

120A and 120B Series

Fuel Filter/Water Separators

Instruction Part Number 10219 Rev B



Overview:

120A and 120B fuel filter/water separators are designed to be installed on the suction side of the fuel system with maximum flow capacities of 15 and 20 gallons per hour (GPH) respectively. The compact size and 4-port versatility make the 120 series a very popular small filter for many applications. Servicing is simplified by the self-venting bowl drain and spin-on filter.



Contact Information: Product Features:

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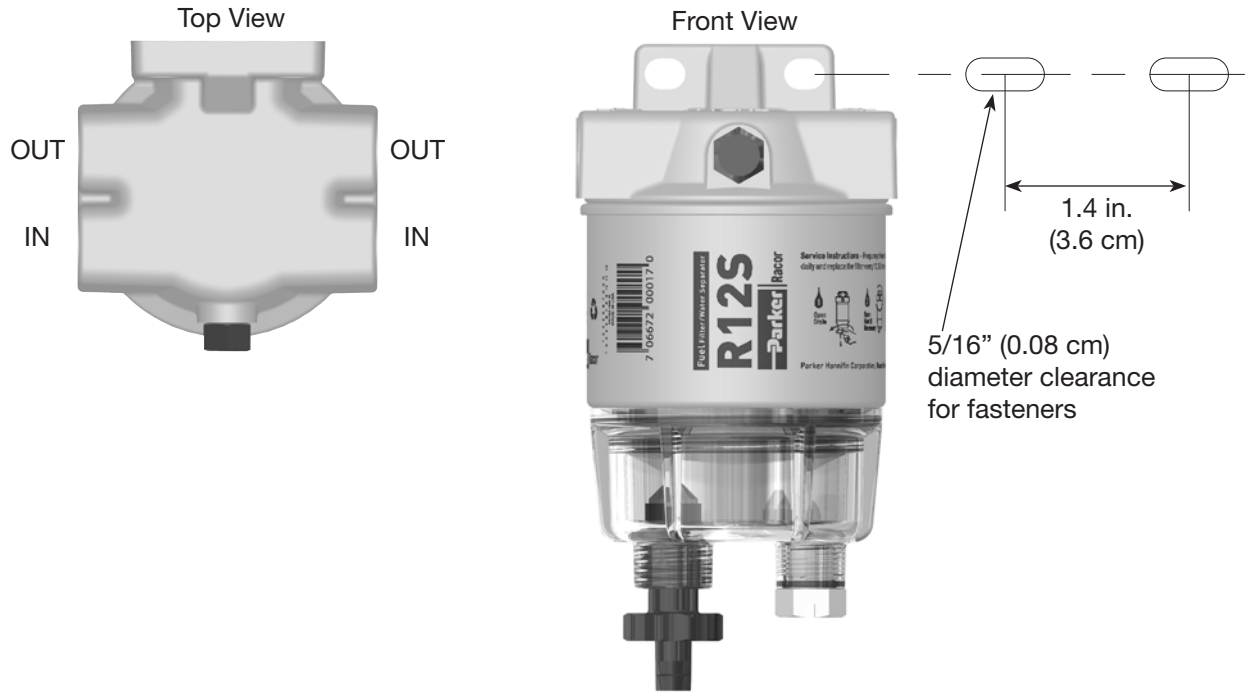
www.parker.com/racor

- Removes 99% of free water
- Available with 2, 10, or 30 micron Aquabloc®II media
- Up to 20 GPH (75 LPH) flow rate (depending on model)
- Optional in-bowl water probe available
- 4-port, die-cast aluminum mounting head with 1/4"-18 NPTF threads

