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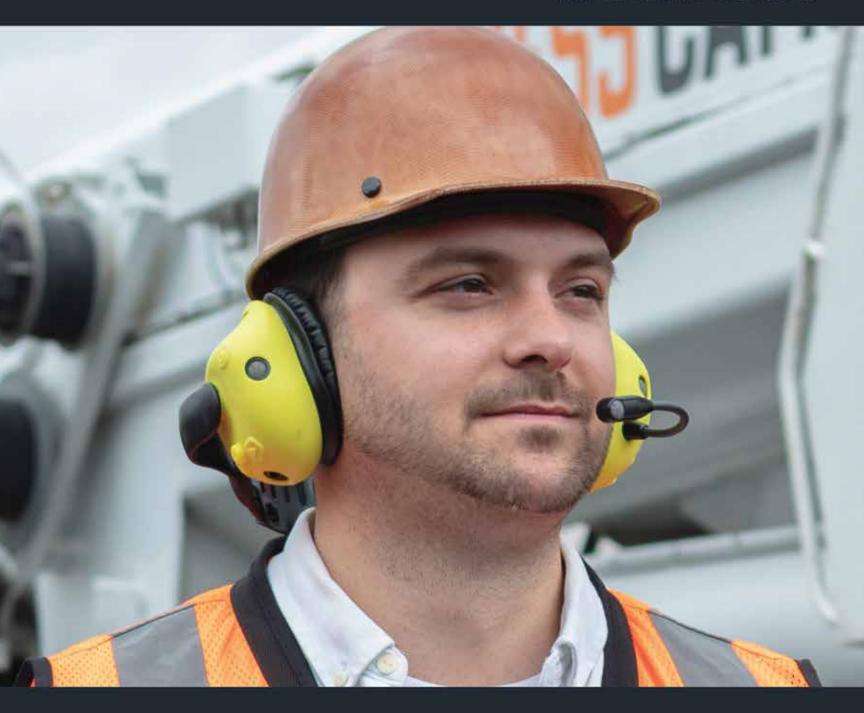
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ON THE COVER: Carmon Geffs (left) and Tom Ross from Hurricane Hydrovac use their Rival hydrovac unit at a new home construction subdivision in Windsor, Ontario. Hurricane Hydrovac, based in Essex, Ontario, was digging a trench to locate damaged utilities in need of repair. (Photography by Eric Seals)

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<u>SAFETY</u> Staying Hydrated on the Job Site

In physically demanding jobs, hydration is essential to not only worker productivity but also safety. This is especially true in the summer months when the heat index in some places climbs above 100 degrees F. Here are some guidelines to keep in mind for yourself and your workers during these warmweather months.

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Growing Pains

WHICH METHOD OF GROWING YOUR COMPANY BEST SUITS YOU? THERE ARE MANY THINGS TO LOOK AT AND EXPLORE WHEN MAKING THE DECISION TO EXPAND.

BY CORY DELLENBACH, EDITOR

ast month I talked in my column about starting a company and the risks associated with that. This month I'd like to talk a little about expansion. What happens if you already own a company and want to grow it? What options do you have?

There are several ways you can grow your company. The two that we see the most in this industry are either by adding services to attract new customers, or by way of acquisitions — like buying out a competitor in your area.

One way of doing it isn't better than the other, it's just a matter of how you want to go about growth.

EXPANDING SERVICES

Expansion of services is probably the easier of the two options. You're using your current crew to offer additional services than you already offer. Maybe it's something as simple as incorporating ground-penetrating radar services into your vacuum excavation company or adding a new vacuum truck to handle septic pumping or industrial pumping.

Hopefully, if you are growing by adding services, you already have someone on staff that is familiar with the work and they can offer their insight or help get those services rolling without too many hiccups.

Through this method of expansion, you could grow as slow or as fast as you want. If you feel like it's a service that is going to take off, be ready to hire more staff to ensure it can be done without letting your current services suffer.

The other advantage of growing organically like this is the ability to add equipment as slow or as fast as you'd like. You could add just one new truck until that new service takes off and then add more tools that would help you do it easier. Being able to add equipment as needed also helps with your cash flow and ensuring the company isn't being put in too much of risk if the new services don't pan out.

ADDING THROUGH ACQUISITION

The other method of growth we often see is through acquisition of other companies. It happened this way for Shawn O'Keefe and his company, profiled in this issue.

O'Keefe and business partner Max De Angelis, after years of working in the construction field, teamed up to buy Heaton Sanitation and form Hurricane Hydrovac.

When buying out another company, some of the pros include eliminating a competitor and giving your company an immediate core group of experienced operators right away. Some disadvantages might include a much larger inventory of equipment to keep track of and a way to allow all sides of the company to communicate with one another — dispatch system, payroll paperwork, etc.

Having that experienced crew right away helps to alleviate the stress of trying to find those crew members you would need if you grow by adding the services. It means you can continue to the work they have been doing with little to no downtime.

WHAT WAYS HAVE YOU GROWN?

What ways have you grown your company? Is there a way you would prefer to grow it? Email me at editor@ digdifferent.com and tell me your story.

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> Part of Hurricane Hydrovac's equipment lineup also includes a Vactor 2100 Plus used for sewer flushing and hydroexcavation, and a cube van outfitted as a CCTV sewer inspection truck. The company, based in Essex, Ontario, offers hydroexcavation, sewer cleaning and inspection work, as well as septic services throughout southern Ontario.

STOPPING THIS STORM

STRATEGIC BUSINESS MOVES HELP CANADIAN COMPANY STAY COMPETITIVE IN A MARKET FLOODED WITH OTHER HYDROVACS

STORY: KEN WYSOCKY PHOTOS: ERIC SEALS



HOTO COURTESY OF HURRICANE HYDROVAC

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Every day, more than two dozen Hurricane Hydrovac hydroexcavation and dry- and wet-vacuum trucks fan out across southern Ontario to expose underground utility lines, dig trenches, perform industrial cleaning, pump out septic tanks and flush municipal sewer lines.

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Offering this broad range of services is a chief reason why the company — based in Essex, Ontario, about 15 miles southeast of downtown Detroit — has grown dramatically since its inception in 2015.

"We do all kinds of vacuum work," says Shawn O'Keefe, who co-owns the company with business partner Max De Angelis. "If you have a job that requires a vac truck, we can do it. We're licensed to carry anything.

"A lot of guys in this business just dig holes," he continues. "But we do everything, from handling emergency spills and sewer flushing to industrial cleaning and railroad work."

Strategic acquisitions also have played a key role in the company's growth. In fact, the biggest acquisition the 2015 purchase of Heaton Sanitation, which cleans grease traps and septic and holding tanks — essentially created Hurricane Hydrovac. And in 2016, the company acquired Learningtonbased Sewer Maintenance Services, which cleans and inspects municipal sewer lines and does trenchless pipeline rehabilitation work. The company was rebranded as Hurricane SMS and operates as a separate company from Hurricane Hydrovac.

Today, the company's primary customers are gas and electric utilities, telecommunications companies, municipalities, general contractors that do roadwork and heavy construction, O'Keefe says.

WEALTH OF EXPERIENCE

O'Keefe, age 49, has deep roots in the excavation world. While attending high school and earning an engineering degree at the University of Windsor, he worked for his father's company, Michael O'Keefe Ltd., which did excavating, septic-tank pumping and industrial cleaning.

"I was running heavy equipment at age 15," he recalls.

Hurricane Hydrovac Ltd., Essex, Ontario, Canada

OWNERS: Shawn O'Keefe and Max De Angelis FOUNDED: 2015

EMPLOYEES: 85

SERVICES: Hydroexcavation, sewer cleaning and inspections, septic and liquid-waste removal

SERVICE AREA: Southern Ontario

WEBSITE: www.hurricanehydrovac.ca



The team at Hurricane Hydrovac, includes from left, Mike Talbot, operations manager; Shawn O'Keefe, president; Andrew Beaudoin, liquid waste dispatcher; Steve Hamza, fleet manager; Carmon Geffs, hydrovac operator; Tom Ross, hydrovac operator; Kaleigh Hayes, office manager; and Heather Moric, administrative assistant.

In 1996, after graduating from the university, O'Keefe started working for his father full time. Around 2009, he persuaded his father to add hydroexcavating to the company's services. And in 2015, O'Keefe and De Angelis, whom O'Keefe knew after years of working together in the construction field, teamed up to buy Heaton Sanitation and form Hurricane Hydrovac.

Heaton Sanitation is still in business and focuses mostly on cleaning septic

"A LOT OF GUYS IN THIS BUSINESS JUST DIG HOLES. BUT WE DO EVERYTHING, FROM HANDLING EMERGENCY SPILLS AND SEWER FLUSHING TO INDUSTRIAL CLEANING AND

RAILROAD WORK." Shawn O'Keefe

> provided two big advantages: It eliminated a competitor and gave Hurricane Hydrovac a core group of veteran, experienced operators right away.

> "By acquiring Heaton, we started out with a large customer base and operators with decades of experience, which was priceless," O'Keefe notes. "Some of our guys have been operating hydroexcavation trucks for more than 25 years, which is a huge knowledge base."

> Starting out with a solid base of experienced operators also enabled the company to charge profitable rates, as opposed to discounting rate to gain market share, he says.

> "We don't sell jobs based on price," O'Keefe explains. "We sell based on providing the best service. If people

balk at our prices, we educate them and explain that trucks cost about \$500,000 and that labor rates for experienced operators isn't cheap, either.

"We believe that customers want you to be available when they need you and they want you to provide good, quality equipment and knowledgeable people," he continues. "When someone hires a hydrovac company, it's a big expense. But they'll accept that as long as they get good service."

tanks, grease traps and holding tanks, while its hydroexcavation services were folded into the Hurricane Hydrovac umbrella.

"We saw there was a growing need for hydrovac service," O'Keefe says. "It was a great opportunity because at the time, there wasn't a ton of competition. So we wanted to get in early, dominate our area and expand into southern Ontario.

