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# On Shore Frac Fleet

Focused on Supporting the Oilfield

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding

### DISCLAIMER

The products described herein, including without limitation, product features, specifications, designs. availability and pricing are subject to change by Parker Hannifin Corp and it's subsidiaries at any time without notice.

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ENGINEERING YOUR SUCCESS.



## AVAILABILITY

WORLDWIDE DISTRIBUTION  
SALES FORCE AND SERVICE

## FLEXIBILITY

SOLUTIONS FOR GLOBAL  
AND REGIONAL CHALLENGES

## SUSTAINABILITY

PROTECTING PEOPLE  
AND ENVIRONMENT

## PROFITABILITY

SERVING FOR GREATER VALUE TO YOU  
AND YOUR BUSINESS

## RELIABILITY

MINIMIZING DOWNTIME  
AND OPTIMIZING PERFORMANCE

With annual sales of **\$13 billion** in fiscal year 2014, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of mobile, industrial and aerospace markets. The company employs approximately **57,500 people in 50 countries** around the world. Parker has increased its annual dividends paid to shareholders for 58 consecutive fiscal years, among the top five longest-running dividend-increase records in the S&P 500 index.

For more information, visit the company's website at [www.parker.com](http://www.parker.com)  
or its investor information website at [www.phstock.com](http://www.phstock.com).

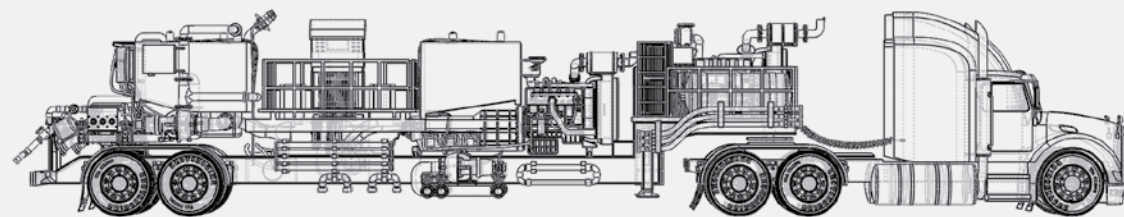


ENGINEERING YOUR SUCCESS.

