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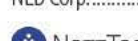
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Luke Laggis
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A Tremendous Experience

2012 PUMPER & CLEANER ENVIRONMENTAL EXPO HIGHLIGHTS THE INDUSTRY'S BEST

BY LUKE LAGGIS

The 2012 Pumper & Cleaner Environmental Expo is over, but the lessons and insight gained in Indy will be far-reaching. The educational seminars, equipment demonstrations and conversations with other contractors and manufacturers were all part of the Expo experience, and that's experience you'll be able to take forward and use to improve your business.

Watching the exhibit floor come together on Sunday and Monday was pretty amazing. The constant swirl of trucks, crates and equipment being ferried back and forth on the show floor gave the Indiana Convention Center a sort of circus-like atmosphere, except there were forklifts instead of bumper cars and the smell of diesel exhaust hung in the air rather than the wafting scents of cotton candy and corn dogs. Attendees never get to see that part of the show, but I think you'd appreciate the perspective it provides on the volume of work and level of coordination it takes to pull off an event like this.

Education Day was also impressive. There was a big slate of classes, and some were so full people were listening in the hallways outside the doors. Some of the most interesting conversations I overheard throughout the whole Expo were on Education Day. The seminars themselves presented timely, valuable information for contractors, but some of the conversations after the seminars – between attendees and in some cases, instructors – were just as valuable. There were practical questions about real problems, and direct answers that could make a difference on the next job. There were also stories of experiences echoing those presented by the instructors, a sharing of common ground that's always good for perspective.

There were many other opportunities to learn at the Expo as well, from product demos on the exhibit floor to Thursday morning's roundtable discussions. You could see pipe bursting, CIPP lining, electronic pipe scanning and jetting nozzles in action, or take part in discussions on measuring sewer flow, lateral cleaning or hydroexcavation.

The seminars themselves presented timely, valuable information for contractors, but some of the conversations after the seminars – between attendees and in some cases, instructors – were just as valuable.

Over 500 exhibitors and thousands of contractors from dozens of countries were all in Indy, and that also led to opportunities to learn about the projects and problems contractors are tackling in other regions. With so many industry people all together, the networking opportunities were almost limitless.

The Expo was a great experience for me, and I hope it was for you as well. And if you weren't fortunate enough to be able to attend, at least the new product roundup in this month's issue will give you a look at some of the newest and best products that were on display. Enjoy the coverage, and put the 2013 Expo (Feb. 25-28) on your calendar for next year. **c**

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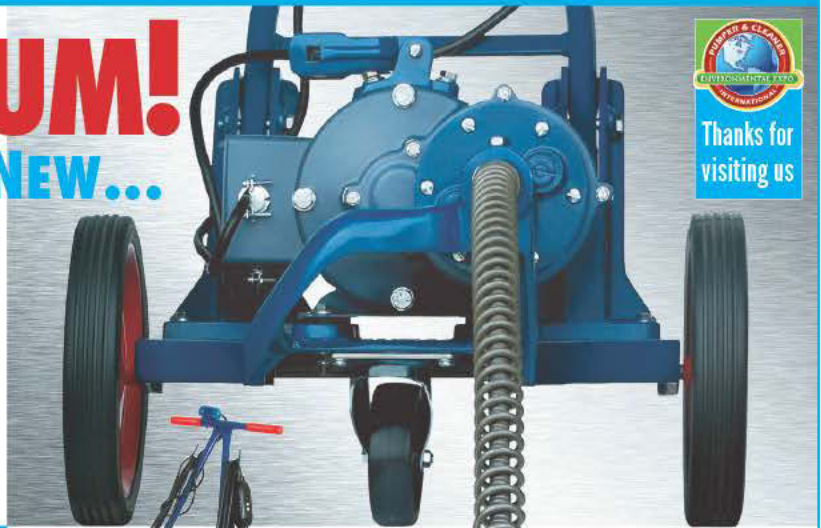
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Honor the Profitable, Fire the Rest

COST ACCOUNTING CAN HELP YOU DETERMINE THE REAL VALUE OF YOUR CUSTOMERS

BY MARK E. BATTERSBY

It is the rare sewer and drain cleaning contractor who doesn't know whether his or her business is profitable. Accounting statements or even the cleaning operation's tax returns often provide that information. How many contractors, however, are aware that some customers simply don't make money for their cleaning businesses?

That's right, few commercial drain cleaners and general maintenance business owners or managers are aware whether their "best" customers are generating profits sufficient to warrant the degree of services demanded or provided.

The solution is simple: make those customers profitable or cut them loose. Obviously, improving

One week is obviously not enough and a year is too long. Most customers' habits can be tracked within two- to four-month timeframes.

Gross profit margins are the most commonly used factor, but it cannot be immediately assumed a customer is not profitable because its margin is below average. That's where other factors, including costs, come in.

Many businesses routinely allocate a portion of their overhead costs to customer service. More often, however, costs reflect only the cost of the services performed. Missing from this measurement is the time, support, effort, and ultimately the total cost required to meet the customer's needs. Analysis

is usually not practical to identify the profitability of individual customers, unless there are only a few of them. Therefore customers may be grouped by size, industries and market or types of services.

To set up an effective cost accounting system, the help of an accountant or CPA might be advisable. Cost accounting can, after all, get fairly complicated. The money spent for professional guidance will be well worth it, leaving only the question of what to do about any "bad" customers.

TURNING BAD TO PROFITABLE

The first step to turning unprofitable customers into valuable assets is determining whether the relationship can be improved. A sewer or drain cleaning contractor who believes in holding onto every customer, no matter what the cost, may never see his or her cleaning business reach its maximum earning potential.

Efforts should always be made at "reforming" the customer before asking him to take his business elsewhere, but each situation – and each customer – is different.

If the problem is one of slow pay with a small customer, scheduled services can be postponed until they've paid up. The same approach may work for larger customers if the cleaning business has enough leverage. Alternatively, a price increase can offset the higher cost of extending credit for a longer period of time.

Worried about the customer going elsewhere? Sometimes that's a good thing. Problem customers become problems for competitors.

ACQUIRING AND KEEPING PROFITABLE CUSTOMERS

It is five times more profitable to spend marketing and advertising dollars on retaining customers than acquiring new customers. In years past, focusing on customer retention was not as important because people had a personal connection with their service providers and "stickiness" came naturally. But that has all changed now.

The first step to turning unprofitable customers into valuable assets is determining whether the relationship can be improved. A sewer or drain cleaning contractor who believes in holding onto every customer, no matter what the cost, may never see his or her cleaning business reach its maximum earning potential.

a customer's value to the business isn't easy but it begins with understanding how much a customer costs.

KEEPING TABS ON COSTS

The often repeated "80/20" rule states that a large majority (80 percent) of any business's earnings come from a very small number (20 percent) of its customers. In other words, most contractors and businesses make most of their money from a small percentage of their customers.

Customers who don't necessarily pay much but who also don't demand a lot of service may be good customers, while other customers may pay more but require so much assistance that they're costing the contractor money.

The best way to research a customer and evaluate their profitability is to keep track of all interactions with that customer over a period of time.

that reveals the total cost by customer rather than by types of services often produces startling results that will shift the customer profitability discussion from anecdotal evidence or gut feelings to a discussion utilizing quality information.

Cost accounting is the process of allocating all of the cleaning operation's costs associated with generating a sale, performing a service, etc., both direct and indirect. Direct costs include such things as the total wages paid to workers, the salaries of supervisors, supplies expended, etc. Indirect costs are all of the other expenses associated with keeping the operation going.

ESTABLISH A SYSTEM, CREATE A GOAL

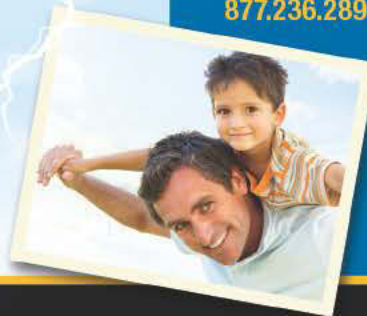
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Clockwork Home Services® is now part of  Direct Energy.

Do you know how much of your business's resources you allocate to marketing and new customer acquisition? Most importantly, do you know how much you should be spending to market the business? Most small businesses use a combination of guesswork, perceived funds available and gut feel to set their marketing budgets.

Understanding the lifetime value of new customers has allowed many cleaning business owners and managers to take a longer-term and more realistic view of attracting new business. Customer acquisition cost is calculated by dividing total acquisition expenses by the total number of new customers. Not too surprisingly, there are different opinions as to what constitutes an acquisition expense. For example, rebates and special discounts do not represent an actual cash outlay, yet they have an impact on cash flow and presumably, on the customer.

To compute the cost of acquiring a customer, CAC, the operation's entire cost of sales and marketing over a given period, including salaries and other related expenses, is divided by the number of customers acquired in that period. Further calculations are necessary to determine how many prospects have been attracted by a marketing campaign and how many of those prospects were successfully turned into customers.

In order to compute the lifetime value of a

customer, LTV, the gross profit margin expected to result from that customer over the lifetime of the relationship is computed. Gross margin would obviously take into consideration any support, installation and servicing costs over the projected life of the customer relationship.

SOLUTIONS AND MORE SOLUTIONS

There are a number of strategies for resolving the "Best Customer/Least Profitable Customer" conundrum including:


- Increasing the profitability of already-profitable customers
- Identifying unprofitable customers and realigning them to better manage costs
- Pricing services more effectively
- Improving negotiation processes with customers (discounts, quantity of deliveries, order size, payment terms, etc.)

The one thing many sewer and drain contractors often ignore is whether their best business decision may actually involve firing some of their worst customers. While this may seem like an illogical suggestion, particularly in a difficult economy, having the wrong customers can cost a cleaning business in unexpected ways and hold it back from real success with the temptation of short-term profits.

The operation may be stuck in a raw deal

with minimum profit margins, losing the ability to service new and more profitable customers. The operation may also experience employee turnover due to burnout from servicing abusive or demanding customers, leaving the business with the expense of recruiting and training new workers.

Part of the challenge faced by many cleaning business owners and managers is how to extract the operation from those relationships without burning bridges or creating enemies.

Accounting for costs means more realistically pricing goods and services to ensure costs are passed on to the customer. Cost accounting can also prove invaluable when it comes to determining real profits, finding out what a particular job actually costs and what your "best customer" actually costs your cleaning business. 

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UTAH PIPEBURSTING USES EDUCATION TO GROW A STRONGER
MARKET FOR ITS SERVICES BY PETER KENTER

Imagine opening a pipe bursting business in a market where you're practically the only game in town. Now imagine that only a tiny segment of your potential clients know what pipe bursting is. That's the business climate in which Jay Garrett, owner of Utah Pipebursting, launched his business in 2009. The business is thriving on the philosophy that educating potential clients is the best way to transform them into paying customers.

(continued)

profile

UTAH PIPEBURSTING, LLC, OGDEN, UTAH



PRESIDENT: Jay Garrett
FOUNDED: 2009
EMPLOYEES: 4
SPECIALTIES: Pipe bursting
SERVICE AREA: Northern Utah
WEBSITE: www.utahpipebursting.com

Jay Garrett, left, and Trevor Garrett replace a pipe at a residence in Salt Lake City. (Photography by Chris Detrick)

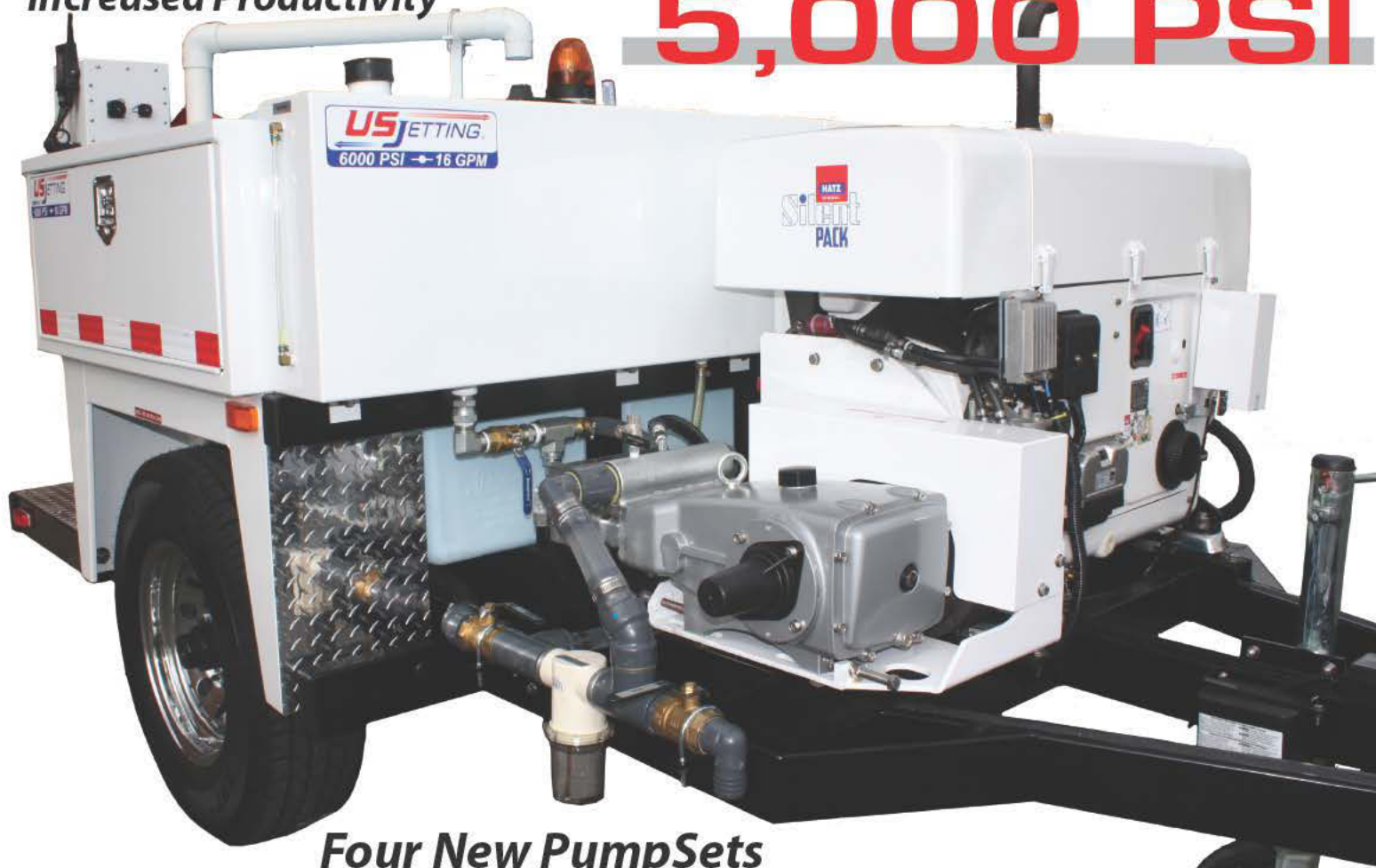


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"In 1998, I was living in the Los Angeles area and the mainline cleaning and video inspection company I was working for sent me to Ogden (Utah) to rescue a project at Hill Air Force Base," says Garrett. "After that, the division in Salt Lake City requested that I remain and my wife and I decided it was a good place to raise a family."

Garrett was introduced to pipe bursting when he joined Whittaker Construction in Brigham City, north of Ogden, in early 1999.

"I was running a division of the company that offered specialty services, including CCTV, vacuum trucks, hydroexcavation – anything that didn't involve open-cut or directional drilling," says Garrett. "We got a call for a pipe bursting job and the guy who had done it before was busy on another project, so they told me to go do it – a trial by fire. I figured it out pretty quickly. But after about four years the



"They installed a lot of lightweight Orangeburg pipe, which was designed to last perhaps 25 years. There's lots of clay pipe in the ground, and that was designed to last 60 years, and plenty of concrete that's been in the ground for at least 70 years. It's the perfect storm ... everything is starting to fail at the right time for us."

Jay Garrett

company got really large and realized it needed to concentrate on \$25 million projects instead of \$5,000 or \$6,000 pipe bursts that were almost as expensive to bill through accounting than any profits associated with them. In their position, I would have done the same."

He joined CH Nix Construction in the same area in 2005, plumping up its pipe bursting business from only 10 projects the prior year to 85 the first year he was employed.

Garrett and a partner set out to launch their own pipe bursting business in Ogden in the fall of 2006. "I was already well networked with a lot of potential clients," he says.

Ogden is located in the shadow of the Wasatch Mountains. The northern part of the state has few competitors with pipe bursting capabilities – perhaps a dozen. The city itself boasts a population of more than 80,000, and it has access to an urban area of more than two million, and to Salt Lake City, about 40 miles to the north.

PIPE BURSTING A SPECIALTY

A little more than two years later, the partnership dissolved and Garrett started a new business under the Utah Pipebursting name in the spring of 2009, concentrating solely on pipe bursting.

He immediately hired one son, foreman Brandon, now 21. Trevor, now 19, was hired after his 18th birthday. Two other employees followed soon after. His other son Devon, 16, works for the business part-time as an electronic media specialist, defining the company's Web presence.