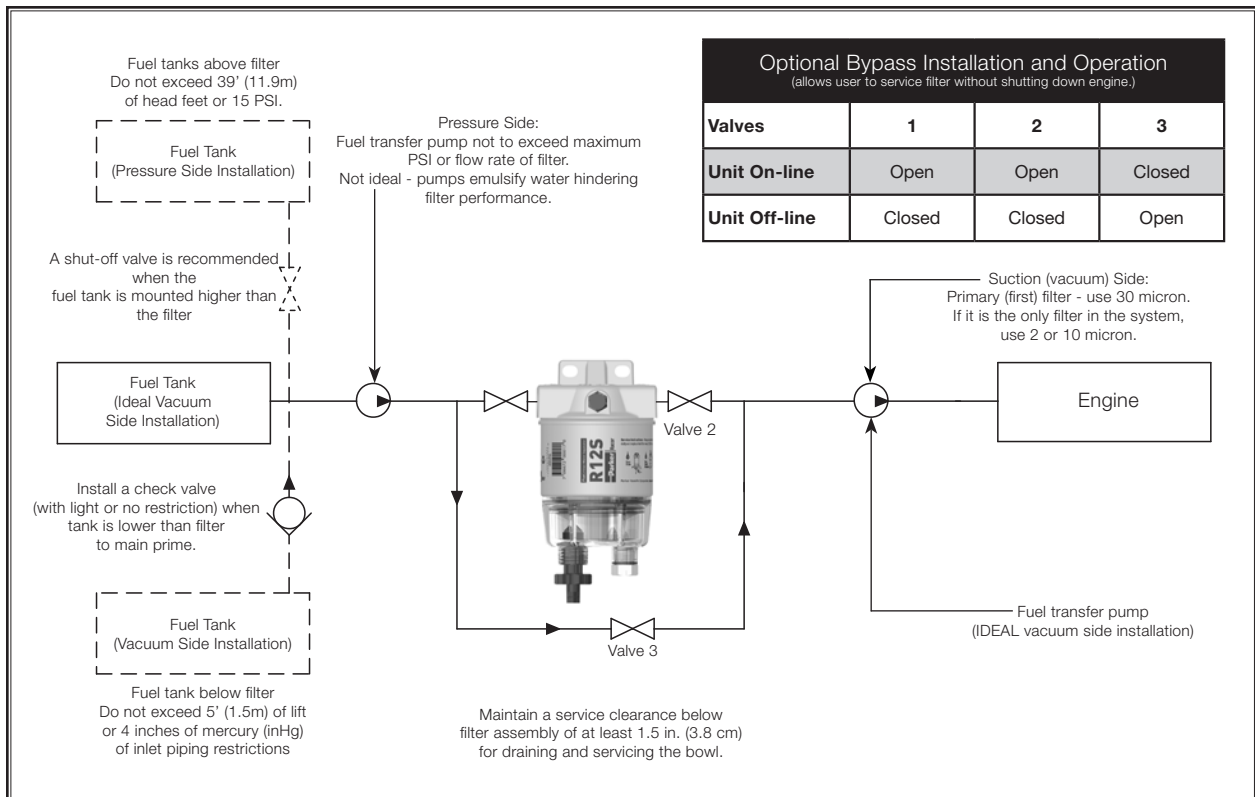


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Mounting Instructions



Installation Diagram



Installation Guidelines

Warning! Do not smoke, allow open flame, or heat near installation which could create a fire. Perform installation in a well ventilated area. Refer to installation diagram and keep these few guidelines in mind while installing the filter assembly.

1. Apply thread sealant to

tapered threads of inlet and outlet fittings prior to installing into mounting head ports.

2. Install filter underhood for protection against extreme cold temperatures. This will help in preventing fuel gelling. Diesel fuel additives containing alcohol

can damage non-metal components in fuel systems and are not recommended.

3. Ensure that fuel lines are secured to protect them from rubbing on other surfaces. Avoid tight bends and high heat sources.

Priming The Unit

1. Spin bowl and filter (together) off mounting head and fill with clean fuel.

2. Spin bowl and filter (together) onto head and tighten firmly by hand.

3. Start engine and check for leaks. Correct as necessary with engine off.

Draining The Collection Bowl

Water is heavier than fuel and will settle to bottom of bowl. In high humidity environments, check collection bowl frequently (daily if poor fuel source is suspected). A filter equipped with an in-bowl water probe

(RK30964) and alarm kit (RK20725, 12 volt dc) will alert the operator when a high water level condition exists and service is required.

