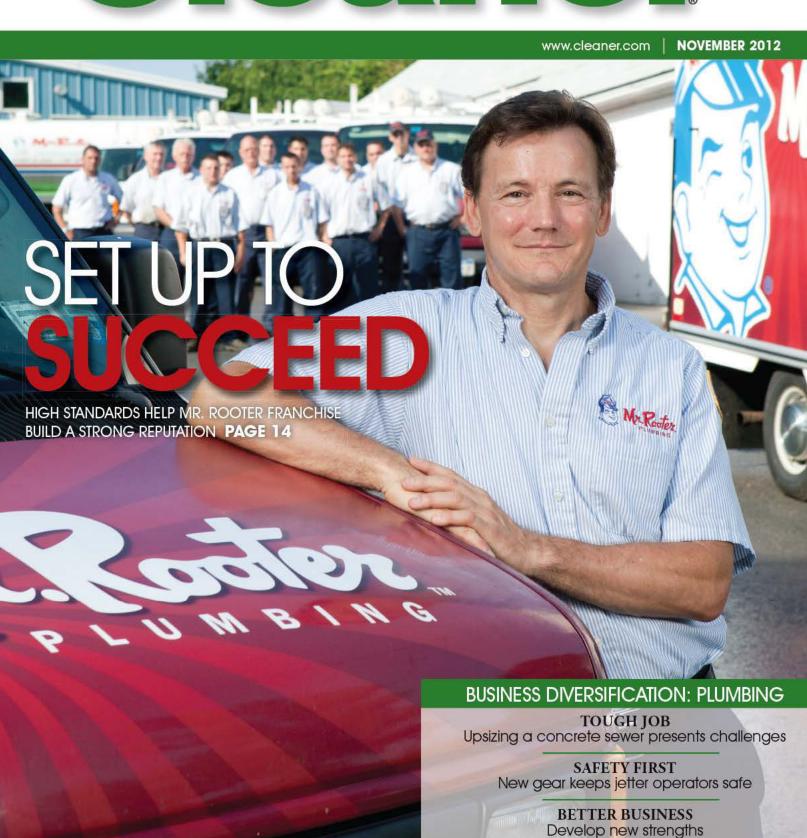
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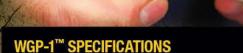
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Network connectivity allows remote diagnostics and maintenance, as well as automatic network connectivity allows remote diagnostics and measure defect size. Included the image of the latest undate adds tools to measure defect size. Network connectivity allows remote diagnostics and maintenance, as well as automatic firmware updates. (The latest update adds tools to measure defect size, flow capacity, and lateral angle plus macro for one hutton crawler return.) link

lateral angle, plus macro for one-button crawler return.)



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November 2012

features

Set Up to Succeed By Pete Litterski



On the cover: Clint Kershaw owns Mr. Rooter of the Hudson Valley in Pleasant Valley, N.Y. Kershaw has been in business for 16 years, and his crew of 25 handles everything from water heaters to root intrusions for customers across six counties in the Hudson River Valley. (Photography by Steven Planck)

Clean, Inspect and Detect

Texas contractor keeps a tight focus on diagnosing problems and leaves repair work to other contractors. By Marian Bond

Tech Perspective: On Call

Building an emergency response team requires careful planning and attention to detail. By Jim Aanderud

Get Ready for Indy

Pumper & Cleaner Expo will return to the Hoosier State in 2013. By Luke Laggis

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From the Editor: Pay Yourself a Complement

Adding the right services can create tremendous opportunities for your business. By Luke Laggis

Safety First: Cloak of Protection

A new line of safety gear will help keep jetter operators safe. By Luke Laggis

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Luke Laggi editor@cleaner.con

ADDING THE RIGHT SERVICES CAN CREATE TREMENDOUS OPPORTUNITIES FOR YOUR BUSINESS

BY LUKE LAGGIS

he theme of this issue of *Cleaner* is Business Diversification. It may not sound exciting, but it's something every business owner in this industry should be thinking about, because diversifying service offerings can facilitate expansion and generate business even in difficult times.

There are many plumbing contractors that don't handle sewer and drain cleaning or repair and replacement. These services often fall to specialized drain cleaning contractors like those featured on these pages every month. Yet these pages are also a testament to the stability and opportunity this line of work can bring to a traditional plumbing contractor. The volume of new installations can rise and fall with the housing market and other factors, but things break, and cleaning and repair work is always necessary.

A few months ago I wrote a column extolling the virtues of specialization and the need to establish a core business from which you can build. Let's assume you've already done that. The next step, if growth is a goal, is to logically expand service offerings from that core. I say logically because it might not make sense for an inspection company to jump into something as technical as pipe bursting if it isn't doing any other repair work. However, adding basic jetter service to clean lines that have just been inspected is a logical step with great revenue potential. The key to many contractors' success is expanding with complementary services.

If your focus is traditional plumbing, CCTV inspection is a great bridge to the cleaning and rehabilitation end of the business. Inspection is a natural complement to your repair service, while pipe bursting would stray far from your core business. You could offer pipe bursting, but it won't directly complement your other services so there will be fewer opportunities to profit from it. If you're already doing dig-and-replace work, CIPP lining or pipe bursting could complement your existing services quite nicely.

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In the October issue of *Cleaner*, we profiled Levine and Sons of Redford Charter Township, Mich., a third generation plumbing company that established its roots long before CCTV inspections and CIPP lining were even a thought. Approximately 80 percent of the company's business is still in traditional plumbing installation and repair, but they've moved beyond the traditional scope of plumbing services. Today, the company also offers drain cleaning, sewer lining, pipe bursting, CCTV inspection and dig-and-replace sewer line work. The company devotes a full-time crew and three trucks to this segment of the business.

The volume of new installations can rise and fall with the housing market and other factors, but things break, and cleaning and repair work is always necessary.

The key is that all these services complement the company's traditional plumbing repair work, opening additional revenue streams. If a customer calls with a backed-up sink, the Levine team can handle everything from cabling the drain to lining the sewer lateral, depending on where the root problem lies. The services all play off their basic plumbing repair work.

The value of diversification is something Clint Kershaw thoroughly understands. Kershaw's business, Mr. Rooter of the Hudson Valley, is profiled in this month's issue. Kershaw and his crew handle blocked sewer lines with everything from jetting and rodding equipment to complete pipe lining and pipe bursting services. Technicians also work on fixtures, water supply lines and water heaters, and the company even offers excavation and installation of new onsite treatment systems.

"One of the challenges in my business is finding people who have all the necessary skills, plus the customer service skills to do all of that," Kershaw says.

Indeed, having the expertise to tackle a wide range of services is a challenge for any business, which is why it's important to build a strong foundation of knowledge and services before branching out. But once you've accomplished that, expansion is the next logical step.

Adding a new service is a major decision, and one that should be carefully thought out. That said, additional services present new opportunities for your business and new avenues to reach your goals.

So keep your eyes out for the next opportunity, and enjoy this month's issue. $\ensuremath{\mathbf{c}}$







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Five new service trucks were delivered to Zoom Drain & Sewer Service located in Philadelphia, PA during the summer of 2012. This makes a total of 18 trucks delivered over the past ten years, 7 for the year 2012. Every service truck contains a US Jetting 3010 High Pressure Jetting Unit (3,000 PSI @10 GPM) with 180 gallon water storage tanks within a fully wrapped Hackney Service Body mounted on an Isuzu chassis. The latest 5 trucks have PTO - hydraulic drive pumps instead of diesel power, a compact design upgrade that greatly increased storage space. Read more about all the Zoom trucks built over the last decade at www.usjetting.com.



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more. For customers with septic systems that have failed, the company even offers excavation and installation of new onsite treatment systems.

"We do all of that and any of that," Kershaw says. "We work on everything from the water meter or the pump through the house and outside to the sewer or the septic system. One of the challenges in my business is finding people who have all the necessary skills, plus the customer service skills to do all of that."

THE RIGHT PEOPLE

Kershaw says he sets high standards for the 25 employees on his payroll. For technicians, he seeks experienced plumbers who know all of the basics of the trade and demonstrate the capability to learn the necessary skills to provide the full line of services offered by his company.

The franchise advertises in local newspapers and online when it needs a new employee, and Kershaw says he will often keep ads running even when he is full-staffed because he will occasionally find someone who would make an ideal addition to his team.

Kershaw's favorite candidates are plumbers who have had their own business in the past. "From their point of view, they know they can often make better money and get rid of a lot of headaches," Kershaw says. "And for me, they already know the importance of good customer service on the job.

"My most impressive staff member is John Gorman. He won Technician of the Year in 2011 out of all of the technicians in the Mr. Rooter system. He was in business for himself before he came to us. His people skills and plumbing experience are stellar but he was not very good at running his own business. The Mr. Rooter system allows John to run his own business within my business. He is one of my top technicians year after year."

"We work on everything from the water meter or the pump through the house and outside to the sewer or the septic system. One of the challenges in my business is finding people who have all the necessary skills, plus the customer service skills to do all of that." Clint Kershaw

Kershaw's field employees - the 12 plumbers, an excavator operator, pumper truck operator and his assistant - are supervised by service manager Drew Colwell.

"He is relatively new to me and fitting in well," Kershaw says. "His demeanor is calm which is a necessity in this job. With 15 technicians working, and all of the customers they service, things can get hectic, but Drew remains calm and collected.



profile

MR. ROOTER OF THE HUDSON VALLEY, PLEASANT VALLEY, N.Y.

OWNER: Clint Kershaw

YEARS IN BUSINESS:

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"My office is run by Brian George. He came from a fuel oil service company and started as a customer service representative. He is attending school full time and running my office. He has become my right-hand person remembering all of the details I seem to forget."

Despite the breadth of services he offers, Kershaw says the plumbers he hires generally don't need much training. "Most of them are rounding second base and they know almost everything they need to do the job," he says.

After receiving basic training on the company's equipment and learning Mr. Rooter of the Hudson Valley's policies and procedures, most of the new plumbers are soon able to go into the field with their company truck and begin handling calls.

"If they run into something they can't handle, we don't call them in," Kershaw says. "We'll have them stay on the job so they can learn from the technician we send out to help them. That way they can learn how to handle it on their own next time."

Kershaw says whether employees work in the field or in the office, he wants them to be able to learn all of the skills that will make them stand out on the job.

(continued)



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ABOVE: Mr. Rooter employees John Gorman, left, and Kurt Albert use a Scooter camera to inspect a line at Our Lady of Lourdes High School in Poughkeepsie, N.Y. RIGHT: Shawn Abrams uses a Spartan cable machine to clear a line at Hannaford Plaza in Wappingers Falls, N.Y.

"We know that most people aren't going to stay with us forever, but even with our office workers we want them to learn the skills not only to do their job right, but to help them move on if they want to."

"We know that most people aren't going to stay with us forever, but even with our office workers we want them to learn the skills not only to do their job right, but to help them move on if they want to."

Clint Kershaw

Although his technicians are scattered over a broad territory, Kershaw brings them into the office once a week for a group meeting to go over any issues that might require training or a new approach.

CLEAN TRUCKS AND GOOD EQUIPMENT

Mr. Rooter of the Hudson Valley technicians are expected to keep their company trucks stocked and ready to handle just about any plumbing problem they encounter on the initial visit to a customer's home or business.



Kershaw is just as particular in choosing equipment for his crew as he is in the hiring process. "When I started in this business I chose one make and model of each piece of equipment that I was going to use. Every plumbing shop I went into had broken equipment lying all over the place. I picked each

CARING FOR HIS COMMUNITIES

Late in 2011, a local church called Clint Kershaw and asked if he could provide some assistance as its members tried to help a widow whose house needed major repairs.

Kershaw was asked to look at the boiler system that heated the home for the woman and two grandsons she was caring for. "She was just living in a house that was falling down around her, "he says, "The people were trying to make it liveable again."

The church members called because Kershaw had recently announced that he was starting a new effort called "Mr. Rooter Wants to Help." He says he started the program because, "We've always done little stuff for people from time to time and I just decided that people have been good to us and it was time for some payback."

Kershaw agreed to check on the boiler system and headed to the home of Elizabeth Vantassel to inspect the problems and determine what he could do to help. Before he ever entered the house, however, he noticed that her yard was soggy and flooded with sewage. He quickly determined that the corroded steel septic system had been severely damaged when someone drove through Vantassel's yard and drove over the tank.

Kershaw told organizers that Vantassel's septic system was her most serious problem and he offered to replace the system for her free of charge. The job normally would have cost \$15,000.

In the next six months, Kershaw tackled two more jobs as part of the program, one at a home where a woman's son had solved her failed sewer line problem by digging a hole in her back yard, and another for a woman who had a failed sewer line running to her septic system. Kershaw's team inspected the line and saw that it was severely damaged. "She had to keep paying someone to keep cleaning the line, so we just replaced it," he says.

Kershaw says that he and his employees have enjoyed meeting the people who needed their help and are happy they can do something to improve their lives. So far, he says, the biggest challenge is getting nominations for more people in need of help. Mr. Rooter of the Hudson Valley has links through its Facebook page to a site where people can nominate families or individuals who need help (http://mrrooterplumbingwantstohelp.com/). The only requirement to make a nomination is that the person must "like" the company on Facebook.



Mr. Rooter of Hudson Valley's plumbers also have access to a TRIC Tools pipe bursting system and a Perma-Liner pipelining system when they have to deal with a damaged sewer

For his company's septic system work, Kershaw has a 2,000-gallon pumper on a Freightliner chassis and a 4,000-gallon pumper on a Kenworth chassis.

HANDLING UPS AND DOWNS

Although he offers a full range of services, Kershaw has avoided new construction "because (continued)

Kurt Albert handles the controls of a Spartan trailer jetter while cleaning a sewer line at Our Lady of Lourdes High School in Poughkeepsie, N.Y.

tool/product, learned how to service it, stocked the parts I needed, and we are able to take care of most repairs ourselves through proper training, keeping costs down and getting equipment back into service as fast as possible."

The plumbing technicians are equipped with Ford E350 Super Duty Extended Vans. "As far as trucks go," Kershaw says, "I have always been a Ford guy. We drive every van to 200,000 miles before con-

"We know that 76 percent of our business is repeat business. If I didn't have that repeat business level when the economy went down in 2008, then I'd be out of business." Clint Kershaw

sidering getting rid of them. They last and most repairs can be performed by my local mechanic."

When a job calls for digging, Kershaw turns to his Caterpillar 357B and Bobcat 335 mini excavator. The Caterpillar includes backhoe, bucket, forklift and trencher attachments, and can tackle a wide range of jobs. The Bobcat has allowed him to expand the scope of his operation.

Kershaw equips his plumbers with Scooter Video Inspection systems to get a good look at the inside of a pipe before determining what repairs are necessary. If they find obstructions, his crews have access to a collection of jetters, including four Spartan electric jetters, two Harben trailer jetters and a Spartan Warrior Hydro-Jet trailer jetter. Each of the trucks is equipped with Spartan Drain Cable machines.

Kershaw says he likes the Spartan Tool equipment because they offer the best service. "We have a rep who visits frequently, providing repairs and parts."

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Kroy Midwest 701 S. 17th St. P.O. Box 516 Henderson, NE 6837 of the thin margins and the roller coaster market. Service is always needed, it doesn't matter what the economy is doing; things still break and have to be fixed.