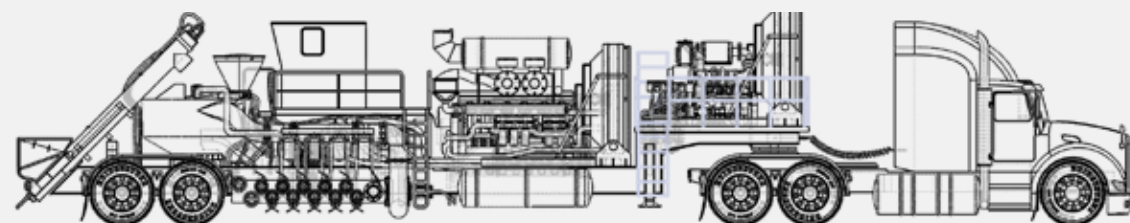




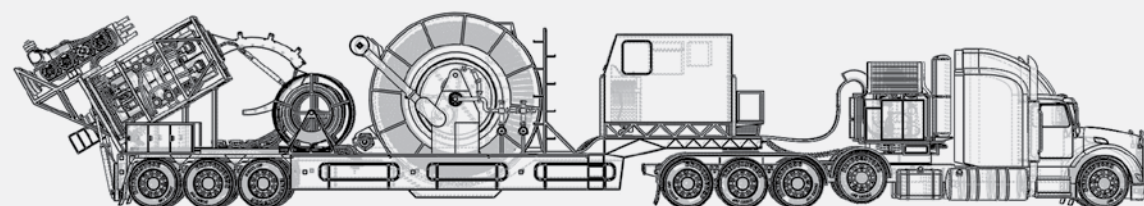
## 01 CEMENTER



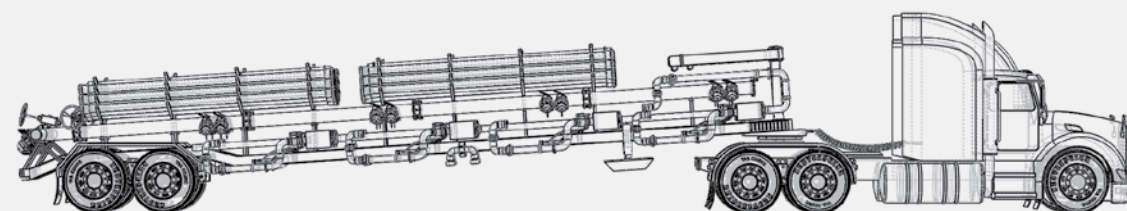
## 02 BLENDER



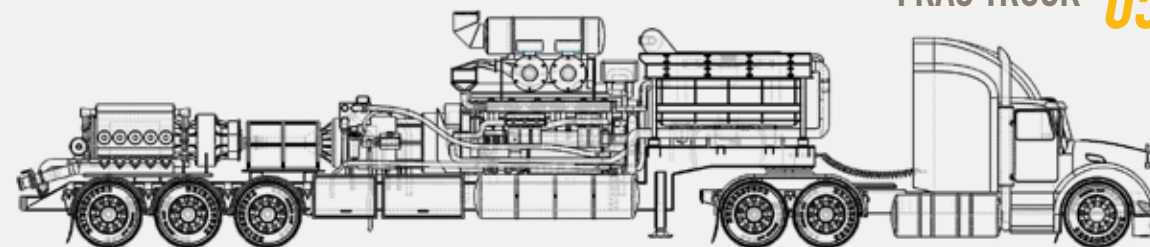
## 03 COILED TUBING



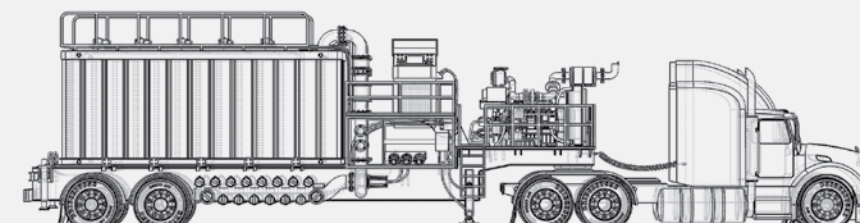
## 04 FRAC MANIFOLD



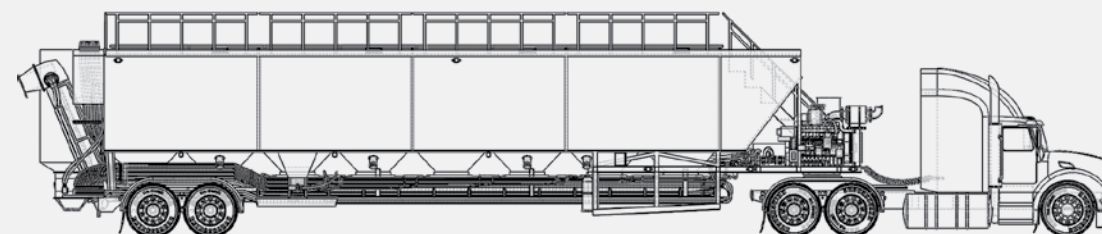
## FRAC TRUCK 05



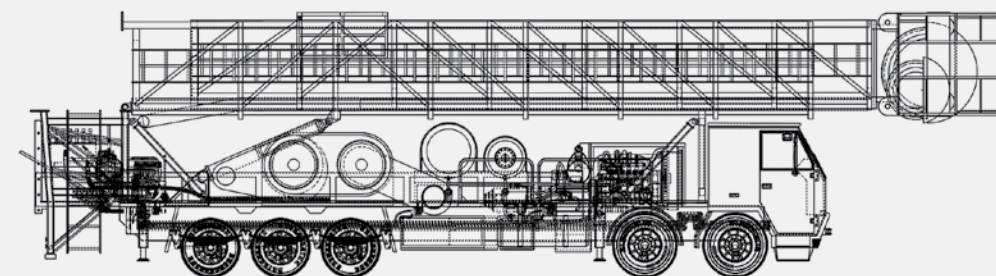
## HYDRATION TRUCK 06



## SAND TRUCK 07



## WORK OVER RIG 08



Parker Hannifin is focused on supporting the needs of the oil and gas industry. This brochure provides a representative overview of the many solutions that are offered; however, Parker offers much more that is not captured here. For a more complete overview of Parker oilfield offerings, please see our interactive online marketing materials or contact one of our distributor partners.



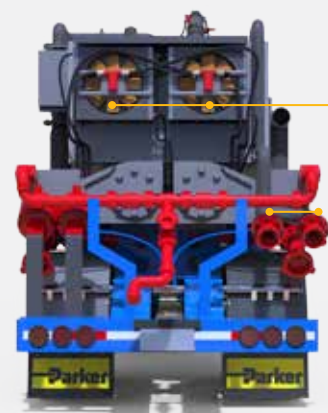


# CEMENTER

Parker's Engineered Materials Group designs and manufactures a wide range of molded, extruded and machined solutions. In addition to all of the o-rings the oilfield relies on every day, Parker also manufactures: packer elements, cement plugs, liner wipers, frac balls, expandable liners, mud/frac pump seals and more.







6

1



## TRI-PLEX PUMP DRIVE

The Gold Cup pump offers dependable high pressure closed circuit design and simplifies plumbing with integrated features.

2



## CENTRIFUGAL DRIVE PUMP

The P1 Open Circuit piston pump provides consistent fluid power to the drive motor.

3



## HYDRAULIC MOTOR FOR CENTRIFUGAL PUMP

The F12 motor boasts high efficiency and is one of the most reliable on the market.

4



## HYDRAULIC MOTOR FOR TRI-PLEX

Gold Cup motors are designed to operate under pressure pulsation conditions created by the Triplex circuit.

5



## BALL VALVE

Up to 10,000 psi in 2, 3, or 4 way configurations. Carbon steel, stainless steel, brass, aluminum, and many seal options for different fluids. (BVHPSSclr shown)

6



## HYDRAULIC COOLERS

Compact and easy to maintain, Parker's coolers are optimized for the oil and gas environment. The ULDC line is a perfect choice.

7



## HYDRAULIC OIL FILTER

IL8 series of filters are designed for demanding lube oil applications with flows up to 300 GPM and utilize high capacity deep pleat elements.

8



## AIR FILTRATION & PRE-CLEANERS

Racor air filters and pre-cleaners designed and built to meet demanding high dust environments with excessive vibration and extreme temperatures.

9



## WELL SERVICE PACKING FOR TRIPLEX CEMENT PUMP

Parker's Resilon(R) Polyurethane well service packing is designed to reduce downtime - a great option for new build and replacement.

10



## HYDRAULIC HOSE ASSEMBLIES

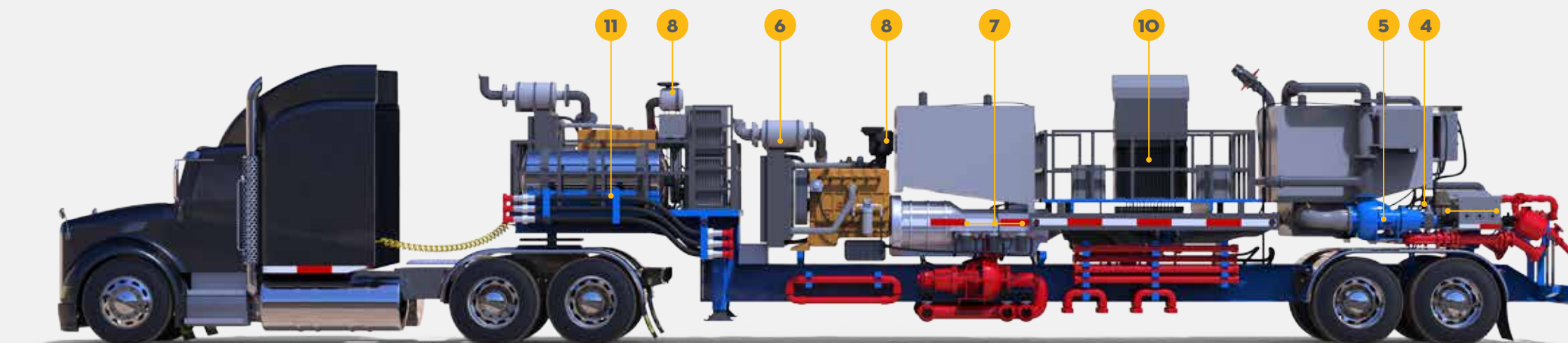
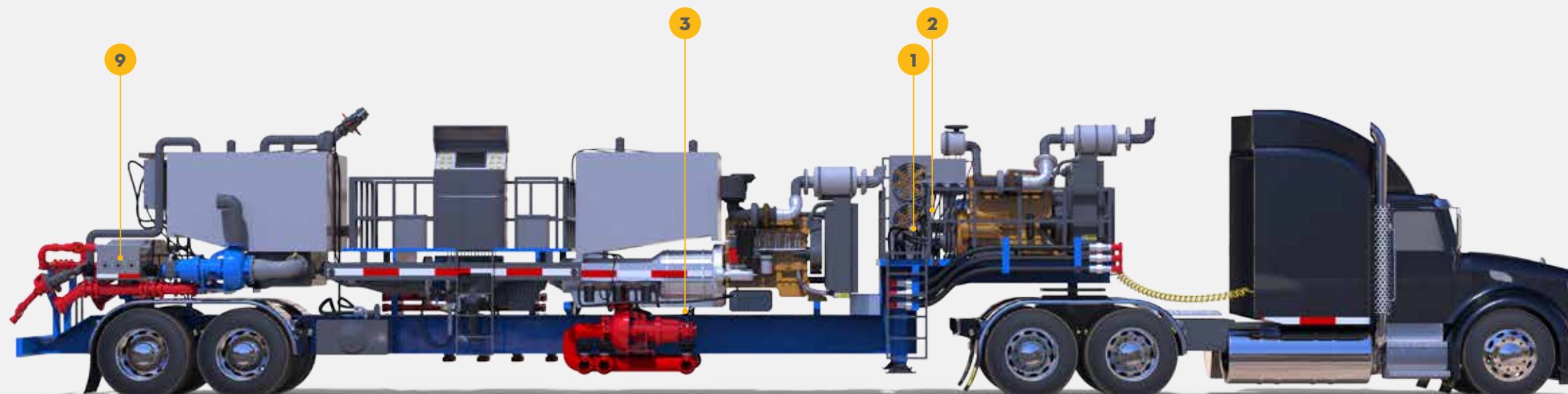
High performance hose, fittings, equipment and accessories necessary to keep your fracking equipment running at peak performance levels. (R2, R12, R13 are commonly used)

