

“Its goal is to preserve the best and refurbish the rest.”

Certified Revives Vacuum Trucks

Guzzler vacuum trucks are built to last. Yet age and use eventually wear them down. Sometimes, they get into accidents, or owners want to add new capabilities.

When Philip Harbin, owner of Harbin Services, Inc., of Athens, Tenn., needed to rebuild a blower and modify a second rig, he called Certified Equipment Sales & Service Center.

“We do most of our truck maintenance ourselves,” says Harbin. “But sometimes we run into a situation where it’s good to know we can call on them for help.”

That’s because Certified Equipment (formerly the Guzzler Store) knows how to breathe new life into old rigs — and not just Guzzlers. Certified services all brands of vacuum equipment. Their technicians are factory trained in Fruitland, Hibon, Roots and Holmes pumps and blowers; Omsi and Dana transfer cases; and Jetstream, Vactor and Myers water pumps.

They are National Truck Equipment Association-trained in chassis modification, and do everything from brakes, engines, transmissions, clutches, axles and suspensions to full chassis rebuilds.

Maintenance

Many owners bring trucks to one of Certified’s three locations (Houston, Tex., Birmingham, Ala., and Streator, Ill.) to restore



them to factory specifications.

Take, for example, blowers. The gap between blower impeller and housing is only a few sheets of paper thick. When impeller tips erode, the gap widens. “That makes you less efficient,” says John Stafford, who heads Certified Equipment. “Jobs take longer, engines run faster and use more fuel, and your people have to work harder.”

Certified technicians return performance to as-new levels. They also check other specs, such

as bearing wear, so your truck has a longer, more productive service life.

Repairs and Rebuilds

Certified also does emergency and accident repairs. Its goal is to preserve the best and refurbish the rest. “If the chassis is good, we can replace the body. If the body is good, we can remount it on a new chassis,” says service sales manager Paul Graziani.

Most rebuilds include new air, electric and hydraulic lines. Certified puts in new controls, upgrades air cannons, rebuilds blowers and transfer cases, and changes all the gaskets, seals and hoses.

Certified does some rebuilds with specific applications in mind. “If your truck is going to a power plant, it needs a reliable vacuum, but you may not want to put extra money into a chassis if you’re not driving over the road,” Graziani explains.



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Subsidiaries of



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Making Sense of Waterblast Connectors

Jetstream products are designed to use a wide range of industry-standard and proprietary connectors. Choices are usually dictated by pressure, application and the waterblast device connected to your system.

Even so, you have a lot of options. To make the right choice, it's worth reviewing connector materials, sealing systems and connectors designed for each pressure range.

Materials

Connectors are made from stainless or carbon steels. Stainless shows excellent corrosion resistance but is relatively expensive. Some grades are also prone to galling and may seize up when mated with stainless threaded connectors on expensive manifolds and valves. Copper plating and nickel- or silver-based thread lubricant provide the best protection against galling and seizure.

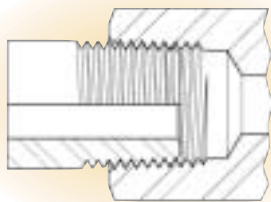
Carbon steels cost less than stainless and are less prone to galling, but are vulnerable to corrosion. They are commonly used in pipe thread connectors and hose end fittings, which are often plated to resist corrosion.

Both stainless and carbon steels are used to manufacture a broad range of industry-standard and proprietary connectors.

Standard Connections

Tapered pipe threads wrapped with Teflon® and metal-to-metal seals are the industry's two most common sealing methods. They are used on a wide range of connectors.

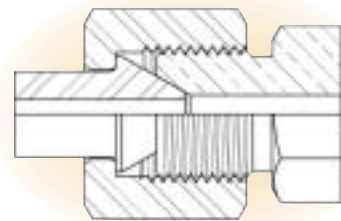
Pipe threads. Pipe threads, also called NPT (National Pipe Tapered), account for an overwhelming majority of connections at 15,000 psi and below. They are inexpensive, versatile and easy to use. They are widely available in sizes ranging from 1/16 inch to 1 inch, and generally have a larger inner diameter (and lower pressure drop) than comparably sized metal-to-metal connections. Hoses with pipe threads usually require the use of additional quick-disconnect couplings. Jetstream pipe threads are specially machined for greater thread engagement, which increases safety and reduces galling. Pipe threads are more vulnerable to wear and seizure than straight threads, and Teflon® will not seal reliably over 15,000 psi.



