



Photo courtesy of Kwik Trip, Inc.

Alternative Fuel: CNG, LNG & LPG Vehicle and Fueling System Solutions

Helping create a sustainable future



ENGINEERING YOUR SUCCESS.

PARKER: A NATU



A leader in the design and manufacture of products and systems that convey and utilize compressed natural gas (CNG), Parker is a natural for natural gas. Our proven, multi-technology subsystems and components in fluid management, motion and fluid control, filtration, and temperature control provide CNG solutions that offer faster development, improved service life, reduced risk, and greater value.



CNG Challenges

- Developing CNG refueling infrastructure
- Natural gas vehicles can cost up to 40% more than equivalent gas vehicles; natural gas conversion of a gas vehicle can cost up to \$18K
- Shorter driving range
- Longer refueling time
- Greater weight of fuel tank
- Currently only on a limited number of vehicles



CNG Advantages

- Natural gas (NG) is plentiful in North America and relatively inexpensive, particularly in light of the fact that gasoline and diesel fuel have jumped in price by more than 30%
- NG produces 30% fewer greenhouse gas emissions than gas or diesel
- NG is safer, with a low chance of flammability
- Supply of NG is expected to exceed demand, keeping prices depressed
- Government push to alternative fuels through environmental regulations, tax credits, and incentives
- Using existing natural gas lines makes vehicle refueling at home easy
- NG engine availability is increasing
- NG vehicles offer longer vehicle life with less long-term expense for the consumer

RAIL FOR NATURAL GAS

Our global footprint assures local availability, no matter where you develop, assemble, or manufacture.

Parker offers a complete product package for CNG including fittings, filters, couplings, valves, regulators, hoses, nozzles, and receptacles.

Parker Solutions

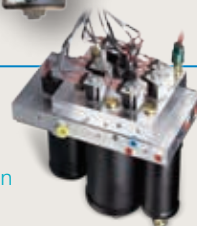
From fittings, filters, and couplings to valves, hoses, nozzles, and receptacles, our complete CNG product package is unmatched in the industry. Our customers also benefit from other value-added advantages:

- Years of extensive experience in design, prototyping, and manufacturing shorten the design cycle, improving production efficiency and simplifying procurement procedures
- Early-on collaboration from concept through production creates competitive advantage
- Our global footprint assures local availability, no matter where you develop, assemble, or manufacture
- Compliant and listed with national and international certification standards
- As a multiple technology provider, Parker saves you time and money by reducing the need for multiple suppliers
- Parker also supports LNG applications



CUSTOMIZED SOLUTIONS

Parker has the unique ability to integrate multiple technologies into robust, customer-focused solutions, such as the On Board Fuel Regulation Module (top) and this manifold using several Parker products (right).



Contact Veriflo Division at (510) 235-9590 or Fluid Control Division at (860) 827-2300 to find out more. Or follow this on-line path to chat with an engineer: <http://parker.com/fcd/Support/LiveHelpAskAnEngineer>

Collaborate with Parker for CNG solutions that fuel competitive advantage.