About 80 percent of the company's work is performed within 15 miles of Ogden, but Garrett chases contracts as far as 400 miles away. "We don't have any problem driving from Point A to Point B in Utah," says Garrett. "Anything below 50 mph is considered a traffic jam here."

The business name describes what the company does almost exclusively. "About 95 percent of our work is bursting and replacing pipes, a very specialized service offering," says Garrett.

About 80 percent of customers are on the residential side, about 15 percent are municipal and a little industrial work rounds out the service calendar.

"The geography of the area itself is a bit of a risk factor," says Garrett. "There's a variety of soil types. You might find a bed of sand and rock in one direction, and a band of cobble and clay in another. The constantly changing soil is a challenge to actual pipe bursting."

Because much of the soil is clay that compacts poorly, almost all excavation work requires clay soils to be replaced with engineered fill.

"The sewer laterals also run deep here – a 6-foot lateral would be like a vacation to us," Garrett says. "Most of the houses here have full basements, and it isn't unusual to see laterals that start out at the house at seven or eight feet, then cut through hilly territory until they're buried eight to 12 feet deep at the other end."

There's plenty of need for lateral repair. Ogden is rife with Orangeburg pipe and other materials approaching the end of their life expectancy.

"We had a huge population explosion here in the 1940s and 1950s in part due to the construction of Hill Air Force Base, trucking, and industrial and tourist development," says Garrett. "They installed a lot of lightweight Orangeburg pipe, which was designed to last perhaps 25 years. There's lots of clay pipe in the ground, and that was designed to last 60 years, and plenty of concrete that's been in the ground for at least 70 years. It's the perfect storm ... everything is starting to fail at the right time for us."

ABOVE: Matthew Gross fuses sections of HDPE pipe on a bursting job. BELOW: Gross sets up the pulling pit by inserting the cable into the grippers of the ram (TRIC Tools).



(continued)

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The Utah Pipe Bursting crew includes, from left, Jay Garrett, owner; Brandon Garrett, foreman; Trevor Garrett, laborer; and Matthew Gross, laborer.

ternet they enter the search terms ‘Utah’ and ‘pipe bursting’ and our company appears at the top of the search engine results. Because of our lower overhead and the fact that we don’t pay franchise fees, we often successfully compete on those projects.”

MARKETING SHIFT

Previously, when the company serviced a lateral in a subdivision built with Orangeburg pipe, Garrett would canvas the entire area, explaining the technology that averted a disaster at the neighbor’s house. He often converted more than a quarter of the neighborhood into paying customers. However, this sort of door-to-door marketing is no longer paying big dividends.

“Everyone is being inundated with flyers these days,” he says. “I’ve switched to a sandwich board parked near the road that says ‘Another sewer pipe saved by Utah Pipebursting.’ That’s gotten us a lot better response than flyers.”

Garrett takes advantage of networking opportunities through such organizations as Business Networking International, Cambridge Who’s Who, and local chambers of commerce. He also uses Angie’s List and pay-per-lead services, such as ServiceMagic, which connect him quickly with qualified potential customers.

The company’s equipment armada includes two bursting machines, a 30-ton and a 50-ton pulling unit from TRIC Tools Inc., two Kubota mini

EDUCATION AND MARKETING PAY OFF

The key to the business’ has been education and marketing.

“Only 5 percent of our potential customers know what pipe bursting is,” says Garrett. “Utah culture is very conservative, so often a technology must be proved everywhere else in the world before people in this state will accept it. We try to hook them right up front with our slogan: ‘Replace your pipe, not your yard.’”

Garrett generally wins clients over after explaining the cost savings of pipe bursting versus open-cut replacement. Much of the business is generated by word-of-mouth and online through the company’s website. Garrett also uses LinkedIn, Facebook and other social networking sites.

“Twitter is dying and the Yellow Pages are dead,” says Garrett. “Most people who find us call a plumber or drain cleaner who refers them to us. People in their 30s and 40s tend more to look us up on the Internet. Younger people turn to Facebook to find us on their iPhones in seconds. We’re currently designing a mobile phone version of the website to cater to that market. A lot of the younger customers are surprised when I show up and I’m a guy in his 50s.”

A few national chains that offer pipe bursting as a sideline will quote on local jobs, often prompting customers to look for a competitive quote elsewhere.

“People who thought I chose a boring name for the business have started to see the method in my madness,” says Garrett. “The moment they hit the In-

“People who thought I chose a boring name for the business have started to see the method in my madness. The moment they hit the Internet they enter the search terms ‘Utah’ and ‘pipe bursting’ and our company appears at the top of the search engine results.”

Jay Garrett

excavators, a Ford dump truck, two Ford pickups, assorted trailers, and shoring equipment by Griswold Machine & Engineering. Garrett orders most of his smaller-diameter bursting equipment from TRIC Tools and his larger-diameter equipment from HammerHead. Most of the equipment maintenance is performed in-house in the company’s small shop.

A four-person crew, the full employee complement, is assigned to each bursting project.

(continued)

THE RIGHT TOOL FOR THE WRONG JOB

Sometimes innovating with available tools can bring a tough job to a successful conclusion. Just ask Jay Garrett, owner of Utah Pipebursting, how he helped to install a new sewer lateral at a library in Salt Lake City.

“This is the old Salt Lake City library that was being converted into The Leonardo art, science and technology museum,” he says. “They had a 24-foot patio running around the outside of the building, but specified that we couldn’t touch a single tree or tree root, or damage the patio. Directional drilling for the 85-foot length of lateral was out of the question because of traffic considerations on the road side.”

Garrett figured that a torpedo pneumatic piercing tool by Vermeer with a 6-inch bursting head, expanded to eight inches,

might do the trick.

“We oversized the hole because keeping to grade was critical,” he says. “We could only allow a fall of five inches over 85 feet, so the extra hole diameter gave us a little breathing room to adjust the line.”

The equipment cut through the soil like a *Dune* sandworm, with the PVC line following smoothly behind. Garrett filled any spaces around the line with sand blown into the excavation using an air compressor.

“Every contractor I spoke to said it wouldn’t work,” says Garrett, “But I was too stupid to listen to them. The client was very happy with the results.”

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Matthew Gross stands by as the TRIC Tools bursting head reaches the receiving pit on a residential pipe bursting job.

“We complete each lateral in a single day, from start to finish, then subcontract the asphalt to a contractor who will pave three or four access holes at once,” says Garrett. “Our policy is that we pay each employee for an eight-hour day, even if they manage to complete the project and go home after fewer hours. That not only keeps the workers happy, but finishing early frees up extra time for me to devote to the business.”

Pipe bursting is the right choice for almost any host pipe material, except for corrugated pipes that tend to accordion and gum up the process, says Garrett.

HDPE OR PVC?

The company tends to favor either high-density polyethylene (HDPE) or polyvinyl chloride (PVC) for new sewer laterals.

“HDPE requires a smaller launching pit, perhaps three by five feet, and the material is more flexible,” says Garrett. “With a 4-inch line you can put a bend on the pipe so that it has a 6-foot radius on it. PVC is a much more rigid pipe, so if you use a 20-foot stick you have to dig a 25-foot launching pit to insert it and you can get maybe a 2.5-foot deflection per 20 feet on it.”

HDPE can be pre-fused in lengths of up to 300 feet before it enters the staging pit – a time-consuming process. PVC, on the other hand, is more easy to connect, with the 20-foot lengths inserted in assembly-line fashion.

“Each replacement pipe material has advantages and disadvantages,” says Garrett. “Research your replacement materials and choose the material to fit the job characteristics, not the reverse.”

Utah Pipebursting orders HDPE line from ISCO Industries and Yelomine

“Each replacement pipe material has advantages and disadvantages. Research your replacement materials and choose the material to fit the job characteristics, not the reverse.”

Jay Garrett

Restrained Joint PVC pipe from CertainTeed. Pipe fittings are by HD Supply.

Garrett has also developed some specialty equipment for specific contracts involving houses that share a common lateral that often runs under the driveway.

“Necessity was the mother of invention,” he says. “Instead of digging up two services and charging clients a ridiculous amount of money, I developed a bursting head that will pull two lines, one to one house and one to the other.”

Garrett isn’t, however, going to make a million dollars out of the invention.

“There were three of us who developed the idea at the same time independently – and to my knowledge, none of us patented it,” he says. “I do about 10 of these jobs a year because, for some reason, shared laterals were common here at one time. We recently worked on a project where eight houses had once shared the same combined lateral, but because the first three houses had been demolished, there were only five houses left.”

A huge variance in local bylaws and building codes is also a challenge, in large part because they never anticipated pipe bursting technology.



“Some jurisdictions, for example, require a rock bed to be installed under all new pipe,” says Garrett. “Although they really want to apply that rule to pipe bursting installations they can’t reasonably do that – so they tell us that we have to put a rock bed under the little 3-foot section of exposed pipe in the launching pit.”

Garrett is currently involved in forming a nonprofit pipe bursting association created by and for contractors, a complement to the vendor-driven pipe bursting subsidiary of the National Association of Sewer Service Companies (NASSCO), that may help to create broader acceptance of pipe bursting across the country.

“It will be focused on promotion of the technology, professional development and technical advice,” he says. “I hope to have it launched later this year.”

NOT FAZED BY ECONOMY

Garrett says he hasn’t been fazed by the recent economic downturn. He’s currently working to expand into more municipal and commercial work and broaden his reach throughout northern Utah.

“When times are tough, a money-saving technology will be in high demand, provided your marketing is in place and people know what you’re offering,” says Garrett. “We’re harvesting where we’ve already seeded. I’ve done 700 laterals and I see a strong market for pipe bursting for at least the next 20 years, but that doesn’t mean I’m not looking out for other business interests. My sons will be taking over the business some day and I want them to be working on the next big thing if pipe bursting slowly phases out.”

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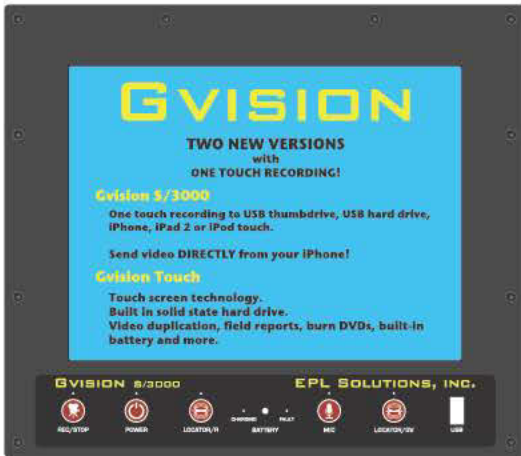
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TWO INDUSTRY EXPERTS WEIGH IN ON A DOZEN QUESTIONS EVERY CONTRACTOR SHOULD ASK BEFORE A PIPE BURSTING JOB BEGINS

BY PETER KENTER

Over the past three decades, pipe bursting technology has become a valuable tool in sewer line construction and maintenance. However, the success of each project owes as much to the design and preparation of the job as its execution.

We asked two industry experts to share a dozen points any contractor should consider before embarking on a pipe bursting job. On deck: Collins Orton, product specialist and California regional sales manager for trenchless equipment manufacturer TT Technologies, of Aurora, Ill., and Alan Goodman, national sales manager, pipe ramming and pipe bursting with HammerHead of Oconomowoc, Wis.

1. Has the existing line been inspected using closed circuit television (CCTV)?

Orton: Anyone performing pipe bursting without a CCTV inspection is very, very foolish. You don't have X-ray vision. In a lot of cases, you need to get visual confirmation of pipe construction material and any bends in the pipe. You need to look for the laterals and all of the connections, both legal and illegal. If you send a new line through there without camera inspection, you'll be the first to know about it when the sewer laterals start backing up.

Goodman: Proper CCTV service allows you to see a transition in existing pipe material and if the existing line has a belly or sag. If you're bursting that line it will try to follow the path of the existing pipe. By increasing the diameter of the existing pipe you can help diminish the belly or sag due to the new pipe diameter. A CCTV inspection after the installation is also the best way of demonstrating that the installation has been completed correctly.

2. Have all other utilities been identified, accurately located and exposed where needed?

Orton: Accurate service location is becoming more and more important, from gas and electrical lines to fiber optic cables. Even if you locate the utility and you don't know how much room you have between utilities, you have to excavate and expose that crossing to determine what the clearance actually is. We've seen cases where the lateral was located an inch or two from a gas line. We've even seen a case where the gas company had drilled a 2-inch gas main straight through a sewer lateral.

Goodman: Our rule of thumb is that, for every inch you want to expand, the depth of cover should be 12 times that number to account for proper clearance from other utilities. So if you're going from a 4-inch line to a 7.2-inch line – a 3.2-inch increase – you would want to be at least 38 to 40 inches from the nearest utility.

3. What is the existing pipe material made of? Are there any transitions of pipe material throughout the run?

Orton: Some pipes are fracturable, some are flexible and can't break and need to be sliced and spread open. The material in the existing pipe can have an affect on what kind of tools you use, from a simple cone to a bursting head with ribs or blades to provide extra power. Ductile iron is flexible, not fracturable, while cast iron can be burst, so you need to be positive about the pipe material, even to the point of digging and inspecting if you aren't sure what the pipe is made of. Some plastics are a bit of a grey area with some of them fracturing and some being flexible enough to snap back so that you need a larger tool head to fracture them.

Goodman: For existing concrete pipe, be careful of steel rebar reinforcement. We've seen smaller gauge steel rebar as small as 1/4 inch or 3/8 inch in diameter all the way up to heavy-duty steel-reinforced stuff, where it's a real challenge to split the concrete and the rebar. We've also seen cases where the contractor is asked to burst a 10-inch concrete pipe that has been slip-lined with HDPE (high-density polyethylene) pipe. Due to capacity issues, the contractor is requested to burst both the 8-inch HDPE pipe and the 10-inch concrete pipe installing a new 10-inch HDPE pipe. You obviously need to bring enough force to burst through both materials simultaneously.

A technician pushes rods through the existing sewer line, preparing for a burst. (Photo courtesy of HammerHead)



4. Are there any unusual bends or repairs on the existing pipe?

Goodman: Even if two lines are made of the identical material, for example fracturable cast iron, it's important to note whether it's a sewer or waterline. Waterlines are pressurized and they might have repair couplers, so you need to know what kind of work has been done on the existing line.

Orton: We've seen sewer laterals going from the sewer line to the property perpendicular to the street, then taking an entirely different route from the property line to the home. That's one of the reasons CCTV inspection is so important. In some cases, especially where there's an elbow involved, a shorter bursting head can get through an elbow and then bend inboard of the elbow to re-enter the pipe.

5. What is the replacement pipe material made of?

Orton: There are a number of different pipe materials commonly used for sewer lateral service. The most common is HDPE, but some building departments ask for ABS (acrylonitrile butadiene styrene) or PVC (polyvinyl chloride) or even cast iron drainage systems. The more rigid the material, the longer the launching pit required to introduce the new pipe. HDPE is very flexible and requires the shortest excavation, and the more flexible the material, the larger the bend radius it will be capable of following.

Goodman: HDPE is the preferred material for replacement pipe when pipe bursting, but fusible PVC, TerraBrute, ductile iron and clay have been used successfully when additional projects and site conditions have been considered.

6. Do you have the correct type and capacity of bursting equipment on site? What are the diameters of the existing pipe and the new line being installed?

Orton: Never bring a knife to a gunfight. It's all about bringing enough force to the job because power is the name of the game in pipe bursting. Don't bring a 15-ton unit when you really need 25 to 28 tons. An experienced contractor is also likely to bring two or three bursting heads to the job site for each nominal pipe size, just to be sure they can modify their approach if they encounter unexpected soil conditions, for example, that can create extra drag on the pipe.

Goodman: It's critical to get those measurements right, because you want to expand the existing pipe at least 20 percent larger than the outside diameter of the new pipe being installed. Another thing to consider is whether that pipe is unobstructed. If we have a 10-inch clay line that's collapsed in places, we need to bring the necessary pilot and tooling along with enough force and a large enough bursting head to expand the collapsed material out instead of forward, which would essentially create a plug in front of the burst head. That could result in a failed burst.

7. How will the replacement pipe be joined together?

Goodman: Generally speaking, contractors prefer both HDPE and fusible PVC as the joints are fused together, eliminating the need to account for a bell. Bell and spigot PVC pipes are also used for replacement because they can use collars with locking mechanism or glue joints and eliminate purchasing a fusing machine.

Orton: HDPE is fusion welded. PVC pipe may have solvent welded joints – glued joints – or even rubber gaskets. However, many of these require bell connections that are wider than the pipe diameter. That means you have to use enough force and a bursting head big enough to account for the larger diameter of the bell joint.



The crew aligns pipe bursting equipment in the extraction pit. (Photo courtesy of IT Technologies, Inc.)

8. How deep or expandable is the soil surrounding the existing pipe?

Orton: There's a wide range of soil – everything from a nice, soft clay to hard rock where lines are inserted into rock trenches that form around the pipes and bells. Many lines are already surrounded by softer bedding, but even that can be problematic if the soil is frozen solid. In places like Edmonton, they bring out a huge steam plant to defrost the soil before pipe bursting.

Goodman: The depth of the soil is critical because the shallower the original line, the more likely the line is to fracture or hump above the soil. If you're going from a 4-inch to 6-inch line two feet below the ground, there's a good possibility of creating a heave above the line if you're not careful.