"Every business has its up and downs," he says. "We weathered the recession and have come out stronger on the other side. Sales are up every year and we are able to grow again. I never would have made it through the recession without the support of Mr. Rooter corporate. Their support is worth every penny I spend in royalties."

Kershaw says he likes to be able to network with his fellow franchisees, which is a big help when he faces a new or difficult problem. "I never have to figure out what to do. I just call a few other fellow franchisees and ask what they did when it happened to them."

To market Mr. Rooter of the Hudson Valley, Kershaw relies upon traditional means such as the Yellow Pages and other media, but his staff also maintains a Facebook site where they tout not only the services of Mr. Rooter, but helpful entries about a wide array of topics. "It's not about plumbing all the time," he says. "We try to keep it interesting."

But Kershaw's favorite way of building business for the past 16 years has been by referrals. "We call all of our customers the day after we see them to say thank you and to see if there are any issues that need to be resolved. We try to keep it short and sweet and at the end, we say, 'If you know of anyone who needs a good plumber, please ask them to give us a call."

Even though his office staff makes that plug, Kershaw is most interested in assuring that his customers are happy. "We know that 76 percent of our business is repeat business," he says. "If I didn't have that repeat business level when the economy went down in 2008, then I'd be out of business."

Kershaw says that although his growth has been rapid, from two technicians when he started his franchise 16 years ago to 15 technicians today, he has kept it on a steady pace of 20 to 30 percent per year.

"Growth will kill you if it goes too fast," he says. "You can only buy so many trucks and so much equipment at one time and stay on track."

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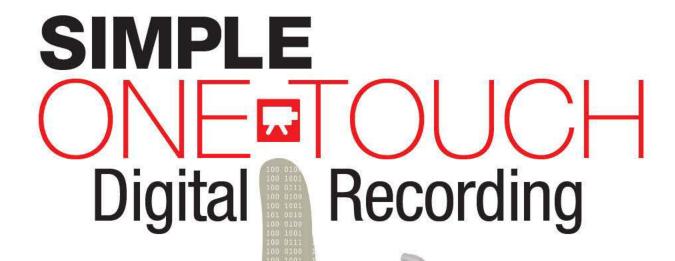
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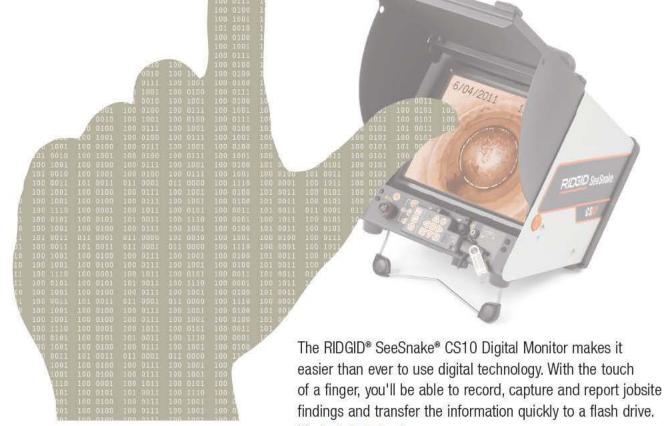
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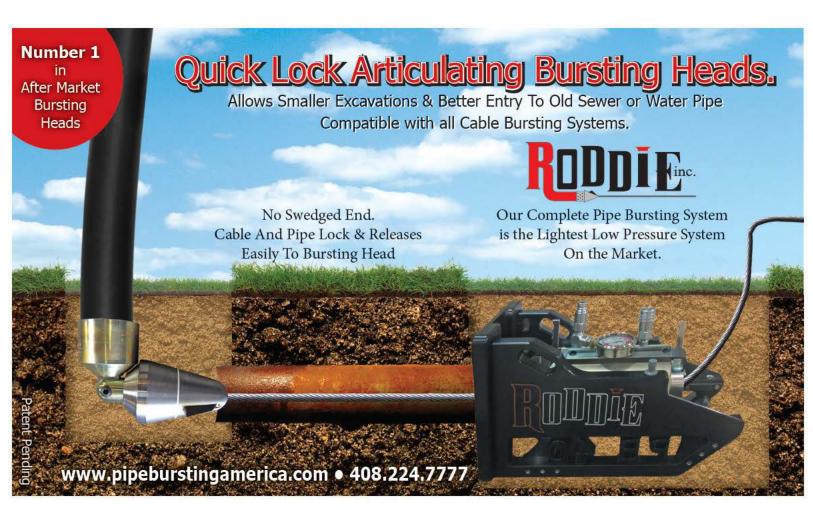
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Cloak of Protection

A NEW LINE OF SAFETY GEAR WILL HELP KEEP JETTER OPERATORS SAFE

BY LUKE LAGGIS

few months ago this column discussed jetting safety and the tragic death of Chad Unverzagt, who was killed in a jetting accident in New Castle, Ind. Unverzagt was struck by the trailer jetter's nozzle after it broke free from the pipe he was cleaning and launched up out of the pipe.

Unverzagt had 30 years of experience in the business. This wasn't his first jetting job, yet in the midst of a routine job, something went horribly wrong. It's something that could happen to anyone operating this kind of equipment on any job, any day. Proper safety precautions are critical, but even the best operators sometimes take things for granted.

Until now, safety clothing for jetting was mostly limited to large pieces of armor designed for ultrahigh pressure jetting or blasting, but a new line of gear

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for mid-pressure jetting – the range typically used to clean sewer and drain lines – is bringing another layer of safety to the industry.

The garments are made from Dyneema, which manufacturer TST Sweden claims is the strongest fiber in the world. It is made of polyethylene fiber that is 15 times stronger than steel on a weight-for-weight basis. That allows for a high level of protection and without a lot of extra weight or bulk. The garments offer protection up to 7,500 psi with rotary or spinning and fan nozzles and 3,000 psi with a straight jet on a gun.

"The big difficulty is people taking the mid-pressure range for granted; you're not operating at the 40,000 psi range that you know is going to kill you."

Nick Woodhead

Jackets, pants, aprons and full one-piece suits are available, along with gloves. The garments are designed for safety, comfort and functionality, with lined insides and feature waterproof and dirt-repelling exteriors. The full one-piece suit weighs 5.5 pounds.

TST Sweden has been making heavier protective clothing for higherpressure applications for a long time, but the new safety line is something US Jetting president Nick Woodhead pushed for and advocated. He says it's much more functional for this industry than the armored protective gear that's been available.

"Ultrahigh pressure gear is too hot in the summer and too cumbersome in the winter," Woodhead says. "This is just like a rain suit."

Woodhead says the new protective clothing is a great step, but it will take time and awareness for it to become a standard. He says at some point there will be a push for jetting companies to provide this type of safety gear, and eventually laws will change and it will be required.

"The big difficulty is people taking the mid-pressure range for granted; you're not operating at the 40,000 psi range that you know is going to kill you," Woodhead says.

The other major hurdle for safety in general, says Woodhead, is education. "People have got to be trained, and they need to be trained officially. We run training programs all the time. Most people get trained by the former operator, but who trained him? Formal training and formal education is what's vitally important in this industry."

More information about TST Sweden's ProOperator safety gear is available at www.tst-sweden.com.

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TOUGH JOB

A crew from SLR Contracting Group lowers a bursting head, skirt expander and 32-inch HDPE pipe into a shoring box with John Deere 290 and Caterpillar 336 excavators. The job required sheet piling to be driven alongside the closed lane of a four-lane parkway to protect the road from the force of the pull-backs. (Photos courtesy of SLR Contracting Group)



Tight Quarters

A PNEUMATICALLY ASSISTED BURSTING HEAD HELPS AN ONTARIO CONTRACTOR UPSIZE A CONCRETE SEWER WITHOUT DISRUPTING TRAFFIC

BY SCOTTIE DAYTON

nfiltration through failed joints in a 27-inch concrete gravity sewer in Windsor, Ontario, taxed the capacity of the wastewater treatment plant during heavy rains. Hydrogen sulfide was corroding the crown in many places.

"The water table 24 inches below grade made the soil like liquid sand. Our trench boxes would abut a busy four-lane parkway. Underground utilities were on the other side of our 14-foot-wide work corridor. It was intimidating."

Rob DiMenna

In 2002, the city put out a tender to directional drill the 3,800-foot sewer. No contractors responded. City engineer Fahd Mikhael looked at other solutions, including open-cutting, but no one would touch the job. Fearful of the sewer's imminent failure, the city requested bidding to pipe burst and upsize the line in 2012.

Two firms responded and local SLR Contracting Group won the bid. Although the company had extensive sewer and water main experience, it had

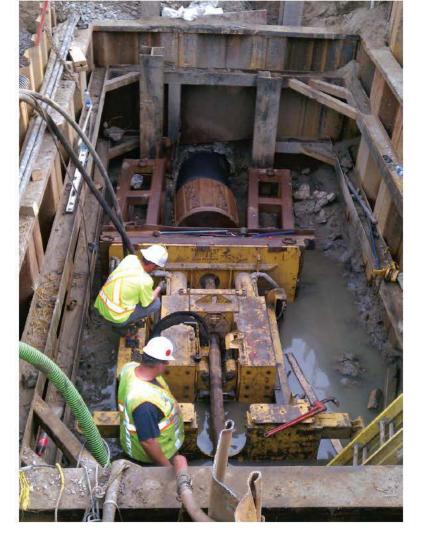


Midwest Trenchless Services employee Jon Snyder assists as the bursting head, skirt expander and 32-inch HDPE pipe are lowered into the pit.

never burst pipe, and crews would have to learn on a site with multiple challenges.

"The water table 24 inches below grade made the soil like liquid sand," says project engineer Rob DiMenna. "Our trench boxes would abut a busy four-lane parkway. Underground utilities were on the other side of our 14-foot-wide work corridor. It was intimidating."

With guidance from Midwest Trenchless Services in Grant, Mich., SLR completed the project in three months despite a strike by operating engineers and unexpected obstacles. The company believes it also set a U.S. and Canadian record for the longest pull of 32-inch pipe - 570 feet.



tough

PROJECT: Upsize a sewer paralleling a busy parkway

CUSTOMER: City of Windsor, Ontario

CONTRACTOR: SLR Contracting Group, Windsor

EQUIPMENT: Pipe bursting system,

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RESULTS: Sewer upsized in three months without

disrupting traffic

ROLLING THE DICE

Joel Kruszynski, president of Midwest Trenchless, and three associates provided on-the-job training for DiMenna's people. "We expected the worst," says Kruszynski. "Ground conditions were bad. The sewer was installed in 1915, so no one knew how thick the pipe was or how it was reinforced. Without knowing that, we guessed at how much force it would take to burst it. It was a crap shoot."

To improve their odds, Midwest built a 36-inch bursting head with bullet nose, dorsal and side slitting blades, and a 12-inch pneumatic hammer powered by a 350 cfm Ingersoll Rand compressor that would add 150 tons of force to assist the 330-ton hydraulic ram. A 36-inch skirt expander screwed to the new pipe would create the annular space for the larger diameter.

DiMenna rented one 6-inch and two 8-inch pumps from Godwin Pumps for the elaborate sewer bypass system. He also rented a wellpoint dewatering system from Double Diamond Dewatering (Strathroy, Ontario) for the nine 10- to 16-foot-deep pits excavated 500 feet apart.



LEFT: Midwest Trenchless Services' employees Brandon Sanford (left) and George Jordan complete a burst. ABOVE: The 32-inch HDPE pipe passes under a live 20-inch 700 psi natural gas main with minimal clearance.

"The city wanted us to sheet pile each hole, but we built four 24- by 12-foot sheet pile boxes that we could move easily to leapfrog over excavations," says DiMenna. By working downstream, the pulling pit would become the entry pit the next day.

SAFETY FIRST

Vehicles on the major commuting parkway traveled at 50 mph, and the trench boxes butted against the edge of the pavement. "Even when separated by Jersey barriers, it's very difficult for crews to work within a foot of oncoming traffic," says DiMenna.

Officials closed the nearest lane for safety purposes and to enable workers to install sheet piling that protected the road when the boxes moved against it from the force of the pulls. SLR also held daily toolbox safety talks and a weekly meeting with its full-time safety representative.

Underground utilities on the opposite side of the work corridor included a 30-inch sewer force main, a 24-inch water transmission main, and a 16-inch gas main. DiMenna's crew used the area to fuse sticks of 32-inch HDPE IPS (iron pipe size) pipe. After attaching the bursting head, they lowered the assembly into the pits with a John Deere 290 and Caterpillar 336 excavator.

The self-contained, hydraulic static pipe bursting machine used rods linked together to pull the head. As the rods appeared in the machine during pullbacks, SLR's Shayne Renaud and Midwest's Jon Snyder removed them, enabling the Caterpillar shovel to lift the rods from the hole.

Midwest's technical experience had DiMenna's crew comfortable with the job from the first day. "Joel and his guys were great to work with," says DiMenna. "He made certain that we had extra power to overcome what was out there. Consequently, we tried the first pull without slurry, it was successful, and we never used any."

Pulls of 500 feet began around 7 a.m. and finished between 2 and 3 p.m. Removing the expanders and setting up the next day's pull took another three to four hours. "We discovered the sewer pipe was reinforced with rebar because



hydrogen sulfide corrosion had exposed it," says DiMenna. Even in sections with much of the crown missing, bursts still averaged 260 to 280 tons of force.

SWING AND SWAY

Because of soft ground conditions and constant dewatering, sections of highway began failing three or four feet into the closed lane. As work neared a row of utility poles, Toronto Hydro-Electric System shut off that portion of the grid for the day.

"Original drawings indicated 12 inches of clearance between the gas main and sewer. When we open-cut to expose to the line, it sat right on top of the sewer. That caused some havoc."

Joel Kruszynski

The pull progressed smoothly until the head passed under the first pole. "The pressure spiked to 300 tons about the same time the pole began moving in response to concrete displacement," says Kruszynski. Upon investigation, workers found the pole seated directly on the pipe. Work stopped until two Hydro-Electric trucks arrived to raise the row of poles 18 inches, allowing the bursting head to pass beneath them uneventfully. This section of the pull took four days.

A strike by local operating engineers halted the project for one-and-ahalf weeks. "All we could do was sit it out and pay rent on the equipment," says DiMenna.

With issues resolved, work resumed on a pull that would pass under a 20-inch 700 psi natural gas main. "Original drawings indicated 12 inches of clearance between the gas main and sewer," says Kruszynski. "When we open-cut to expose to the line, it sat right on top of the sewer. That caused some havoc."

With no room for displacement, the bursting head and broken concrete could damage or rupture the main. Workers undercut the sewer, then pushed it into the depression with the excavator bucket. "We crossed our fingers and started the pull," says Kruszynski. He advanced the head as slowly as possible, enabling the concrete pieces to fall safely into the void.

The pressure also spiked to 300 tons when bursting through the sewer's 10 unevenly spaced concrete manholes. DiMenna reduced the number of structures to seven by increasing the distance between them and eliminating the last one. The decision extended the final pull to 570 feet, but it was uneventful.