"Now there's a ton of companies entering the market — probably 10 times more than when we started," he adds. "But there's also a lot more need for hydrovac work, so for the most part, there's plenty of work to go around. It's just hard to get prices where they should be."

ACQUISITION ADVANTAGES

Why did O'Keefe and De Angelis decide to acquire a company instead of building one from scratch? The partners debated the pros and cons of both scenarios for some time before deciding that acquiring a company



Carmon Geffs (left) and Tom Ross use the Rival hydrovac's digging wand and boom to loose up dirt at a new home construction subdivision in Windsor, Ontario. Hurricane Hydrovac was on site to clear and make a trench so others could try and find where lines were cut by someone else so it could be repaired.

INVESTING IN EQUIPMENT

A critical part of providing good service is investing in quality equipment that maximizes productivity and profitability and minimizes downtime. And Hurricane Hydrovac's fleet of equipment reflects that emphasis on service.

When Hurricane Hydrovac acquired Heaton, the former owned four hydrovac trucks and Heaton owned seven. Now the company owns a fleet of 13 hydroexcavating trucks, eight combination sewer trucks and five liquidvacuum trucks.

Five of the hydrovac trucks are Vactor HXX models built on Kenworth, International and Western Star chassis. They carry 15-cubic-yard debris tanks and 1,300-gallon water tanks and rely on CAT water pumps and blowers made by Hibon (a brand owned by Ingersoll Rand).

The company also owns two hydrovac trucks built by Foremost on Kenworth chassis with 15-cubic-yard debris tanks, 2,000-gallon water tanks, Cat water pumps and blowers from Robuschi-Gardner Denver; one Hydro Trencher

unit built by Cusco Fabricators (a brand owned by Wastequip) on a Western Star chassis with a 15-cubicyard debris tank, two 500-gallon water tanks, a Cat water pump and a Hibon blower; and four T10 trucks built by Rival on Western Star chassis and featuring 10-cubic-yard debris tanks, 1,200-gallon water tanks, Robuschi-Gardner Denver blowers and water pumps made by Pratissoli, distributed by John Brooks Company Limited (Dynablast).

A Wolf hydroexcavator, built by Westech Vac Systems on a Western Star chassis with a 15-cubicyard debris tank, a 1,300-gallon water tank, a Cat water pump and a Hibon blower, rounds out the roster of hydrovac trucks.

MORE SERVICES, MORE TRUCKS

The company also owns eight Vactor 2100 combination sewer trucks built on Kenworth, Western Star and Sterling chassis; they feature debris tanks ranging from 12 to 15 cubic yards, Vactor-made water pumps and either blowers made by Roots (a brand owned by the Howden Group) or two-stage fans made by Vactor.

In addition, the company has invested in five liquid vac trucks built out on Peterbilt and Western Star chassis by Presvac Systems Ltd. and Cusco; they feature 3,000- to 4,000-gallon debris tanks and vacuum pumps manufactured by Robuschi. Two liquid vac trucks built by Custom Vac Services and used primarily for septic and liquid-waste industrial work, feature Peterbilt chassis, 4,000-gallon debris tanks and vacuum pumps made by Robuschi.

Hurricane Hydrovac also invested in a Hi-Rail dry-vacuum truck built out by Guzzler Mfg. (a subsidiary of Federal Signal Corp.); it's equipped with special wheels that enable it to drive on railroad tracks when needed. It features an 18-cubic-debris tank and a Hibon blower and is used to clean up spills at railroad yards or in rail tunnels.

Investing in quality equipment also works as an employee-retention tool, O'Keefe notes.

"I definitely think it does," he says. "They need to believe in the ownership of a company. If employees see a company doesn't invest in new equipment and start thinking it won't be here in a few years, they're less likely to stick around. Plus, guys love to run newer trucks.

"We don't cut corners on maintenance, either," O'Keefe adds. "One of the most frustrating things for an operator is showing up on a job with a truck that's not working 100% and having to explain that to a customer.

"We don't put our guys in that position."

To that end, the company runs its own repair shop with eight to 10 fulltime mechanics, another eight or employees that do painting and sandblasting and a couple more that do metal fabricating.

"With a repair shop, we can control the time it takes for repairs," O'Keefe points out. In addition, the shop has enough room to about 1-1/2 dozen trucks indoors, which saves money on winterizing them, he adds.

QUALITY COUNTS

The company prides itself on proving customers with fast, quality work. To ensure that requires building a culture that rewards hard work and integrity. Part of that culture was built by veteran Heaton employees that stayed on board after the acquisition, O'Keefe notes. (continued)



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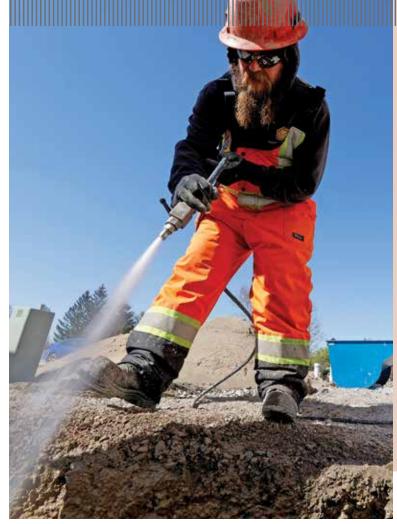
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Carmon Geffs uses the digging wand from the hydroexcavator to loosen the soil for the trenching operation.

"NOBODY HERE IS TOO GOOD TO GET DIRTY OR DO DIRTY WORK. THE EASIEST WAY TO EARN THE RESPECT OF EMPLOYEES IS TO GET OUT THERE WITH THEM."

Shawn O'Keefe

A lead-by-example ethic which O'Keefe and De Angelis instill also sends a strong message to employees, he says.

"Nobody here is too good to get dirty or do dirty work," O'Keefe explains. "Max and I and our managers aren't afraid to get out in the field. I still run (excavation) equipment on most days. The easiest way to earn the respect of employees is to get out there with them."

As an example, O'Keefe cites a sewer-replacement project that went didn't go as planned last summer, which required a crew to dig up the line and reinstall it.

"On a Friday night, I went down into about a 10-foot-deep trench, up to my knees in mud, to fix the sewer myself," he says. "You have to lead by example."

OPTIMISTIC OUTLOOK

Looking back, O'Keefe says the biggest business mistake he ever made was not entering the hydroexcavation market earlier.

"We should've started 10 years before we did," he says. "We would've had an even better head start."

But looking ahead, the entrepreneur expects continued growth for Hurricane Hydrovac — no tapping on the brakes ahead. And some of that growth

The Keys to Success

Since starting Hurricane Hydrovac in 2015, Shawn O'Keefe says the company that he and Max De Angelis co-owns in Essex, Ontario, has roughly tripled in size.

Getting into the hydroexcavation market before competitors played a big role in the that growth. "We also had a solid business plan," says O'Keefe. "We both ran other businesses before we started this one, so we had experience."

O'Keefe also notes that he and De Angelis prioritized reinvesting profits back into the company in the form of new equipment.

Providing great customer service also was critical.

"We will do anything for customers and we have the experienced to it, too," he says. "And we're always available. We answer the phone 24 hours a day — no answering service. And as managers, we're available 24 hours a day for our customers and our employees."

The ability to provide a diverse array of services also was key.

"When one market slows down, another seems to pick up," O'Keefe explains. As an example, when construction-related hydroexcavation works starts winding down when winter comes, scheduled maintenance kicks into gear at industrial plants that shut down for cleaning during the holidays.

It also helps that the hydroexcavation trucks are capable of doing more than just excavating; when it rains a lot and they can't work on projects, for example, the trucks can be used to clean catch basins or flush sewer lines, he notes.

could come from expanding services geographically and perhaps even buying more companies.

"I don't think you can stop growing," he says. "And I don't see a slowdown in sight. But we're looking for organic growth, maybe by spreading farther east more than we have."

Whatever growth occurs, O'Keefe doesn't want it to come at the expense of quality control and customer satisfaction.

"We're not looking to quickly double or triple in size," he continues. "If we can grow 10 to 20% a year, that would be sustainable. And we're always open to more acquisitions if the right opportunities come along." \checkmark



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Following the Chain of Command

THE MOST IMPORTANT ROLE OF A SAFETY COORDINATOR IS COMMUNICATING PROTOCOLS TO THE REST OF THE COMPANY

BY TIM DOBBINS

t takes more than a safety coordinator to produce accident-free work environments. But pairing someone in charge of safety with a team of like-minded individuals is a great step in the right direction for many companies.

Ensuring employees complete jobs safely is no small task. Keeping workers up to date on regulations while monitoring to confirm that correct procedure is being performed in the field can be a full-time job and may very well warrant the need for a dedicated safety manager.

Progressive Pipeline Management (PPM) has been committed to safely improving the longevity of the pipeline infrastructure in the Wenonah, New Jersey, area since its inception in 2002.

Its safety strategy relies on different people throughout the company, but ultimately falls on one individual. "We have different roles of responsibility when it comes to safety, and each facet of safety in the company is overseen by different personnel," says Casey Giambrone, vice president of engineering at Progressive Pipeline Management. "Everyone plays their own role, but Claudia Law, our safety coordinator, is the main point of contact in the end."

WHAT COMES WITH THE ROLE

The safety coordinator's role at PPM begins during the hiring process with overseeing operator qualifications. "Operator qualifications are a big part of our safety protocol," Giambrone says. "In order to work here, every employee needs to have certain credentials before going into the field."

The safety coordinator may be responsible for developing a list of requirements, as well as consulting with a third party like PPM does. They use qualifications that are governed by the Northeast Gas Association (NGA), a regional trade association that focuses on pipeline education and training.

The requirements for PPM are

specific to pipeline work, so if searching for outside assistance, look for associations or agencies that are precise to your exact field of work. "NGA governs our qualifications, and we work with a company called Promet-



ric. They are the proctors that actually facilitate testing," Giambrone says. "Our employees get tested every three years to ensure they are knowledgeable, safe and proficient."

