

Transportation Filtration

CNG Fuel Filter
For Natural Gas Truck

Market Application Publication



The Challenge

The customer, who is the leader of Russian truck manufacturers, increased the amount of CNG powered vehicles due to the Russian Government program promoting natural gas vehicles. The challenge was to create a new low pressure CNG module for a V8-engine with two outlet ports and integrated ports for both a fuel temperature and pressure sensor. Additionally, higher flow rates were required all in a smaller footprint.

Why Racor was Chosen as the Solution

In order to improve the engine durability, the customer needed to raise the CNG fuel quality. Racor originally discussed with the customer a new low pressure CNG filter, which would fulfill the required system integrity. All while doubling the coalescing performance level and



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reaching the required 98.5% efficiency at given flow rates. Based on extensive team work between Racor and the customer, Racor could offer a newly designed engine mounted CNG filter to support this project. We are looking forward to a long relationship and partnering with local suppliers in Russia to provide quick and efficient production for these vehicles.

The Solution

Racor modified a Parker CNG filter to an element with a new size. New sealing materials that made the filter elements resistant to the high temperatures of 120°C were also added.

Customer Custom Part Numbers:

Assembly: FFC110MKMZ01
Replacement Element: CLS110MKMZ

Racor Standard Part Numbers:

Assembly P/N: FFC-110-06
Replacement Element P/N: CLS110-06



ENGINEERING YOUR SUCCESS.

FFC Series CNG Filters



Specifications	FFC-110	FFC-110L-10	FFC-112	FFC-113	FFC-116
Fuels Used	CNG	CNG	CNG	CNG	CNG
Filter Type	Coalescer	Coalescer	Coalescer	Coalescer	Coalescer
Maximum Pressure	800 PSI (5,500 kPa)	800 PSI (5,500 kPa)	3,600 PSI (24,800 kPa)	3,600 PSI (24,800 kPa)	5,000 PSI (34,400 kPa)
Max Flow Rate	25 SCFM (708 lpm)	50 SCFM (1,416 lpm)	15 SCFM (425 lpm)	50 SCFM (1,416 lpm)	8.4 SCFM (238 lpm)
Port Size	¼" NPT	½" NPT	¼" NPT	½" NPT	¼" NPT
Length	7.9 in. (18.3 cm)	10.4 in. (26.4 cm)	4.8 in. (12.2 cm)	8.0 in. (20.3 cm)	4.0 in. (10.1 cm)
Diameter	3.1 in. (7.9 cm)	3.1 in. (7.9 cm)	2.3 in. (5.8 cm)	3.0 in. (7.6 cm)	1.75 in. (4.4 cm)
Weight	1.5 lbs (0.7 kgs)	1.8 lbs (0.8 kgs)	1.5 lbs (0.7 kgs)	5.5 lbs (2.5 kgs)	1.75 lbs (0.8 kgs)
Clean Pressure Drop	1.0 PSI (6.9 kPa)	1.0 PSI (6.9 kPa)	3.0 PSI (20.7 kPa)	1.7 PSI (11.7 kPa)	1.25 PSI (8.6 kPa)
Sump Capacity	5.0 oz. (148 cc's)	7.0 oz. (207 cc's)	0.5 oz. (15 cc's)	5.0 oz. (148 cc's)	0.25 oz. (7.4 cc's)
Temperature	-40° /+221° F (-40° /+105° C)				

- Notes:**
1. For accurate flow rates and pressures, consult your engine manual, engine manufactures agent, or the vehicle manufacturer.
 2. Some specifications are the result of tests conducted at the optimum flow rate.
 3. Allow 3.0 in. (7.6 cm) of clearance below assembly for draining and maintenance of element.
 4. Filter element kit, includes element and replacement seals.



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