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## Industrial Vacuumers Consider Best Practices

“From a contractor’s standpoint, you can hardly offer waterjet service and not offer vacuum truck service, and vice versa,” says Pat Debusk of Debusk Industrial Services and a board member of the WaterJet Technology Association (WJTA). “But even though both types of equipment work the same job, their operators face different hazards.”

Clearly, both waterjet and vacuum truck operators need safety training. High-pressure water presents an obvious danger to operators and the people around waterjet equipment. High-powered vacuums are also potentially dangerous, and some combination vacuum units use high-pressure water as well. Vacuum operators often work in confined areas and trenches, and must cope with electrical cables, pressurized pipes, and potentially hazardous structures.

Twenty-one years ago, the newly formed WJTA addressed safe and efficient waterjet use with its guide, *Recommended Practices for the Use of Manually Operated High Pressure Water Jetting Equipment*. This collection of best operating practices quickly became the industry’s safety bible.

### Guidelines

Now WJTA has begun exploring whether it should create a similar set of guidelines for vacuum truck operators.

“Our waterjet handbook is not a training manual, but a set of tried and proven practices developed by people throughout the industry,” says WJTA Association Manager Ken Carroll. “Many of the vacuum companies have really good safety programs that we could pull together into a single guide.”

A need appears to exist. Although OSHA does not specifically regulate portable equipment, managers and supervisors must comply with relevant OSHA regulations. Larger companies often have specialists who monitor safety requirements

and manage training and compliance. This is often more difficult for smaller firms.

Adopting a single, generic set of operating guidelines and personnel classifications would benefit both smaller and larger companies.

### Advantages

To start with, managers would find it easier to tell whether their safety procedures were the best way to meet OSHA and other regulations. “When we issued our waterjet guidelines 21 years ago, many companies that thought they were in compliance really were not,” recalls Debusk.

Third-party recommendations also provide greater credibility, says Bill McClister, Onyx Industrial Services Vice President of Support Services and WJTA board member. “The WJTA is a neutral third party involved

with technical education. It has nothing to gain from how it writes its recommendations,” he explains.

This is especially important if a lawsuit arises from a vacuum-related accident. Without guidelines that define best practices, lawyers may challenge companies to show that they took all necessary safety precautions.

Established, industry-wide guidelines provide benchmarks for industrial cleaning companies to show they operate safely. “Our guidelines have been cited in court cases as evidence that a company was following recommended practices,” says Carroll.

Even more importantly, says McClister, collaborating on best practices gives the entire industry a way to improve its procedures. “We’ve all made mistakes, we’ve all had accidents,” he explains. “Each one is a black eye for the entire industry. By working together, we can create a central clearing house where we can learn from our individual mistakes and improve safety for everyone.”



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Subsidiaries of



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# New Manual Sends Clear, Consistent Safety Message

**T**he best way to talk about safety is to provide a clear, consistent message across the board," says Vactor Project Manager Andy Current.

That approach is evident in the new *Vactor/Guzzler Safety Manual*, which Current's safety team expects to release this spring. It updates, supplements, and combines safety information from previous vehicle-specific Vactor and Guzzler manuals into a single safety handbook.

"This makes a lot of sense for our customers," says Current. "Most of them operate multiple vehicles. Now, they have a single document to which they can refer, and they can use it as a starting point to provide consistent safety training for their operators across the different products they own."

## Basics

"Clearly," says Current, "the new manual is not a substitute for hands-on training. But it does provide current best practices, a listing of key safety decals and warnings, and many references for additional safety information."

The most basic safety information starts up front with a warning about the high-pressure water systems found on most Vactor trucks. Pressurized water can inject debris and bacteria deep into the skin. Even injuries that look minor can lead to serious infection and require prompt medical attention.

The manual also includes a series of general warnings and safety standards. Some reflect simple common sense, like wearing protective clothing, ensuring good footing and visibility around the work area, and shutting down before making repairs. Others have been learned through experience, such as working in teams of two or more and draining water in cold weather to keep ice from cracking valves and fittings.

## Labels

The manual lists the typical labels found on current Vactor equipment. This section starts with an explanation of Vactor's five label categories. These range from "Danger" (a red label that warns of imminent hazard of serious injury or death) and "Warning" (an orange label that notes potential for serious injury or death) to less-threatening cautions and notices. It then provides five pages of specific labels.

An additional page lists common Vactor/Guzzler decals. Some of these are well known, such as the images of the turtle and rabbit on the throttle that indicate slow and fast.

Workers may find others less familiar, such as the symbols for hydraulic oil, valve position, and steady/intermittent operation.

