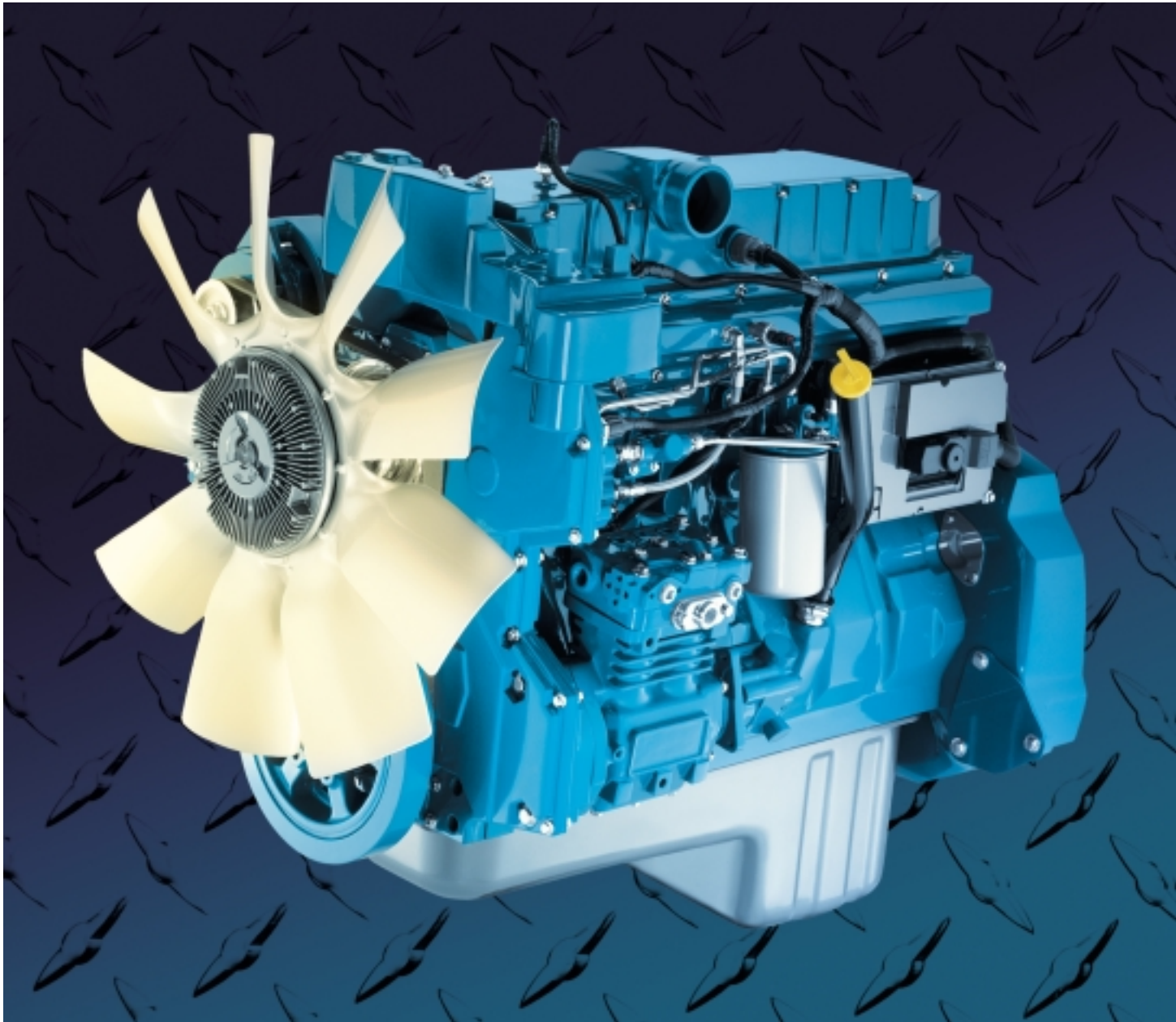




System Solutions For
The Engine Industry



***Your Resource For Motion Control
Components, Systems and Solutions***

The Engine Industry: A Focus

Parker means components, systems and partnerships that work

Parker is your single choice for the engine industry worldwide. From on-engine systems to fuel conditioning to service shops, Parker is there with expertise and uniquely designed systems. Parker offers solutions to meet the demands of design and manufacturing engineers, purchasing and maintenance managers, environmental scientists, and the CFO.

Anywhere an engine is to be used, the Parker team can review the application and parameters to match or create a system solution that decreases costs, reduces emissions, and increases the real value of the engine. Innovative products can be developed jointly with Parker as your partner.

