

Marine Gasoline Series

120R-RAC-01 and 120R-RAC-02

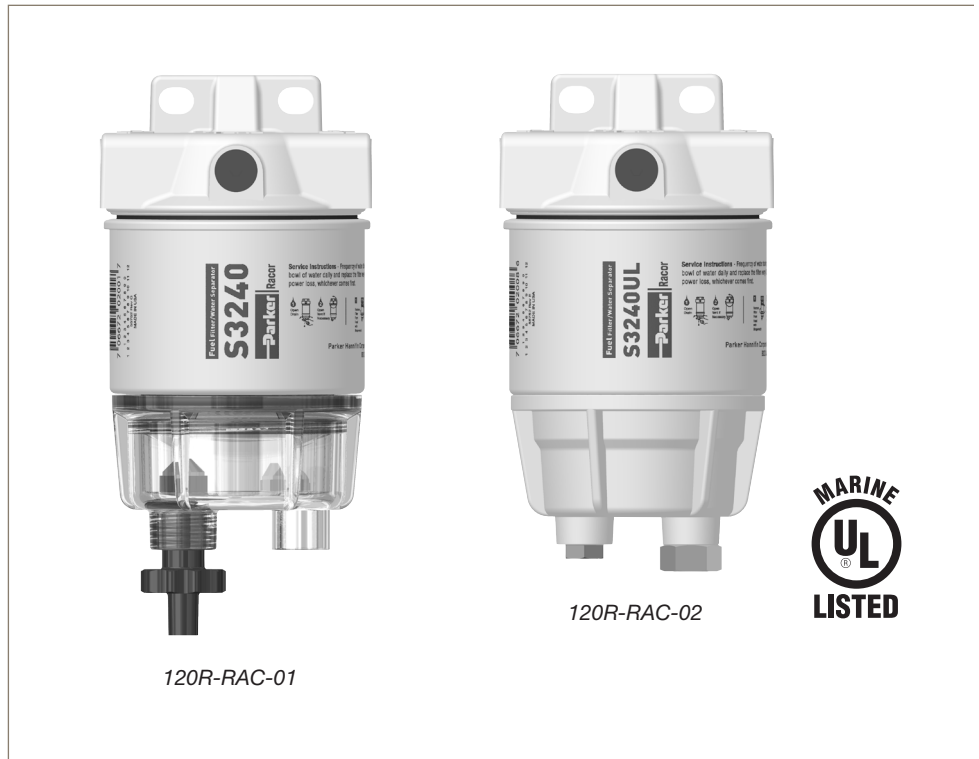
Fuel Filter/Water Separators

Instruction Part Number 10223 Rev C



120R-RAC series filter assemblies were designed specifically for marine gasoline applications. These high-performance filters will help your engine run better than ever with clean, water-free fuel. The legendary Aquabloc® media removes 99% of free water and sediment down to 10 micron (nominal). With four port mounting versatility and simple servicing procedures, there has never been a better choice for your marine application than a Racor fuel filter/water separator.

Model number 120R-RAC-02 is marine UL Listed and USCG approved.



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Specifications	120R-RAC-01	120R-RAC-02
Application: Inboard Outboard	No Yes	Yes Yes
Maximum Flow Rate	30 GPH (114 LPH)	30 GPH (114 LPH)
Replacement Filter	S3240	S3240TUL
Center Threads	M18 x 1.5	M18 x 1.5
Port Size	1/4"-18 NPTF	1/4"-18 NPTF
Number of Ports: Inlets Outlets	2 2	2 2
Height	6.5 in. (16.5 cm)	6.0 in. (15.2 cm)
Width	3.2 in. (8.1 cm)	3.2 in. (8.1 cm)
Depth	3.2 in. (8.1 cm)	3.2 in. (8.1 cm)
Weight (dry)	1.1 lb (0.5 kg)	1.2 lb (0.6 kg)
Clean Pressure Drop	0.15 PSI (0.01 bar)	0.15 PSI (0.01 bar)
Maximum Allowable Pressure	7 PSI (0.5 bar)	7 PSI (0.5 bar)
Underbowl Clearance	2.0 in. (5.1 cm)	2.0 in. (5.1 cm)
Water Removal Efficiency	99%	99%
Ambient Temperature Range	-40° to +255°F (-40° to +124°C)	
Maximum Fuel Temperature	190°F (88°C)	

Installation Guidelines

Danger! Great care must be exercised to avoid potential fire hazards during installations. Do not smoke or permit open flames or sparks near the fuel system.