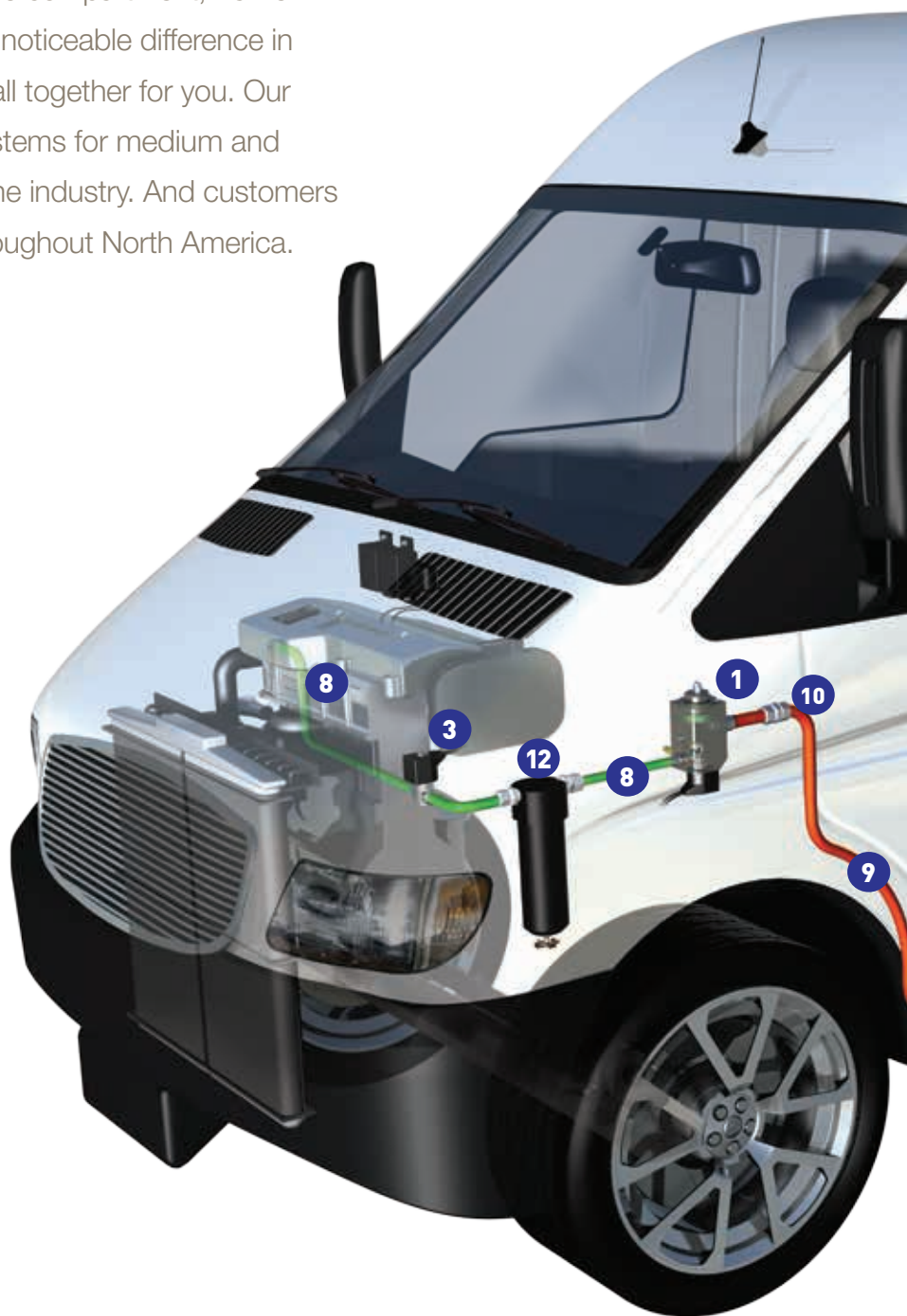
From the refueling receptacle to the engine compartment, Parker offers the CNG components that make a noticeable difference in performance, plus the expertise to put it all together for you. Our global experience in the design of fuel systems for medium and heavy-duty vehicles is well respected in the industry. And customers have local access to Parker channels throughout North America.