Market Leader

Parker offers a win-win partnership; the relationship between Parker as a supplier and the OEM can be successful and beneficial. No other motion control company can match the accomplishments realized by Parker and our customers. Parker people know your business and have your bottom line in mind.

Engineering Expertise

Parker offers its customers unparalleled design assistance and support. Our dedicated sales and application engineers will work with you during the design process to optimize system integration, component sizing, performance, and cost. Parker R&D resources offer state-of-the-art technologies from our diverse market segments. And the discoveries and technological advancements from our various operating groups can be applied across the corporation for the benefit of our customers.

Premier Customer Service

Parker offers technical assistance, electronic ordering, and electronically formatted customer information. Our worldwide support ensures that your engine, system, plant, or equipment can be serviced and supported anywhere around the globe. Parker operates more than 250 manufacturing facilities around the world. Our employees are empowered to do whatever it takes to meet or exceed customer expectations.

Quality First

The Parker name is widely recognized throughout the world as representing the highest quality products. The people of Parker are dedicated to Total Quality Management.

The Value of Systems Integration

The many benefits of working with Parker include quality products, system integrity, worldwide distribution, extensive field support, unequalled customer service, as well as shortened product lead times, simplified ordering and more efficient shipping. But most importantly, with the assistance of Parker's application engineers, you can be sure that the capability of your new engine system will meet or exceed your specifications and expectations.

www.parker.com/engine



Products For Engine Applications

Parker makes over 500,000 parts to meet your system needs

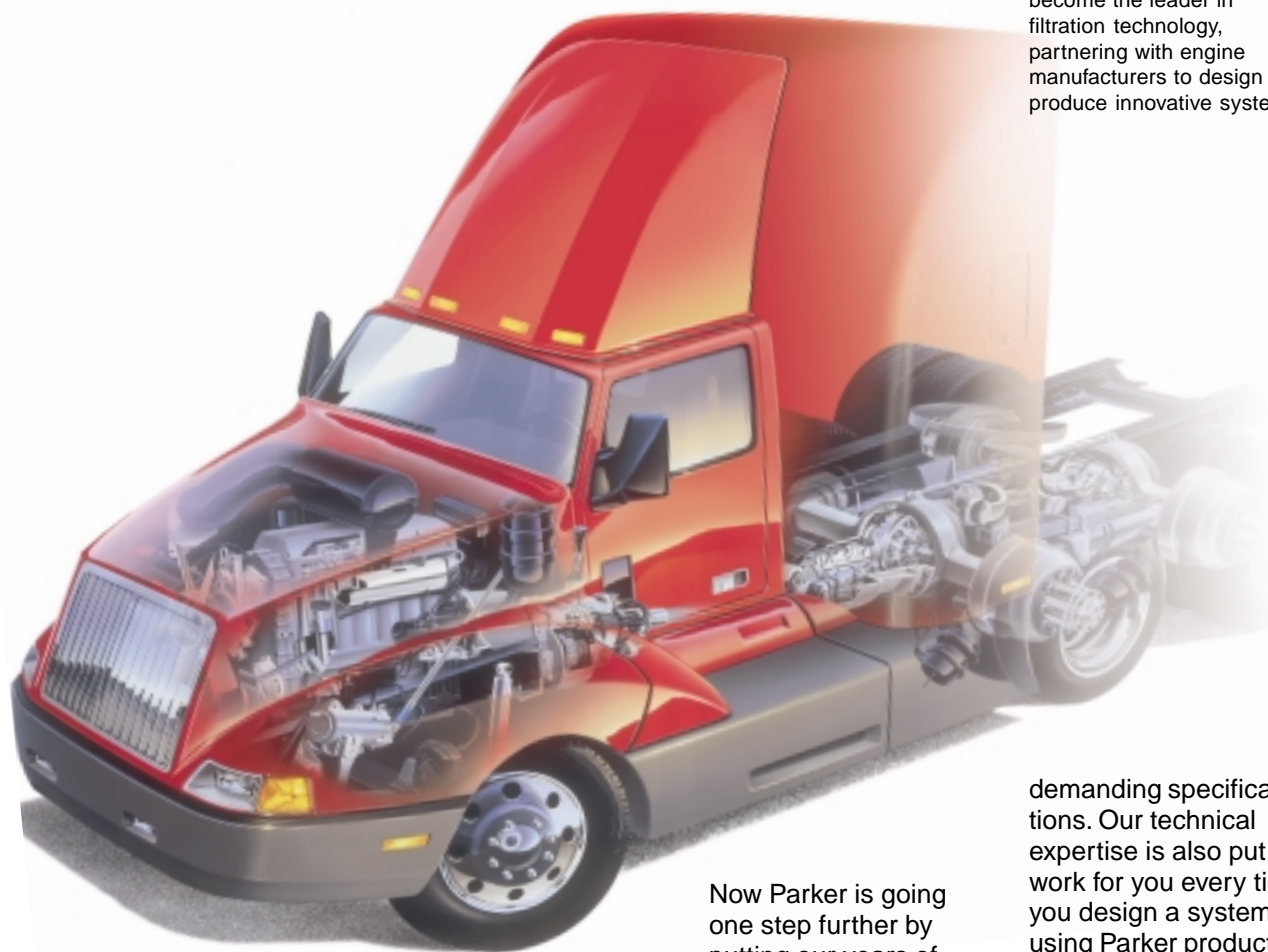
Products	Transportation	Construction	Marine	Agriculture	Power Generation
Filters					
Fuel Conditioning & Filtration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air Filters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oil Filters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coolant Filters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic Filters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heat Exchangers					
Heat Exchangers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hose and Fittings					
Fittings & Adapters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PTFE Hose, Fittings, Assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diesel Fuel Tubing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PFA & PTFE fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine Oil Coolant Assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transmission Oil Coolant Assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Heater Hose and Tube Assemblies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NTA, Flare, Valves, Pipe, Vibra-Lok, Prestomatic Diesel Fuel Fitting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic Components					
Hydraulic Fittings & Adapters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solenoid Valves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pumps and Motors					
Fuel Pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor-Driven Pumps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seals					
O-rings & Molded Shapes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic & Pneumatic Seals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extruded & Precision Cut Seals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Composite Sealing Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sensors and Regulators					
Regulators & Transducers					<input type="checkbox"/>
Change Filter & Water-In Fuel Sensors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Valves					
Diaphragm & Bellow Valves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ball, Plug, Needle & Check Valves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General Purpose Solenoid Valves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Parker — Providing The Engine Industry With Complete System Solutions.