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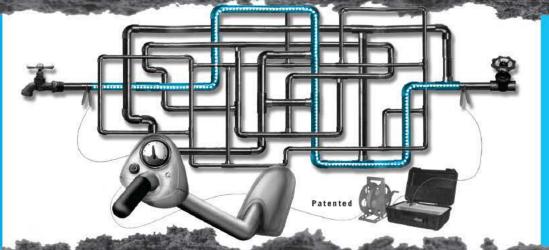
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PHCC MEMBER

AAA Flexible Pipe Cleaning crew member Robert Pacas, left, holds the hydrovac hose from an Aquatech combination unit (Hi-Vac Corp.) in a drainage pipe while Manuel Hernandez operates the controls at the truck. (Photos by John Everett)



CLEAN, INSPECT AND DETECT

TEXAS CONTRACTOR KEEPS A TIGHT FOCUS ON DIAGNOSING PROBLEMS AND LEAVES REPAIR WORK TO OTHER CONTRACTORS BY MARIAN BOND

Over the years, sewer cleaning companies based in northern climates would come to Houston during the winter months, but AAA Flexible Pipe Cleaning Company provided year-round pipe cleaning and inspection service. Their local roots and steadfast presence helped establish a solid customer base.

Michael Fisco, who came to Houston in 1979 to run the family business, says they began to concentrate on industrial, commercial, municipal and some residential work at that time, moving away from traditional plumbing services.

"The thing is, we don't do any repairs, so we don't compete with a lot of the other companies who are actually my customers in some cases," says Fisco. "All we do is clean, inspect and find the problem."

AAA Flexible Pipe handles the initial locating and inspection work and then turns over reports or DVDs to the customer.

"We make no recommendations as to the remedy," Fisco says. "We are not an engineering company. We do not recommend any specific company to come in to do the repair."

(continued)

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LEFT: From left, Gerson Hernandez, Robert Pacas, Jesus Ibarra and Manuel Hernandez use the Aquatech truck to clean out a sewer line. BELOW: Ibarra lowers a camera (RS Technical) into a manhole to inspect the sewer line.



THE ESSENTIAL TOOLBOX

Leak detection and line locating are essential to the AAA operation. Fisco says that with the right equipment and proper training and experience in locating lines, the operator will avoid a lot of guesswork and wasted effort.

"Otherwise you can dig to find the line, and find you are 15 feet away," he says. "We have a longtime employee who is an expert at this, and he does all the training for us."

"The thing is, we don't do any repairs, so we don't compete with a lot of the other companies who are actually my customers in some cases. All we do is clean, inspect and find the problem."

Michael Fisco

Leak detection and locating tools, including the RIDGID NaviTrack II, are often the first out of the box. Fisco says they don't always televise the entire line. When the smell of gas or sanitary sewer odors are present, they use the smoke detector, which is a less expensive procedure. In some instances they are contracted to use smoke detection on an entire city sewer system – again, a less expensive method than cleaning and televising.

When testing, if there is a break in the line, smoke will rise from the ground, and the area is marked to be televised. This is a team effort with three technicians – one to operate the blower, and two others who observe, looking for leaks while walking down both sides of the street.

The AAA team has four Hurco Technologies smoke blowers (two Power Smokers for manhole inspection, and two Power Smoker 2s for cleanouts). When televising is called for, they rely on RIDGID Mini-SeeSnake Plus cameras. They keep one on each of their five CCTV vans, which were built on Ford and Chevrolet box trucks by RS Technical Services Inc.

Hydroexcavation is another important part of the business. "With sanitary sewers or storm sewers, we locate first and then hydroexcavate to expose any breaks in a line," Fisco says.

Their 18 Aquatech B-10 combo vac trucks (Hi-Vac Corp.) range from 2004 to 2012. They have a 2,000-gallon steel debris

tank and a 2,000-gallon plastic water tank for jetting. Pumps are by General Pump, 2,000 psi/65 to 80 gpm. They have positive displacement blowers with GE Water & Process Technologies Roots pump.

They also have four Aquatech SJR-1500 Sewer Jet Trucks.

Fisco says they usually get about 10 years of vehicle service within their fleet because his employees take excellent care of the equipment. Each morning, they have a toolbox meeting and run through a checklist on their trucks – lights, brakes and other systems. If there is a problem, it is fixed then and there. Otherwise they take a different vehicle. The crew is always aware of the safety issues.

"Our supervisors have expertise in specific areas, and everyone takes extensive training on a regular basis for all procedures, including safety," Fisco says.

SYSTEMS OLD AND NEW

Shifting ground commonly leads to pipe breaks and joint separations, and as a result, AAA frequently encounters root infiltration in storm and sanitary sewers. Many of the lines they inspect are composed of 30-year-old truss pipe that has failed. Older lines are usually vitrified clay, but PVC is generally used for replacement. They also see HOBAS Pipe on bigger lines. For storm sewers it's usually concrete or PVC. (continued)



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Owner Mike Fisco with crew members, from left, Robert Pacas, Jesus Ibarra, Gerson Hernandez and Manuel Hernandez.

AAA has service and preventive maintenance contracts with municipalities and industrial companies, and they are a 24/7 operation.

"If a municipality has a stoppage, we respond within an hour, with a twohour window. There are many cities that have their own equipment, but they still use us," Fisco says. "Sometimes it's on the weekend and they don't want to call their guys out.

"Everything that goes through the sanitary sewer is treated in a treatment plant. If rainwater is getting into a sanitary sewer, it gets treated, and that could be millions of gallons of water. It's very expensive for the city to treat that rainwater. Our challenge is to find all infiltration points so our customer can make the necessary steps to eliminate the problem.

REFINING THE REFINERIES

AAA also handles sewer and line cleaning, vacuuming and hydroexcavation for the local oil refineries

"We don't find many roots, but old sewer lines that are cracked, depending on the size of the plant and age," says Fisco. "Usually there is vitrified clay pipe. But they are moving to steel pipe.

"Exxon has a strict policy as to who they use. They have contractors specifically set up to handle repairs. You can't just get into a plant. You have to go through a lot of training."

Michael Fisco

"Another concern with storm sewers is when we find a sanitary sewer has a break in it and it's flowing into the storm sewer. This goes to the rivers and lakes, and we don't want this water going into the tributaries."

Fisco says the cities in their service region are big, and they could not possibly do it all. In La Porte, where he is located, they have had a contract for 25 years, even though the city has their own cleaning and CCTV crew that stays busy. "There is no way they can maintain the whole system themselves," he says.

Approximately 40 percent of the company's work is with municipalities, 40 percent is commercial, and the 20 percent balance is with industrial and residential customers who often have full storm systems in their backyards that need inspection and cleaning.

There is a lot of percolating of the pipe. It builds up. To clean, we use high-pressure jetting.

"We have an ongoing contract for cleaning and inspecting with Exxon Mobil Corporation in Bay Town, Texas. Exxon has a strict policy as to who they use. They have contractors specifically set up to handle repairs. You can't just get into a plant. You have to go through a lot of training. We've

(continued)

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pany. "We were doing grease

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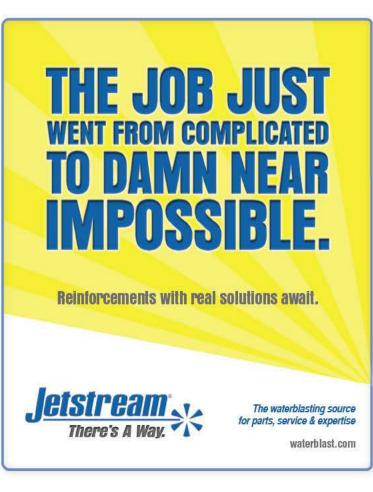
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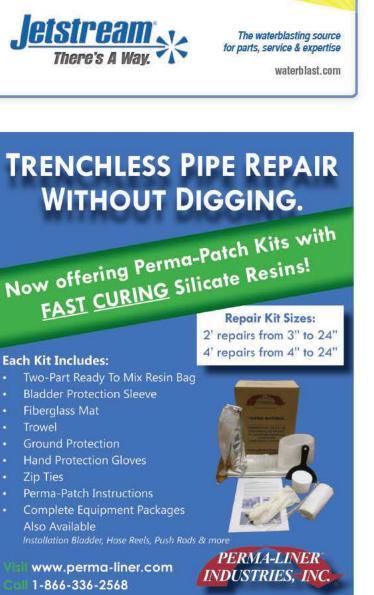
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"It takes a long time to know how to operate a truck and clean a sewer properly. It just does."

Michael Fisco

Gerson Hernandez uses a RIDGID NaviTrack Scout to locate lines.

been with Exxon for 32 years taking care of their sewers."

SAFETY TRAINING

Ongoing safety training for all employees is an essential part of the business.

"We use an outside company that comes to our facility," Fisco says. "We also do additional in-house training. When we are training to work in a refinery, we put a technician under constant watch for six weeks with a mentor from our company."

Fisco says some employees have been with him for 25 or more years, so he rarely has to worry about hiring. If it is necessary to bring on someone new, he looks for people who know how to operate equipment, as it's hard to train somebody to clean sewers. Even experienced people will be put with a trained operator for several weeks to learn how AAA Flexible Pipe conducts business.

"It takes a long time to know how to operate a truck and clean a sewer properly. It just does," says Fisco.

ROOM TO GROW

AAA Flexible Pipe operates out of a 15-acre site in La Porte, outside of Houston. Five acres is devoted to the business, with a 4,000-squarefoot building and a 7,500-squarefoot shop where two full-time mechanics handle all the maintenance and repair, with the exception of hydraulics. Ten acres are set aside for 14 longhom steers, a pet project in honor of Fisco's dad, Ernest Fisco Sr.

They cover a 100-mile radius, which is sufficient to keep all equipment on the road. If Fisco gets a request from beyond this region, he will refer to another company.

"I prefer to concentrate the business and thus, I have better control," he says. "I have a lot of friends in the industry and a good network to make referrals." c

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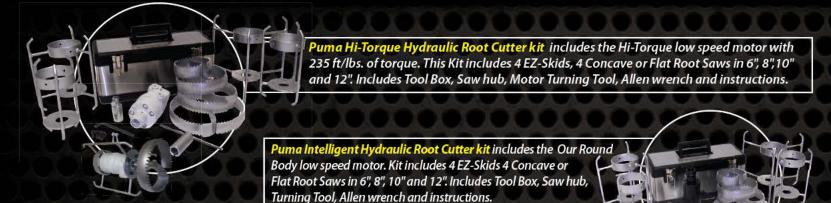
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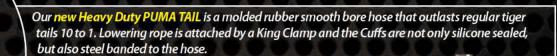
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Tech Perspective looks at technology-related issues and provides information and advice that cleaning professionals can apply to equipment selection and to their daily work in the field. Industry members are welcome to offer ideas for this column. Please direct them to editor Luke Laggis, editor@cleaner.com.

On Call

BUILDING AN EMERGENCY RESPONSE TEAM REQUIRES CAREFUL PLANNING AND ATTENTION TO DETAIL

BY JIM AANDERUD

ost municipal wastewater utilities handle sanitary sewer overflows internally and have their own emergency response teams, but these services are being outsourced more and more. As a result, there is an emerging opportunity for contractors that specialize in pipeline inspection and cleaning.

In 1972, the Clean Water Act was enacted in an effort to help clean up our waterways. The legislation led to a national focus on reducing the number of SSOs in the 1990s, and the results were quite impressive. Utilities were able to achieve significant reductions by taking aggressive and proactive measures, but even with billions of dollars spent annually to rehabilitate our aging sewer system infrastructure, sanitary sewer overflows are still inevitable.



Containing the overflow is the first priority in an emergency situation. Anything that can be used to keep the sewage from running into storm drains or green areas is fair game. (Photo courtesy of Jim Aanderud)

"A contractor-based emergency response service is not for the faint of heart. It is a serious business that requires serious attention. A haphazard plan or a lackadaisical approach is a sure path to disaster."

The fines levied for SSOs can be staggering. In some cases they can be as high as \$10 per gallon. A 400-gallon-per-minute spill can cost nearly a quarter of a million dollars per hour. If these spills aren't handled expediently, the fines can easily run into the tens of millions of dollars. So, there is great motivation to limit SSOs and respond to them as quickly as possible.

THE CONTRACTOR

A contractor-based emergency response service is not for the faint of heart. It is a serious business that requires serious attention. A haphazard plan or a lackadaisical approach is a sure path to disaster. Only serious and dedicated companies should even consider entering this market.

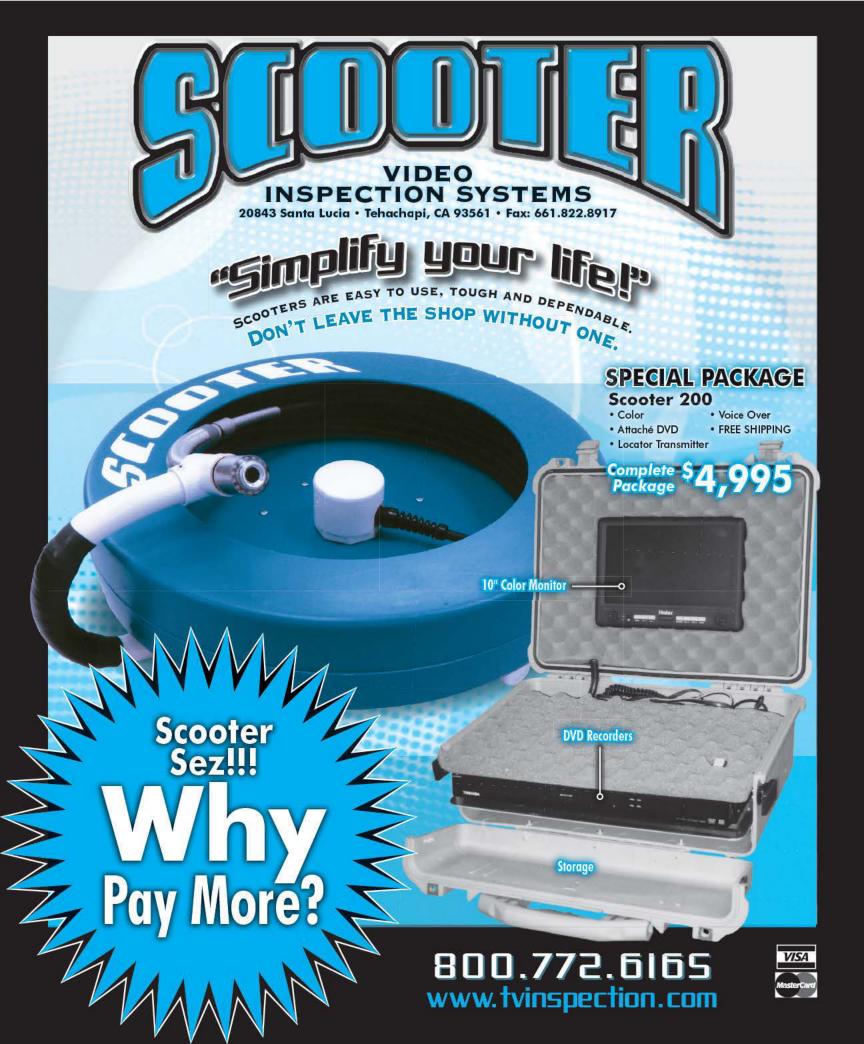
Federal and state government pressure ensures that municipal utilities take SSOs very seriously. If a contractor fails to respond to a spill within a given timeframe, the financial impact to the municipality is huge.