All employees, whether new or seasoned, must pass the written test before they are allowed on any job site. Training and materials for test preparation are provided in-house through presentations and review sessions that are facilitated by employees within the company.

THE SAFETY CHAIN

Creating a safety plan starts at the very beginning for PPM, well before crews are onsite. "We have health and safety plans (HASPs) that are created by the engineer when designing the system before it begins construction," Giambrone says. "Basically, HASPs go through what challenges might be faced at each stage of the project." They include emergency procedures, shutdown protocol, emergency evacuations, emergency contact notifications and the locations of the nearest police stations, fire departments and hospitals. That information is relayed from the HASP via the safety coordinator to personnel assigned to the job.

It's a good idea to organize a chain of information with someone at the top, especially if your company is large enough that multiple crews are working several jobs at the same time. At PPM, the safety coordinator is the main point of contact with each supervisor, who is in direct communication with crews.

"We have supervisors that work with all the crews on the job sites to make sure that work is being performed as it should, as well as that proper safety measures and precautions are being taken," Giambrone says. "On every job site, there is a daily job briefing. The supervisor and everyone who is on site go over the specific job they will be performing that day and cover the particular hazards that might be encountered through the course of completing the tasks."

Once that meeting is over, every employee there needs to sign a form acknowledging they were there and received the information.

HIGHER ACCOUNTABILITY

Whether or not you think your company requires a full-time position to fill the obligations of a safety coordinator, Giambrone thinks it's essential to at least have designated people that are held responsible for managing a safety program.

"Every company, whether you have a designated coordinator or not, needs to create a stringent training protocol and that needs to be addressed routinely," he says. "They need to at least assign certain individuals that are knowledge-

able of safety requirements to be supervisors or crew leads. There should at least be some higher-end accountability."

If you decide responsibility should fall on a dedicated full-time coordinator, consider the background of the person you hire. "It's always good to have some experience in the construction industry. It doesn't necessarily need to be specific to what you're doing," Giambrone says. "Someone who is familiar with overall construction practices and what challenges that involves and someone accustomed with OSHA and their requirements. These are all things that will contribute to being an effective safety coordinator."

Companies can take significant strides toward safer work sites by hiring a safety manager committed to keeping up with the increasingly strict laws regarding job site safety and relaying that information throughout the company. Hiring a full-time employee responsible for this may be a substantial investment, but one that could ultimately save huge in the long run. \checkmark

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Creating a Positive Culture

CREATE THE FUTURE WORKPLACE CULTURE YOU WANT INSTEAD OF FOCUSING ON THINGS YOU CAN'T CONTROL

BY JASON V. BARGER

uch in the world often seems out of our control. We experience rapid change, political and economic uncertainty, employee shifts and the war for talent, and the "future of work" that everyone is forecasting is still being created. A lot is out of our control. However, even in the midst of all that is swirling around us, there is so much that every leader, team and organization has right in front of them that is fully within their control.

Most teams and companies just need to step back and acknowledge it. In fact, one of the greatest mental exercises for all of us these days is to recognize and name all the things that are within our control. When we can't control the weather, the economy or the latest media scandal, we still have a decision about what we will choose to give our energy to. There is always a response or action that is within our control. Every time we shift our thinking from reactionary finger pointing, making excuses or feeling sorry for ourselves, and direct our focus and energy to solutions, gratitude and ownership over our next actions, positive ripples are felt by all around us. It models a different spirit for the path forward.

The best leaders and teams understand their role is to help positively influence the mindsets of their people in ways that give energy, hope and clarity to the path forward.

At a time when nine out of 10 employees say they would take a pay cut to work for a more meaningful culture, it's way past time for all of us to think

about the role we all play in creating these meaningful cultures. The mindsets, actions and behaviors that we choose will send ripples to everyone around us.

The best leaders and cultures are

intentionally co-creating their future culture together. The mindsets they fuel and the actions they take determine the direction they head.

5 AGREEMENTS TO MAKE FOR YOUR FUTURE CULTURE

Breathe — Practice breathing in gratitude, appreciation and joy each day • rather than the toxic air of blame, gossip, negativity and excuse making. How you begin your day often sends your mind and your actions in a particular direction. Which air do you want to breathe?

2 Share clear messages — We all need and want clarity. Share clear messages about the direction you're heading and what you want for the road ahead. Is your mission clear? Is your vision clear? Are the values for how your team is committed to travel clear? Is your strategy for the next priorities clear? If not, your team may get trapped focusing on all that is out of their control.

3. **Develop an intentional strategy** — Do you and your team or organization have a clear and intentional strategy for the future culture you are trying to create? Can you articulate the desired culture you want? Do you have support and a guide to help keep you all moving in the same direction? If not, agree to develop an intentional strategy. **4** Flex your muscles — Practice working through challenges and obstacles personally and as a team. Every time you flex those muscles and move through discomfort, you get stronger. Resolve plus toughness is critical to help people navigate their way through obstacles, challenges, negativity, finger pointing and division. Leaders help their people and learn through adversity. Toughness isn't about being physically stronger than others, it is about being able to be vulnerable with your people and still have the resolve to find solutions together.

5 Take ownership — Be accountable for your words, your actions, and o your physical, mental and spiritual well-being. The best leaders connect the things they say they will do with positive accountability and action. Accountability isn't a negative word; it's a positive mantra that everyone should take ownership of. The best cultures empower everyone involved to be an owner and an ambassador for the future culture they are creating.

Your future culture is being created right now. It's either being dictated by all that is outside of your control or it is being intentionally led by leaders who are focused on everything within their control. The mindset, actions and agreements you make to yourself and others will dictate the path you walk.

The best cultures proactively help their people breathe and navigate through obstacles together. They make agreements to themselves and others to choose

to inhale positivity and exhale negativity, blame, gossip and division. The agreements they make dictate the quality of the culture for all. The ecosystem of their culture is grown, developed, cultivated and led with intentionality, one agreement at a time.

The process for developing high-performing and engaged teams never stops and the best leaders, teams and organizations make agreements to lead an intentional strategy for how they hire, onboard, do performance evaluations, develop emerging leaders and recognize excellence. The best leaders invest in their teams and the mindsets they cultivate together.

If you're experiencing a lack of clarity, energy, passion or hope for the road ahead, it may be time to make some new agreements to yourself and with those on the journey with you.

ABOUT THE AUTHOR

PRACTICE WORKING THROUGH CHALLENGES AND OBSTACLES

AND MOVE THROUGH DISCOMFORT, YOU GET STRONGER.

PERSONALLY AND AS A TEAM. EVERY TIME YOU FLEX THOSE MUSCLES

Jason V. Barger is the author of Thermostat Cultures, ReMember, Step Back from the Baggage Claim and Breathing Oxygen, as well as the host of The Thermostat podcast. As founder of Step Back Leadership Consulting, he is also a keynote speaker, leadership coach and organizational consultant. Learn more at www.JasonVBarger.com.

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Axis Vac & HDD Services Ltd.

SASKATOON, SASKATCHEWAN

This hydroexcavator from **Axis Vac & HDD** in Canada both pops in the daylight and in the nighttime with the custom neon-green paint job and under-body glow from green neon lights. The company, based in

Saskatoon, Saskatchewan, has another truck on order, similar to this one, but orange. The truck is a 2022 Foremost 1200 hydrovac build on a 2022 Western Star 4700 chassis and sports a Detroit DD13 18-speed engine. The unit has a 4,000 cfm Roots blower (a brand owned by the Howden Group), 20 gpm wash pump, a 1,200-gallon freshwater tank and a 10-cubic-yard sloped debris tank. Axis Vac & HDD President Mitch Willie says the truck is set up for utility and pipeline work. The company, founded in 2017, has 45 employees and offers horizontal directional drilling and hydroexcavation services throughout central and western Canada. Axis Vac has other Foremost 1200 and 1600 hydrovacs in its vehicle lineup that feature either 10- or 12-cubic-yard debris tanks. On the direction drilling side, the company uses Vermeer drills. For more information on Axis Vac & HDD, go to www.axisvac.com.



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	xcavation 200	\mathbf{D}								
DIRECTO		MODEL NAME	TYPE	Style	Debris Body Capacity (cu. yards)	Debris Door (dimensions)	Debris Body (dump angle)	Water Tank Capacity (gallons)	Standard Water Pump (gpm & psi)	
See ad on page 39	GapVax, Inc. 575 Central Ave. Johnstown, PA 15902 tf: 888-442-7829 p: 814-535-6766 f: 814-539-3617 www.gapvax.com Inquiry@gapvax.com	GapVax VHX	Hydro	Chassis	7	Fully opening	50 degree	750	13 gpm 3,000 psi	
		HV55 Hydrovax	Hydro	Chassis	12 1/2	Fully opening	50 degree	400-1,400	5-40 gpm 2,000-5800 psi	
		HV56 Hydrovax	Hydro	Chassis	15	Fully opening	50 degree	400-1,200	5-40 gpm 2,000-5800 psi	
	KAISER PREMIER 2550 East Bijou Ave. Fort Morgan, CO 80701 p: 970-542-1975 http://www.kaiserpremier.com sales@kaiserpremier.com	CV Series	Hydro	Chassis	11-13	96″ x 48″ half round	19 degree floor	1,800 - 2,250	20 gpm 3,000 psi	
		UrbanX	Hydro	Chassis	8	67" diameter	35 degrees	800	10 gpm 3,000 psi	
	Ox Equipment Inc. 1343 Sandhill Dr. Ancaster, ON L9G 4V5 tf: 888-290-4044 f: 905-296-6348 www.ox-equipment.com info@ox-equipment.com	MTS Dino 12	Air	Chassis	15	Side tipping; hopper size will vary	138 degrees	High-powered dry vacuum system; no water required	High-powered dry vacuum system; no water required	
	(continued on following page)	MTS Dino 8	Air	Chassis	10.5	Side tipping; hopper size will vary	138 degrees	High-powered dry vacuum system; no water required	High-powered dry vacuum system; no water required	
		MTS Dino 4.5 LT	Air	Chassis	6	Side tipping; hopper size will vary	138 degrees	High-powered dry vacuum system; no water required	High-powered dry vacuum system; no water required	