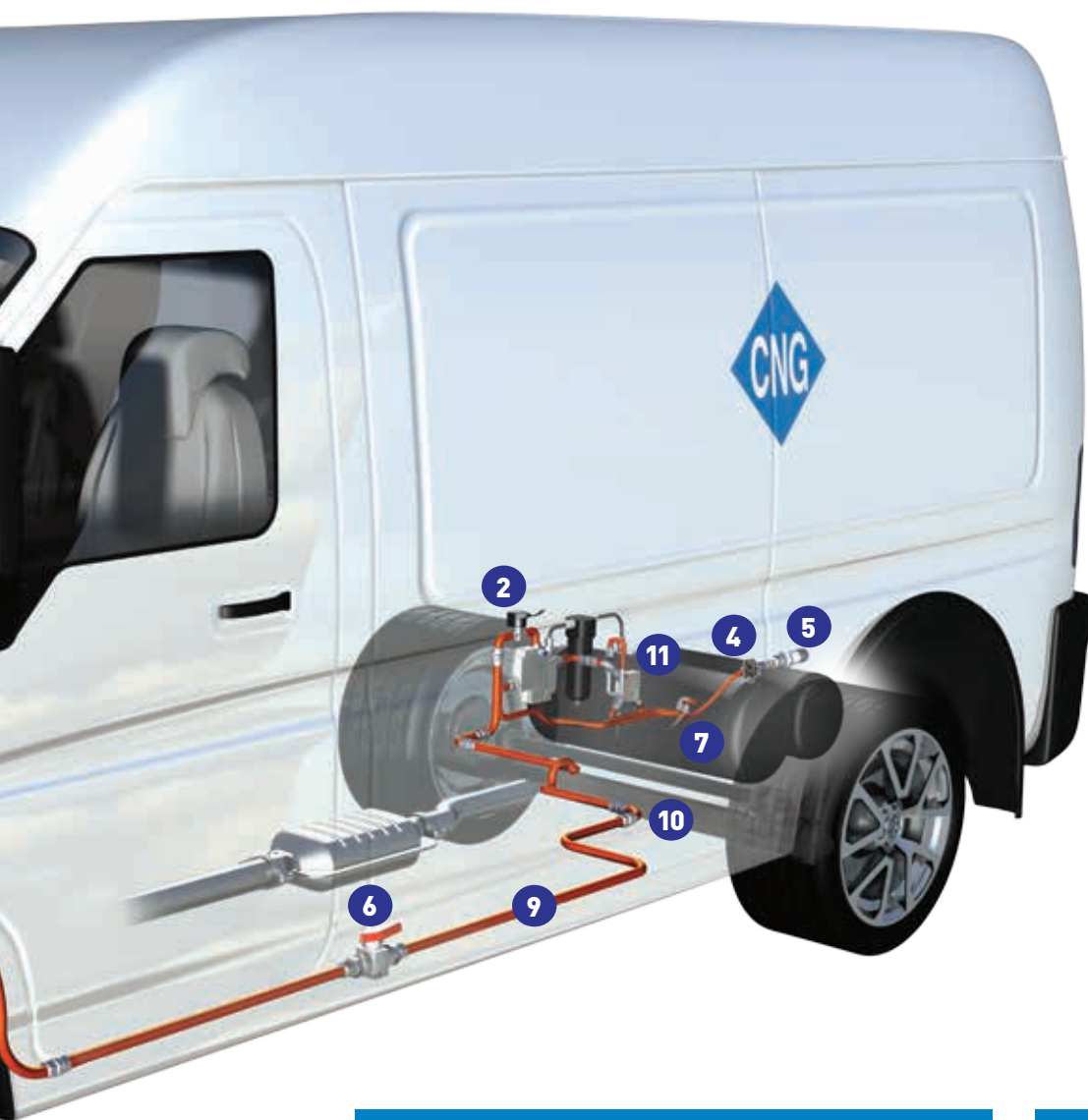
REGULATION

- 1 The On Board Fuel Regulation Module (FM80) features a machined body gas regulator with any or all of the following options:
 - Integrated high pressure filter
 - High and low pressure sensors
 - Lock-off solenoid valve
 - Heat exchanger
 - Pressure relief device

VALVES AND RECEPTACLES

- 2 High-pressure CNG valves
- 3 Low-pressure CNG valves
- 4 Check valves
- 5 Receptacles
- 6 HB4 Series ball valves
- 7 B Series ball valves





CNG COMPLIANCE

Parker provides the largest offering of natural gas products that are certified to industry standards and organization approvals.

- CSA
- UL
- ISO
- ECE
- NFPA
- NGV1
- NGV3.1
- NGV4.2
- NGV4.4
- ANSI

FUEL CONVEYANCE

- 8 Low-pressure CNG hose
- 9 High-pressure CNG hose
- 10 Seal-Lok™ for CNG O-ring Face Seal fittings
CPI™ single ferrule tube fittings
A-LOK® double ferrule tube fittings

FILTRATION

- 11 High-pressure filters
- 12 Low-pressure filters

REGULATOR


On Board Fuel Regulation Module (FM80)

Available with multiple options, Parker's integrated gas regulator system provides advanced fuel handling performance. Piston regulator design delivers better control, fewer connections, and longer range.

- Optimized for 5 to 12 liter engines
- Stable, precise pressure control of CNG from 225 psi (15 bar) through 3,600 psi (248 bar) inlet pressure
- Tested and designed for extreme environmental operating conditions
- Extreme -40 F (-40 C) and +248 F (+120 C) ambient temperature
- Superior flow pressure-characteristics compared to other products available in the market with a 20 psi (1.4 bar) delivery pressure envelope
- Maintains stable pressures and high flow to the downstream components across the full operating range of CNG vehicles tank pressures of 3600 psig to 225 psig (250 bar to 15 bar)
- Integrated high pressure filter, high and low pressure sensors, lock-off solenoid available as options
- Made of durable anodized aluminum and incorporates a piston-style single-stage regulator with an integrated heat exchanger and pressure relief valve
- Additional functional elements include a solenoid shut-off valve (on/off), a coalescing filter (available in various grades and sizes), and pressure sensors for both high and low pressure sides of the regulator
- The FM80 is fully configurable. Request a FM80 Technical Bulletin (PN 25000314) from Veriflo Division for more information

Proven multi-technology subsystems and components.

FUEL CONVEYANCE

SS23CG Low-Pressure Hose


CNG compatible low-pressure, rubber-covered hose with nylon inner tube. High temperature rated to 250°F (121° C) at 425 psi (29 bar). Flexible with a small bend radius for easy routing.

- CAN / CGA-8.1-M86 Type III
- Meets UL 21 588, 569 specifications
- Meets ECE R110 / R67 specifications

CNGRP Low Pressure Hose


Flexible, lightweight hose serves as primary conveyance of CNG downstream of pressure regulator. Rated to 248°F (120°C) at 500 psi (34.5 bar).