Refer to Installation Diagram on page 4 prior to beginning installation.

- Any secondary or pressure side filters located between pump and engine should be serviced and left in place.
- Mount unit vertically on suction side of fuel pump, transfer pump, or non-removable filters, whichever comes first.
- Maintain 2" (5.1 cm) vertical clearance below filter for servicing bowl and replacing filter.
- Ensure a suitable pipe thread sealing compound is used on NPT threads of fitting prior to installation into head. For mounting flexibility, there are two inlet ports and two outlet port. Plated steel fittings are recommended. Plug unused ports with provided steel NPT plugs—do not use tapes on NPT threads.
- Use quality fuel hose in maximum fuel line size applicable to reduce potential fuel flow restrictions. Note: USCG accepted hose recommended.
- Thread fittings into appropriate fuel ports and tighten snugly. Plug unused ports (if any) with port plugs and tighten snugly.
- Attach fuel lines to filter. Avoid tight bends, rubbing areas and heat sources when routing hose.
- Follow Priming Instructions.

Priming

Always follow your engine manufacturer's guidelines for priming the fuel system. To prime the filter:

1. Spin bowl and filter off of mounting head (together).
2. Fill filter with clean fuel.
3. Apply a coat of motor oil or clean fuel to filter gasket.
4. Spin bowl and filter (together) onto mounting head tighten by hand—do not use tools.
5. Start engine and check for leaks. Correct as necessary with engine off.

Service

Draining The Bowl

Water is heavier than fuel and will settle to bottom of bowl and appear different in color. In high humidity environments, check bowl frequently (daily if a poor fuel source is suspected).

1. Make sure engine is off and cool to touch.
2. Close shut-off valve between fuel tank and filter, if applicable.
3. Open vent plug on mounting head.
4. Slowly open drain on bottom of collection bowl and allow only water to drain out—do not leave drain open for very long as it will eventually drain the entire filter of all water and fuel.
5. When fuel is detected coming out of drain, close drain quickly and tighten snugly.
6. Close vent plug and tighten snugly.
7. Open Shut-off valve if applicable.
8. Follow Priming instructions.

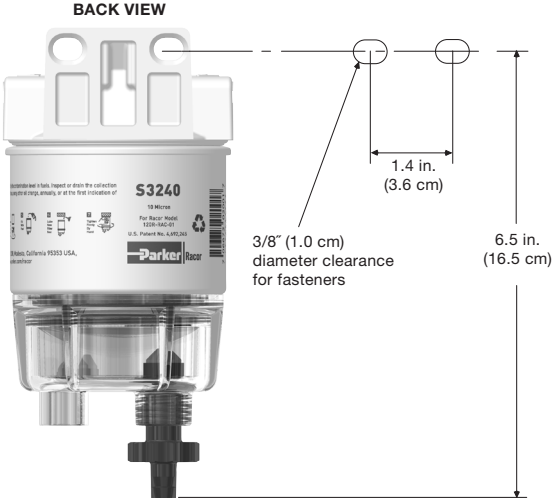
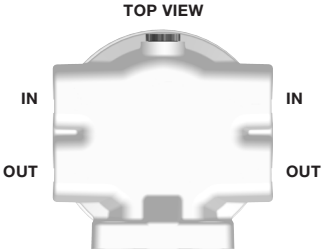
Filter Replacement

Filter replacement frequency is determined by contamination level in fuels. Fuel flow to engine becomes restricted as filter gradually plugs with contaminants, resulting in noticeable power loss and/or hard starting. As a guideline, change filter every 500 hours, every other oil change, annually, or at first indication of power loss, whichever occurs first. Always carry extra replacement filters as one tankful of excessively dirty fuel can quickly plug a filter.

