



# Alternative Fuel Filters

*Bulletin 1000 - NG -1*



**Finite<sup>®</sup>**

# NEW SOLUTIONS FROM Finite®

Today's alternative fuel — compressed natural gas — has the same problems that plague diesel and gasoline...



contamination that collects during handling, water that condenses in tanks and compressors that leak oil into the fuel stream.

High efficiency, high pressure filtration is essential for eliminating the primary threats to injectors — condensed moisture and oil carryover from high pressure compressors.

The precision components necessary for the efficient operation of an alternative fuel system demand superior filtration.

The solution — the industry's first and most complete line of alternative fuel filters/coalescers. From pipeline to engine — Parker products provide the critical filtration required for most alternative fuel systems.

## VEHICLE APPLICATIONS

Protecting the fuel injectors and precision components of an alternative fuel system is vital to efficient vehicle operation. Parker is now offering the most complete line of fuel filter/coalescers for on-vehicle applications. These filters ensure removal of damaging aerosol contamination as small as .3 to .6 microns, and exceeding 95% efficiency, depending on the grade of element specified. Units are available in a range of pressure ratings and are constructed of aluminum or stainless steel.

The fuel filter/coalescer elements are produced by a unique process of arranging microglass fibers into a tubular form. During operation, fuel is forced through the coalescing media from the inside of the cartridge through the tubular wall to the outside, where the large droplets fall to the bottom of the housing. Oily water emulsion accumulates in the sump located in the bottom of the housing until drained, while the dirt particles remain trapped on the surface of the fibers.

Fuel system engineers and NGV converters agree that a high quality filtration system is an essential alternative fuel engine component. Installed upstream of the high-pressure regulator, the fuel filter/coalescer contributes to maximize uptime, reducing maintenance costs and extending the equipment's life cycle. In addition, some engineers favor the installation of a downstream filter/coalescer to protect the low-pressure regulator and other injection system components.



### Low Pressure Fuel Filter Coalescers

*Lower pressure coalescers are ideal for operating environments up to 500 psi. All aerosol contaminants in the 0.3 to 0.6 micron range are filtered to an efficiency level that exceeds 95%.*



### High Pressure Fuel Filter Coalescers

*High pressure coalescers constructed to withstand operating pressures to 3600 psi. These stainless and anodized aluminum filters remove over 95% of aerosols in the 0.3 to 0.6 micron range.*



*Advanced technology and design innovation have made Parker the preferred OEM supplier for alternative fuel filtration systems.*

# VEHICLE APPLICATIONS

A recognized leader in alternative fuel filtration technology, Parker assists in the development and validation of quality standards for ANSI and the Natural Gas Vehicle Coalition.



## SAFETY FIRST!

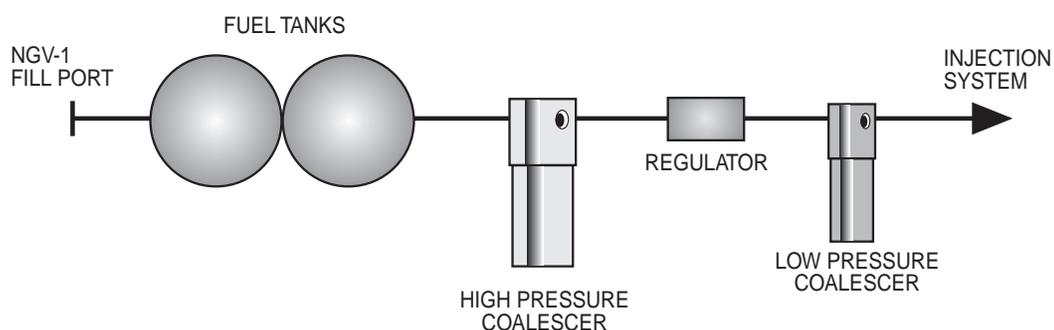
Safety is always a factor that must be taken into consideration when servicing fuel related products. It is imperative that shutoff valves, manual or electronically controlled, be installed and upstream and downstream of any high pressure CNG filter. After shutoff, pressure should slowly be released prior to removal of the filter housing or drain plug.