Conforms to and listed per: NFPA 52, ANSI/CSA NGV 3.1, CSA 12.3, Class C Certificate# 70102698

- Electrically conductive
- Dampens vibration and noise
- Low permeation construction

5CNG High-Pressure Hose


Flexible, lightweight hose serves as primary conveyance of CNG in all areas of the vehicle system up to the firewall. Class A assemblies rated to 150°F (65° C) and Class D assemblies rated to 185°F (85° C), both at 5,000 psi (345 bar).

Conforms to and listed per: NFPA 52, ANSI/CSA NGV 4.2, ECE R110, CSA 12.52 Class A&D CSA Certificate# 1053249

- Electrically conductive
- Dampens vibration and noise
- Up to 30% lighter than rigid tubing
- Very flexible; easy to install with faster routing and simple maintenance
- Robust hose design resists fatigue, corrosion, and environmental effects

VALVES AND RECEPTACLES

HB4 Series Ball Valves


Provide reliable shutoff or switching functions. Upper and lower trunnion bearings enhance the resistance of the trunnions against seizure, and increase the valve life in extreme applications.

- Compact and rugged design
- Spring-loaded seats for high cycle life and low operating torques at pressures up to 10,000 psig (689 bar)
- Perfect for diverter applications such as fueling / defueling vehicles

B Series Ball Valves


Manually, pneumatically, and electrically actuated two-way B Series ball valves provide quick, 1/4 turn, on-off control of natural gas.

- Certified by CSA for NGV applications such as bulk containers and manual shutoff on vehicle fuel systems as per NFPA 52
- Proven and used on trucks, buses, and cars around the globe

Check Valves


Located on the fuel line between the fill receptacle and the fuel tank, Parker's CVS-363 check valve allows depressurization of the nozzle and receptacle, preventing return flow.

- Uni-directional flow control

Fueling and De-fueling Receptacles

Parker's FMS Series fueling receptacles are available in 3,000 and 3,600 psi (200 and 250 bar) versions and are certified to the NGV1 standard.

Stainless defueling receptacles conform to ISO 7241-B profile. Both fueling and defueling receptacles have common profiles for easy connectivity with other manufacturers' compliant products.



High-Pressure CNG Valves



Our high-pressure, high-flow, two-way normally closed valves offer higher working pressure than competitors' models and all stainless steel construction for optimum performance.

- Bubble-tight maximum allowed leakage
- ISO 15500 / ECE R110 approval in process

Low-Pressure CNG Valves

Two-way, brass, normally closed valve line specifically designed for low-pressure CNG applications. Offers exceptionally high flow for a low-pressure valve. Located downstream of the pressure regulator.

- Bubble-tight maximum allowed leakage
- ECE R110 approved valve; 3/8" and 1/2" NPT available

FILTRATION

FFC-110 / 110L Filters

Positioned on the low-pressure side of the vehicle system between the pressure regulator and the fuel injectors. Protect fouling of fuel injectors. Multiple sizes, efficiency grades for application versatility.

- 800 psig (55 bar) maximum pressure is highest known



FFC-112 / 112L / 113 Filters

Positioned on the high-pressure side of the vehicle system between the storage tank and the pressure regulator where pressures can typically reach 3,600 psig (248 bar). Protects regulator from contaminant buildup.



FFC-213 / 3600 PSIG Filters (Aluminum)



The, FFC-213 is another popular filter for on-board alternative fuel vehicles. It removes submicronic contaminants with removal efficiencies from 95% (grade 10) to 99.97% (grade 6), ensuring long service intervals for components like fuel injectors and regulators.

- Lightweight aluminum construction
- 3600 PSIG design pressure withstands harsh operating environments

FITTINGS

CPI™ Tube Fittings

Single ferrule tube fittings of precision-engineered parts designed to provide secure, leak-proof connections on vehicle. Supercase™ ferrule design works well in vibration-prone applications due to its unique "bowing" action between the body seat.



- Proven in thousands of critical vibration and pressure applications, including CNG
- Molybdenum coated nut with fine pitch threads ensures no galling
- Single pre-swaged ferrules minimize chances of incorrect assembly

A-LOK® Tube Fittings

Two ferrule tube fittings of precision engineered parts designed to provide secure, leak-proof connections on vehicle. Manufactured to the highest quality standards.



Proven in CNG applications around the globe. Available in a broad range of sizes, materials, and configurations.

Seal-Lok™ for CNG O-ring Face Seal (ORFS) Fittings



Leak-free, vibration-resistant ORFS threaded connections available in inch (1/4" to 3/4") and metric (6 mm to 20 mm) sizes for high- or low-pressure CNG applications using hard tube or hose. Seal-Lok for CNG provides a zero clearance fitting system which allows for ease of assembly in tight installation areas.