11



## DRY BULK CEMENT HOSE

Extremely flexible hose designed for maximum abrasion resistance. The 1/4" thick abrasion resistant tube gives you maximum service life in the most severe applications. (Series SS247 shown)





# 02

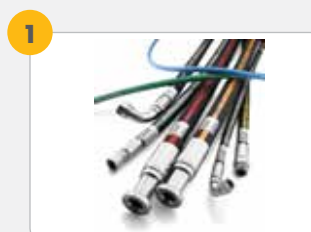


# BLENDER

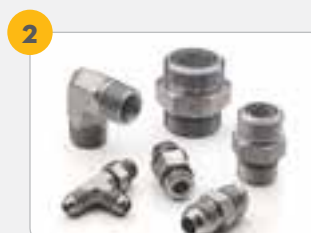
Always innovating, Parker's HTR Series Unibody Actuators enhance the proven performance and efficiency of the rack-and-pinion hydraulic actuator by creating a compact, environmentally-sealed, modular package. Reduced weight, fewer fittings required and increased corrosion resistance makes this the ideal actuator for oilfield applications.







**HYDRAULIC HOSE ASSEMBLIES**  
High performance hose, fittings, equipment and accessories necessary to keep your fracking equipment running at peak performance levels.



**HYDRAULIC FITTINGS & ADAPTORS**  
XTR plating provides superior resistance to rust reducing your equipment's downtime and saving you money.



**CHEMICAL HOSES**  
Designed with an UHMW tube for maximum chemical resistance, this heavy duty chemical hose provides the safety and versatility required in the oilfield. (Series 7373T)



**FRAC HOSE**  
This 400 psi hose is available with both the standard abrasion resistant cover and a XT, extreme abrasion resistant cover. (Series 7311 shown)



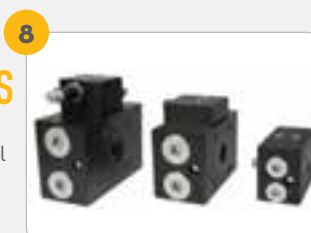
**RACOR ENGINE OIL FILTER**  
Absolute Series bypass oil cleaners increase engine oil life by reducing contaminants resulting in longer filter life and lower maintenance.



**PROPORTIONAL MULTIFUNCTION VALVES**  
Multifunction load compensated for repeatable automation control with explosion proof options. (VP120clr shown)



**WELDED CYLINDERS**  
Welded cylinders are available in multiple stroke lengths and bore sizes and are repairable. Perfect for sand hopper positioning.



**HYDRAULIC ROTARY ACTUATORS**  
Unibody Actuators enhance performance / efficiency of rack-and-pinion hydraulic actuators by creating compact, environmentally-sealed, modular package.



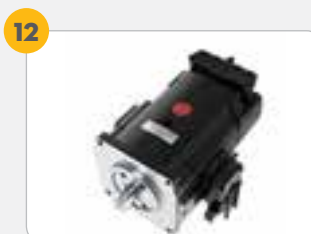
**LOW SPEED HIGH TORQUE MOTORS**  
Gerotor motors provide smooth operation over a wide range of speeds. High starting torque, quiet operation and long life are hallmarks of this design.



**AUGER DRIVE MOTORS**  
Calzoni LSHT motor is capable of powering through packed sand with its high starting torque. Gold Cup motor and gear box are also an option for this application.



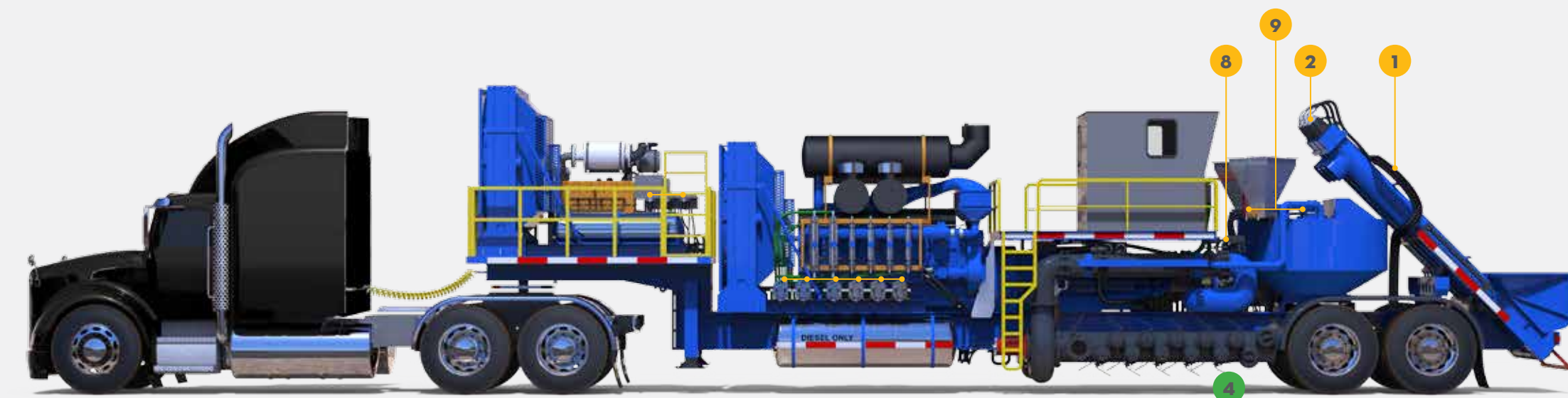
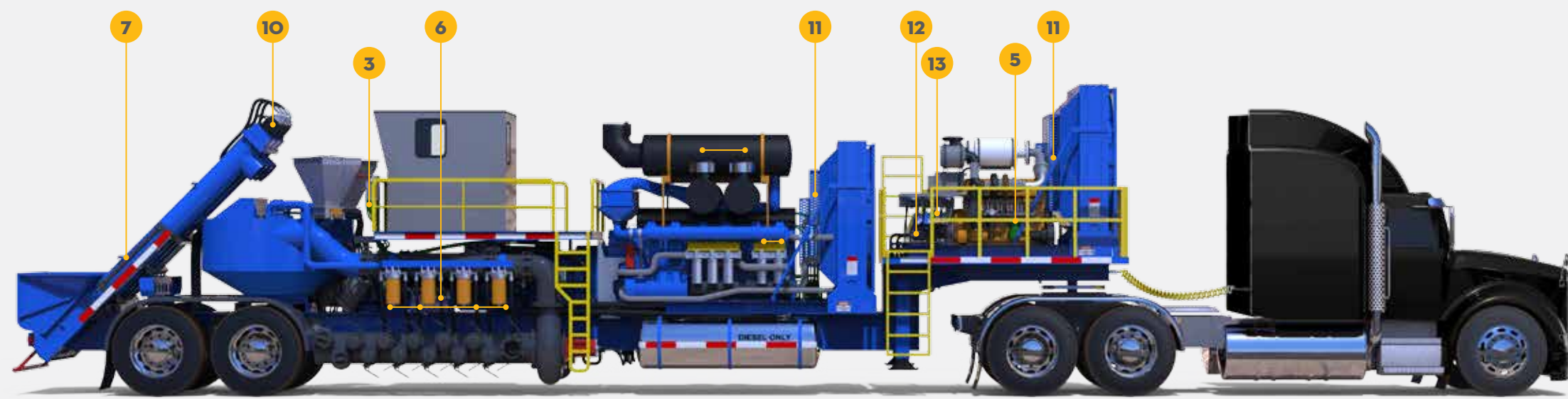
**OIL COOLER FAN DRIVE**  
M5 vane motors are compact and efficient for large cooling needs. Integrated valving option allows reversing functions for radiator clean out.