Standard Blower (hg & cfm)	Filtration Type	Boom Size (ft.)	Degree of Rotation	Offloading Type	Controls Location	Wireless Y/N	Vacuum (cfm/psi)	Power Source	Compressed Air Flow	Compressed Air Pressure	Accessories Available	Other
28″ hg 4,000 cfm	Wet/dry single mode	22 ft. reach with 15 degree downward pivot		Decant and fully opening tailgate	Curbside	Yes					winterization lighting tool boxes racks cabinets	21 filter bags; the following options: On-board scales with digital readout stops lading when set target is reached; 200 cfm air compressor; vertical heated cabinet for water system; water heater; glycol injection
28″ hg 5,250 cfm	Wet/dry single mode	17-25 ft. reach from center of truck	270	Decant and fully opening tailgate; auger and sludge pump options available	Curbside and driver's side, loca- tion varies depending on options	Yes					winterization lighting tool boxes racks cabinets	34 filter bags; 5 cyclones for superior filtration; safe working area on top of truck; various options available
28″ hg 5,250 cfm	Wet/dry single mode	17-25 ft. reach from center of truck	270	Decant and fully opening tailgate; auger and sludge pump options available	Curbside and driver's side, loca- tion varies depending on options	Yes					winterization lighting tool boxes racks cabinets	Optional 200 cfm air compressor; 28" hg blower, 6,000 cfm
28″ hg 6,600 cfm	3 stage	8″ x 26 ft.	340	Fixed, end dump, mechanical assist	Rear, curbside	Yes			200 cfm	200 psi	winterization lighting tool boxes cabinets	Air Compressor, air purge, ladder and platform, extreme weather package, 700K Btu boiler, trash pump, towing package, steam package, dual digging package, rear steps, custom dump door porting, extended van bodies
28″ hg 2,400 cfm	3 stage	6" x 18 ft.	320	Full opening door, tilt and dump	Rear, curbside	yes			200 cfm	200 psi	winterization lighting tool boxes cabinets	Air compressor, 400K Btu Boiler, air purge, ladder and platform
Twin Fan 24,000 cfm	Automatic self- cleaning system; polyester cartridge	10″ x 21 ft. Power Arm	180	Side tipping	Driver's side	Yes	24,000 cfm	Truck engine PTO/OMSI transfer case	360 cfm	185 psi	lighting tool boxes	Hydrostatic ground drive system ladders, storage, air spade, pneumatic power shovel, jackhammer, boom vibrator system emergency tool kit
Twin Fan 24,000 cfm	Automatic self- cleaning system; polyester cartridge	10″ x 21 ft. Power Arm	180	Side tipping	Driver's side	Yes	24,000 cfm	Truck engine PTO/OMSI transfer case	360 cfm	185 psi	lighting tool boxes	Hydrostatic ground drive system ladders, storage, air spade, pneumatic power shovel, jackhammer, boom vibrator system emergency tool kit
Twin Fan 24,000 cfm	Automatic self- cleaning system; polyester cartridge	10″ x 21 ft. Power Arm	180	Side tipping	Driver's side	Yes	24,000 cfm	Truck engine PTO/OMSI transfer case	360 cfm	185 psi	lighting tool boxes	Ladders, storage, air spade, pneumatic power shovel, jackhammer, boom vibrator system emergency tool kit

(continued)

Vacuum Excavation 2022 Debris Body Water Tank Standard													
DIRECTO	RY ZUZ	MODEL NAME	TYPE	Style	Debris Body Capacity (cu. yards)	Debris Door (dimensions)	Debris Body (dump angle)	Water Tank Capacity (gallons)	Standard Water Pump (gpm & psi)				
	Ox Equipment Inc. (cont.) 1343 Sandhill Dr. Ancaster, ON L9G 4V5 tf: 888-290-4044 f: 905-296-6348 www.ox-equipment.com info@ox-equipment.com	MTS Dino 4.5	Air	Chassis	6	Side tipping; hopper size will vary	138 degrees	High-powered dry vacuum system; no water required	High-powered dry vacuum system; no water required				
		MTS Dino 4.5 High Rail	Air	Chassis with High Rail Kit	6	Side tipping; hopper size will vary	138 degrees	High-powered dry vacuum system; no water required	High-powered dry vacuum system; no water required				
		MTS City Dino	Air	Chassis	4.5	Rear tipping; hopper size will vary	138 degrees	High-powered dry vacuum system; no water required	High-powered dry vacuum system; no water required				
PRES VAC Systems	Presvac Systems 4131 Morris Drive Burlington, ON L7L 5L5 tf: 800-387-7763 p: 905-637-2353 f: 905-681-0411	Presvac HydroX Mini	Hydro	Chassis	7	Full diameter Full opening		800	18 gpm 3,500 psi Adjustable flow and pressure				
	www.presvac.com sales@presvac.com	Presvac HydroX	Hydro	Chassis	15	78″ Full opening	90 degree	1,000	18 gpm 3,500 psi Adjustable flow and pressure				
See ad on page 9	Ramvac Vacuum Excavators by Sewer Equipment 1590 Dutch Rd.	AX Air Excavator	Air	Chassis	2, 3 and 4	3/4 full opening	50 degree	50-300	10 gpm @ 60 psi, 10 gpm @2,500 psi				
	Dixon, IL 61021 tf: 888-477-7638 www.sewerequipment.com sales@ram-vac.com	Ramvac 2000 & 3000	Hydro	Trailer	6	Full opening	50 degree	150	5 gpm @ 2,500 psi				
		HX Hydro Excavator	Hydro	Chassis	3 to 15	3/4 full opening	50 degree	325-1,300	10 gpm @ 2,500 psi, 18 gpm @ 2,500 psi				
See ad on page 19	Rival Hydrovac Inc. Box 5 Major, SK SOL 2H0 tf: 844-467-4825 p: 403-550-7997 www.rivalhydrovac.com tdell@rivalhydrovac.com	Rival T7	Hydro Air Option	Chassis	7	54" Full opening rear door two-stage hoist	40 degree	800	10 gpm 3,000 psi				
		Rival T10	Hydro Air Option	Chassis	10	54" Full opening rear door two-stage hoist	40 degree	1,200	10 gpm 3,000 psi				

Standard Blower (hg & cfm)	Filtration Type	Boom Size (ft.)	Degree of Rotation	Offloading Type	Controls Location	Wireless Y/N	Vacuum (cfm/psi)	Power Source	Compressed Air Flow	Compressed Air Pressure	Accessories Available	Other
Twin Fan 24,000 cfm	Automatic self- cleaning system; polyester cartridge	10″ x 21 ft. Power Arm	180	Side tipping	Driver's side	Yes	24,000 cfm	Truck engine PTO/OMSI transfer case	360 cfm	185 psi	lighting tool boxes	Hydrostatic ground drive system; ladders, storage, air spade, pneumatic power shovel, jackhammer, boom vibrator system emergency tool kit
Twin Fan 24,000 cfm	Automatic self- cleaning system; polyester cartridge	10″ x 21 ft. Power Arm	180	Side tipping	Driver's side	Yes	24,000 cfm	Truck engine PTO/OMSI transfer case	360 cfm	185 psi	lighting tool boxes	Hydrostatic ground drive system; ladders, storage, air spade, pneumatic power shovel, jackhammer, boom vibrator system emergency tool kit
Twin Fan 10,500 cfm	Automatic self- cleaning system; polyester cartridge	8″ x 16 ft. Power Arm	180	Rear tipping into bags/bins	Rear	Yes	10,500 cfm	Truck engine PTO/OMSI transfer case	320 cfm	116 psi	lighting tool boxes	Hydrostatic ground drive system; ladders, storage, air spade, pneumatic power shovel, jackhammer, boom vibrator system emergency tool kit
28″ hg 2,650 cfm	Cyclone and inlet Filter	6″ x 20 ft.	340	45 degree dump and optional pressure off-load	Passenger	Yes					winterization lighting tool boxes racks cabinets	Can be built to DOT/TC Code
28″ hg 4,000-6,400 cfm	Two large cyclones and inlet filter	8" x 25 ft.	340	45 degree dump and optional pressure off-load	Passenger	Yes					winterization lighting tool boxes racks cabinets	Can be built to DOT/TC Code
16-28″ hg 1,400- 3,000 cfm	Cyclone separator media filter	6-9 ft.	180		Curbside	Yes	16-28″ hg 1,400- 3,000 cfm	PTO	185-300 cfm	150-250 psi	winterization lighting tool boxes racks cabinets	
18″ hg 2,400- 3,000 cfm	Cyclone separator media filter	12-18 ft.	260		Curbside	Yes	18″ hg 2,400- 3,000 cfm	Auxiliary engine			lighting tool boxes racks	
18-28″ hg 3,000- 5,400 cfm	Cyclone separator media filter	16-26 ft.	330	Decant pump/ pressure offload 5 psi (pressure offload)	Curbside	Yes	18-28″ hg 3,000- 5,400 cfm	REPTO	185 cfm	150 psi	winterization lighting tool boxes racks	
27″ hg 2,650 cfm	Cyclone and cartridge	6" x 20 ft.	342	Tilt and pressure off	Curbside	Yes	2,650 cfm	PTO/ Hydraulics	200 cfm optional	200 psi optional	winterization lighting tool boxes racks cabinets	All accessories are included; Weights displayed on wireless remote back-up cameras standard; Retractable railing atop truck
27″ hg 3,850 cfm	Cyclone and cartridge	8″ x 25 ft.	342	Tilt and pressure off	Curbside	Yes	3,850 cfm	Transfer case or hydraulics	200 cfm optional	200 psi optional	winterization lighting tool boxes racks cabinets	All accessories are included; Weights displayed on wireless remote back-up cameras standard; Retractable railing atop truck