This cost could even be passed on to the contractor. When sewage is flowing down the street, municipal officials won't be interested in excuses.

Even if a wastewater utility doesn't contract out its emergency response services, it can still be fruitful to be listed as a backup response team. Some agencies like to keep contractors on file in the event an emergency situation develops that is larger than they can handle. This can also be a great opportunity for contractors to get their foot in the door.

If your company does get contracted as a primary emergency response team, there will still be agency personnel involved. Most likely, they will be the ones contacting you and will be on site before your team arrives. They will be the ones directing the action, while your job will be to stop the overflow.

(continued)



SETTING UP AN EMERGENCY RESPONSE TEAM

The first priority in setting up an emergency response team is to have experienced combination unit operators with extensive sewer cleaning knowledge. When your company is called out to stop a spill, there is no time for on-the-job training. The operators must know sewers and understand the dynamics that cause sewer backups. They must be able to grasp the scope of the situation quickly, develop an immediate plan of action and be capable of executing it effectively in order to stop the overflow.

In addition to the operators, the combination unit and any support vehicles must also be ready at all times. Tools, nozzles and containment equipment should always be on the trucks. Vehicles should be checked regularly to ensure that they are ready to roll.

"A good combination unit operator will understand the cause of the blockage and its exact location almost immediately. He'll be able to feel the fluctuations in the hose when the blockage is encountered, and will be able to read the water as the dislodged material flows through the manhole."

Operating an emergency response team presents many challenges, but none greater than the need to have personnel on standby 24 hours a day, 365 days a year. Crews must be rotated regularly. An ER team must be prepared to respond to an emergency at a moment's notice, and in some cases, they may be required to be on site in under an hour. Guaranteeing a timely response requires a structured communication protocol that ensures employees can be reached and will respond expediently.

There may be cost considerations when having an ER team on standby around the clock. Some companies compensate their employees for their time, while others do not. Either way, team members face some restrictions. Response time is critical to an ER program, so they must stay within a small geographical area. They cannot venture beyond a point where they are unable to respond within the allotted time, and they must refrain from drinking alcohol.

Standby compensation can be a bit tricky if there is no line item for it on the bid package. In this case, the only way to make up for the shortfall is to ensure that the cost is absorbed into the actual response time. Unfortunately, if spills don't occur for long periods of time, the financial burden could become a loss.

ON SITE

The delineation of responsibility in an emergency response should be clearly defined in the contract documents. The contractor must know who is responsible for estimating flow, determining volume, taking photographs and documenting onsite events. Most agencies take on this role themselves as they

collect information for their spill reports, but the contractor must have a clear understanding of where his responsibility lies.

Once on site, the crew must be able to work as quickly as possible in order to mitigate the situation. Containing the overflow is the first priority. Anything that can be used to keep the sewage from running into storm drains or green areas is fair game. Sand bags, absorption socks or even dirt berms can be used to hold back the sewage. In severe cases, a backhoe may be needed.



The next step is to break the blockage. Setting up at the right manhole is critical. Most of the time it's the manhole just downstream of the overflow, as it is the closest one to the blockage.

Seasoned operators understand that a single nozzle is not sufficient for clearing blockages. In this case, at least three different nozzles may be needed.

The most effective tool for breaking through the blockage is a penetrating or chisel point nozzle. These nozzles are designed to drive up the line and punch a hole through the blockage. Their torpedo-like shape and forward jets make them an ideal tool in this situation. It may take a number of impacts before the nozzle actually breaks through, but eventually flow will be restored and the overflow will be relieved.

Once the water recedes into the manhole, many crews consider their jobs done. Since there is no longer an active overflow, they assume the problem has been eliminated. But this assumption can be very dangerous and could lead to a secondary overflow. It is imperative that the obstruction be completely removed before moving on. A penetrator nozzle only pokes a hole through the blockage and may provide only temporary relief. The mass that originally caused the backup may still be there and must be removed.

A good combination unit operator will understand the cause of the blockage and its exact location almost immediately. He'll be able to feel the fluctuations in the hose when the blockage is encountered, and will be able to read the water as the dislodged material flows through the manhole.

If the blockage was caused by a root mass, it may be necessary to use a mechanical cutter like a root saw or a chain flail. A spinning nozzle such as a Warthog (StoneAge) or Bulldog (Enz USA) can be very effective if grease is the problem. Either way, a spinning nozzle should be used to thoroughly clean the pipe wall.

Blockages can interrupt the normal flow of solids for a period of time, so it is possible for a buildup of solids to accumulate behind the blockage. This must

be cleaned and completely removed before the job is complete. A Grenade Bomb-style nozzle is the perfect tool for moving large quantities of sediment.

Placing a basket in the trough is also a good idea, as it will catch the material and keep it from flowing through the manhole. Dislodged roots or any other solids could easily cause a secondary blockage downstream.

In some cases, the contractor may be required to clean up the surface area as well. Depending on the size of the spill, this may take a considerable effort. If soil was used for containment, it could be considered contaminated and may fall under special disposal requirements.

Due to the environmental impact and financial cost of overflows, it should never be assumed that a blockage has been cleared. As soon as possible, a CCTV camera should be used to inspect the area and verify that the potential for future problems has been completely eliminated.

There are many factors to consider when putting together an emergency response team, but being part of a team that protects our environment by eliminating sanitary sewer overflows can be very gratifying. Contractors who take this business seriously, prepare properly, and perform superbly, will wind up being one of the best resources an agency has.

ABOUT THE AUTHOR Jim Aanderud is owner of Innerline Engineering, a video pipeline inspection company based in Corona, Calif.







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National Association of Wastewater Transporters

8 a.m.

Introduction to Pressure Distribution Designing Systems, Boundaries and Barriers from a Soils Perspective

9:30 a.m.

11 a.m.

1:30 p.m.

4:30 p.m.

3 p.m.

Operation and Maintenance of Pressure Distribution Laterals

Pump Choices and Settings: Decisions for Proper Operation

Installing with Management in Mind: How to Get the Most out of Your System

Design and Maintenance of Grease Interceptors

SSCSC

8 a.m.

9:30 a.m.

11 a.m.

1:30 p.m.

3 p.m.

4:30 p.m.

Southern Section Collection Systems Committee

Seven Powerful Tools for CCTV Inspection Perfection

Easements — A Collection System Maintenance Nightmare

Nozzle Science — The Next Generation of Tier 3 Nozzles and Beyond

Pass or Fail - Is Your Company Going To Make It? How to Ensure Success

Social Media and Web-Based Promotion: Is it Right for Your Business?

Pipeline Relining and Rehabilitation Solutions

Time Dosing ... Why? How? And How Much?

Loading Rates — How Much Can the Soil Take?

Troubleshooting Pumps, Floats and Panels

The Dirty Dozen — Toxins That Kill Septics

NOWRA

National Onsite Wastewater Recycling Association

8 a.m.

9:30 a.m.

11 a.m.

1:30 p.m.

3 p.m.

4:30 p.m.

8 a.m.

9:30 a.m.

11 a.m.

Are Seepage Pits Really Bad? **Designing Drip Dispersal Systems**

Soil Erosion Control During and After Septic System Installation

How Installers Can Use the Poor Economy to Increase Profits

Decentralized Wastewater Collection System Maintenance

NOWRA Room 2

National Environmental Health Association

8 a.m.

9:30 a.m.

11 a.m.

1:30 p.m.

3 p.m.

4:30 p.m.

Part One: The Science and Engineering of Onsite Wastewater Treatment Part Two: The Science and Engineering of Onsite Wastewater Treatment

What Makes a Professional in Onsite Wastewater Systems?

Education and Training: Professionalization of the Practitioners

Management Models: Management and Becoming a Management Entity The Future of the Onsite Wastewater Industry: How to Make it Work for You!

NASSCO

National Association of Sewer Service Companies

Convey Your Stormwater and Plug Your Holes!

8 a.m.

Ultraviolet Manhole Rehabilitation

9:30 a.m. 11 a.m.

Jet Up! Sewer and Storm Water Cleaning

1:30 p.m.

3 p.m.

4:30 p.m.

Rethinking Collection Maintenance with Sewer Line Rapid Assessment Tool or SL-RAT

Case Study of Cleaning Large Diameter Sanitary Sewers and Siphons

Pipeline Assessment Certification Program (PACP) 2013 Update Workshop

Business Coach

8 a.m. - 5:30 p.m.

2013 - Your Best Year Ever

WaterJet Technology Association

8 a.m.

Safety and Efficiency — You Don't Have to Choose!

9:30 a.m.

Selecting the Best Jetting Tip Doesn't Have to Be Scary

11 a.m.

Hydroexcavation — The Non-Destructive Solution

Vacuum System Information

1:30 p.m.

Understanding the Power: Physics of Vacuum and How it Works

Portable Sanitation Association International

4:30 p.m.

GAP: Good Agricultural Practices

IEXSTAR

General Business

1:30 p.m.

The Art and Science of Business Management

3 p.m.

The Business of Contracting



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TUESDAY TRACKS

FEBRUARY 26TH, 2013

TRANSPORTATION AND LAND APPLICATION

8 a.m. Driver Compliance and Certification: How to Meet DOT Requirements
9:30 a.m. Staying in Compliance with 503 Regulations for Land Application

11 a.m. Land Application: Case Study of a Long-Term Operation

INDUSTRY SAFETY

8 a.m. One Piece Nozzles Enhance Performance and Safety
9:30 a.m. Confined Space Entry Permit and Equipment Review

11 a.m. Utility Line Locating

SSESI

8 a.m. Making Emergency Response Your Business

9:30 a.m. How to Protect and Maintain Sewer Hose From Mini Jetters to Combination Units

11 a.m. How to be Successful in the Cleaning/CCTV Business

GENERAL BUSINESS

8 a.m. New Untapped Techniques to Capture Today's Customers

9:30 a.m. 10 Steps to Marketing Success

11 a.m. Cloud Computing for Small Business and the Field Service Industry

SEWER COLLECTION & REHABILITATION

8 a.m. Chemical Grouts and Grouting Methods

9:30 a.m. Watch Your Assets — Remote Monitoring Can Save You Big Bucks

11 a.m. Lateral Connection Rehabilitation: Biggest Bang for the Rehabilitation Buck

SPANISH/FSPANO!

8 a.m. T.B.D. 9:30 a.m. T.B.D.

11 a.m. How to Overcome the Difficulties of Doing Business in South America

WEDNESDAY TRACKS

FEBRUARY 27TH, 2013

SEWER COLLECTION & REHABILITATION

8 a.m. Cash for Compliance: The New Boom in Home Sewer Replacement

9:30 a.m. Trenchless Point Repairs, a Low Cost Permanent Solution

11 a.m. Penn State University Performs Manhole-to-Manhole Lining In-House

GAS, OIL & MINING

8 a.m. How to Decide What Dewatering Option is Best for You

9:30 a.m. Blower 101: The Basic Operation of the Positive Displacement Blower

11 a.m. Principles and Equipment of Hydro-Pneumatic Vacuum Excavation

GENERAL BUSINESS

8 a.m. Save Money — Move Your Business to the Cloud

9:30 a.m. Morally Bankrupt

11 a.m. Measuring Success Matters: Your Ads, Your Agents, Your Technicians

MUNICIPAL

8 a.m. Benefits of Digital Side Scanning Inspection Camera Systems

9:30 a.m. Application for Sewer and Storm Nozzles

11 a.m. Grinder Pumps & Application

PORTABLE LIQUID WASTE

8 a.m. A View from the Receiving End: Regulatory Challenges in FOG Programs

9:30 a.m. T.B.D.

11 a.m. Now You Smell Me, Now You Don't: Deodorants

NEW TECHNOLOGY

8 a.m. T.B.D.

9:30 a.m. New Technology for Locating Sewer Line Leaks

11 a.m. Solve Decentralized System Malfunction Issues and Site Challenges

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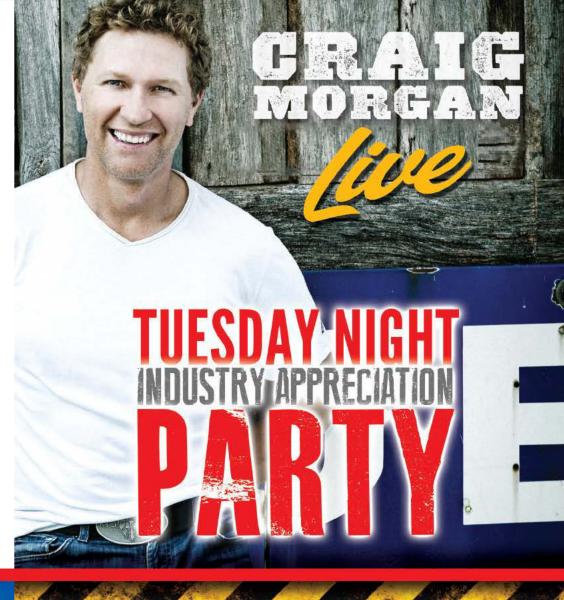
Tuesday, February 26th

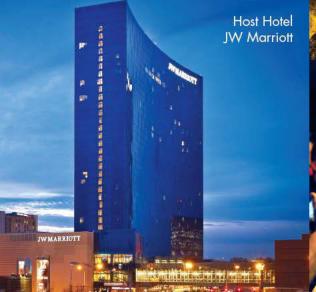
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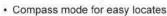
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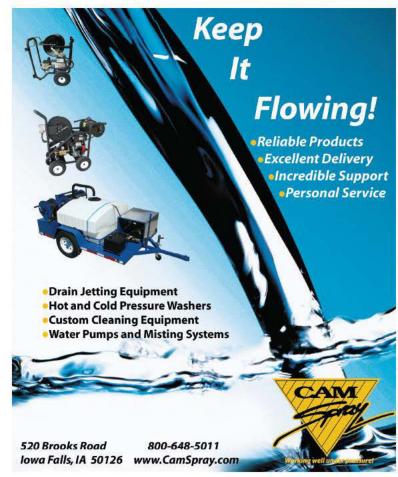


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Get Ready for Indy

PUMPER & CLEANER EXPO WILL RETURN TO THE HOOSIER STATE IN 2013

BY LUKE LAGGIS

he Pumper & Cleaner Environmental Expo International will return to Indianapolis Feb. 25-28, 2013, bringing back everything that made the 2012 Expo a huge success along with some new features to help attendees get even more out of their time in Indy.

"Once a year there is a gathering of the best in the industry," says Bob Kendall, co-founder of COLE Publishing and president of COLE, Inc. "The best manufacturers, dealers and suppliers meet with the best pumpers, cleaners and service contractors. This gathering provides unequaled opportunity to see, learn, grow and develop their businesses."

Education Day will kick off the 2013 Pumper & Cleaner Expo, providing an opportunity to acquire the strategies and technical know-how to push your

"There's no better place to network with others who understand your business. The free exchange of knowledge and experience is priceless. There's no better place to learn how to become more profitable."

Bob Kendall

business or utility forward. Topics cover everything from *Pump Choices and Settings* to *The Science and Engineering of Onsite Wastewater Treatment*. Pumpers, cleaners and other wastewater professionals will have the opportunity to learn

from the industry's top experts, gaining insight on best practices and strategies for growth and success. Education Day also facilitates free dialogue among your peers, so you can seek and share advice and experiences that competitors might otherwise keep to themselves. It's a day dedicated to helping you expand your knowledge base and improve your craft.