- Resistant to over-torque up to 200%
- Unlimited reusability with only seal replacement needed
- Tested by TUV and conforms to the following standards: ECE R110, ANSI NGV 3.1-2014/CSA 12.3-2014, and ISO 15500 in the following materials: stainless steel, and XTR (zinc nickel) plated steel
- Seal-Lok Xtreme™ available for LNG applications

Our complete line of CNG filtration, conveyance, dispensing, and valve solutions connect you to added efficiency and faster fill times. Have a unique application or the need to push the envelope of innovation? We can support that, too, with a team of CNG experts that will help to engineer your success.

FILTRATION

- 1 M/J Series filters

VALVES

- 2 Valves and Manifolds

FUEL CONVEYANCE AND DISPENSING

- 3 CNG hose
- 4 Seal-Lok™ for CNG O-ring Face Seal fittings
- 5 CPI™ tube fittings
- 6 A-LOK® tube fittings
- 7 Fuel/Vent line breakaways
- 8 Nozzles / nozzle docks



VALVES

HB4 Series Ball Valves

Provide reliable shutoff or switching functions. Upper and lower trunnion bearings enhance the resistance of the trunnions against seizure, and increase the valve life in extreme applications.



- Compact and rugged design
- Spring-loaded seats for high cycle life and low operating torques at pressures up to 10,000 psig (689 bar)
- Perfect for safe and economical dispensing applications on time fill stands and dispensers when combined with Parker Snap-tite NGV 1 nozzles

B Series Ball Valves



Manually, pneumatically, and electrically actuated two-way B Series ball valves provide quick, 1/4 turn, on-off control of natural gas.

- Broad selection of valve body, seat, and seal materials provide a wide range of operating pressures and temperatures
- Perfect for bulk and high flow / high cycle applications with up to 100,000 cycles of trouble-free performance without any seat changes

Valves and Manifolds



High integrity, precision instrumentation check, bleed/purge, needle, and pressure relief valves and manifolds for all isolation, regulation, direction control, and over-pressure protection applications.

FILTRATION

M-Series Filters

Available in a variety of filter sizes and media, these 800 psig (55 bar) filters have multiple applications in a CNG system. Use them as contaminant protection in pre- and post-filters for a gas dryer, a compressor intake filter, and inner-stage compression filters. Excessive lubrication oil can create contamination problems in a compressor, especially at the higher pressures involved in the later stages of a multi-stage compressor.



- 800 psig (55 bar) maximum pressure ensures reliability
- Excellent corrosion resistance
- Easy drainage without bowl removal
- Multiple sizes and media choices

J-Series Filters

5,000 psig (345 bar) filters remove solid and liquid contaminants from natural gas. Available in a variety of filter sizes and media, these versatile filters can be used as a compressor post-filter to storage cascades and fuel dispensing equipment.

- More filter choices than any other competitor
- Easy drainage without bowl removal
- Optional high-pressure drain kits allow drainage while system is pressurized



For consumer or fleet CNG refueling, connect with Parker.

FUEL CONVEYANCE AND DISPENSING

Vent Line Breakaway



Placed on the fuel return line, our NGVBCN2-VL breakaway ensures the venting of the CNG hose in the event of a "drive off."

Reliable performance

Nozzle and Nozzle Dock

NGV1 standard refueling nozzles for public or private use. Can be classified as Type 2 or 3, for use in both fast-fill or time-fill service. Non-marring polyurethane sleeve protects vehicle body from surface damage.

Situated on the fueling station, our NGVND nozzle dock holds the nozzle when not in use, keeping it clean and readily accessible.



Fuel Line Breakaway

The NGVBCN2-P50 breakaway is certified to NGV4.4 standard for breakaway devices used on natural gas dispensing hoses and systems. It allows the hose to safely disconnect, preventing damage to the dispenser in the event of "drive off," sealing the CNG in the line to prevent leakage and hose whip.

- Pressure balanced
- Reliable performance



Added efficiency.
Faster fill times.

Seal-Lok™ for CNG O-ring Face Seal (ORFS) Fittings



Leak-free, vibration-resistant ORFS threaded connections available in inch (1/4" to 3/4") and metric (6 mm to 20 mm) sizes for high- or low-pressure CNG applications using hard tube or hose. Seal-Lok for CNG provides a zero clearance fitting system which allows for ease of assembly in tight installation areas.

- Resistant to over-torque up to 200%
- Unlimited reusability with only seal replacement needed
- Tested by TUV and conforms to the following standards: ECE R110, ANSI NGV 3.1-2014/CSA 12.3-2014, and ISO 15500 in the following materials: stainless steel, and XTR (zinc nickel) plated steel
- Seal-Lok Xtreme available for LNG applications

CPI™ Tube Fittings

Single ferrule tube fittings of precision-engineered parts designed to provide secure, leak-proof connections on vehicle. Suparcase® ferrule design works well in vibration-prone applications due to its unique "bowing" action between the body seat.