9. Is there any concrete reinforcement surrounding the line?

Goodman: You need to know if and how much concrete was poured on the joint. Quite often if the guys have a couple of yards left over on the concrete truck, they pour it into the pipe excavation. In Los Angeles, there are many cases of concrete slurry mix being poured on top of the line in order to help stabilize the lines during ground shifts. This can result in a failed burst due to lack of expansion in the ground and concrete slurry mix.

Orton: On one pipe bursting job we saw, the contractor encountered several pipes inserted in a concrete block measuring 12 by 12 by 12 feet. Your only recourse in a case like this is to remove the obstruction.

10. How will the replaced line be tied into the existing pipe at the house and at the property line or main? What fittings are allowed?

Orton: Make sure to have the fittings on hand, from common couplings to clamps with worm gears to satisfy the codes of that jurisdiction.

Goodman: The engineers that design the job should have a good idea of what will be required, so bring anything that might be needed, from a range of fittings to electrofusion saddles.

11. Have all permits been finalized?

Orton: Get the necessary permits required from the jurisdiction to ensure that the work will be inspected. In some cases, a lateral that crosses the property line may have to be approved and permitted by two different authorities and the communications between these authorities is often poor.

Goodman: Amen.



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EQUIPMENT MODIFICATIONS ENABLE A CONTRACTOR TO CLEAN A GRAVITY LINE 40 FEET BELOW A WASTEWATER TREATMENT PLANT IN WASHINGTON, D.C.

BY SCOTTIE DAYTON

A 24-inch gravity line designed to transfer sludge from one pit to another at the Blue Plains Advanced Wastewater Treatment Plant in Washington, D.C., was one-half to three-quarters full and hadn't been used in years. As part of a plant upgrade, project engineer Nicholas Ritenour, PE., of Ulliman Schutte Construction in Washington, wanted it cleaned.

The pipe, running 800 feet in a service tunnel 40 feet beneath the plant, hung eight to 14 feet above the floor. Three contractors said the situation was impossible before Ritenour called Tom Buchwald of Quality Pipe Cleaning Co. in Centreville, Va. Buchwald has more than 20 years of experience resolving the unsolvable.

"Our biggest challenges were mobilizing equipment, getting a jetter hose in the pipe, and cleanup," he says. "Since air had never reached the sludge, it was soft, but not soft enough to flow."

Buchwald's answer involved bolting the hose reel and controls from a Vac-Con X-Cavator to the front of a 753 Bobcat loader and staging two hydro-excavators near a service stairwell. Despite unforeseen obstacles, eight employees working 10-hour shifts cleaned the line in 10 days.

MOBILIZATION

The crew spent the first day mobilizing equipment. The tunnel had adequate ventilation to run the loader and alarms were in place in the event the carbon monoxide level rose too high.

"Once cleaning began, we could see smoke in the air, but it never became an issue," says Buchwald. Lighting also was adequate.

Project manager J.R. Swerda drove the loader down a ramp and into the west end of the tunnel where work would begin, but the passage narrowed and blocked the attempt. He reversed and consulted Ritenour.

A pump house on the east side of the plant had a 50-ton overhead crane that changed out pumps through an access hole large enough for the loader. Swerda and the crane operator hooked chains to the hose reel before unbolting and lowering it. Halfway down, it flipped over on its side, so the crew hoisted it back up, righted the unit, reattached the chains, and lowered it successfully.

"Lowering the Bobcat was hairy because it's old and doesn't have lift points," says Swerda. "We made a sling from two chains and balanced the machine between them."

To clean the pipe 8 feet overhead, Tom Buchwald bolted the hose reel and controls from a Vac-Con X-Cavator to the front of a 753 Bobcat loader. The 2-inch water supply hose is attached to the left, while the 2-inch jetting hose snakes forward and upward. (Courtesy of Quality Pipe Cleaning Co.)

When it was on the floor, Swerda reattached the hose reel and drove to the work area.

Buchwald planned to hook the 2010 Vac-Con to a fire hydrant to supply water to the 2011 machine stationed at the east stairwell. When they arrived, masons were building a wall at that entrance.

tough job

PROJECT: Clean 800 feet of 24-inch pipe 40 feet below ground

CUSTOMER: Blue Plains Advanced Wastewater Treatment Plant, Washington, D.C.

CONTRACTOR: Quality Pipe Cleaning Co., Centreville, Va.

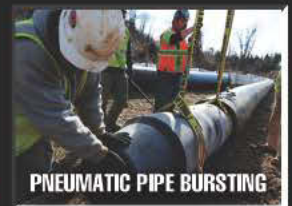
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RESULTS: Line cleaned in 10 days



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ABOVE: Built from two rows of sandbags, the 15- by 15-foot capture pit was 18 inches high and leaked badly. The camera captured flying spray. RIGHT: A rope tied through the bolt holes in the pipe secures the jetter hose, preventing it from falling out. Plant operators used the hanging chains to lower the valve they cut out of the line.



“We had to park the trucks hood to hood at the west stairwell 60 feet away, which made it even farther for the machine to pull,” he says.

STAIR MASTERS

The crew hauled 200 feet of 6-inch flexible hose down six flights of stairs, then brought 60 feet of 8-inch hose for vacuuming and the 1/2-inch hose supplying water to the jetter. To access the pipe eight feet overhead, plant operators had removed valves at two locations. Swerda’s crew tied a rope through the bolt holes in the pipe to the rear to secure the jetter hose and prevent it from falling out.

The floor was covered with dried sludge. Gutters full of water ran on either side of the tunnel to sump pumps.

“If the sludge we removed reached the pumps, it would burn them up,” says Swerda.

To capture the debris, the men built a 15- by 15-foot pit 18 inches high from two rows of sandbags.

“The first couple of times we jetted a section was really nasty,” says Swerda. “The slurry blew out, hit the ground, and splattered all over the walls and floor.”

The first 300-foot section had the worst buildup and took two days to clean using a Vac-Con Storm nozzle with six jets in the rear.

“We probably jetted it 50 to 60 times,” says Swerda.

At the farthest point, the crew vacuumed 250 feet from the trucks, both VPD4012/1300 LXA units with 12-cubic-yard debris body, 1,300-gallon water



The pump house, the last building in the background, is 800 feet from where the trucks are mobilized.

tank, 4,000 cfm/18 inches Hg Hibon positive displacement blower, and 80 gpm/2,000 psi water jetter with Omnibus Control System. They discharged material at the plant.

Workers initially laid the vacuum hose flat in the pit, but suction was reduced when the hose wasn’t fully covered, and by then they had containment problems. Swerda found a 6-foot stepladder, slung the hose across the spreaders, and pointed the end into the pit to improve suction.

“The first couple of times we jetted a section was really nasty. The slurry blew out, hit the ground, and splattered all over the walls and floor.”

J.R. Swerda

HORRIBLE MESS

The pit leaked badly. Workers corralled the overflow and pushed it back to the hose with squeegees. When they thought the section was clean, Swerda televised the line with an OZ II camera on a wheeled Pipe Ranger from CUES.

“The inspection truck has 900 feet of cable and we strung out most of it,” he says. “I was surprised the transporter had the power to pull 600 feet of cable, but it did.”

The second 300-foot section was accessible from the fifth flight of stairs. The work remained identical until the pipe disappeared.

“Nicholas took me down two flights of stairs and there it was, 15 feet off the ground and mostly hidden behind a bunch of other pipes,” says Swerda. “There were only a few places where we could access it.”

A worker in a fall restraint harness walked along two pipes to cut the opening and insert the jetter, fed from the truck now parked beside the service door. As a precaution, plant operators poly-wrapped three pumps in the splash zone. They also assured Swerda that two nearby fluorescent lights were waterproof. When one filled with slurry, it didn’t short out.

Once Swerda verified the line was clean, the crew used a handgun to hose down the walls, floor and overhead pipes at each work area, and brooms to push the material to the vacuum hose. The work took half a day, then operators reinstated the valves to prepare the line for service. **c**

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Technicians Abaro Garcia, left, and Michael Janeira use a Vivax-Metrotech camera to examine a broken sewer line at a residential home. (Photography by Thomas Costello)



A Nice Touch GOES A LONG WAY

FRANCHISE-FUELED GROWTH HELPS NEW JERSEY FIRM DO MORE FOR THEIR CUSTOMERS BY KEN WYSOCKY

Sending out bouquets of flowers or a nice fruit basket isn't just for guys in trouble with their significant others. At Mr. Rooter Plumbing of Central New Jersey, it's one of many ways the company goes above and beyond the norm to keep customers happy – especially on those inevitable occasions when a job doesn't quite go as planned.

"We're in an industry where things don't always go perfectly, but it's how you recover from your mistakes or unforeseen problems that makes your business successful," says Andrew August, who co-owns the Freehold-based business with his wife, Sheryl. "It's very important to Sheryl and I that we do the right thing when something goes wrong or something unforeseen occurs – put customers ahead of profits. If you do the job right and treat people fairly, the money will come later."

About 10 years ago, a Mr. Rooter crew had to work well into the night to

replace a residential lateral line. Concerned about the customer's family, which included young children, the company put them up for the night in a hotel and bought them dinner.

profile

MR. ROOTER PLUMBING OF CENTRAL NEW JERSEY, FREEHOLD, N.J., AND MR. ROOTER OF SOUTH FLORIDA, POMPANO BEACH, FLA.

OWNERS: Andrew and Sheryl August
ESTABLISHED: 1995 In N.J., 2009 In Fla.
EMPLOYEES: 38 In N.J., 6 In Fla.
SERVICE AREA: Central New Jersey, Southern Florida
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That compassion for customers is evident at all levels of the company. Last February, an elderly woman's pipes froze during a major snowstorm, leaving her without heat. When it became apparent that a lack of repair parts would prevent technicians from finishing the job until the next day, dispatcher Donna Sola drove to the woman's house and persuaded her to sleep at Sola's home for the night.

"All that was done without us knowing or giving direction," Sheryl says. "That's not the first time Donna has done something like that. Another time, she felt bad for a customer and paid for him to go to a hotel, and we reimbursed her."

Sometimes the Augusts feel a customer deserves a small gesture of appreciation, even if everything on a job went according to plan.

"If something doesn't go 100 percent right, or as a thank you just for doing business with us, we send flowers, fruit baskets or cookies baked by people with disabilities," Sheryl says.

GIVE BACK TO COMMUNITY

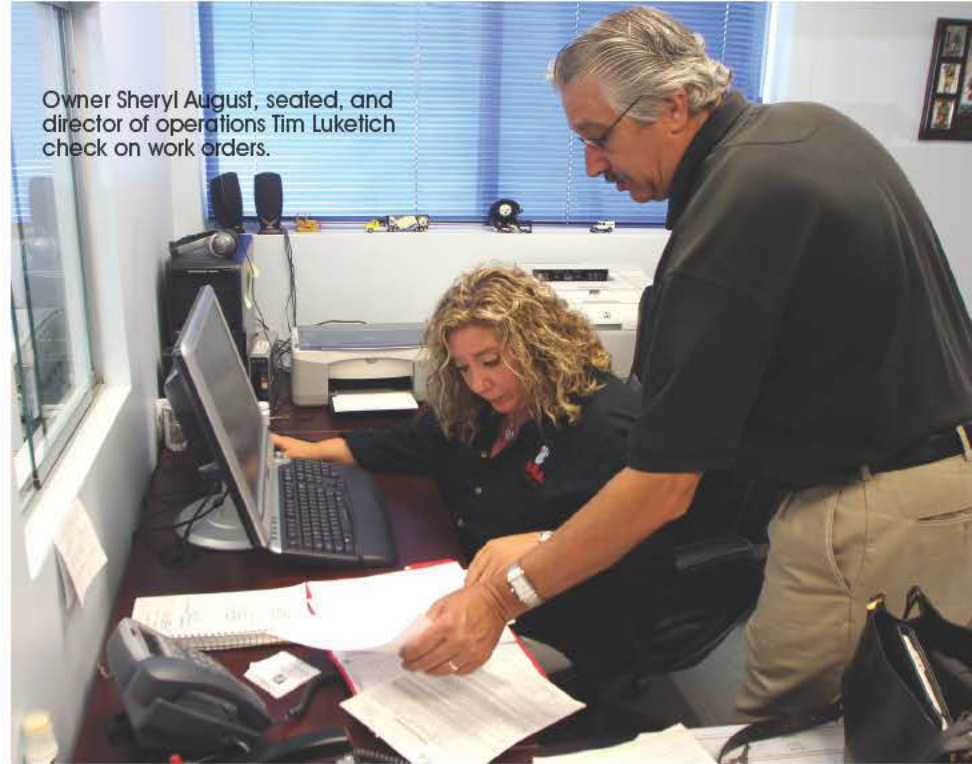
The couple's generosity also extends to their community at large and to fellow Mr. Rooter franchisees. They regularly donate money or services to charities, in particular to Habitat for Humanity and Ronald McDonald House Charities.

"One of our technicians has two children with a rare disease, and they use the Ronald McDonald House in Long Branch all the time because they're constantly seeing specialists," Andrew says. "So we partner with that house and donate work and services."

Why? The answer may sound trite, but it rings as true as the couple's intentions. "Sheryl and I lead a nice life," Andrew says. "There are a lot of people out there who aren't as fortunate as us."

Echoes Sheryl, "We've worked very hard for everything we have and we want to give back. We find that, at times, money is tight. But we always have time to donate services, if not money. We also encourage our suppliers to donate material, too. They've been great."

Owner Sheryl August, seated, and director of operations Tim Luketich check on work orders.



"One nice thing about a franchise is you have commonality with other franchise operators. You're not competing against them, so everything is an open book. I can ask other franchises about equipment I'm thinking about buying, for example. We have 200-plus owners working together to create a great business network."

Andrew August

Last year, the Augusts received the 2010 Excellence in Mentoring award from Mr. Rooter, an indication of how much they help fellow franchisees who seek advice and counsel. In 1996, the franchise also received the Mr. Rooter Rookie of the Year award, given to the best new franchise nationwide.

In fact, the Augusts' franchise is a designated mentoring center, and operators from all over the country visit to learn how a successful franchise operates.

"One nice thing about a franchise is you have commonality with other franchise operators," Andrew says. "You're not competing against them, so everything is an open book. I can ask other franchises about equipment I'm thinking about buying, for example. We have 200-plus owners working together to create a great business network."

DEEP FAMILY-BUSINESS ROOTS

Andrew comes from a long line of plumbers and drain cleaners. His grandfather, Ben, and father, Larry, plied their trade in New Jersey under the name August Plumbing. Andrew started working for his father as a youngster and became a full-time employee the day he graduated from high school.

"I went to a vocational high school because I knew early on what direction I was going in life," he recalls. "I finished my apprenticeship before age 21 and received my plumber's license at 21."

"I always enjoyed the work a lot and enjoyed working for my dad's company even more," he continues. "It's not a desk job and you're never doing the same thing day in and day out. It's not always the cleanest work, but it provides an honest day's work for an honest day's pay."

He says as a child in the late 1980s, a lot of his friends' parents were losing their jobs but his dad was always working.

(continued)



A view inside the Perma-Liner lateral replacement system trailer.

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Technician Abaro Garcia uses a Kubota excavator to widen a hole around a broken sewer line.

“We put things in place and the business just grew and grew and grew. We’re now a multi-million dollar company in terms of gross sales. It’s absolutely more than we ever imagined a business could be.”

Sheryl August

“My father always told me if you learn a trade, you can live anywhere in the world because someone will always need your skill set. He knew what he was talking about.”

Sheryl started out her career as a school teacher, but when Larry August fell ill, she began helping out in the office. The elder August never fully recovered and eventually moved to Florida. After filling in for about two years, Sheryl decided to work full-time for the family business.

The couple saw the potential benefits of owning a franchise when they agreed to handle service calls for a Mr. Rooter franchise that was for sale. Andrew noticed the high call volume, and says the more he learned about the franchise, the more it impressed him.

FRANCHISE BENEFITS

Andrew says his father helped him become a good tradesman, but not necessarily a good businessman.

“A franchise is good at business development – teaching you things like how to be profitable, how to maximize sales and what equipment you need to earn a better living. We learned about benchmarking – taking the averages of franchisees that show you where your numbers should range on your profit-and-loss statement, where your price points should be and what the break-evens should be.”

Sheryl says the franchise provides the business systems required to become more profitable, as well as advice about what makes a company professional, uniformed employees and scripts for answering phones and handling customers.

“We put things in place and the business just grew and grew and grew,” she notes.

“We’re now a multi-million dollar company in terms of gross sales. It’s absolutely more than we ever imagined a business could be.”

As the company grew, so did its fleet of equipment. The Mr. Rooter franchise now owns 36 Chevrolet and Ford standard service vans; five Ford F-450 heavy-duty utility service trucks; one Ford F-550 dump truck for excavation work; four Kubota KX41 mini excavators; one Kubota KX61 excavator; and one Kubota KX121 excavator.

