660 with 10 gpm, 3,000 psi; and Model 56 with 5.5 gpm, 3,500 psi or 8 gpm, 2,500 psi. **763-780-5440; [www.catpumps.com](http://www.catpumps.com)**

## 2. Case Construction Equipment CX350D LR excavator

Case Construction Equipment's full-size CX350D LR (long-reach) excavator provides increased operating performance in applications that require long-distance bucket reach and precision. The new model features an elongated boom and arm and additional counterweight for increased digging capabilities in deep or long-distance digging applications while providing the same improved responsiveness and control of the D Series. With an operating weight of 88,200 pounds, the CX350D LR features a

268 hp Tier 4 Final diesel engine and up to 24,500 ft-lb of bucket digging force. The extended arm and boom provide a maximum dig radius of 61 feet 3 inches and a maximum dig depth of 46 feet 3 inches. **866-542-2736; [www.casece.com](http://www.casece.com)**

## 3. VMAC Multifunction Power System

The VMAC Multifunction Power System's 5-in-1 components consist of a rotary screw air compressor, generator, welder, battery booster/charger and cold climate kit. It is powered by a Honda iGX800 V-Twin gas engine, provides up to 40 cfm at 100 psi of compressed air and 8 kW of electric power at 100% duty cycle, and up to 250A of welding capability. The system allows operators to use just one function or all five simultaneously. The system reduces idling of truck engines at the job site, decreasing noise, fuel costs, and operating hours and engine wear on the vehicle. **800-738-8622; [www.vmacair.com](http://www.vmacair.com)** ▼

## This Issue's Feature:

### Partnership leads to new tracked hydroexcavator

BY CRAIG MANDLI

When a hydroexcavation contractor needs to perform work in hard-to-reach or environmentally sensitive areas such as swamps or marshes, it is often difficult to use large trucks. Mats can sometimes be placed down for the trucks to drive over to protect the environment from any damage the heavy machines may cause. Those mats are heavy, bulky and expensive, though, and they take additional time to utilize.

However, through a collaborative effort with Ledwell & Son, PRINOTH and Pipeline & Utility Rental Equipment (PURE), the pipeline and utility industries have a new tool to make digging easier. The **TrakVac** is a **compact hydroexcavator** built by **Ledwell** and mounted on a PRINOTH crawler carrier buggy. It combines the agility of a crawler carrier to access hard-to-reach areas with low-impact vacuum technology where traditional digging is more difficult, especially close to underground utilities and pipelines. The idea was getting a more compact hydroexcavation unit into some of the harder-to-reach or environmentally sensitive areas of pipeline construction.

"The total package of hydroexcavation with the ability to 'Go Anywhere' (which is PRINOTH's slogan) makes the TrakVac a true initiative and an answer to the growing demands of the pipeline industry," says Gary Gathright, Ledwell engineer.

The vacuum module is self-contained while mounted on the PRINOTH PANTHER crawler. The prototype utilizes the PANTHER T12 model but can be



sized to be installed on several different models. The 1,600 cfm vacuum blower unit works similarly to Ledwell's larger blower vacuum trucks with the addition of a 7 gpm, 3,000 psi, high-pressure water system and 1,600 cfm vacuum blower. It has a gross vehicle weight rating of 55,000 pounds and a ground pressure of only 6 psi when loaded.

"Since so many areas don't allow mechanical digging, the hydroexcavation option gives crews on pipelines, construction sites and other hard-to-reach locations maximum flexibility," Gathright says. "Using the TrakVac, they can exca-vate footings, expose hidden utilities and effect repairs to a buried pipeline."

The TrakVac is sold and rented through PURE, a partner company of Vacuum Truck Rentals, which played a key role in the concept and development of the TrakVac along with Ledwell and PRINOTH.

"We were approached by PURE to develop the TrakVac in partnership with PRINOTH," Gathright says. "Each of us brought unique perspectives from fabrication to vacuum equipment to crawler carriers that enabled our team to provide a complete solution."

**866-656-7873; [www.purerentalsllc.com](http://www.purerentalsllc.com)**



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## CLASSIFIEDS

### EQUIPMENT & TOOLS

NEW 2020 MC1510 GapVax sewer cleaner: JD Brule Equipment, Located in Greely, Ontario, Canada, is selling a GapVax sewer cleaner on a 2020 Western Star 4700 chassis and is available immediately. The unit has 10-cubic-yard debris tank, holds 1,500 US gallons of water, standard 4,500cfm 18" Hg blower (8.6 hours) and Giant water pump. Please contact Adam Russell if you are interested. 613-293-1965, Ontario (C03)

2001 Vactor 2112HXY, dual fan system vacuum, 10gpm at 2500 psi. 12-yard debris box, 1,000-gallon water tank. 8-speed manual, 3126 CAT engine. 8" extendable boom, 86,000 miles (new engine in 2018), 10,774 hours. \$50,000. 920-734-4707, WI (C03)

2011 Vac-Con V390LHA combination cleaning truck. Low miles, great condition. 1998 Vactor 2110-36PD ex-city owned, low miles. See more photos and details of these units at [www.empireequip.com](http://www.empireequip.com). Contact Craig at 714-639-8352. (CBM)

2014 Freightliner 114SD with a VacAll AJV1215; 12-yard debris body, 1,500-gallon water, combination vacuum/jetting unit. (Stock# 052R). [www.VacuumSalesInc.com](http://www.VacuumSalesInc.com) (888) VAC-UNIT (822-8648) (CBM)