Fuel Conditioning and Filtration

Filtration and water separation is critical to efficient diesel, gasoline and alternate fuel engine operation. Racor Division has become the leader in filtration technology, partnering with engine manufacturers to design and produce innovative systems.



Parker is a leading motion control system and component supplier for engine applications. Our breadth of product allows us to be your single source. Parker can help you save both time and money, with shorter lead times, less paperwork and fewer hassles.

Now Parker is going one step further by putting our years of application and engineering expertise to work for you as your single source supplier.

Our sales engineers will work with your designers to bring together all of the motion and control components necessary to meet your

demanding specifications. Our technical expertise is also put to work for you every time you design a system using Parker products. Our engineers will work with you to optimize your application's requirements and minimize the space required. From integrating products to components and systems training, Parker will be your system partner.





Air Filtration

Air cleaners, combination air filter/pre-cleaners, and centrifugal pre-cleaners for dust free engine performance. Racor Crankcase Ventilation Filter Systems protect turbochargers and other precision components.



Oil Filtration

Permanent cleanable filtration, bypass filtration modules/systems. Spin-on retrofit cartridge filtration and lubrication systems from 6 gpm to over 500 gpm.



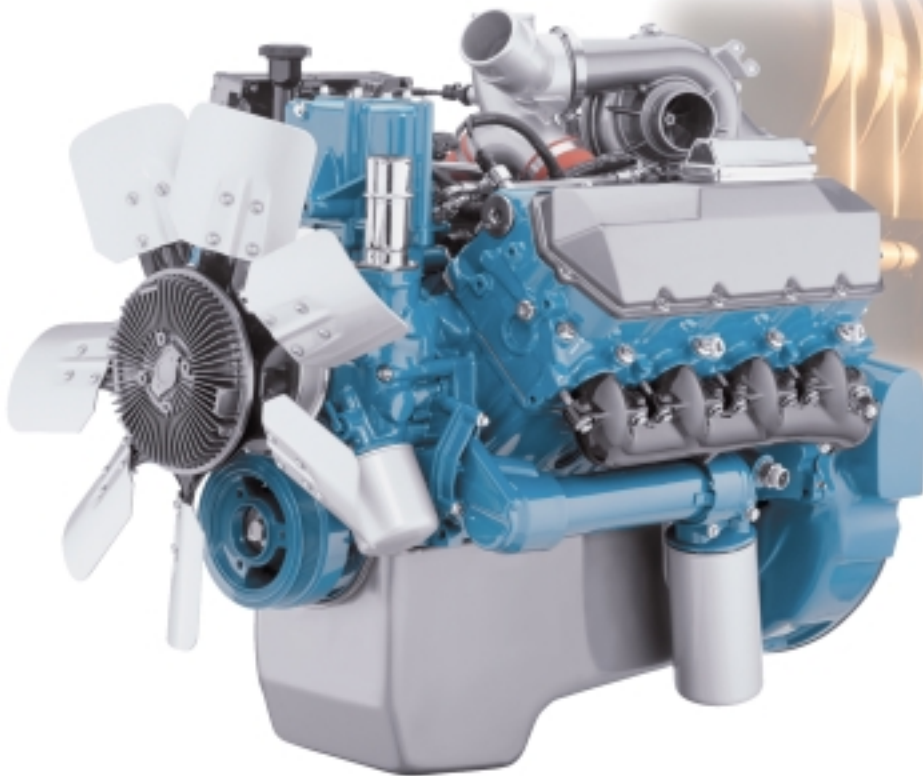
Coolant Filtration

Filtration systems, coolant system cleaners, liquid coolant, corrosion inhibitors, and extended use coolant additives for automobile, light-duty truck and heavy-duty truck engines.



Hydraulic and Lubrication Filters

Cartridge style filters and purification systems for removing particulate and water contamination from hydraulic and lubrication fluids.



Variable Displacement Pumps

Piston pumps for water glycol, synthetics and mineral oils, displacements to 270 cc per revolution and 5000 PSI continuous. Full line of control options and cast iron housings for quiet durable operation.



Fixed Displacement Pumps

Gear, vane and piston designs, flows to 100 gpm and pressures to 3600 PSI continuous. Fixed vane pumps are interchangeable with Vickers.



Low Speed High Torque Motors

High starting torque, high volumetric efficiency and long life. Pressures to 4000 PSI intermittent, torques to 15,000 lb-in and displacements to 67.3 in³ per revolution.



High Speed Motors

Maximum operation speeds to 6000 rpm, pressures to 3600 PSI and displacements to 250 cc per revolution. Reversible motors with external case drains are standard.



Solenoid Valves

Skinner, Lucifer and Gold Ring™ solenoid valves control fluids and gases.



Instrumentation Valves

Among those available are: manually, electrically and pneumatically actuated ball valves, and manifold configured valves.



Electrohydraulic Servo Valves

Robust and reliable, flows 0.5 to 90 gpm with pressures to 3000 PSI. Explosion proof and intrinsically safe models. Meets CSA, FM and Cenelec Standards.



Proportional Control Valves

Proportional, directional, throttle, and pressure control available. Flows 2-1500 gpm and pressures to 5000 PSI. Zero lap servo spools for closed loop applications with on board electronics.



Fuel Nozzles

Distribution and atomization of liquid fuel or gas for combustion applications. Single fuel/dual fuel or other applications to meet OEM specifications.



Seals

High quality seals used in engines and air control valves including pressure regulators and other pressurized components.



Hose and Tubing

Hose available in all popular sizes. Braided or spiral reinforcements in steel or textile materials. Tubing and hose in a variety of materials and colors.



Hydraulic Hose and Fittings

Vacuum systems to 60,000 PSI (414 MPa). Sizes from 1/8" to 2" (3mm to 51mm) I.D. in both rubber and thermoplastic. Steel braided or spiral reinforcements. Meet all SAE specifications.



Hydraulic Valves

Directional control valves with optional soft-shift, servo and proportional valves and control electronics.



Ball Valves

Low and high pressure, in brass, stainless steel, and carbon steel. Sizes from 1/4" through 2" and pressures up to 6000 PSI. A variety of port configurations available.