Element Replacement

Element Replacement frequency is determined by the contamination level in fuels. Fuel flow to the engine becomes restricted as the element gradually plugs with contaminants, resulting in noticeable power loss and/or hard starting. When any one of these occur, change the

element as soon as possible. As a guideline, change the element every 500 hours, 10,000 miles, every other oil change, annually or at the first indication of power loss, whichever comes first.

Always carry extra replacement filters as one thankful of excessively contaminated fuel can plug a filter.



Troubleshooting Procedures

A major cause of power loss or hard starting is a result of an air leak (or clogged filter). If your unit will not prime or fails to hold prime, check that drain,

bowl, and filter are properly tightened. Next, check all fitting connections and ensure fuel lines are not pinched or clogged with contaminants. If problems

persist (and filter is new) call Racor Technical Support for assistance: 800 344 3286 or 209 575 7555.

Specifications

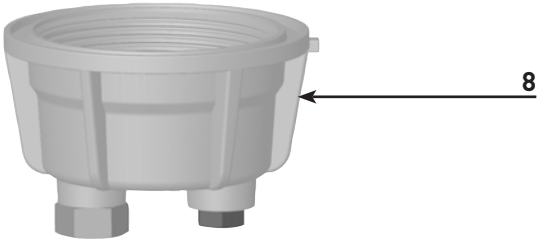


Models	120A	120B
Maximum Flow Rate	15 GPH (57 LPH)	20 GPH (80 LPH)
Port Size (SAE J476)	1/4"-18 NPTF	1/4"-18 NPTF
Replacement Elements		
2 micron	R12S	R13S
10 micron	R12T	R13T
30 micron	R12P	R13P
Min. Service Clearance	2 in. (0.51 cm)	2 in. (0.51 cm)
Center Threads	M18 X 1.5	M18 X 1.5
Height	6.5 in. (1.66 cm)	8 in. (2.03 cm)
Depth	3.2 in. (0.81 cm)	3.2 in. (0.81 cm)
Width	3.2 in. (0.81 cm)	3.2 in. (0.81 cm)
Weight (dry)	1.1 lb (0.5 kg)	1.2 lb (0.6 kg)
Clean Element Pressure Drop	0.15 PSI (0.01 bar)	0.15 PSI (0.01 bar)
Maximum Allowable Pressure**	7 PSI (0.48 bar)	7 PSI (0.48 bar)
Water in Bowl Capacity	1.76 oz. (52 ml)	1.76 oz. (52 ml)
Ambient Temp. Range	-40° to +255°F (-40° to +124°C)	
Max. Fuel Temp.	190°F (32°C)	

**Special Notes: Vacuum installations are recommended. Pressure installations are applicable up to the maximum PSI shown.

120A and 120B Replacement Parts

<u>Part No.</u>	<u>Description</u>
1. RK 10214	Head, 1/4" NPTF Ports
2. RK 10110	Metal Vent Plug, 3/8"-24
3. RK 10503	Square Gasket Kit
4. Replacement Filters	Model 120A
R12S	2 Micron
R12T	10 Micron
R12P	30 Micron
Replacement Filters	Model 120B
R13S	2 Micron
R13T	10 Micron
R13P	30 Micron
5. RK 10012	Bowl O-ring Kit
6. RK 10215	Clear Bowl Kit
7. RK 20126	Bowl Plug Kit
8. RK 10109	Metal Bowl Kit (optional)



Accessories

Water Probe Kits

Racor offers a wide selection of water probes, each designed for use with particular models and installation requirements. These probes are available in various configurations to fit every Racor filter/separator. The water probe is only a component in the water detection system and will not work without a Racor electronic detection module (see next page).

RK 30880 has an electronic detection module built-in to its design and has the simplest installation procedure. Multiplex units must use one probe for each collection bowl but only one water detection module is needed. Wiring instructions are supplied with each water detection module.