The learning opportunities won't end when the final session lets out on Monday afternoon. Educational seminars are also slated for Tuesday and Wednesday, and Roundtable Discussions will be held Thursday morning. In fact, this year's Expo features one of the most expansive lineups of educational opportunities in the event's 33-year history. You can learn about new tools, technologies and methods for solving specific problems; fine-tune your knowledge of basic

in-the-field practices; and learn business leadership skills that can help transform your performance and profit. And on top of it all, Expo education courses count toward continuing education credits in many states. Check out the Expo website (www.pumpershow.com) for specific information on your state.

Of course, it's not all about the classroom. It's really the massive display of tools, trucks and tech-

nology that steals the show. The Pumper & Cleaner Expo is the only place you can meet all the major manufacturers, kick the tires on the latest equipment, and network with the people who know this industry best.



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Education Day at the Pumper & Cleaner Environmental Expo provides a full day of great learning opportunities spanning a wide range of topics.

A record 92 percent of attendees at the 2012 Expo said they'd be coming back in 2013, so you can be assured of rubbing elbows with the best people in the industry.

"There's no better place to network with others who understand your business," says Kendall. "The free exchange of knowledge and experience is priceless. There's no better place to learn how to become more profitable."

Last year, 501 exhibitors filled over 550,000 square feet on the show floor, and the response is already up from new companies interested in the 2013 Expo. An initial list of exhibitors can be found in this issue, and the list is continually updated on the Expo website, which you can also use to preview the educational sessions, study the interactive floor plan, plan your itinerary and search for hotel rooms. Three new hotels near the airport will provide convenient accommodations for those with early or late flights.

Indy also has plenty to offer outside the Expo hall, including a wide range of museums, entertainment venues and shopping opportunities, and there are hundreds of restaurants within a short walking distance of the Convention Center. Find your favorite spot to meet up with clients, colleagues and friends, and find out what Indy's "Hoosier Hospitality" is all about.

While you're planning your itinerary, be sure to keep Tuesday night open for the Industry Appreciation Party and Craig Morgan concert at the JW Marriott Hotel, connected to the Convention Center. It promises to be a great night.

In fact, the Expo promises four great days. If you haven't been to the Expo, jump onto the website and take a look at everything it can offer you and your business. It's easy to plan the trip, and you'll walk away with a better perspective on your business and the industry as a whole.

See you in Indy. c



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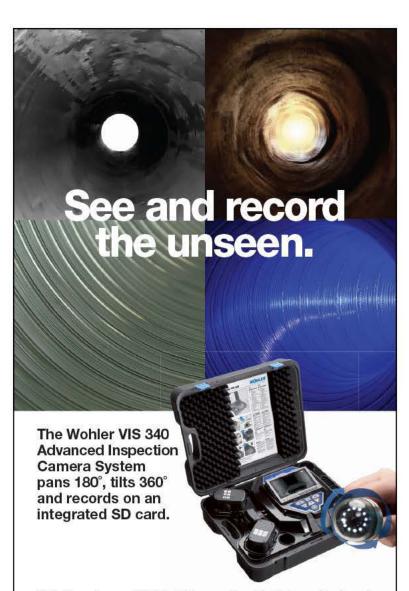
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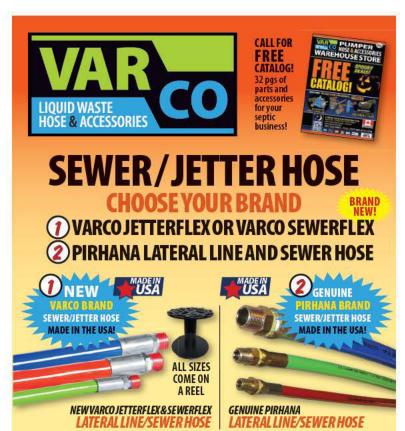


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<u>3/16"</u>	\$24.26	\$30.80	\$38.40	\$51.30	\$78.63	\$78.63	\$92.29	\$119.61	\$146.94	\$174.29
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Going Green for Greenbacks

SUSTAINABILITY IS ALL ABOUT REDUCING YOUR ENERGY COSTS, LOWERING YOUR OVERHEAD AND BOOSTING YOUR PROFITS

BY DAVID STEINKRAUS

his is the beginning of a season of planning for many drain cleaning contractors. The chill and rain or cold and snow of winter are arriving, and business may be slowing with the weather. Part of that planning process may involve updating or adding on to your business building, or constructing a new office and garage space. And when you think of construction issues, think energy efficiency.

You don't have to be a dyed-green activist to appreciate some ideas accompanying the public discussion about renewable energy resources. All you need is that monthly reminder sent by your utility company. The good news is it may not require much for you to refresh or erect a structure that will put green in another good place: your wallet.

Whether you are remodeling, building new or expanding, there are some general rules to be efficient and save money. One is to be careful of budget creep. This doesn't mean overall budget. It means not becoming so attached to one idea that you make unwise cuts to keep the total budget under control.

Here's one architect's story that serves as a helpful example. The owner of a new commercial building wanted a curtain wall. It was a \$100,000 of infrared reflectivity, Brown says. Infrared radiation is heat, so this modern glass will let sunlight in but not all the heat. In the Southwest you need glass with high-infrared reflectivity to keep the sun's heat out. In colder climates, high-reflectivity glass on the north and west faces keeps heat inside during the winter and out in summer. On the south face you put low-reflectivity glass. In the winter the sun will help warm the building, and in the summer, a shade will block seasonal heat.

LIGHT THE WAY

With insulation and windows addressed, you can think about heating, and Brown says you may not have to think hard. A properly oriented, well-insulated building may not need very-high-efficiency heating and cooling equipment. You may still buy it to cut your operating cost, but your payback period will be longer.

Brown puts it this way: You will pay annual operating costs over and over, and by comparison the initial cost of building in extra insulation or better windows is very small.

You don't have to be a dyed-green activist to appreciate some ideas accompanying the public discussion about renewable energy resources. All you need is that monthly reminder sent by your utility company.

THE GOOD NEWS IS IT MAY NOT REQUIRE MUCH FOR YOU TO REFRESH OR ERECT A STRUCTURE THAT WILL PUT GREEN IN ANOTHER GOOD PLACE: YOUR WALLET.

expense, and the architect could have produced the same effect for less cost. But the owner insisted on the design he had in mind and cut away \$30,000 and \$40,000 items to pay for it. Consider what that may have cost – better windows or a better ventilation system, which could have cut his operating expenses for the next 20 to 30 years.

BACK TO BASICS

Options for energy efficiency can be overwhelming, but the basics still apply, says architect Tom Brown, of Stevens Point, Wis. His rules are simple: Insulate the building well, point it in the right direction, and then worry about

Insulation is cheap, he says, and a well-insulated building will be much easier to keep warm or cool. He's a fan of blown-in insulation because it fills every nook, unlike fiberglass bats unless they are installed carefully.

The other part of his idea - pointing in the right direction - has to do with the sun. West-facing windows add heat during the afternoon - bad for buildings in the Southwest. For people in cold climates, north-facing windows promote heat loss. Proper windows can counteract both problems.

Manufacturers now produce windows with glass that has different degrees

Some experts say it's possible today to have a building that, over the course of a year, produces as much energy as it consumes. But like any general statement, that comes with qualifications. Such buildings may be offices or warehouses that don't require a great deal of electric power. You won't have a zero-energy building if you intend to run an arc welder.

Lighting is another major component to your energy costs. About 20 percent of all energy used in commercial buildings is for lighting, according to the federal Energy Information Administration. In those buildings, big fluorescent lights are still king, and we know they're not the most efficient. Compact fluorescents and the newer LED lights produce more light per watt of input.

There is more to lighting than just bulbs.

Motion-sensing switches can turn lights on only when someone is in a space.

Clustering activities – putting your grinder next to the workbench instead of by itself in a corner, for example - means you can concentrate bright lighting

Think daylight. Skylights, light pipes, and light-colored walls and ceilings will maximize your use of all the free light provided by the sun. Consider electric bulbs to be a supplement to sunshine.



NEED PROFESSIONAL HELP?

You may be wondering whether you need to hire an architect for this planning. Brown says not necessarily.

An architect will add 6 to 8 percent to the cost of your project on average, but for a smaller project, Brown says you're better off spending the money on an energy audit. That will tell you where your existing building is leaking heat. A check of your local phone listings or an Internet search will reveal companies that perform audits. It is true they usually sell other services such as insulation, Brown says, but they also have good tools for examining the efficiency of your building.

He often requires a blower door test as the final exam for a building he has designed. The test consists of a big fan, which lowers the air pressure inside a building. You can walk around, hold your hand next to windows and electrical outlets, and literally feel the air leaks.

You may have heard of the LEED program, which stands for Leadership in Energy and Environmental Design. It is from the U.S. Green Building Council (www.usgbc.org) and it sets standards for energy-efficient and environmentally responsible buildings. You also may have seen or heard of projects certified as LEED Gold or LEED Platinum.

For a small project like a drain cleaning contractor's shop, certification would not be worth the cost, Brown says. Yet the LEED standards can be a good guideline when you're considering construction.

Whatever you do in your project, don't ignore the marketing advantage of an environmentally sustainable design. In an industry that stresses keeping the environment clean, doing a green building project may get you bragging rights over your competition. And that could mean more green in your wallet. c





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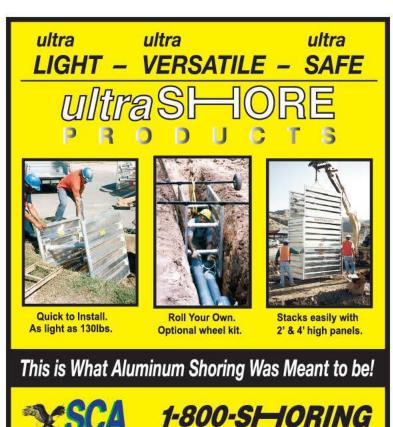
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Balancing on the Leadership Seesaw

PUSHING YOURSELF TO DEVELOP NEW STRENGTHS WILL IMPROVE RESULTS AND RELATIONSHIPS

BY LEE ELLIS

s a child, riding a seesaw was fun, wasn't it? Well, except when you didn't have equal weight on both sides - then it was just out of balance and someone got stuck in mid-air. That bears the question - is your leadership out of balance? There's a good chance it is because statistically, more than 85 percent of the population tilts toward being strong at either results or relationships and weak at the other.

WHAT'S WRONG WITH BEING OUT OF BALANCE?

The idea of balancing results and relationships is nothing new, but if we assume that character is the foundation of leadership, then there should be an inner motivation to accomplish the mission (get results) and take care of the people (build relationships). If you don't get results, you can't be truly successful in your work or justify your purpose and if you don't take care of your people, some will quit and leave and some will quit and stay. In either case, it's not a viable situation. So in the long run, balancing a concern for people with accomplishing the mission is crucial to success.

IDENTIFY YOUR NATURAL BENT

How can you know and what can you do about it? Begin by examining the two lists below and deciding which behaviors best describe your "natural" talents. This indicates your natural leadership style and predicts the direction of your tilt as well as the area in which you need to work to improve your balance. If you can't determine your natural bent, ask someone who knows you well.

Results-oriented

- · Take charge, decisive
- · Introverted, focused
- · High standards, task-oriented
- · Challenging, speaks directly
- · Logical, organized
- Skeptical

Relationship-oriented

- Encouraging, supportive
- Trusting
- Good listener
- · Gives positive feedback
- · Concerned and caring
- Develops others

HOW DO YOU GAIN A BETTER BALANCE?

First, accept the fact that most of your strengths are natural - we are born with them and they are naturally out of balance. To get better, we have to change by learning new personality talents (behaviors). You don't need to give up who you are or what you have and you don't need to reinvent yourself. Rather, you augment your strengths by adapting new behaviors that will make you more effective. The way you do this is to intentionally learn a few behaviors in your weaker area that bring you more in balance. The reason this is so hard is that it's not natural, and therefore often feels very awkward, sometimes hokey and even phony.

RESULTS-ORIENTED LEADERS NEED TO SOFTEN UP

If this is your style, just the idea of softening seems counterintuitive, but developing good interpersonal skills is what's needed to make you a better leader. You know it - you just don't want to go there. For example, learning to patiently listen, really understand, and then affirm the ideas of others can be far out of your comfort zone. For some, the needed skill might be learning to give

No matter which side of the balance scale you're on, adapting new behaviors on your weak side even at small levels will lead to significant improvements. Over time they will become easier, facilitating even further change for the leader.

specific, positive feedback. These "soft" skills would be as easy as breathing for many relationship-oriented leaders, but for the tough, rational results group, it can be terrifying - they feel out of control and way out of their comfort zone. It takes intentional courage for a thick-skinned, results-oriented person to be a good leader and do these "people" things that are so important.

RELATIONSHIP-ORIENTED LEADERS NEED TO TOUGHEN UP

If you are someone whose natural style is highly relational, you will need to identify a couple of behaviors on the results-oriented chart to work on. Quite often this is learning to be more decisive and more direct in giving guidance and setting standards. Casting a stretch vision and conducting difficult conversations is essential to keep the organization and individual team members moving toward your goals. It may be intimidating, so plan out what you are going to say and then courageously deliver your message; it's the only way for you to gain a better balance and be the leader you want to be.

SMALL CHANGES PAY BIG RETURNS

No matter which side of the balance scale you're on, adapting new behaviors on your weak side even at small levels will lead to significant improvements. Over time they will become easier, facilitating even further change for the leader.



IT TAKES COURAGE TO CHANGE

You cannot become a better leader by reading books and going to workshops. These are great ways to learn but when it comes down to actual growth, you have to change your behaviors; there is no other way. You have to give up some of your old habits like dominating or withdrawing and engage others with a more balanced leadership style, and you have to do it under the daily pressures of life and work. That's what it means to lead with honor - having the courage to do what you know you should do.

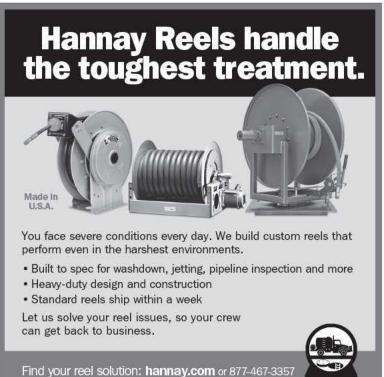
TAKE THE FIRST STEP

You likely already know what you need to do to gain a better leadership balance and be the leader you want to be, so what are you going to do differently? Who will you engage as your support team to encourage and support you in your growth? As you make progress balancing on the leadership seesaw, help others to gain a better balance, too. c

ABOUT THE AUTHOR

Lee Ellis is a speaker and the author of Leading With Honor. Leadership Lessons from the Hanoi Hilton, in which he shares his experiences as a Vietnam POW and highlights leadership lessons learned in the camps. As president of Leadership Freedom, a leadership and team development consulting and coaching company, Ellis consults with Fortune 500 senior executives in the areas of hiring, teambullating, executive development and succession planning. For more information, please visit www.leadingwithhonor.com.