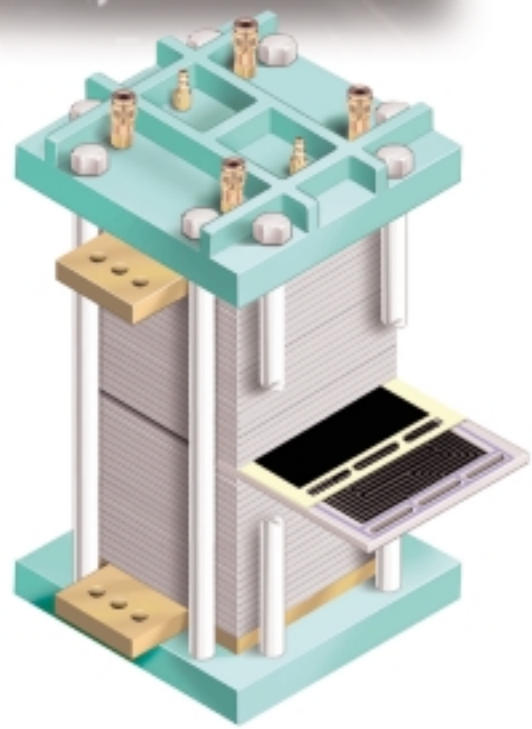
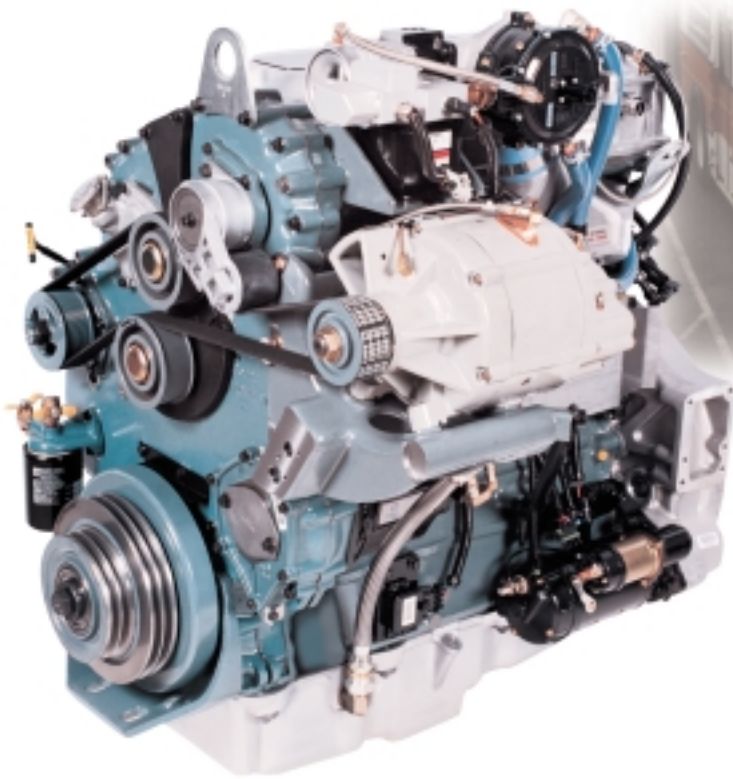
Sensors

Engine interface sensors and indicators such as water in fuel, intake air restriction, bypass indicators and pressure output sensors.



Heat Exchangers

Engineered solutions for adding or removing heat from engine systems. Fuel heaters or coolers, oil coolers, coolant pre-heaters, and other specialty solutions to meet OEM specifications.



Fittings and Adapters

O-ring face seal, 37° flare, NTA and Vibra-Lok fittings, as well as metric, BSP, SAE/UNF, NPTF and ISO 6149 ports. Materials include steel, stainless steel and brass. Most available with special application o-rings and seals.



Quick Couplings

1/8" through 2 1/2" hydraulic, pneumatic, diagnostic quick couplings are available in single and double shut-off. Materials include steel, stainless steel, and brass.

Premier Customer Service Initiatives...

Field Sales Team

Parker's highly trained field sales force provides expert assistance in your product selection, working hand-in-hand with your local Parker distributor. These experts are strategically located throughout the world to work with you on product application issues.

Single Source

Total system capabilities enable our customers to reduce their number of vendors, saving both time and money through reduced paperwork, simplified ordering and more efficient shipping.

Printed and Electronic Sales Literature

Parker offers the most comprehensive selection of product and technical information in printed form, as well as electronic versions on CD-ROM and our web page.

inPHorm

'inPHorm' is Parker's product selection software that helps you choose the correct components for your application, saving you time and making selecting, specifying and ordering easier.

Industry-Leading Technical Support and Training

The Parker network of application specialists, support professionals and distributor personnel will provide expert technical assistance where and when you need it, as well as training in motion control technology.

Worldwide Distribution Network

With over 7,500 distributors, our distribution network is the strongest in the industry, providing comprehensive technical support and after-the-sale service.



*We're Where You
Are...Worldwide*

To order products, CDs or additional product information:

Call 1-800-CPARKER (In Europe, 00800-2727-5374)

Email c-parker@parker.com

Visit www.parker.com/engine

anything  Possible.

Parker Hannifin Corporation
6035 Parkland Blvd.
Cleveland, Ohio 44124
Phone: (216) 896-3000
Fax: (216) 896-4000

Bulletin PH-Engine
7.5M 6/02 SL