**AUGER DRIVE PUMP**  
The Gold Cup pump offers dependable high pressure closed circuit design and simplifies plumbing with integrated features.



**CENTRIFUGAL DRIVE PUMP**  
The P1 Open Circuit piston pump provides consistent fluid power to the drive motors.





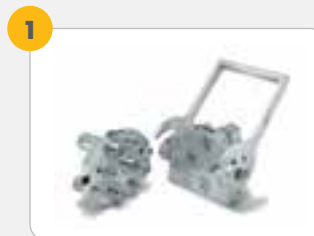


# COILED TUBING

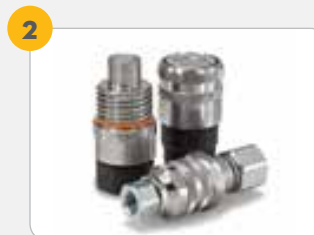
Parker is always working on new product solutions to meet the oilfield's needs. Two recent examples include the MCC Series Multicoupler that can accommodate up to 10 connections in a single plate, and the new 59 Series high pressure, high impulse, thread-to-connect quick coupling. Both ideal for today's coiled tubing rigs.







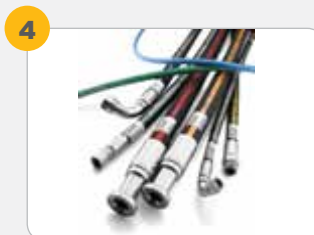
**MCC SERIES MULTICOUPLER**  
Customizable design can accommodate up to 10 connections in a single plate. Guide pins and external locking tabs ensure a complete connection.



**59 SERIES THREAD-TO-CONNECT**  
High pressure, high impulse, thread-to-connect quick coupling. Double-start ACME thread allows full connection in 2 1/2" turns under residual line pressure.



**HYDRAULIC FITTINGS**  
Seal-Lok O-ring Face Seal Fittings with precision engineered Trap-Seals provide a leak-free connection for high vibration and hydraulic impulse applications up to 9200 psi.



**HYDRAULIC HOSE**  
High performance hose, fittings, equipment and accessories necessary to keep your fracking equipment running at peak performance levels.



**INJECTOR DRIVE PUMPS**  
Gold Cup Closed circuit hydrostat provides precision control to the bent axis injector motors.



**CYLINDER AND REEL PUMPS**  
P1 Pressure compensated Open Circuit pump can be used for tilt cylinders along with reel take up & hold back functions.



**SKATE & STRIPPER PUMPS**  
P2 Open circuit pumps provide consistent high pressure for the Skate and Stripper circuit.



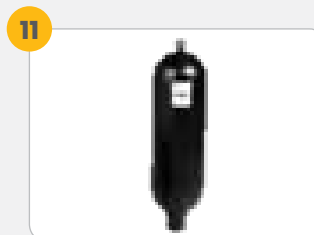
**REEL DRIVE MOTOR**  
M4 vane motors are well suited to operate in a stalled condition to accomplish reel hold back force.



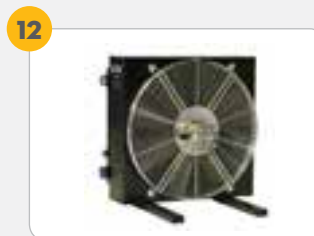
**INJECTOR HEAD MOTORS**  
Variable Displacement Bent Axis V14 motors can be used to operate the feed tracks of the injector head.



**WELDED CYLINDER**  
Welded cylinders are available in multiple stroke lengths and bore sizes and are repairable. Shown here is the RDH Heavy Duty Roundline.