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STEMMLE PLUMBING REPAIR DEPENDS ON THE DURACABLE DM30 TO GET THE JOB DONE

BY KEN WYSOCKY

hen it comes to productivity and durability, John Stemmle knows a good thing when he sees it. That's why his company, Stemmle Plumbing Repair Inc., in Richmond, Va., owns 17 Duracable DM30 cable drain cleaning machines - one for each of the company's service trucks.

Over the years, the Duracable machines have become an integral part of Stemmle Plumbing's operations, which breaks down into about 65 percent commercial work and the rest residential. The company uses the DM30s equipped with a 1/2 hp, 200 rpm motor and designed for 2- to 6-inch-diameter lines - to clean residential and commercial lateral lines and septic tank lines, Stemmle says.

"We've had great success with the machines," he notes. "They're goodsize machines – very powerful – and they require very little maintenance. We clean them and grease them, and aside from that, they're mostly maintenance free. We have some that are 10 years old and still run great. It's hard to determine exactly, but there's no doubt they've saved us thousands of dollars over the years in repairs and replacement parts.

"Drain cleaning is a big portion of our business – about one-third of our gross sales revenue – so that makes them pretty valuable pieces of equipment."

An easy-to-detach cable reel allows technicians to break down the DM30 into two pieces, which makes it easier for one technician to carry up and down stairs. Because it detaches so easily, the company generally can do jobs with just one technician where it otherwise might need two to carry heavy equipment.

"Instead of lifting one 200-pound piece of equipment up and down steps, they can carry two 100-pound pieces separately," Stemmle explains. "That reduces stress on our guys - keeps them from getting tired and minimizes injuries. We also have ramps on the sides of our trucks to minimize lifting-related injuries."

The detachable reel, which allows for easy cable size changes, also adds to the machine's versatility. Stemmle Plumbing usually uses 110 feet of 11/16-inch cable, but sometimes technicians switch to 1/2-inch cable to do smaller floor drains and pipes.

Technicians, from left, Gary Dickerson, Clay Wheeler and Chris Castlebury with Stemmle Plumbing Repair's Duracable DM30 drain cleaning machines. (Photo courtesy of Stemmle Plumbing Repair)

"That way, we don't have to buy additional machines dedicated to just floor drains," Stemmle notes. "Switching reels takes just a couple minutes and involves just one screw, so it's hassle free."

Stemmle also lauds the DM30's power retriever that pulls the cable back onto the reel. That helps technicians minimize fatigue and muscle strains stemming from pulling and tugging on the cable. Moreover, the blades can do a better, more uniform job of cleaning when retrieved at a steady pace, he says.

One of the DM30's strongest assets is durability. Stemmle says that many times, the drain cleaners run for three or four hours straight. As an

money machines

OWNER: Stemmle Plumbing Repair Inc., Richmond, Va.

MACHINE: Duracable DM30 cable drain cleaning machine

Duracable Manufacturing Company 800/247-4081

www.duracable.com

FUNCTION: Cleaning residential and commercial lateral lines

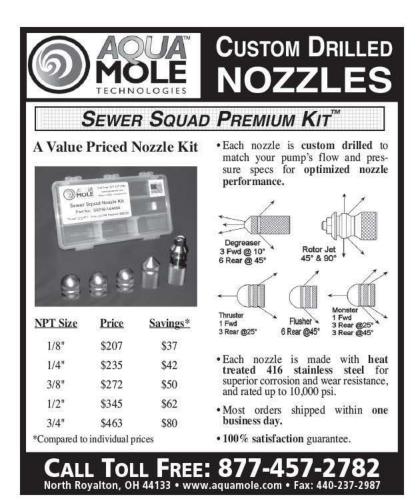
FEATURES: 1/2 hp, 200 rpm motor; 21-inch, open-spoke

detachable reel; 110 feet of 11/16-inch cable; power feed and return

COST: About \$2,500

WEBSITE: www.stemmleplumbing.com







example, he cites a 300-foot-long stretch of drain pipe at a local hospital that frequently clogs with debris, grease and soap scum that turns into sludge and gets trapped in pipes with "bellies" that don't drain well.

"They're good-size machines - very powerful - and they require very little maintenance. We clean them and grease them, and aside from that, they're mostly maintenance free. We have some that are 10 years old and still run great."

John Stemmle

"The clean-out is by an entranceway to the outpatient surgery area," Stemmle says. "We have to work at night, cabling the line out to 300 feet, then using a sewer jetter that goes in through a manhole to push the debris out to the mainline in the street. Our DM30 runs for hours on that job, but we've never had a problem working on that line."

The DM30's durability also generates repeat business and word-ofmouth referrals because they rarely break down on a job. On-the-job breakdowns can damage a company's reputation, and makes customers who are

already anxious about a sewer backup even more nervous, Stemmle points out.

"They're stressed out, wondering if you're going to come back and finish the job," he says. "Plus it prolongs the job - maybe it doubles or triples the time required to complete the task. Maybe you even have to bring out another technician who otherwise would be out generating revenue on another job.

"I've worked for companies where drain machines were in the shop almost as much as we used them," he adds. "It was extremely frustrating for the technicians and the customers. So when I decided to start my own company, I went out and purchased the best equipment I could find.

"These machines are invaluable to my business - strong and dependable," he concludes. "They don't let us down." c

SHOW US THE MONEY (MACHINE)

Money Machines, a feature in Cleaner, reports on innovative work vehicles that help contractors operate more efficiently, satisfy customers and earn more profit. We'd like to know about your Money Machine be it a service van, camera truck, jetting rig, vacuum unit or any vehicle that really helps drive your business. To nominate your vehicle for a feature in this column, send an email to editor@cleaner.com. Tell us briefly but specifically what features make it a great producer. And send a picture because appearance counts. We look forward to seeing your Money Machine.

Plumbing BY BRIANA JONES













COMPONENT CAMERA SYSTEM

The VISTRAC II camera system from Amazing Machinery is equipped with the highest commercial-grade camera head and cable. The unit has a 7-inch flat-screen LCD in an ABS case, and records to an SD card. The high-quality color camera head is 1 3/8-inch in diameter and has a built-in 512 Hz sonde transmitter. The stainless steel camera body with sapphire lens makes the head durable. The camera head is waterproof up to 500 feet, and equipped with 10 white LEDs, a dimmer control and an 11-inch steel spring loader.

The system has a 200-foot-long, 1/2-inch super slick push cable, with a 24-inch layflat storage reel. The component-based system allows the user to change the camera head, recorder or monitor if it is damaged. 800/504-7435; www. amazingmachinery.com.

2. ECONOMY TRAILER JETTERS

EJT series economy trailer jetters from Cam Spray come with a 28 hp Honda engine with 7 gpm flow at 4,000 psi or 11.5 gpm at 2,700 psi. Both models feature a manual reel with 250 feet of 3/8- or 1/2-inch hose. The units allow for jetting 6- to 10-inch lines. Standard features include a 5-gallon fuel tank, industrial three-plunger pump with stainless valves and ceramic plungers, power pulse valve, air purge, and recirculation for freeze protection.

The heavy-duty trailer features close-tube frame and full metal deck on a 3,500-pound axle, and includes road-ready wiring and lights with 2-inch ball hitch. A 150-gallon water tank includes auto shutoff if the tank runs dry. Also included is a set of four nozzles, storage box, tip cleaner, tiger tail, safety face shield, rubber gloves and high-vision safety vest. 800/648-5011; www.camspray.com.

MINI INSPECTION SYSTEM

The CUES Mini-Push 20/20 is a portable, color video push inspection system with a built-in battery power supply, battery charger, and self-leveling camera with built-in sonde. The unit inspects and records digital video in pipelines from 2 inches in diameter and larger. The 6.4-inch color LCD monitor is adjustable with a fold-down position for protection during transport and includes a sun shield for optimal viewing in sunlight. The lightweight system includes

wheels for easy portability and a balanced footprint for stability. 800/327-7791; www.cuesinc.com.

4. PORTABLE JETTER

The PJ-3000 portable jetter from Draincables Direct delivers power and versatility at minimal cost. The unit includes a 13 hp Honda gas motor with a robust but small frame that provides 4 gpm at 3,000 psi. It has a line/pipe capacity of 1 1/4 up to 6 inches with 200 feet of 3/8-inch hose along with 75 feet of 1/8-inch trap hose. Nozzle, kit, gloves, face shield and tip cleaner are included with the toolbox. 800/421-4580; www.draincables.com.

5. UPRIGHT DRAIN MACHINE

The DM162 upright drain machine from Duracable Manufacturing is designed for running 5/8-inch cable up to 80 feet in length and can be configured for any job. It is equipped with a 1/3 hp motor that runs at 265 rpm. The reel includes a built-in toolbox and a heavy-duty casted, self-aligning head bearing to maintain proper alignment while in operation. This helps increase the life of the reel. The head bearing also holds the reel in place and allows for quick change-outs. The unit can be operated in horizontal and vertical positions and comes with non-marring rubber pads to protect the work surface from marks. 877/244-0556; www.duracable.com.

6. TRUCK JET

The Truck Jet 2500 from Dyna-Vac Equipment is designed for operator ease and safety. Fixed or rotating reel assemblies and hydraulic swing-outs are available. Hose comes in 300- to 700-foot lengths, and the unit has 3/4- and 1-inch operating systems. The unit comes with a General run/dry pump that operates at 40 or 65 gpm at 2,000 or 2,500 psi. Drive options, PTO, hydraulic or auxiliary engine are available.

All main functions including pump and reel controls, auxiliary lighting, and safety switches are conveniently located in one station and operated with fingertip controls. Optional pendant and wireless controls are available. Water tanks are available in 1,000- to 1,500-gallon capacities in polyethylene,

(continued)

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aluminum or stainless steel. The unit comes open deck with rear enclosure, fully enclosed and heated. 888/298-8668; www.dynavacequipment.com.

CAMERA INSPECTION SYSTEMS

EasyCAM camera inspection systems include pushrod lengths of 150 or 200 feet. Each model is equipped with a color camera, 512 Hz transmitter and 8-inch daylight readable monitor. A modular design includes separate components that are each manufactured to simply and securely plug into the adjoining component. The camera head, transmitter, pushrod, electronics, monitor and aircraft aluminum frame can be easily repaired by the owner. Safe 12-volt operation offers efficient portability and operation for up to six hours between charges. The systems will also operate using a standard 110-volt house outlet or can be charged in a vehicle. Titanium camera heads are offered with two of the three models. 239/260-2056; www. easycamllc.com.

8. SECTIONAL CLEANING MACHINE

The Model C sectional drain and sewer cleaning machine from Electric Eel runs up to 200 feet of 1 1/4-inch self-feeding dual cable in 8- or 10-foot sections that require no handling when rotating. The unit cleans lines 3 to 10 inches in diameter for distances up to 200 feet. One-man operation means less time and labor expense. A heavy-duty 1/2 hp Baldor motor comes standard, and 3/4 hp and 1 hp motors are also available.

A custom designed gearbox ensures high quality, lower cost and parts availability. The heavy-duty, fully adjustable safety clutch keeps cable and tool breakage to a minimum and provides overload protection. A fold-down handle allows for easy transportation, storage and use in crawl spaces. A unique carry handle provides balance and easy transport. The unit is suited for tough blockages, such as tree roots, and longer runs in main sewer lines. 800/833-1212; www.electriceel.com.

9. PUSH CAMERA

The VeriSight Pro push camera from Envirosight includes a lightweight controller that allows direct entry of WinCan-compatible observations. The multi-language controller displays footage on an 8-inch TFT LCD, and captures up to 90 hours of MPEG 4 video on an SD/SDHC card (up to 32 GB) or USB stick (up to 128 GB). It can zoom 3x and capture images in JPEG from live and recorded video. Users can browse stored video and images using a thumbnail gallery, and PC offload is easy.

A 16-page text writer with full QWERTY keyboard can be configured for a variety of colors and formats, and can be used to log observations (with available PACP, LACP and WRc compliance) for direct upload to WinCan. The stainless steel self-leveling camera with shadowless, variable LED illumination captures crisp video footage, regardless of pipe material. It inspects 2to 9-inch lines and snakes through bends for maximum range. An integrated tri-band sonde (33 kHz, 512 Hz, 640 Hz) works with most locators. Coiler comes with 130, 200 or 330 feet of pushrod. Controller and reel carry an IP54 rating and the system runs continuously for six hours off internal rechargeable Lithium-ion batteries, or off mains or vehicle power. 866/936-8476; www. envirosight.com.

10. WIRELESS TRANSMITTER

The Wi-Fi wireless transmitter from Forbest Products allows users to connect wirelessly to all of the company's sewer and drain cameras via iPhone 4/iPhone 4S/iPad/iPad 2, Android tablets and Windows PC. Users can watch live and record the images captured by cameras on phones, tablets and laptops about 300 feet (100 M) away from the location of the camera. The transmitter makes it easy and quick to send the images from the field to the office and customer. 650/757-4786; www.forbestusa.net.

11. HIGH-FLOW WATERJET

The JM-3080 waterjet from General Pipe Cleaners is designed for clearing large, remote lines of grease, sediment, ice and other soft blockages. The highflow device includes a 20 hp Honda engine with electric start and offers an 8 gpm flow rate at 3,000 psi. Vibra-Pulse technology propels nozzles through long lines and tight bends. The 12-gallon buffer tank is designed for tapping local water sources and provides enhanced safety margins. Other features include thermal pump protection, inlet filter and panel-mount pressure gauge. The unit also features a positive lock braking system for its four 13-inch pneumatic tires. 800/245-6200; www.drainbrain.com/jets.

12. TRAILER JETTER

The O'Brien 704030-SC trailer jetter from Hi-Vac Corporation is designed for day-to-day sewer line cleaning. The unit can clean a wide range of pipes. It is built to handle tough jobs with a powerful engine and pump combination. The 190-degree swivel reel allows for easy access to the manhole regardless of how the trailer is parked. The model is designed for a high pressure rating without the loss of high flow rating. 800/752-2400; www.obrienmfg.com.

(continued)





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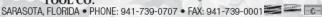
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13. WIRELESS REMOTE JETTER

The Mongoose 184 trailer jetter from Mongoose Jetters can get into tough spots and tight areas with a 180-degree industrial rotating hose reel that has a locking point every 7.5 degrees. A wireless remote feature allows users to operate the machine from the top of a roof or inside the house. The unit allows jetting on high- and low-pressure applications for easy cleanup and graffiti removal using the 4,000 psi dump gun feature.

Additional features include a high-quality five-plunger run/dry pump, NEMA 4 control box, and the unit is towable with water. Applications include roof vents, basements, sanitary sewer pipes, commercial and industrial lines up to 12 inches. 800/323-1604; www.mongoosejetters.com.

14. UPRIGHT CABLE MACHINE

The M888 Upright Workhorse from MyTana Mfg. Company is an upright machine available with 11/16- or 3/4-inch mainline sewer cable, up to 125 feet long. The unit is designed for 3- to 10-inch lines. The gearbox drive mechanism is capable of pushing up to 400 feet of cable when additional reels of cable are used. Reels can be added or changed in seconds. The standard automatic feed retriever saves wear and tear on operators. It comes complete with a full set of 2- to 6-inch blades and a set of replacement blades. The hard plastic reel is standard and an open reel with cover is available. 800/328-8170; www. mytana.com.