On the drain cleaning side, the company owns one 4014 trailer-mounted waterjetter, made by US Jetting; one trailer-mounted Harben 4016 DTHS waterjetter, made by Harben Inc.; one trailer-mounted Model 747 waterjetter, made by the Sewer Equipment Co. of America; two trenchless sewer-line repair systems from Perma-Liner Industries; one trenchless pipe bursting system manufactured by TRIC Tools; and three dozen Vivax pipeline inspection cameras, made by Vivax-Metrotech Corp. In addition, each service

van carries three cable drain machines made by Spartan Tool LLC: a Spartan 300, Spartan 100 and Spartan 81.

NEW, WARMER MARKET

The Augusts opened another franchise, Mr. Rooter of South Florida, in Pompano Beach in August 2009. They were already familiar with the area because Andrew’s parents moved there after stepping away from the business.

Thanks to a skilled staff back in New Jersey and Web-hosted franchise business software, the couple can run both businesses from either office.

One technician from the New Jersey office moved to Florida, and the New Jersey office handles all dispatching in both offices via a sophisticated phone system.



Director of operations Tim Luketich, left, uses his smartphone to look up a part for Gabe Alvarado.

(continued)

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“We’ve worked very hard for everything we have and we want to give back. We find that, at times, money is tight. But we always have time to donate services, if not money. We also encourage our suppliers to donate material, too. They’ve been great.”

Sheryl August

“Our phone system cost us more than one of our backhoes,” Andrew says. “But it allows Sheryl to do the same job she did in New Jersey while sitting here in Florida. We can watch the dispatch board from Florida and make sure the right technician in New Jersey goes to the right job. It’s pretty unbelievable.”

RETAINING EMPLOYEES

The franchises may be far apart, but the Augusts strive to attract and retain good employees in both offices by creating a great work environment, including a zero-tolerance drug-testing policy. The company also offers paid vacations and competitive pay.

THE CHANGING FACE OF MARKETING

For Sheryl August, co-owner of Mr. Rooter Plumbing of Central New Jersey in Freehold and Mr. Rooter of South Florida in Pompano Beach, marketing efforts have changed dramatically in just the last five years.

“When I first started, the Yellow Pages was the main marketing tool. Now, in some areas, they’re not even publishing Yellow Pages,” she says. “We rely mostly on well-branded service trucks and the Internet. We’re constantly collecting email addresses and starting to use things like Twitter and Facebook. Marketing in the plumbing industry is changing at a very fast pace.”

Sheryl says she was originally skeptical about social networking because she didn’t realize how prevalent it had become and didn’t think it was a good tool for the company’s target customers.

“I thought it was basically just for young kids,” she says. “But it’s the future. We blog, we tweet and we Facebook. When the weather was unusually cold here in Florida, we tweeted about our first heating-service call in South Florida.”

Sheryl learned much of what she knows about social media through the Mr. Rooter business system, which supplies her and husband/co-owner Andrew with tweets and Facebook posts on a monthly basis. They also develop posts on their own and typically send out two or three tweets a week.

“Every time we get a good review from a customer, it automatically posts on Facebook and Twitter accounts,” she says.

Sheryl says the social media marketing efforts are so new that it’s hard at this point to quantify the results. She can, however, point anecdotally to things like a Facebook post by her sister telling friends that the Augusts were expanding into Broward County, which generated several service calls. Someone in New Jersey picked up a positive customer review on Twitter and re-tweeted it to her followers.

“I don’t know yet how it affects the bottom line, but I do know that it’s something important,” she explains. “This is the wave of the future. You have to try to stay with or ahead of the curve. If all builds and it grows. If nothing else, it positions us as a progressive company.”



Owners Andrew and Sheryl August (in dark shirts) join some of their employees outside the Mr. Rooter office.

“Typically, people in this industry move around a lot,” Andrew notes. “But we have a lot of employees with 15 years or more of service, so I figure we must be doing something right. We really concentrate on keeping things professional and making it a place people want to come every day. We figure people can work anywhere, so we need to make them want to work for our company.”

The company used to have a bonus system, which is currently discontinued because of the prolonged recession. “But when someone does something extraordinary, there’s always something for them,” Andrew points out.

In lieu of the bonus system, the Augusts use a service called Customer Lobby (www.customerlobby.com), where customers can write reviews about a company’s performance. Each customer is told about the service and technicians receive \$5 for every good review they receive. In a good month, some employees could earn as much as \$100 to \$150, Andrew says.

CUSTOMER IS KING

Overall, Andrew attributes the company’s success to Mr. Rooter business principles and a laser-like focus on customer service and fair pricing.

“There are no gimmicks,” he emphasizes. “We pre-write every invoice before we start a job and honor that price at the end of the job. We do business fair and square, as if we’re sitting on both sides of the table ... we have empathy for our customers because they’re often in a bad way.

“There are no shades of gray at Mr. Rooter,” he adds. “It’s all about offering the best service we can.”

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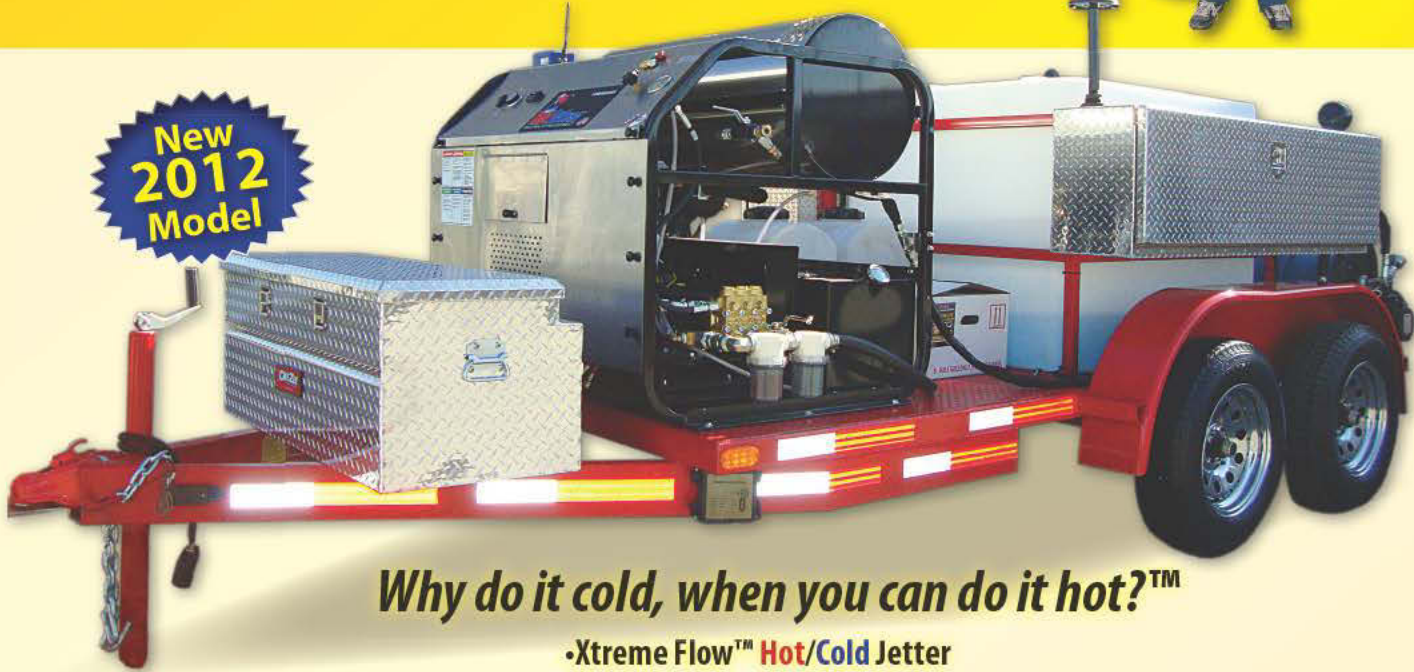
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John - Rhinorooter, Brigham City, Utah



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VAC-CON COMBO TRUCKS ELIMINATE CONTRACTOR'S NEED FOR OUTSIDE ASSISTANCE

BY KEN WYSOCKY

For years, Jeff Nold found it painful to watch a percentage of job profits flow into subcontractors' coffers. So the manager of the wastewater division of Goel Services Inc. in Washington, D.C., decided on a cure: Buy enough equipment to eliminate the need for subcontractors while boosting profitability and expanding service capabilities.

One of the newer additions to the company's fleet is a reconditioned 2005 Vac-Con V312LHA-1300 combination sewer truck with hydroexcavating capability. Built on a Sterling LT7501 chassis, the unit features a 12-cubic-yard debris body, a three-stage centrifugal compressor, hydrostatic blower drive, a 1,300-gallon water tank, 10-foot telescoping boom and a water pump that generates up to 50 gpm at 3,000 psi.

"We just did three emergency jobs in 10 days for a customer. We're that company's go-to guys – and part of that is due to our equipment. Knowing we have the fleet we do and the people we do, people naturally come to us."

Jeff Nold

"We've been trying very hard for the last five years to expand services to avoid subcontracting all our televising and sewer cleaning work," Nold explains. "Without a doubt, it was painful to walk into my boss's office with a \$250,000 invoice from a subcontractor, and we're getting \$5,000 off the top. That hurts – especially when you know you could do the work yourself.

"We bought the reconditioned Vac-Con in October 2011," he continues. "Currently, we rent two Vac-Con trucks, own two more and are in the process of buying a 2008 unit. Our company dropped \$1.5 million on hard assets in the last year because we know the business is there ... and we can make more money in the long run. These trucks definitely increase our productivity and our margins."

Nold says he attended the Pumper & Cleaner Environmental Expo International to take a good look at various combo sewer trucks. In the end, Nold chose Vac-Con for its user-friendly features.

This reconditioned 2005 Vac-Con V312LHA-1300 combination sewer truck is part of a fleet of Vac-Cons that have helped Goel Services Inc. in Washington, D.C., take over the work they formerly farmed out to subcontractors. (Photos courtesy of Goel Services)

"If something breaks, like a pony generator, for example, we can fix it ourselves on the spot," he notes.

Moreover, Nold says Goel saved \$150,000 to \$170,000 by buying a reconditioned unit with a six-month warranty.

RELIABILITY IS KEY

Buying reputable and reliable equipment benefits Goel in several ways. First of all, it helps the company submit bids with confidence because it can virtually guarantee the unit's productivity.

"I know walking into it that if I can send out one of our cleaning crews with the Vac-Con unit to clean ahead, our CCTV crews can cover 2,000 linear feet per

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OWNER:	Goel Services Inc., Washington, D.C.
MACHINE:	Reconditioned 2005 Vac-Con V312LHA-1300 combination sewer truck 888/491-5762 www.vac-con.com
FEATURES:	Sterling LT7501 chassis, 12-cubic-yard debris body, 1,300-gallon water tank, 10-foot telescoping boom and a 50 gpm/3,000 psi water pump
COST:	\$156,000





Patrick Johnson of Goel Services Inc. in Washington, D.C., uses the jetter on his Vac-Con combo truck to clean a sewer line in a residential neighborhood in the D.C. metro area.

day,” Nold says. “And on a really good day, I know our crews can clean 3,500 to 5,000 linear feet per day.”

In addition, Nold knows full well that in a competitive business world, a company’s reputation is only as good as its last job. And that reputation is tarnished if equipment breaks down consistently, especially on emergency jobs where time is of the essence.

“We just did three emergency jobs in 10 days for a customer,” he says. “We’re that company’s go-to guys – and part of that is due to our equipment. Knowing we have the fleet we do and the people we do, people naturally come to us.”

In some cases, better equipment allows the company to more efficiently allocate manpower. As an example, Nold points to a catch basin cleaning job where the Vac-Con’s reliability enabled him to send one operator and an assistant instead of two operators.

“We know it won’t have (breakdown) issues, so we can just rock and roll,” he notes.

WOW FACTOR ATTRACTS EMPLOYEES

Moreover, newer equipment helps Goel attract and retain employees.

“Guys come in here and go, ‘Wow,’” Nold says. “They love having reliable equipment that hasn’t been trashed. One guy told me, ‘You’re not joking around – you’re on a mission.’ And we are.”

Nold also points out that some customers like the fact that Goel doesn’t have to sub out some of the work it’s hired to do.

Overall, the manager says he can’t emphasize enough how valuable the Vac-Cons are to his division.

“They help me keep my people employed, and help me attract and keep quality people,” he says. “They’re the lifeblood of our division.”

And a great source of pain relief for those subcontractor blues. ☐

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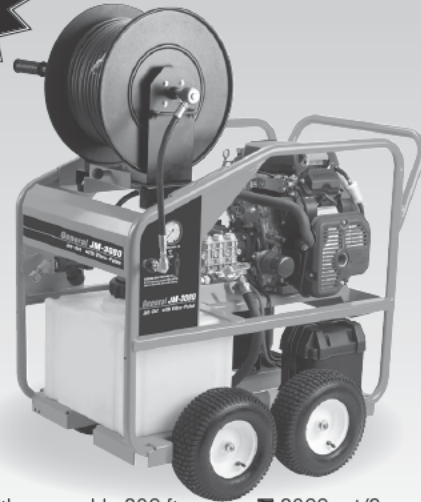


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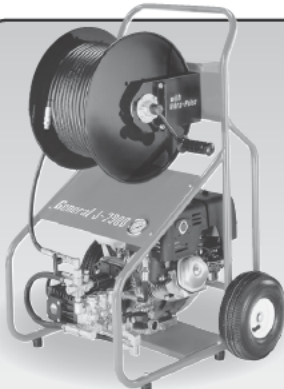
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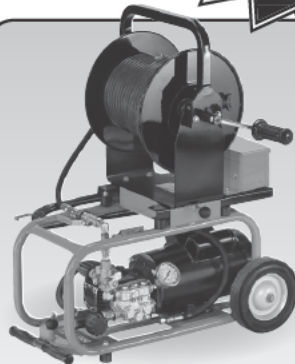
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VETERAN CONTRACTOR LEARNS A TOUGH LESSON: NEVER TAKE TRAINING FOR GRANTED

BY MARY SHAFER

Josh Branscome has been cleaning drains and installing and pumping septic systems for more than a decade, and owns B & M Septic Tank & Drain Service Inc. in Lawsonville, N.C. The 24-year-old has run the business for six years, and has been a paramedic for the Stokes County Emergency Medical Services for just as long. But all that training and experience didn't help him when he let his guard down on a recent job and paid a high price for momentary carelessness.

IT ONLY TAKES A MOMENT

The day of the accident, Branscome and his crew were installing a septic system. He was standing atop the precast concrete tank already in the ground, monitoring the backfilling being done by his foreman, Gray Mabe, with their New Holland 555E backhoe. Branscome looked away briefly as he turned to step off the tank. In doing so, he momentarily moved out of Mabe's line of vision, and that was all it took. Mabe continued to swing the bucket around with a last load of dirt, assuming Branscome remained where he had been. In fact, his boss was now on the ground, closer to the boom and directly in its path, with his back to the action.

Branscome caught the full force of the bucket in his left shoulder, knocking him down a 15-foot embankment behind the tank. He suffered three torn ligaments in his left shoulder and down into his clavicle. Aggravated tendinitis is the lingering result, and his left hand was still numb two months later. Still, he maintains, "I was lucky, because another six inches higher and it would have hit me in the head."

TRAINING'S NOT ENOUGH

That may be true, but luck's not what any contractor should rely on to keep everyone safe, and no one is more aware of that than Branscome.

"I'm absolutely responsible for what happened," he admits. "It was a few weeks before Christmas, we all had our minds on other things and were in a hurry to get done. I've stood on the tank during an installation a thousand times, always thinking I was out of reach of the tractor. Now we know you can't always gauge that distance accurately, so we don't get anywhere close to the backhoe when it's running."

Branscome thoroughly trains all crew members when they start, and they receive refresher training as needed. But he says this accident has driven home that knowing the right thing to do and actually doing it are two separate things.

"I always tell everybody they should never be in reach of that machine. Someone could pull the wrong lever by mistake or a lever could get stuck, and that backhoe could do something you don't expect. I've always thought about it, but more in the back of my mind. Now I make sure I'm consciously paying attention."

He says it all happened so quickly, his EMT training didn't kick in, but another of his crew – also a paramedic – immediately rushed to his boss's side. Branscome actually finished the job, running the backhoe, because they still had 600 feet of drainfield to put in. Then he went to the hospital, was treated and released

after a couple hours. Afterward, he went home and literally sat in his recliner for three days, a huge change for a guy who typically works 70- to 80-hour weeks.

COSTS REALLY ADD UP

The real costs of the accident have been significant. Branscome was off work from the ambulance for a month because the nerve damage made it impossible for him to pick up anything. He'd saved up sick time there, so he didn't lose any actual income. But he estimates the monetary value of those sick days, along with the costs of his MRI, doctor bills and the labor he had to hire to staff the septic truck, totals \$3,000 to \$4,000.

He's back at work on both jobs and doing physical therapy, but it's going to take a while to regain full hand function. "The doctors say if I'm careful, I should

"I was lucky, because another six inches higher and it would have hit me in the head."

Josh Branscome

get rid of the numbness," he says. Eventually, he'll need surgery to clean out torn cartilage and repair damaged ligaments.

The one bright spot was that he got to spend the holidays with his family for the first time in three years, but there was a high price to pay in terms of pain, lost productivity and profits.

"It was a big wake-up call," he says.