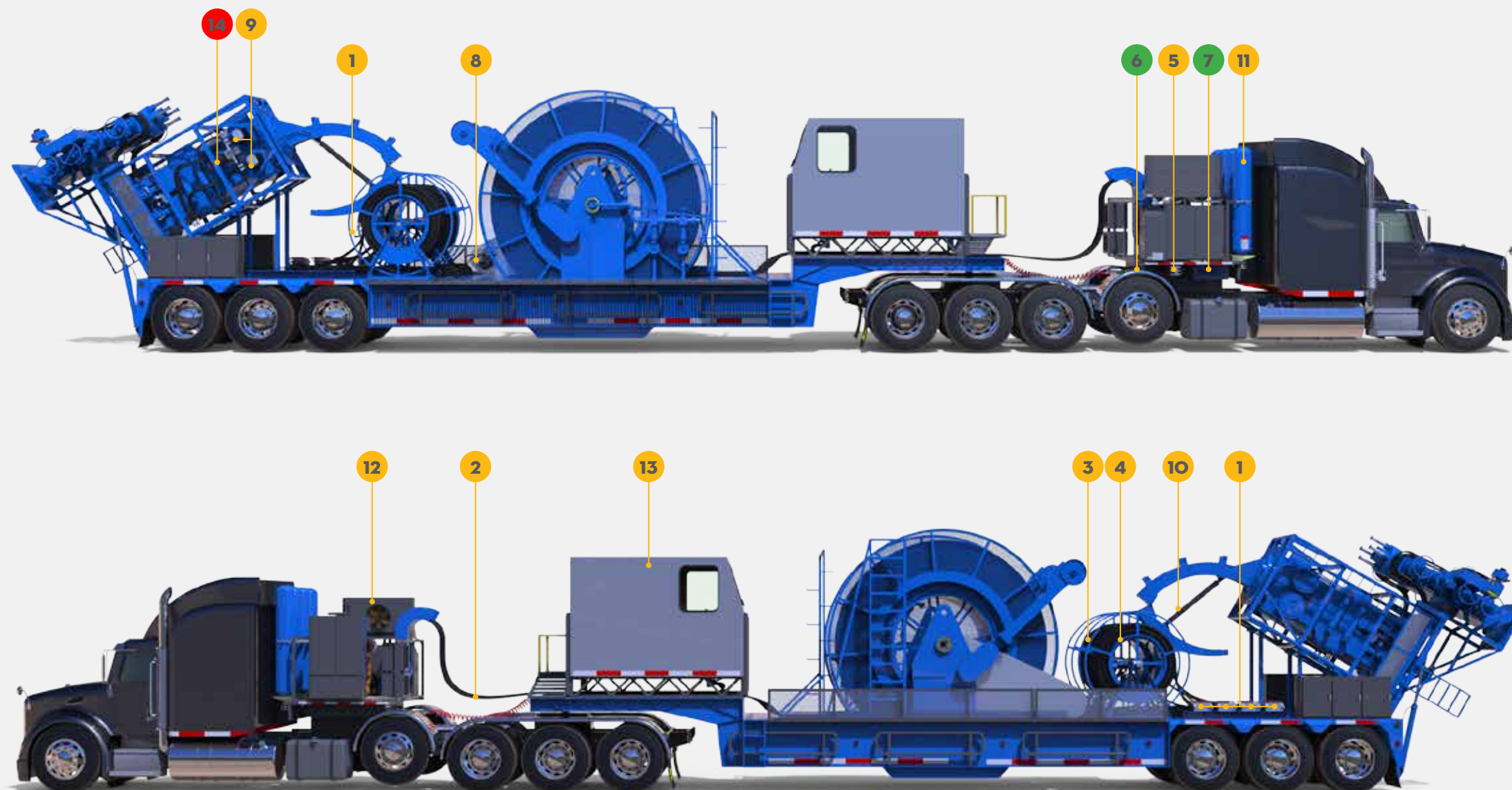
**HYDRAULIC ACCUMULATORS**  
11 and 15 gallon bottom repairable bladder accumulators are two common examples of the bladder and piston accumulators that Parker manufacturers.



**HYDRAULIC COOLER**  
ULHC coolers with hydraulic motors provide maximum cooling capacity up to 215 hp. Easy to maintain and can be used as a retrofit.



**CUSTOM MANIFOLD SOLUTIONS**  
Custom valve solutions for specific multifunction system requirements. (Pulsar System 2 shown)





04



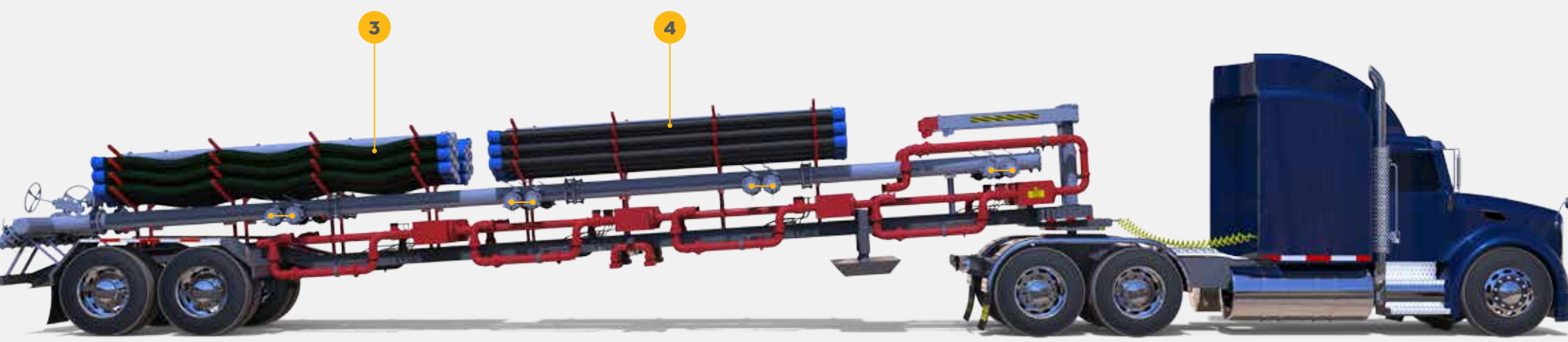
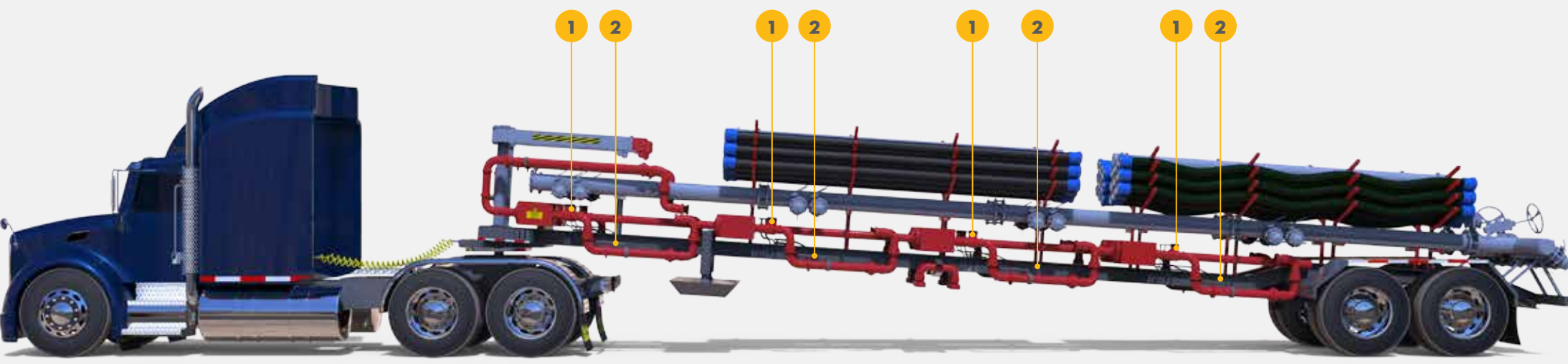
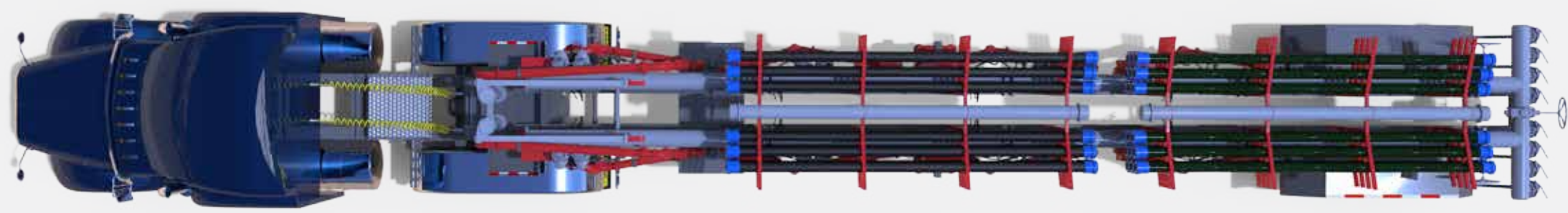
# FRAC MANIFOLD

Black Eagle hoses are multi-spiral, wire-reinforced and specifically designed for oilfield applications. Available in lengths up to 9,800 ft with working pressures up to 15,000 psi. Hose construction includes COLORGARD, a dual color safety feature and an extra thick cover for superior abrasion resistance. Black Eagle is 70% lighter than flexible pipe and 45% lighter than rigid pipe.