MINI INSPECTION SYSTEM

The MiniLite system from RapidView IBAK North America is a pipe inspection system that allows users to inspect, record and measure the internal dimensions of small pipelines. During normal inspection operations, users can accurately capture diameter measurements with one touch using the ORION zoom camera. The system consists of a replaceable coiler cartridge, portable command console and one of several choices of cameras. The unit includes a high-visibility 10.4-inch monitor and a full QWERTY keyboard. Users can record inspections on a built-in MPEG digital video recorder on SD and SDHC memory cards. The system is available in 100- and 130-foot lengths. 800/656-4225; www.rapidview.com.

16. PAN N' TILT CAMERA

The Pan n' Tilt push camera from Ratech Electronics is a portable inspection system for pipes and drains as small as 3 inches in diameter. Camera options include black and white, color, self-leveling, micro and pan n' tilt. The camera can be retrofitted to existing Ratech systems or used as a stand-alone unit. It rotates 330 degrees up/down and 220 degrees left/right, allowing users to easily view the pipe condition in detail. The cost-efficient unit is adaptable to the company's Jet Cam.

Combining the camera with a Ratech control unit such as the Elite SD gives recording capability using SD/USB drives and allows MPEG video capture and JPEG image capture. Also included is an on-screen display overlay system providing electronic distance counter, time, date and eight pages of memory for listing problems and displaying company information. Standard 200-foot gel-rod cable is included. Longer lengths are available. 800/461-9200; www. ratech-electronics.com.

17. PUSH CABLE SYSTEM

The DELTA push cable system from Rausch Electronics USA features a forward-facing SAT42 camera with an auto-upright function. The unit works in pipes as small as 2 inches and features an integrated sonde and monitor. The integrated controls and lightweight carrying case with wheels make it rugged and portable. The DELTA-Pro system features the full pan-and-tilt KS60CL camera that works in pipes as small as 4 inches. 877/728-7241; www. rauschty-usa.com.

18. PORTABLE INSPECTION

The SeeSnake Max rM200 camera system from RIDGID combines portability and versatility for inspecting lines up to 200 feet long and 1 1/2 to 6 inches in diameter. It has improved reel mechanics for easy passage through tight turns, an ultra-compact camera that provides optimal lighting, and an upgraded cable, which provides abrasion resistance and allows users to push further with less effort. The inspection system is compatible with SeeSnake CS10 and CS1000 digital recording monitors. It comes with an integrated transport system to make it easily portable. Users can carry the reel with the included shoulder strap or use the wheel system. 800/769-7743; www.ridgid.com.

19. SINGLE-CONDUCTOR INSPECTION SYSTEM

The Jet Cam system from RS Technical Services is adaptable to most jetter systems. It is powered by the jetter's 12-volt DC battery system and allows the operator to see the condition of the pipe and cleaning results instantly. Features include an easy-to-install reel and controller system; 600 feet of lightweight single-conductor cable on a motorized reel with torque control; TFT, LCD monitor with high-resolution display; 16 high-intensity LED lights; recording capability to flash or USB drive; and an optional on-screen footage counter display. 800/767-1974; www.rstechserv.com.













20. ELECTRIC JETTER

The Shark SJPE-1500 electric jetter from Shark Pressure Washers & Jetters is portable, compact and includes a detachable hose reel. It is rated at 1.7 gpm at 1,500 psi and operates on 115-volt electricity and comes standard with a 35-foot power cord with GFCI. The slide-in handle accommodates loading and unloading the unit into any van, truck or car, and also allows for convenient transport.

With the pull of a small lever, the 100-foot hose reel is removable for ease of use and storage. Pulse Technology propels the hose through lines and around tight curves to break through clogs. Designed for indoor use on 2- to 4-inch pipe, the unit features a steel roll-cage chassis, rugged triplex pump and heavy-duty, long-lasting Baldor motor. The compact and flexible design allows the jetter to fit in tight spaces and makes for easy one-person operation. It is ETL certified to UL-1776 safety standards. 800/771-1881; www.sharkpw.com.

21. ELECTRIC HYDROJETTER

The Model 717 electric hydrojetter from Spartan Tool includes an adjustable pressure regulator, which allows the operator to increase the pressure generated by the 2 hp electric motor to 1,500 psi, its full cleaning power, when there is a 20-amp circuit available, or to decrease the pressure to 1,250 psi to operate on a 15-amp circuit without tripping the breaker. The machine generates 2.2 gpm of water flow. The portable system includes three standard hoses that allow cleaning out to 165 feet from the machine, eight jetting nozzles, easy-ride pneumatic tires, pulsation technology, jetting gloves and a washdown spray gun. 800/435-3866; www.spartantool.com.

22. MODULAR INSPECTION

The vCam inspection system from Vivax-Metrotech includes a control module with an 8-inch color LCD, dual-frequency transmitting sonde, digital recording to the internal hard drive or SD card, full-function keyboard, internal microphone, AC/DC power, rechargeable batteries, USB interface, RCA jack for video and audio, distance counter and camera LED brightness control. The control module is field serviceable. The range of reels allows inspection of 3- to 12-inchdiameter pipes in distances from 60 to 400 feet. The camera reels are fitted with field-serviceable camera terminations as standard equipment. 800/446-3392; www.vivax-metrotech.com.

FRANCHISE SYSTEMS

23. BENJAMIN FRANKLIN PLUMBING

Benjamin Franklin Plumbing is one of the largest and fastest growing residential service franchises in North America with a mission to help contractors and business owners realize their full potential. It encompasses a nationally recognized brand with a trusted reputation, which helps franchisees capture market share. An online marketing platform consists of marketing assets and ideas available for immediate adaptation for a specific market.

An extensive support network with in-field and in-house specialists helps franchisees operate with lower cost, higher margins and higher standards of excellence. A comprehensive tiered training program allows franchisees to continuously improve everything from technical skills, to salesmanship, to management methods. Franchisees are also given membership to an affiliate purchasing group that allows access to vendor discounts and rebates on parts, equipment and services. 877/236-2899; www.benfranklinfranchising.com.

24. ROOTER-MAN

The Rooter-Man franchise concept is built around the exclusive use of Rooter-Man's trademarks in a franchisee's territory. Franchise owners become part of a team of independent dealers working together under a nationally recognized trademark and brand. Franchisees receive comprehensive training programs, ongoing and dedicated support, and discounts and partnerships through the franchise's national buying power.

Franchisees are taught how to run a successful business through personal training and 11 step-by-step manuals that outline every aspect of running a franchise, including national and localized Internet marketing programs. The Rooter-Man franchise includes a network of over 480 locations. 800/700-8062; www. rootermanfranchise.com.

25. ROOTERNOW

RooterNOW offers an opportunity for plumbing and drain cleaning professionals to purchase a top-quality and instantly recognizable national brand name. The RooterNOW affiliate program is an option for established or new company owners who do not wish to use the operating and marketing systems of a franchise and do not need training.

RooterNOW affiliates are free to use their own marketing products and reporting systems without interference or restrictions. There are no requirements to purchase or be bound by any operating methods or manuals, and there are no fees for co-op advertising. Licensees are not required to disclose any financial information, and are not required to undergo personal or business credit reporting. Provided that affiliates operate in accordance with accepted industry practices and the proper use of licensed advertising materials, they have complete freedom to run their own businesses without oversight or regulation from others. The RooterNOW website guides potential customers based on ZIP code location. 888/650-1214; www.rooternow.net. ©

Plumbing BY SCOTTIE DAYTON

RAPID INSPECTION DEVICE USES ACOUSTICS

PROBLEM

Charlotte-Mecklenburg Utilities Division in Charlotte, N.C., wanted to reduce sewer overflows without cleaning the entire 4,100-mile system. Officials searched for ways to determine blockages quickly and at a cost relative to CCTV inspections.

SOLUTION

The division selected the Sewer Line Rapid Assessment Tool from InfoSense. The transmitter, placed in an open manhole, transmits tones. In a downstream manhole, the receiver compares the tones with sounds it should hear in a clean pipe. If the signal is degraded, algorithms analyze it and present the operator with a simple assessment in real time on a scale of zero to 10. The acoustic inspection takes less than three minutes without contacting the waste stream.



RESULT

Two operators working independently inspected 52,000 feet of gravity sewer for blockages in less than two weeks. Only 42 percent of the pipe required cleaning. The labor saved by not cleaning 100 percent of the line paid for the inspection devices. Operators have inspected almost a million feet of pipe so far. The technology won the 2012 Water Environment Federation Innovative Technology Award. 877/747-3245; www.infosenseinc.com.

SYSTEM EXTENDS PIPE LIFE

PROBLEM

The aged cast iron sanitary sewer at the 731-unit Pelican Cove Condominium Association in Sarasota, Fla., had cracks, root intrusion and infiltration.

SOLUTION

Sleuth Plumbing Technologies cleaned the 1.5-mile system of 2- and 3-inch pipes, then lined it through access points with Nu Drain from Nu Flow.



RESULT

It was one of the largest, most cost-effective and successful projects in the company's history. 905/433-5510; www.nuflowtech.com.



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COXREELS MOVES TO NEW MANUFACTURING FACILITY

Coxreels moved to a new manufacturing facility in Tempe, Ariz. The location provides approximately 50 percent more production space for its fabrication, machine and welding departments.



VAC-CON LAUNCHES MUNICIPAL, CONTRACTOR WEBSITE

Vac-Con launched a new website (www.vac-con. com) for the municipal and contractor markets. The site includes product demonstrations, equipment photos and product information as well as dealer information pages.

DEKKER VACUUM ACQUIRES HULLVAC PUMP

Vacuum equipment manufacturer and supplier Dekker Vacuum Technologies acquired HullVac Pump Corp. of Ivyland, Pa. Operations for HullVac, provider of rotary piston and vane pumps, will move to Dekker's corporate facilities in Michigan City, Ind.

ISCO RECEIVES ISO CERTIFICATION

ISCO Industries received International Organization for Standardization ISO 9001:2008 certification for its quality management system. The Louisville, Ky.-based company is a supplier and custom manufacturer of high-density polyethylene (HDPE) piping products.



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RAPIDVIEW NAMES REGIONAL SALES MANAGER

RapidView IBAK North America named Jeff Paulik regional sales manager for the western United States and Canada. Paulik's background includes equipment procurement and distribution, marketing and administration. He will oversee the efforts of all RapidView IBAK pipeline inspection products in his territory.



SOUTHLAND TOOL SUPPORTS CALIFORNIA CHARITY

Southland Tool Mfg. pledged its support to Caterina's Club as part of its business plan for future growth during a company gathering in July. The Anaheim, Calif., charity provides daily meals to 250 children, many raised by single parents. It also provides scholarships, piano lessons and dental work for those in need.

INFOSENSE RECEIVES WATER QUALITY AWARD

InfoSense received the Innovation Technology Award from the Water Environment Federation for its sewer line rapid assessment tool (SL-RAT). The tool provides collection system crews with a quick diagnosis of a sewer pipeline segment without the time and expense of a CCTV inspection.

LMK ENTERPRISES ADDS INVESTMENT PARTNER

LMK Enterprises Inc. brought on an investing partner and formed a new operating entity, LMK Technologies LLC. The company looks to expand investments both domestically and internationally along with a continued commitment to research and development.

TRIC TOOLS RECEIVES EXPORT AWARD

TRIC Tools received the Export Achievement Certificate from Jeffrey L. Bleich, U.S. ambassador to Australia in July. Earlier this year the company signed a distribution agreement with Drainchem Pty. Ltd. of Australia to distribute TRIC Trenchless pipe bursting products in Australia and New Zealand. c



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Steam and water inversion heads keep liner under pressure

BY ED WODALSKI

The Stinger steam-cure and Maverick II hot water-cure bladder inversion heads from Perma-Liner Industries feature an internal silicon bladder and air connection port between the silicon bladder and the calibration tube. The design enables the installer to invert the calibration tube and hold pressure on the liner while removing the bladder inversion head from the Perma-Liner inverter. Without the silicon bladder and air introduced through the air connection port, the liner and calibration tube would collapse and possibly cause a failure when re-inflated. The Maverick II hot-water boiler also has a recirculation pump.

"Basically, the bladder inversion head allows you to shoot a calibration tube through your liner without losing air pressure," says Jim Gould, R&D and production manager for Perma-Liner Industries. "You don't have to disconnect anything; you leave it hooked up to the bladder and inversion head. You can cook with hot water using the Maverick II or steam with The Stinger, if you wanted it fast. I prefer the steam. It's much faster (than water) and you don't need large quantities of water, depending on the length of your shot."

The inversion heads enable contractors to shoot liner into a pipeline with active infiltration. "You don't want that water to get in between the liner and the host pipe because you won't have a perfectly round liner," Gould says. The inversion heads can be used in any size pipe, but are most commonly used in 4- and 6-inch lines. Average cook time is less than half an hour.

On the market for less than a year, the redesigned heads were the result of needing to hold pressure on the liner before applying

the pressure cap, Gould says. "A pinch clamp wouldn't work because with the steam you have a relief end on your calibration tube that allows steam to pass through, so you would immediately lose pressure if you aren't constantly adding air or steam. And as far as the Maverick II version with hot water, we have a tube that goes through all the way to the opposite end of the calibration tube. You couldn't pinch it off because the tube was in the way. You needed the bladder sealed off so you can put your cap on and start your steam or hot water." 866/336-2568; www.perma-liner.com.



WACHS DW GUILLOTINE PIPE SAW

The Diamond Wire Guillotine pipe saw from E.H. Wachs is designed to cold cut steel, ductile and cast iron pipe from 4 to 16 inches in diameter. The saw mounts directly to the pipe for clean cuts and features a quick-change, continuous loop diamond wire cutting element. The saw is controlled by a single crank, manual feed for one-person operation. The hydraulic-driven saw connects to a skid-steer or other equipment capable of 8 gpm at 2,000 psi. The saw weighs 75 pounds and is 34 1/2 inches long, 11 1/4 inches wide and 37 1/4 inches tall. 866/392-1060; www.ehwachs.com.

ENVIROSIGHT ROVVER MEASUREMENT SUITE

ROVVER Measurement Suite (RMS) image-analysis software for the ROVVER X pipe inspection crawler from Envirosight enables operators to measure a variety of pipe attributes directly from the system's touchscreen control pendant. Using adjustable overlays, the software calculates flow level; pipe diameter, bend and offset;



and the branch angle, clock position and diameter of service connections. All measurements can be stored in the system's onboard WinCam-based inspection reporting database. Measurements can also be offloaded to WinCan V8 software, the 3D module of which can build a virtual model of the inspected assets. 866/936-8476; www.envirosight.com.

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REED SAW IT BLADE GUIDES

Blade guides for the Saw It pneumatic saw from Reed Manufacturing Co. are available in 21- and 30-inch lengths. The guides reach across the pipe section being cut and stabilize the blade to prevent whipping and vibration, extending blade life and squaring the cut. 800/666-3691; www.reedmfgco.com.