(continued)

Vacuum Ev	cavation 700									
DIRECTO		MODEL NAME	ТҮРЕ	Style	Debris Body Capacity (cu. yards)	Debris Door (dimensions)	Debris Body (dump angle)	Water Tank Capacity (gallons)	Standard Water Pump (gpm & psi)	
Super Products See ad on page 3	130 W. Boxhorn Dr. Mukwonago, WI 53149 tf: 800-837-9711	Mud Dog 700 Vacuum Excavator	Hydro & Air	Chassis	7		50 degree	600	11 gpm 3,000 psi	
	www.superproducts.com info@superproducts.com	Mud Dog 1200 Vacuum Excavator	Hydro & Air	Chassis	12	Full opening rear		1,500	18 gpm 3,000 psi	
		Mud Dog 1600 Vacuum Excavator	Hydro & Air	Chassis	16	Full opening rear		2,000	18 gpm 3,000 psi	
	Tellus Underground Technology 200 Hester St., PO Box 157	TUT-5500	Air	Chassis	1.5	25″ diameter	55 degree	70	3.5 gpm 1,500 psi	
See ad on page 15	Portland, PA 18351 tf: 866-579-9911 p: 570-234-0325 f: 570-245-0026	TUT-6500	Air	Chassis	2	25″ diameter	55 degree	70	3.5 gpm 1,500 psi	
	www.tellusunderground.com rlyon@tellusunderground.com	TUT-2001	Air	Trailer	1			70	3.5 gpm 1,500 psi	
See ad on back cover	TRUVAC by Vactor Manufacturing, Inc. 1621 S. Illinois St. Streator, IL 61364 4t: 800-627-2171	Paradigm	Air	Chassis	3.3		50 degree	300 Air only = 100 gallons	8 gpm 2,500 psi Air only = 4 gpm @ 2,500 psi	
	tf: 800-627-3171 p: 815-672-3171 www.truvac.com sales@truvac.com	Prodigy	Hydro	Chassis	9		50 degree	600	10 gpm 2,500 psi	
		HXX Hydro Excavator	Hydro	Chassis	12 or 15		50 degree	1,200	10 gpm 3,000 psi	
		HXX Mid-Size	Hydro	Chassis	12 or 15		50 degree	1,200	10 gpm 3,000 psi	
MORE POWER TO YOU See ad on page 21	Vac-Con, Inc. 969 Hall Park Rd. Green Cove Springs, FL 32043 p: 904-284-4200 www.vac-con.com info@vac-con.com	Mudslinger MS800	Hydro	Trailer	4		55 degree	325	4 gpm 4,000 psi	
	(continued on following page)	Mudslinger MST800	Hydro	Chassis	4		55 degree	325	4 gpm 4,000 psi	
		Mudslinger MXT	Hydro	Chassis	3 to 16		50 degree	800 to 1,300	11 gpm 2,200 psi	

Standard Blower (hg & cfm)	Filtration Type	Boom Size (ft.)	Degree of Rotation	Offloading Type	Controls Location	Wireless Y/N	Vacuum (cfm/psi)	Power Source	Compressed Air Flow	Compressed Air Pressure	Accessories Available	Other
18″ hg 3,100 cfm or 27″ hg 3,700 cfm		8" diameter with 18 ft. reach	270	Dump unloading	Cabinet	Yes					winterization lighting tool boxes	
28″ hg 5,800 cfm		8" diameter with 19-27 ft. reach	335	Eject unloading	Dog House	Yes					winterization lighting tool boxes	
28″ hg 5,800 cfm		8" diameter with 19-27 ft. reach	335	Eject unloading	Dog House	Yes					winterization lighting tool boxes	
15″ hg 1,200 cfm	Self cleaning 1.0 micron	4″	270		Rear of Truck	No	1,200 cfm @ 7.5 psi	Diesel Engine	185 cfm	150 psi	winterization	
15″ hg 1,200 cfm	Self cleaning 1.0 micron	4″	270		Rear of Truck	No	1,200 cfm @ 7.5 psi	Diesel Engine	185 cfm	150 psi	lighting tool boxes racks	Operates both dry and wet, 200 psi compressed air available
15″ hg 1,200 cfm	Self cleaning 1.0 micron	4″			Rear of Truck	No	1,200 cfm @ 7.5 psi	Diesel Engine	185 cfm	150 psi	cabinets	
15″ 2,200 cfm	Dual cyclone and 5 micron polyester final filter	6" diameter 5 ft. extension	225	Dumping, tilting debris body	Right side	Yes						
16″ hg 3,200 cfm	Cyclone and polyester final filter	6" diameter	320	Dumping, tilting debris body	Right side	Yes					winterization lighting	
28″ hg 5,250 cfm or 6,176 cfm	Dual cyclone and polyester final filter	8" diameter 7 ft. extension	320	Dumping, tilting debris body	Right side	Yes					tool boxes racks cabinets	
PD= 18" hg 4,970 cfm	PD=Cyclone and final filter/ fan=cyclone	8" diameter 7 ft. extension	320	Dumping, tilting debris body	Right side	Yes						
16″ hg 990 cfm or 1,190 cfm	Dry Filter Package	9 ft. boom with 16 ft. x 4″ boom hose	270	Full open hydraulic dump door and hydraulic dump hoist	Passenger side	Yes	990 or 1,190 cfm	49, 74, or 114 hp Kubota diesel engine			winterization lighting tool boxes racks	
16″ hg 990 cfm or 1,190 cfm	Dry Filter Package	9 ft. boom with 16 ft. x 4″ boom hose	270	Full open hydraulic dump door and hydraulic dump hoist	Passenger side	Yes	990 or 1,190 cfm	49, 74, or 114 hp Kubota diesel engine			winterization lighting tool boxes racks	
200″ H2O 8,000 cfm	Single stage separator	6 ft. boom with 8″ vacuum intake hose	270	Full opening rear door	Passenger side	Yes		Hydrostatic drive Vac-Con 3-stage fan PD blowers available			winterization lighting tool boxes racks	(continued)

Vacuum Ex	vavation 000									
DIRECTO	RY ZUZ	MODEL NAME	TYPE	Style	Debris Body Capacity (cu. yards)	Debris Door (dimensions)	Debris Body (dump angle)	Water Tank Capacity (gallons)	Standard Water Pump (gpm & psi)	
VAC-CON MORE POWER TO YOU See ad on page 21	Vac-Con, Inc. (cont.) 969 Hall Park Rd. Green Cove Springs, FL 32043 p: 904-284-4200 www.vac-con.com info@vac-con.com	X-Cavator CXT	Hydro	Chassis	9, 11, and 12	Flat style rear door	50 degree	800 to 1,300	20 gpm 4,000 psi	
		X-Cavator EXT	Hydro	Chassis	12		50 degree	1,500	20 gpm 4,000 psi	
YVX	Vacmasters 5879 W 58th Ave. Arvada, CO 80002 tf: 800-466-7825	Vacmasters SpoilVac	Hydro	Chassis & Trailer	1, 2.5, 4, 5, 6	25" Posi-Seal Full Hydraulic	45 degrees	200 additional water available	4 gpm 3,000 psi	
	p: 303-467-3801 f: 303-420-3971 www.vacmasters.com cbell@vacmasters.com	Vacmasters System 1000	Hydro & Air	Chassis & Trailer	1.5 or 2.5	25" Posi-Seal full hydraulic	45 degrees	85 additional water available	4 gpm 3,000 psi	
		Vacmasters System 3000	Hydro & Air	Chassis	1.5	25" Posi-Seal	45 degrees	110 additional water available	4 gpm 3,000 psi	
		Vacmasters System 4000	Hydro & Air	Chassis	2.25	25" Posi-Seal	55 degrees	85 additional water available	4 gpm 3,000 psi	
		Vacmasters System 5000	Hydro & Air	Chassis	2.75 or 3.5	48" full opening hydraulic	45 degrees	85 additional water available	4 gpm 3,000 psi	
		Vacmasters System 6000	Hydro & Air	Chassis	4.75	60" full opening hydraulic	30 degrees	85 additional water available	4 gpm 3,000 psi	
Vermeer See ad on page 5	Vermeer 1210 East Vermmer Rd. Pella, IA 50219 p: 641-628-3141 www.vermeer.com/na/ vacuum-excavators/vxt300	VXT300	Air	Trailer	8 (6.1-m³) spoil tank capacity	Cam-over hydraulic telescopic cylinder		800 (3,028-L)	3,000 psi (206.8 bar)	