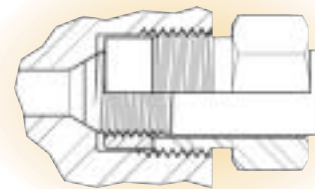
Metal-to-metal. Metal-to-metal seals are also common. They consist of mating cones that create a thin ring of contact where they meet. It

often takes high torque to properly seal cone-and-seat connectors. Placing these high sealing stresses over a very small area causes wear and eventually leaks that require repair or replacement.

Type M. Type M are cone-and-seat connectors used across all pressure ranges. Unlike Types MP and HP, Type M geometry protects the seating surfaces from external damage. Type M comes in a wide range of sizes, and unlike pipe threads, it does not require additional quick-disconnect couplings. Like all metal-to-metal connectors, Type M tends to wear after repeated use. Because it is used at all pressure ranges, users must take extra care to make sure they match the connector with properly rated hoses and fixtures.



Medium Pressure (MP). Medium pressure (Type MP) connectors use a gland and collar to hold threaded tubing against the female seat. They come in 1/4 inch to 1 inch sizes and work at pressures up to 20,000 psi. When used for tube cleaning, the tubing connects directly to the nozzle without gland or collar to reduce the outside diameter. Mating surfaces are subject to wear, and the conical sealing surface that protrudes from the male connection can be damaged if dropped, dragged or struck during assembly. Users can sometimes re-cone worn or damaged seating surfaces. MP connectors are prone to assembly errors, so users must take care to align and engage threads properly during assembly.



Picking the Right Connector

Check the rating. Many connectors look alike. Verify that all components are rated at or above your working pressure. Never use parts that have no pressure rating.

Check the fittings. Many connectors use the same threads but differ in pressure rating and sealing geometry. Make sure they are designed to mate before applying torque.

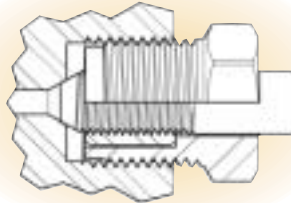
Lubricate. Always use a high-quality lubricant for all connections. This is absolutely critical for stainless steel connections.

Get the picture. The back of each Jetstream catalog has details and actual-size drawings of each connection type. Look it up if you have a question.

Limit Teflon®. Never use Teflon® tape for anything but pipe threads.

Call. Jetstream solutions providers are always ready to help identify and select products. Just call us at 800-231-8192.

High Pressure (HP). The industry-standard Type HP connector resembles the Type MP, but has smaller inside diameters, heavier metal bodies, and larger threads to withstand higher pressures to 40,000 psi. Common sizes range from 1/4 inch to 9/16 inch. Like Type MP, Type HP connects directly to a nozzle without gland or collar for tube cleaning. Type HP also shares Type MP's vulnerability to mating surface wear, accidental damage and assembly error.



Proprietary Connections

Jetstream makes a variety of proprietary connections designed to simplify use, maintenance, reliability and safety. Most use soft seals, such as rubber o-rings or rubber-and-plastic seal assemblies. These eliminate metal-to-metal contact and keep mating components from damaging fluid end manifolds, valves and other expensive components.

Machined to tighter tolerances to keep high-pressure water from pushing rubber seals through tiny gaps in mated components, soft-seal connectors cost more initially. Over the long run, though, their reduced wear on manifolds and valves, and field-replaceable seals make them far more economical.

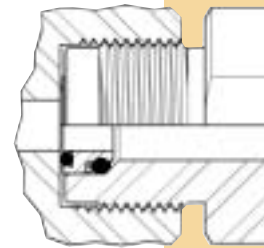
Jetstream designs connectors with threads that only mate with compatible equipment so they cannot be used at the wrong pressure. Many have larger inside diameters than comparable metal-to-metal connectors to minimize pressure drop and ensure higher flows.

Jetstream 20K Port. Designed to address Type MP weaknesses, the Jetstream 20K Port uses a hydraulically biased seal that increases sealing force as pressure rises. The seal is reliable with low torque assembly, field-repairable and will not damage manifolds, valves and other components. It is designed for operation up to 20,000 psi. Flows above 25 gallons per minute produce a significant pressure drop.