- Proven in thousands of critical vibration and pressure applications, including CNG
- Molybdenum coated nut with fine pitch threads ensures no galling
- Single pre-swaged ferrules minimize chances of incorrect assembly

A-LOK® Tube Fittings

Two ferrule tube fittings of precision-engineered parts designed to provide secure, leak-proof connections on vehicle. Manufactured to the highest quality standards.

- Proven in CNG applications around the globe
- Available in a broad range of sizes, materials, and configurations



FUEL CONVEYANCE AND DISPENSING

5CNG High-Pressure CNG Hose



Flexible, lightweight hose serves as primary conveyance of CNG in all areas of the dispensing system. Class A assemblies rated to 150°F (65° C) and Class D assemblies rated to 185°F (85° C), both at 5,000 psi (345 bar).

Conforms to and listed per: NFPA 52, ANSI/CSA NGV 4.2, ECE R110, CSA 12.52 Class A&D CSA Certificate# 1053249

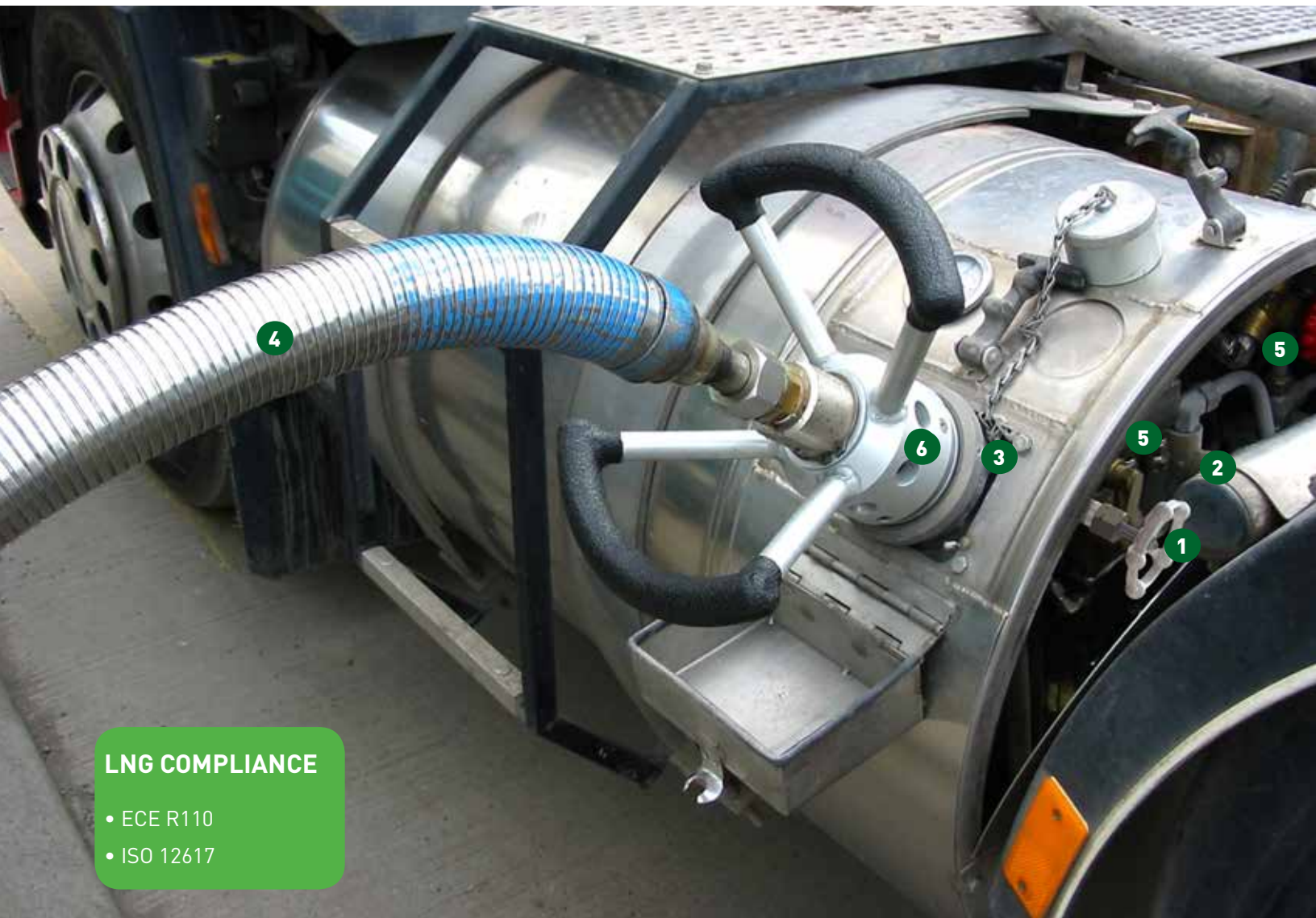
- Electrically conductive
- Twin-line assemblies available to reduce installation time, eliminate tangling & reduce part number complexity
- Sizes up to 1"
- Very flexible; easy to install with faster routing and simple maintenance
- Robust hose design resists fatigue, corrosion, and environmental effects