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Standard Blower (hg & cfm)	Filtration Type	Boom Size (ft.)	Degree of Rotation	Offloading Type	Controls Location	Wireless Y/N	Vacuum (cfm/psi)	Power Source	Compressed Air Flow	Compressed Air Pressure	Accessories Available	Other
200″ H2O 8,000 cfm	Dual cyclone	10 ft. boom with 8″ vac- uum intake hose	270	Hydraulically- driven scissor lift	Centrally- located passenger side	Yes	5,775 cfm	Hydrostatic drive PD blower or 3-stage fan			winterization lighting tool boxes racks cabinets	
28″ hg 6,176 cfm	Cyclone separator 26" pleated cartridge final filter	7 ft. boom with 26 ft. reach	310 degrees horizon- tally +45/- 22 degrees vertically	Hydraulic scissors lift	Passenger side	Yes	6,176 cfm	Transfer case PD blower			winterization lighting tool boxes racks cabinets	Operator enclosure, heat or AC climate controls
15" hg 860 cfm	Cyclonic/ cartridge	Hose assist arm	360	Hydraulic dump	curbside	No	860 cfm	49 hp Kubota T-4 Final	N/A	N/A	winterization lighting tool boxes racks	Vacmasters SpoilVac full hydraulic door reverse flow
15" hg 860 cfm	Cyclonic/ cartridge	Hose assist arm	360	Hydraulic dump	curbside	No	860 cfm	74 hp John Deere T-4 Final	100 cfm	150 psi	winterization lighting tool boxes racks	
15" hg 1,220 cfm	Automatic purge/ cyclonic/ cartridge			Hydraulic dump	curbside	No	1,220 cfm	99 hp John Deere T-4 Final	165 cfm	185 psi	winterization lighting tool boxes racks	For all models: Wheelbarrow Mount
15" hg 1,220 cfm	Automatic purge/ cyclonic/ cartridge	Hose assist arm	180	Hydraulic dump	curbside	No	1,220 cfm	155 hp John Deere T-4 Final	300 cfm	220 psi	winterization lighting tool boxes racks	Barrel Top Interceptor Core Drill/Generator Pneumatic Jack Hammer Pneumatic Tamper Sand Blaster
15" hg 1,700 cfm	Automatic purge/ cyclonic/ cartridge	Hose assist arm	180	Hydraulic dump	curbside	Yes	1,700 cfm	173 hp John Deere T-4 Final	300 cfm	220 psi	winterization lighting tool boxes racks	
16" hg 2,200 cfm	Automatic purge/ cyclonic/ cartridge	5" hose extends 22 ft.	270	Hydraulic dump	curbside	Yes	2,200 cfm	250 hp John Deere T-4 Final	350 cfm	250 psi	winterization lighting tool boxes racks	
Roots 624-3,500 cfm (99.1 cubic m/min)	2 micron washable	14-19 ft. (4.2 m- 5.8 m)	335		Full- function wireless remote (optional belly pack or handheld)	Yes	6″ (15.2 cm) PTO- driven truck vac	Full- function wireless remote (optional belly pack or handheld)	3,500 cfm (99.1- m³/min)		winterization	Optional 420k Btu water heater and winter packages for operation in cold dimates

"IT STARTS WHEN CUSTOMERS FIRST CALL US ... AND IT CONTINUES TO WHEN A TECHNICIAN LISTENS TO GET ABSOLUTE CLARITY ON THE SITUATION, THEN ANSWERS ALL THEIR QUESTIONS AND PROVIDES OPTIONS FOR SOLVING THE PROBLEM." Richard Hart, Harts Services, Tacoma, Washington

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Excelling. It speaks volumes.

Air Excavation

RAMVAC Vacuum Excavators by Sewer Equipment Tempest

The Tempest industrial air mover from RAMVAC Vacuum Excavators by Sewer Equipment is capable of removing dry and liquid materials



over a long distance and from great depths. This unit

delivers maximum vacuum efficiency even in the toughest working conditions. While utilizing high suction from a 28 inches Hg 5,500 cfm positive displacement blower through an 8-inch system, this unit offers a self-discharging filter system that provides automatic interval cleaning of the filter house during vacuum operations. This system significantly reduces the downtime associated with premature cleaning of the baghouse when the debris box is not full. It allows operators to keep working, while recognizing maximum debris capacity. Additionally, its hydraulically powered articulating extendable knuckleboom is exclusive in the marketplace. With 270-degree range of motion and 16 foot working length, this boom hinges back and forth, providing maximum support of the vacuum tube for increased operator ergonomics as well as cleaning efficiency.

888-477-7638; www.sewerequipment.com

Blower

National Vacuum Equipment Challenger 1600

The Challenger 1600 from National Vacuum Equipment is a 1,600 cfm tri-lobe blower designed for continuous duty at maximum vacuum. It employs rotors designed to improve vacuum efficiency and reduce mechanical noise. The blower has a ballast air-cooling design and typical maximum vacuum of 27 inches Hg. **800-253-5500; www.ngtvgc.com**



Hot Water Boilers

Dynablast HV420

Custom Dynablast HV420 hydrovac water heaters produce 420,000 Btu with an output temperature of 175 degrees F at 5 gpm, making them suitable for colder climates and improved digging in clay-filled areas. All models come with ETL certification for safety, which also includes certification on the coil for higher efficiency and heat transfer, a stainless steel target plate for increased

coil life and momentary override control. They include an Interpump Group T 2040 water pump package providing 10.5 gpm at 2,900 psi and 1,750 rpm, as well as a hydraulic package with a Sunfab 34 cc motor. All components are custom-mounted in a 24-by-24-inch cabinet.

905-867-4642; www.dynablast.ca

Easy-Kleen Pressure Systems Wildcat Heaters

Wildcat Heaters high-pressure, oil-fired hotwater/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.egsykleen.com**

Hydroexcavation Equipment

Fruitland 870 Series

Fruitland's 870 Series pump allows vacuum levels of 28.5 inches Hg and continuous vacuum of 27 inches Hg. Additionally, it is capable of providing 30 psi pressure for off-loading. Oil consumption is 1 gallon for 18 hours of operation to reduce consumption and environmental impact. Locally sourced, nonproprieta



1 gallon for 18 hours of operation to reduce consumption and environmental impact. Locally sourced, nonproprietary oil may be used. The pump delivers 510 cfm (free air) through 4-inch porting. **905-662-6552; www.fruitlandmanufacturing.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

Hydroexcavation Trucks and Trailers

Ditch Witch HX30G

The HX30G from Ditch Witch offers power in a low-profile design to help increase productivity. It is powered by a 31 hp Vanguard gas engine for suction power and water pressure to remove slurry and expose water/sewer lines for easy repair. It has a 542 cfm blower, 3,000 psi water pressure capacity and 4.2 gpm water flow,



increasing the operator's efficiency and precision on the job site. It comes with the choice of a 500- or 800-gallon tank for a variety of job requirements. The machine is also available in a variety of trailer configurations, including the Ditch Witch VT9 trailer — which, when equipped with the 500-gallon tank, does not require a CDL to transport.

800-654-6481; www.ditchwitch.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



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Challenger Series

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800-253-5500 www.natvac.com

HotJet USA Vac 'n Jet Series

The HotJet USA Vac 'n Jet Series of vacuum trailer jetters are rugged and compact, engineered to haul equipment and spoils loads, can clean valve boxes and storm drains and hydroexcavate and/or clean drainlines and sewer lines. They offer hot- and/or cold-



water operation with a choice of engines ranging from 13 to 66 hp and gas or diesel. 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 CentriClean filter system. They can also be designed to meet specifications.

800-624-8186; www.hotjetusa.com

Imperial Industries Hydro **3600 Hybrid Excavator**

The Hydro 3600 Hybrid Excavator from Imperial Industries is short and compact for maneuverability in tight spaces. It is user-friendly, effi-



cient and can be operated easily by a single person and is designed to minimize time spent on the job site, according to the maker. It includes a 3,600-gallon hauling capacity (customizable sizes available), optional water capacity, code and noncode availability, a three-stage lift hoist with built-in vibrator and full opening rear door for easy dumping, 20 gpm jetter up to 4,000 psi (adjustable), a National Vacuum Equipment 1600 blower and a moisture trap and grit ridder. Options include a 16-function remote control for easy operation of the boom, jetter, blower and vacuum.

800-558-2945; www.imperialind.com

Presvac Systems Hydrovac

The Presvac Systems Hydrovac is designed for versatility and cold-weather operation with optional full compliance with U.S. Department of Transportation specifications for collection or transpor-



tation of hazardous materials. The high-vacuum blower allows extraction of all types of soils, gravel, rock, clay, water and silt material, with knockout features in the debris tank to minimize carryover. Modular filtration configured to blower size provides blower protection and minimal maintenance. It comes with a heavy-duty, 8-inch boom that extends up to 25 feet with six-way hydraulic power and wireless controls for all boom functions, a soft-start water pump, vacuum breaker and truck engine speed.

800-387-7763; www.presvac.com

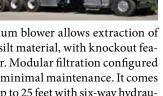
Rival Hydrovac T7 Tandem and T10

The T7 Tandem from Rival Hydrovac was designed primarily to be a unit that could be loaded with debris and drive 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 weight prior to travel. The T10 is built with the same features and operating system, but with larger capacities and components. It is popular with clients who do both utility and industrial work. It is available in three chassis layouts to meet weight restrictions in a given area. An air compressor option allows for excavating with air when required, while a truck-mounted coring system allows for removal of hard surfaces prior to nondestructive excavating.

403-550-7997; www.rivalhydrovac.com



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Super Products Mud Dog 700

Mud Dog 700 vacuum excavators from Super Products are designed for operator convenience and consistent performance to meet the challenges of applications from compact, urban projects to large-scale excavation. Units come standard as hydroexcavators with an optional air excavation package. They maximize legal payload, allow-



ing operators to carry and accomplish more while still excavating safely in small work areas. The compact, versatile vacuum excavator features a 7-yard debris body and 600-gallon water tank. The unit comes standard as a dump body with an electric vibrator offering a 50-degree dump angle with the capability of dumping into a 48-inch container. Additionally, it is equipped with a rear-mounted, extendable, 8-inch-diameter boom that reaches 18 feet, has 270-degree rotation and pivots 10 degrees downward, which minimizes job site restoration and eliminates traffic congestion near roads.

800-837-9711; www.superproducts.com

Tornado Global Hydrovacs F4 ECO-LITE

The F4 ECO-LITE 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 26-foot reach. The smaller F3 ECO-LITE 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

Transway Systems Terra-Vex HV65

The Transway Systems Terra-Vex HV65 is an ideal single-operator unit, capable of performing all functions from a single remote control, saving time and money. The blower, water tank, boiler, jetter system, and wands are housed in an insulted, sound-dampening enclosure complete



with thermostat-controlled heater. It includes large, winter-friendly roll-up doors with ample inside storage. An onboard air compressor compliments the many features available by buying directly from the manufacturer.