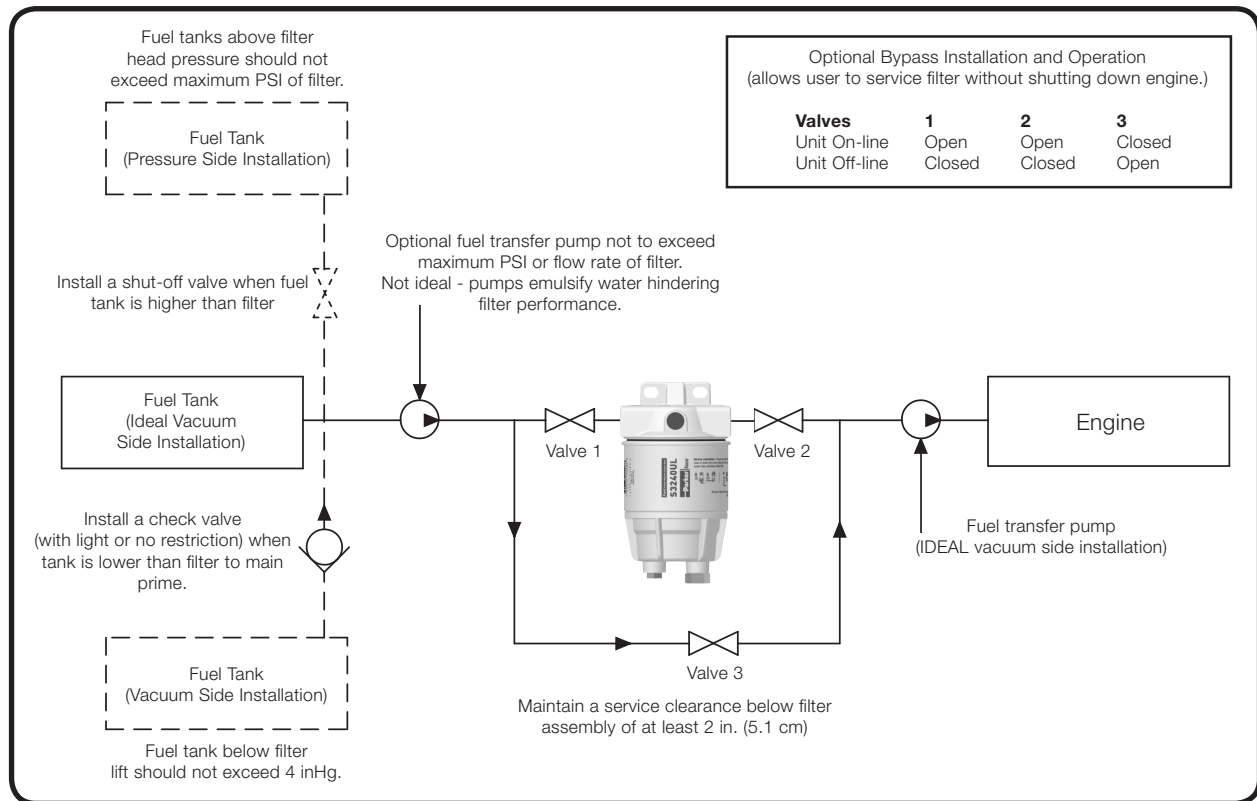
1. Clean all debris or dirt away from head of filter assembly prior to servicing.
2. Place a container of sufficient volume below filter assembly to collect contaminants.
3. Close tank outlet valve if tank is mounted higher than filter, if equipped.
4. Open drain (remove plug on -02 model) to empty filter assembly of fuel.
5. Spin filter and bowl off together, then remove bowl from filter.
6. Dispose of filter properly.
7. Clean bowl O-ring gland and sealing surface of mounting head free of dirt, debris, or gums.
8. Apply motor oil to new filter seal and bowl O-ring (supplied with new filter).
9. Place filter seal onto filter and O-ring into bowl gland.
10. Spin bowl onto new filter snugly by hand—do not use tools.
11. Priming fuel system following your manufacturer's procedures, if necessary; otherwise, see Priming section.

Replacement Parts

Part Number	Description
1. RK 10214-01	Head Kit
2. 10224	3/8"-24 UNF Vent Plug
3. RK 10503	Gasket Kit
4. S3240	120R-RAC-01: 10 micron Replacement Filter (includes #'s 3 and 5)
S3240UL	120R-RAC-02: 10 micron Replacement Filter (includes #'s 3 and 5)
5. RK 10012	Bowl O-ring Kit
6. RK 10222	Clear Bowl Kit (-01 model) (includes #'s 5 and 7)
7. RK 30476	Self-venting Drain Kit
8. RK10553	Metal Bowl Kit (-02 model) (includes #'s 5, 9, and 10)
9. RK 20022	Probe Plug Kit (1/2"-20 UNF)
10. 01SP-2S	Drain Plug Kit (1/8" NPTF)



Installation Diagram



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