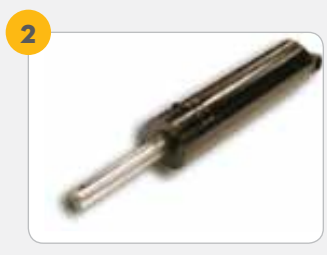




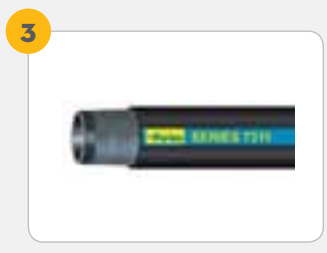
# FRAC MANIFOLD



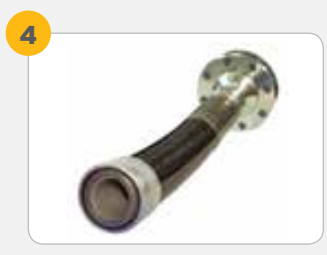
**1**  
**HYDRAULIC ROTARY ACTUATORS**  
HTR Series Unibody Actuators help in removing workers from the immediate area around the manifold by adding automation that increases safety and performance.



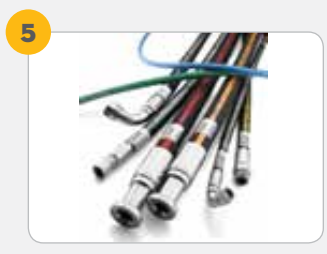
**2**  
**WELDED CYLINDERS**  
Welded cylinders are available in multiple stroke lengths and bore sizes and are repairable. Perfect for positioning assistance.



**3**  
**FRAC HOSE**  
This 400 psi hose is available with both the standard abrasion resistant cover and a XT, extreme abrasion resistant cover. (Series 7311 shown)



**4**  
**BLACK EAGLE HOSE**  
The Black Eagle hose family is a series of multi-spiral, wire-reinforced hoses available in lengths up to 9,800ft. with working pressures from 5,000 to 15,000 psi.



**5**  
**HYDRAULIC HOSE ASSEMBLIES**  
High performance hose, fittings, equipment and accessories necessary to keep your fracking equipment running at peak performance levels.





05

# FRAC TRUCK

Parker offers a range of natural gas related products. This includes a compact fuel control valve for fuel modulation, a flow meter for accurate measurement, an advanced fuel flow control valve and five in one CNG regulation system that includes the regulator, filter, shut off valve, heat exchanger and pressure sensing.





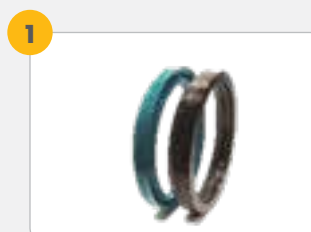
05

# FRAC TRUCK

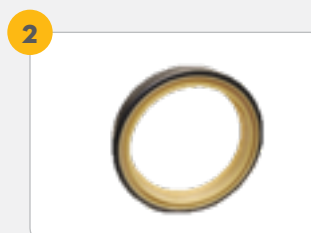
Parker offers a range of natural gas related products. This includes a compact fuel control valve for fuel modulation, a flow meter for accurate measurement, an advanced fuel flow control valve and five in one CNG regulation system that includes the regulator, filter, shut off valve, heat exchanger and pressure sensing.



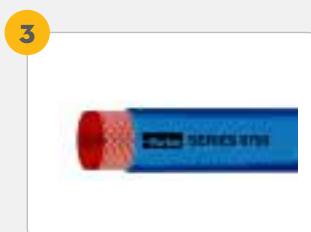




**1 WELL SERVICE PACKING**  
Parker's Resilon® polyurethane well service packing is specifically designed to reduce downtime and a great option for both new build and replacement.



**2 PONY ROD SEAL**  
Parker's Resilon® polyurethane pony rod seal offers a single piece solution to wipe debris from the rod and maintain gear fluids.



**3 SILICONE HOSES**  
Series 6750 high temperature silicone hose is used as a flexible joint between two rigid pipes. Extremely durable and available in multiple sizes.



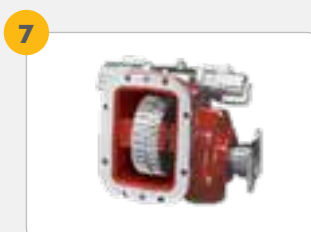
**4 426 HI TEMPERATURE HOSE**  
426 hose is designed for high-temperature applications up to 302°F, including engine compartment applications. Meets SAE 100R1 specification.



**5 HYDRAULIC GEAR PUMP**  
Cast iron and aluminum gear pump and motor offering provides reliable performance, reparability and application flexibility. (P76 series shown)



**6 HYDRAULIC GEAR MOTOR**  
Cast iron and aluminum gear pump and motors provide reliable performance, reparability and application flexibility.



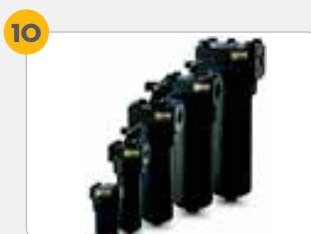
**7 CHELSEA POWER TAKE OFF UNIT**  
Parker's Chelsea power take off units are designed for heavy duty applications in the harshest environments. Common series include 880, 852, 823.



**8 COOLING FAN MOTOR**  
Bent Axis Fan Motor provides efficiency and the required torque to operate these high hp cooling fans. (F12-250 shown)



**9 PROPORTIONAL DIRECTIONAL CONTROL VALVE**  
Precision manufactured for proportional speed control of multiple functions.



**10 HYDRAULIC OIL FILTER**  
WPF series high pressure filters handle up to 7000 PSI with a patented integral bypass element design that provides a new bypass valve with every service.



**11 METALLIC WEAR DEBRIS SENSOR**  
Provides real-time detection for both ferrous and non-ferrous metal debris in lube circuits maximizing pre-warning time before damage occurs.



**12 RACOR FUEL FILTER**  
Heavy-duty fuel filter/water separators feature Aquabloc® media for high efficiency removal of water, rust, and dirt from diesel fuels. Options are available for all-weather operation



**13 RACOR SPIN ON FUEL FILTER REPLACEMENTS**  
ParFit line of heavy-duty spin-on replacement fuel filters feature Aquabloc® media for high efficiency removal of water, rust, and dirt from diesel fuels.