800-263-4508; www.transwaysystems.com

TRUVAC FLXX

The TRUVAC FLXX is a vacuum excavator built to perform for utilities and contractors installing, replacing and repairing underground infrastructure, utilizing both air and hydroexcavation options for all conditions. This safe digging machine offers more power and maneuverability ideal in tight urban settings where



street excavation jobs can include supporting, repairing and installing a city's water, sewer, power and telecommunications infrastructure. Designed to maximize productivity on the job, it boasts the highest legal payload capacity in a mid-size truck with a 10-cubic-yard debris body. In addition, it offers Park-n-Dig, an always-connected water source; safe and precise digging with the DigRight one-touch flow control technology; a water heater to dig in all types of weather/material conditions; a 22-foot boom reach with 340-degree rotation; and a DigFast option to maintain peak vacuuming performance and a clear airstream in the vacuum tube.

800-627-3171; www.truvac.com

Vac-Con Mudslinger MS800

The Mudslinger MS800 trailer-mounted hydrovac from Vac-Con encompasses the same power, suction and capacity of a truck hydroexcavator on a portable, pull-behind trailer. It includes the choice of tier 4 diesel



or gas engine options providing up to 1,190 cfm and 16 inches Hg with a PD blower and 325 gallons of water. An 845-gallon debris tank allows operators to stay productive on the job site, while a 9-foot boom with 24 inches of hydraulic extension provides a full range of motion. It is designed to be a powerful standalone unit, but can also provide support to construction, HDD and public utility fleets. It's at home in a variety of applications including daylighting, potholing, culvert and manhole cleaning, and utility locating. **904-284-4200; www.vac-con.com**

Vacall AllExcavate

High-pressure water and air jetting and standard intelligent controls, plus easy startup and operation, set Vacall AllExcavate machines apart. Water pumps generate 24.5 to 120 gpm and



pressures to 3,000 psi with optional air excavation at 185 cfm and dual psi of 110 and 150. The water system, wand, control panel, tools and worker apparel are protected in a heated compartment. Standard AllSmartFlow CAN bus intelligent control systems have a programmable LCD display that monitors engine, water and airflow and vacuum performance, allowing for precise boom and reel adjustments. Aluminum water tanks carry 1,000 to 1,300 gallons. Galvanized debris tanks have a supreme finish. Units use one engine to power the chassis and excavation functions, reducing serviced and operation costs. **800-382-8302; www.vacall.com**

Vermeer VXT500 VXP Series

The Vermeer VXT500 VXP Series is an 8-inch vac with an 8-yard spoil tank capacity. It is suitable for utility applications where a higher-capacity machine with a smaller footprint is desired. It joins a family of Vacuum X-Traction Products, Inc. (VXP) vacs featuring vacuum blowers that deliver 4,800 to 6,400 cubic feet per minute and spoil tank capacities ranging up to 16 yards.

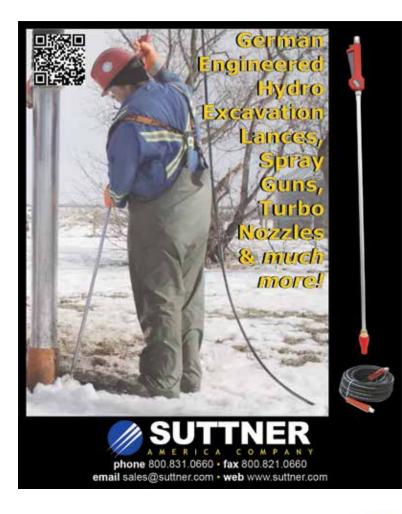


352-728-2222; www.vermeer.com

Nozzles

Enz USA Hydro X

The Hydro X nozzle from Enz USA is available in 3/8-inch NPT or 1/2-inch connecting threads, and it can function at up to 5,000 psi with flow as low as 8 gpm. It combines a powerful, oscillating water jet with a high debris removal rate. A tungsten carbide front jet ensures a longer life than ceramic jets can offer. For quick and easy maintenance, a repair kit is available. Due to the nozzle's simplicity, repairs can be made quickly and efficiently in the field with little downtime. For the operator's safety, a plastic cover provides protection against harsh and sensitive environments. **888-369-8721; www.enz.com**



Hydra-Flex Machete

The Machete hydroexcavating nozzle from Hydra-Flex channels water in an oscillating motion, creating a small spray angle and a direct stream with a forceful impact. This premium penetration will allow faster digging and more precise trenching capabilities. Its durable, replaceable cover allows for quick changes while increasing the nozzle's lifespan. It is available in three sizes, with operating pressure ranges from 1,000 to 3,200 psi and a heat rating of 180 degrees F. It will last in excess of 500 hours, according to the maker. **952-808-3640; www.hydraflexinc.com**

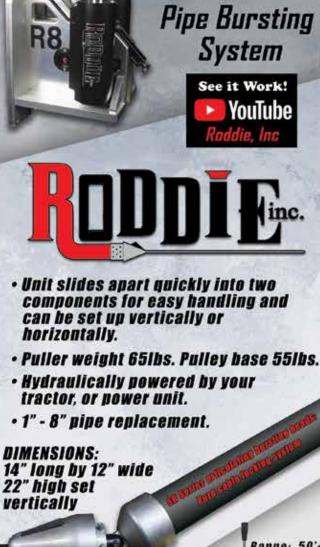
Water Pump

Cat Pumps Hydroexcavating Pumps

Cat Pumps Models 2560 (16 gpm at 3,000 psi) and 2565 (20 gpm at 2,500 psi) hydroexcavating pumps are constructed for continuous-duty

applications. BH versions have a machined-bearing cover to mate with Cat Pumps' 76SAEC.25FR hydraulic bell housing, allowing the 2560BH and 2565BH to be directly driven by an SAE C hydraulic motor. The compact direct drive allows for a space-saving footprint, and is simple to install and maintain. **763-780-5440**; www.catpumps.com ▼

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Success Stories: Vacuum Excavation

BY CRAIG MANDLI



Dry suction attachment a fit for remote daylighting

PROBLEM

Banton Construction is a contractor working for Metro North Railroad. They have an excavator on site to do some initial excavation, but once they get near underground infrastructure, they are required to expose the underground utilities with safe-dig technologies. Road access is often limited. Hy-rail hydrovac trucks are often difficult to find and come at additional cost. In addition, in this situation, with a six-hour work window, the work crews were often not able to use the entire window. Once the hydro-vac truck was full, it would take 2 1/2 hours for the truck to empty and return to the job site.

SOLUTION

The tinbin TC2 dry suction excavator attachment from Integrity Rail Products

was a fit. Since there is an excavator on site already with sufficient hydraulic flow and capabilities, the suction capabilities of the tinbin TC2 were easy to implement. The soil was loosened from around the utilities with an air lance and then sucked out of the excavation with the tinbin TC2. Because the spoils were dry, Banton Construction personnel could dump the spoils on site or place them into a dump truck for removal. The excavator with the tinbin TC2 could keep working as the spoils were spread out on site or removed by other equipment.

RESULT Crews are now able to use the entire work window. This results in increased production for Banton Construction, making it easier for them to keep on schedule and minimize disruptions to the railroad.

905-928-6415; www.integrityrailproducts.com



Suction excavator saves on slurry disposal costs

PROBLEM

Expanding solar farms across the U.S. require the same level of utility maintenance and infrastructure development as a small city. When vacuum excavation equipment is needed for large scale excavations along buried lines, an air or dry vac must be used because slurry spray would damage the panels and there's nowhere within range to refill water tanks or dispose of slurry.

SOLUTION

Ox Onsite, operating out of Jacksonville, Florida, uses the **MTS Dino 4.5 Advanced Suction Excavator** to effectively dig very long trenches in a variety of tough soil conditions. Solar arrays typically run for hundreds of yards which would require a lot of backfill, but with excavated spoils kept unaltered the native soil is reused and no further equipment is required.

RESULT The solar farm client saved thousands of dollars in slurry disposal and haulage fees and ended up booking multiple trucks to finish the job a couple months ahead of schedule.

877-534-4379; www.ox-onsite.com **V**



Connector cover keeps debris out of couplings

PROBLEM

Hydroexcavation operators constantly struggle with quick connect couplings on the end of the lances. The couplings become inoperable when mud, dirt and spoils that may contain wet sand, clays, gravel and other debris become lodged in the joint. Advanced Plumbing & Mechanical in Monmouth, Illinois, constantly struggles with debris in the couplings.

SOLUTION

Vactor offered a **connector cover** called **The Shield.** This device is retrofittable to all Vactor products in the field, as well as competitor products.

RESULT Advanced Plumbing & Mechanical experienced The Shield firsthand. "For such a simple concept, The Shield has eliminated all of our previous struggles," says Zach Johnson, the company's owner. "After several days of work, the quick connect couplings are left clean and fully functional." 815-672-3171; www.vactor.com

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THE LATEST: Products



1. Cat Pumps Hydroexcavating Pumps

Over 50 years' high-pressure pump manufacturing experience has earned Cat Pumps a reputation for producing the highest-quality, longestlasting pumps in every marketplace it serves. Engineers at Cat Pumps designed Models 2560 (16 gpm at 3,000 psi) and 2565 (20 gpm at 2,500 psi) to meet the hydroexcavating market needs. Constructed for continuous-duty applications, the 2560 and 2565 pumps are dependable, highquality products backed by world-class customer service, training and support. BH versions have a machined-bearing cover to mate with Cat Pump's 76SAEC.25FR hydraulic bell housing, allowing the 2560BH and 2565BH to be directly driven by an SAE C hydraulic motor. The compact direct drive allows for a space-saving footprint, and it's simple to install and maintain. **763-780-5440; www.catpumps.com**

2. Gauge JackHammer tracking devices

Gauge's JackHammer series GPS tracking products have a IP69K environmental rating, a negative 40 to 185 degree F operating range, and a LTE Cat-M1 cellular module. The JH-BP2 is intended for non-powered assets like trailers, storage containers or roll-off boxes. It includes a 17-year battery based on one message a day. The JH-BP3 is intended for implements and attachments such as buckets, jackhammers, pile drivers and more. It includes a 4-year battery and an optional weld-on steel guard. **317-472-6455; www.gaugecorp.com**