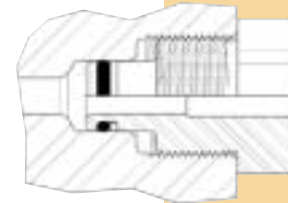
Jetstream HHP Port. Designed for higher-flow 20,000 psi applications, the Jetstream HHP Port uses a soft o-ring and backup ring seal. It will not damage expensive components, and the seal is inexpensive and easily field-repairable.

Jetstream 40K Port. The Jetstream 40K Port combines an o-ring seal backed up by a conical seat for use at pressures up to 40,000 psi. The reliable, inexpensive seal is quickly repaired in the field and will not damage expensive components.

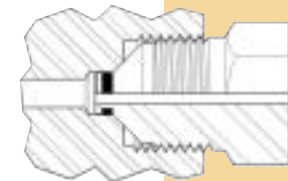
Jetstream 40K Pump Discharge. Designed by Jetstream for use at the discharge connection of Jetstream 40,000 psi pumps, its large inside diameter supports high flow with minimal pressure drop. The connector uses a special rubber seal and backup ring. It will not damage expensive components, and the seal is easily field-repairable.



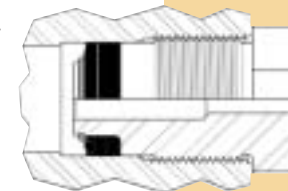
Jetstream
20K Port



Jetstream
HHP Port



Jetstream
40K Port



Jetstream
40K Pump
Discharge

Certified Revives Vacuum Trucks – continued

Certified also retrofits trucks with new capabilities. Some owners add offloading systems, booms, pressure washers and other new equipment. This enables them to take advantage of new opportunities without buying another truck.

Used Trucks

Certified also sells used vacuum trucks. Most are trade-ins from owners who move up to the latest improvements on new trucks. New trucks last longer, have longer warranties, meet demanding emissions standards and come with better financing terms.

Yet used vehicles also deliver value. “We sometimes needed another truck but didn’t think we could keep it busy all the time,” Harbin recounts. “Since we didn’t need to run it full time, we bought it used.” Some owners buy used

trucks as backups or to work a single plant. They believe used equipment provides more value for their specific applications.

Certified offers three types of used vehicles, says Stafford. “We give Grade A trucks a 150-point check, bring them back to factory specs, and warrantee them for six months. Grade B trucks are fully functioning units that do not come with a warranty. Grade C trucks are usually older models sold for in-plant use or salvage.

Certified also offers one final service: advice. “If you’re having a problem with a truck, call us,” says Graziani. “Whether it’s something we can help you solve over the phone or whether you have to bring it in, we’re the best place to start.”



Vacuums to Meet on Safety Practices

Industrial cleaning contractors and equipment manufacturers are invited to a planning meeting this August to address industrial vacuum equipment safety.

The meeting's bottom line is simple: Waterjet contractors have a safety bible, *Recommended Practices for the Use of High-Pressure Waterjetting Equipment*. Industrial vacuum operators do not.

For two decades, *Recommended Practices* has defined the industry's best and safest practices. Its operating guidelines and personnel classifications give contractors proven ways to comply with relevant OSHA safety regulations.

By following those guidelines, companies demonstrate that they are doing their best to protect employees and people at their worksites.

The August meeting has been called to begin creating a similar guide for industrial vacuum operators. The WaterJet Technology Association (WJTA), which updates and publishes

Recommended Practices, will be the host.

WJTA is a neutral source of industry assistance and information. It has proven its ability to work with contractors, government and academia to write practical safety guidelines. Its latest version of *Recommended Practices* includes suggestions for personnel qualifications, operator training and operating procedures.

This is a chance for all of us to band together to make our industry safer and improve its profile among customers and regulators.

Creating recommended practices requires input from everyone. We encourage you and your colleagues to lend your knowledge and experience to the task. Your voice can help make this industry what it needs to be.

Join us at our first planning meeting. It's at the Hyatt Regency O'Hare-Rosemont, in Chicago, IL, on Tuesday, August 22. For more information, contact WJTA at 314-241-1445 or wjta@wjta.org.



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