2005 Vactor combination sewer vacuum and high-pressure jet with positive-displacement blower and 15-cubic-yard debris hopper capacity, mounted on a Sterling chassis. 80gpm/2,000psi, 1,500-gallon water tank system. 600-foot hose reel capacity. \$85,000. 406-447-5050, MT (C03)

### RENTALS

Liquid vacs, wet/dry industrial vacs, combination jetter/vacs, truck & trailer mounted jetters. All available for daily, weekly, monthly, and yearly rentals. **VSI Rentals, LLC, (888) VAC-UNIT (822-8648) [www.vsi-rentalsllc.com](http://www.vsi-rentalsllc.com)** (PBM)

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## Happenings

### CALENDAR

**March 10-14**

**CONEXPO-CON/AGG**, Las Vegas Convention Center, Las Vegas. Visit [www.conexpoconagg.com](http://www.conexpoconagg.com)

**March 24-26**

**Common Ground Alliance (CGA) Excavation Safety Conference & Expo**, Palm Springs Convention Center, Palm Springs, California. Visit [www.cgaconference.com](http://www.cgaconference.com)

**March 26-28**

**Mid-America Trucking Show**, Kentucky Expo Center, Louisville, Kentucky. Visit [www.truckingshow.com](http://www.truckingshow.com)

**April 5-9**

**North American Society for Trenchless Technology (NASTT) No-Dig Show**, Colorado Convention Center, Denver. Visit [www.nodigshow.com](http://www.nodigshow.com)

**May 15-21**

**ITA-AITES General Assembly and World Tunnel Congress (WTC)**, Kuala Lumpur Convention Centre, Malaysia. Visit [www.wtc2020.my](http://www.wtc2020.my)

**May 19-21**

**National Utility Contractors Association (NUCA) Washington Summit**, Holiday Inn Washington Capitol, Washington, D.C. Visit [www.nuca.com/summit](http://www.nuca.com/summit)

**May 31-June 3**

**Electric Utility Fleet Managers Conference (EUFMC)**, Williamsburg Lodge and Conference Center, Williamsburg, Virginia. Visit [www.eufmc.com](http://www.eufmc.com)

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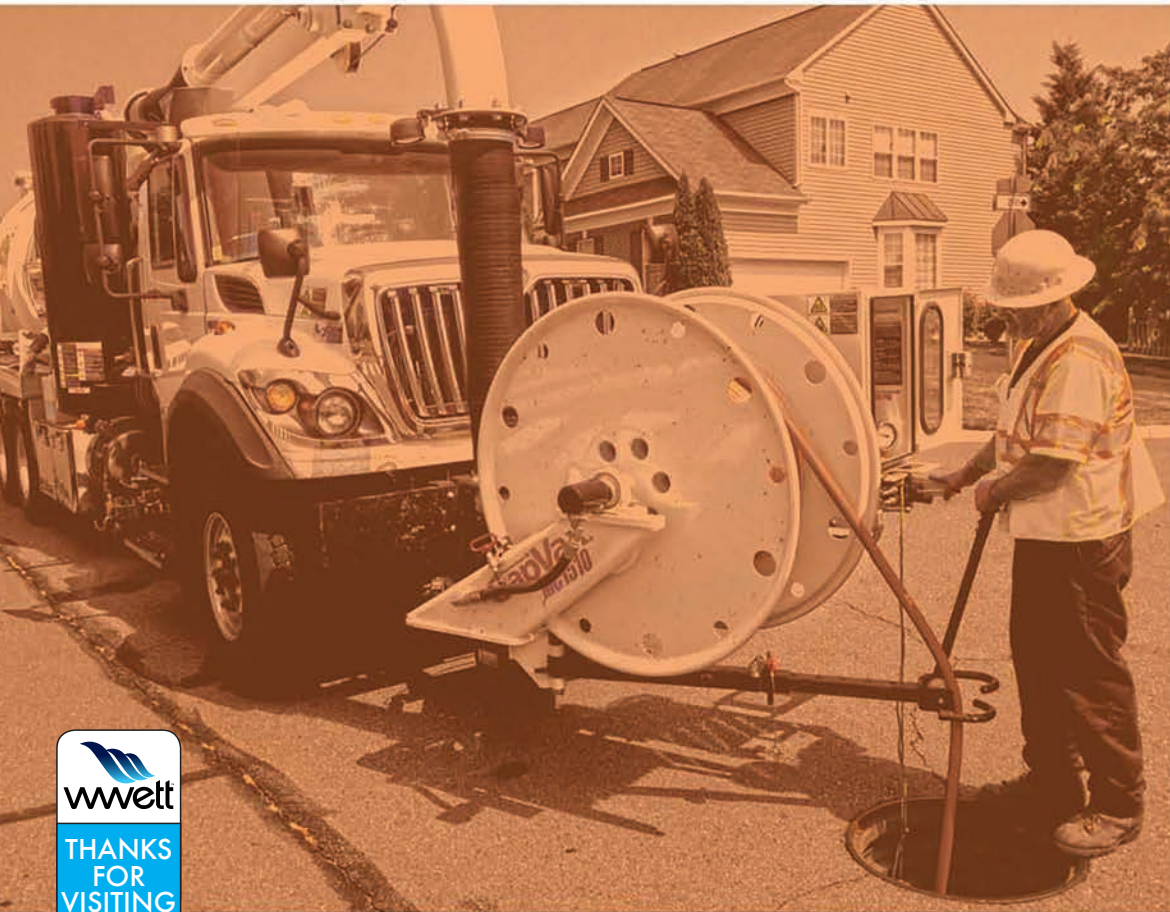
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