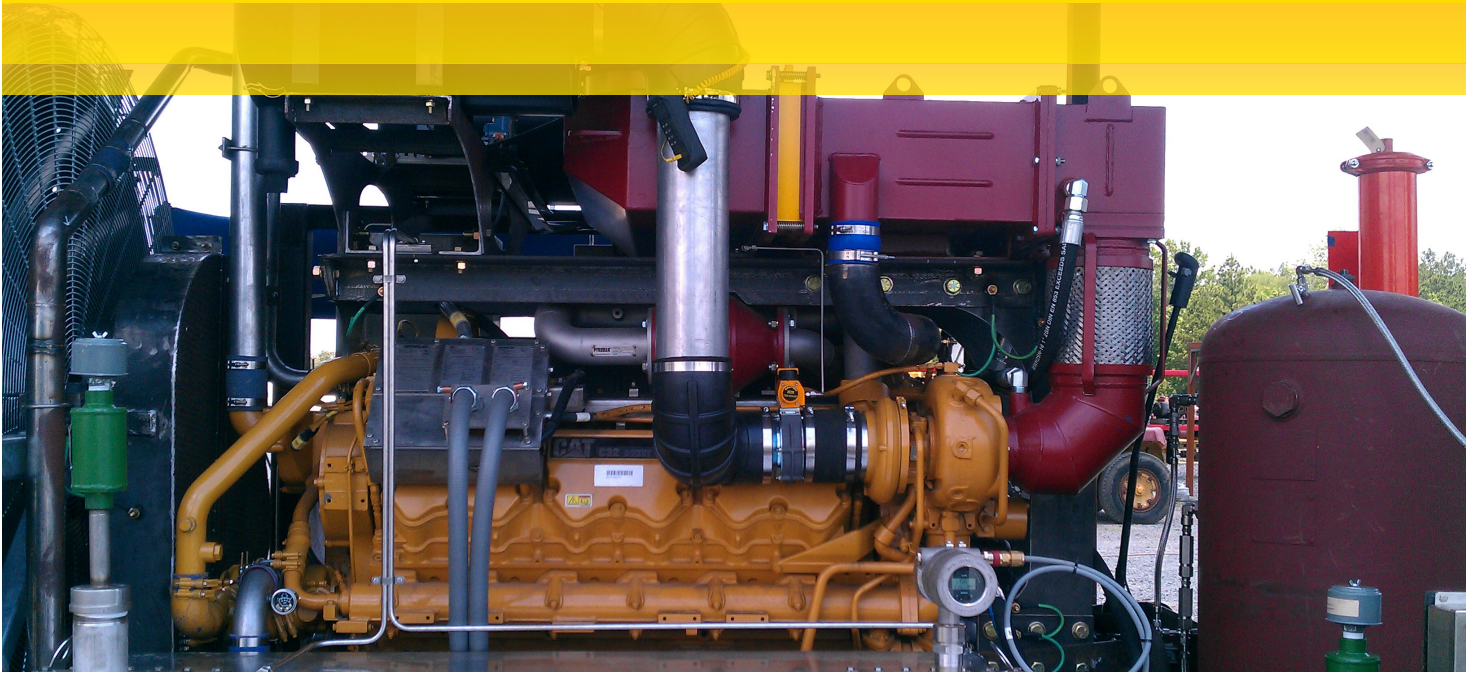


PUMPING UP THE INNOVATION



LOCATION:
Stephenville, TX

SCOPE OF ENGINE USE:
Cat® C32 Industrial Diesel Engines

CAT DEALER:
Holt Cat

www.texaspumpsystems.com

AVOIDING FIREWORKS

Safety first. We all learn that on day one, regardless of where we work. But imagine if you worked on an offshore oil rig. When you're miles out at sea, safety is absolutely everything. Texas Pump Systems creates customized pump packages for clients around the world—including oil companies that need pumps for floating production and storage facilities. This equipment is used for "pigging," which entails pumping fluid from the seabed into vessels that hold a couple million barrels of crude oil. Obviously, it makes for quite an explosive atmosphere.

"Using diesel engines in that particular application causes for a lot of headache, because you can imagine with these engines sitting on two million barrels of crude oil—one spark will make a pretty good firecracker," explains Ernst Vanderlaan, General Manager of Texas Pump Systems. Not surprisingly, achieving a perfect combination of safety and performance was a pretty sizable hurdle to overcome. Twenty years ago, requirements for engine compliance when it came to usage around hazardous explosive materials was lax at best. But Caterpillar saw the need for explosive-atmosphere design and got to work. Innovative engine design inspired changes like adding exhaust gas coolers to keep surface temperatures down to 200 degrees.

So when Texas Pump Systems got the call to build pump packages for use in explosive atmospheres, they were able to rely on Caterpillar's hazardous-area certified engine to be used at the heart of their assembly. By pairing that with their own custom-control systems, monitoring, gauges and so on, Texas Pump Systems was able to deliver top-of-the-line packages that would not only get the crucial job done, but also keep all those hard-working folks (and their well-earned sea legs) completely safe.

THE NEED FOR SPEED

Texas Pump Systems was founded in 2014 in Stephenville, Texas. When it comes to crafting pump packages, they're far from an assembly line. The company specializes in customizing one-off products that meet the ultra-specific needs of clients—for everything from steel mills to drilling operations to water disposal (and a whole lot in between). "I really don't think there's anybody else that does engine-driven packages like we do," Vanderlaan says. "Every application requires a different configuration, so every pump system requires a different configuration. If you package the stuff right, it's going to last a long, long time."

That affinity for creative thinking came in quite handy when Texas Pump Systems' existing customer Graco Oilfield Services came with a new request. Graco has been a pioneer in the higher horsepower market, being the first ones to use 700 hp pump packages in their well servicing. Come 2019, they were looking to dramatically up their game to 1,300 hp application, which nobody had done before. The envelope-pushers at Texas Pump Systems made it happen with a Cat® C32 industrial power unit (IPU) at the heart of the package. The designers chose the C32 specifically because of its reduced size and weight—not to mention its extreme reliability and affordability.

The big challenge was to fit an automatic transmission behind the engine and keep the cost down for the customer. Vanderlaan's team solved the issue by using new C32 engines paired with rebuilt transmissions and high-pressure pumps to minimize the expense. So not only did Graco save money, but their new packages allow them to complete jobs much faster than the lower horsepower machines—and also achieve a deeper horizontal lateral while they're at it (up to 5,000 feet with the latest pumps). Talk about a win/win for everyone.

"I work a little different. I think one-offs are challenging—they're fun," says Vanderlaan. And with these pump-packaging puzzles to constantly solve, the Texas Pump Systems team works closely with their Caterpillar dealer, Holt Texas, to brainstorm completely outside-the-proverbial-box unique solutions and answer the (literally) powerful questions. That way clients know that their customized packages are one-of-a-kind and more than ready to work. "When Holt says Caterpillar is a family, they truly mean it," Vanderlaan explains. "It takes a village, and they've always been such a resource—even friends—for us."



"I DON'T EVEN SEE CATERPILLAR AS A VENDOR ANYMORE—THEY'RE PRETTY MUCH PART OF OUR COMPANY. WE'RE FAMILY."



LET'S DO THE WORK.™