PARKER: Other

LNG

- Cleaner than Gasoline and Diesel
- Reduced Fuel Costs
- Reduced Air Emissions
- Lower Risk of Combustion Compared to Gasoline and Diesel
- Quieter Engines
- Cleaner Environment



LNG COMPLIANCE

- ECE R110
- ISO 12617

Fuels: LNG

VALVES AND RECEPTACLES

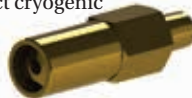
Bestobell Cryogenic Globe Valve 1



Parker Bestobell's cryogenic globe valves feature an innovative loose flange bolted bonnet design that allows for thermal expansion and contraction, therefore eliminating leakage at the bonnet gasket. Extremely durable, these valves deliver smooth operation and reduced closing torque by use of a PTFE anti-friction disc between the valve spindle and the disc assembly.

- Maximum Working Pressure (MWP) subject to end connections; Up to 50 bar (725 psi) at -196°C to +65°C
- Unique Parker Bestobell loose flange bolted bonnet design allows for thermal expansion and contraction and eliminates leakage at the bonnet gasket
- PTFE/PCTFE seal to ensure tight shut off at all times
- Anti-blowout stem and one-piece high strength design for operator safety
- Long life, low torque stem thread
- Lightweight ergonomic aluminum hand wheel

Bestobell Cryogenic Thermal Relief Valve 2



Parker's Bestobell compact cryogenic thermal relief valves are designed to prevent damage to piping and equipment caused by the expansion of liquefied gases. This thermal relief valves will lift at $\pm 3\%$ of set pressure rating. When liquefied gases are trapped between two closed valves (known as liquid lock), reheating and boiling can lead to a dangerous rise in pressure. The Parker Bestobell's thermal relief valves have been designed to prevent pressure build up.

- Maximum Working Pressure (MWP) subject to end connections Up to 50 bar (725 psi) at -196°C to +65°C
- Valve will not stick in its seat even when left unused for long periods of time
- Design allows the valve to reseal correctly after venting off the expanding fluid which prevents wastage of cryogenic gases
- Valve is tight up until 90% of set pressure
- Valve reseats before 50% of set pressure
- Orifice diameter is 8mm

Kodiak Fueling Receptacle 3



Universal receptacle design will connect with other manufacturer's nozzles.

- Valve automatically opens when connected and closes when disconnected
- Up to 300 psi (20.7 bar) max working pressure
- Rated flow: 50 gpm (190 lpm)
- Port sizes: 1" or 3/4" NPTF
- ECE R110 certified and compliant with ISO 12617
- Protective dust cap is included

FLUID CONVEYANCE

Metal Hose 4



Designed for applications where chemical and temperatures extremes are present.

- Excellent chemical resistance
- Operates in high temperatures
- Hydroformed design yields a uniform wall thickness, promoting even distribution of stress during flexing and reduces concentrated residual stress
- Full Vacuum - Maintains its shape under full vacuum, other hose types collapse
- Zero permeation
- Leak-free fitting weld connection

FITTINGS

Seal-Lok™ Xtreme Fittings 5



Seal-Lok Xtreme for LNG applications are field replaceable fittings that use a patented stainless-steel metal sealing ring. This Parker innovation achieves superior tube and hose connections at temperatures as low as -328°F (-200°C) and as high as 1200°F (650°C).

- SAE/AISI 316/316L stainless-steel materials for corrosion resistance
- Working pressures up to 6000 psi
- High resistance to over-tightening or over-loosening due to vibration
- Incorporates extreme temperature seals into O-ring face seal body design

NOZZLES

Kodiak™ Fueling Nozzle 6



Designed for fueling LNG vehicles, the Kodiak Nozzle offers an easy, single action connection with

Parker's Kodiak Receptacle. Engineered for use with cryogenic fluids, the nozzle design provides a thermal break to reduce freezing of the locking mechanism.

- Single connect/disconnect action for quick and easy fueling
- Integral shut-off valve and hose swivel
- Valve automatically opens when connected and closes when disconnected
- Up to 300 psi (20.7 bar) max working pressure
- Rated flow: 50 gpm (190 lpm)
- Port sizes: 1" NPTF or 1" 37° male flare with adapter fitting

PARKER: Other



CNG, LNG, and LPG fuels are less expensive alternatives to traditional fuels and are used in more and more motor vehicles. These alternative fuels reduce carbon monoxide, carbon dioxide, and hydrocarbon vehicle exhaust emissions. Still, they are prone to the same types of contamination present in traditional fuels.

