

OEM REPAIR PROGRAM EXTENDS POWER END LIFE AND IMPROVES FLEET RELIABILITY

North America

CHALLENGE

- A major oilfield services company was facing frequent power end failures, increasing downtime and repair costs while eroding the savings achieved through internal repairs

SOLUTION

- GDEP partnered with the customer to implement a structured OEM repair program to improve reliability, accelerate repairs, and extend power end service life

RESULTS

- 120+ power end repairs performed
- 40% reduction in power end failures
- \$100K+ cost savings

LOCATION



POWER END FAILURES DISRUPT OPERATIONS

A major oilfield services company specializing in well completion and production services was experiencing excessive power end failures that were impacting operations.

Reliable power end performance is critical to operations, but failures are common because of the sheer mechanical stress of shale play requirements. Damage from contamination, lubrication failure, and improper maintenance are common, often leading to overheating, bearing failure, and premature wear. In some cases, more significant damage is encountered in the form of damaged crankshafts, chipped bull gear teeth, and cracked frames. All of these failures disrupt operations, increasing the number of units that are down for repair. Since power ends cannot be repaired on site, units must be removed from service and transported to a repair facility.

For several years, the company had been assembling and repairing power ends internally, including the use of some non-OEM parts, to capture upfront cost savings across its widespread U.S. operations. Over time, however, frequent failures and the cumulative nonproductive time associated with maintenance and repairs began to outweigh those savings.

The customer operated a significant fleet of power ends across its pressure pumping operations and was regularly pulling dozens of damaged units from service each month. Moving the failed units from the field, coordinating removal and replacement, and managing operations with equipment rotating in and out of the field was taking its toll and the company was looking for a better option.

GD Energy Products (GDEP) partnered with the customer to implement a structured repair program that leveraged its specialized facilities, highly trained technicians, and exclusive use of OEM parts to accelerate repairs and extend power end service life. The program also incorporated advanced, proprietary software to track each unit from removal in the field through the repair process and throughout its service life.

IMPROVING REPAIRS IMPROVES ECONOMICS

Each damaged power end was tracked from the moment it was removed from the field, where the failure mode was initially identified, through shipment to one of GDEP's network of service facilities in Odessa, Fort Worth, or Altoona, where GDEP technicians verified the reported damage upon arrival.

With GDEP's repair facilities strategically located across all major shale plays, the customer was able to leverage a nearby facility to reduce turnaround time and improve operational efficiency. This proximity also eliminated long-distance transportation of failed units, saving the customer more than \$100,000 in transportation costs alone.

Trained technicians and repair mechanics at the facility performed a thorough tear-down inspection of each of the customer's power ends upon arrival to ensure all of the damage was documented and logged before repairs began. Following detailed procedures, technicians performed the necessary repairs, drawing on the expertise of experienced engineers on site when needed. Repairs for each unit were validated in one of multiple test cells at the facilities. The software recorded data at every stage of repair and testing. This recorded data was shared with the customer when the units were returned to resume service in the field.

Initially, the repair program was structured to support a high volume of power ends each month to keep pace with failures in the field. As repairs began to be performed in a dedicated GDEP facility, staffed with trained personnel, monthly power end failures declined by more than 40%.

In addition to extending power end service life, performing repairs at the GDEP facilities enabled precise failure data to be captured and analyzed, providing insights that can be used to improve power end designs for longer-lasting, higher-performing components.

ADDING TO THE BOTTOM LINE

By leveraging the expertise of the GDEP team, its strategically located repair facilities, and highly engineered OEM parts, the customer was able to accelerate the repair process and quickly return high-quality units to field operations. Spending less money on high-quality repairs enabled the customer to extend power end service life, reduce total cost of ownership, and ultimately decrease the number of units down for repair.



120+ POWER ENDS REPAIRED IN 2025



40% DROP IN POWER END FAILURES



SAVED \$100K IN TRANSPORTATION COSTS

GD
ENERGY PRODUCTS