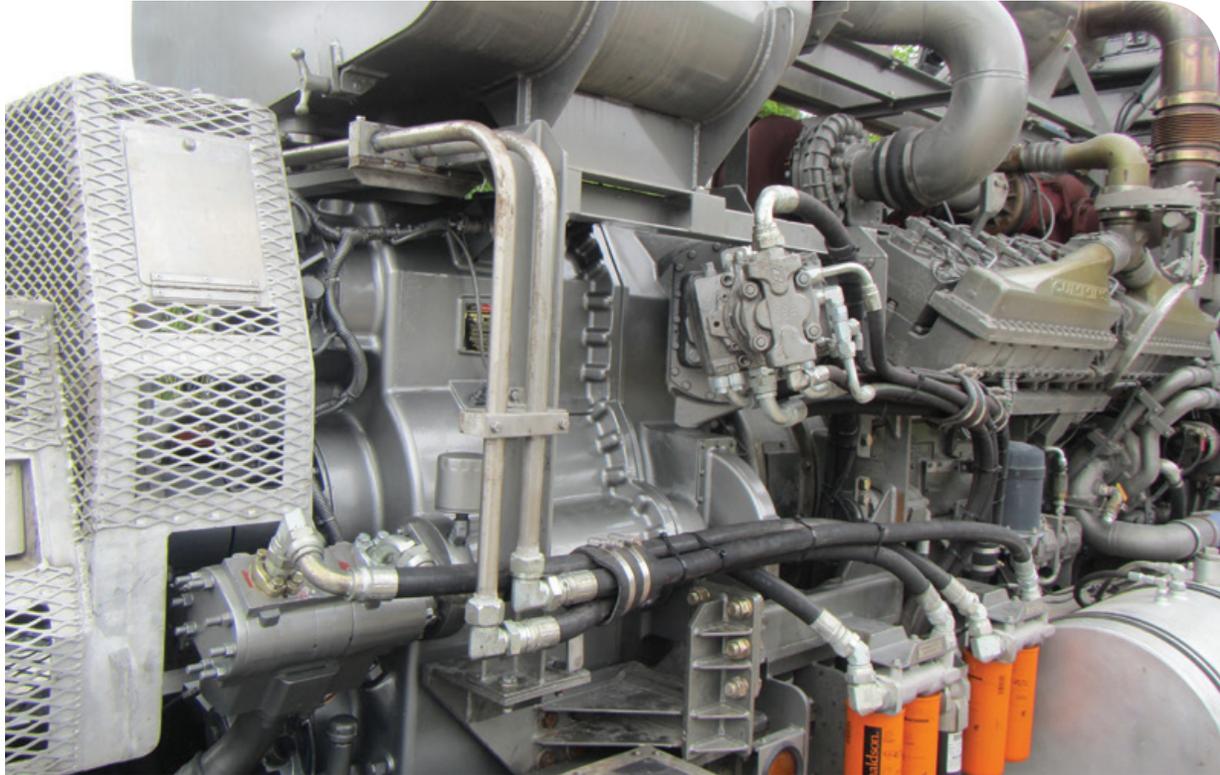




Universal Well Services required a replacement transmission for pressure-pumping applications that would provide a longer service life.



Customer:	Universal Well Services, Inc.
Application:	Horizontal drilling to tap natural gas reserves in the Marcellus Shale
Location:	The Appalachian Basin
Transmission:	Twin Disc TA90-7500 9-speed coaxial power-shift transmission
Power:	Up to 2,600 HP
Electronic Controls:	Twin Disc TDEC-500 electronic control system



Twin Disc provides durable, long-lasting transmissions for hydraulic fracturing. Universal Well Services required a replacement transmission for pressure-pumping applications that would provide a longer service life.

Situation

After experiencing reliability issues with the transmissions in their fracking fleet, Universal Well Services, Inc., a leading provider of hydraulic fracturing services, reached out to Great Lakes Power Service Co. to upgrade the transmissions in their equipment. The customer required a replacement transmission for pressure-pumping applications that would provide a longer service life.

Implication/Problem

When the fracking industry began tapping natural gas reserves in the Marcellus Shale in the Appalachian Basin, it required the use of larger pumps and engines than those used for traditional shallow vertical wells. The customer needed a replacement transmission small enough to fit within their existing fracking units but powerful enough to provide the necessary horsepower to utilize in horizontal drilling applications.

Solution

Great Lakes Power Service Co. recommended the use of Twin Disc's purpose-built TA90-7500 fracking transmission to upgrade the transmissions in the customer's entire fracking fleet. The systems appealed to the customer because their compactness allowed them to be used as a drop-in replacement.

The 7500 Series transmission system consists of a 9-speed coaxial power-shift transmission, providing up to 2,600 HP, and an advanced electronic control system. It is more compact and has less complicated plumbing than other transmissions, making it easy to fit into the cramped quarters of a fracking rig. It does not require a torque converter, contributing to overall weight savings.

Results

After more than five years of service, many of the 7500 Series transmissions in the rigs had been in use for 11,000 to 14,000 engine operating hours without failure.

Because of their satisfaction with the performance of the Twin Disc technology, the customer is now upgrading its fracking units with newer TA90-7601 Series transmission systems. The 7601s add an additional reduction ratio to the rigs and further extend their service life.

"Twin Disc builds durable transmissions for difficult applications. That's where they excel. Their engineering group did a phenomenal job making sure we had all the bases covered. Twin Disc provides technical expertise and resources including support on pumping stands, field support, and controlled integration."

Harry Allen III
Vice President, Great Lakes Power Service Co.