## Resources

The *Vactor/Guzzler Safety Manual* also covers a broad range of potential hazards. Some involve equipment issues, like operating around electrical power cables and safe vacuum valve operation and relief. Others apply to such general issues as working safely in confined spaces and trenches, and coping with static electricity.

"Our customers must be aware of OSHA regulations," says Current. "While OSHA does not regulate mobile equipment, the people who operate that equipment must follow OSHA rules. That means that employers and workers at a job site must comply with a broad range of OSHA regulations. The relevant safety procedures depend on what you're doing and where you're doing it."

No single manual covers all that material. Instead, says Current, the new safety manual highlights critical concerns and refers users to resources for more information. The section on static electricity, for example, refers to American Petroleum Institute pamphlets and training classes, recommended National Fire Protection Association (NFPA) practices, and a Center for Chemical Process Safety book on the subject. The section on confined spaces references an OSHA pamphlet.

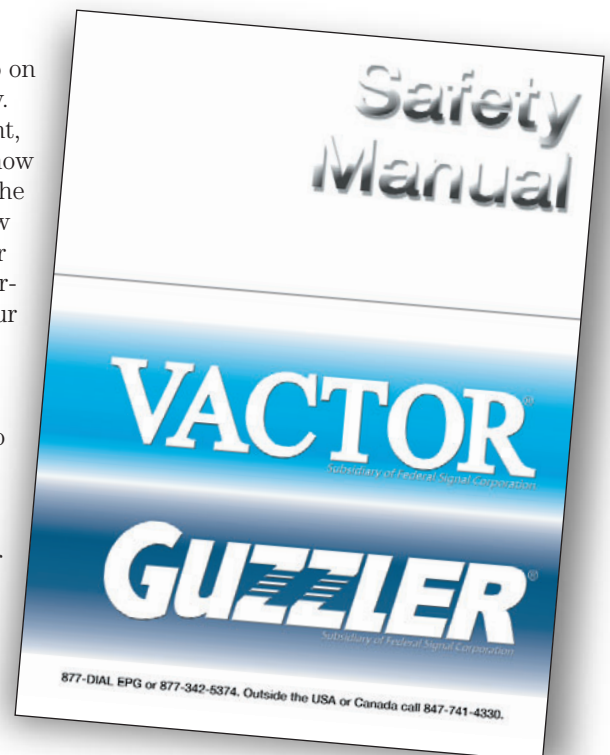
The manual, says Current, is just one step on the road to better safety. "We know our equipment, but we don't claim to know the jobs and worksites the way our customers know them," he explains. "Our goal is to give them information on how to use our equipment safely and direct them to more detailed safety information that they can use to assess their jobs."

The new manual will begin going out with Guzzler and Vactor trucks this spring. You can also get a copy by contacting your Guzzler/Vactor sales rep or Babette Austin at 800-627-3171.

# NEWS & EVENTS

Interested in Learning more about Guzzler, Jetstream and Vactor products?

Go to [www.federalsignal.com](http://www.federalsignal.com)



# HXX Video Gets Operators Up to Speed Faster

**V**actor HXX™ hydroexcavators are powerful pieces of equipment. To unlock all their potential – and keep them running reliably – workers need to know how to inspect, operate, and maintain their units.

A new DVD from Vactor walks them through each step of the way. Following the DVD's recommendations not only boosts HXX productivity, but helps reduce maintenance costs as well.

Many companies use DVDs to supplement manuals and hands-on training because they bring employees up to speed quickly. "DVDs are very visual and graphic," explains HXX Product Manager Deepesh Nayanar. "For example, we can display the proper way to wear protective clothing. We can use animation to help them visualize how air moves through the truck, so they understand how to apply the procedures we recommend."

The 55-minute video has eight chapters. Some of the key points they cover include:

**Overview.** This section includes the fundamentals of HXX operation. It describes how air, water, and debris flow through the unit.

**Inspection and setup.** The DVD details how to inspect an HXX unit each day before heading out to the job. It shows where to look for leaks and fluid levels, and how to check electrical and hydraulic systems. It also covers HXX setup at the worksite.

"When people do these things over and over

again, they sometimes think that if the truck was okay last night, it should be okay this morning," says Nayanar. "We want to encourage them to engage in the right practices and not to take the machine for granted."

**Operations.** Operators need to turn on a sequence of subsystems before the HXX begins to hum. This section shows them how. It also discusses the tradeoffs in selecting the right operating speed. Running at high RPM's, for example, works great when removing heavier materials and using long vacuum lines, but it burns more fuel and requires more frequent dumping. In the cold, high-RPM airflow causes wind chill that can lead to icing. Lower-RPM operation reduces freeze-ups, noise, and works just as efficiently for lighter materials.