Specifications	RK 21069	RK 30964	RK 30880
Threads	1/2"-20 Threads	1/2"-20 Threads	1/2"-20 Threads
Description	One piece design with two wires. Requires a detection module.	Includes detachable 2-wire connector. Requires a detection module.	Includes detachable 3-wire connector, built-in detection electronics and under-dash warning light. Probe sends ground signal to light.
Voltage	12 or 24 vdc	12 or 24 vdc	12 or 24 vdc
Power Draw: (12 volt) (24 volt)	N/A	N/A	5 Milliamps 10 Milliamps
Maximum Load	N/A	N/A	1 Amp
Weight	0.03 lb (0.01 kg)	0.02 lb (0.01 kg)	0.4 lb (0.2 kg)
Caution: Never wire a water probe directly to voltage or another brand of detection module.			

Hose

Racor fuel hose is fire resistant and meets SAE J1527 Type A class and SAE J1942 standards. This hose delivers test proven performance in a wide operating temperature

range, constant working pressure in popular sizes, long-lasting reinforced construction, kink and cut resistance, and compatibility with a variety of standard fittings.

Additional Features

- High-tensile steel wire braid.
- No-Skive - does not require the removal of outer cover to install.
- USCG-rated for gasoline, diesel, lube oil, and hydraulic systems.
- Working temperature of -4°F to +212°F (-20°C to +100°C).



Part Number	Hose ID	Working Pressure	Burst Pressure	Min. Bend Radius
CGH-5	1/4" (6.3 mm)	500 PSI (3.5 MPa)	2000 PSI (14 MPa)	1" (25 mm)
CGH-6	5/16" (8 mm)	500 PSI (3.5 MPa)	2000 PSI (14 MPa)	1 1/4" (30 mm)
CGH-8	13/32" (10 mm)	500 PSI (3.5 MPa)	2000 PSI (14 MPa)	1 3/4" (45 mm)

Note: Additional sizes may be available - contact your Racor distributor.

Water Detection Modules

Racor Water Detection Kits are available for under dash, in-dash, and remote mount installation. These units may be used with any Racor fuel filter/

water separator and water probe. An electric detection module analyzes electrical resistance at water probe and determines if water is present. Units reset

automatically after removing water (unless specified). All water detection module kits include an RK 21069 water probe.

Under Dash Modules

Specifications	RK 12870	RK 12871
Voltage	12 vdc	24 vdc
Features	Light and Buzzer	Same as RK12870
Description	Lamp illuminates and buzzer sounds when water is detected. Water must be drained to reset light and stop buzzer.	
Dimensions	1.4" H x 1.25" D x 1.4" W	
Power Draw	1 Milliamp	
Max. Internal Load	30 Milliamps	
Weight	0.2 lb (0.1 kg)	

Note: Additional modules available - contact your Racor distributor.

**Part Number
RK 12870 or
RK 12871**



In-Dash Modules

Specifications	RK 20726
Voltage	12 or 24 vdc
Features	Light and Buzzer
Description	Red DRAIN lamp illuminates continuously and buzzer sounds momentarily when water is detected. Power-up self diagnosis feature and circuit protection included.
Dimensions**	2.2" Diameter x 3.2" Depth
Power Draw: (12 volt) (24 volt)	3 Milliamps 13 Milliamps
Max. Internal Load	30 Milliamps
Weight	0.4 lb (0.2 kg)
** Cut 2.0" diameter hole to mount gauges in instrument panel.	

Note: Additional modules available - contact your Racor distributor.

**Part Number
RK 20726**



Remote Mount Modules

Specifications	RK 14329	RK 14321
Voltage	12 vdc	24 vdc
Features	Sends Hot (+) Signal	Sends Hot (+) Signal
Description	Receives signal from water probe or vacuum switch (not included) then sends a signal to horn or lamp. Must use with relay if power draw is over 1 amp.	Same as RK14329 but sends 24 vdc hot (+) signal.
Dimensions	0.7" H x 2.5" D x 2.8" W	1.0" H x 1.5" D x 2.0 W
Power Draw:	14 Milliamps	10 Milliamps
Max. Internal Load	30 Milliamps	30 Milliamps
Weight	0.3 lb (0.1 kg)	0.4 lb (0.2 kg)

Note: Additional modules available - contact your Racor distributor.

**Part Number
RK 14329**



**Part Number
RK 14321**



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