## SPECIFICATIONS



Model	FFC-116	FFC-112 FFC-112SAE	FFC-110	FFC-110L	FFC-113	FFC-114
Type	Coalescer	Coalescer	Coalescer	Coalescer	Coalescer	Coalescer
Port	1/4" NPT	1/4" NPT or 9/16" SAE	1/4" NPT	1/4" NPT	1/2" NPT	1/2" NPT
PSI (Max)	5000	3600	500	500	3600	3600
Rated Flow SCFM at 100 PSIG	8.4	15	25	50	50	50
Length	3.85	4.75	7.16	10.4	8.06	7.01
Diameter	1.75	2.25	3.13	3.13	2.97	2.97
Drain Port Size	1/4"	3/8" SAE	1/8"	1/8"	9/16-18 SAE-6	9/16-18 SAE-6
Weight	1.75	1.5	1.5	1.8	5.5	5.25
Element Number	CLS116-10	CLS112-10	CLS110-10	CLS110-10L	CLS113-6	CLS113-6
Sump Capacity oz.	0.25	0.5	5.0	7.0	5.0	3.0
Material	316 Stainless Steel	Anodized Aluminum	Powder Painted Chromated Aluminum	Powder Painted Chromated Aluminum	303 Stainless Steel	303 Stainless Steel

## Typical Application



# FUEL DISPENSING

Compressor skid packages, commonly supplied for both slow-fill and standard refueling operations, often yield large amounts of oil with the gas. Studies throughout industry confirm that some compressors deliver oil aerosols into the gas stream in amounts exceeding 100 PPM to 400 PPM by weight.



## J4SF & J4NF

*Heavy duty coalescer withstands pressure to 5,000 psi with a sump capacity of six ounces. The J4 models offer maximum pressure rating and capacity. Construction is nickel plated nodular cast iron with epoxy powder painted exterior. Available with 1" NPT or SAE-16 port connections.*

To meet these high volume applications, Parker has developed oil removing fuel dispensing coalescers which will handle pressures to 5000 psi and feature large sump capacities.

Coalescing filters are only part of the CNG delivery system. Oil removal efficiency is affected by gas stream temperature, oil concentration, velocity, flow rate, maintenance and the system plumbing. Careful design and service are essential to achieve satisfactory equipment performance.

## J2SD & J2SL

*The J2SD and J2SL coalescers offer up to 5,000 psi pressure rating. Construction is nickel plated ductile iron with epoxy powder painted exterior. SAE-8 porting connections (Adaptor bushings provide for 1/2" NPT female).*



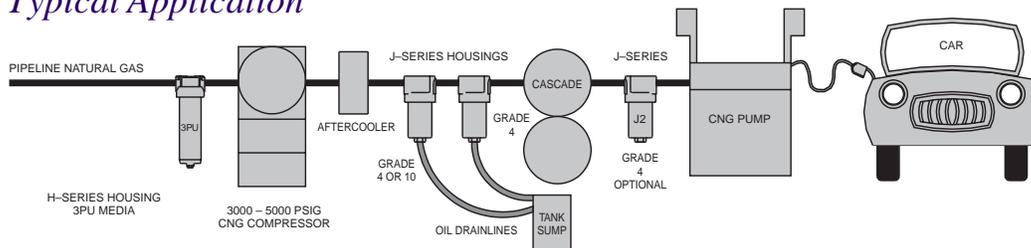
*Alternative Fuel Filtration Systems are just one of the complete line of fuel, air and oil filtration products available from Finite. For more information about other ways you can improve and protect your equipment, talk with your nearby distributor – or call us toll-free.*



**Parker Hannifin Corporation**  
Filtration and Separation Division  
500 Glaspie St.  
Oxford, MI 48371  
800-521-4357  
Fax: 248-628-1850  
www.parker.com

**The Complete Package:  
Only From Parker**  
No one has a more complete selection of products for alternative fuel vehicles than Parker; components for efficient refueling, and all the products needed for installation.  
**For more information about connector components call toll-free 1-800-C-PARKER**

### *Typical Application*



Warning: Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage. This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for the products or system, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including with limitation, product features, specification, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