06

# HYDRATION TRUCK

Parker is focused on your equipment's uptime. The IPDR particle detector (available in explosion proof configuration) is designed to be a cost-effective solution to real-time hydraulic fluid monitoring. An integral part of any preventative maintenance program, Parker detection and prevention solutions help you identify problems early and avoid costly downtime.

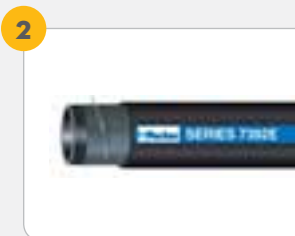






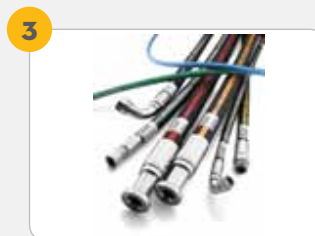
## PROPORTIONAL MULTIFUNCTION VALVES

Multifunction load compensated for repeatable automation control with explosion proof options. (VPLc/r shown)



## WATER HOSE

Heavy duty suction and discharge hose that will handle the most rugged transfer applications and is also compatible for mild chemical transfer service. (Series 7392E shown)



## HYDRAULIC HOSE ASSEMBLIES

High performance hose, fittings, equipment and accessories necessary to keep your fracking equipment running at peak performance levels



## HYDRAULIC CONDITION MONITORING

IPDR particle detector is a cost-effective solution to real-time hydraulic fluid monitoring helping you identify problems early and avoid costly downtime.



## ENGINE OIL FILTER

Absolute Series bypass oil cleaners increase the life span of engine oil by reducing the contaminants in the oil resulting in longer filter life and lower maintenance costs.



## WELDED CYLINDERS

Welded cylinders available in multiple stroke lengths and bore sizes and are repairable. Perfect for outrigger leveling.



## PADDLE MOTORS

Solid shaft construction of this Parker Nichols high torque motor means high drive train strength and longer life. Delivers high power in a small package.



## CENTRIFUGAL PUMP DRIVE

The F12 motor boasts high efficiency and is one of the most reliable on the market.



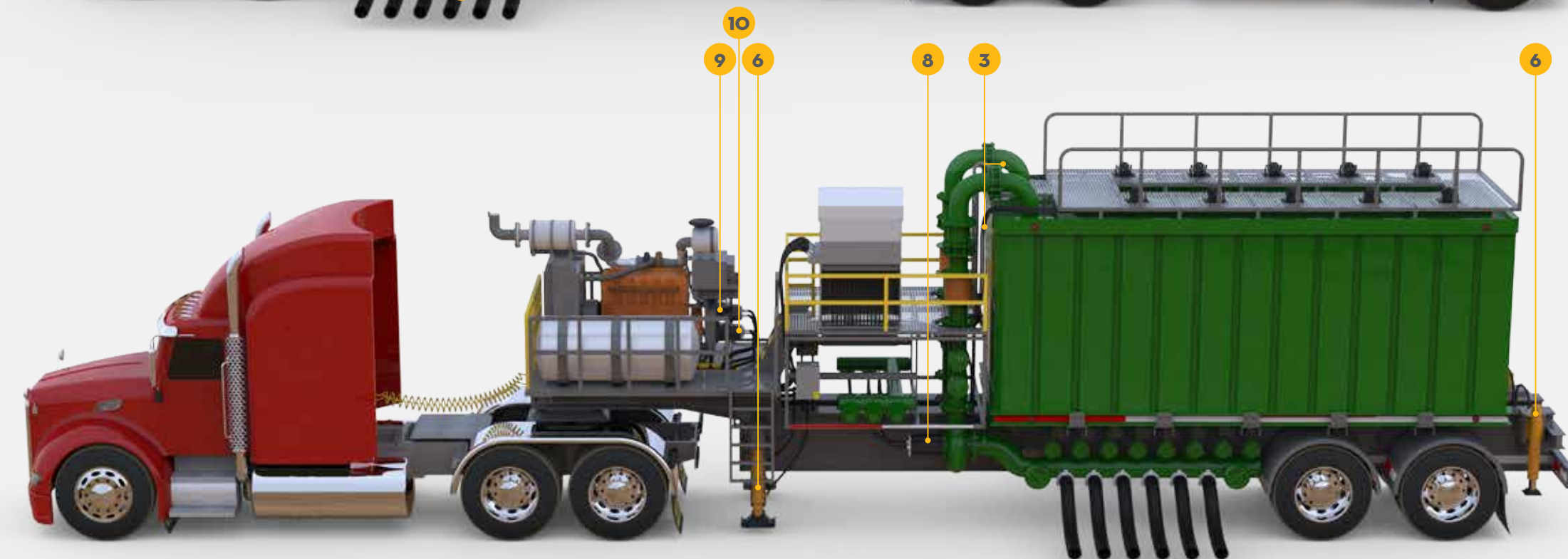
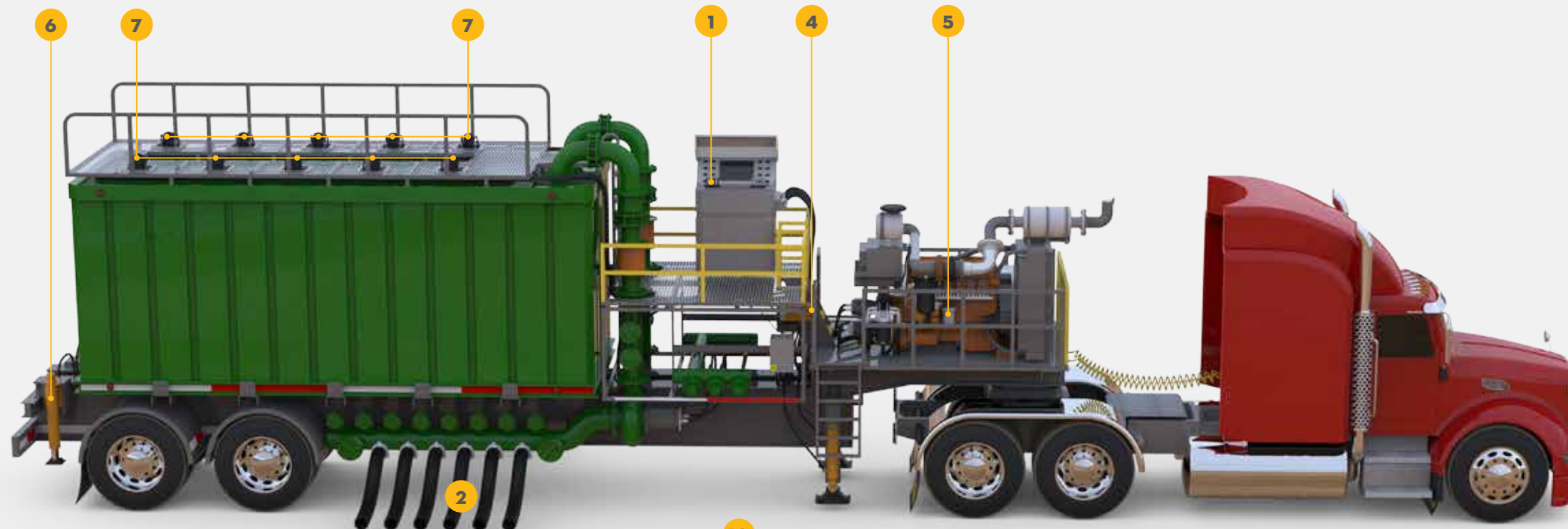
## CENTRIFUGAL DRIVE PUMP

Pressure compensated open circuit P1 pump supplies flow to hydraulic motors to drive the centrifugal pump



## PADDLE DRIVE PUMP

Pressure compensated open circuit P2 pump ideal for use with multiple paddle motors.