PEERLESS ELECTRONICS VEHICLE CIRCUIT BREAKERS

The 1610 Series vehicle circuit breaker from Peerless Electronics is a resettable alternative for standard plug-in blade fuses in vehicles with 12volt or 24-volt electrical systems. Color-coding corresponds to the color of blade fuses. The 1620-S Type II circuit breaker with modified reset has a low operating temperature and space-saving



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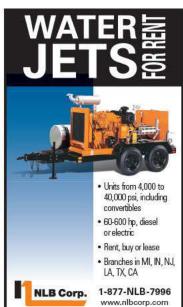
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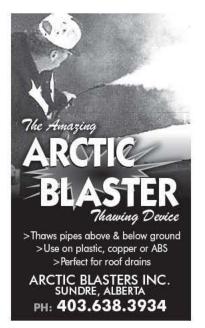
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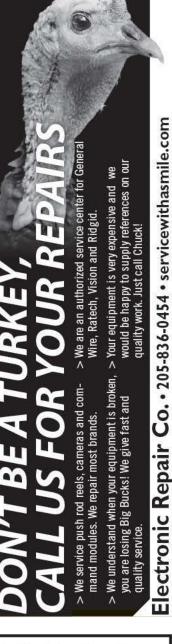
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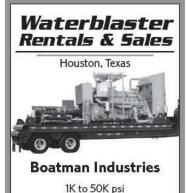
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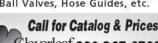
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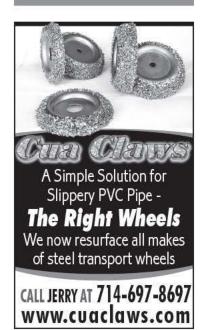
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Used Myers D65-20 pump with new packing and check valves. \$4,750. 714-381-4141. Pictures at www.empireequip.com. (CPBM)



Honda model WP40X, 8 hp, 4" with hoses. Honda 4 hp. 2" pump with hoses. The Cable Center: 800-257-7209.



Strong Mfg. Spraymate: 35D/60 manhole rehab, grout pumping, fireproof insulation, lightweight cellular grout machine etc. Check out www.strongmfg.com for more info. Completely refurbished. New tires, paint, tune up, water pump, plumbing, etc., Wisconsin V4 engine. Very low hours. Nice unit!.....\$21,500/OBO 815-378-7401 IL

Buy & Sell all makes and models, new & used vacuum pumps & high pressure water pumps, and good used replacement parts. Call for an inventory sheet and save. www. VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

RENTAL EQUIPMENT

Liquid vacs, wet/dry industrial vacs, combination jetter/vacs, vacuum street sweeper & catch basin cleaner, truck & trailer mounted jetters. All available for daily, weekly, monthly, and yearly rentals. VSI Rentals, LLC, (888) VAC-UNIT (822-8648) www.vsirentalslic.

RODDING MACHINES

1985 Champion sewer and duct rodder: 1,000 feet of continuous 1/2" rod, V4 Wisconsin on 1975 Ford 1-ton, hose, saws blades, tools and spare parts, \$6,000/OBO, 916-399-9595. CA. (C11)

ROOT CONTROL

1992 Engineering Co. trailer: Hose thruster machine, used to apply Sanafoam Vaporooter to sewer lines, trailer mounted, 2 cylinder Onan engine, can be connected to a jetter truck. \$6,000/OBO. 916-399-9595, CA. (C11)

New sewer line root killer "Oblitiroot" sticks to tree roots and pipes, leaving a root prevention coating that endures. www.Olv idium.com or call Toby (inventor) 928-246-1580. 1990's pricing! (C01)

SERVICE/REPAIR

www.servicewithasmile.com Sewer Cam Reel and Camera Repair: Authorized for General Wire, Ratech, Vision & RIDGID. Quality service on all brands. Need more info? Give Chuck a call. Electronic Repair Co., Birmingham, AL 35206, 205-836-0454; email: part@servicewithasmile.com.

Dynamic Repairs - Inspection Camera Repairs: 48 hour turn-around time. General Wire, Ratech, RIDGID, Electric Eel Mfg, Gator Cams, Insight Vision, Vision Intruders. Quality service on all brands. Rental equipment available. For more info call Jack at 973-(CMPBM) 478-0893. Lodi, New Jersey.

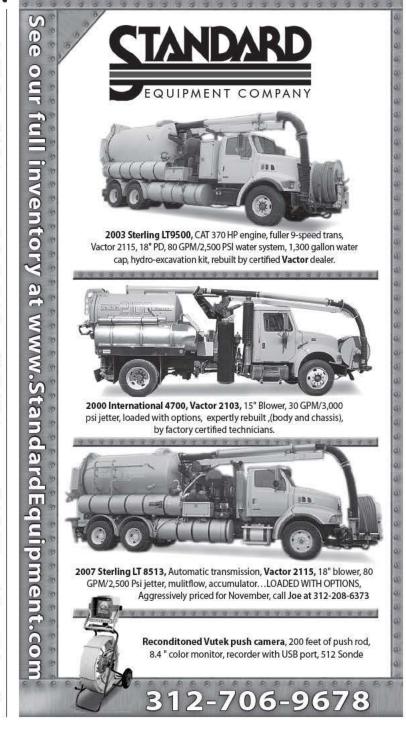
TOOLS

T&T Tools: Probes, hooks. Probes feature steel shafts with threaded and hardened tips. The insulated Mighty Probe™ tested to 50,000 volts. Top Poppers™ open manhole covers easily. Free catalog. www.TandT tools.com. Phone 800-521-6893. (CPBM)

RIDGID model #300 with stand. RIDGID tristand vises, RP 330 ProPress kit. The Cable Center: 800-257-7209.

Ritchie Yellow Jacket Recovery System & BULLET 7 cfm pump. The Cable Center: 800-257-7209 (CBM)

Bosch Brute hammer drill with cart irons. The (CBM) Cable Center: 800-257-7209.







TRUCKS (DUMP, MISC.)

2002 Ford F350: Super Duty XL, 99k miles, utility body with pipe rack, no rust, good condition. \$9,500. 2002 CAT, LR18B rake, have new shaft. \$3,000/OBO. 203-838-7000.(C11)

TV INSPECTION

2005 Cyclops Mainline Inspection System installed in a low mileage 1999 Ford 1 ton extended diesel with hi-top. P&T color camera, HD transporter, 850' cable, DVD, keyboard data entry, auxiliary wheel kit, traction wheel kit and manhole hardware. 90 day factory warranty on TV system. Ready to go to work. \$39,500. Call Bill at 830-249-9756.

New Cyclops Electronics Valu-Pac IV Standard: P&T color camera, heavy duty transporter, all-in-one controller for camera, lights, reel and transporter, 15" LCD monitor, DVD rec/ player, keyboard data system with on-screen footage, motorized reel with 500' TV/tow cable. All for only \$32,700. Call 830-249-9756 and talk to the guys that build 'em.

1992 GMC Step Van: CCTV inspection/grout truck, 77k miles, runs and works great, Win-Cam software, comes with many accessories, excellent condition. \$49,500. Call 518-337-9420 for details.



1998 Ford E-350. Equipped as Follows: 1998 Ford E-350 V8 gas engine, 5,469 miles, Cues Pipe Ranger, Honda EV6010 generator, two crawlers, (1) tracked, (1) 6-wheeled, tracked crawler accessory 6"-24" pipe, wheeled crawler accessory 8"-24" pipe, two camera heads, (1) pan & tilt, (1) pan, tilt & zoom. (Stock #1804)

312-829-1919

Ratech Inspection System: 1995 Ford E350 cargo van, new computer and data program, pan-and-tilt camera on crawler (with 1-yearold motor and transmission) 1,000' cable (1 year old). \$35,000/OBO. Call 519-294-6500. ON.

Envirosight Rovver 125 Camera System: Rovver 125 steerable crawler upgraded with back up camera, additional light, and 512 locator. Complete wheel sets, camera control unit, desktop and remote pendant, and was recently serviced. See pictures at www. empireequip.com. \$43,500. Call Craig at 714-420-4801, CA. (C11)

TV INSPECTION

1998 Cues Mainline TV System: GMC Savanna 3500, Cues with Pro-Data on-screen titler, Honda generator, Sony combo DVD/VHS, 1,700' of M/C cable, pan & tilt camera with shorty transporter. \$39,500. 608-835-7767, WI.



2008 Dodge Sprinter Van 3500: Mercedes diesel, 9,500 miles, Envirosight Supervision & DigiSewer cameras, 1,000 foot cable reel, Reese winch system, Quickview pole camera, wash down system, everything is like new. Onan diesel generator has 150 hours, camera unit has less hours. Serious inquiries only!

815-693-2929 IL

Used and rebuilt camera kits in stock: RIDGID Mini Compact, Mini Color, Standard Self-Leveling, General Gen-Eye I, II and III, Aries Seeker, and SRECO kits. The Cable Center: 800-257-7209.

VACUUM LOADERS

2012 Western Star cab and chassis, Power Vac 5300, 3,250 U.S. gallon, carbon steel DOT 407/412 regulations vacuum tanker with a Hibon PD blower, 5300 SCFM with vacuum to 28" mercury, dump type with full open rear door, and a Presvac PVB 750 vacuum-pressure pump. (Stock #13518V www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

1999 Sterling cab & chassis with a Cusco Turbovac 3800 industrial loader with a jetting system. (Stock #3163C) www. VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

WANTED

WANTED: Old sewer trucks running or not. Any brand, any make. PH: 713-900-9565, email: mmachinerymexico@gmail.com. (CBM)

Wanted to Buy: Vactor 2100's and late model Guzzlers, Cash, 800-336-4369. (CPBM)

WATERBLASTING

NLB 36 psi waterblaster: Model #362000-660, 3,531 hours, Cummins engine, 174 hp. \$45,000. NLB electric: 150 hp, 3-phase model #10150E-11/4, 10,000 psi. \$25,000. 1-734-722-8922, MI. (C12)

WATERBLASTING

Gardner Denver T-375M; 21 gpm @ 10.000 psi, Gardner Denver T-450M: 52 gpm @ 10,000 psi. NLB 10-200: 34 gpm @ 10,000 psi. NLB 20-600: 44 gpm @ 20,000 psi. Gardner Denver LC-1500: 390 gpm max, 15,000 psi max. NLB 10-200: 10k max, 34 gpm max. NLB 36-200 6 gpm @ 36,000 psi. Jetstream 4220: 20k psi @ 17 gpm, Allis-Chalmers 10x8x22, 700 hp Wheatley 125: 15 gpm @ 10,000 psi, Wheatley 165: 30 gpm @ 10,000 psi, Wheatley 165: 17 gpm @ 20.000 psi. Boatman Ind. 713-641-6006. View @ www.boatmanind.com.

WATERBLASTING

WATER JETTING EQUIPMENT: We sell. repair and retrofit water blasters. Visit us at: www.waterjettingequipment.com or phone 714-259-7700.

40,000 psi Sapphire Nozzles, UHP hoses & replacement parts. Excellent quality & prices. 772-286-1218, info@alljetting.com, www.alljetting.com.

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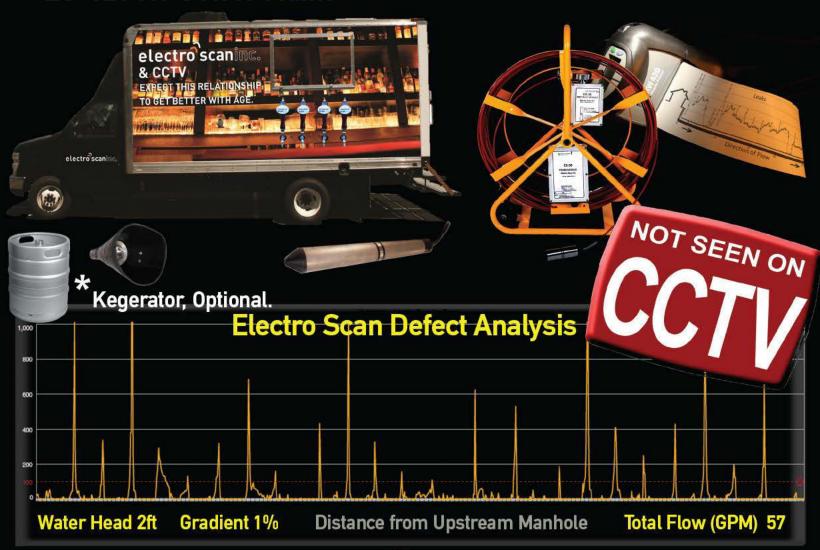
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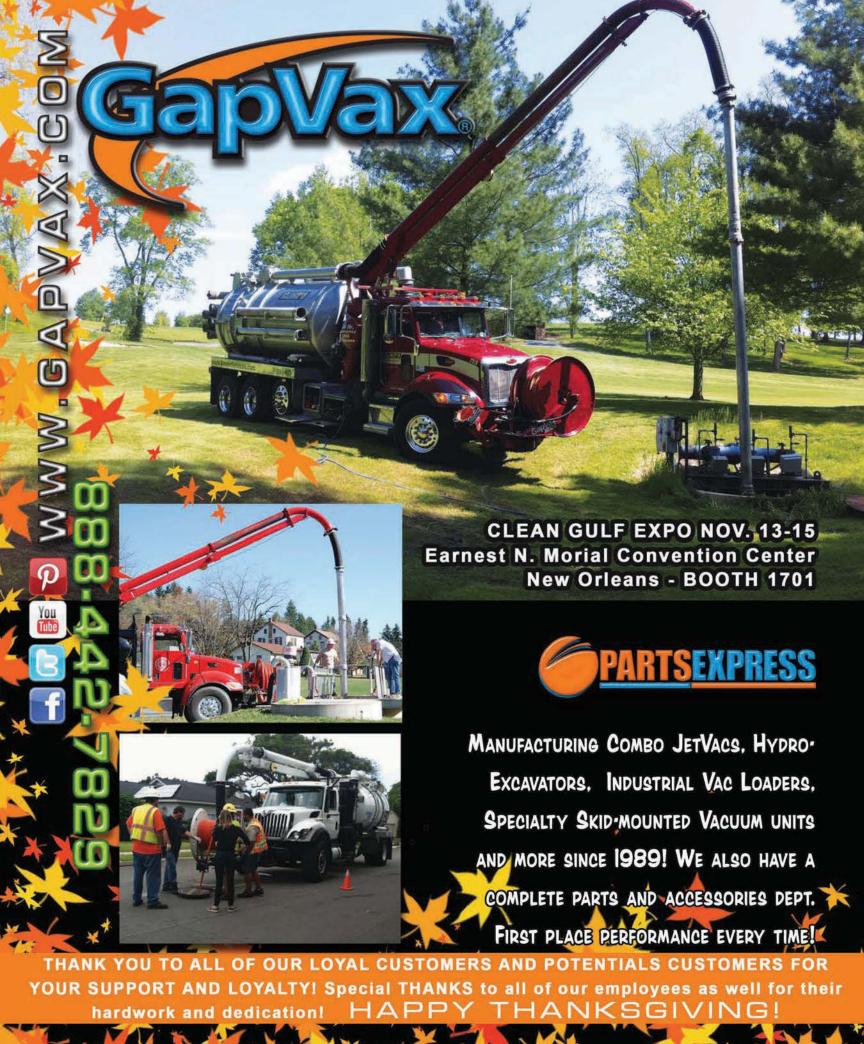
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