3. Volvo Load Assist wheel loader software

Volvo Construction Equipment launched new functions on its wheel loader productivity software, Load Assist. The updates include new modes within the On-Board Weighing app, the Operator Coaching Advanced app and Quick Tips. The On-Board Weighing app provides real-time insight into the bucket's load within plus/minus 1% accuracy. The new Simple Mode limits On-Board Weighing to three core functions: viewing the current load in trip mode, viewing the loaded weight and printing a simplified receipt. Operator Coaching now includes a host of advanced features, including two new views for productivity and utilization. Another new tool, Quick Tips, shows messages on how to use specific apps and functions found within the Co-Pilot display. **828-650-2000; www.volvo.com/constructionequipment**

4. Doosan -7 Series mini excavators

Doosan Infracore North America next-generation -7 Series mini excavators are equipped with a family of products, including Doosan engines and diagnostics. The first four excavator models include the zero-tail-swing DX27Z-7, DX35Z-7 and DX50Z-7, as well as the reduced-tail-swing DX55R-7. The new DX27Z-7 expands the Doosan mini excavator lineup with a model for those who need a smaller machine. Integrated into the excavator design, additional counterweight enhances the excavator's struc-

tural durability while enabling offset digging without the need to reposition the machine. Lift-over-side capacity is also enhanced because of the machines' integrated counterweight design. A swing-open tailgate and side-access hood provide easy access to the excavator's engine and pump package, valve bank, cooling system and hydraulic system. **770-831-2200**; www.doosanequipment.com

5. COXREELS Extreme-Duty XTM Series spring rewind reel

The XTM Extreme Duty Reel from COXREELS is based on the TMP T-Series Medium Pressure product line, and uses all the options available in the COXREELS lineup with some unique features for extra rugged environments. All sizes of the XTM Series feature stainless steel rollers directly integrated into the all-welded steel box frame. The reels utilize dual permanently lubricated bearings, rigidly fixing the drum assembly to the solid 1-inch steel axle for consistent stability even in the most vibratory and impacting environments, while still maintaining an external fluid path for easy service. The reels feature swivel retainers which prevent unwanted vibratory loosening of threaded components and easily accessible ratcheting mechanisms. High temperature, steel core arbors transfer the powerful heavy duty spring motor torque to the multiple supported axle ensuring reliable rewind in odd positions or dirty situations. **800-269-7335; www.coxreels.com**

6. John Deere 350 and 380 mid-sized excavators

John Deere released the newly enhanced 350 P-Tier and 380 P-Tier midsized excavators. Both offer SmartGrade technology as a factory option and field upgrade kits, and the user can choose from 2D or 3D guidance, or 2D or 3D SmartGrade Ready Control. Overdig protect limits the bucket's cutting edge from going below the target design surface. Visibility around the machines has been improved with the option of a right, rear and left camera system with LED surround lighting that provides 270-degree visibility and is integrated into the cab's primary display. In an effort to lower daily operating costs, the machines' fuel economy is up 7% compared to previous models via electric on-demand cooling fans that reduce engine load, in-line after treatment for less restriction and system complexity, and increased front piping diameter to cut down hydraulic restriction. **800-503-3373; www.johndeere.com**

7. Vermeer D550 horizontal directional drill

Vermeer's D550 HDD maxi-rig 550,000-pound HDD drill offers 100,000 ft-lbs of torque, advanced telematics and smart onboard technology and diagnostic information. The D550 crawler-mounted drill is designed for installing large-diameter products, including oil and gas pipelines, waterlines and high-voltage electrical transmission lines at long distances. The drill's onboard telematics gives operators and service technicians access to important diagnostics information. Operationally, the D550 controls









have three different auto drilling modes: rotation, thrust and speed. The unit's ultra-slow speed technology delivers precise thrust control to allow operators to regulate weight-on-bit pressure for optimal cutting action and maximum tooling life. 352-728-2222; www.vermeer.com

8. ASV Holdings smooth CTL turf tracks

ASV Holdings offers smooth turf tracks for minimized damage to soft, delicate surfaces. With a combination of greater ground surface area and the benefits of ASV's Posi-Track undercarriage, the turf tracks can achieve equal or better traction than treaded tracks on dry surfaces. ASV turf tracks can minimize damage to topsoil and root systems, allowing for faster job completion in landscape, hardscape and golf course applications. The turf tracks have a completely smooth design and are manufac-

tured from a specialized blend that resists cracking, provides traction and maximizes overall life. The rubber tracks eliminate rusting and corrosion because they contain no steel cords. Additionally, durability is maximized through seven layers of embedded puncture, cut and stretch-resistant material. These turf tracks are available for the RT-25, RT-40, RT-50, RT-65 and VT-70 High-Output models. 800-205-9913; www.asvllc.com



This Issue's Feature:

Digital hub helps contractors make sense of telematics

comprehensive digital hub

BY CRAIG MANDLI

Technology has made mountains of telematics data available at your fingertips. But how do you interpret it? How do you make it work to run your business more efficiently? What if you could monitor the health of your entire mixed-equipment fleet from one dashboard, receive maintenance alerts on your phone, and order parts without searching through manuals? You can with Komatsu's comprehensive digital hub, My Komatsu.

My Komatsu gives contractors easy-to-interpret visual analyses of data collected from numerous sources displayed on easy-to-read dashboards. It can pull data from Komtrax, Komtrax Plus, ISO API 15143-3 (AEMP 2.0) data from other OEMs, or other direct data sources and provide powerful analytics to help contractors manage a varied fleet and drive business without managing multiple IDs and passwords.

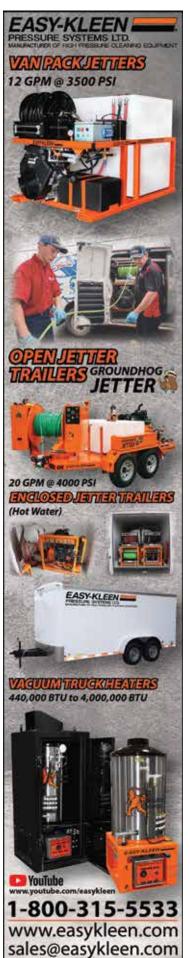
"Komatsu understands that our customers are busy and expect technology to be easy to use," says Matthew Beinlich, director of digital support solutions for Komatsu. "Starting today, our customers can get the most important telematics data, such as location, hours, fuel consumption, idle ratio and production, from My Komatsu for many of the other brands of equipment they may operate."

The system has been designed to make it easy to collect, visualize and monitor telematics data from both Komatsu and non-Komatsu machines. It lets users quickly view and manage data on one dashboard, receive maintenance alerts and order parts, troubleshoot to help minimize downtime, monitor for theft and unauthorized use, benchmark machine performance, track fuel consumption and manage fuel efficiency, and access data anytime. With the ISO-15143-3 (AEMP 2.0) telematic API (application programming interface), computer code allows fleet managers to integrate new telematics digital information into existing fleet management systems. With this functionality, fleet managers can view telematics data for Komatsu and non-Komatsu machines to easily visualize the complete fleet, pull operation reports and set alerts.

"Simply enter the ISO 15143-3 API credentials for those brands into My Komatsu once, and you'll no longer need to log into each OEM's system separately each day," says Beinlich. Instead, data generated by the equipment (Komatsu or non-Komatsu) flows to Komtrax data storage. ISO 15143-3 (AEMP 2.0) facilitates the extraction and raw data to the choice of database. ISO integration and analytics are currently standard features with a My Komatsu registration.

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THE LATEST:

Hyundai announces 3 new team members

Hyundai Material Handling, North America, announced the hiring of three new team members. Cecil D'Antignac will join the company as district sales manager for the Southeast region. D'Antignac brings over 28 years of material handling industry experience to Hyundai. Jeffrey Mathews brings over 20 years of material handling experience in his new role as national accounts manager. With over 20 years' experience as a professional technician, Jason Taylor will support Hyundai dealers as technical trainer for the brand.

McElroy names Barry Johnson as new quality director

McElroy hired Barry Johnson as the company's new quality director. He will replace Steve Burgess, who has announced his retirement after 35 years of service to McElroy. Johnson will lead McElroy's quality team,

identifying opportunities to improve the company's overall customer experience. Prior to arriving at McElroy, Johnson held positions at several companies including Ford Motor Company, Brunswick and TriMas. Most recently, he served as senior director of quality and continuous Improvement at NORDAM, an aerospace manufacturing and repair firm.

VMAC named Manufacturing Business of the Year

VMAC was named Manufacturing Business of the Year at the 21st Annual Grant Thornton Vancouver Island Business Excellence Awards. VMAC previously has won the Manufacturer of the Year category in 2018 and 2019 and was named Business of the Year in 2020.

NUCA Member of the Year award named

The National Utility Contractors Association awarded Mike Sturgill of Xylem Dewatering Systems its NUCA Associate Member of the Year award, honoring his work on behalf of the association and two new NUCA chapters in Tennessee and Texas.



CALENDAR

Sept. 12-14

Breakthroughs in Tunneling Short Course, University of Denver - Joy Burns Center, Denver. Visit www.tunnelingshortcourse.com.

Oct. 8-12

95th Annual Technical Exhibition and Conference (WEFTEC), New Orleans Morial Convention Center, New Orleans. Visit www.weftec.org.

Nov. 2-4

Tunneling Association of Canada 2022 Conference, Fairmont Hotel Vancouver, Vancouver. Visit tunnelcanada.ca.

Nov. 15-16

Pipeline Leadership Conference, The Embassy Suites The Woodlands at Hughes Landing, Houston. Visit www.plconference.com.

Feb. 14-16, 2023

Global Excavation Safety Conference, The Tampa Convention Center, Tampa, Florida. www.globalexcavationsafetyconference.com.

Feb. 20-23

Water & Wastewater Equipment, Treatment & Transport (WWETT) Show, Indiana Convention Center, Indianapolis. Visit www.wwettshow.com.

Send contributions to our Happenings column to editor@digdifferent.com.



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