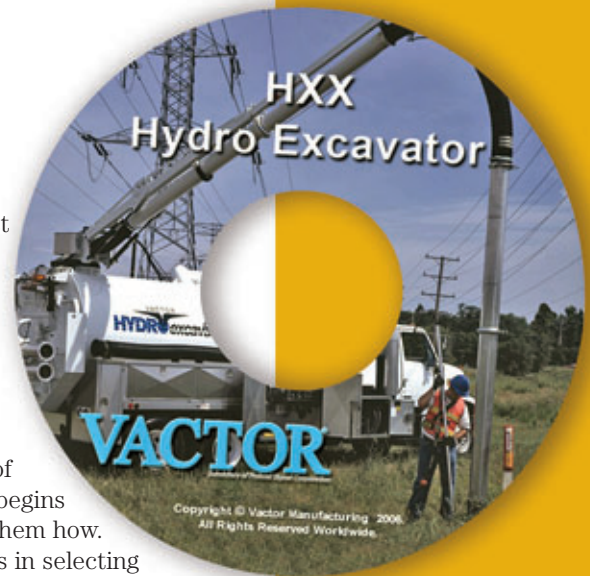
**Vacuuming tips.** Anyone who has ever worked around an HXX respects its powerful vacuum. Yet injuries still happen when workers fall into bad habits, such as guiding debris into the vacuum with their feet or hands, or removing an obstruction while the vacuum is running. The video highlights some of these hazards. It also provides tips on improving vacuum performance, such as minimizing hose length, leaving room for air at low RPM, and stopping before overloading the debris body.

**Dumping.** The key to safe and efficient dumping, says Nayanar, is finding level ground free from overhead wires and obstructions. This is especially important because the HXX boom travels up and down with the debris tank.

**Water system drainage.** Vactor recommends draining the water system weekly to air out its components. The process is quick, simple, and ensures that parts last longer.

**Options.** Vactor has developed a wide range of options for the HXX. Some simplify maintenance. These include a lube manifold that lets mechanics lubricate critical parts from a single port and an air purge unit to speed water system purging. Others options improve performance, such as the cold weather recirculation system, continuous fill water system, and boom remote control.

**Maintenance and general information.** Proper maintenance improves performance and adds life to expensive parts. The video covers scheduled 25-hour/weekly and 100-hour/monthly maintenance.



“Following the DVD's recommendations not only boosts HXX productivity, but helps reduce maintenance costs as well.”

## Industrial Vacuumers Consider Best Practices – continued

### Moving Forward

The WJTA plans to bring together vacuum equipment operators, end-users, and manufacturers in Chicago this August to discuss potential guideline development.

"While we will go into the meeting with an agenda, our real goal is to listen to what the industry wants from our organization," says Carroll. "Most industrial cleaning companies we've talked with seem interested."

"If you're a leader in this industry, you certainly want to be involved," says Debusk. "This is a chance to state your case and help make our industry safer and more efficient."

If you want to learn more, call Ken Carroll, LeAnn Hampton, or Mark Birenbaum at the WJTA at 314-241-1445 or e-mail [wjta@wjta.org](mailto:wjta@wjta.org).

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# New Faces Bring Broad Experience

The Federal Signal Environmental Products Group would like you to join us in welcoming three employees who are stepping up to new responsibilities.

You probably know Kevin Fulkerson already. For the past five years, he led our Right Start training. Not only has he transformed a good idea into a great program, but he has also seen nearly every application, problem, and solution in our industry. As the new Regional Sales Manager for Kentucky, West Virginia, Virginia, North Carolina, Maryland, District of Columbia, and Delaware, he can put that experience to work for you.

Craig Warrick thought he wanted to work in the metal-forming shop until he saw a demonstration of a Vactor sewer cleaner. That hooked him. He soon shifted to Guzzler assembly, and after that spent the past four years putting each Guzzler through its paces during final testing before sending it out to its new owner. As the new Sales Training Technician in the Right Start team, he will now help train buyers on their new Guzzler, Vactor, and Jetstream equipment.

Babette (Babs) Austin is also well known to many Vactor customers. Within six months of

joining us as a receptionist in 2000, she was promoted to inside sales. Now she is our new Telequalifier. In that position, Babs tracks the business needs of new and existing customers, and makes sure they connect with the right teams.

## HXX Video Gets Operators Up to Speed Faster – continued

It also emphasizes the importance of cleaning the fans to reduce wear and imbalance. “Ordinarily, operators run HXX units so that material settles out in the filtration system or the fans after a day’s work,” he explains. “If you don’t clean it out, it could corrode the impellers or create imbalances over time. A simple daily cleanup can extend the operating life of this system.”

The DVD comes with each new HXX. Operators that already own an HXX can get copies from their sales reps, or by calling Vactor’s Service or Technical Publications departments at 815-672-3171.

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