SAFETY AWARENESS SPREADS

His entire four-person crew sat down to discuss how they could work more safely, talking about the accident and paying more attention to their surroundings. They're now working toward active situational awareness, knowing exactly where everyone is at all times, and not getting too close to operating equipment.

They've started talking about all facets of safety, such as carrying pipe that's too heavy and wearing safety gear. They've recently purchased two Top Poppers (www.TandTtools.com) for lifting manhole covers, acknowledging it's just not smart to put anyone's back at risk for lack of proper tools.

"And we're going to take our time, no matter how backed up we are," Branscome says. "Because hurrying is when accidents happen. So from now on, it's not just a good idea – it's how we're doing things." **c**



Josh Branscome is shown with wife Misty, and Lauren, 9, Savannah, 5, and Trey, 2. (Photo courtesy of Josh Branscome)

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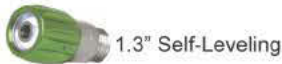
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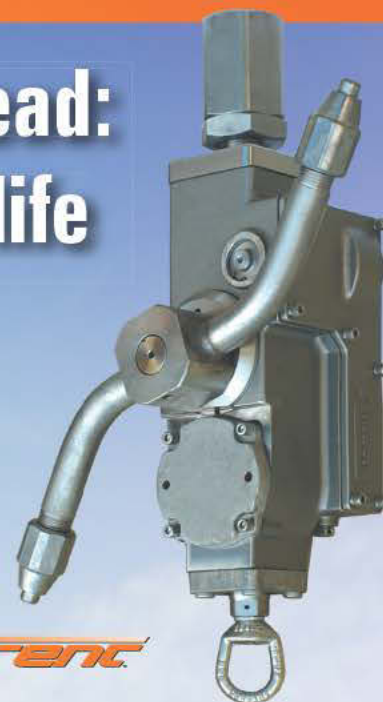
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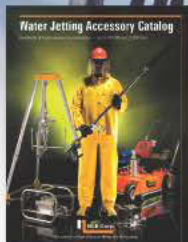
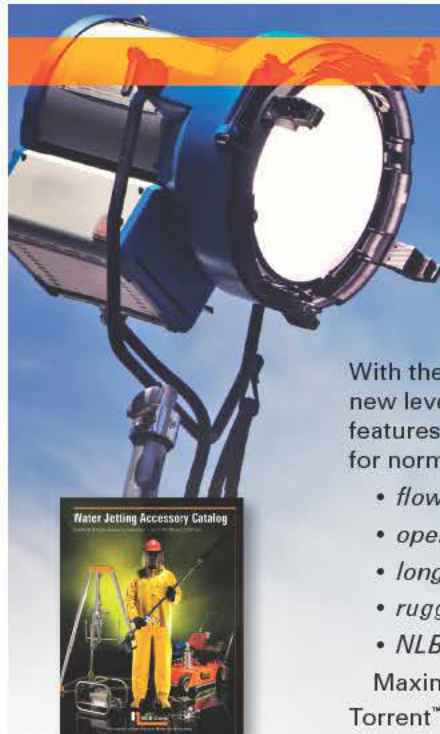
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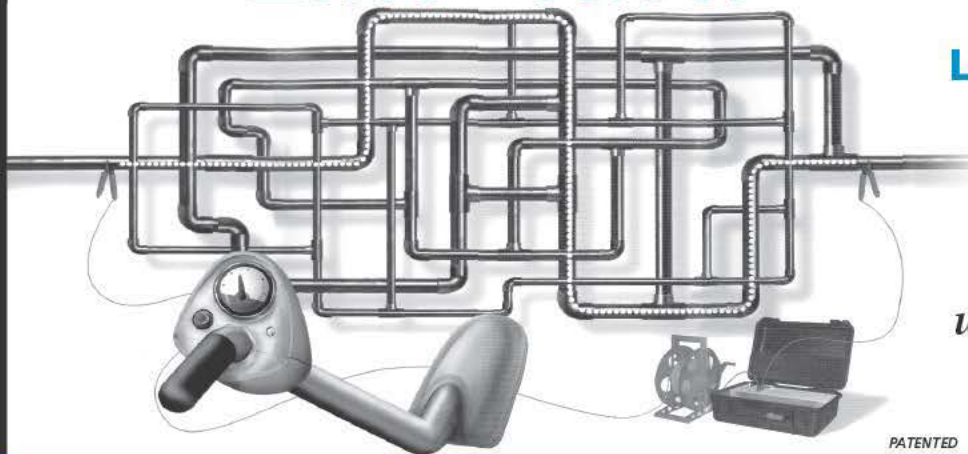
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BY FRED S. STEINGOLD



Fred S. Steingold practices law in Ann Arbor, Mich. He is the author of Legal Guide for Starting and Running a Small Business and The Employer's Legal Handbook published by Nolo. Legal strategies may vary depending on the state in which you live and the specifics of your situation. See your lawyer for legal advice.

With lawyers charging \$250 to \$400 an hour in many cities, going to court can be a big pain in the pocketbook. But there's a way that a small or mid-sized business can often avoid this cost: consider representing yourself in small claims court.

Naturally, you wouldn't want to be your own lawyer in defending a \$100,000 contract case or a \$1 million personal injury suit. But how about suing a customer for an unpaid bill? Or a supplier for a \$5,000 breach of contract? Or a driver who knocked down a \$2,000 sign in your parking lot?

In cases like these, the small claims court – a court specifically designed for non-lawyers – may be just the ticket. This user-friendly court provides a speedy, inexpensive resolution of disputes that involve relatively small amounts of money.

In small claims court, the rules of evidence and procedure are informal. USUALLY, EACH SIDE SIMPLY TELLS THE JUDGE ITS STORY AND PRESENTS ITS WITNESSES AND OTHER EVIDENCE.

According to the legal website Nolo, the publisher of *Everybody's Guide to Small Claims Court*, you can sue for up to \$6,000 in Maine, \$4,000 in Kansas, and \$7,500 in Minnesota. These are typical amounts, but there's considerable variation. Tennessee, for example has a \$25,000 limit while Kentucky limits cases to no more than \$1,500.

SOME RESTRICTIONS APPLY

If you're doing business as a corporation or limited liability company (LLC), check the law in your state. In a few states, even if you're the sole owner of your corporation or LLC, you're not allowed to represent the business in court. The reasoning is that the corporation or LLC is a separate legal entity. Appearing in court for the business would amount to practicing law without a license.

Most states, however, let you designate someone – a corporate officer or employee, for example – to appear for the company in small claims court. Even better, in some states, you can send your bookkeeper to testify in a case involving unpaid debts.

To understand how you can use the small claims court to your advantage, consider the strategy of a real estate appraiser whom I'll call George. Occasionally, George has clients who ignore his bills. It drives him up the wall to think that people are ripping him off by not paying what they owe. Several years ago, he decided to pursue every nonpaying client if the amount involved was significant and there was a reasonable chance of collection.

Initially, George spent some time with his lawyer to become familiar with court procedures and to discuss pre-court strategies such as sending an effective

collection letter. Over the years, George has done very well in collecting unpaid accounts. Occasionally, if matters get complicated, he calls or visits his lawyer. Phone calls rarely last longer than 15 minutes and visits rarely last longer than a half hour.

Wisely, George groups together several problems so he can discuss them at the same time. Occasionally, George has his lawyer draft a legal pleading or a notice or letter. Over the years, he's collected most of what's owed to him – at a minimal cost.

You can do the same. Small claims procedures are easy to master. Basically, you pay a small fee, file your lawsuit with the court clerk, see to it that the papers are served on your opponent, show up on the appointed day and tell your story. Check with the court clerk for the specifics.

You can sometimes use small claims court even if your case is for slightly more than the court's limit. The secret is to ask for just the jurisdictional limit and forget about the rest. For example, suppose you're in the lighting fixture business and an interior decorator owes you \$3,200 for some lamps. If the jurisdictional limit in your state's small claims court is \$3,000, in the long run it may be less expensive for you to forget about the \$200 excess. Hiring a lawyer and going to regular court would be even more expensive. Just sue for \$3,000.

POINTERS

Before you file your lawsuit, be reasonably sure of your legal position. Do you have a decent chance of proving in court that the defendant refused to pay a fair bill, or broke a contract, or negligently damaged your property? If not, any talk about going to small claims court is just an idle threat that will hurt your credibility.

Also, make sure you've done your best to get paid outside of court. Let the other side know that you're preparing to sue. Call first and then follow up with a letter. If you do wind up in court, the letter will help the judge see that you made every reasonable effort to get paid before filing suit.

And before you file your case, think about whether you'll be able to collect on a judgment if the defendant doesn't pay. It helps if the defendant has a job or a bank account or owns property on which you can place a lien. If not, no matter how well you do in court, collecting the money will be a real hassle.

After you've filed your case, start getting your evidence together. Round up any relevant contracts, invoices, photographs, charts – anything that will help prove your case. And make sure any employees or other witnesses you need to testify are available on the hearing date set by the court.

In small claims court, the rules of evidence and procedure are informal. Usually, each side simply tells the judge its story and presents its witnesses and

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Give a brief summary of your case and then lay out the important facts in chronological order. Address your testimony to the judge, not to the other side. Avoid arguing with the other side.

The judge may interrupt with questions. Always respond directly to the point the judge is inquiring about. Then go back to making your points.

At the end of the case, ask the judge to award you the costs associated with bringing the small claims suit, as well as the amount the defendant already owes you. If you win, you're normally entitled to have the other side pay your filing fee, any fees for service of papers and any fees you paid to witnesses you had to subpoena. c

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On Display

PUMPER & CLEANER ENVIRONMENTAL EXPO EXHIBITORS USE THE BIG STAGE IN INDIANAPOLIS TO UNVEIL THE LATEST INDUSTRY PRODUCTS AND INNOVATIONS

BY LUKE LAGGIS AND MIKE SCHOBLASKA

A giant showroom of cutting-edge environmental services equipment and business-building products greeted contractors in the sewer and drain cleaning business at the 2012 Pumper & Cleaner Environmental Expo at the Indiana Convention Center Feb. 27-March 1. The Expo, held for the first time in Indianapolis, offered 501 exhibits and attracted 8,595 attendees representing 3,875 companies in a wide range of water, wastewater, environmental service and gas and oil service industries.

Attendees kicked the tires on heavy-duty vacuum and hydroexcavation trucks, tried a wide variety of business-efficiency software, and learned about tools and accessories as varied as trailer-mounted waterjetters, smoke blowers and mobile dewatering equipment. Here's a sampling of the new products seen at the Expo for the first time:



Perma-Liner Industries



NLB Corp.



Super Products



Rausch Electronics USA

COMPLETE REHABILITATION IN A KIT

The Perma-Patch kit from Perma-Liner Industries is designed for 3- to 24-inch diameter pipes with cracks, holes and separation in joints. The system uses a fibreglass mat with sodium silicate resins creating a structural repair with a minimum life span of 50 years. The kit includes two-part epoxy in a ready-to-mix bag, bladder protection sleeve, fibreglass mat, trowel, ground protection, hand protection gloves, zip ties and complete instructions. 866/336-2568; www.perma-liner.com.

SELF-SUFFICIENT BUNDLE CLEANING

The ATL-5000 from NLB Corp. is a self-sufficient high-pressure I.D. tube cleaning system that requires no external power or air supply. The system includes a three-cylinder diesel engine rated for 31 hp and can operate at pressures up to 20,000 psi. Fully adjustable lance stroke length allows configuration for various length bundles, and the optional HVAC package provides heat and cooling to the operator system. 800/441-5059; www.nlbcorp.com.

NEW HYDROEXCAVATOR

The Mud Dog 1600 hydroexcavator from Super Products delivers up to 18 gpm at 3,000 psi. An 8-inch, positive displacement vacuum system provides 5,800 cfm airflow and 28 Hg of vacuum. 800/837-9711; www.muddogeasy.com.

NO-DIG POINT REPAIR

The QuickLock no-dig point repair system from Rausch Electronics USA features a V4A stainless steel liner and EPDM rubber compression seal that works in water and sewer lines. Two lock-and-gear mechanisms on either end of the sleeve lock into place when maximum compression pressure is reached. The entirely mechanical system needs no cure time and allows continuous flow during installation. 877/728-7241; www.rauschtv-usa.com.



CONTINUOUS CURE TEMPERATURE MONITORING

The VeriCure system from Pipeline Renewal Technologies monitors cure temperature continuously along the entire length of a CIPP liner during installation. Readings are taken every inch and averaged into 18-inch zones, represented by real-time and historical data software tailored to CIPP professionals. The unobtrusive 3-mm probe preserves the flow of the liner. 866/936-8476; www.pipelinet.com.

IMPROVED VACUUM CONTAINERS

Vacuum containers from Wastequip are available in 20- and 25-cubic-yard capacities and are tested to 27.5 Hg of vacuum. Features include a 1/4-inch steel plate body, one-piece floor and roof, simplified ratchet and chain sealing mechanism, and a one-piece t-seal gasket. Options include placard holders, additional valves and drains, and side hinge pull bar design. 877/468-9278; www.wastequip.com.

HIGH-PRESSURE SHUTOFF BOX

The Tri-Mode shutoff box from Under Pressure Systems is rated to 60,000 psi with a minimum pressure requirement of 60 psi. Features include a flat tappet cartridge design, dual air pistons, 1-quart filter and micro fogger lubricator. Weighing 30 pounds, the shutoff box has three functions, dry shutoff – plug dump port, dump at dump port – not pressured, and dump at dump port – pressure jeweled dump. 330/602-4466; www.underpressuresystems.com.



VERSATILE WATERBLASTER

The Torus XL waterblast tool from StoneAge features replaceable manifolds for different operating conditions, adjustable speed control, replaceable 1-inch O.D. extensions, OC8 carbide nozzles, stainless steel construction and can be hung from either end. It has a maximum pressure of 15,000 psi and maximum flow of 200 gpm, weighs 98 pounds and has an entry diameter of 8 inches. 866/795-1586; www.stoneagetools.com.

WATERPROOF LOCATOR

The ML-3 magnetic locator from SubSurface Instruments is fully waterproof (readings can be heard under water) with internally mounted controls for one-hand keypad control. Available in 40- (short) and 55-inch (long) models, the locator is made of aircraft-grade aluminum and has an LCD meter with bar graph that expands according to signal strength and a "+" or "-" that illuminates above the graph to indicate polarity. 920/347-1788; www.ssilocators.com.

COMPLETE PIPE PLUG KIT

The multi-size pneumatic blocking and bypass pipe plugs from Savatech Corp. are manufactured with high-quality special rubber compound reinforced with Kevlar cord. They are resistant to wear- and age-related degradation, while providing strength and function in all defined conditions. The plugs are well designed for stopping and bypassing in pipe from 3/4 inch to 6 inches. The kit also includes extension hoses, a hand pump, a gauge and a safety manual. 386/760-0706; www.savatech.com.

INCREASED CLEANING PRESSURE

The Vactor 2100 Plus catch basin cleaner from Vactor Manufacturing has a fan and air-routing system that delivers increased vacuum pressure in single-stage and dual-stage fan configurations. Ergonomic controls make it easy to operate and maintain. Additional features include a 1,250-gallon water capacity, 12-cubic-yard debris capacity, 20 gpm at 2,500 psi hydroexcavation kit and an 8-foot telescoping boom. 800/627-3171; www.vactor.com.



RS Technical Services



RedZone Robotics



Continental Carbonic Products



FLITZ International Limited



MyTana Mfg. Company



Parson Environmental Products



Petersen Products Co.



Southland Tool Mfg.

SINGLE CONDUCTOR CAMERA

The TrakSTARII from RS Technical Services is a microprocessor-controlled single conductor camera that is half the size of the TrakSTAR and is designed to fit on the TranSTARII steerable tractor. Other features include 40:1 zoom, pan and tilt, auto iris and focus, adjustable lighting and internal condition sensors. 800/767-1974; www.rstechserv.com.

MAIN TRUNK CONDITION ASSESSMENT

The HD Profiler system from RedZone Robotics is a laser/sonar/video assessment system deployable up to 10,000 feet in pipes ranging in size from 30 to 118 inches. Additional features include integrated corrosion/debris measurement, V-360 virtual pan/tilt/zoom, and 3D pipeline modeling. 412/476-8980; www.redzone.com.

DRY ICE BLASTING MADE EASY

The FREEZE CLEAN dry ice blasting machine from Continental Carbonic Products is lightweight and portable, making it easy to maneuver and easy to store. It has minimal moving parts, virtually no maintenance and has a low-pressure requirement (100 cfm at 70 psi). 800/379-4232; www.continentalcarbonic.com.

ORGANIC MAGNESIUM CHLORIDE REMOVER

The magnesium chloride remover from FLITZ International Limited is an organic product that cleans magnesium chloride from aluminum without an acid and will not dull or haze aluminum. It is also safe for painted surfaces, fiberglass and chrome and is available in 16-ounce or 1-gallon containers. 262/534-5898; www.flitz.com.

PORTABLE JETTER

The M30E MaxBlast electric jetter from MyTana Mfg. Company is a mainline jetter for 1 1/2- to 6-inch lines with 4 1/2 gpm at 3,000 psi. The jetter features a 25-foot heavy-duty power cord, 200 feet of 3/8-inch jetter hose, 75 feet of 1/8-inch hose, three stainless steel nozzles, a wand and wand nozzles. 800/328-8170; www.mytana.com.