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# SAND TRUCK

Parker isn't only focused on making sure your hydraulic fluid flows properly. Parker Racor provides the solutions to ensure your engine is getting clean fuel, air and oil. In addition to the many on-engine solutions, Parker also offers portable fuel cleaning, transfer and dispensing units.







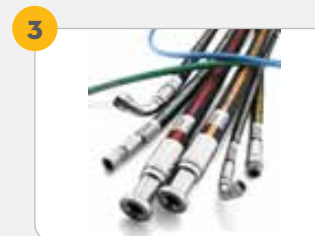
## OUTRIGGER CUSTOM CYLINDERS

With a long history in custom cylinders, Parker can meet any of your unique cylinder design needs up to 48" bore and 876" stroke.



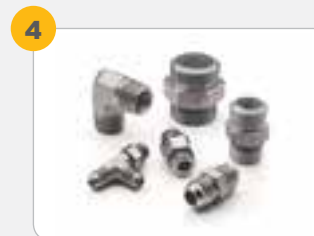
## WELDED HYDRAULIC CYLINDERS

Mobile welded cylinders of all sizes are ready for your application. Shown here are small welded cylinders perfect for sand bin hopper gates.



## HYDRAULIC HOSE ASSEMBLIES

High performance hose, fittings, equipment and accessories necessary to keep your fracking equipment running at peak performance levels.



## HYDRAULIC FITTINGS

Seal-Lok O-Ring Face Seal Fittings combined with Parker's XTR plating provides for leak free connections and superior resistance to rust.



## LSHT CONVEYOR MOTOR

For 50 years, Parker Torqmotors™ have been the "go to" product when a high torque motor is needed for a tough application. Rugged. Dependable. Long life.



## VARIABLE DISPLACEMENT PISTON PUMPS

P2 open circuit pump provides adequate flow to operate this truck's conveyor system and hopper gate doors.



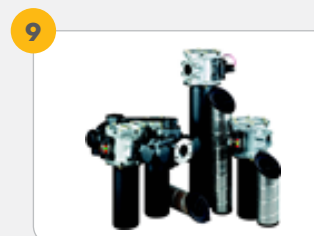
## DIRECTIONAL CONTROLS VALVES

Durable manifold mounted valves used to control for gate control and auxiliary functions with explosion proof options. (D1VWateX-clr shown)



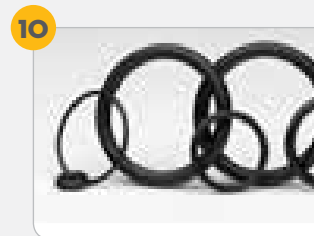
## CHECK VALVE

Parker manufactures a wide variety of in-line check valves.



## HYDRAULIC OIL FILTERS

Moduflow Plus low pressure filters provide high versatility in mounting and porting configurations to meet your application needs.



## PARKER O-RINGS

From your standard NBR volume o-rings to more complex offerings of HNBR and FKM for high temperatures and pressures, Parker has a material for all of your needs.





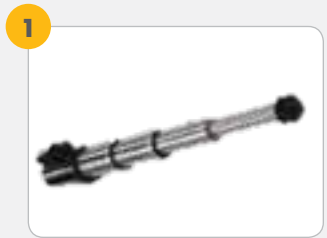
08

# WORKOVER RIG

As an expert in cylinder design and manufacturing, Parker can be relied on for all of your linear actuator needs. Welded, tie rod, compact, custom, telescoping, electromechanical, pneumatic, and more. Added features include Parker's new Global Shield coating technology, Zero Leak sealing technology, Intellinder positioning sensors and many accessories.



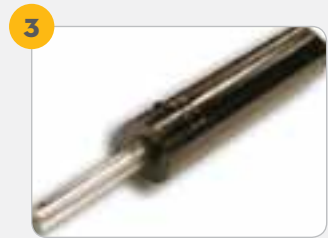




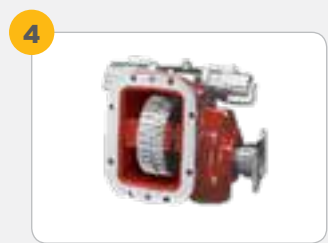
**MAST RAISING CYLINDERS**  
From workover rigs to the largest land rigs, Parker has the telescoping and custom cylinders you need for the most demanding lifts.



**TIE-ROD-CYLINDERS**  
Ideal for catwalk positioning, Parker tie rod cylinders are available in multiple stroke lengths and bore sizes and are repairable. (2H Heavy Duty shown)



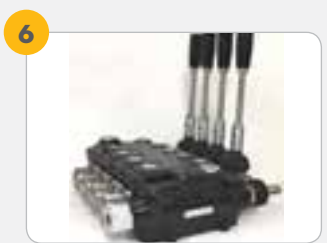
**WELDED CYLINDERS**  
Welded cylinders are available in multiple stroke lengths and bore sizes and are repairable. Perfect for outrigger leveling.



**POWER TAKE OFF UNITS**  
Parker's Chelsea power take off units are designed for heavy duty applications in the harshest environments. Common series include 880, 852, 823.



**GEAR PUMP**  
Cast iron and aluminum gear pump and motor offering provides reliable performance, reparability and application flexibility.



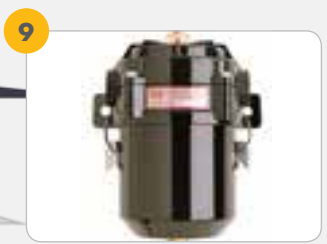
**SECTIONAL AUXILIARY VALVES**  
Low flow open center valves with fixed flows for outriggers and other auxiliary functions. (VO50clr shown)



**SECTIONAL OPEN CENTER VALVES**  
High flow valves for the raising and lowering mast raising function. (VA-VG35clr shown)



**LSHT WINCH MOTORS**  
Solid shaft construction of this Parker Nichols high torque motor means high drive train strength and longer life. Delivers high power in a small package.



**CCV**  
Controlling crankcase blow-by gas emissions is possible using Parker's open or closed (CCV) crankcase ventilation filters.



**QUICK COUPLINGS**  
Parker is the world's largest manufacturer of quick couplings producing hydraulic and pneumatic couplings in a variety of sizes, materials, and end configurations.



**HYDRAULIC HOSE ASSEMBLY**  
High performance hose, fittings, equipment and accessories necessary to keep your fracking equipment running at peak performance levels.

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