Parker Hannifin employs dedicated teams who focus only on the fuel market to provide you with the best possible system solutions. By using components that are designed to work together, and in some cases, designed to work as a complete system, customers are able to simplify maintenance change outs, purchases and reduce unexpected downtime.

FUEL CONVEYANCE

SS23CG Low-Pressure CNG Hose



If you make or maintain LPG/CNG powered equipment, SS23CG hose is your choice for gas permeation resistance and reliable performance.

- Exceeds Canadian Gas Association specification CAN/CGA-8.1-M86 Type III which means it meets permeation requirements of 1,6 g/m²-day

SS25UL Liquefied Petroleum Gas Hose



Parker's SS25UL hose is a liquefied petroleum gas hose that has a constant working pressure of 350 PSI to deliver consistency and reliability.

- Constant working pressure of 350 psi to deliver consistency and reliability
- Designed, built, and tested to meet UL Standard 21 performance specifications
- Sizes range from 3/16" to 5/8" in diameter

FILTERS

Replaceable Filter Element Housing LPGR-200



Used on-board propane-powered vehicles including: shuttle buses, delivery trucks, and vans as well as lift trucks and turf maintenance vehicles.

- Unique housing designed to prevent contaminants that have settled in liquid propane tanks and fuel lines from reaching critical engine components
- Contains a high efficient pleated element, offered in either a 1-micron or 5-micron rating, constructed to lengthen filter life
- Pleated media is backed on both sides by a rugged epoxy coated steel screen for high strength during peak flow rate conditions
- Black anodized lightweight aluminum housing is designed for long term corrosion protection
- SAE-8 port connections allow for leak-free, quick, and easy installation

Disposable Liquid Propane Filters LPGD-200

Used on-board propane powered vehicles to prevent contaminants in the fuel tank from getting into the engine.



- Filter is rated for 500 psig
- Removes submicronic contaminants rated to either 5 micron or 1 micron depending on the protection requirements
- Small size allows for versatile installation and easy servicing
- Each housing is black powder painted for long-term corrosion protection
- Supplied with 1/2" SAE flare connections on both the inlet and outlet fittings making for easy installation
- SAE-8 port connections allow for leak-free, quick, and easy installation

Fuels: **LPG**

VALVES

LPG Control Valves



Used on-board propane powered vehicles including school buses, transit vehicles, delivery trucks, and a growing number of propane autogas applications.

- Individual tank mounted supply and return valves
- Piloted piston valve designs with an excess flow valve and check valve for enhanced performance
- On-engine fuel rail valving incorporates both supply and bleed solenoid valves
- Meets UL125 performance requirements
- LPG Control Valves are suitable for many clean transportation applications

Bi-Fuel Gas Shut Off Valve



Designed for a broad range of gas train systems including flexible fuel arrangements for stationary generators and industrial gas engines.

- Direct pilot operated 2way normally closed solenoid valve with integral Deutsch connector
- Forged aluminum flange-mount body with multiple pressure or temperature sensor port options
- Designed for CNG and LPG systems
- Suitable for many industrial based applications

Typical LPG Applications:

- Alternative Fuel Vehicles
- Bi-Fuel Vehicles
- School Buses
- Shuttle Buses
- Fleet Delivery Vans
- Vocational Trucks
- Taxis

LPG COMPLIANCE

- CGA-8.1-M86



Parker Divisions for these CNG, LNG, and LPG products

FILTRATION

Parker Hannifin Corporation

Gas Separation & Filtration Division

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phone 800-343-4048

CNG VALVES

Parker Hannifin Corporation

Fluid Control Division

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fax 860 827 2384

CNG SUPPLY AND RETURN LINE HOSE

Parker Hannifin Corporation

Hose Products Division

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fax 440 943 3129

CNG HOSE

Parker Hannifin Corporation

Parflex Division

1300 N. Freedom Street
Ravenna, OH 44266
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fax 330 296 8433

SEAL-LOK™ FOR CNG O-RING FACE SEAL and SEAL-LOK™ XTREME FITTINGS

Parker Hannifin Corporation

Tube Fittings Division

3885 Gateway Blvd.
Columbus, OH 43228
phone 614 279 7070
fax 614 279 7685

CPI™/A-LOK® FITTINGS AND BALL VALVES

Parker Hannifin Corporation

Instrumentation Products Division

1005 A Cleaner Way
Huntsville, AL 35805
phone 256 881 2040
fax 256 881 5730

PRESSURE REGULATORS AND CRYOGENIC VALVES

Parker Hannifin Corporation

Veriflo Division

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fax 510 232 7396

RECEPTACLES, NOZZLES, CHECK VALVES, AND IN-LINE BREAKAWAYS

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