COMPLETE MORTAR APPLICATION SYSTEM

The Pro50 Starter mortar spray system from Parson Environmental Products is a complete mortar application system that includes mixer, pump and spray gun. An onboard computer balances the spray rate with the pumping volume to prevent clogging. The hopper has a 12.5-gallon capacity with a flow rate of 2 to 3.5 gallons per minute. The system includes 50 feet each of 1-inch material hose and 1/2-inch air hose. 610/582-6060; www.parsonenvironmental.com.

FLEXIBLE DRAIN FLUSHER

The DrainJet-Pro hydraulic drain flusher from Petersen Products Co. is available in sizes from 1 1/2 inches up to 6 inches and can be used on jetters with pressures up to 1,000 psi. It can be used to clean and flush clogged and slow lines and also to prevent backflow. Constructed from heavy-duty ballistic nylon, the unit is flexible enough to maneuver around bends in pipes. 800/926-1926; www.pipeplug.com.

LIGHTWEIGHT DEBRIS GRABBER

The Puma Grabber from Southland Tool Mfg. is a lightweight tool with a three-pronged grabbing head used for removal of debris and heavy objects from manholes. Made of aluminum, it is available in 6-, 12- and 18-foot lengths, and the 18-foot length can also be used in 6- and 12-foot configurations. 714/632-8198; www.southlandtool.com.



Spartan Tool



Wastequip Cusco Division



Pearpoint



Pipeline Observation System Management (POSM)



Quik-Lining



RapidView IBAK North America



RIDGID



EPL Solutions

EASY DRAIN INSPECTION

The Trap Eze 50-foot flexible pushrod camera from Spartan Tool allows the user to easily inspect small-diameter household drains. It weighs 3 pounds, attaches to the standard Pro Touch camera system, and features black and white video. 800/435-3866; www.spartantool.com.

MULTI-MODE VACUUM TRUCKS

Jack Doheny Companies are now distributing the OmniVac series of vacuum trucks from Wastequip's Cusco Division, featuring five operating modes: 1,400 cfm wet mode operating in both vacuum and pressure modes, 1,400 cfm dry mode operating in vacuum mode and 360 cfm industrial mode operating in both vacuum and pressure for smaller jobs or for jobs where hydrocarbons are present. It also offers the additional filtration of a complete baghouse and air cannon pulsation cleaning system. 888/936-4369; www.dohenysupplies.com.

UPDATED COMMAND MODULE

The P350 flexitrac system command module from Pearpoint features an 8-inch industrial grade TFT screen with anti-reflective protection, splash-proof keyboard for text entry and report writing, and Bluetooth wireless technology to send photos. The USB 2.0 port allows transfer of files to a PC or laptop, and the unit is also compatible with the P340 flexiprobe pushrod system. 800/688-8094; www.radiodetection.com.

REAL-TIME PRESSURE TESTING RESULTS

The pressure testing system software from Pipeline Observation System Management (POSM) is used for pressure testing joints, laterals, grout repairs, quick line repairs and entire lateral sections. The software allows the user to control the bladder pressure involved, add observations, start and stop the test, and view the real-time results of the test. 859/274-0041; www.posm.us.

CONTINUOUS INVERTER FOR LARGE LINERS

The Quick Shot Magnum inversion unit from Quik-Lining is designed to continuously invert liner tube without being restricted by the length of pipe or diameter. The unit is lightweight and portable, and handles liners for 8- to 18-inch pipe. It incorporates Venture tube technology to create high air pressure at the front end and low pressure at the back to pull the liner through while minimizing air loss. It is compatible with all manufacturer's lining materials. 605/868-8670; www.quirklining.com.

DOUBLE-DUTY INSPECTION SYSTEM

The MainLite portable pipeline inspection system from RapidView IBAK North America has 1,200 feet of fiber optic cable and is compatible with all of the company's cameras and inspection equipment. It can also be truck-mounted for stationary use. Controls include a touchscreen and dual joysticks, one for the camera and one for the tractor. 800/656-4225; www.rapidview.com.

PORTABLE PIPELINE VISE

The portable 460-12 TRISTAND chain vise from RIDGID can hold pipe up to 12 inches in diameter and features an adjustable rear leg that provides the ability to level the stand. Other features include an integrated ground lug that provides a conductive surface to connect the weld ground, a leg chain that keeps the legs folded when not in use, and a tool tray. 800/769-7743; www.ridgid.com.

VERSATILE VIDEO INSPECTION SYSTEM

The GVision Touch plug-and-play video inspection system from EPL Solutions (distributed by Allan J. Coleman Co.) uses the Windows XP interface. Additional features include a single power source and built-in battery and charger, anti-glare 10.4-inch 1,200 NIT LCD screen with 170-degree viewing angle, and a portable, rugged aluminum case. The video system is designed for RIDGID and most other camera systems. 773/728-2400; www.allanjcoleman.com.



Seksui SPR Americas



CUES



Hathorn



Duracable



Bowman Tool Company



C-Tec



MAX-LIFE Mfg.



Enz USA

NEW PARTNERSHIP

Seksui SPR Americas has partnered with Innovative Sewer Technologies (I.S.T.) to distribute their line of Lateral Technology Systems. 866/627-7772; www.seksui-spr.com.

CONTINUOUS HEMISPHERICAL SCANNING CAMERA

The Digital Universal Camera (DUC) from CUES is a high-resolution digital CCTV side scanning camera designed for rapid and detailed condition assessment of wastewater systems. The system produces a continuous hemispherical scan of the internal conditions in 8- to 60-inch pipe. It operates at a constant speed without the need to stop or pan and tilt. It can inspect and assess 5,000 feet per day when used in conjunction with the asset-based Granite XP decision support software. 800/327-7791; www.cuesinc.com.

SIMPLE RECORDING DEVICE

The Magnum DVR from Hathorn is a simple recording device designed to record to a USB drive. It features adjustable lighting controls, 10.4-inch daylight readable monitor, 512 Hz sonde, and on-screen footage counter. The unit also includes audio and video output jacks, built-in voice-over recording, click-through controls, 8X zoom and one-touch recording with pause key. It works with most of the company's reels and can be mounted on push reels. 905/886-2835; www.hathorncorp.com.

PIVOTING CABLE MACHINE

The Duracable DM150 cable machine is a versatile unit with five notched positions from 0 to 90 degrees that allow for work in tight areas. The motor is gear-driven for extra torque and power, pushes 1/6 hp at 230 rpm and is controlled with an air foot pedal. The unit can handle 1 1/4- to 4-inch lines, and 14-inch and oversized 14-inch polyethylene reels are available. Mini power cable feed and return are optional. 800/247-4081; www.duracable.com.

TOUGH MOTORS

Magnum Motors from the Bowman Tool Company are made of hardened tool steel to handle the robust duties of an underground machine. The design allows for more torque and higher shock loads, and the hexagon drive makes it easy to plug in. 717/432-1403; www.bowmantool.com.

REMOTE VEHICLE FISHES CORDS

The Hound from C-Tec is a watertight remote control vehicle that fishes cords through 8-inch-diameter and larger pipe. It is housed in a heavy-duty stainless steel body, features an all-wheel drive asymmetrical traction system, and can cover 200 feet per minute. 866/993-0366; www.ctecworld.com.

SKIDS WILL NOT SCRATCH

Epoxy-coated skids from MAX-LIFE Mfg. are designed for use in relined pipes and will not cut or scratch the new liner. Skids are coated with Scotchkote, a fusion-bonded epoxy coating. It has been tested and found to have negligible wear on relined pipe, according to the manufacturer. 888/873-6295; www.flexmax.com.

DOUBLE-DUTY NOZZLES

The Rotodrill nozzle from Enz USA features a rotating front jet for improved cutting performance and efficient cleaning. It combines the flushing capability of a standard nozzle and the penetrating and cutting capabilities of a hydroexcavation nozzle in one unit. It is available in 1/2-, 3/4- and 1-inch systems. 877/369-8721; www.enzusainc.com.



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NATURAL ALTERNATIVE

Drainbo drain treatment and cleaner is an all-natural alternative to toxic drain products. It is a biological drain opener and cleaner formulated for use in home drains. Naturally grown bacillus digest household waste such as grease, soap film, oils, proteins and fats found in the waste stream. The product will maintain and clean drains, and is safe to use with septic systems. The cleaner is a USDA-certified biobased product. 877/372-4626; www.drainbo.com.

VERSATILE CABLE MACHINE

The model Z5-P drain cleaning machine from Electric Eel cleans 1 1/4-inch- to 3-inch-diameter lines up to 100 feet while running galvanized aircraft wire inner core (IC) cable, in either manual or auto feed configurations. Features include a built-in drum shaft slip clutch, an upright frame on 10-inch wheels with folding handle, a rear bar shields the motor, and the unit allows for two-position operation. Several complete kits are also available. 800/833-1212; www.electriceel.com.

JETTING MADE EASIER

The SJPE-1500 portable electric jetter from Shark Pressure Washers uses Pulse Technology to propel the hose through the line and around tight bends. The 1.7 gpm/1,500 psi unit features a detachable hose handle for easy maneuvering, removable 200-foot hose reel and toolbox on the back for nozzle storage. It is powered by a 1 1/2 hp motor, which operates on 115-volt electricity and comes standard with a 35-foot power cord with GFCI. 800/771-1881; www.sharkpw.com.

SAFETY, CONTAMINATION ISSUES SOLVED

The Safety Sewer Drain from Four M LLC eliminates the mess and threat of contamination when removing the cleanout on a plugged drain. Made of clear polypropylene, the device fits over a 4-inch cleanout. Sewage drains through a valve-controlled hose into a bucket or other receptacle for disposal. The device also can be adapted to work on a 3-inch cleanout. 906/753-4002; www.safetysewerdrain.com.

EXPANDED OFFERINGS

Draincables Direct is now offering the RIDGID video inspection and drain cleaning product line, giving customers the opportunity to get more of what they need from a single source. 800/421-4580; www.draincables.com.

ANGIOPLASTY FOR BUILDINGS

The Residential Epoxy Coating System from Nu Flow is like an angioplasty system for buildings. The pressurized airflow system hooks up to the angle stops in a building, and then uses a sandblasting process to clean the inside of the pipes before epoxy is introduced to the airstream to line them. A manifold system controls where the airflow from the machine travels. Full on-site training and support are included. 800/834-9597; www.nuflowtech.com.

VERSATILE VACUUM TRUCK

The Aquatech F-10 combination jet/vac truck from Hi-Vac is designed for easy operation and efficiency in a host of municipal and industrial applications. It includes the same proven components as B-Series units and features a front-mounted reel, positive displacement blowers, a self-cleaning, top-loading boom that extends 26 feet from tank inlet, and single-engine drive that decreases fuel consumption and saves on maintenance expenses. 800/752-2400; www.aquatechinc.com.

SIMPLE, STEERABLE CAMERA

The Rover X steerable six-wheel drive camera crawler from Envirosight, provides extended crawl range with a touchscreen control pendant. Twin multifunction joysticks simplify operation, and MPEG video and JPEG still images can be uploaded directly to WinCan software. The crawler and pendant connect directly to the video cable reel without a control unit. The system also includes a detachable remote-operated camera lift, three onboard cameras and an integrated sensor package. 973/252-6700; www.envirosight.com.



Rothenberger USA



Hot Jet USA



US Jetting



Hella Inc.



Insight Vision



Hammelmann



Madewell Products Corp.



Inland Pipe Rehabilitation

SIMPLE CAMERA SETUP

The Roscopet500 video camera from Rothenberger USA features picture capture capability, image rotation and 48-inch, 14-mm-diameter images. It can navigate through a standard 1 1/2-inch P-trap. 800/545-7698; www.rothenberger-usa.com.

BUILT TO HANDLE TOUGH JOBS

The XtremeFlow (model HJ2TA1736) twin-engine, twin-reel hot-water jetter from Hot Jet USA (Power Line Industries Inc.) delivers up to 17 gpm at 3,600 psi of hot or cold water. Features include twin 35 hp Vanguard gasoline engines and pump units and two onboard hose reels: one with 300 feet of 3/8-inch Piranha hose and one with 300 feet of 1/2-inch Piranha hose (rated to 150 degrees) and standard 1/2- and 3/8-inch nozzles. The jetters are mounted on a 5-foot by 12-foot trailer. 800/213-3272; www.hotjetusa.com.

HIGH-PRESSURE JETTER

The 6,000 psi Platform Series high-pressure jetting unit from US Jetting for sewer and drain cleaning applications features a seven-position swivel hose reel, jump jet pulsation system and 325-gallon HDPE water tank. The 6018 run dry pump allows for outputs of 6,000, 5,000 or 4,000 psi at 18 gpm. 800/538-8464; www.usjetting.com.

POWERFUL LITTLE LIGHT

The Power Beam 3000 from Hella Inc. uses LED technology in a small worklight capable of covering longer ranges generally associated with other light sources. It is rated at 41 watts with a measured luminous flux of 2,885 lm and is available with different optics for close and long ranges. 877/224-3552; www.hellausa.com.

TIME-SAVING INTERFACE

The Laptop Interface Module from Insight Vision enables operators to connect their laptops directly to an existing camera reel in the field via USB cord. Included capture and editing software works with PCs and Macs and allows users to manipulate and email their files on the spot. 888/867-4570; www.insightvisioncameras.com.

WIRELESS PUMP CONTROL

The HH-M remote control for high-pressure water pumps from Hammelmann requires no air and does not require a person at the pump to operate the system. The remote system works from up to 1,000 feet away so operators can oversee the cleaning operation while maintaining complete control over the pump. The system includes controls to turn pressure on and off and for emergency stops. 800/783-4935; www.hammelmann.com.

I&I CONTROL FOR LESS

The Pure Fused calcium aluminate mortar from Madewell Products Corp. is a stand-alone mortar with a high compression strength of 10,000 psi. The product was developed to control I&I issues where an epoxy top-coat for protection from hydrogen sulfide is not required. 800/741-8199; www.madewell.net.

SHORT-RUN LINING ALTERNATIVE

EcoCast Advanced Geopolymer from Inland Pipe Rehabilitation is designed for pressure pipe repair. The spray-in liner provides structural repair for manholes and large-diameter sewer and storm sewer pipe with as little as a half inch of material. The product is billed as a strong alternative to CIPP on smaller lengths of pipe, according to the manufacturer. An antimicrobial component can be added for protection against hydrogen sulfide gases. 281/362-1131; www.pmconst.com.



CIPP Services



Electro Scan Inc.



PrimeLine Products



Forbest



Cherne Industries



PURE Software Solutions



Easy Liner



USB-Sewer Equipment Corporation

HEAVY-DUTY STEAM UNITS

Enclosed steam trucks from CIPP Services feature fuel-efficient Clayton steam units and offer protection from rain, snow and ultraviolet ray damage, which reduces maintenance and keeps units running longer. Trucks include 3.5 or 5 million Btu steam boilers, diesel-powered air compressors with up to 375 cfm output, MultiQuip three-phase diesel-powered 25 Kva generators, inline water softener treatment system and a central operators station inside the truck body with fold-up access staircase. Trucks are equipped with system drains to purge water for easy winterization when not in use. 815/712-8708; www.cipp-services.com.

NEW WAY TO SCAN PIPES

The ES-38 electro scanner from Electro Scan Inc. is designed for scanning laterals 3 to 8 inches in diameter, and can cover 30 feet per minute. Electrical variances – where electricity (and water) is flowing through cracks, leaks or defects in non-metallic pipes – and associated distance measurements are transmitted to a smartphone application (included) to display and record defect locations and relative size. The probe includes 200 feet of 1/4-inch fiberglass pushrod. An optional printer and the ES-Air Push Rod are also available. 800/975-6149; www.electroscan.com.

CONTINUOUS INVERTER

The Quick Shot inversion unit from PrimeLine Products is designed to continuously invert liner tube without being restricted by the length of pipe or diameter. The unit is lightweight and portable, and handles liners for 3- to 8-inch pipe. It incorporates Venture tube technology to create high air pressure at the front end and low pressure at the back to pull the liner through while minimizing air loss. It is compatible with all manufacturer's lining materials. 877/409-7888; www.prime-line.net.

WIRELESS INSPECTION SYSTEM

Wireless video inspection cameras from Forbest can transmit images up to 500 feet to control stations or laptop computers for viewing over the Internet, enabling multiple users at various locations to simultaneously view

video from a single camera. 650/757-4786; www.forbestusa.net.

SMOKE BLOWER ELIMINATES RESIDUE

The Air Loc Plumbing DWV Smoke Blower from Cherne Industries detects odor sources in a building's pipes. It uses liquid smoke that is atomized before heating, eliminating liquid residue. 800/843-7584; www.cherneind.com.

NO MORE BLIND JETTING

JetView from PURE Software Solutions is a video transmission system that allows jet operators to see everything the CCTV operator sees in real time, eliminating blind cleaning operations. Setup is as simple as mounting the unit on the jetting equipment, placing the transmitter in the CCTV equipment and connecting the video cable. It comes in a portable case and features a 10-inch monitor with instant transmission up to 1,000 feet. It works with all CCTV equipment. 303/867-1414; www.puresoftware.com.

VERSATILE TRANSITIONAL LINER

The Transition Liner from Easy Liner is an elastic, knitted inversion liner that handles lining through 4- to 6-inch pipe transitions and also works on straight runs of 4-, 5- and 6-inch pipe. The liner negotiates 90-degree bends with minimal wrinkling and maintains a thickness of 3.5-mm when expanded to 6 inches. It is ambient-cured with a 90-minute cure time and works with most epoxy, polyester and silicate resins. 888/639-7717; www.easy-liner.com.

CONTROLLED-SPEED NOZZLE

The Rotor nozzle from USB-Sewer Equipment Corporation uses magnets around the shaft to control speeds. The nozzle utilizes Advanced Optimized 3D HydroMechanics, with two jets that serve as drivers and two as brakes. It has double-sealed bearings, requires no lubrication and is well suited for removing grease and scaling. It is available in sizes for 6- to 24-inch sewer lines. 770/984-8880; www.usbsec.com.



Cam Spray



US Fleet Tracking



Myers Pentair Water



Dyna-Vac Equipment



F.S. Solutions



General Pump



UEMSI



NEW TRAILER DRAIN JETTER

The EJ-T series of economy drain jetters from Cam Spray feature a 28 hp Honda engine with flows and pressures at 7 gpm at 4,000 psi or 11.5 gpm at 2,700 psi. Models include a manual reel with 250 feet of 3/8-inch or 1/2-inch hose for jetting 6- to 10-inch lines. Features include an industrial three-plunger pump with stainless valves and ceramic plungers, power pulse valve, air purge and recirculation for freeze protection, a 5-gallon fuel tank, heavy-duty trailer, 2-inch ball hitch and 150-gallon water tank with auto-shutoff. 800/648-5011; www.camspray.com.

UNDER-DASH TRUCK GPS DEVICE

The NTX5B under-dash GPS tracking device from US Fleet Tracking enables fleets with a few or 500 trucks to follow trucks in real-time as they run routes for maximum productivity. The system updates latitude, longitude, heading and speed of a vehicle every 10 seconds, and keeps 90 days of history. Records can be saved for up to a year. The system works with third-party software for dispatching. Data is sent through satellite networks. 405/749-1105; www.usft.com.

NEW LOW-PROFILE PLUNGER PUMP

The HPL 120-30 low-profile, reciprocating plunger pump from Myers Pentair Water is designed for mobile sewer jetting applications. The pump delivers up to 120 gpm at a maximum discharge pressure of 3,000 psi. Features include side-gear reduction, open cradle, independent and removable stuffing boxes, spin-on oil filter and pressurized power end lubrication. 419/289-1144; www.myersaplex.com/hpl120.

VERSATILE TRUCK JETTER FOR MUNICIPAL WORK

The Dyna-Jet 6520 truck jet from Dyna-Vac Equipment features a 65-gpm, 2,000-psi truck-mounted PTO-drive jetting system with a 600-foot hose reel designed to serve the municipal sector for use on larger sewer lines, culverts and storm drains. The swivel reel provides easy access on both sides of the truck and to line up with manholes, and stows inside the insulated, heated box on the back of the truck to prevent freezing in cold weather. 888/298-8668; www.dynavacequipment.com.

METERING DEVICE FOR FATS, OILS AND GREASE

The F.O.G. Buster system from F.S. Solutions meters the amount of detergent used to clean pipes that have a lot of buildup of fats oils and grease, such as sewer lines near restaurants. The unit comes with a 25-gallon detergent tank and can be easily retrofitted for an existing work truck or specified for a new truck. The detergent solution goes down the line, foams up over 10-15 minutes to liquefy greases and coats the pipe for a longer-lasting solution to prevent buildup. The meter improves efficiency, reduces water usage and can be shut off when not needed. 800/822-2253; www.fssolutionsgroup.com.

SYMMETRICAL PLUNGER PUMP

The new MW Series of high-pressure triplex plunger pumps from General Pump feature the capability to run dry for up to 30 minutes without causing any damage to the wet-end components. The pump is designed to be symmetrical from top to bottom so it can be converted in the field for use in either a right- or left-hand crankshaft configuration. Simply remove the manifold and crankcase cover and flip the pump. Engineered for 80 gpm, 2,000 psi machines, it works with the most popular spec for sewer jetting equipment. The pump has a maximum inlet pressure of 45 psi, maximum fluid temperature of 140 degrees F and weighs 540 pounds. 888/474-5487; www.generalpump.com.

COMPACT MAINLINE TELEVISION SYSTEM

The Predator Advantage portable mainline system from UEMSI features a new compact reel for a televising unit that can be transferred from truck to truck and access backyards and narrow easements. The unit, designed for televising 6- to 60-inch sewers, comes standard with 500 feet of cable, or can be ordered with 600-foot or 1,000-foot options. The heavy-duty unit is accompanied by the Prowler and optional Trax Jr. wheeled tractors and Explorer Zoom pan and tilt camera. Other standard features include a 10.4-inch color LCD monitor, built-in DVR with 160 gb hard drive, USB port, built-in SD card holder and wired handheld remote control. 800/666-0766; www.uemsi.com



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COMPACT, EXPANDABLE GAS MONITOR

The GX 2012 confined-space multi-gas monitor from RKI Instruments is the company's smallest personal five-sensor gas monitor weighing only 12.3 ounces. The handheld unit uses micro-sensor technology to measure oxygen, methane gas, carbon monoxide and hydrogen sulfide, and is also designed to add a fifth sensor when necessary. The detector has a low cost for the entry-level market, has glove-friendly large buttons, high-impact protective rubber covering, utilizes an easy-read automatic backlight during alarms, and is powered by lithium ion or alkaline batteries. 800/754-5165; www.rkiinstruments.com.

VERSATILE PUMP CONTROLLER

EMS PRO and EMS PRO Lite pump controllers from FW Murphy meet the varying needs of industrial, engine-driven equipment applications. The EMS PRO all-in-one controller is made for use across multiple engine lines. It features numerous start/stop and throttling options via the back-lit operator interface mounted behind a lockable door. 918/317-4100; www.fwmurphy.com.

ANYWHERE ACCESS TO BUSINESS RECORDS

The TAC Online program from Clear Computing can be accessed with a PC or Mac, smartphones or tablets. The Total Activity Control system offers full control over data, real-time vehicle tracking, verbal route driving directions in vehicle and credit card processing. It is fully customizable with work orders and invoices, fonts and colors and grid layouts. 888/332-5327; www.clearcomputing.com.

EQUIPMENT TRACKING SYSTEM

The StreetEagle asset management system with barcode scanning from InSight USA provides fleet managers with real-time monitoring of equipment in the field. The scanner allows a service technician or delivery driver to scan each piece of equipment during delivery or pickup or at any service stop. The handheld scanner provides proof of service, prevents equipment loss, verifies current locations and helps manage inventory. 301/866-1990; www.streeteagleps.com.

NEW HYDROEXCAVATOR DISPLAY PANEL

The MC Advanced Series hydroexcavator from GapVax Inc. features a monitoring system that enables the operator to observe and troubleshoot from a single display (one inside and one outside the cab) as well as control hydraulics, blower and water pump operations with a complement of gauges. 814/535-6766; www.gapvax.com.

REDESIGNED COMPACT LOADER BACKHOES

Terramite X-Series compact loader backhoes from TerraQuip Construction Products have undergone a complete redesign, affecting engines, hydraulics and styling. Units include the T5X with a 25 hp gasoline or diesel engine, 8-foot 6-inch dig depth and 2,000-pound loader lift; the T7X with a 26 hp diesel engine, 9-foot dig depth and 2,100-pound loader lift, and the T9X with a 37.5 hp diesel engine, 10-foot dig depth, and 2,300-pound loader lift. 800/428-3772; www.terramite.com.

NEW BRANDING FOR SEPTIC SERVICE

A Corp/Rooter-Man has introduced the SewerMan national brand for residential septic system and sewer solutions. Services under the new brand include septic system pumping, repair and inspection, sewer jetting, and pipe lining. The new brand complements the company's existing Rooter-Man franchising. The marketing program includes a locally optimized Internet marketing website and exclusive use of a toll-free phone number that rings directly to the franchisee. 978/667-1144; www.rooterman.com.

PUMPS FOR VARIED LIQUIDS

Priming-assisted Prime Aire Plus pumps from Gorman-Rupp Co. offer venturi/compressor priming systems along with increased head and flow and enhanced maintenance features. Models in sizes up to 8 inches are suitable for clear liquids and liquids that contain large solids. Features include externally adjustable running clearances, ductile iron body and impeller, oil-lubricated bearings, and a fuel-level monitoring system. 419/755-1011; www.gormanrupp.com.



REMOTE VACUUM TRUCK MONITORING

Offered by Vac-Con, the OmniView data logging and telematics system keeps track of current and past vacuum truck locations using GPS tracking. It also tracks numerous truck functions, including fuel usage on the main and auxiliary engines, vacuum and pump run times, hose footage, water quantity on-board, system pressures, vehicle rpm, and vehicle and auxiliary engine hours (for maintenance interval tracking). A total of 70 functions are monitored. 904/284-4200; www.vac-con.com.

RELIABLE PUMPING WITHOUT CLOGGING

Godwin Dri-Prime NC Series pumps from Xylem are designed for energy efficiency and non-clogging operation even when moving liquids containing stringy solids, fabric and plastics including bubble wrap. Applications include sewer bypassing, pump station backup, sludge pumping, stormwater pumping and industrial effluent. An automatic self-priming venturi priming system primes and re-primers from dry up to 28 feet with no operator assistance or foot valve required. 914/323-5700; www.godwinpumps.com.



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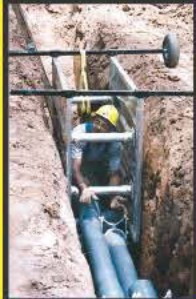
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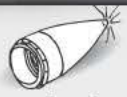
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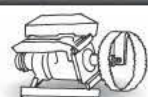
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LOW FLOW AIR HAMMER

The All Terrain Air Hammer from Ditch Witch is designed to work with the company's JT4020 All Terrain and JT100 All Terrain directional drills to penetrate the hardest rock. The drills efficiently install utility conduit in a wide range of ground formations, from mixed hard soil to cobble to solid rock. The air hammer offers All Terrain technology, which enables it to continuously drill as it is being steered, resulting in a fast, efficient bore. Conventional air hammers require stopping to drill to change directions. The hammer has a low flow rate of 4 gpm, so fluid costs and cleanup time are minimal. Used properly, the unit leaves only dry cuttings and a small amount of foam that is used downhole to remove the cuttings. It requires no oiler or drilling mud. The hammer comes in a kit that includes the unit, a 6.5-inch convex bit, convex bit jaw, 4-inch jaw assembly, two slide pins, the Rockmaster Air Housing, a fluid pump and air adapter kit. Featuring larger air pots, the air housing is designed to maximize the productivity of the air hammer. 800/654-6481; www.ditchwitch.com.



COMPACT WINCH

The HydroGuide HG5 winch from HammerHead Trenchless is powered by a turbocharged 33 hp liquid cooled Kubota diesel engine, which drives the solid dual capstan and dual direct drive Geroler motors. The compact system withstands high load ratings and improves torque transmission, offering constant pulling force over the entire pull length and reducing cable wear.

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which tracks line speed, distance, tonnage and pressure. The keypad and large LCD provide access to current data and recorder setup. When a project is complete, users plug in a USB flash drive to download the data. Available on-screen data includes distance, force, speed and pressure. 800/331-6653; www.hammerheadtrenchless.com.

STATIC PIPE BURSTING

The Model PD-7 static pipe bursting machine from Pow-R Mole replaces existing underground water, sewer or gas lines. The unit will operate from a pit only 72 inches long. It has a pulling force of 112,000 pounds at 3,000 psi and a maximum pull rate of 7 ft/min.

The system uses a 2-inch-diameter rod with a 2.5-foot tapered quick-connect thread. The low-pressure system can be powered by a 58 hp diesel hydraulic power unit or from an auxiliary circuit on a backhoe. The unit can burst and install up to 12-inch I.D. pipe in most compressible soils. 800/344-6653; www.powrmole.com.



SHORING DEVICE

The pneumatic shoring device from Prospan Manufacturing is made of lightweight anodized aluminum. The maintenance-free unit utilizes user-friendly tabulated data. The device comes with a large selection of end attachments and extensions. 888/413-8100; www.prospanshoring.com.



COMPLETE SHORING SYSTEM

The ultraSHORE trench shoring system from Safety Corporation of America, made of corrugated aluminum, features stackable panels that can be used horizontally or vertically for bury depths to 12 feet in Class C soils. Extra features include leg kits or wheel kits for OSHA regulations. Easily transported in a pickup, the system can be closed off on one or both ends with quick-release, spring-loaded end-closure panels. 800/746-7464; www.shoring.com.



COMPACT HYDROEXCAVATOR

The Ram Vac HX12-27 hydroexcavator from Sewer Equipment Co. of America has a short wheelbase and small turning radius for tight working conditions. It features a 5,200 cfm positive displacement



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EXTREME-WEATHER HYDROEXCAVATOR

The Mud Dog 1600 hydro-excavator from Super Products LLC delivers up to 18 gpm at 3,000 psi. Its 8-inch, positive displacement vacuum system provides



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The AllExcavate hydro-excavator from Vacall safely and efficiently cleans frac tanks and underground utility lines and removes dirt from drilling rigs and trucks. The standard 8-foot, 6-inch telescoping boom is located at the rear of the chassis and reaches in a 180-degree radius without having to move the machine. The single-engine design reduces fuel consumption, eliminates emissions and reduces costs and downtime for routine maintenance. Water tanks are fabricated with high-quality aluminum. The debris body is standard with powder-coat paint, but a galvanized option is available. A flush system is also available. Operators can open, close and lock the tailgate with one control.

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September, 2012 - (TBA) California

Operation & Maintenance, Level 1

Instructors: Mike Treinen or Kit Rosefield

Go to www.COWA.org

November, 2012 - (TBA) California

Operation & Maintenance, Level 2

Instructors: Nick Weigel or Kit Rosefield

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PIPE BURSTING SYSTEM ENDS BLOCKAGES

PROBLEM

Roots protruding through joints and cracks in a 110-foot section of 4-inch vitrified clay sewer pipe created blockages at a mobile home park in Sunnyvale, Calif. The park owners looked for a permanent fix.

SOLUTION

Maintenance supervisor Bob Smith contracted RODDIE Inc. to replace the line with 4-inch SDR-17 HDPE pipe using the company's PB-40 pipe bursting system. The compact, 120-pound machine fit easily in the small pulling pit sandwiched between structures. A 13 hp low-pressure hydraulic power pack powered the ram with 50 tons of pulling force and 21 square inches of piston area.



RESULT

Sewer service was restored in one day. 408/224-7777; www.pipeburstingamerica.com.

PIPE BURSTING HELPS CURE I&I

PROBLEM

Inflow and infiltration increased winter flow rates by five times the dry-weather rate at the Ross Valley Sanitary District in San Rafael, Calif. The district assembled a pipe bursting division as part of its trenchless repair campaign to replace more than 16 miles of aging sewer lines and adjoining lower laterals.

SOLUTION

The district chose the compact M50 pipe bursting system from TRIC Tools to replace 6-inch vitrified clay mains with 8-inch high-density polyethylene pipe. A 14 gpm/5,000 psi trailer-mounted TRIC/WIT pump powered the ram with 48 tons of pulling force and 19.24 square inches of piston area. The equipment fit easily in easements and other tight places.



RESULT

The district estimated savings of 50 percent over open-cut replacement and a 40 percent reduction over subcontracting the work. 888/883-8742; www.trictools.com.

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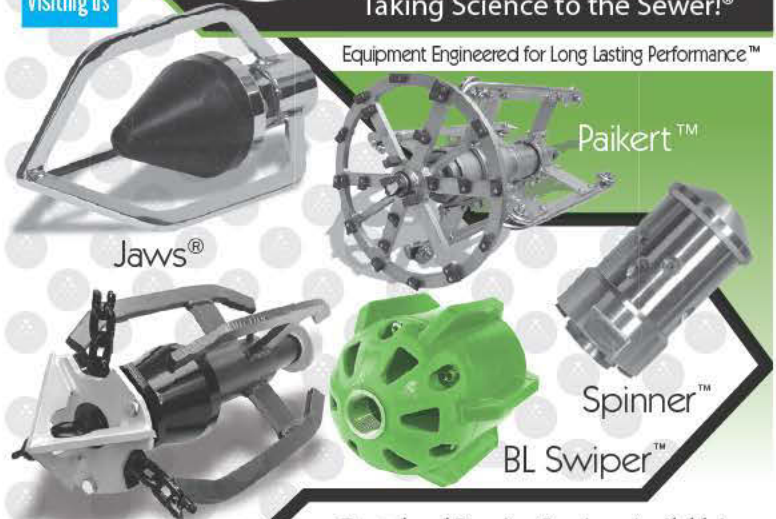
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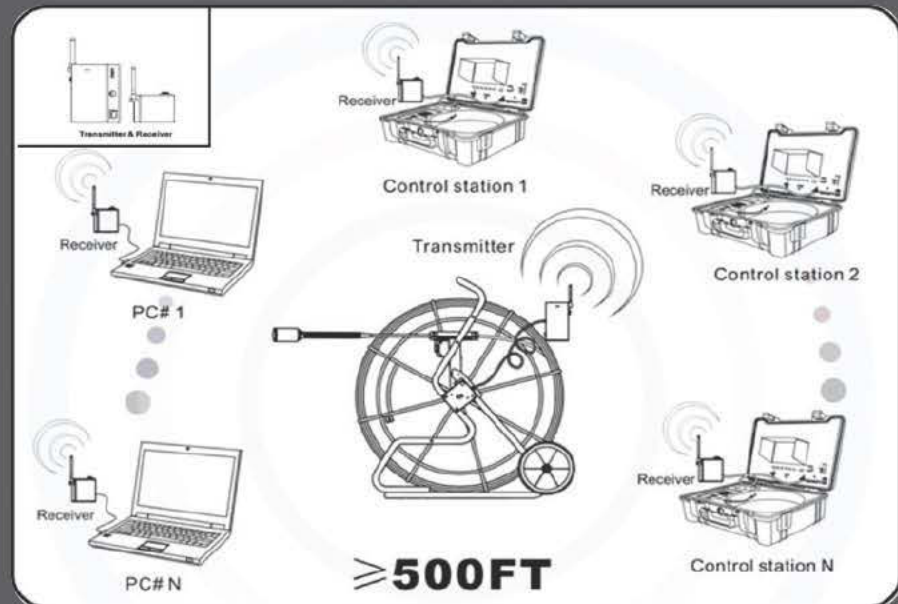
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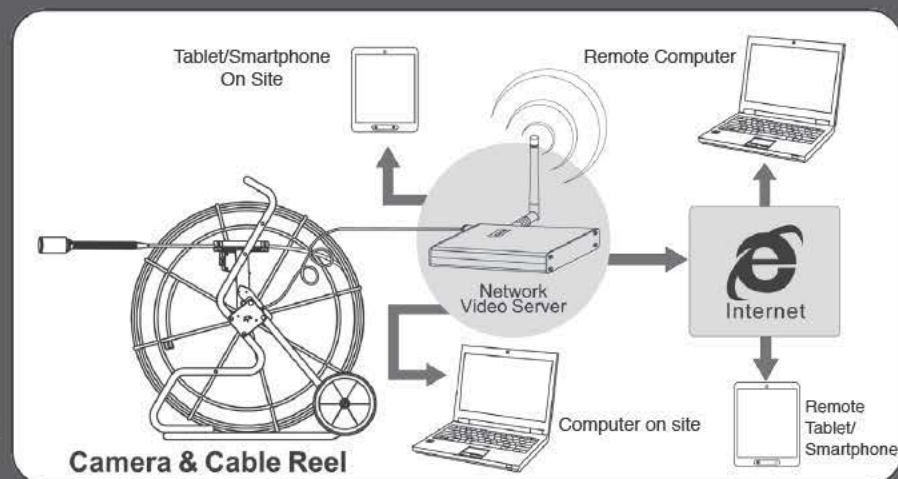
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SEKISUI ACQUIRES RABMER PIPE REHABILITATION

SEKISUI Chemical Co. Ltd. of Japan acquired 75 percent shareholding of Rabmer Pipe Rehabilitation Group of Australia. The merger enables SEKISUI to expand its European markets.

MR. ROOTER A TOP 50 FRANCHISING TWITTER ACCOUNT

Mr. Rooter Corp.'s Twitter account ranked No. 37 among Top 50 Franchising Experts to Follow on Twitter, according to Franchising Articles. In addition to tweeting seasonal tips, the plumbing and drain cleaning company provides advice through its Twitter account at www.twitter.com/mrrootercorp.

**SPARTAN TOOL NAMES
TERRITORY SALES MANAGER**

Spartan Tool LLC named Dean Pruitt territory sales manager, responsible for sales, service and customer support in Utah and Nevada. He has 20 years experience in the sewer and drain cleaning industry.



Dean Pruitt

**STONEAGE, NLB SETTLE PATENT
INFRINGEMENT LAWSUIT**

StoneAge Inc. and NLB Corp. resolved their patent infringement dispute on mutually agreeable terms. StoneAge granted NLB a covenant in exchange for a royalty, enabling NLB to continue manufacturing and selling its Typhoon rotary nozzles. NLB contested StoneAge's claims and did not admit liability. Terms of the resolution were not disclosed.

HOBAS PIPE LAUNCHES WEBSITE

Hobas Pipe USA launched the website, www.hobaspipe.com, featuring publications and videos of the company's products and their applications, as well as tech profiles and case histories.



NOZZTEQ NAMES DECARLO VP OF SALES

NozzTeq Inc. named Anthony "Tony" DeCarlo vice president of sales. He will work directly with customers in 19 states and authorized dealers throughout North America.

JETTER DEPOT NAMES PISANIELLO SALES MANAGER

Jetter Depot named Kim Pisaniello sales manager for its Atlanta location. Pisaniello has 16 years of industry experience and will be responsible for sales, service and customer support.

OATEY ACQUIRES HERCULES CHEMICAL ASSETS

Oatey Co. and its subsidiary, HCC Holdings Inc., acquired certain assets of Hercules Chemical Co., manufacturer and supplier of products to the plumbing, heating, air conditioning and electrical trades. Based in Cleveland, Ohio, Oatey SCS distributes more than 6,000 plumbing products.

**SPARTAN NAMES DEFOUR
TERRITORY MANAGER**

Spartan Tool LLC named Louis Defour territory sales manager. He will be responsible for sales, service and customer support in Louisiana, southern Mississippi, southern Alabama and the western panhandle of Florida. Defour has 20 years experience in the sewer and drain cleaning industry.



Louis Defour

WELDON WINS US JETTING EXPO GIVEAWAY

Bill Weldon of Roto-Rooter, DeLand, Fla., won the US Jetting giveaway prize of a DeWALT cordless drive and flashlight set at the Pumper & Cleaner Environmental Expo International. c

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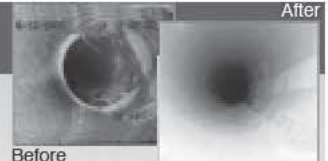
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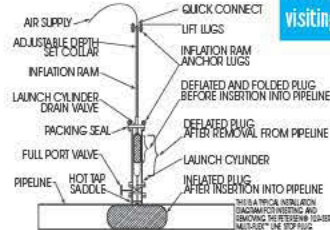
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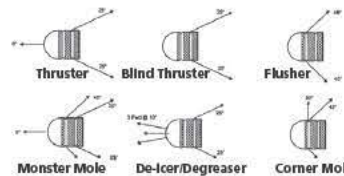


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1999 Sterling cab & chassis with a Cusco Turbovac 3800 industrial loader with a jetting system. (Stock #3163C) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

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1998 Mack RD6885 with a 3,000 U.S. gallon, DOT certified, carbon steel vacuum tank unit. (Stock# 6653V) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

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POWERVAC 3800, 3,000 U.S. gallon, carbon steel vacuum tanker with a Hibon PD blower 3800 SCFM with vacuum to 28" mercury. High Dump Type; D.O.T. 407/412 regulations (Stock#13478V) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CMBM)

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www.hotjetusa.com CPBM

2010 Mongoose trailer jetter: Model 184, 600 hours, located in Orlando, FL. Great shape, looks brand new. \$23,500. 267-249-3774. (C04)

2000 SRECO trailer jet, 700 gallon, John Deere 6 cylinder diesel, FMC pump, 65 gpm @ 2,000, 1" hose, Jet Cam system with 2 cameras, municipal unit, 396 hours. Call Bill: 800-969-1672, located in Virginia. (C04)

JETTERS-TRAILER

2007 O'Brien 3518 SC, 350-gallon tank, 65 hp, Cummins, 18 gpm @ 4,000 psi, Giant pump, 400' x 1/2 hose, rotating beacon light, wash down package, fill hose, wireless hand held remote, Intelaccount hose footage counter, single axle trailer, only 55 hours use. \$25,000. Call 803-768-2028. (C04)

JETTERS-TRUCK

2006 GMC TC6500 cab and chassis with Pipe Hunter Trunk Mounted Jetting Unit, 3,000 psi @ 50 gpm with a 1,000-gallon water tank, rear mounted hose reel with JET EYE Camera System. **6,800 original miles, like new. \$119,000 sale price. (Retail for \$210,000)** (Stock #13234V) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

2000 Pipe Hunter, model 100335, FMC L16SC pump, 35 gpm @ 3,000 psi, 1,000-gallon tank, 3/4" hose, swivel reel, 2,000 GMC, 7500 chassis, Cat 3126 diesel, Allison automatic, municipal unit, 61,000 miles. \$15,000. Call Bill 800-969-1672, VA. (C04)

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1997 Vac-Con Hot Shot truck mount jet truck: 11,000 miles on chassis, 250 hp Cat, 1,200 hours on John Deere aux engine, new 5-speed manual transmission, 50 gpm @ 3,000 psi quintiplex pump, 1,600-gallon water tank, no leaks, tool boxes, runs and works, great municipal owned. \$18,000 Call 303-898-9475. (C05)

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1982 Ford LN 8000 Vactor, 10 yard debris, 1,500-gallon water, single fan, 2,800 hours, Arizona truck, no rust. \$10,000, OBO. 520-360-0383, AZ. (C04)

2002 Sterling cab and chassis, Vac-Con industrial machine mounted on a pre owned. (Stock #6917C) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

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2000 Sterling cab and chassis, Vector series 2110 industrial machine mounted on a pre owned. (Stock #5358C) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

For Sale 1999 VAC-CON: Factory rebuilt engine 6/2005, 80 gpm, 2,000 psi, PD, spicer trans., one owner, 9,968 hours, 78,175 miles. \$68,000, OBO. 1-800-664-3937, PA. (C06)

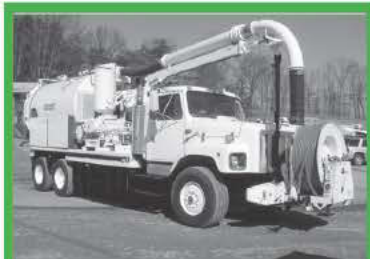


1997 Vac-Con combo unit: \$43,000 & **1998 Vac-Con combo unit:** \$48,000: International chassis, 16-yard debris tank, 1,500-gallon fresh water, 80 gpm/2,000 psi General pump, in-frame engine, 600' of hose reel, good condition. **Call 910-521-0549** C04

2005 Vac-Con Sterling combo unit, C-10 Cat engine, 335 horsepower, Myers dp 80 gpm @ 2,000 psi, 3 stage fan, 12-yard debris tank, 126,000 miles. \$98,000. Good shape, ready to work. 813-489-3108, FL. (C05)



1988 Ford L8000 Vac: Ford @ 210 hp, A/T, 81K miles, 6K hours, spring susp., spoke wheels, Vac-Con body, Cummins showing 1,292 hours, s/n: V290T-0488186.\$22,500 **715-546-2680 WI** CBM



1999 International 2674: Vac-Con VPD-3616, PD Blower, ISM Cummins 335 hp, HD4560 Allison, 46,000 rears, Cummins upper, ex-municipal truck, 79,172 miles. **814-696-4343** C04

JET VACS



2000 Vector 2115J: 2-stage fan, 6 cyl. John Deere eng., 60 gpm/2,500 psi water pump, 1"x800' large capacity hose reel, telescoping/rotating hose reel, 8' telescopic boom, 15-yard debris body, 1,300-gallon water capacity. Unit mtd. on a 2000 Sterling LT7501 chassis, 275 hp CAT, MD3560 auto. trans., 14,100 miles, 3,510 hrs., ex-city unit, great condition. **Call Mike for pricing 800-294-0149** C04



1995 Ford L-9000: Vac-Con V316, 3-stage fan, L-10 Cummins, HT-750 Allison, 46,000 rears, Cummins diesel upper, ex-municipal truck, 33,280 miles. **814-696-4343** C04

1990 Ford L8000, Vector 6 cylinder, diesel automatic with rear Ford gas engine. 12-yard debris tank, 65 gpm / 2,000 psi pump. Ready to work. Photos at www.empireequip.com. \$26,500. Ask for Craig at 714-639-8352, CA. (CBM)

2004 Vac-Con Sterling combo unit, new C-7 Cat engine, 2.5 year warranty on engine, 12-yard debris tank, 3 stage fan, 80 gpm/2,000 psi, Myers dp pump. 125,000 miles, 2,100 hours. \$95,000. 813-489-3108, FL. (C05)



1997 Aquatech B10 unit: Mounted on Ford with 40,000 miles, 10-yard debris tank, 2,000 psi, 65 gpm. Unit runs great, no problems, start up and go, very clean truck. Located in Orlando.\$47,500 **Call 267-249-3774 for details** C04

JET VACS



2003 Sterling L7500 Vac Truck: Cat 3125 @ 315 hp, A/T, 55K miles, spring susp., 2003 Vac-Con V390LHAD, 3 compressor fans, 10' telescopic boom, HS drive, articulating hose reel, hi-dump debris tank.\$99,500 **715-546-2680 WI** CBM

2008 Sterling LT7501 with a VacAll AJV1015, 10-yr debris body, 1,500-gallon water, combination vacuum/jetting unit. (Stock #13366) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CMBM)

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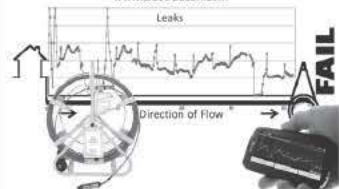
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2005 GMC 5500: 4x4 Duramax w/ crescent tank, 6 to 8 units, 750 waste, 350 water, vac pump, Masport HXL3F, 106 cfm, 139,000 miles.\$19,900 **614-837-3010 OH** C05

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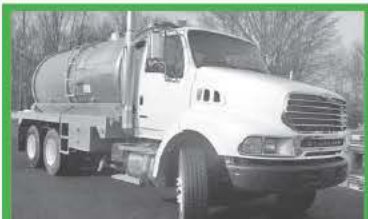
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1978 Mack Vac Truck: Mack diesel, M/T, 10,500/19,040 axles, camelback susp., spoke wheels, 22.5 tires.\$24,500
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2006 Sterling LT9500 Vac Truck: Acert C-13, Fuller 8LL, lockers, 18/40 axles, 4x6 drive, air ride, 24K miles, 208" WB, 227" frame behind cab, 22.5 tires, engine brake, disc wheels, 2006 Presvac tank, s/n: APV-4000-0705-7052, 4,000-gallon tank, Masport pump.\$89,500
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2009 Vactor. Model 2115-824-RCS-18, combination sewer vehicle, auctioned at <http://www.publicsurplus.com/sms/auction/view?auc=678969>, ending February 27, 2012. Contact Kent County Purchasing at 616-632-7720, MI. (C04)

2002 Ford E450, super duty box televising truck, auctioned at <http://www.publicsurplus.com/sms/auction/view?auc=678965>, ending February 27, 2012. Contact Kent County Purchasing at 616-632-7720, MI. (C04)

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Aries Lets II: Camera and tractor, includes control launcher and 2 cables, used on 1 job, setup can be converted to Cues camera as well. \$8,500. 813-489-3108, FL. (C06)

RST TV System: It includes a mainline cable reel and controller motor, tractor, and an Omni 2 camera. All equipment is in working condition. \$7,500. Pictures at www.empire-equip.com. 714-639-8352. (CPBM)

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. (CBM)

2005 Aries CCTV van, pan and tilt camera, 2 tractors (wheel and track) oversize tire kit, 1300LF single conductor steel braided cable, Wincan software, mounted on 95 E350 box truck. \$16,500. 813-489-3108, FL. (C06)

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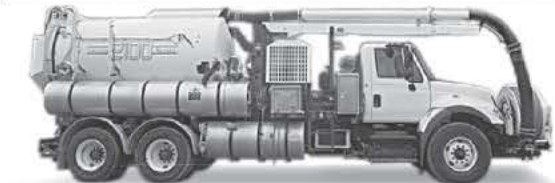
STANDARD



2006 Vactor 2110, 80 GPM/2,500 PSI, Multiflow, Accumulator, 1,000 Gallon water capacity, 8' teleboom, Rotating hose reel, Roots 824 blower, 2006 Sterling, 350 HP, Automatic transmission, 66,500 Miles/4,600 hours.



1998 Vactor 2110, Two stage fan system, 60 GPM water pump, multiflow, accumulator, lots of options, 1998 Navistar 2554, automatic transmission, unit has been completely rebuilt by certified chassis and body technicians and comes with a warranty.



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1987 Chevrolet P30 Stepvan: 76,476 miles, Cues TV rig, Night Owl pan and tilt with transporter, Onan generator, hose reel. Needs some TLC but a great backup rig or starter outfit. \$8,000 or best offer. Wes at 281-728-6330, TX. (C04)

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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)

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1999 International with a Guzzler Ace 27" HG wet/dry industrial vacuum tank loader. **Demo/Rental unit.** (Stock #7390) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

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1998 Sterling cab & chassis with a Cusco Mastervac 3800 wet & dry industrial loader. (Stock #5088C) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648). (CBM)

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